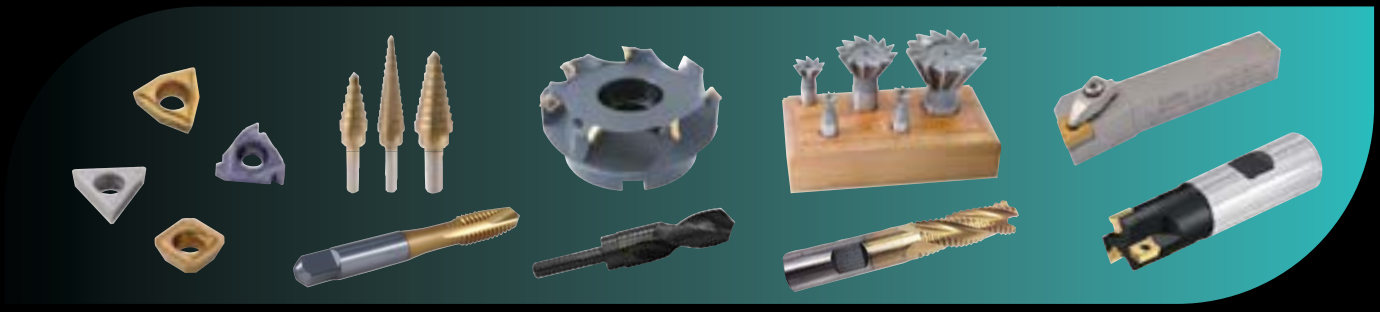
PRECISION MEASURING TOOLS

CUTTING & CARBIDE TOOLS



MACHINE TOOL ACCESSORIES

SHOP SUPPLIES

CAT. No. 30
Effective 2022

NEW PRODUCTS

5PC MEASURING & MARKING SET

- Made of hardend tool steel.
- **Set consists of one of each:**
  - Machinest Square: 6" (6" Blade x 4" Beam)
  - Center Finder Square: 1-1/2"
  - Round Head Protractor
  - Carbide Tipped Scriber with magnet other side.
  - Center Punch: 4"
- Complete in a fitted ABS case

Additional Products Shown on Page 60.

11PC R8 COLLET SET & 12PC R8 COLLET RACK COMBO

11 Piece R8 Collet Set - 1/8-3/4" x 16ths (3900-0007)

- Hardened and precision ground to close tolerance.
- Made of high grade tool steel.
- Run out is 0.0007".
- Internally threaded: 7/16"-20.

R8 12 Piece Collet Rack (3900-0016)

- Open and close cover protects collets from debris.
- Mounting bolts are included.
- Easy side mount with two screws.

Additional Collets Shown on Page 205.

HSS TAPER SHANK DRILLS 118° SPLIT POINT

- Designed for drilling in many different materials and a wide range of applications. These drills feature a surface treatment to imporove chip flow and a taper shank made to American National Standard (Morse) dimensions. Black oxide finish for increased wear resistance and improved lubridity, reducing chip welding and galling.

HIGH SPEED STEEL

5302-2024 Shown

5302-4112 Shown

Item#	Dia. d1	Flute Length l2	Shank Taper	OAL l1
5302-2024	3/8	3-1/2	2MT	7-3/8
5302-2040	5/8	4-7/8	2MT	8-3/4
5302-2048	3/4	5-7/8	2MT	9-3/4
5302-3056	7/8	6-1/8	3MT	10-3/4
5302-3100	1	6-3/8	3MT	11
5302-3108	1-1/8	7-1/8	3MT	11-3/4
5302-3116	1-1/4	7-7/8	3MT	12-1/2
5302-4116	1-1/4	7-7/8	4MT	13-1/2
5302-4124	1-3/8	8-7/8	4MT	14-1/2
5302-4132	1-1/2	9-3/8	4MT	15
5302-4140	1-5/8	10	4MT	15-5/8
5302-4148	1-3/4	10-3/8	4MT	16-1/4
5302-4200	2	10-5/8	4MT	16-5/8

Additional Sizes Shown on Page 89.

3K REVOLVING HEAD KNURLING TOOLS

- Machined ground steel in shiny black finish.
- Knurls are hob cut from high speed steel and heat treated.
- Provided with one pair each of fine, medium and coaraw knurls.
- Replacement knurts are offered as a complete spare set for knurling tools.

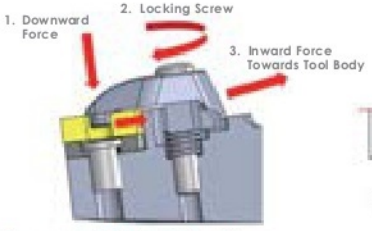
Item#	Holder size W x H x L	Knurl Dimensions Dia. x Thickness x Hole
2220-0008	1/2 x 1-1/8 x 6-1/2"	3/4 x 3/8 x 1/4"
2220-0010	5/8 x 1-3/8 x 7-1/2"	3/4 x 3/8 x 1/4"

Additional Knurling Products Shown on Page 305.

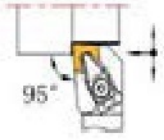
MCLNR TOOL HOLDERS - RIGID CLAMP DESIGN -5° LEAD ANGLE • RIGHT HAND

TMCLNR

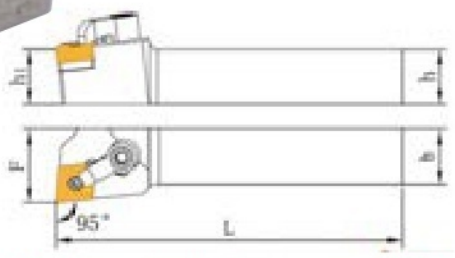
- 0° Relief



New Design!



INSERTS NOT INCLUDED



See page 152 for advantages.

See pages 165-166 for spare parts. Replacement inserts shown on pages 173-174.

Item #	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2011-1122	TMCLNR12-4B	3/4"	3/4"	1.00"	4.5"	CN..43..	C0903B	LYM0610	TP-2	MS0523	YB6512	S3
2011-1162	TMCLNR16-4D	1"	1"	1.25"	6"	CN..43..	C0903B	LYM0610	TP-2	MS0523	YB6512	S3
2011-1167	TMCLNR16-5D	1"	1"	1.25"	6"	CN..54..	C1604B	LYM0810	TP-4	MS0523	YB6512	S3
2011-1202	TMCLNR20-5E	1-1/4"	1-1/4"	1.50"	7"	CN..54..	C1604B	LYM0810	TP-4	MS0523	YB6512	S4

Additional Tool Holders Shown on Pages 153-164.

We are not responsible for typographical error price are subject to change without notice.

THREAD DETECTIVE/IDENTIFIER - Inch & Metric

- Nut and bolt thread identifier. Each size has a nut and bolt checker on the same gauge.
- Inch nut and bolt sizes include #6-32, #8-32, #10-32, #10-24, 1/4-28, 1/4-20, 5/16-24, 5/16-18, 3/8-24, 3/8-16, 7/16-20, 7/16-14, 1/2-20 & 1/2-13
- Metric Nut and bolt sizes include M4x0.7, M5x0.8, M6x1.0, M7x1.0, M8x1.0, M8x1.25, M10x1.0, M10x1.25, M10x1.50, M12x1.25, M12x1.50 & M12x1.75
- Thread sizes are etched on each gauge
- The individual gauges rotate freely on the wire cable for fast thread verification
- Wire cable with loop for convenient hanging

Additional Internal Gaging Products Shown on Pages 30-38.

Dasqua® DIAL INDICATOR WITH MAGNETIC BACK

- Indicator strictly made in accordance with DIN 878.
- Permanent powerful magnet.
- Fitting for all group 2 dial indicator.
- Magnet screws off.
- Magnetic force: 20KG.
- Fitted case.

GROUP 2

5111-1010 Shown

Magnetic Back with Indicator Kits

Item#	Indicator Included	Indicator Range	Graduation	Stem Dia.
5111-0001	5111-0000	0-10mm	0.01mm	8mm
5122-4211	5111-4210	0-1"	0.001"	3/8"

Additional Indicators Shown on Pages 47-51.

TRIANGULAR HOLLOW SCRAPER

- An extremely useful accessory for scraping, trimming and deburring metals, tubing and other materials.
- Hollow ground cutting edge stays sharper longer and resharpens easily.

Additional Deburring Products Shown on Pages 107-108.

Dasqua® METRIC OUTSIDE MICROMETERS

- Strictly made in accordance with **DIN 863.**
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Carbide measuring surfaces ground for longer service life.
- Standards included above 0-1" micrometer.
- Fitted case.

.01MM GRADUATION

Item#	Range	Accuracy
4111-8105	0-25mm	0.004"
4111-8110	25-50mm	0.004"
4111-8115	51-75mm	0.004"

Additional Micrometers Shown on Pages 17-23.

60PC HSS METRIC/INCH TAP & DIE SET

- NC, NF and NPT threads
- 1" O,D, dies
- Adjustable die stock
- Adjustable handle tap wrench
- T-handle tap wrench
- Screwdriver
- Two screw pitch gages

CARBON STEEL

INCLUDES:
27 tap & die sizes: 1/4-20NC, 5/16-18NC, 3/8-16NC, 7/16-14NC, 1/2-13NC, 4-40NC, 6-32NC, 8-32NC, 10-24NC, 12-24NC, 1/4-28NF, 5/16-24NF, 3/8-24NF, 7/16-20NF, 1/2-20NF, 10-32NF, 1/8-27NPT, 3mmx0.5, 4mmx0.7, 5mmx0.8, 6mmx1.0, 7mmx1.0, 8mmx1.25, 9mmx1.25, 10mmx1.5, 10mmx1.0, and 12mmx1.75.

Additional Sets Shown on Pages 99-101.

HARLINGEN® 3-JAW SELF-CENTERING LATHE CHUCKS - PLAIN BACK

- 2 sets of jaws
  Lathe chuck wrench and
  1 set of mounting screws included

See page 284 for Advantages!

Item#	D	Center Hole	Max. Speed r/min
9712-1105	3"	0.63"	4000
9712-1106	4"	0.87"	3500
9712-1107	5"	1.18"	3000
9712-1108	6"	1.57"	2500
9712-1109	8"	2.56"	2000

Additional Chucks Shown on Pages 285-295.

DIGITAL ELECTRONIC CALIPERS

3-KEY AUTO-OFF DIGITAL ELECTRONIC CALIPERS

INCH/METRIC
.0005" RESOLUTION

- Auto power off or manual on/off key.
- Three-key Model: Inch/MM, On/Off & Zero.
- Switchable inch/metric, with resolution to .0005"/ .01mm on high contrast easy to read LCD display.
- 4-way measurements: Outside, Inside, Depth & Step.
- Floating zero.
- Body and measuring surfaces are hardened stainless steel.
- Standard SR 44, 1.55V battery included.
- With fitted case.
- Meets DIN 862.

REPLACEMENT BATTERY (ITEM #4102-0030)

Item#	Range	Accuracy
4100-0029	0-4" / 0-100mm	± 0.001"/ 0.02mm
4100-0030	0-6" / 0-150mm	± 0.001"/ 0.02mm
4100-0031	0-8" / 0-200mm	± 0.001"/ 0.03mm
4100-0032	0-12" / 0-300mm	± 0.0015"/ 0.04mm

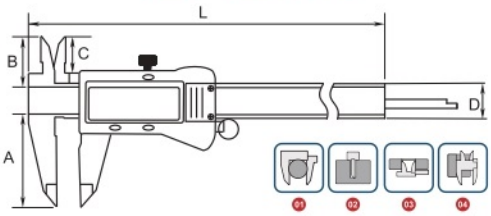
Dasqua® METAL HOUSING BIG SCREEN DIGITAL ELECTRONIC CALIPERS

Metal Cover

Battery + CR2032 | DIN 862 | mm/in

- Stainless steel frame.
- Silky smooth movement throughout.
- Hardened, ground and lapped measuring surfaces.

INCH/METRIC
.0005" RESOLUTION



REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
2117-9105	0-6"/0-150mm	0.01mm/0.0005"	40	20	15.5	16	235	0.02mm/0.001"
2117-9110	0-8"/0-200mm	0.01mm/0.0005"	50	24	19.5	16	287	0.03mm/0.0015"
2117-9115	0-12"/0-300mm	0.01mm/0.0005"	60	26	21.5	16	290	0.03mm/0.0015"

Z-Limit ULTRA SERIES DIGITAL ELECTRONIC CALIPERS

- Manufactured and inspected at world class factory that produces the highest quality US brands.
- Last measuring position retained when shut off
- 4-way measurements: Outside, Inside, Depth & Step
- Body is hardened stainless steel
- Automatic shut-off after 5 minutes of non-use
- Three-key Model: Inch/MM, On/Off & Zero
- Standard CR-2032(3V) battery included
- With thumb roller
- Meets DIN 862

Z-Limit ULTRA-SERIES

Item#	Range	Accuracy
4109-0030	0-6"/0-150mm	.001"/ .01mm
4109-0031	0-8"/0-200mm	.001"/ .01mm
4109-0032	0-12"/0-300mm	.0015"/ .04mm

INCH/METRIC
.0005" / .01mm GRADUATION

REPLACEMENT BATTERY (ITEM #4102-0032)

Fraction/Inch/Metric DIGITAL ELECTRONIC CALIPERS

- Reads in fraction of an inch, easy to read.
- Resolution 0.0005"/0.01mm/1/64th
- Press button to change mode mm/inch/fractional
- 4-way measurements: Outside, Inside, Depth & Step.
- Standard SR 44, 1.55V battery included.
- On/off switch and auto off
- Zero setting
- With fitted case.
- Meets DIN 862

.0005" INCH/METRIC RESOLUTION

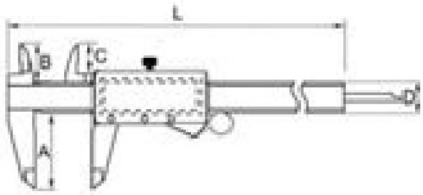
REPLACEMENT BATTERY (ITEM #4102-0030)

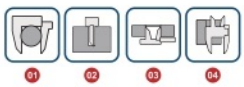
Item#	Range	Accuracy
4100-3506	0-6"/0-150mm	.001"/.02mm
4100-3508	0-8"/0-200mm	.001"/.03mm
4100-3512	0-12"/0-300mm	.0015"/.04mm

Dasqua® BIG SCREEN DIGITAL ELECTRONIC CALIPER

Battery + CR2032 | mm/in | DIN 862 | Data output

- Surfaces of beam ground (Parallelism: 0.015, 20% better than normal) to ensure smooth movement throughout.
- Special glass etching for super accuracy.
- Digit Size:11.5mm.
- Inch, Metric, Fractional.
- Standard CR-2032 (3V) battery included.
- Meets DIN 862.



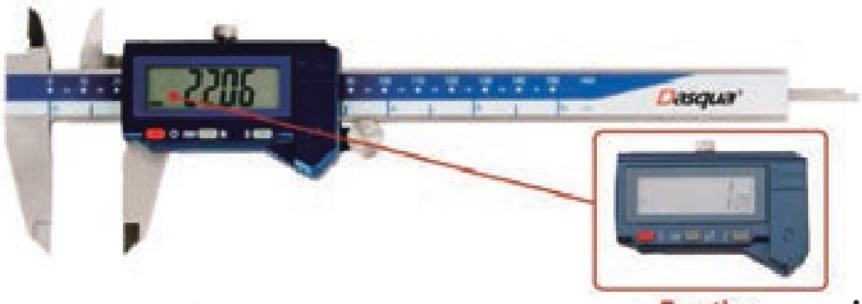


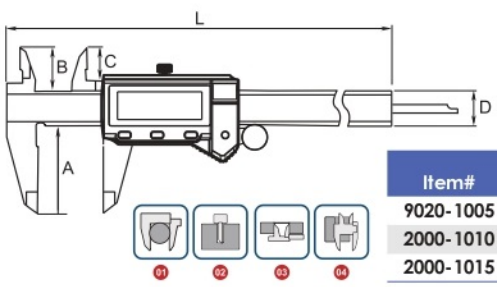
REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
1804-1065	0-6"/0-150mm	0.01mm/0.0005"	40	20	15.5	16	235	0.02mm/0.001"

Dasqua® DIGITAL ELECTRONIC CALIPERS

DIN 862 | mm/in/F | IP54 COOLANT & FLUID RESISTANT | Battery + CR2032





- NEW Advanced design.
- Strictly made in accordance with DIN862.
- Silky smooth movement throughout.
- Hardened, ground and lapped measuring surfaces.

REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
9020-1005	0-6"/0-150mm	0.01mm / 0.0005" / 1/128"	40	20	15.5	16	235	0.02mm/0.001"
2000-1010	0-8"/0-200mm	0.01mm / 0.0005" / 1/128"	50	24	19.5	16	287	0.03mm/0.0015"
2000-1015	0-12"/0-300mm	0.01mm / 0.0005" / 1/128"	60	26	21.5	16	390	0.03mm/0.0015"

DIGITAL ELECTRONIC CALIPERS

4-KEY DIGITAL ELECTRONIC CALIPERS

.0005"/0.01mm INCH/METRIC RESOLUTION

- **Four-key type:** Hold-key, On/Off key, Inch/mm key & Zero key. Enter high/low dimensional limits-out of limits will flash on display.
- Body is hardened stainless steel.
- 4-way measurement for outside, inside, depth and step.
- Thumb roller for moving the slider in small and smooth increments.
- Hold-key can be used for data hold at any position.
- Standard SR 44, 1.55V battery included.
- With fitted case.
- **Meets DIN 862**

REPLACEMENT BATTERY (ITEM #4102-0030)

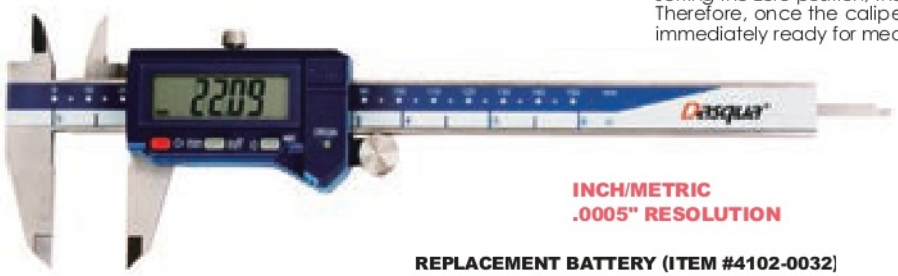
Item#	Range	Accuracy
4100-3006	0-6" /0-150mm	± .001"/.02mm
4100-3008	0-8" /0-200mm	± .001"/.03mm
4100-3012	0-12" /0-300mm	± .0015"/.04mm

Dasqua® ABSOLUTE IP54 WATER RESISTANT DIGITAL ELECTRONIC CALIPERS

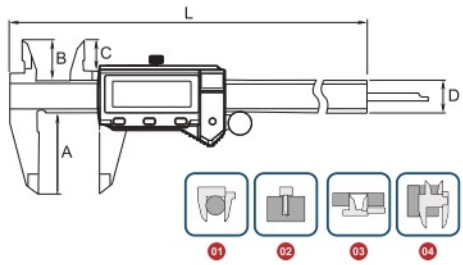
BLUETOOTH TRANSMITTER | mm/in/F | IP54 COOLANT & FLUID RESISTANT | Battery + CR2032 | Absolute | DIN 862

- IP54 protection agaist water, oil, dust or any other liquid.
- Hardened stainless steel blade for long life.
- Silky smooth movement throughout.
- Fitted case.

Absolute function NEW and GREAT for precision inspection:
All Dasqua digital calipers with this logo "Absolute" are equipped with the innovative Absolute-Reference System. The zero position just needs to be set once: After setting the zero position, the zero remains memorized for all further measurements. Therefore, once the caliper is switched ON or the slider is moved, the caliper is immediately ready for measurement.



INCH/METRIC
.0005" RESOLUTION



REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
2010-1005	0-6"/0-150mm	0.01mm / 0.0005"	40	20	15.5	16	235	0.02mm/0.001"
2010-1010	0-8"/0-200mm	0.01mm / 0.0005"	50	24	19.5	16	287	0.03mm/0.0015"
2010-1015	0-12"/0-300mm	0.01mm / 0.0005"	60	26	21.5	16	390	0.03mm/0.0015"

FLIP OVER DIGITAL ELECTRONIC CALIPERS

- Display flips 180° with display rotation function for true left handed operation.
- Can also be positioned for top viewing
- 4-way measurements: OD, ID, Depth and Step.
- Body is hardened stainless steel.
- Thumbroll for smooth measuring.
- True inch/metric conversion.
- Floating zero.
- Standard CR-2032 (3V) battery included.
- With fitted case.

THE FLIP OVER DISPLAY PROVIDES LEFT OR RIGHT HANDED USE!

INCH/METRIC
.0005"/0.01mm RESOLUTION

REPLACEMENT BATTERY (ITEM #4102-0032)

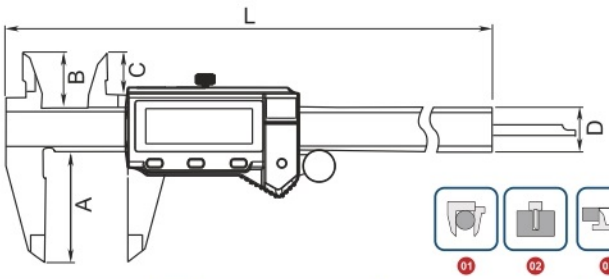
Item#	Range	Accuracy	Battery
4100-3216	0-6"/0-150mm	.001"/ .02mm	CR-2032/3V
4100-3218	0-8"/0-200mm	.001"/ .02mm	CR-2032/3V

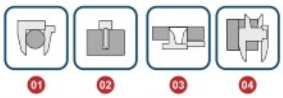
Dasqua® IP67 WATER PROOF DIGITAL ELECTRONIC CALIPERS

mm/in/F · IP67 COOLANT & FLUID RESISTANT · DIN 862 · Battery + CR2032

- Inductive measurement system.
- A-class static protection.
- With calibration certificate.
- Hardened stainless steel blade for long life.
- mm/inch/fraction

INCH/METRIC
.0005" RESOLUTION





ACCESSORIES

Item#	Description
2140-9997	Wireless Transmitter/Receiver
2140-9998	Bluetooth Transmitter
2140-9999	Cable

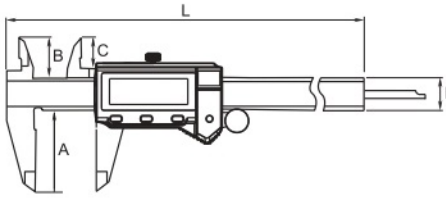
Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
2015-1005	0-6"/0-150mm	0.01mm / 0.0005" / 1/128"	40	20	15.5	16	235	0.02mm/0.001"
2015-1010	0-8"/0-200mm	0.01mm / 0.0005" / 1/128"	50	24	19.5	16	287	0.03mm/0.0015"
2015-1015	0-12"/0-300mm	0.01mm / 0.0005" / 1/128"	60	26	21.5	16	390	0.03mm/0.0015"

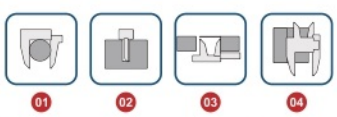
Dasqua® BUILT-IN BLUETOOTH IP54 WATER RESISTENT ABSOLUTE DIGITAL ELECTRONIC CALIPERS

ABSOLUTE

- Strictly made in accordance with **DIN862**.
- IP54 protection against water, oil, dust or any other liquid.
- Silky smooth movement throughout.
- Hardened, ground and lapped measuring surfaces.

INCH/METRIC
.0005" RESOLUTION





Battery + CR2032 · DIN 862 · mm/in/F · IP54 COOLANT & FLUID RESISTANT · Absolute

Item#	Range	Reading	(mm) A	B	C	D	L	Accuracy
2025-1005	0-6"/0-150mm	0.01mm / 0.0005" / 1/128"	40	20	15.5	16	235	0.02mm/0.001"
2025-1010	0-8"/0-200mm	0.01mm / 0.0005" / 1/128"	50	24	19.5	16	287	0.03mm/0.0015"
2025-1015	0-12"/0-300mm	0.01mm / 0.0005" / 1/128"	60	26	21.5	16	390	0.03mm/0.0015"

DIGITAL ELECTRONIC CALIPERS

LONG RANGE DIGITAL ELECTRONIC CALIPERS

- Resolution to .0005"/ .01mm on high contrast LCD display.
- Internal and external measurement.
- Absolute/Incremental measurement with fine adjustment.
- Body is hardened stainless steel , no-glare satin reading.
- Standard SR 44, 1.55V battery included.
- Switchable inch/metric.
- Preset function.
- On/Off button.
- With fitted wood case.
- Meets DIN 862

Item#	Range	Jaw Length	Radiused Jaw Width	Accuracy
4100-0033	0-20"/ 0-500mm	4	0.787"	± 0.002"/ 0.05mm
4109-1034	0-24"/ 0-600mm	4	0.80"	± 0.002"/ 0.05mm
4109-1036	0-40"/ 0-1000mm	5	0.80"	± 0.002"/ 0.06mm
4100-0037	0-60"/ 0-1500mm	5-1/4	0.787"	± 0.004"/ 0.10mm
4100-0038*	0-80"/ 0-2000mm	6	0.787"	± 0.004"/ 0.10mm

Radiused jaws for accurate ID measurement

INCH/METRIC
.0005" RESOLUTION

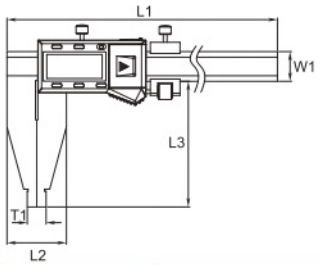
REPLACEMENT BATTERY (ITEM #4102-0030)

* Truck Ship Only

Dasqua® INDUSTRIAL HEAVY DUTY DIGITAL ELECTRONIC CALIPERS

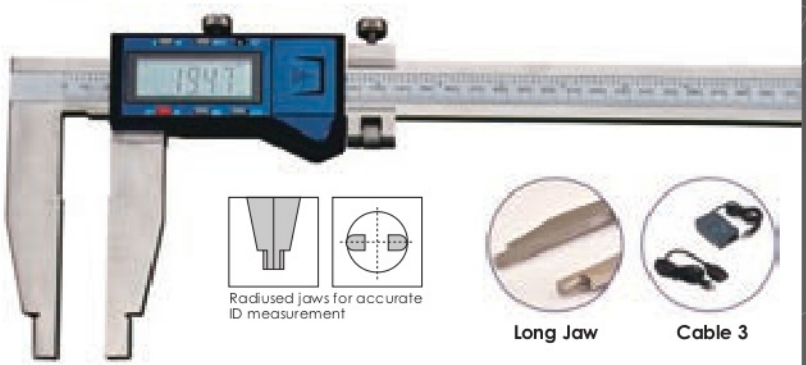
Battery CR2032 | CABLE 03 | DIN 862 | mm/in | Data output

- Strictly made in accordance with **DIN862**.
- With fine adjustment.
- With hold function.
- Hardened stainless steel construction for long life.
- Metric/Inch conversion.



Competitive Price compared to other industrial-grade heavy duty calipers

INCH/METRIC
.0005" RESOLUTION



Radiused jaws for accurate ID measurement

Long Jaw

Cable 3

Item#	Range	Reading	(mm) L1	L2	L3	W1	T1	Accuracy
2220-8113	0-12"/0-300mm	0.01mm / 0.0005"	445	40	90	20	12.7	0.04mm/0.002"
2220-8116	0-24"/0-600mm	0.01mm / 0.0005"	770	44	100	24	20.32	0.05mm/0.002"
2220-8119	0-40"/0-1000mm	0.01mm / 0.0005"	1210	46	125	30	20.32	0.06mm/0.0025"

Cable 3 (ITEM #2220-9999)

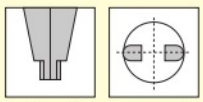
Pro-Series LONG RANGE DIGITAL ELECTRONIC CALIPERS

- Manufactured and inspected at world class factory that produces highest quality US brands.
- Switchable inch/metric.
- High contrast LCD display.
- Preset function.
- On/Off button.
- Internal and external measurement.
- Absolute/Incremental measurement with fine adjustment.
- Body is hardened stainless steel , no-glare satin reading.
- Standard CR-2032, 3V battery included.
- With fitted case.
- Meets DIN 862

INCH/METRIC
.0005" / .01MM RESOLUTION

REPLACEMENT BATTERY (ITEM #4102-0032)

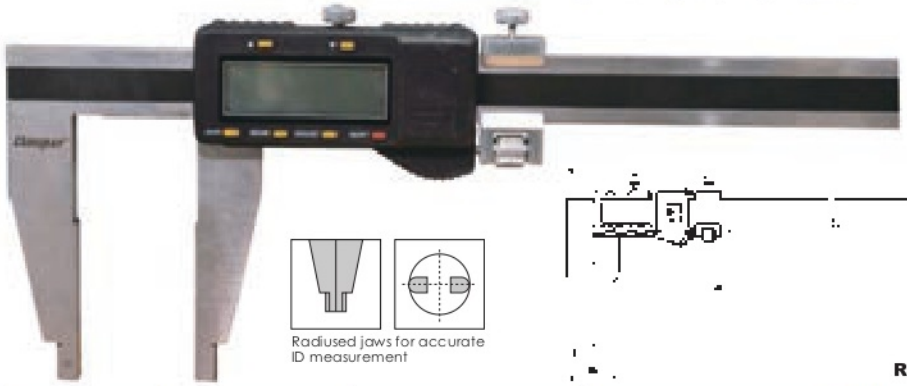
Limited Supply!



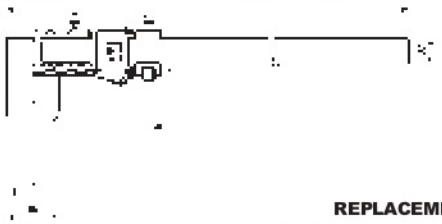
Radiused jaws for accurate ID measurement

Item#	Range	Jaw Length	Radiused Jaw Width	Accuracy
4100-0233	0-20"/ 0-500mm	4"	0.787"	± .001"/ .02mm
4100-0234	0-24"/ 0-600mm	4"	0.787"	± .0015"/ .03mm
4100-0236	0-40"/ 0-1000mm	6"	0.787"	± .002"/ .05mm

Dasqua® IP54 WATER RESISTENT LONG RANGE DIGITAL ELECTRONIC CALIPERS



Radiused jaws for accurate ID measurement



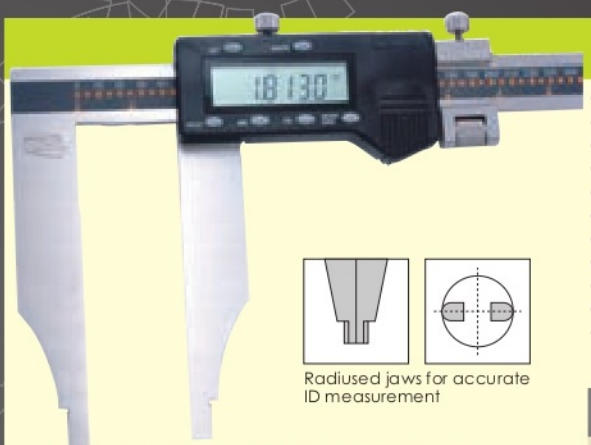
IP54 COOLANT & FLUID RESISTANT | Data output | DIN 862 | mm/in | Battery + CR2032

- With sturdy frame and big size for high stability.
- Made of solid stainless steel.
- Strictly made in accordance with **DIN862**.
- With fine adjustment.
- With Data-Output and Metric-Inch Conversion function.

REPLACEMENT BATTERY (ITEM #4102-0030)

Item#	Range	Resolution	(mm) L	A	B	W	T	Accuracy
2220-3575	0-60"/0-1500mm	0.01mm / 0.0005"	1800	80	125	41.5/52	20	0.11/0.0045"
2220-3580	0-80"/0-2000mm	0.01mm / 0.0005"	2300	80	150	41.5/52	20	0.14/0.0055"

Z-Limit LONG- JAW DIGITAL ELECTRONIC CALIPERS



Radiused jaws for accurate ID measurement

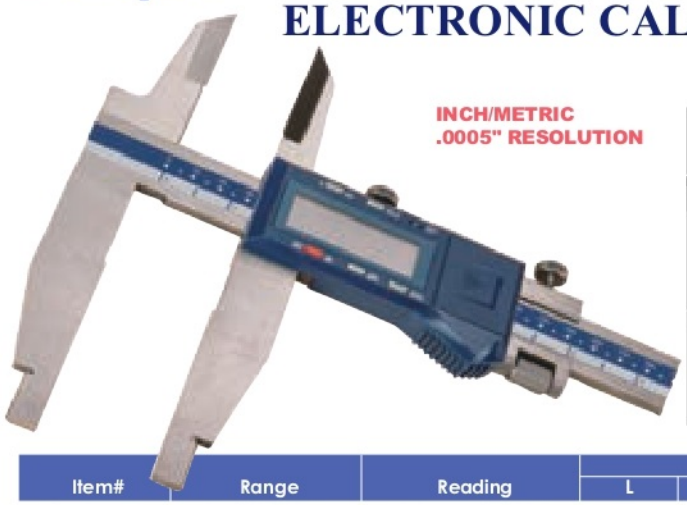
- **Manufactured and inspected at world class factory that produces highest quality US brands.**
- Internal and external measurement.
- Absolute/Incremental measurement with fine adjustment.
- Body is hardened stainless steel , no-glare satin reading.
- Standard CR-2032, 3V battery included.
- Switchable inch/metric.
- High contrast LCD display.
- Preset function.
- On/Off button.
- With fitted case.
- **Meets DIN 862**

INCH/METRIC .0005" / .01MM RESOLUTION

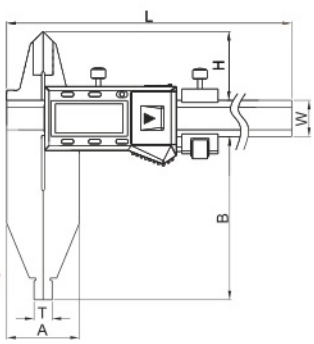
REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Jaw Length	Radiused Jaw Width	Accuracy
4109-0242	0-24"/ 0-600mm	6"	0.787"	± .0015"/ .03mm
4109-0243	0-24"/ 0-600mm	8"	0.787"	± .0015"/ .03mm

Dasqua® IP54 WATER PROOF HEAVY DUTY DIGITAL ELECTRONIC CALIPERS-WITH UPPER JAWS

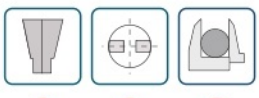


INCH/METRIC .0005" RESOLUTION



IP54 COOLANT & FLUID RESISTANT | Data output | DIN 862 | mm/in | Battery + CR2032

- With sturdy frame and big size for high stability.
- Made of solid stainless steel.
- Strictly made in accordance with **DIN862**.
- With fine adjustment.
- With Data-Output and Metric-Inch Conversion function.



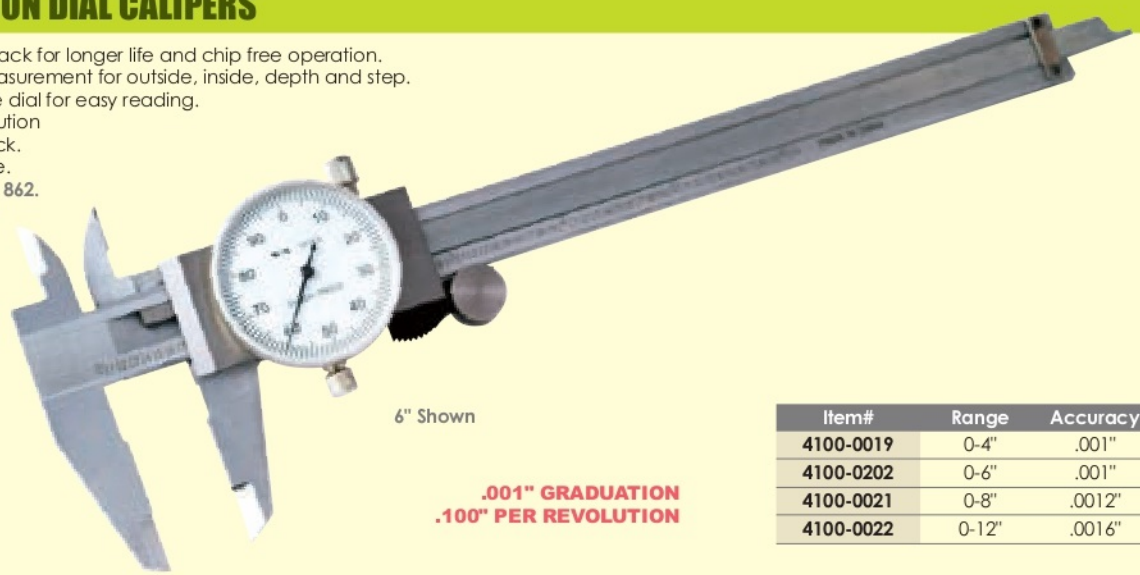
01 02 03

Item#	Range	Reading	(mm) L	A	B	W	T	H	Accuracy
2710-1105	0-12"/0-300mm	0.01mm / 0.0005"	445	40	90	20	10	38	0.04mm/0.002"
2710-1110	0-20"/0-500mm	0.01mm / 0.0005"	670	52	150	24	20	60	0.05mm/0.002"
2710-1113	0-24"/0-600mm	0.01mm / 0.0005"	770	54	150	24	20	60	0.05mm/0.002"
2710-1115	0-40"/0-1000mm	0.01mm / 0.0005"	1210	60	150	30	20	63	0.06mm/0.0025"

DIAL CALIPERS

PRECISION DIAL CALIPERS

- Covered rack for longer life and chip free operation.
- 4-way measurement for outside, inside, depth and step.
- Adjustable dial for easy reading.
- One revolution
- Positive lock.
- Fitted case.
- Meets DIN 862.



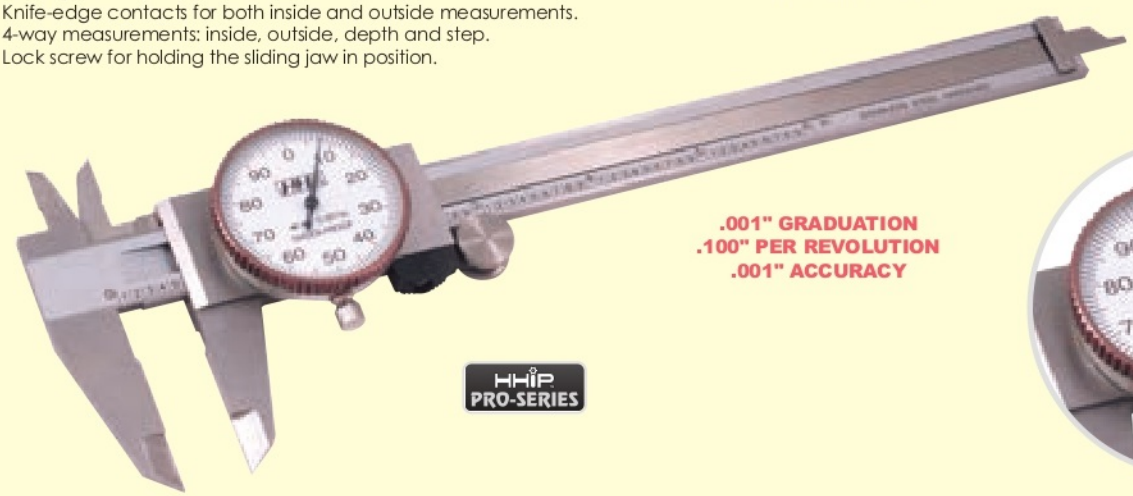
6" Shown

.001" GRADUATION
.100" PER REVOLUTION

Item#	Range	Accuracy
4100-0019	0-4"	.001"
4100-0202	0-6"	.001"
4100-0021	0-8"	.0012"
4100-0022	0-12"	.0016"

Pro-Series PRECISION DIAL CALIPER

- Direct reading, reliable and accurate.
- Graduations of .001" in one revolution.
- Hardened stainless steel bar, rack, gears, depth rod and measuring faces.
- Screw on rack, covered for chip free operation.
- Shock proof.
- Knife-edge contacts for both inside and outside measurements.
- 4-way measurements: inside, outside, depth and step.
- Lock screw for holding the sliding jaw in position.
- One hand use with the thumb operated fine adjustment roller.
- Decimal, Fraction Conversion chart on back of caliper.
- Lock screw for knurled dial (1-1/2") bezel.
- With fitted case.
- Meets DIN 862



.001" GRADUATION
.100" PER REVOLUTION
.001" ACCURACY

BLACK FACE PRECISION DIAL CALIPERS

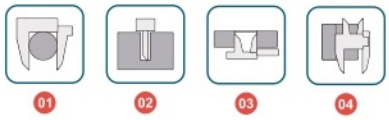
- Covered rack for longer life and chip free operation.
- 4-way measurement for outside, inside, depth and step.
- Adjustable dial for easy reading.
- One revolution
- Positive lock.
- Fitted case.
- Meets DIN 862.

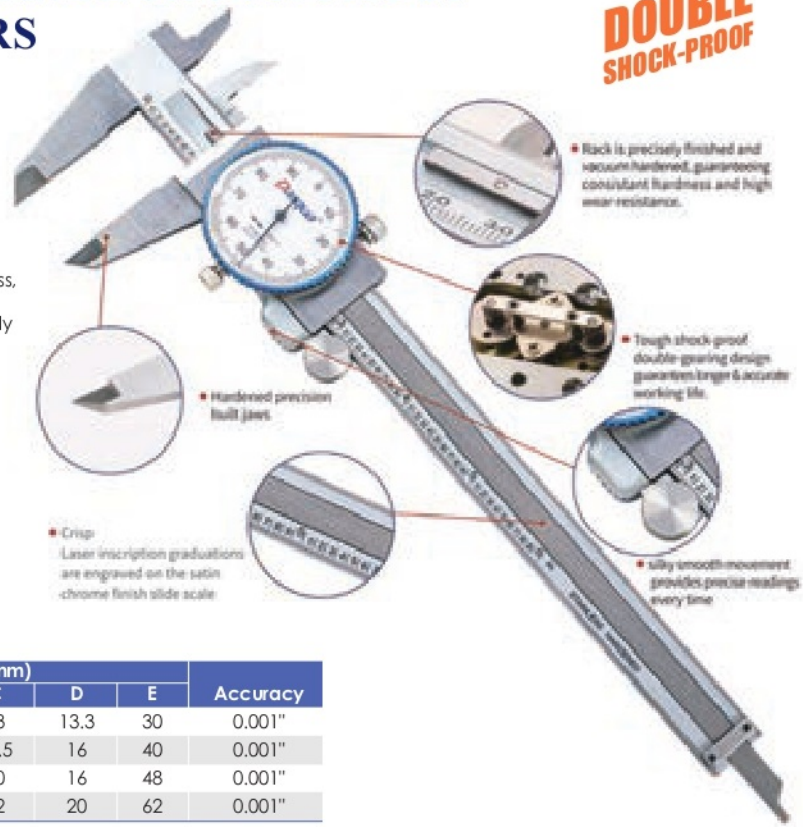
.001" GRADUATION
.100" PER REVOLUTION

Item#	Range	Accuracy
4100-0201	0-6"	.001"
4100-0221	0-12"	.0016"

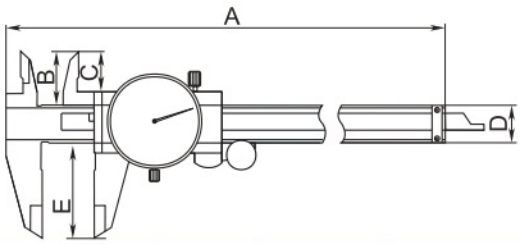
Dasqua® MACHINIST GRADE SHOCK PROOF DIAL CALIPERS

DIN 862 | SHOCK-PROOF





- The entire body jaws are vacuum hardened with uniform hardness, guaranteeing longer wear-resistance and longer service life.
- The upper and lower parts of the slide scale body are precisely ground to ensure smooth operation.
- Strictly in accordance with **DIN862** standard.
- Made of high quality stainless steel.



Item#	Range	Graduation	(mm) A	B	C	D	E	Accuracy
1332-4105	0-4"	0.001"	169	18	13	13.3	30	0.001"
1332-4110	0-6"	0.001"	236	21	16.5	16	40	0.001"
1332-4115	0-8"	0.001"	285	24	20	16	48	0.001"
1332-4120	0-12"	0.001"	410	28	22	20	62	0.001"

Z-Limit ULTRA QUALITY SHOCK PROOF DIAL CALIPER

- **Manufactured and inspected at world class factory that produces highest quality European brands.**
- Graduations of .001" in one revolution.
- Hardened stainless steel very well finished.
- Smooth operating, Shockproof.
- Screw on rack.
- Knife-edge contacts for both inside and outside measurements.
- 4-way measurements: inside, outside, depth and step.
- One hand use with the thumb operated fine adjustment roller.
- With fitted durable case.
- **Meets DIN 862**

Z-Limit ULTRA-SERIES

Limited Supply!

.001" GRADUATION
.001" ACCURACY
SMOOTH MOVEMENT

Z-Limit SHOCK PROOF DIAL CALIPERS WITH METAL HOUSING

.001" GRADUATION

Z-Limit ULTRA-SERIES

- **Manufactured and inspected at world class factory that produces highest quality US brands.**
- 4-way measuring: outside, inside, depth and step.
- Sliky smooth movement throughout the entire range, tough, shockproof design.
- Stainless steel construction.
- .100" range per revolution.
- .001" reading dial face.
- Supplied in a shop-hardened case.

Limited Supply!

Item#	Range	Accuracy	Jaw Length
4109-2801	0-6"	.001"	1.6"
4109-2802	0-8"	.001"	2.0"
4109-2803	0-12"	.0015"	2.5"

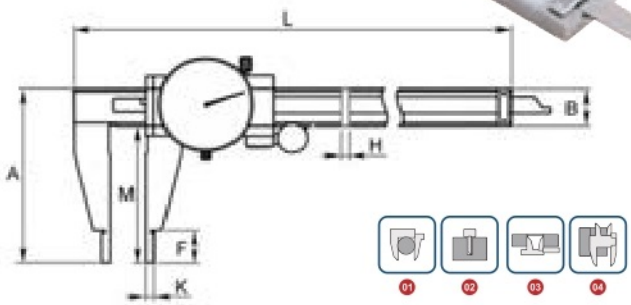
LONG RANGE DIAL CALIPERS

Dasqua® LONG RANGE HEAVY DUTY SHOCK PROOF DIAL CALIPERS

SHOCK -PROOF | DIN 862

- Tough shock-proof gearing.
- 4 usages for measuring outside diameter, inside diameter, step and depth.
- Solid stainless steel construction.
- Strictly made in accordance with DIN862.
- Distinct lines and figures laser etched against satin chrome finish.
- Locking screw for stable reading.
- Extra rigid main beam for high stability.
- Hardened, ground and lapped measuring surfaces.
- Silky smoothy movement throughout.
- Beam graduation in 0.100" increments.

.100" PER REVOLUTION
.001" GRADUATION

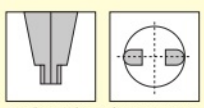


Item#	Range	Graduation	(mm) L	A	B	F	H	K	M	Accuracy
1432-4105	0-18"	0.001"	580	108	22	20	6.0	5	86	±0.002"
1432-4110	0-20"	0.001"	630	108	22	20	6.0	5	86	±0.002"
1432-4115	0-24"	0.001"	730	108	22	20	6.0	5	86	±0.002"
1432-4120	0-40"	0.001"	1200	168	28	22	8.0	10	140	±0.0025"

Ultra-Series LONG RANGE DIAL CALIPERS

- Manufactured and inspected at world class factory that produces highest quality US brands.
- Made of stainless steel hardened and precision ground.
- One revolution per each 0.100"
- Covered screw-on rack made from one piece.
- 3-way measurement: Outside, Inside and Depth.
- Thumb roll for rapid measuring.
- Beam graduation in 0.100" increments stain chrome finished.
- With fitted case.
- Meets DIN 862

SMOOTH MOVEMENT



Radiused jaws for accurate ID measurement

Limited Supply!

.100" PER REVOLUTION
.001" GRADUATION

Item#	Range	Jaw Depth	Radiused Jaws Width	Accuracy
4100-2428	0-18"	4"	0.787"	.0028"
4100-2430	0-20"	4"	0.787"	.0030"
4100-2434	0-24"	4"	0.787"	.0038"

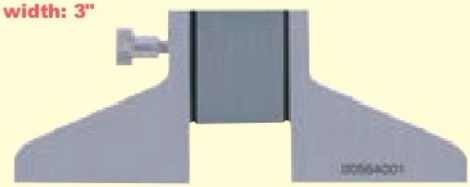
CENTER LINE GAGE SETS

- Checks distance between different size hole, or to an edge from a hole. Cone will seek center.
- Adapts to most dial calipers.
- Reads in exact figures.
- High grade alloy steel.

Item#	For
4100-0040	4", 6", 8" Calipers
4100-0041	10", 12" Calipers

Z-Limit DEPTH MEASURING BASE FOR 6" CALIPERS

Slot width: .64"
Base width: 3"



CALIPER ACCESSORY KIT

- Components are hardened.
- 4.1mm slot to fit all kinds of brands.
- **Kit includes:**
  4 sets of points
  4 sets of screws
  1 set of clamps
  1 Allen wrench

REPLACEMENT BATTERIES FOR DIGITAL ELECTRONIC CALIPERS

Battery height 5.40mm.
Battery diameter 11.60mm.

Battery height 3.2mm.
Battery diameter 20mm.

CASES FOR CALIPERS (REPLACEMENT)

- Fits most dial and electronic calipers.
- Durable ABS material.
- **Case only.**

Item#	Fits Caliper	LxWxThick
4100-0030CASE	6"	9.8x3.5x1"
4100-0031CASE	8"	12.0x3.8x1"
4100-0032CASE	12"	16.7x4.9x1.1"

Pro-Series CASES FOR CALIPERS (REPLACEMENT)

- Fits most dial and electronic calipers.
- Durable ABS material.
- Modern & advanced design provides extra protection & depth accesory storage.
- **Case only.**

Item#	Fits Caliper	LxWxThick
4100-0030CV	6"	10.5x4x1.4"
4100-0031CV	8"	13x5x1.4"
4100-0032CV	12"	17X5.5X1.4"

VERNIER CALIPERS

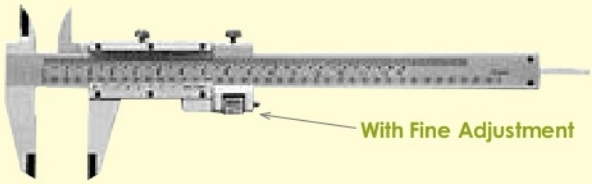
PLASTIC VERNIER CALIPER

- Made from durable plastic material.
- 3-way measurement: Inside, outside and depth
- Nice promotion item packed with blister card.
- Neon colors.

INCH/METRIC

Item#	Description	Graduation
4100-0001	0-6"/0-150mm	1/128"/ 0.05mm

PRECISION VERNIER CALIPER W/FINE ADJUSTMENT



- Satin chrome finish: Non-glare.
- Measuring faces are ground.
- Supplied with case.

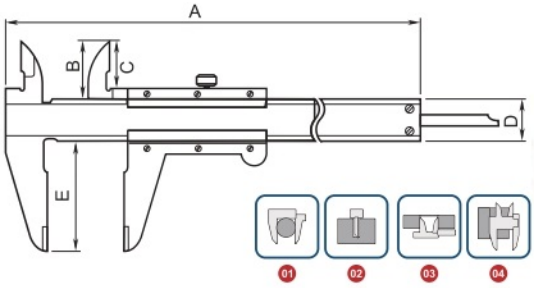
Limited Supply!

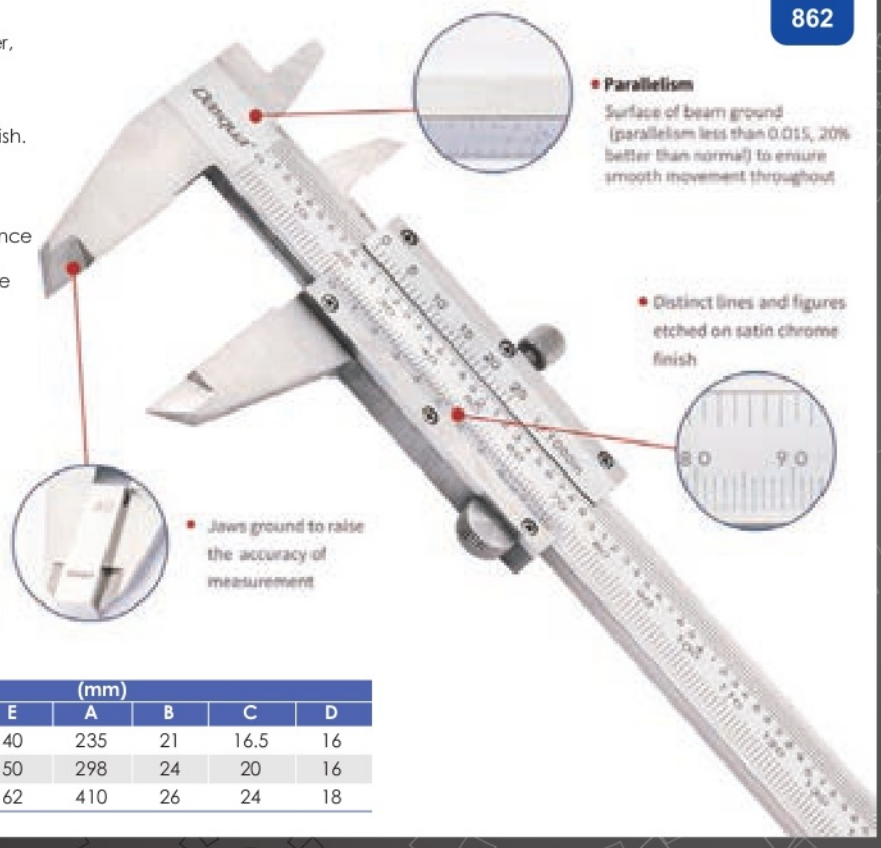
INCH/METRIC
.001"/ .02mm GRADUATION

Dasqua® VERNIER CALIPERS-LOCKING SCREW

DIN 862

- 4 usages for measuring outside diameter, inside diameter, step and depth.
- Made of solid stainless steel.
- Strictly made in accordance with DIN862.
- Distinct lines and figures etched against satin chrome finish.
- With locking acrew for stable reading.
- Dual reading scales on vernier scale.
- Accuracy .0015"/.03mm.
- Ground and lapped measuring face provides wear resistance and long life.
- Ralsed sliding surface-helps prevent defacement of scale graduations.
- Case included.



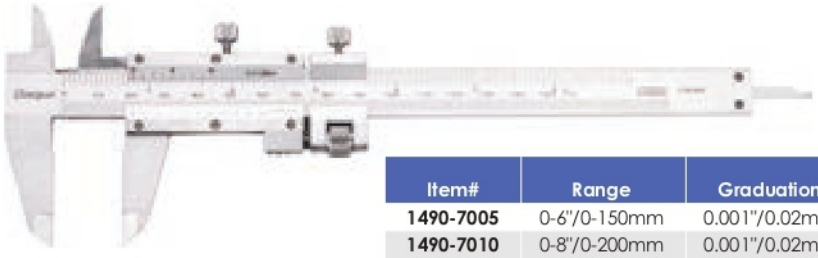


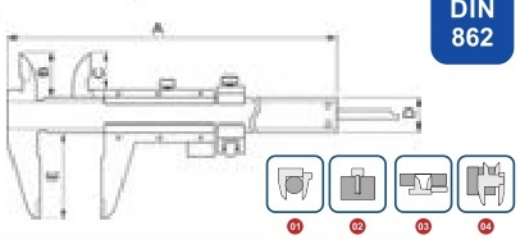
Item#	Range	Reading	(mm) E	A	B	C	D
1550-2005	0-6"/0-150mm	0.02mm/0.001"	40	235	21	16.5	16
1550-2010	0-8"/0-200mm	0.02mm/0.001"	50	298	24	20	16
1550-2015	0-12"/0-300mm	0.02mm/0.001"	62	410	26	24	18

Dasqua® VERNIER CALIPERS-WITH FINE ADJUSTMENT

DIN 862

- 4 usages for measuring outside, inside, step and depth.
- Made of solid stainless steel.
- Strictly made in accordance with DIN862.
- Distinct lines and figures etched against satin chrome finish.
- With locking screw for stable reading.
- With fine adjustment.



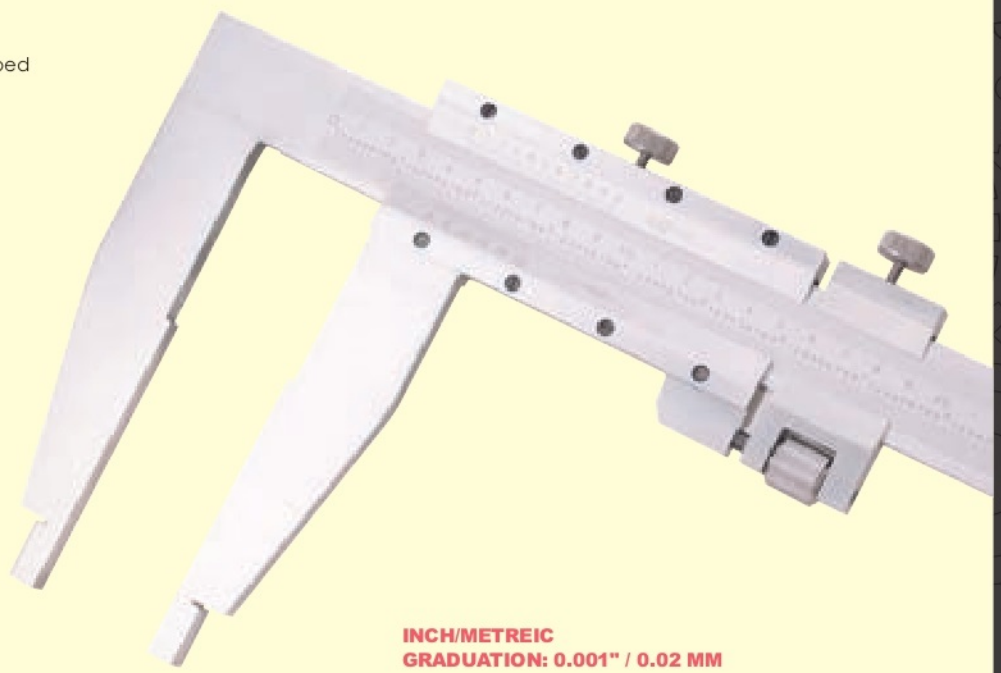


Item#	Range	Graduation	(mm) A	B	C	D	E	Accuracy
1490-7005	0-6"/0-150mm	0.001"/0.02mm	235	21	16.5	16	40	0.03mm
1490-7010	0-8"/0-200mm	0.001"/0.02mm	298	24	19.5	16	50	0.03mm
1490-7015	0-12"/0-300mm	0.001"/0.02mm	410	26	20.0	18	55	0.03mm

PRECISION HEAVY DUTY LONG RANGE VERNIER CALIPERS

- With fine adjustment thumb screw
- Hardened stainless steel throughout.
- All measuring surfaces are ground and lapped for extreme accuracy.
- Supplied in wooden case.
- Satin chrome finish: Non-glare.
- Meets DIN 862

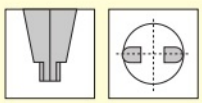
Reading .001"/ .02mm



INCH/METREIC
GRADUATION: 0.001" / 0.02 MM

Item#	Range	Jaw Depth	Radiused Jaw Width
4100-0006	0-24" / 0-600mm	4"	10mm
4100-0008	0-40" / 0-1000mm	5-1/2"	20mm
4100-0009	0-60" / 0-1500mm	6-1/2"	20mm
4100-0010+	0-80" / 0-2000mm	7-1/2"	30mm

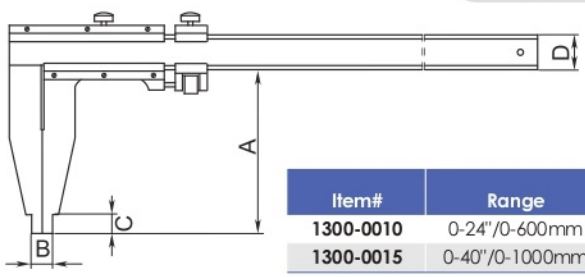
+ Truck Ship Only

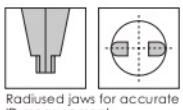


Radiused jaws for accurate ID measurement

Dasqua® LONG JAW VERNIER CALIPERS

- Hardened ground jaws with precision lapped measuring faces.
- Satin chrome finish, hardened stainless steel throughout for longer life.
- Black lines and figures against the satin chrome finish provide easy and error-free reading.
- Inch/Metric graduation.
- Two-way measurement: ID and OD.
- Jaws have rounded measuring faces for accurate inner diameter (ID) readings.
- Fine adjustment for precision measurement.
- Long jaws for hard to reach areas.
- Fitted plastic case.





Radiused jaws for accurate ID measurement

Item#	Range	Reading	(mm) A	B	C	L	Accuracy
1300-0010	0-24"/0-600mm	0.001"/0.02mm	100	10	12	25	±0.05mm/0.002"
1300-0015	0-40"/0-1000mm	0.001"/0.02mm	125	20	18	32	±0.07mm/0.0028"

INSPECTION SETS

Pro-Series 3PC INSPECTION TOOL KIT

0~6" Dial Caliper:
- 0.001" graduation in one revolution,
- Hardened stainless steel, screw-on rack, shock-proof,
- 4-way measurements (inside, outside, depth and step),
- Dial face 1-1/2" diameter with special designed knurled bezel,
- Decimal and fraction conversion chart on back of caliper

0~0.03" Dial Test Indicator:
- 0-15-0 reading, 0.0005" graduation,
- Complete with 2 stems(5/32"&3/8"),
- Precision pivot bearing,
- 0.098" contact point,
- Dovetail mounts (top, back & front),
- Jeweled movements,
- Auto reversing.

Limited Supply!

0~1" Outside Micrometer:
- 0.0001" graduation,
- Anvil and spindle hardened and precision ground, carbide tipped measuring faces, ratchet stop,
- Adjustment wrench supplied

4PC STUDENT'S KIT

0~1" Outside Micrometer:
- 0.0001" graduation
- Carbide tipped
- Ratchet stop

4" Bevel Squarer:
- Beam size 2-3/4"
- Ground and lapped accuracy for straightness, parallelism, and at right angles.

0~6" Dial Caliper:
- 0.001"graduation
- 4-way measurement
- Stainless steel
- Shock-proof

6" Flex Ruler:
- 4R graduation
- Satin chrome finish
- Stainless steel

6PC CALIPER, MICROMETER & SQUARE KIT

0~6" Dial Caliper:
- 0.001"graduation
- 4-way measurement
- Stainless steel
- Shock-proof

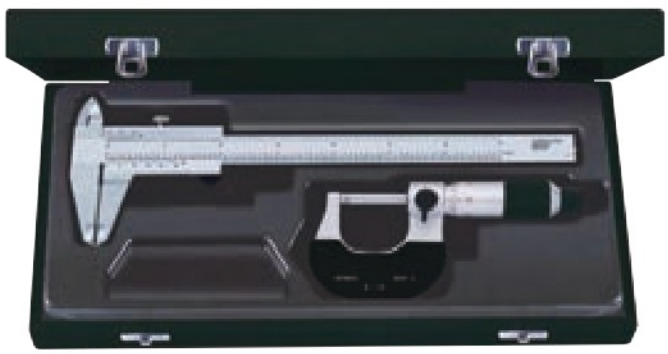
Combination Square:
- 12" 4R blade
- Square head
- Protractor head
- Center head

0-1" Outside Micrometer:
- 0.0001" graduation
- Carbide tipped
- Ratchet stop

Z-Limit 2PC VERNIER CALIPER & MIC KIT

- **Manufactured and inspected at world class factory that produces highest quality US brands.**
- 0~1" Outside Micrometer, Resolution: .0001"
- 0~6" Vernier Caliper, Resolution: .001"/ 1/128"

Limited Supply!



6PC INSPECTION TOOL KIT

22pc Indicator Point Set:
- AGD specification (4-48 threads)
- Fits most indicators

0-0.03" Dial Test Indicator:
- 0.0005" graduation,
- Complete with 2 stems (5/32" & 3/8")

0-1" Outside Micrometer:
- 0.0001" graduation
- Carbide tipped
- Ratchet stop

0~6" Dial Caliper:
- 0.001"graduation
- 4-way measurement
- Stainless steel
- Shock-proof

0-1" Dial Indicator:
- 0.001" graduation
- 2" dial face

Magnetic Base:
- Fine adjustment
- 130 lbs. power pull.

Dasqua® 7PC ULTRA PRECISION MACHINIST KIT

IP67 COOLANT & FLUID RESISTANT

SET INCLUDES:

- 176lbs. super strong power pull 275mm arm length magnetic base with fine adjustment (7121-0025)
- Big screen IP67 oil proof digital caliper, 0-150mm/0-6" range, 0.0005" resolution, inch/metric/fraction (2015-2405)
- 0-150mm/0-6" rule, graduations: 0.5, 1.0, 1/64", 1/32", 1/16" (1012-2011)
- IP65 digital outside micrometer, 0-25mm/0-1" range, 0.0005" resolution (4410-1105)
- Dial test indicator with shock proof gearing, 0-0.8mm range, 0.001" resolution (5211-1129)
- Ultra precision 1-2-3 blocks, squareness 0.0001"/1" (8407-0005)
- Depth base attachment (3001-1001)

A MUST FOR EVERY MACHINIST!

Z-Limit 2PC ELECTRONIC CALIPER & MIC KIT

- Manufactured and inspected at world class factory that produces highest quality US brands.
- 0-1" IP54 Digital Micrometer, Resolution: .00005"
- 0-6" Digital Caliper with Precision Glass Scale, Resolution: .0005"
- Absolute Measuring System
- Standard CR-2032, 3V battery included.

Z-Limit ULTRA-SERIES

IP 54

Limited Supply!

REPLACEMENT BATTERY (ITEM #4102-0032)

Dasqua® 2PC IP54 ABSOLUTE ELECTRONIC MEASURING SET

IP54 COOLANT & FLUID RESISTANT | DIN 862 | DIN 863

mm/in | Battery + CR2032

- Strictly made in accordance with **DIN 862/863**.
- Caliper and micrometer water resistance reach to IP54 standard.
- 0-6"/0-150mm (0.0005"/0.01mm) digital caliper with **Absolute function.**
- 0-1"/0-25mm (0.00005"/0.001mm) digital micrometer.
- Metric/Inch conversion.
- Standard CR-2032, 3V battery included.

RESOLUTION
CALIPER- 0.0005"/0.01mm
MICROMETER- 0.00005"/0.001mm

Limited Supply!

REPLACEMENT BATTERY (ITEM #4102-0032)

PRECISION MEASURING TOOLS

MICROMETER ACCESSORIES

10PC MEASURING TOOL SETTING MASTERS

- Quick easy and extremely accurate.
- Each block comes with a cerificate of calibration.
- Complete with aluminum carry case.
- **Set Includes:**

9pc Gage Blocks(Grade 0): .0625", .100", .125", .200", .250", .300", .500", 1.000", & 2.000"

1 PC Optical Flat: 1" Dia. x .5125" Thickness, .000004" Flatness, .00002" Parallel

12PC MICRO CHECKING SET

Grade AS-0= Grade 2(At) : +4/-2 millionth

- For checking various spindle positions of entire micrometer range.
- Meet or exceeds U.S. Federal specification GGG-G-15C and ISO 9000 requirements.
- Gauge blocks include: .105, .210, .315, .420, .500, .605, .710, .815, .920 & 1.000".
- Optical flats for checking micrometer flatness are .500 & .5125"
- Manufacturer's calibration certificate included.
- Completed with fitted case.

10PC MICRO CHECKING SET

Grade AS-0= Grade 2(At) : +4/-2 millionth

- Meet or exceeds U.S. Federal specification GGG-G-15C and ISO 9000 requirements.
- Gauge blocks include: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000".
- Optical flats for checking micrometer flatness.
- Manufacturer's calibration certificate included.
- Completed with fitted case.

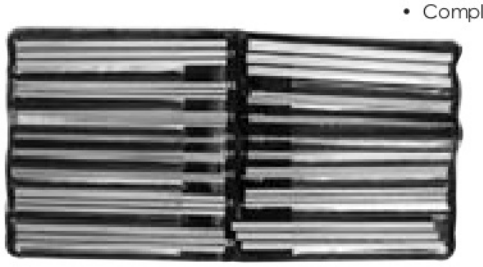
THREAD TRIANGLE

- One pair gauges all 60° threads from 4-80 pitch, standard and special
- For any thread, mic the distance over the triangles, then refer to the chart to determine class of fit
- For special threads, add constant to nominal O.D. and check against mic reading to determine class of fit

For Checking All Standard 60° Threads

INCH & METRIC THREAD WIRE SET

- Measures all metric threads from .5mm to 6mm.
- 48 wires; 16 different sizes.
- Measures all 60° thread
- 3 to 48 threads per inch.
- Laminated chart included.
- Complete in vinyl case.



Pro-Series INCH & METRIC THREAD WIRE SET

- Measures all 60° threads
- 48 pieces -16 different sizes
- Measures all threads from 3 to 48 threads per inch and all metric from 0.5mm to 6mm pitch.
- 3 wire methods of measuring external threads.
- Wires are fitted in a plastic case stamped with sizes.
- Chart compiled from the U.S. Standard Handbook H.28. and gives proper sizes & measurements over wires.
- Comes with 4 wire holders, each holder has 2 pair of holes, each pair of holes for different size of wire and make pitch diameter measuring much easier.

MICROMETER STAND

- Fully adjustable micrometer clamp.
- Non marring.
- Lacquered cast iron base.
- Clamping capacity: 5/8".
- Flat frame style.
- Base weight: 3 lbs.

Limited Supply!

Dasqua® MICROMETER STAND

- Keep hands free for operating micrometer and positioning workpiece.
- Perfect for batch or mass production measurements in manufacturing and quality assurance.
- Blue enamel finish.
- Very sturdy and stable.
- Case iron.

PORTABLE MICROMETER STAND

- Micrometer stand is uniquely designed for easy locking and carrying around.
- Stand can be folded to dimension: 4.6" x 3.2" x 1.5"
- Lacquered cast iron stand weighing 2 lbs.

MICROMETER SOLD SEPARATELY

7PC ANVIL ATTACHMENT KIT FOR OUTSIDE MICROMETERS

- Turns your micrometer into 7 different tools.
- Set contains: ball, spline, knife, super spline, blade, comparator.
- Fits all brands of outside micrometers.
- Attachments other than ball are .500" long. This mount must be subtracted from the total reading.
- Hardened and ground.

BALL ATTACHMENT

- Used for measuring parts with rounded surfaces
- Ball attachment is applied by snapping onto end of either anvil or spindle.
- Anvil Diameter: .250"
- Includes: 1Ball, 1Sleeve

METAL CASES - FOR OUTSIDE MICROMETER SETS

- Well made aluminium case.
- Durable foam inserts for better protecction.
- Fits most outside micrometer sets on the market.

0-12" Case Shown

MICROMETERS NOT INCLUDED

PRECISION MEASURING TOOLS

Dasqua® OUTSIDE MICROMETERS

4112-5110 Shown

- Strictly made in accordance with DIN 863.
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Carbide measuring surfaces ground for longer service life.
- Standards included above 0-1" micrometer.
- Fitted case.

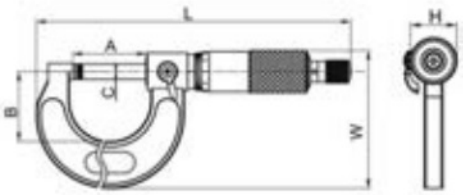
.001" GRADUATION

Item#	Inch	(mm) A	B	C	L	W	H	Accuracy
4112-5105	0-1"	31	29.5	Ø6.5	133	58.5	18	0.0015"
4112-5110	1-2"	56	38	Ø6.5	137.2	76	18	0.0015"
4112-5115	2-3"	81	51	Ø6.5	162.7	91	18	0.002"
4112-5120	3-4"	106	63.5	Ø6.5	210.5	105	18	0.002"

Included

.0001" GRADUATION

Item#	Inch	(mm) A	B	C	L	W	H	Accuracy
4112-0105	0-1"	31	29.5	Ø6.5	133	58.5	18	0.00015"
4112-0110	1-2"	56	38	Ø6.5	137.2	76	18	0.00015"
4112-0115	2-3"	81	51	Ø6.5	162.7	91	18	0.0002"
4112-0120	3-4"	106	63.5	Ø6.5	187.7	105	18	0.0002"
4112-0125	4-5"	131	76	Ø6.5	214.5	125	18	0.00025"
4112-0130	5-6"	156	89	Ø6.5	251	142	18	0.00025"

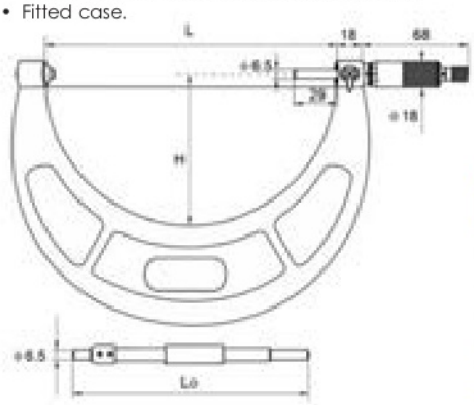


Dasqua® LARGE OUTSIDE MICROMETERS

DIN 862

- Strictly made in accordance with DIN 863.
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Bigger size for larger range.
- Carbide measuring surfaces ground for longer service life.
- Zero setting standard bar
- Tapered designed frame for easier use in narrow slots and tight locations.
- Rigid steel frame is ribbed for extra strength.
- Fitted case.

4112-1150 Shown



.0001" GRADUATION

Item#	Range	(mm) L	H	Lo	Accuracy
4112-1135	6-7"	185	99	150	0.00027"
4112-1140	7-8"	210	111.5	175	0.00027"
4112-1145	8-9"	238	127	200	0.0003"
4112-1150	9-10"	264	140	225	0.0003"
4112-1155	10-11"	289	152.5	250	0.00035"
4112-1160	11-12"	315	165.5	275	0.00035"

Dasqua® OUTSIDE MICROMETER SETS

DIN 863

- Strictly made in accordance with **DIN 863**.
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Standards are included above 0-1" micrometer.

Plastic Case

Aluminium case

.001" GRADUATION

Item#	Set/pcs	Range	Package
4112-0206	3	0-3"	Plastic Case

.0001" GRADUATION

Item#	Set/pcs	Range	Package
4112-0006	3	0-3"	Plastic Case
4112-0010	4	0-4"	Plastic Case
4112-0215	6	0-6"	Aluminium Case
4112-0203	12	0-12"	Aluminium Case

SOLID METAL FRAME OUTSIDE MICROMETERS & SETS

- Solid Mitutoyo style metal C-shape frame for all sizes.
- Graduation: 0.0001"
- Hardened and precision ground anvil spindle thread with microlap finish on ends.
- Positive locking clamp with ratchet stop.
- Carbide tipped faces.
- Meets or exceeds federal specifications.
- Supplied with fitted case.

.0001" GRADUATION

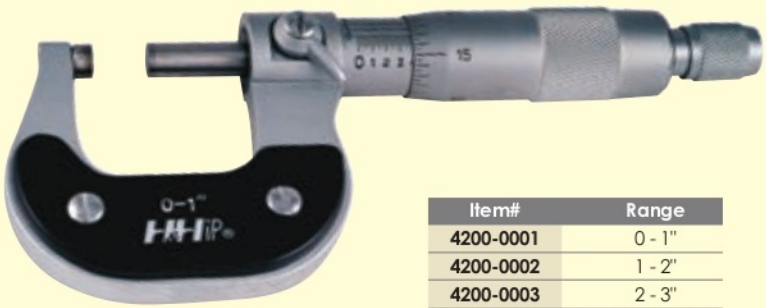
Item#	Range
4200-0150	0-1"
4200-0152	1-2"
4200-0153	2-3"
4200-0154	3-4"
4200-0155	4-5"
4200-0156	5-6"
4200-0157	6-7"
4200-0158	7-8"
4200-0159	8-9"
4200-0160	9-10"
4200-0161	10-11"
4200-0162	11-12"

STANDARDS INCLUDED

PRECISION OUTSIDE MICROMETERS & SETS

- Hardened and precision ground anvil spindle thread with microlap finish on ends.
- Meets or exceeds federal specifications.
- Micro fine graduations.
- Spindle lock.
- Graduation: 0.0001".
- Carbide faces.
- Ratchet stop.
- Fitted case.
- Standards included.

.0001" GRADUATION



Item#	Range
4200-0001	0 - 1"
4200-0002	1 - 2"
4200-0003	2 - 3"
4200-0010	0 - 3" (3pc/set)
4200-0011	0 - 6" (6pc/set)

Dasqua® METRIC OUTSIDE MICROMETER

- Strictly made in accordance with **DIN 863**.
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Made with thermal protection frame.

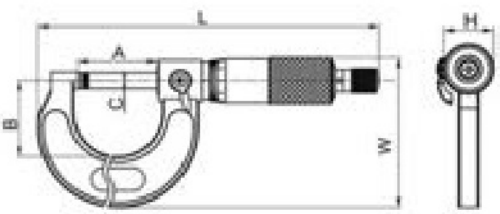
DIN 863

Item#	Range	Graduation	Package
4111-6405	0-25mm	0.01mm	Plastic Box

Dasqua® METRIC OUTSIDE MICROMETERS & SET

DIN 863

- Strictly made in accordance with **DIN 863.**
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Carbide measuring surfaces ground for longer service life.
- Standards included above 0-1" micrometer.
- Fitted case.



.01MM GRADUATION

Item#	Range	(mm) A	B	C	L	W	H	Accuracy
4111-8105	0-25mm	31	29.5	Ø6.5	133	58.5	18	0.004"
4111-8110	25-50mm	56	38	Ø6.5	137.2	76	18	0.004"
4111-8115	51-75mm	81	51	Ø6.5	162.7	91	18	0.004"

Included

DIGITAL READOUT OUTSIDE MICROMETER

- Anvil and spindle hardened and precision ground with microlap finish.
- Carbide tipped measuring faces.
- Ratchet stop.
- Meets or exceeds U.S. Federal specifications.
- Supplied with fitted case.

.0001" GRADUATION

DEEP THROAT MICROMETER

.0001" GRADUATION

- Resolution: 0.0001".
- Ratchet stop thimble for exact and repetitive readings.
- Positive locking clamp.
- Carbide tipped measuring faces.
- The spindle thread is hardened, ground and lapped.
- For taking accurate measurements of steel and plastic sheets and plates wherever there is a deep depth.

Item#	Range	Throat Depth	Accuracy
4200-0208	0-1"	6"	.0001"

INTERCHANGEABLE ANVIL MICROMETERS

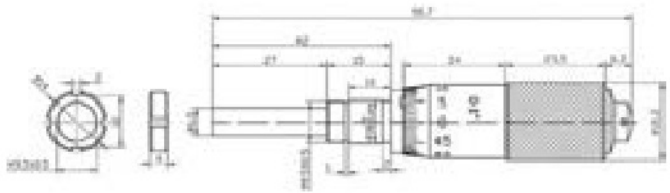
- Long range outside micrometers.
- Pipe combined steel frame provides lightness plus extreme rigidity for perfect balance.
- Micro fine graduations.
- Carbide tipped measuring faces.
- Ratchet stop.
- Fitted case.
- Standards included.

.001" GRADUATION

Item#	Range	Accuracy
4200-0171	12-16"	.001"
4200-0172	16-20"	.001"
4200-0173	20-24"	.001"
4200-0174	24-28"	.001"
4200-0175	28-32"	.001"

Dasqua® MICROMETER HEADS

- Used for improving accuracy in machines, gaging, test equipment, electronics, optical instruments and machine instruments.
- Satin chrome finished-no glare and resists rust.
- Quick reading on thimble.
- Flat face spindle with high precision.
- Rachet thimble and threads are hardened ground and lapped for consistent repeatability and accuracy.
- Quick and easy adjustment.
- Carbide measuring surfaces ground for longer service life.



.001" GRADUATION

Item#	Range	Accuracy
4812-5105	0-0.25"	0.0015"
4812-5110	0-0.5"	0.0015"
4812-5115	0-1"	0.0015"
4812-5120	0-2"	0.0015"

Dasqua® BALL SPHERICAL FACE MICROMETERS

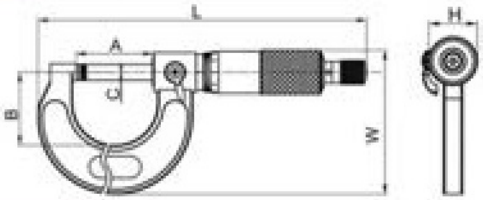
DIN 863

- For measuring wall thickness of various curvedparts & tubes, including barings, sleeves, collars, rings, cylinders and from a hole to an edge.
- Strictly made in accordance with DIN 863.
- Accuracy: 0.0001"/0.004mm.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Barrel and thimble satin chrome finish.
- Carbide measuring face.
- Clear graduations on satin chrome finish for easy reading.
- Quick and easy zero adjustment on sleeve.
- Positive lever locking clamp and rachet stop.
- Ideal for measuring convex curves directly without having to subtract the diameter of the ball.
- Supplied with fitted case.

4510-2305 Shown

4510-2310 Shown

.0001" GRADUATION



Item#	Range	(mm) A	B	C	L	W	H	Accuracy
4510-2305	0-1"	31	29.5	Ø6.5	133	58.5	18	0.00015"
4510-2310	1-2"	56	38	Ø6.5	137.2	76	18	0.00015"

SCREW THREAD MICROMETER KITS

- Direct reading of pitch diameter in threads with interchangeable anvil and spindle pairs.
- Anvils and spindles made of tool steel, hardened and ground.
- Micro fine slant line graduations.
- Ratchet stop.
- With fitted case.

.001" GRADUATION

Anvil in Pairs	Pitch TPI
#1	64~48
#2	44~28
#3	24~14
#4	13~9
#5	8~5
#6	4.5~3.5
#7	28~20
#8	18~12
#9	11~7
#10	6~4.5

Item#	Range	Anvils
4200-0226	0-1"	#1-5
4200-0227	1-2"	#2-6
4200-0228	2-3"	#7-10

ELECTRONIC SCREW THREAD MICROMETER KIT

- Non-rotation spindle
- 60° V-shaped and knife-edged anvils
- With cable for RS232 output.
- Ratchet stop.
- With fitted case.
- Direct RS232 output.

INCH/METRIC
.00005" GRADUATION

Anvil in Pairs	Pitch TPI	Pitch MM
#1	64~48	.4~.5
#2	44~28	.6~.9
#3	24~14	1.0~1.75
#4	13~9	2~3
#5	8~5	3.5~5.0

REPLACEMENT BATTERY (ITEM #4102-0030)

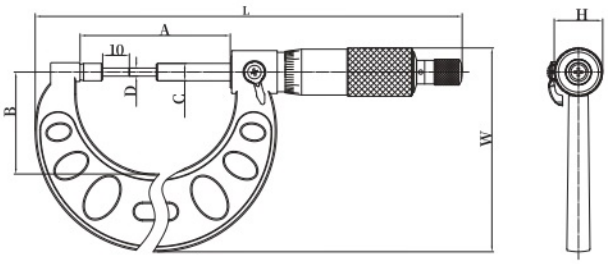
Item#	Range	Anvils
4200-0361	0-1"	#1-5

Dasqua® VERNIER SPLINE MICROMETERS

DIN 863

- For measuring spline shafts, slots and keyways.
- Strictly made in accordance with DIN863.
- Graduation: 0.0001".
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Barrel and thimble have satin chrome finish.
- Carbide measuring face.
- Clear graduations on satin chrome finish for easy reading.
- Quick and easy zero adjustment on sleeve.
- Positive lever locking clamp and rachet stop for exact readings.
- The anvil & shaft have a small diameter for measuring splined shafts, slots, and keyways.
- Supplied with standards bar except 0-1" model.
- Non-rotating spindle.
- Supplied with fitted case.

.0001" GRADUATION



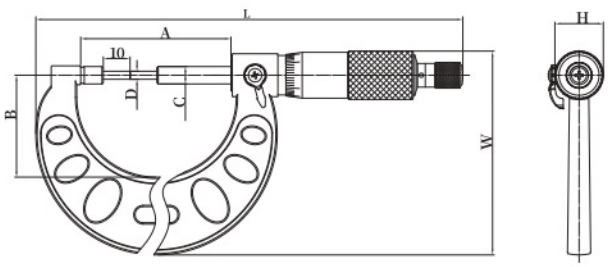
Item#	Range	Resolution	(mm) A	B	C	L	W	H	Accuracy
4710-2305	0-1"	0.0001"	56	38	Ø6.5	137.2	76	18	0.004mm/0.00015"
4710-2310	1-2"	0.0001"	55.3	31	Ø6.5	162.7	91	18	0.004mm/0.00015"
4710-2315	2-3"	0.0001"	80.8	44	Ø6.5	187.7	105	18	0.004mm/0.0002"

Dasqua® POINTED SPINDLE & ANVIL MICROMETERS

DIN 863

- For measuring the web thickness of drills, small grooves, and other hard to reach dimensions.
- Strictly made in accordance with DIN 863.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Barrel and thimble have satin chrome finish.
- Carbide measuring face.
- Clear graduations on satin chrome finish for easy reading.
- Quick and easy zero adjustment on sleeve.
- Positive lever locking clamp and rachet stop.
- Size 1-2" and 2-3" furnished with standards for micrometer reading verification.
- Supplied with fitted case.

.0001" GRADUATION



Item#	Range	(mm) A	B	C	L	W	H	Accuracy
4610-2305	0-1"	56	38	Ø6.5	137.2	76	18	0.00015"
4610-2310	1-2"	81	51	Ø6.5	162.7	91	18	0.00015"
4610-2315	2-3"	106	63.5	Ø6.5	187.7	105	18	0.0002"

SPECIALTY MICROMETERS

INDICATING MICROMETERS

- Carbide tipped measuring faces.
- Jeweled bearings.
- Retracting button.
- Tolerance hands.
- Easy zero adjustment.
- With fitted case.
- Standard included.

.00005" GRADUATION

PRECISION BLADE MICROMETER

- Graduation: .0001".
- For taking measurements of workpieces which have narrow grooves or "T" slots when standard micrometer can't reach.
- Microfine graduations on satin chrome finish for easy reading.
- Anvil & spindle hardened & precision ground.
- Blade penetration=0.315".
- Blade thickness=0.03".
- Blade width=0.256".
- Non-rotating spindle.

.0001" GRADUATION
.0016" ACCURACY

Limited Supply!

Dasqua® DIGITAL ELECTRONIC IP65 WATER PROOF BLADE MICROMETERS

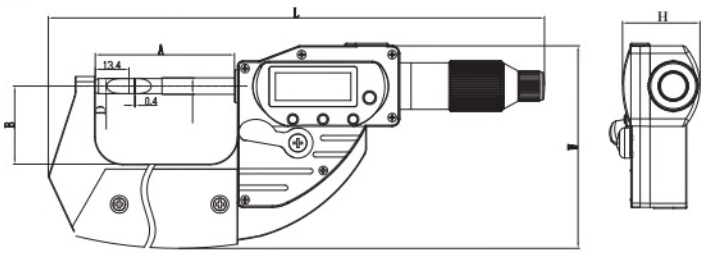
- Absolute function.
- For measuring narrow grooves and hard-to-reach areas.
- Quick measuring function. Lever activated opens & closes on fixed thimble in under one second.
- Large, easy-to-read digital display.
- Class A in electrostatic discharge.
- Carbide-tipped anvils.
- Measuring spindle hardened and ground.
- IP65 protection against coolants, dirt, chips and grit.
- Standard included above 0-1".
- Accuracy: 0.00015"
- True Inch/Metric conversion.
- Non-rotating spindle.
- Furnished in fitted case.

CABLE 01 | DIN 863 | IP65 COOLANT & FLUID RESISTANT | BLUETOOTH TRANSMITTER | WIRELESS TRANSMITTER | Data output | Absolute | Battery + CR2032 | mm/inch

Incredibly Accurate & Easy to Use

INCH/METRIC .0005" GRADUATION

Quick-Move



Item#	Range	Resolution	(mm) A	B	C	L	W	H	Accuracy
4220-2103	0-1"/0-25mm	0.00005"/0.001mm	29.8	25.4	Ø6.5	168.6	64.6	30.8	0.00015"/0.003mm
4220-2106	1-2"/25-50mm	0.00005"/0.001mm	55.3	31	Ø6.5	197.2	80.5	30.8	0.00015"/0.003mm
4220-2109	2-3"/50-75mm	0.00005"/0.001mm	80.3	44	Ø6.5	227.5	96	30.8	0.00015"/0.004mm

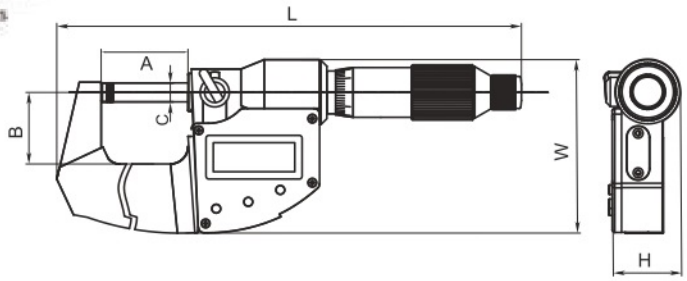
Dasqua® IP65 SPLASH PROOF DIGITAL ELECTRONIC OUTSIDE MICROMETERS

IP65 COOLANT & FLUID RESISTANT | Battery + CR2032 | mm/inch | DIN 863

- Strictly made in accordance with DIN863 and with calibration certificate
- Clear easy-to-read graduation lines Laser inscription and engraving
- Carbide measuring surface (Hardness ≥89HRA) guarantees longer working life and higher wear resistance.
- Precision ratchet thimble cap maintains uniform measuring pressure to reduce errors
- IP65 protection, ensuring precision performance in harsh environments
- Large easy-to-read LED screen

- A-class static protection.
- Display absolute position at startup.
- Insulating grips are employed on the frame to reduce heat transfer.

INCH/METRIC
.0005" GRADUATION



Item#	Range	Resolution	(mm) A	B	C	L	W	H	Accuracy
4410-1105	0-1"/0-25mm	0.00005"/0.001mm	29.8	24.5	Ø6.5	159.5	59.6	23.5	0.00015"/0.003mm
4410-1110	1-2"/25-50mm	0.00005"/0.001mm	55.3	31	Ø6.5	188.5	75.7	23.5	0.00015"/0.003mm
4410-1115	2-3"/50-75mm	0.00005"/0.001mm	80.8	44	Ø6.5	219	90.7	23.5	0.00015"/0.004mm
4410-1120	3-4"/75-100mm	0.00005"/0.001mm	105.8	56	Ø6.5	246.5	107.2	23.5	0.00015"/0.004mm
4410-1125	4-5"/100-125mm	0.00005"/0.001mm	130.8	68	Ø6.5	278	125.3	23.5	0.0002"/0.005mm
4410-1130	5-6"/125-150mm	0.00005"/0.001mm	155.8	81	Ø6.5	307.5	141.3	23.5	0.0002"/0.005mm

Dasqua® MICROMETER STAND

- Keep hands free for operating micrometer and positioning workpiece.
- Perfect for batch or mass production measurements in manufacturing and quality assurance.
- Blue enamel finish.
- Very sturdy and stable.
- Case iron.

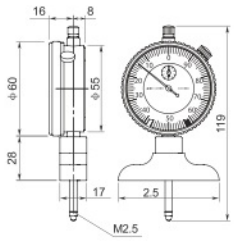
Perfect for Batch or Mass Production

SPECIALTY MICROMETERS

Dasqua® 0-22" DIAL DEPTH GAGE KIT

- Used to measure depth of holes or parts with grooved or elevated surfaces.
- Dial Indicator for easy and clear reading.
- Hardened base with fine lapped contact surface.
- Extension rods of different lengths offering larger measuring ranges.

.001" GRADUATION



0~22" DIAL DEPTH GAGE KIT

- Provides rapid, direct reading measurements of depths.
- 6 rod extensions can be connected together for a full 0-22" capacity.
- Supplied with fitted case.
- 2" diameter dial face.
- 2-1/2" base

.001" ACCURACY

PRECISION DEPTH MICROMETER SETS

- Interchangeable rods are fitted to the micrometer spindle against a positive stop and locked.
- Base surface hardened & lapped.
- Ratchet stop for consistent and repetitive measurements.
- Satin chrome non~glare.
- Complete with fitted case and spanner wrench.

Item#	Range	Base size	No. of Rods	Accuracy
4500-0001*	0-4"	2.5"	4	0.001"
4500-0011	0-4"	4"	4	0.001"
4500-0002	0-6"	4"	6	0.001"

Dasqua® DEPTH MICROMETERS

- For measuring depth of holes, parts with grooves or elevated surfaces.
- Satin chrome finish.
- Rachet thimble and threads are hardened, ground and lapped for consistent repeatability and accuracy.
- Positive locking clamp.
- Clear and easy-to-read graduations.
- With fitted case.

.0016" ACCURACY

Item#	Range	Graduation	No. of Anvils	(mm) Length
4612-5105	0-1"	0.001"	1	63
4612-5110	0-2"	0.001"	2	102
4612-5115	0-3"	0.001"	3	102
4612-5120	0-4"	0.001"	4	102
4612-5125	0-6"	0.001"	6	102

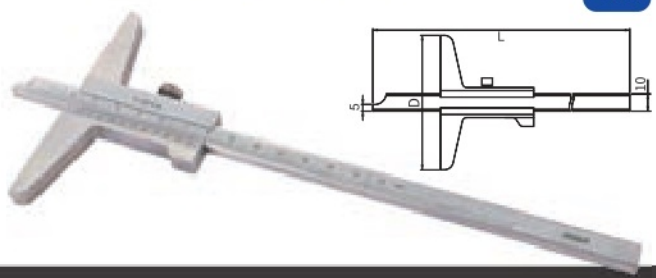
Dasqua® MONOBLOCK DEPTH VERNIER GAGES

DIN 862

- Hardened ground jaws with precision lapped measuring face.
- Satin chrome finish, hardened stainless steel throughout for long life.
- Distinct lines and figures etched against satin chrome finish.
- Strictly made in accordance with DIN 862.

.0001" GRADUATION

Item#	Range	(mm) L	(mm) D	(mm) Accuracy
3001-2901	0-6"	250	100	±0.03
3001-2903	0-8"	300	100	±0.03
3001-2905	0-12"	400	100	±0.04



DIGITAL ELECTRONIC DEPTH MICROMETER KIT

- High accuracy Interchangeable rods
- High contrast LCD display
- Spherical end for easy straight measurement
- 4" base
- Friction thimble
- Standard SR44(1.55V) battery included
- With fitted case

INCH/METRIC .0005" GRADUATION

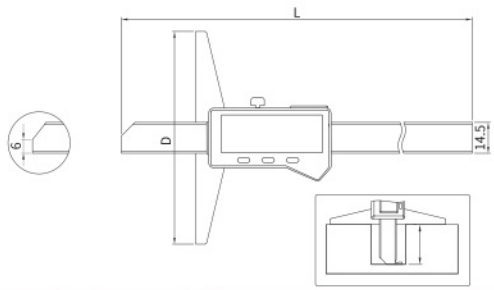
REPLACEMENT BATTERY (ITEM #4102-0030)....$3.19

Data output

Dasqua® DIGITAL ELECTRONIC DEPTH CALIPERS

INCH/METRIC
.0005" GRADUATION

- Used to measure step and depth.
- Made of solid stainless steel, widened and thickened.
- Strictly made in accordance with DIN 862.
- Hardened, ground and lapped measuring surfaces for longer service life.
- Large, easy to ready display.
- Standard CR-2032 (3V) battery included.
- Fitted case.



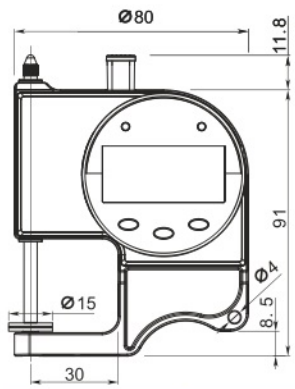
REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Resolution	(mm) D	(mm) L	Accuracy
9021-2005	0-6"/0-150mm	.0005"/.01mm	100	230	±0.03mm
2001-2010	0-8"/0-200mm	.0005"/.01mm	100	280	±0.03mm
2001-2015	0-12"/0-300mm	.0005"/.01mm	100	380	±0.04mm

Dasqua® DIGITAL ELECTRONIC THICKNESS GAGE

- Spring load movement with a push button.
- Large LCD display for easy and clear readings.
- Thickness measurement of different materials.
- Data hold function, data output.
- Standard CR-2032 (3V) battery included.
- Fitted case.

Data output



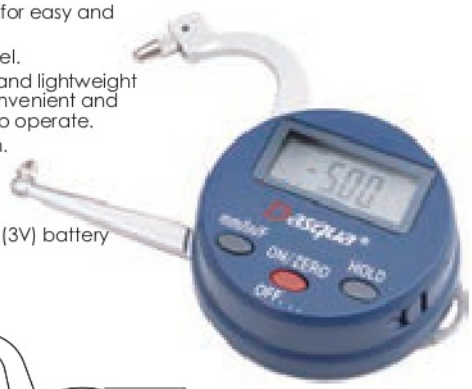
INCH/METRIC/FRACTION
.0005" GRADUATION

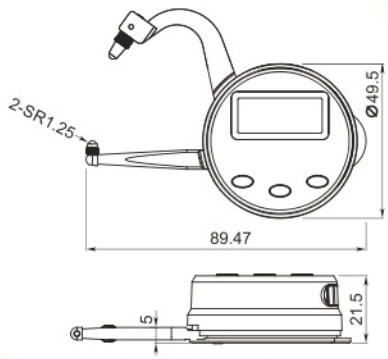
Cable 3 (ITEM #2220-9999)

Range	Resolution	Accuracy
0-25mm/0-1"	0.01mm / 0.0005" / 1/128"	0.05mm/0.002"

Dasqua® DIGITAL ELECTRONIC THICKNESS GAGE

- Large LCD display for easy and clear readings.
- Spring loaded travel.
- The compact size and lightweight ensure it is very convenient and handy, and easy to operate.
- Data hold function.
- Class A for electrostatic discharge.
- Standard CR-2032 (3V) battery included.
- Fitted case.





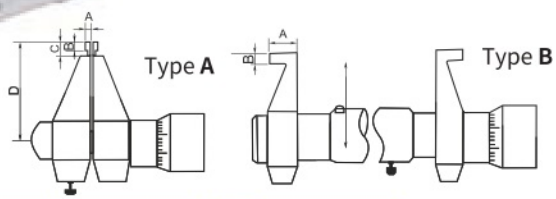
INCH/METRIC/FRACTION
.0005" GRADUATION

Range	Resolution	Accuracy
0-25mm/0-1"	0.01mm / 0.0005" / 1/64"	0.05mm/0.002"

Dasqua® INSIDE MICROMETERS

- Used to measure various inside dimensions.
- With ratchet stop for constant pressure.
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Clear graduations laser-etched on satin chrome finish for easy reading.
- With spindle lock.
- Carbide measuring surfaces ground for longer service life.

.001" GRADUATION



Item#	Range	Graduation	Accuracy	Calibration ring	Type	(mm) A	B	C	D
4912-5105	0.2-1.2"	0.001"	±0.00025"	Yes	A	2.3	4.5	5.5	27.5
4912-5110	1-2"	0.001"	±0.0003"	Yes	B	12.3	4.5	/	27.5
4912-5115	2-3"	0.001"	±0.00035"	No	B	12.3	4.5	/	27.5
4912-5120	3-4"	0.001"	±0.0004"	No	B	12.3	4.5	/	27.5

Dasqua® TUBULAR INSIDE MICROMETERS

- Wide range by combining extensions rods and anvils with micrometer head
- Clear graduation laser etched on satin chrome finish for easy reading.
- Strictly made in accordance with DIN863.
- Satin chrome finish.
- Supplied with a standard gauge for zero setting.
- Micrometer heads vary from 50mm to 63mm. Each micrometer heas is with an extension rod depending on the customers' desired measuring range.
- Measuring rods hardened, ground and lapped.
- Fitted case.

.001" GRADUATION

Item#	Range	Graduation	Extension Rod	Accuracy
4312-5103	2-5.5"	0.001"	Micrometer Head	0.0002"
4312-5106	2-4"	0.001"	0.5", 1"	0.00025"
4312-5109	2-12"	0.001"	1/2", 1" 2", 2", 4"	0.00045"
4312-5112	2-20"	0.001"	0.5", 1" 2"(2pcs), 4", 8"	0.00065"

INSIDE MICROMETER SETS

- The combining of extension rods provides a wide measuring range
- Carbide measuring faces
- Positive lock clamp
- Supplied with a standard caliper gage for zero setting
- With Fitted Case

4200-0333 Shown

.001" GRADUATION

Item#	Range
4200-0332	4 - 20"
4200-0333	4 - 36"

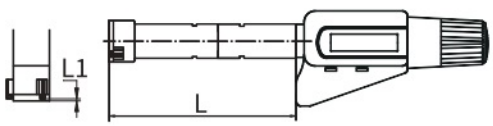
4200-0332 Shown

Dasqua® IP54 WATER PROOF ELECTRONIC INTERNAL 3 POINT HOLE MIKE SETS

IP54 COOLANT & FLUID RESISTANT

- Strictly made in accordance wit DIN 863.
- Hold function.
- Dorect reading from clear large easy-to-read Digital display.
- Self-centering micrometer hardened head; from 12mm with carbide measuring jaws for accurate & ture measurement of internal diameters.
- Extension available for deep measuring.
- Setting rings included in all sets for adjustment.
- Ratchet stops providing correct contact pressure for accurate reading.
- Conact points are designed for measurements near the bottom of blind holes.
- Resolution: .00005"/.001mm
- Includes instant inch/millimeter conversion.
- Furnished in fitted case.

INCH/METRIC
.0005" GRADUATION



Item#	Range	Resolution	No. of Setting Ring	Extension Rod Length	(mm) L	(mm) L1	Accuracy
4511-6205	0.275-0.5"/6-12mm	0.00005"/0.001mm	2pc-8,10mm	100mm	1.5	54.5	0.004mm
4511-6210	0.5-0.8"/12-20mm	0.00005"/0.001mm	1pc-16mm	150mm	0.5	80	0.004mm
4511-6215	0.8-2"/20-50mm	0.00005"/0.001mm	2pc-25,40mm	150mm	0.5	90.97	0.004mm
4511-6220	2-4"/50-100mm	0.00005"/0.001mm	2pc-62,87mm	150mm	0.5	114	0.005mm

INTERNAL GAGING

18PC PRECISION ANGLE GAGE SET

- Stainless steel and satin chrome finished.
- Each gage has eight gauging surfaces.
- Quick inspection of angles and I.D. or O.D. chamfers-in or out of the machine.
- Each gage checks primary, 1/2 primary and complementary angles.
- Supplied with pouch.

Item#	Primary Angle
4901-0045	5°~ 90° by 5°

PRECISION RADIUS GAGE SETS

- Five different gauging surfaces on each gage for both convex and concave radius.
- Made of satin finish stainless steel-rust and stain resistant.
- With handy gage holders.

Item#	Set	Range
4901-0040	25pc	1/64"-17/64" x 64ths and 9/32"-1/2" x 32nds
4901-0026	26pc	0.010-0.500"
4901-0044	10pc	0.55-1.00" by 0.05"
4901-0047	26pc	0.5-13mm by 0.5mm

8PC RADIUS GAGE SETS

- Each gage has five measuring surface for checking radius, convex and concave radii easily
- Satin chrome finish and each gage size is marked

Item#	Range
4901-0041	9/16~1" by 16ths
4901-0042	1-1/16~1-1/2" by 16ths

35PC GAGE SET

INCLUDES:

- **TELESCOPING GAGE SET** 6 PC 5/16-6" Range #4200-0255
- **SMALL HOLE GAGE SET** 4 PC .125-.500" Range #4400-0009
- **RADIUS GAGE SET** 25 PC 1/61-1/2" Range #4901-0040

CENTER GAGES

- Graduated in 14ths and 20ths on one side and 24ths and 32nds on the other
- Micro-fine graduations
- Accuracy meets Federal Specifications.

CONCAVE & CONVEX RADIUS GAGES

Item#	Radius Range	Concave Blade	Convex Blade
4901-0102	17/64 -1/2" x 1/32	16	16
4901-0103	17/32 -1" x 1/32	16	16

SATIN FINISH, STAINLESS STEEL - RUST, AND STAIN RESISITANT

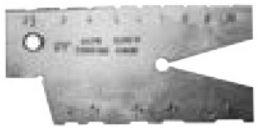
Dasqua® RADIUS GAGE

- For testing of raised and recessed curves.
- Fine cutted forms.
- Both concave and convex shaped blades become a pair.
- Radius size is marked on each gauge.
- With a locking clamp.

Item#	Range	Step	Leaves Convex(Pcs)	Leaves Concave(Pcs)
1352-1005	1/32"-1/4"	1/64"	15	15

29° ACME SCREW THREAD GAGES

- Standard for grinding and setting tools when cutting Acme threads.
- Angle & edges are hardened and precision ground.
- Threads: 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9 & 10.



29° ACME SCREW THREAD PITCH GAGE-15 BLADES

- Made of tool steel hardened and precision ground
- Pitch number marked on each blade
- Threads: 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9 & 10
- Blades length: 3"

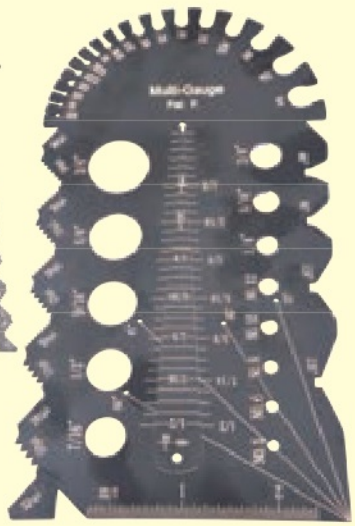
THREAD DETECTIVE/IDENTIFIER - Inch & Metric

- Nut and bolt thread identifier. Each size has a nut and bolt checker on the same gauge.
- Inch nut and bolt sizes include #6-32, #8-32, #10-32, #10-24, 1/4-28, 1/4-20, 5/16-24, 5/16-18, 3/8-24, 3/8-16, 7/16-20, 7/16-14, 1/2-20 & 1/2-13
- Metric Nut and bolt sizes include M4x0.7, M5x0.8, M6x1.0, M7x1.0, M8x1.0, M8x1.25, M10x1.0, M10x1.25, M10x1.50, M12x1.25, M12x1.50 & M12x1.75
- Thread sizes are etched on each gauge
- The individual gauges rotate freely on the wire cable for fast thread verification
- Wire cable with loop for convenient hanging

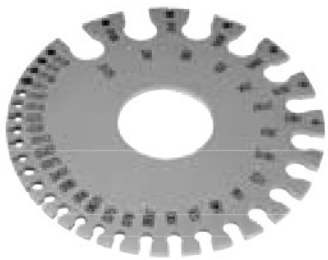
7-IN-1 MULTI-PURPOSE GAUGE

- Made of tool steel with black coating
- Laser engraved markings.
- 7-IN-1 Combine: Wire Gauge, Drill Sizes, Drill Point Gauge, Screw Pitch Gauge, Bore Gauge, Ruler & Protractor
- Tap/Drill recommendation chart included.
- Wire Gauge: 0.024~0.25"
- Drill Sizes: #5, 6, 8, 10 ,12, 1/4", 5/16", 3/8", 7/16", 1/2" 9/16", 5/8" & 3/4"
- Drill Points: 60°, 90°, 118° & 135°
- Screw Pitch Gauge: 40th, 32nd, 24th, 20th, 18th, 16th, 14th, 13th, 12nd, 11th & 10th TPI
- Bore Gauge: 1/64~1/2"
- Ruler: 2-1/2" (32nd)
- Protractor: 15°, 30°, 45°, 60° & 90°
- Vinyl pouch included.

6-5/8" Long x 3-1/2" Wide



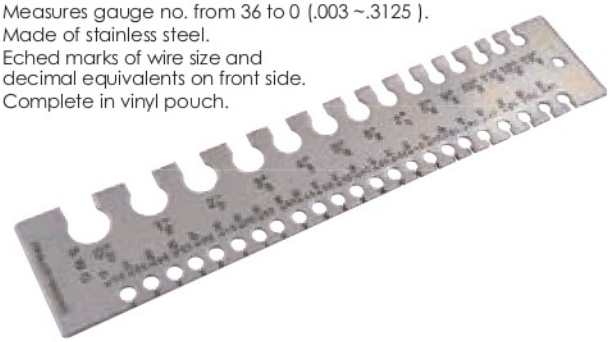
36-0 WIRE MEASURING GAGES



- For measuring wire diameter and non-ferrous sheets such as copper, brass, aluminum, etc.
- Measures gauge no. from 36 to 0 (.003 ~.3125).
- Made of hardened steel and satin chrome finish.
- Marks of wire size on front, decimal equivalents on reverse side
- Complete in vinyl pouch.

WIRE MEASURING GAUGE - Rectangular Shape

- For measuring wire diameter and non-ferrous sheets such as copper, brass, aluminum, etc.
- Measures gauge no. from 36 to 0 (.003 ~.3125).
- Made of stainless steel.
- Eched marks of wire size and decimal equivalents on front side.
- Complete in vinyl pouch.



THREAD GAGING

THREAD PLUG GAGES & RING GAGES

- Gages are made in "X" tolerance
- Classes 2A and 2B for Inch, classes 6H and 6G for MM most commonly used for general applications including bolts, nuts, screws and similar fasteners

PRICED & SOLD BY SET

Metric Size	Plug Gages GO-NOGO with Handle Class 6H Item#	Ring Gages GO-NOGO Class 6G Item#
M2 x 0.4	4101-1102	4101-1202
M3 x 0.5	4101-1103	4101-1203
M2.5 x 0.45	4101-1125	4101-1225
M3.5 x 0.6	4101-1135	4101-1235
M4 x 0.7	4101-1104	4101-1204
M5 x 0.8	4101-1105	4101-1205
M6 x 1.0	4101-1106	4101-1206
M7 x 1.0	4101-1107	4101-1207
M8 x 1.25	4101-1108	4101-1208
M10 x 1.25	4101-1110	4101-1210
M10 x 1.50	4101-1111	4101-1211
M12 x 1.75	4101-1112	4101-1212
M14 x 2.0	4101-1114	4101-1214
M16 x 2.0	4101-1116	4101-1216
M18 x 2.50	4101-1118	4101-1218
M20 x 2.50	4101-1120	4101-1220
M22 x 2.50	4101-1122	4101-1222
M24 x 3.0	4101-1124	4101-1224

Inch Size	Plug Gages GO-NOGO with Handle Class 2B Item#	Ring Gages GO-NOGO Class 2A Item#
4-40UNC	4101-0208	4101-0308
5-40UNC	------	4101-0310
6-32UNC	4101-0212	4101-0312
8-32UNC	4101-0214	4101-0314
10-24UNC	4101-0216	4101-0316
10-32UNF	4101-0217	4101-0317
1/4-20UNC	4101-0221	4101-0321
1/4-28UNF	4101-0222	4101-0322
5/16-18UNC	4101-0224	4101-0324
5/16-24UNF	4101-0225	4101-0325
3/8-16UNC	4101-0227	4101-0327
3/8-24UNF	4101-0228	4101-0328
7/16-14UNC	4101-0230	4101-0330
7/16-20UNF	4101-0231	4101-0331
1/2-13UNC	4101-0233	4101-0333
1/2-20UNF	4101-0234	4101-0334

7PC THREAD PLUG GAGE SETS

- Gages are made in "X" tolerance
- Class 2B for Inch, Class 6H MM set.
- Fitted ABS case included.

SCREW PITCH GAGES

- Correct pitch is determined by matching blade teeth with threaders.
- Each blade clearly marked with proper thread size.
- Blades protected in sturdy steel case.
- Plastic pouch.
- Combination of 31 American National 60° and 24 Metric 60° thread leaves.

Item#	Thread Range	No. of Leaves	No. of Groups
4901-0030	4~42 TPI 60° & .25~6mm 60°	55	2

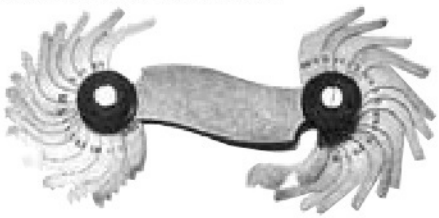
SCREW PITCH GAGES

- Narrow designed blades permit use for internal and external screw threads.
- Correct pitch is determined by matching blade teeth with threads.
- Locking device at each end secures all blades for storage, or positions an individual blade for use.
- Each blade clearly marked with proper thread size
- Blades protected in sturdy steel case.

Item#	Thread Range	No. of Blades	No. of Groups
4901-0094	4~84 TPI 60°	51	3
4901-0095	4~56 TPI & .50~6.00mm	28	2
4901-0096	0.25~2.50mm	28	2
4901-0097	0.50~7.00mm	18	2

SCREW PITCH GAGES

- Correct pitch is determined by matching blade teeth with threaders.
- Each blade clearly marked with proper thread size.
- Blades protected in sturdy steel case.
- Narrow designed blade permits use for internal and external screw threads.



Item#	Thread Range	No. of Leaves	No. of Groups
4901-0028	.25~2.5mm 60°	28	2
4901-0029	0.5~7.0mm 60°	17	2
4901-0037	4~84 TPI 60°	51	2
4901-0038	4~62 TPI 55° & .25~6mm 60°	52	2
4901-0030	4~42 TPI 55° & .25~6mm 60°	55	2

Pro-Series 6PC TELESCOPING GAGE SET

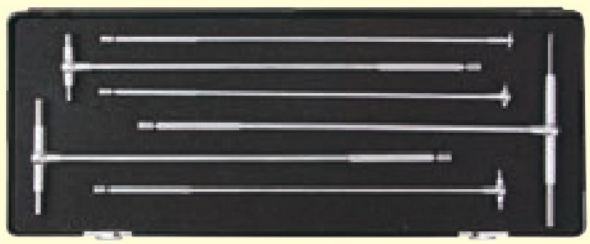
- Double action (self centering) for quick checking of inside measurements.
- Smooth movement.
- Satin chrome finish.
- Constant spring tension for uniform feel.
- Contact point ends are hardened tool steel and precision ground on a radius of the smallest hole the gage will enter.
- Includes shop-hardened case.

Standard 6pc Set

(Inch) Set Range	OAL
5/16~1/2	4.20
1/2~3/4	4.40
3/4~1-1/4	4.40
1-1/4~2-1/8	5.85
2-1/8~3-1/2	5.85
3-1/2~6.0	5.85

Pro-Series 6PC LONG-REACH TELESCOPING GAGE SET

- Double action (self centering) for quick checking of inside measurements.
- Smooth movement, rigid handle with self-centering feature.
- Satin chrome finish.
- Constant spring tension for uniform feel.
- Contact point ends are hardened tool steel and precision ground on a radius of the smallest hole the gage will enter.
- Includes a fitted case.



ong-Reach 6pc Set

(Inch) Set Range	OAL
5/16~1/2	12"/300mm
1/2~3/4	12"/300mm
3/4~1-1/4	12"/300mm
1-1/4~2-1/8	12"/300mm
2-1/8~3-1/2	12"/300mm
3-1/2~6.0	12"/300mm

Dasqua® 12 PC TELESCOPING GAUGE COMBO SET

- Durable action (self-centering) for quick checking of inside measurements.
- Great tool for easy and accurate measurements of the true sizes of holes and slots.
- Satin chrome finish.
- Rigid handle with self-centering feature.
- Constant spring tension for uniform feel & smooth operation.
- Contact plunger automatically self-centering at all times and in all positions.
- Contact point ends are hardened tool steel and precision ground on a radius of the smallest hole the gage will enter.
- Includes fitted case.

Standard Set (Up To 5.85") Shown

COMBO SET FOR EASY ACCESS TO MEASUREMENTS!

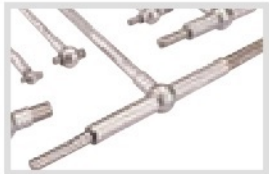
Standard 6pc Set

(Inch) Set Range	OAL
5/16~1/2	4.20
1/2~3/4	4.40
3/4~1-1/4	4.40
1-1/4~2-1/8	5.85
2-1/8~3-1/2	5.85
3-1/2~6.0	5.85

Long-Reach 6pc Set

(Inch) Set Range	OAL
5/16~1/2	12"/300mm
1/2~3/4	12"/300mm
3/4~1-1/4	12"/300mm
1-1/4~2-1/8	12"/300mm
2-1/8~3-1/2	12"/300mm
3-1/2~6.0	12"/300mm

Long Reach Set (Up To 12") Shown



Includes

Item#	Set	Range	Depth
5911-0001	**6PC Long Reach Set**	5/16-1/2",1/2-3/4",3/4-1-1/4",1-1/4-2-1/8",2-1/8-3-1/2",3-1/2-6"	up to 12"
5911-0002	**6PC Standard reach set**	5/16-1/2", 1/2-3/4",3/4-1-1/4",1-1/4-2-1/8",2-1/8-3-1/2",3-1/2-6"	up to 5.85"

TELESCOPING GAGE & SETS

4200-0255 Shown

- Double action (self centering) for quick checking of inside measurements.
- Satin chrome finish.
- Vinyl pouch included.
- Constant spring tension for uniform feel.
- Contact point ends are hardened tool steel and precision ground on a radius of the smallest hole the gage will enter.

Standard Length Set

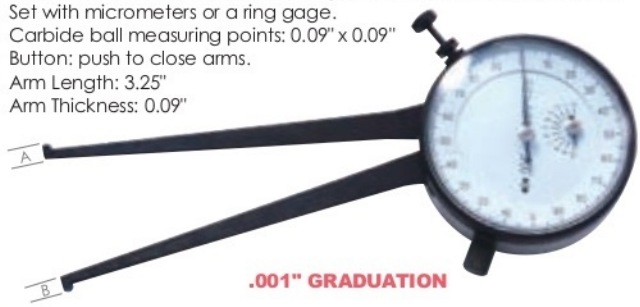
(Inch) Set Range	OAL
5/16~1/2	4.20
1/2~3/4	4.40
3/4~1-1/4	4.40
1-1/4~2-1/8	5.85
2-1/8~3-1/2	5.85
3-1/2~6.0	5.85

Long Reach Set

Set Range
10" Long Reach
5/16~1/2"
1/2~3/4"
3/4~1-1/4"
12" Long Reach
1-1/4~2-1/8"
2-1/8~3-1/2"
3-1/2~6.0"

INTERNAL DIAL CALIPER GAGE

- 0~1" movement to check recessed diameters, internal bores, etc.
- Bezel can be rotated for zero setting and can be locked with screw.
- Set with micrometers or a ring gage.
- Carbide ball measuring points: 0.09" x 0.09"
- Button: push to close arms.
- Arm Length: 3.25"
- Arm Thickness: 0.09"



.001" GRADUATION

Item#	Range	Graduation	A	B
4400-0801	0.375" ~1.375"	0.001"	5/32"	5/32"

4PC SMALL HOLE GAGE SET - Full Ball

- Easy to adjust with full spherical, hardened, satin-chrome plated measuring faces.
- Set furnished in plastic pouch.

.125~.500" RANGE

Pro-Series SPRING DIVIDERS

- Easy adjustment over entire range.
- Balanced legs, uniform tension.
- Polished natural steel finish.

Size	Item#
4"	4901-0065
6"	4901-0066
8"	4901-0067
10"	4901-0068
12"	4901-0069

Pro-Series INSIDE CALIPERS

- Easy adjustment over entire range.
- Balanced legs, uniform tension.
- Polished natural steel finish.

Size	Item#
6"	4901-0070
8"	4901-0071
12"	4901-0072

Pro-Series OUTSIDE CALIPERS

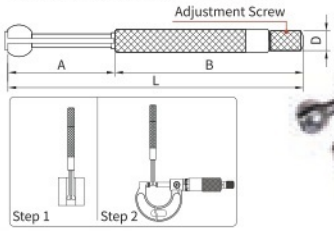
- Easy adjustment over entire range.
- Balanced legs, uniform tension.
- Polished natural steel finish.

Size	Item#
6"	4901-0073
8"	4901-0074
12"	4901-0075

Dasqua® SMALL HOLE GAUGE SET

- Measuring raange: 3-5mm, 5-7.5mm, 7,5-10mm, 10-13mm.
- Used with an outside micrometer for measuring inside diameter of bores.
- Gaging surface is fully hardened to ensure long tool life.
- Extra long for gaging deep and shallow holes, slots, and similar workpieces.
- Satin chrome finish - full ball.

NEW



Item#	Each Measuring Range	(mm) L	A	B	D
5921-0005	3-5mm / .125"- .200"	76	22	53	Ø5
	5-7.5mm / .200"- .300"	78	24	53	Ø5
	7.5-10mm / .300"- .400"	88	28	59	Ø6
	10-13mm / .400"- .500"	92	32	59	Ø6

.0005" GRADUATION DIAL BORE GAGE SETS

- For close tolerance measurements of holes, taper and roundness.
- Gages are supplied with AGD Group II dial indicator.
- Easy setting with micrometers or ring gages.
- Fitted case with anvils index.
- Self centering.

.0005" GRADUATION DIAL INDICATOR

Item#	Range	Probe Depth	No. of Anvils
4400-0061	0.24 - 0.4"	2"	9
4400-0062	0.4 - 0.7"	4"	11
4400-0063	0.7 -1.5"	6"	9
4400-0064	1.4 - 2.4"	6"	6
4400-0007	2.0 - 6.0"	6"	11
4400-1406	1.4 - 6.0"	6"	17

0~6" BORE GAGE SETTING MASTER

- Bore Gage Setting Master Kit is used for accurately setting any bore gage up to 6" inch.
- Each Set includes:

1- Setting Device
Base anvil: 2.750" x .80"
Adjustable anvil 2.375" x .375" (two each)
Baseanvil: 2.750"
Internal capacity: 6"
Depth capacity: 1"
Centralizer capacity width: 2.625"
Quick-release holder for fast adjustment

1- Economy Gage Block Set
36 piece
Tolerances to .00005"
Certificate of Calibration to N.I.S.T.
High quality wooden case

Dasqua® .0005" GRADUATION DIAL BORE GAGE SETS

- Self centering.
- Carbide anvils.
- Easy-to-read.
- Insulated cover.
- Chrome plated handle.
- Includes extension holder and fitted case.

.0005" GRADUATION

The Biggest Measuring Range Set In Industry!
Two Popular Bore Gauge Ranges Combined In One Set!

5512-6130 Shown

Item#	Measuring Range	Depth Up to
5512-6105	0.24-0.4"	1.55"
5512-6110	0.4-0.7"	4"
5512-6115	0.7-1.5"	6"
5512-6120	1.4-2.4"	6"
5512-6125	2-4"	6"
5512-6130	2-6"	6"
5510-0000	1.4-6"	6"

PRECISION STEEL PIN GAGE SETS -Inch

- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Fully hardened to 60-62 RC.
- Finish to 10 Micron or better.
- Class ZZ
- OAL: 2" .

Size	SET	Item#
MINUS SETS (-) -0.0002" + 0.0000"		
0.011~0.060"	50pc	4101-0010
0.061~0.250"	190pc	4101-0011
0.251~0.500"	250pc	4101-0012
0.501~0.625"	125pc	4101-0013
0.626~0.750"	125pc	4101-0014
0.751~0.832"	82pc	4101-0015
0.833~0.916"	84pc	4101-0016
0.917~1.000"	84pc	4101-0017
PLUS SETS (+) -0.0000" + 0.0002"		
0.061~0.250"	190pc	4101-0111
0.251~0.500"	250pc	4101-0112

PRECISION PIN GAGE M1&M2 SET-Inch

- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Fully hardened to 60-62 RC.
- Finish to 10 Micron or better.
- Class ZZ
- OAL: 2" .

Accuraccy -0.0002" + 0.00000" (Minus)

Pro-Series BLACK-OXIDE STEEL PIN GAGE SET -Large Range

- Certified set, traceable to N.I.S.T.
- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Black-oxide finish to 10 Micron or better.
- Hardened to 60-62 RC.
- Class ZZ
- OAL: 2" .
- 2 handles included.

MINUS SET:
(-)0.0002" (+)0.0000"

Pro-Series PRECISION STEEL PIN GAGE SETS WITH CERTIFICATION -Inch

- **Certified sets.**
- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Fully hardened to 62-64 RC.
- Finish to 10 Micron or better.
- Class ZZ
- OAL: 2" .

Item#	SET	Size
Accuraccy -0.0002" + 0.00000" (Minus)		
4101-0040	50pc	0.011~0.060"
4101-0041	190pc	0.061~0.250"
4101-0042	250pc	0.251~0.500"
4101-0043	125pc	0.501~0.625"
4101-0044	125pc	0.626~0.750"
4101-0045	82pc	0.751~0.832"
4101-0046	84pc	0.833~0.916"
4101-0047	84pc	0.917~1.000"

PIN GAGE HANDLE INCLUDED

COMBINATION PIN GAGE SETS WITH HANDLE -Inch

- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Fully hardened to 60-62 RC.
- Finish to 10 Micron or better.
- Class ZZ
- OAL: 2" .

MINUS SETS (-) -0.0002" + 0.0000"

Size	SET	Item#
0.011~0.1000"	90pc	4103-3001
0.101~0.200"	100pc	4103-3003
0.201~0.300	100pc	4103-3005
0.301~0.400"	100pc	4103-3007

PIN GAGE HANDLES

- Comfortable, ergonomically made handle for pin gages.
- Made from aluminum and powder coated.
- Can be used with GO pin (green) on one end, NO GO pin (red) on opposite end.

Item#	For Pin Gage
4102-0001	.011 ~ .060"
4102-0002	.061 ~ .250"
4102-0003	.251 ~ .500"
4102-0006*	.751 ~ .832"
4102-0007*	.833 ~ .916"
4102-0008*	.917 ~ 1.000"

* Limited Supply

Pro-Series PIN GAGE HANDLE 1/32-1/2"

- For pin gage sizes: 1/32~1/2"
- Casting aluminum
- Go and No-Go clearly marked
- Large capacity.

PIN GAGE HANDLE 1/32-1/2"

- For pin gage sizes: 1/32~1/2"
- Casting aluminum
- Go and No-Go clearly marked
- Large capacity.

Pro-Series PRECISION STEEL PIN GAGE SETS WITH CERTIFICATION -Metric

- **Certified sets**
- Supplied in a plastic, sturdy, dust-proof fitted case.
- Sizes marked on case for easy identification.
- Fully hardened to 62-64 RC.
- Finish to 10 Micron or better.
- Class ZZ
- OAL: 2" .

PIN GAGE HANDLE INCLUDED

Item#	Set	Size
Accuracy - 0.005mm + 0.000mm (Minus)		
4101-1010	55pc	0.20~1.28mm
4101-1011	55pc	0.21~1.29mm
4101-1012	185pc	1.30~4.98mm
4101-1013	185pc	1.31~4.99mm
4101-1014	250pc	5.00~9.98mm
4101-1015	250pc	5.01~9.99mm
4101-1016	200pc	10.00~13.98mm
4101-1017	200pc	10.01~13.99mm

Pro-Series PLUG GAGE HANDLES

- SPI style.
- Superior finish and smooth operation.
- Holds pin gage with greatest gripping power.
- Can be used with GO pin (green) and NO GO pin (red).
- Comfortable and ergonomically designed handle for pin gages.
- No bushings required.

Item #	Pin Gage Range (inch) Min.	Max.
4102-0011	0.011	0.060
4102-0012	0.061	0.250
4102-0013	0.251	0.500
4102-0014	0.501	0.625
4102-0015	0.626	0.750

PIN GAGE SET REPLACEMENT CASES

NEW

- Plastic, sturdy, dust-proof case.
- Sizes marked on case for easy identification.
- Good for minus and plus pin gage sets.
- For pin gage overall length 2".

Pin Gages Not Included

PRECISION MEASURING TOOLS

INDIVIDUAL CLASS ZZ PIN GAGES

- Replace missing, damaged, or worn-out Class ZZ gages from existing sets and libraries.
- Each pin is individually marked with size.
- Fully hardened to 60-62 RC.
- Finish to 10 Micron or better.
- Overall Length: 2"
- Tolerance: Minus .0002"

Item#	Size
4103-0011	0.011
4103-0012	0.012
4103-0013	0.013
4103-0014	0.014
4103-0015	0.015
4103-0016	0.016
4103-0017	0.017
4103-0018	0.018
4103-0019	0.019
4103-0020	0.020
4103-0021	0.021
4103-0022	0.022
4103-0023	0.023
4103-0024	0.024
4103-0025	0.025
4103-0026	0.026
4103-0027	0.027
4103-0028	0.028
4103-0029	0.029
4103-0030	0.030
4103-0031	0.031
4103-0032	0.032
4103-0033	0.033
4103-0034	0.034
4103-0035	0.035
4103-0036	0.036
4103-0037	0.037
4103-0038	0.038
4103-0039	0.039
4103-0040	0.040
4103-0041	0.041
4103-0042	0.042
4103-0043	0.043
4103-0044	0.044
4103-0045	0.045
4103-0046	0.046
4103-0047	0.047
4103-0048	0.048
4103-0049	0.049
4103-0050	0.050
4103-0051	0.051
4103-0052	0.052
4103-0053	0.053
4103-0054	0.054
4103-0055	0.055
4103-0056	0.056
4103-0057	0.057
4103-0058	0.058
4103-0059	0.059
4103-0060	0.060
4103-0061	0.061
4103-0062	0.062
4103-0063	0.063
4103-0064	0.064
4103-0065	0.065
4103-0066	0.066
4103-0067	0.067
4103-0068	0.068
4103-0069	0.069
4103-0070	0.070
4103-0071	0.071
4103-0072	0.072
4103-0073	0.073
4103-0074	0.074
4103-0075	0.075
4103-0076	0.076
4103-0077	0.077
4103-0078	0.078
4103-0079	0.079
4103-0080	0.080
4103-0081	0.081
4103-0082	0.082
4103-0083	0.083
4103-0084	0.084
4103-0085	0.085
4103-0086	0.086
4103-0087	0.087
4103-0088	0.088
4103-0089	0.089
4103-0090	0.090
4103-0091	0.091
4103-0092	0.092
4103-0093	0.093

Item#	Size
4103-0094	0.094
4103-0095	0.095
4103-0096	0.096
4103-0097	0.097
4103-0098	0.098
4103-0099	0.099
4103-0100	0.100
4103-0101	0.101
4103-0102	0.102
4103-0103	0.103
4103-0104	0.104
4103-0105	0.105
4103-0106	0.106
4103-0107	0.107
4103-0108	0.108
4103-0109	0.109
4103-0110	0.110
4103-0111	0.111
4103-0112	0.112
4103-0113	0.113
4103-0114	0.114
4103-0115	0.115
4103-0116	0.116
4103-0117	0.117
4103-0118	0.118
4103-0119	0.119
4103-0120	0.120
4103-0121	0.121
4103-0122	0.122
4103-0123	0.123
4103-0124	0.124
4103-0125	0.125
4103-0126	0.126
4103-0127	0.127
4103-0128	0.128
4103-0129	0.129
4103-0130	0.130
4103-0131	0.131
4103-0132	0.132
4103-0133	0.133
4103-0134	0.134
4103-0135	0.135
4103-0136	0.136
4103-0137	0.137
4103-0138	0.138
4103-0139	0.139
4103-0140	0.140
4103-0141	0.141
4103-0142	0.142
4103-0143	0.143
4103-0144	0.144
4103-0145	0.145
4103-0146	0.146
4103-0147	0.147
4103-0148	0.148
4103-0149	0.149
4103-0150	0.150
4103-0151	0.151
4103-0152	0.152
4103-0153	0.153
4103-0154	0.154
4103-0155	0.155
4103-0156	0.156
4103-0157	0.157
4103-0158	0.158
4103-0159	0.159
4103-0160	0.160
4103-0161	0.161
4103-0162	0.162
4103-0163	0.163
4103-0164	0.164
4103-0165	0.165
4103-0166	0.166
4103-0167	0.167
4103-0168	0.168
4103-0169	0.169
4103-0170	0.170
4103-0171	0.171
4103-0172	0.172
4103-0173	0.173
4103-0174	0.174
4103-0175	0.175
4103-0176	0.176

Item#	Size
4103-0177	0.177
4103-0178	0.178
4103-0179	0.179
4103-0180	0.180
4103-0181	0.181
4103-0182	0.182
4103-0183	0.183
4103-0184	0.184
4103-0185	0.185
4103-0186	0.186
4103-0187	0.187
4103-0188	0.188
4103-0189	0.189
4103-0190	0.190
4103-0191	0.191
4103-0192	0.192
4103-0193	0.193
4103-0194	0.194
4103-0195	0.195
4103-0196	0.196
4103-0197	0.197
4103-0198	0.198
4103-0199	0.199
4103-0200	0.200
4103-0201	0.201
4103-0202	0.202
4103-0203	0.203
4103-0204	0.204
4103-0205	0.205
4103-0206	0.206
4103-0207	0.207
4103-0208	0.208
4103-0209	0.209
4103-0210	0.210
4103-0211	0.211
4103-0212	0.212
4103-0213	0.213
4103-0214	0.214
4103-0215	0.215
4103-0216	0.216
4103-0217	0.217
4103-0218	0.218
4103-0219	0.219
4103-0220	0.220
4103-0221	0.221
4103-0222	0.222
4103-0223	0.223
4103-0224	0.224
4103-0225	0.225
4103-0226	0.226
4103-0227	0.227
4103-0228	0.228
4103-0229	0.229
4103-0230	0.230
4103-0231	0.231
4103-0232	0.232
4103-0233	0.233
4103-0234	0.234
4103-0235	0.235
4103-0236	0.236
4103-0237	0.237
4103-0238	0.238
4103-0239	0.239
4103-0240	0.240
4103-0241	0.241
4103-0242	0.242
4103-0243	0.243
4103-0244	0.244
4103-0245	0.245
4103-0246	0.246
4103-0247	0.247
4103-0248	0.248
4103-0249	0.249
4103-0250	0.250
4103-0251	0.251
4103-0252	0.252
4103-0253	0.253
4103-0254	0.254
4103-0255	0.255
4103-0256	0.256
4103-0257	0.257
4103-0258	0.258
4103-0259	0.259

Item#	Size
4103-0260	0.260
4103-0261	0.261
4103-0262	0.262
4103-0263	0.263
4103-0264	0.264
4103-0265	0.265
4103-0266	0.266
4103-0267	0.267
4103-0268	0.268
4103-0269	0.269
4103-0270	0.270
4103-0271	0.271
4103-0272	0.272
4103-0273	0.273
4103-0274	0.274
4103-0275	0.275
4103-0276	0.276
4103-0277	0.277
4103-0278	0.278
4103-0279	0.279
4103-0280	0.280
4103-0281	0.281
4103-0282	0.282
4103-0283	0.283
4103-0284	0.284
4103-0285	0.285
4103-0286	0.286
4103-0287	0.287
4103-0288	0.288
4103-0289	0.289
4103-0290	0.290
4103-0291	0.291
4103-0292	0.292
4103-0293	0.293
4103-0294	0.294
4103-0295	0.295
4103-0296	0.296
4103-0297	0.297
4103-0298	0.298
4103-0299	0.299
4103-0300	0.300
4103-0301	0.301
4103-0302	0.302
4103-0303	0.303
4103-0304	0.304
4103-0305	0.305
4103-0306	0.306
4103-0307	0.307
4103-0308	0.308
4103-0309	0.309
4103-0310	0.310
4103-0311	0.311
4103-0312	0.312
4103-0313	0.313
4103-0314	0.314
4103-0315	0.315
4103-0316	0.316
4103-0317	0.317
4103-0318	0.318
4103-0319	0.319
4103-0320	0.320
4103-0321	0.321
4103-0322	0.322
4103-0323	0.323
4103-0324	0.324
4103-0325	0.325
4103-0326	0.326
4103-0327	0.327
4103-0328	0.328
4103-0329	0.329
4103-0330	0.330
4103-0331	0.331
4103-0332	0.332
4103-0333	0.333
4103-0334	0.334
4103-0335	0.335
4103-0336	0.336
4103-0337	0.337
4103-0338	0.338
4103-0339	0.339
4103-0340	0.340
4103-0341	0.341
4103-0342	0.342

Item#	Size
4103-0343	0.343
4103-0344	0.344
4103-0345	0.345
4103-0346	0.346
4103-0347	0.347
4103-0348	0.348
4103-0349	0.349
4103-0350	0.350
4103-0351	0.351
4103-0352	0.352
4103-0353	0.353
4103-0354	0.354
4103-0355	0.355
4103-0356	0.356
4103-0357	0.357
4103-0358	0.358
4103-0359	0.359
4103-0360	0.360
4103-0361	0.361
4103-0362	0.362
4103-0363	0.363
4103-0364	0.364
4103-0365	0.365
4103-0366	0.366
4103-0367	0.367
4103-0368	0.368
4103-0369	0.369
4103-0370	0.370
4103-0371	0.371
4103-0372	0.372
4103-0373	0.373
4103-0374	0.374
4103-0375	0.375
4103-0376	0.376
4103-0377	0.377
4103-0378	0.378
4103-0379	0.379
4103-0380	0.380
4103-0381	0.381
4103-0382	0.382
4103-0383	0.383
4103-0384	0.384
4103-0385	0.385
4103-0386	0.386
4103-0387	0.387
4103-0388	0.388
4103-0389	0.389
4103-0390	0.390
4103-0391	0.391
4103-0392	0.392
4103-0393	0.393
4103-0394	0.394
4103-0395	0.395
4103-0396	0.396
4103-0397	0.397
4103-0398	0.398
4103-0399	0.399
4103-0400	0.400
4103-0401	0.401
4103-0402	0.402
4103-0403	0.403
4103-0404	0.404
4103-0405	0.405
4103-0406	0.406
4103-0407	0.407
4103-0408	0.408
4103-0409	0.409
4103-0410	0.410
4103-0411	0.411
4103-0412	0.412
4103-0413	0.413
4103-0414	0.414
4103-0415	0.415
4103-0416	0.416
4103-0417	0.417
4103-0418	0.418
4103-0419	0.419
4103-0420	0.420
4103-0421	0.421
4103-0422	0.422
4103-0423	0.423
4103-0424	0.424
4103-0425	0.425

Item#	Size
4103-0426	0.426
4103-0427	0.427
4103-0428	0.428
4103-0429	0.429
4103-0430	0.430
4103-0431	0.431
4103-0432	0.432
4103-0433	0.433
4103-0434	0.434
4103-0435	0.435
4103-0436	0.436
4103-0437	0.437
4103-0438	0.438
4103-0439	0.439
4103-0440	0.440
4103-0441	0.441
4103-0442	0.442
4103-0443	0.443
4103-0444	0.444
4103-0445	0.445
4103-0446	0.446
4103-0447	0.447
4103-0448	0.448
4103-0449	0.449
4103-0450	0.450
4103-0451	0.451
4103-0452	0.452
4103-0453	0.453
4103-0454	0.454
4103-0455	0.455
4103-0456	0.456
4103-0457	0.457
4103-0458	0.458
4103-0459	0.459
4103-0460	0.460
4103-0461	0.461
4103-0462	0.462
4103-0463	0.463
4103-0464	0.464
4103-0465	0.465
4103-0466	0.466
4103-0467	0.467
4103-0468	0.468
4103-0469	0.469
4103-0470	0.470
4103-0471	0.471
4103-0472	0.472
4103-0473	0.473
4103-0474	0.474
4103-0475	0.475
4103-0476	0.476
4103-0477	0.477
4103-0478	0.478
4103-0479	0.479
4103-0480	0.480
4103-0481	0.481
4103-0482	0.482
4103-0483	0.483
4103-0484	0.484
4103-0485	0.485
4103-0486	0.486
4103-0487	0.487
4103-0488	0.488
4103-0489	0.489
4103-0490	0.490
4103-0491	0.491
4103-0492	0.492
4103-0493	0.493
4103-0494	0.494
4103-0495	0.495
4103-0496	0.496
4103-0497	0.497
4103-0498	0.498
4103-0499	0.499
4103-0500	0.500
4103-0501	0.501
4103-0502	0.502
4103-0503	0.503
4103-0504	0.504
4103-0505	0.505
4103-0506	0.506
4103-0507	0.507
4103-0508	0.508

INDIVIDUAL CLASS ZZ PIN GAGES

- Replace missing, damaged, or worn-out Class ZZ gages from existing sets and libraries.
- Each pin is individually marked with size.
- Fully hardened to 60-62 RC.
- Finish to 10 Micron or better.
- Overall Length: 2"
- Tolerance: Minus .0002"

Item#	Size
4103-0509	0.509
4103-0510	0.510
4103-0511	0.511
4103-0512	0.512
4103-0513	0.513
4103-0514	0.514
4103-0515	0.515
4103-0516	0.516
4103-0517	0.517
4103-0518	0.518
4103-0519	0.519
4103-0520	0.520
4103-0521	0.521
4103-0522	0.522
4103-0523	0.523
4103-0524	0.524
4103-0525	0.525
4103-0526	0.526
4103-0527	0.527
4103-0528	0.528
4103-0529	0.529
4103-0530	0.530
4103-0531	0.531
4103-0532	0.532
4103-0533	0.533
4103-0534	0.534
4103-0535	0.535
4103-0536	0.536
4103-0537	0.537
4103-0538	0.538
4103-0539	0.539
4103-0540	0.540
4103-0541	0.541
4103-0542	0.542
4103-0543	0.543
4103-0544	0.544
4103-0545	0.545
4103-0546	0.546
4103-0547	0.547
4103-0548	0.548
4103-0549	0.549
4103-0550	0.550
4103-0551	0.551
4103-0552	0.552
4103-0553	0.553
4103-0554	0.554
4103-0555	0.555
4103-0556	0.556
4103-0557	0.557
4103-0558	0.558
4103-0559	0.559
4103-0560	0.560
4103-0561	0.561
4103-0562	0.562
4103-0563	0.563
4103-0564	0.564
4103-0565	0.565
4103-0566	0.566
4103-0567	0.567
4103-0568	0.568
4103-0569	0.569
4103-0570	0.570
4103-0571	0.571
4103-0572	0.572
4103-0573	0.573
4103-0574	0.574
4103-0575	0.575
4103-0576	0.576
4103-0577	0.577
4103-0578	0.578
4103-0579	0.579
4103-0580	0.580
4103-0581	0.581
4103-0582	0.582
4103-0583	0.583
4103-0584	0.584
4103-0585	0.585
4103-0586	0.586
4103-0587	0.587
4103-0588	0.588
4103-0589	0.589
4103-0590	0.590
4103-0591	0.591

Item#	Size
4103-0592	0.592
4103-0593	0.593
4103-0594	0.594
4103-0595	0.595
4103-0596	0.596
4103-0597	0.597
4103-0598	0.598
4103-0599	0.599
4103-0600	0.600
4103-0601	0.601
4103-0602	0.602
4103-0603	0.603
4103-0604	0.604
4103-0605	0.605
4103-0606	0.606
4103-0607	0.607
4103-0608	0.608
4103-0609	0.609
4103-0610	0.610
4103-0611	0.611
4103-0612	0.612
4103-0613	0.613
4103-0614	0.614
4103-0615	0.615
4103-0616	0.616
4103-0617	0.617
4103-0618	0.618
4103-0619	0.619
4103-0620	0.620
4103-0621	0.621
4103-0622	0.622
4103-0623	0.623
4103-0624	0.624
4103-0625	0.625
4103-0626	0.626
4103-0627	0.627
4103-0628	0.628
4103-0629	0.629
4103-0630	0.630
4103-0631	0.631
4103-0632	0.632
4103-0633	0.633
4103-0634	0.634
4103-0635	0.635
4103-0636	0.636
4103-0637	0.637
4103-0638	0.638
4103-0639	0.639
4103-0640	0.640
4103-0641	0.641
4103-0642	0.642
4103-0643	0.643
4103-0644	0.644
4103-0645	0.645
4103-0646	0.646
4103-0647	0.647
4103-0648	0.648
4103-0649	0.649
4103-0650	0.650
4103-0651	0.651
4103-0652	0.652
4103-0653	0.653
4103-0654	0.654
4103-0655	0.655
4103-0656	0.656
4103-0657	0.657
4103-0658	0.658
4103-0659	0.659
4103-0660	0.660
4103-0661	0.661
4103-0662	0.662
4103-0663	0.663
4103-0664	0.664
4103-0665	0.665
4103-0666	0.666
4103-0667	0.667
4103-0668	0.668
4103-0669	0.669
4103-0670	0.670
4103-0671	0.671
4103-0672	0.672
4103-0673	0.673
4103-0674	0.674

Item#	Size
4103-0675	0.675
4103-0676	0.676
4103-0677	0.677
4103-0678	0.678
4103-0679	0.679
4103-0680	0.680
4103-0681	0.681
4103-0682	0.682
4103-0683	0.683
4103-0684	0.684
4103-0685	0.685
4103-0686	0.686
4103-0687	0.687
4103-0688	0.688
4103-0689	0.689
4103-0690	0.690
4103-0691	0.691
4103-0692	0.692
4103-0693	0.693
4103-0694	0.694
4103-0695	0.695
4103-0696	0.696
4103-0697	0.697
4103-0698	0.698
4103-0699	0.699
4103-0700	0.700
4103-0701	0.701
4103-0702	0.702
4103-0703	0.703
4103-0704	0.704
4103-0705	0.705
4103-0706	0.706
4103-0707	0.707
4103-0708	0.708
4103-0709	0.709
4103-0710	0.710
4103-0711	0.711
4103-0712	0.712
4103-0713	0.713
4103-0714	0.714
4103-0715	0.715
4103-0716	0.716
4103-0717	0.717
4103-0718	0.718
4103-0719	0.719
4103-0720	0.720
4103-0721	0.721
4103-0722	0.722
4103-0723	0.723
4103-0724	0.724
4103-0725	0.725
4103-0726	0.726
4103-0727	0.727
4103-0728	0.728
4103-0729	0.729
4103-0730	0.730
4103-0731	0.731
4103-0732	0.732
4103-0733	0.733
4103-0734	0.734
4103-0735	0.735
4103-0736	0.736
4103-0737	0.737
4103-0738	0.738
4103-0739	0.739
4103-0740	0.740
4103-0741	0.741
4103-0742	0.742
4103-0743	0.743
4103-0744	0.744
4103-0745	0.745
4103-0746	0.746
4103-0747	0.747
4103-0748	0.748
4103-0749	0.749
4103-0750	0.750
4103-0751	0.751
4103-0752	0.752
4103-0753	0.753
4103-0754	0.754
4103-0755	0.755
4103-0756	0.756
4103-0757	0.757

Item#	Size
4103-0758	0.758
4103-0759	0.759
4103-0760	0.760
4103-0761	0.761
4103-0762	0.762
4103-0763	0.763
4103-0764	0.764
4103-0765	0.765
4103-0766	0.766
4103-0767	0.767
4103-0768	0.768
4103-0769	0.769
4103-0770	0.770
4103-0771	0.771
4103-0772	0.772
4103-0773	0.773
4103-0774	0.774
4103-0775	0.775
4103-0776	0.776
4103-0777	0.777
4103-0778	0.778
4103-0779	0.779
4103-0780	0.780
4103-0781	0.781
4103-0782	0.782
4103-0783	0.783
4103-0784	0.784
4103-0785	0.785
4103-0786	0.786
4103-0787	0.787
4103-0788	0.788
4103-0789	0.789
4103-0790	0.790
4103-0791	0.791
4103-0792	0.792
4103-0793	0.793
4103-0794	0.794
4103-0795	0.795
4103-0796	0.796
4103-0797	0.797
4103-0798	0.798
4103-0799	0.799
4103-0800	0.800
4103-0801	0.801
4103-0802	0.802
4103-0803	0.803
4103-0804	0.804
4103-0805	0.805
4103-0806	0.806
4103-0807	0.807
4103-0808	0.808
4103-0809	0.809
4103-0810	0.810
4103-0811	0.811
4103-0812	0.812
4103-0813	0.813
4103-0814	0.814
4103-0815	0.815
4103-0816	0.816
4103-0817	0.817
4103-0818	0.818
4103-0819	0.819
4103-0820	0.820
4103-0821	0.821
4103-0822	0.822
4103-0823	0.823
4103-0824	0.824
4103-0825	0.825
4103-0826	0.826
4103-0827	0.827
4103-0828	0.828
4103-0829	0.829
4103-0830	0.830
4103-0831	0.831
4103-0832	0.832
4103-0833	0.833
4103-0834	0.834
4103-0835	0.835
4103-0836	0.836
4103-0837	0.837
4103-0838	0.838
4103-0839	0.839
4103-0840	0.840

Item#	Size
4103-0841	0.841
4103-0842	0.842
4103-0843	0.843
4103-0844	0.844
4103-0845	0.845
4103-0846	0.846
4103-0847	0.847
4103-0848	0.848
4103-0849	0.849
4103-0850	0.850
4103-0851	0.851
4103-0852	0.852
4103-0853	0.853
4103-0854	0.854
4103-0855	0.855
4103-0856	0.856
4103-0857	0.857
4103-0858	0.858
4103-0859	0.859
4103-0860	0.860
4103-0861	0.861
4103-0862	0.862
4103-0863	0.863
4103-0864	0.864
4103-0865	0.865
4103-0866	0.866
4103-0867	0.867
4103-0868	0.868
4103-0869	0.869
4103-0870	0.870
4103-0871	0.871
4103-0872	0.872
4103-0873	0.873
4103-0874	0.874
4103-0875	0.875
4103-0876	0.876
4103-0877	0.877
4103-0878	0.878
4103-0879	0.879
4103-0880	0.880
4103-0881	0.881
4103-0882	0.882
4103-0883	0.883
4103-0884	0.884
4103-0885	0.885
4103-0886	0.886
4103-0887	0.887
4103-0888	0.888
4103-0889	0.889
4103-0890	0.890
4103-0891	0.891
4103-0892	0.892
4103-0893	0.893
4103-0894	0.894
4103-0895	0.895
4103-0896	0.896
4103-0897	0.897
4103-0898	0.898
4103-0899	0.899
4103-0900	0.900
4103-0901	0.901
4103-0902	0.902
4103-0903	0.903
4103-0904	0.904
4103-0905	0.905
4103-0906	0.906
4103-0907	0.907
4103-0908	0.908
4103-0909	0.909
4103-0910	0.910
4103-0911	0.911
4103-0912	0.912
4103-0913	0.913
4103-0914	0.914
4103-0915	0.915
4103-0916	0.916
4103-0917	0.917
4103-0918	0.918
4103-0919	0.919
4103-0920	0.920
4103-0921	0.921
4103-0922	0.922
4103-0923	0.923

Item#	Size
4103-0924	0.924
4103-0925	0.925
4103-0926	0.926
4103-0927	0.927
4103-0928	0.928
4103-0929	0.929
4103-0930	0.930
4103-0931	0.931
4103-0932	0.932
4103-0933	0.933
4103-0934	0.934
4103-0935	0.935
4103-0936	0.936
4103-0937	0.937
4103-0938	0.938
4103-0939	0.939
4103-0940	0.940
4103-0941	0.941
4103-0942	0.942
4103-0943	0.943
4103-0944	0.944
4103-0945	0.945
4103-0946	0.946
4103-0947	0.947
4103-0948	0.948
4103-0949	0.949
4103-0950	0.950
4103-0951	0.951
4103-0952	0.952
4103-0953	0.953
4103-0954	0.954
4103-0955	0.955
4103-0956	0.956
4103-0957	0.957
4103-0958	0.958
4103-0959	0.959
4103-0960	0.960
4103-0961	0.961
4103-0962	0.962
4103-0963	0.963
4103-0964	0.964
4103-0965	0.965
4103-0966	0.966
4103-0967	0.967
4103-0968	0.968
4103-0969	0.969
4103-0970	0.970
4103-0971	0.971
4103-0972	0.972
4103-0973	0.973
4103-0974	0.974
4103-0975	0.975
4103-0976	0.976
4103-0977	0.977
4103-0978	0.978
4103-0979	0.979
4103-0980	0.980
4103-0981	0.981
4103-0982	0.982
4103-0983	0.983
4103-0984	0.984
4103-0985	0.985
4103-0986	0.986
4103-0987	0.987
4103-0988	0.988
4103-0989	0.989
4103-0990	0.990
4103-0991	0.991
4103-0992	0.992
4103-0993	0.993
4103-0994	0.994
4103-0995	0.995
4103-0996	0.996
4103-0997	0.997
4103-0998	0.998
4103-0999	0.999
4103-1000	1.000

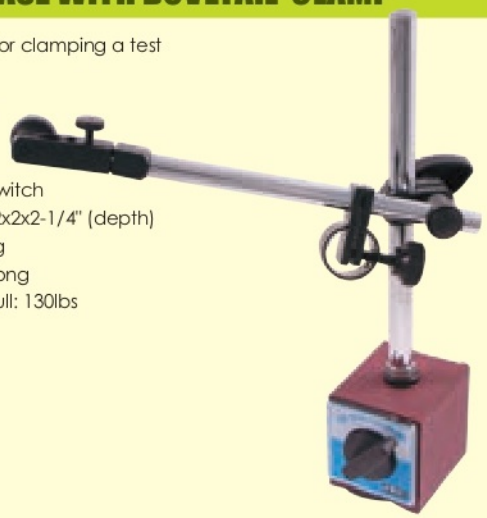
MAGNETIC BASES

Pro-Series MAGNETIC BASES

- Overall height: 9" .
- Off and On switch.
- Scribe-opening: 5/32" .
- Power Pull: 130 lbs.
- Base size : 2" (Width) x 2-1/2" (Depth).
- Holds most AGD dial and test indicators.
- V-shape on bottom surface for firm holding.

MAGNETIC BASE WITH DOVETAIL CLAMP

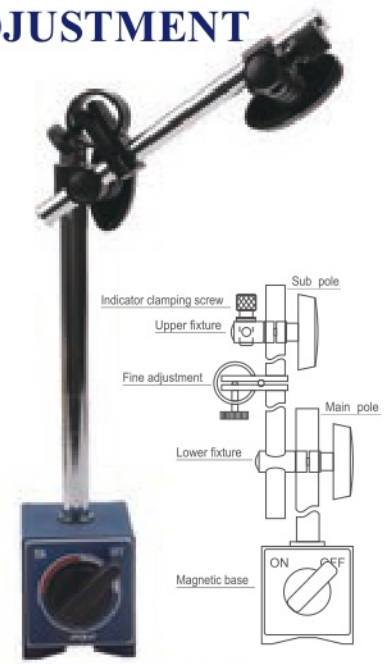
- Dovetail groove for clamping a test indicator
- Indicator stem hole on top 8mm diameter
- Fine adjustment
- On/Off magnet switch
- Base dimension: 2x2x2-1/4" (depth)
- Main stem: 7" long
- Branch stem: 8" long
- Magnet power pull: 130lbs



Dasqua® MAGNETIC BASES WITH FINE ADJUSTMENT

- Highest quality craftmanship.
- V-grooved base for easy and secure mount on cylindrical parts.
- Chrome plated rods.
- Horizontal or vertical posistioning capability.
- Blue wrinkled finish on non-working surfaces.
- Fine quality permanent magnet.
- Smooth and easy on/off switch.

4mm, 8mm, 3/8"



Item#	Holding Power	Base	Main Pole	Sub Pole	Dia. of Clamp Hole	Weight	Fine Adjustment
7122-0004	60kg	60x50x55mm	Ø12x176mm	Ø10x150mm	6.0/8.0mm	1.5kg	With Fine Adjustment
7123-1004	60kg	60x50x55mm	Ø12x176mm	Ø10x150mm	6.0/8.0mm/3/8"	1.5kg	With Fine Adjustment

SUPER POWER DIN MAGNETIC BASE

- Power Pull: 160 lbs.
- On/off switch
- Base Dimension: 2.75" (Depth) x 1.77" (Width) x 2.56" (Height)
- Main Stem: 5/8" dia. x 9"
- Extension Stem: 0.47" dia. x 8" with fine adjustment
- Hold any indicators with stem 8mm diameter.

Limited Supply!

DUAL CLAMPING HOLES MAGNETIC BASE-One Knob Lock

- Dual Stem Clamping Hole: 8mm & 3/8"
- Dovetail groove for testing indicator
- Base dimension: 1-1.97(W) x 2.17(H)x 2.36" (D)
- On/Off switch
- Max. Reach: 17"
- 180 lbs. magnet power.

Limited Supply!

Base (LxWxH)	Tapped Hole	Main Stem	Branch Stem	Weight
60x50x55	M10x1.5	Ø16x230	Ø16x210	1.9kg

MINI UNIVERSAL MAGNETIC BASES

- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Accepts all A.G.D. dial indicators and test indicators.
- Base Dimension: 1.2" (width) x 1.5" (depth).
- Holds 3/8" stem dial indicators & dovetail test indicators
- On/Off magnet power switch.
- Max. Reach: 7.5" .
- With 8mm bushing

MINI INDICATOR MAG. BASE-One Knob Lock

- Base dimension: 1-1/8 (W) x 1-3/8 (H)x 1-3/8" (D)
- Max. Reach: 10"
- On/Off switch
- Hold stems: 8mm & 3/8"
- With dovetail clamp

Limited Supply!

MAGNETIC INDICATOR HOLDER

- Holds most of dial and test indicators.
- Stem holds: 3/8" ,5/16" , 1/4" diameter.
- 80 lbs magnetic pull.
- Overall height: 5"
- Fine adjustment.

UNIVERSAL MECHANISM MAGNETIC BASE

- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Overall stem length: 11.4"
- Fine adjustment.
- On/Off switch.
- Super power pull 130 lbs.
- Base Dimension: 2" (Width) x 2-1/2" (Depth)
- Accepts all AGD dial indicators and test indicators.

EASY RELEASE MAGNETIC BASE

Limited Supply!

- Single universal rod, has 3 diameters to allow mounting popular indicators without changing rods
- Full 360° swivel
- Strong magnetic pull with easy release switch

HEAVY DUTY UNIVERSAL MAGNETIC BASES

- 3-D rigid alumium arm movement.
- Unique central locking mechanism.
- Fine adjustment.
- On/Off switch.
- Accepts all AGD dial indicators and test indicators.

Item#	Power Pull (Lbs.)	Base (L x W x H)	Max. Reach (Inch)
4401-0536	132	58x50x55mm	13.0
4401-0537	176	60x50x55mm	14.5
4401-0538	220	74x50x55mm	16.0

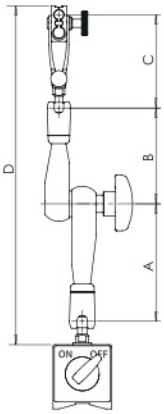
UNIVERSAL MAGNETIC BASE -UNIQUE TOP ADJUSTMENT

- 3-D rigid aluminium arm movement.
- Unique fine adjustment mechanism.
- On/Off switch
- Dovetail groove for test indicator

Item#	Power Pull (Lbs.)	Base (L x W x H)	Max. Reach (Inch)
4401-0532	66	36x30x35mm	6.5
4401-0533	176	60x50x55mm	10.7
4401-0534	220	74x50x55mm	13.7

Dasqua® LOCK'T MAGNETIC BASE

- All wear parts use hardened high grade steel and with hardness over HRC 58°.
- Inner structure is made of bearing steel, delivering more wear-resisting ability and longer service life.



Item#	Power Pull	Base Dimensions	Thread Mount	(mm) A	B	C	Reach Length (D)
7121-0020	50kg	40x40x40	M6x1.00	62	52	79	220
7121-0025	80kg	60x50x55	M8x1.25	100	82	81	290
7121-0030	100kg	74x50x55	M8x1.25	145	95	81	355

STRONG-LOCK UNIVERSAL MAGNETIC BASE

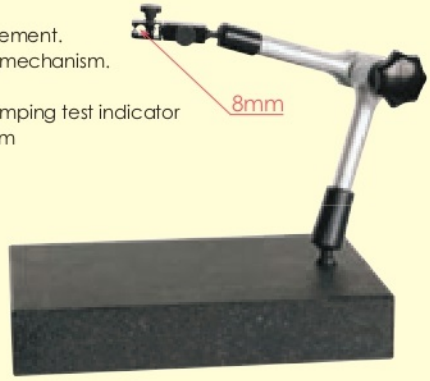
- Solid arm & Joint mechanism.
- Unique central locking mechanism.
- 3-D steel arm movement.
- Overall stem length 18"
- Fine adjustment.
- On/Off switch.
- Super power pull 220 lbs.
- Base Dimension: 2x2 x 3" (Depth)
- Our most rigid system.

HYDRAULIC MAGNETIC BASE

- Absolute sealed hydraulic system.
- Knob turning creates tension and high pressure on the joints to hold the rods absolutely rigid.
- Multi-nimble joint for instant fix at any desired position.
- Fine adjustment.
- Fits dovetail and 3/8" stem indicators.
- Super power pull 130 lbs.
- Overall stem length 13"
- Base Dimension: 2" (Width) x 2-1/2" (Depth)

GRANITE STAND W/UNIVERSAL ARM

- 12x8x2" granite plate.
- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Fine adjustment.
- Dovetail groove for clamping test indicator
- Indicator stem hole 8mm
- Overall Reach: 15"
- Weight: 24 lbs.



ROUND UNIVERSAL MAGNETIC BASE

- 3-D rigid steel arm movement.
- Overall stem length 10"
- Hold 3/8" stem indicator or dovetail.
- Unique central locking mechanism.
- Fine adjustment.
- Power pull 90 lbs.
- Base Diameter: 1.6"

Group 2 INDICATOR MAGNETIC BACKS

- Diameter of Magnetic Back: 2-1/4" for Group II indicators.
- Magnetic back comes with screw-on indicator plain back.
- Can be used with both lug back and plain back indicators.
- Permanent magnet with strong power pull.

MITY-MAG INDICATOR HOLDER

- Zinc die cast housing.
- 45 lbs holding power.
- Hold up to 3/8" dia. stem.
- 5 Locations for mounting accessories.
- Holder Dimensions: 4-1/2" x1" x1-1/4".

Pro-Series CONTOUR MAGNETIC BASE

- Cam lock mechanism
- Unlimited versatility
- Fine Adjustment
- On/Off knob

CENTERED V-MAGNETS

- Grip on round or flat surfaces
- Post Mount Thread: M8x1.25
- 2 magnetic mounting surfaces-bottom and back
- On/off switch

* Post Mount Thread: M5x0.8

Item#	Dimensions	Power Pull
4401-0814*	1.4 x 1.2 x 1.5"	66 lbs.
4401-0111	2 x 2 x 2-1/2"	170 lbs.
4401-0108	2 x 2 x 4-5/8"	260 lbs.

FLEXIBLE ARM MAGNETIC BASE

- Permanent magnet with On/Off switch control.
- Cam lever operates cable. Locks it rigid at any desired position.
- Cable tension adjustable.
- Stem flexes full 360°.
- Accepts all A.G.D. dial indicators.
- Overall length: 13"
- Power Pull: 130 lbs.
- Base Dimension: 2" (Width) x 2-1/2" (Depth)

LOCKING PLIER SHAFT INDICATOR HOLDER

- Accept AGD group indicators
- Vise-Grip easy to hold the indicator anywhere.
- Flexible shaft made from steel
- 13" reach

Limited Supply!

Dasqua® DISC AND ROTOR FLEX CHROME AUTOMOTIVE SET

- Checks ball joint wear, disc rotor runout, tire and whirl runout, gear backlash, valve, guide, etc.

Includes:
- Dial Indicator: 0-1", .001" Graduation (item# 5122-4210)
- Flexible Chrome Shank Magnetic Base (item# 7611-0035)
- Fitted Case

INDICATOR STANDS

Dasqua® UNIVERSAL PRECISION GRANITE STANDS

- Precise ground granite base.
- Extremely rugged and universally adjustable to any position, these gage stands are well suited for inspection and layout.
- Checking and lineup operations anywhere in the shop.
- All settings are individually made without disturbing others.
- There versatile stands allow the indicator to be positioned at any height within the capactity of the upright base post.
- 360° both horizontally and vertically.
- Strictly made in accordence with DIN876.

DIN 876

Includes:

Clamps: 6mm/8mm with fine adjustment and dovetail clamp

Item#	Base Dimension	Post height	Post reach	Flatness
7812-0005	6x4"	Ø14x200mm	Ø12x165mm	0.002mm
7812-0010	10x5.5"	Ø14x200mm	Ø12x165mm	0.002mm

16" GRANITE CHECK REPLACEMENT COLUMN-Post

Optional Long Column for Holding Long Range Indicators

PRICE IS FOR POST ONLY

INDICATOR & GRANITE PLATE NOT INCLUDED

- Convert your standard 6x6, 6x8 or12x8 base to larger capacity stand with this 1" diameter column.
- 16" column includes mounting screw and fine adjustment clamp for all AGD indicators with lug back.

GRANITE CHECK - INDICATOR STAND

- Fine adjustment.
- 10" height.
- 0.00005" granite flatness.
- Accepts all AGD Indicators with lug back.

Granite Stand Only

Item#	Base Size
4401-0020	6 x 6 x 2"
4401-0021	6 x 8 x 2"
4401-0019	12 x 8 x 2"

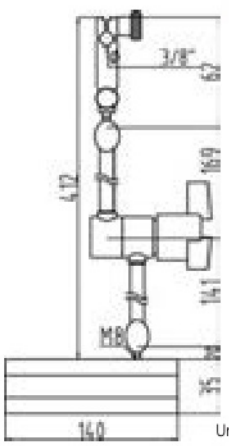
UNIVERSAL MEASURING STAND

- Heavy base allows any surface set-up.
- Base is made of high grade tool steel hardened and precision ground.
- With fine adjustment.
- Max. Extension: 14"
- Base Dimension: 8.90" Length x 2.30" Width x 1.40" Height.
- Conforms to most of AGD indicators.
- Weight: 7 lbs

UNIVERSAL INDICATOR STAND WITH V SHAPE BASE

NEW

- Heavy base with V-shape base.
- Base is made of high grade tool steel hardened and precision ground.
- Universal mechanism arm with fine adjustment.
- Conforms to most AGD indicators.
- Weight: 6.80 lbs



Unit: mm

INDICATOR STAND WITH V SHAPE BASE

NEW

- Heavy base with V-shape base.
- Base is made of high grade tool steel hardened and precision ground.
- With fine adjustment.
- Conforms to most AGD indicators.
- Weight: 6 lbs

Unit: mm

PRECISION MEASURING TOOLS

2PC MAGNETIC BASE & INDICATOR KIT

PRO-SERIES MAGNETIC BASES
- Overall height: 9" .
- Off and On switch.
- Scribe-opening: 5/32' .
- Power Pull: 130 lbs.
- Base size : 2" (Width) x 2-1/2' (Depth).
- Holds most of AGD dial and test indicators.

0-1" DIAL INDICATOR
- Graduation: .001"
- Stem: 3/8" diameter.
- 2" Dia. dial face.
- Lug back.

2PC MAGNETIC BASE & INDICATOR KIT

0~1" DIAL INDICATOR
- Graduation: .001"
- Lug back
- Contact point thread 4-48
- Stem: 3/8"
- Dial Face: 2"

MAGNETIC BASE
- Fine adjustment,
- On/off switch,
- Power Pull: 130 lbs.
- Overall Height: 9"
- Max Reach: 16"
- Hold most of AGD group indicators
- Base: 2" (Width) x 2-1/2" (Depth)

3PC MAGNETIC BASE & INDICATOR KIT

22PC INDICATOR POINT KIT
- Fits most American and imported indicators.
- A.G.D. specifications (4-48 Threads)
- Assorted points.

0-1" DIAL INDICATOR
- Graduation: .001"
- Stem: 3/8" diameter.
- 2" Dia. dial face.
- Lug back.

MAGNETIC BASE
- Overall height: 9" .
- Off and On switch.
- Scribe-opening: 5/32" .
- Power Pull: 130 lbs.
- Base size : 2" (Width) x 2-1/2' (Depth).
- Holds most of AGD dial and test indicators.

1" DIAL INDICATOR & MAGNETIC BACK KIT

0-1" DIAL INDICATOR
- Graduation: .001"
- Contact point interchangeable with thread 4-48.
- Rack & contact point made of hardened stainless steel.
- Stem: 3/8" diameter.
- Jeweled movement.
- 2" Dia. dial face.

MAGNETIC BACK
- Magnetic back is already mounted on indicator.
- Magnetic back comes with screw on/off back.
- Magnetic back has protective coating and is used to position indicator of most metal surfaces.
- Magnetic back diameter: 2-1/4"

MITY-MAG HOLDER & 1" TRAVEL DIAL INDICATOR KIT

0-1" DIAL INDICATOR
- Graduation: .001"
- Contact point interchangeable with thread 4-48.
- Rack & contact point made of hardened stainless steel.
- Stem: 3/8" diameter.
- Jeweled movement.
- 2" Dia. dial face.
- Lug back.

MITY-MAG HOLDER
- Zinc die cast housing.
- 45 lbs holding power.
- 5 Locations for mounting accessories.
- Hold up to 3/8" dia. stem.
- Holder Dimension: 4-1/2 x1x1-1/4"

3PC DIAL INDICATOR, MITY-MAG HOLDER & 22PC IND. POINT KIT

22PC INDICATOR POINT KIT
- Fits most American and imported indicators.
- A.G.D. Specifications (4-48 Threads).
- Assorted points.

0-1" DIAL INDICATOR
- Graduation: .001"
- Contact point interchangeable with thread 4-48.
- Rack & contact point made of hardened stainless steel.
- Stem: 3/8" diameter.
- Jeweled movement.
- 2" Dia. dial face.
- Lug back.

MITY-MAG HOLDER
- Zinc die cast housing.
- 45 lbs holding power.
- 5 Locations for mounting accessories.
- Hold up to 3/8" dia. stem.
- Holder Dimension: 4-1/2 x1x1-1/4"

INDICATOR & MAGNETIC BASE KITS

DIAL TEST INDICATOR & MINI UNIVERSAL MAGNETIC BASE KIT

0-0.03" RANGE TEST INDICATOR

- Graduation: .0005"
- Reading: 0-15-0
- Precision pivot bearing.
- 0.098" Contact point.
- Satin chrome finish.
- Dovetail mount top, back, & front.
- Includes fitted case & 2 stems (5/32" & 3/8").
- Jeweled movements.
- Automatic reversing.

MINI UNIVERSAL MAG BASE

- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Accepts all A.G.D. dial indicators and test indicators.
- On/Off magnet power switch.
- Max. Reach: 7.5".
- Base Dimension: 1.2" (width) x 1.5" (depth).

DIAL TEST INDICATOR & MINI UNIVERSAL MAGNETIC BASE KIT

0-0.03" RANGE TEST INDICATOR

- Graduation: .0005"
- Dovetail mount top, back, & front.
- Includes fitted case & 2 stems (5/32" & 3/8").
- Precision pivot bearing.
- Reading: 0-15-0
- 0.098" Contact point.
- Satin chrome finish.
- Jeweled movements.
- Automatic reversing.

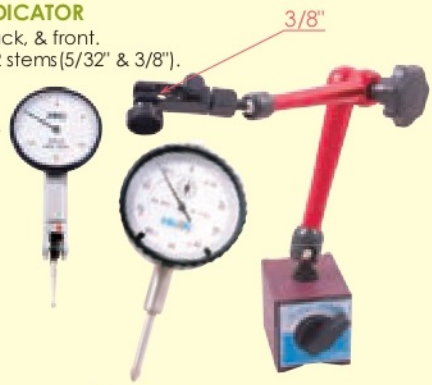
MINI UNIVERSAL MAG BASE WITH FINE ADJUSTMENT

- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Accepts all A.G.D. dial indicators and test indicators.
- On/Off magnet power switch.
- Max. Reach: 7.5".
- Base Dimension: 1.2" (width) x 1.5" (depth).

3PC TEST INDICATOR, TRAVEL INDICATOR & UNIVERSAL MAGNETIC BASE KIT

0-0.03" RANGE TEST INDICATOR

- Dovetail mount top, back, & front.
- Includes fitted case & 2 stems (5/32" & 3/8").
- Reading: 0-15-0
- Graduation: .0005"
- Precision pivot bearing.
- 0.098" Contact point.
- Satin chrome finish.
- Jeweled movements.
- Automatic reversing.



0-1" DIAL INDICATOR

- Graduation: .001"
- Contact point interchangeable with thread 4-48.
- Stem: 3/8" diameter.
- Rack & contact point made of hardened stainless steel.
- Jeweled movement.
- 2" Dia. dial face.
- Lug back.

PRO-QUALITY UNIVERSAL MAGNETIC BASE

- 3-D rigid steel arm movement.
- Unique central locking mechanism.
- Fine adjustable.
- On/Off switch.
- Super power pull 130 lbs.
- Base Dimension: 2"(Width)x2-1/2"(Depth)

Interapid STYLE TEST INDICATOR & MAGNETIC INDICATOR HOLDER KIT

0~0.060" TEST INDICATOR

- Swiss type horizontal dial test indicator
- .080" tungsten carbide point
- Automatic reversal
- Jeweled movement
- Dial reading 0-15-0
- Easy-to-read tilted dial
- Dial diameter: 1-1/2"
- 210° swivel arc.
- Graduation: .0005"

INDICATOR HOLDER

- 80 lbs magnetic pull.
- Overall height: 5"
- Fine adjustment.
- Holds most dial and test indicators.
- Stem holds: 3/8, 5/16, 1/4" diameter.

Dasqua® 7PC ULTRA PRECISION MACHINIST SET

SET INCLUDES:

- 176lbs. super strong power pull 275mm arm length magnetic base with fine adjustment (7121-0025)
- Big screen IP67 oil proof digital caliper, 0-150mm/0-6" range, 0.0005" resolution, inch/metric/fraction (2015-2405)
- 0-150mm/0-6" rule, graduations: 0.5, 1.0, 1/64", 1/32", 1/16" (1012-2011)
- IP65 digital outside micrometer, 0-25mm/0-1" range, 0.0005" resolution (4410-1105)
- Dial test indicator with shock proof gearing, 0-0.8mm range, 0.001" resolution (5211-1129)
- Ultra precision 1-2-3 blocks, squareness 0.0001"/1" (8407-0005)
- Depth base attachment (3001-1001)
- Aluminum case.

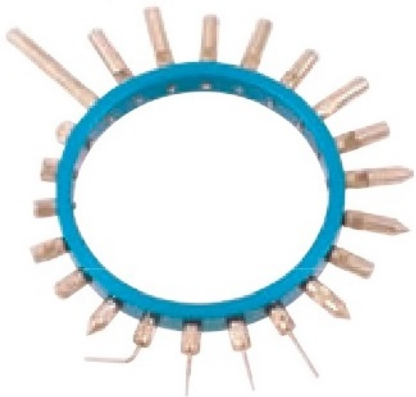
A MUST FOR EVERY MACHINIST!

22PC INDICATOR POINT KITS

- Fits most American and imported indicators.
- A.G.D. Specifications (4-48 Threads).
- Assorted points.

22PC INDICATOR CONTACT POINT RING & KIT

- 22 Points with4-48 screw thread to fit AGD indicators
- All Points are mounted on a convenent alumium ring for safe keeping and ready selection.
- Premium quality.



INDICATOR EXTENSION POINTS & KIT

- 4-48 internal and external threads
- Fits most of AGD group indicators

Item#	Length	Material
4401-0439	1"	Stainless Steel
4401-0441	2"	Stainless Steel

METRIC TO ENGLISH INDICATOR CONVERSION POINT

- Use the same standard inch AGD points with metric indicators
- Dimension: 7/32" dia., 1/2" long
- **4-48 internal threads M2.5 x 0.45 external threads**
- Steel, black oxide plated

USE ENGLISH POINTS ON METRIC INDICATORS

BACK PLUNGE DIAL INDICATOR

- Easy to read from top.
- Reading: 0-100
- Conforms to AGD standards.
- Dial face diameter: 1-3/8"
- Made of stainless steel.
- Rotatable bezel.

.001" GRADUATION

0.2" SHORT RANGE DIAL INDICATOR
-Designed for Making Comparative Tests

- Dial face: 1-1/2" diameter
- Contact point: .098"x1.25"
- Stem: 1/4"x1.5"
- Includes: 3 plunge contacts: 3/16x3/32", 5/16x3/32" & 3/16x1" & 3/8" bottom contact point.
- Completed with case.

Measuring Range: 0~0.2"
0~100 Reading
Graduation: 0.001"

GROUP 1

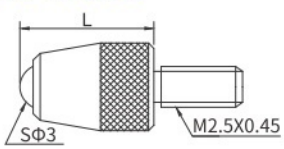
Limited Supply!

INDICATOR REPLACEMENT POINT -Inch

- 4-48 threaded contact point for indicators
- Replacement contact point.
- Fits indicators that have a 4-48 thread.
- Made of hardened stainless steel.

Dasqua® INDICATOR REPLACEMENT POINT WITH CARBIDE BALL POINT-Metric

NEW



- M2.5 thread.
- Carbide ball point.
- Fits indicators that have a M2.5x0.45 thread.
- Overall lenght: 7.3mm

Item#	Material	Length	S Ø D
5333-6101	Carbide	7mm	3.0mm

PRECISION MEASURING TOOLS

DIAL INDICATORS

0~.125 TRAVEL DIAL INDICATOR-GROUP 1

- 1-1/2" diameter dial face.
- Reading: 0-50
- Rack & contact point made of hardened stainless steel.
- Jeweled movement.
- Lug back.

AGD GROUP 1

.0005" GRADUATION

0~.250 TRAVEL DIAL INDICATOR-GROUP 1

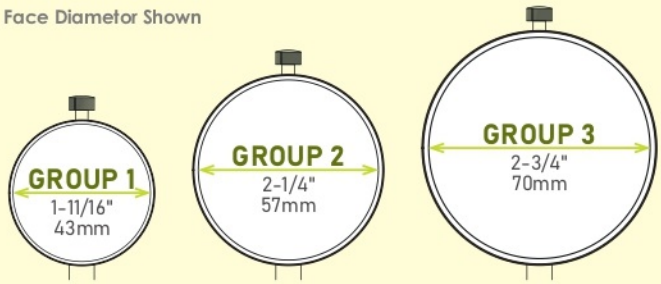
- AGD Group I.
- 1-1/2" diameter dial face.
- Reading: 0-100
- Rack & contact point made of hardened stainless steel.
- Jeweled movement.
- Lug back.

AGD GROUP 1

.001" GRADUATION

DIAL INDICATOR GROUP SPECIFICATIONS

Face Diametor Shown



Z-Limit 1/4" TRAVEL DIAL INDICATOR-GROUP 1

- Manufactured and inspected at world class factory that produces highest quality European brands.
- Reading range pointers installed in the bezel.
- Complete with a fitted durable ABS case.
- Long form of Calibration Certificate included.
- 6 Jewel movement.
- Flat back.

.001" GRADUATION
0-100-0 READING

AGD GROUP 1

Z-Limit ULTRA-SERIES

SHOCK-PROOF

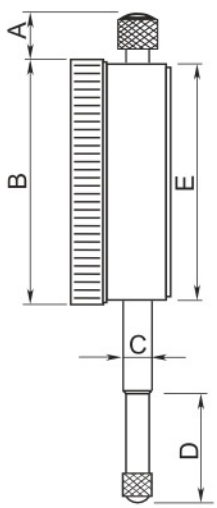
- AGD Group 1: 1-1/2" diameter face.
- Contact point interchangeable with thread 4-48
- Stem: 3/8" diameter.

Dasqua® 0-5mm MINI METRIC DIAL INDICATOR -GROUP 1

SHOCK-PROOF | DIN 878

- With calibration certificate.
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness.
- Limit indicator clips included.
- Strictly made in accordance with DIN878.
- Jeweled bearings providing the lowest possible bearing friction.
- With narrowed range and higher accuracy.
- Flat back.

AGD GROUP 1



Range	Graduation	(mm) A	B	C	D	E	Accuracy	Hysteresis
0-5	0.01	6.5	Ø40	Ø8	12.5	Ø36	0.014	0.003

0-0.4" WATERPROOF DIAL INDICATOR -GROUP 2

- Robust, shockproof design
- Trave: 0-0.4"
- Readig: .001"
- Continuous reading: 0-50
- Tolerance markers
- AGD Group 2, 2-1/4" dia.
- Stem: 8mm
- Lug back and carbide contact point.

Limited Supply!

.0005 GRADUATION

WATERPROOF

Protection Includes:

- Rubber bellows on stem
- Sealed back plate
- O-ring seal on safety cap
- O-ring protection for bezel and rotating dial

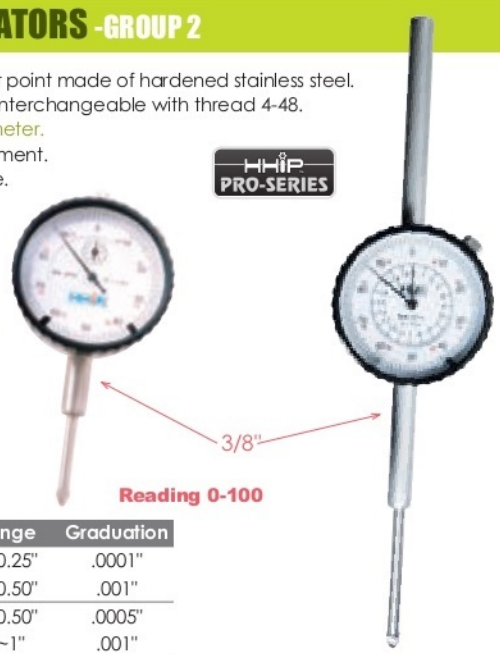
AGD GROUP 2

DIAL INDICATORS -GROUP 2

- Rack & contact point made of hardened stainless steel.
- Contact point interchangeable with thread 4-48.
- Stem: 3/8" diameter.
- Jeweled movement.
- 2" Dia. dial face.
- Lug Back

HHIP PRO-SERIES

AGD GROUP 2



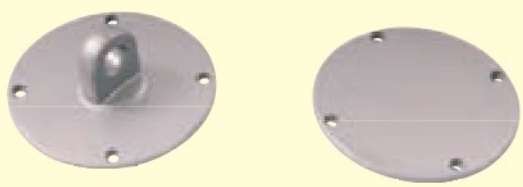
Reading 0-100

Item#	Range	Graduation
4400-1250	0~0.25"	.0001"
4400-0004	0~0.50"	.001"
4400-1095	0~0.50"	.0005"
4400-0001	0~1"	.001"
4400-1100	0~1"	.0005"
4400-1000	0~1"	.0001"
4400-0012	0~1" (Flat Back)	.001"
4400-0002	0~2"	.001"

Replacement Contact Point (4-48 thread) (Item #4400-3139)

DIAL INDICATOR BACK COVER

- For AGD group 2 indicator with 2-1/4" diameter.
- Four hole pattern.



Pro-Series COLOR FACE DIAL INDICATORS -GROUP 2

- Contact point interchangeable with thread 4-48.
- Rack & contact point made of hardened stainless steel.
- Jeweled movement.
- Stem: 3/8" diameter.
- 2" Dia. dial face.
- Graduation: 0.001"
- Reading: 0-100
- Lug back.

AGD GROUP 2

Replacement Contact Point (4-48 thread) (Item #4400-3139)

1" DIAL INDICATOR WITH LIFTING LEVER -GROUP 2

- Lifting lever.
- Rack & contact point made of hardened stainless steel.
- Contact point interchangeable with thread 4-48.
- Stem: 3/8" diameter.
- Jeweled movement.
- 2" Dia. dial face.
- Lug Back

AGD GROUP 2

Reading 0-100

REPLACEMENT INDICATOR FOR DIAL BORE GAGE SET -GROUP 2

0.0005" GRADUATION

FIT MOST DIAL BORE GAGES

AGD GROUP 2

DIAL INDICATORS

Z-Limit 1" TRAVEL INDICATOR-GROUP 2

- 6 Jeweles movement.
- Bezel lock screw designed for easy adjustment.
- Contact point interchangeable with thread 4-48.
- Stem: 3/8" diameter.
- Dial Face: 2.19" diameter.
- Reading range pointers installed in the bezel.
- Long form of calibration certificate included
- Dual Back: flat back installed with an extra lug back.
- Complete with a fitted durable plastic case.

GROUP 2

Z-Limit ULTRA-SERIES

.001" GRADUATION
READING 0-100-0

Replacement Contact Point (4-48 thread)(Item #4400-3139)

Z-Limit 1" TRAVEL INDICATOR-GROUP 2

- Manufactured and inspected at world class factory that produces highest quality European brands.
- Reading range pointers installed in the bezel.
- Complete with a fitted durable ABS case.
- Long form of Calibration Certificate included.
- Contact point interchangeable with thread 4-48
- AGD Group 2.
- 6 Jewel movement.
- Shock-Proof.
- Stem: 3/8" diameter.
- Reading: 0-100-0.
- Flat back.

SHOCK-PROOF

.001" GRADUATION

GROUP 2

Z-Limit ULTRA-SERIES

Limited Supply!

Teclock DIAL INDICATORS-GROUP 2

- Easy-to-read graduations.
- Hard satin-chrome finish.
- Spindle rack, pinions and gear trains are superior quality, ensuring longevity.
- Conforms to AGD specifications.
- Meets or exceeds applicable federal specifications.
- Revolution counter.
- Stem: 3/8" Diameter.
- Face Diameter: 2-3/16".
- 0-100 reading.
- Lug back.

.001" GRADUATION

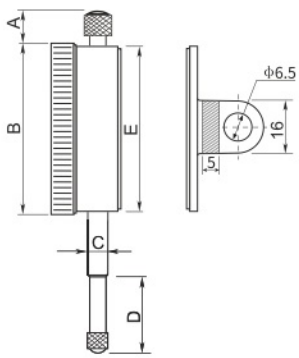
GROUP 2

Dasqua® DIAL INDICATORS-GROUP 2

- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness.
- Limit indicator clips included.
- Strictly made in accordance with D1N878.
- Jeweled bearings on 5122-4215 and 5122-4220 provide the lowest possible bearing friction.
- Casting diameter: 58mm, shank diameter: 8mm
- Satin chrome plated steel case.

GROUP 2

.001" GRADUATION



Replacement M2.5 x 0.45mm Point (Item #5260-9999)

Item#	Range	Scale divisions	Style	(mm) A	B	C	D	E	Accuracy	Protection Standard
5122-4210	0-1"	0.001"	lug back	8.5	58	8	40.9	53.5	0.002"	No Jeweled Bearing
5122-4220	0-1"	0.001"	lug back	8.5	58	8	40.9	53.5	0.002"	Jeweled Bearing
5122-4214	0-2"	0.001"	lug back	79.3	58	8	57.7	53.5	0.004"	No Jeweled Bearing
5122-4215	0-2"	0.001"	lug back	79.3	58	8	57.7	53.5	0.004"	Jeweled Bearing

2" TRAVEL LARGE FACE INDICATOR -GROUP 3

- Contact point interchangeable with thread 4-48.
- Stem: 3/8" diameter.
- **Dial Face: 2.97" diameter.**
- Lug back.

GROUP 3

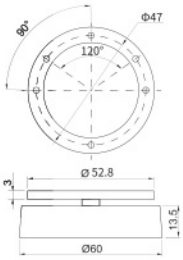
.001" GRADUATION READING 0-100-0

Replacement Contact Point (4-48 thread)
(Item #4400-3139)

Dasqua® DIAL INDICATOR WITH MAGNETIC BACK -GROUP 2

- Indicator strictly made in accordance with DIN 878.
- Permanent powerful magnet.
- Fitting for all group 2 dial indicator.
- Magnet screws off.
- Magnetic force: 20KG.
- Fitted case.

5111-1010 Shown



GROUP 2

Magnetic Back with Indicator Kits

Item#	Indicator Included	Indicator Range	Graduation	Stem Dia.
5111-0001	5111-0000	0-10mm	0.01mm	8mm
5122-4211	5111-4210	0-1"	0.001"	3/8"

Z-Limit 10MM TRAVEL INDICATOR-GROUP 2

- Manufactured and inspected at world class factory that produces highest quality European brands.
- Contact point interchangeable with thread M2.5
- Complete with a fitted durable ABS case.
- Reading range pointers installed in the bezel.
- Long form of Calibration Certificate included.
- AGD Group 2: 60mm diameter face.
- 6 Jewel movement.
- Shock-Proof.
- Stem: 8mm diameter.
- Flat back.

Z-Limit ULTRA-SERIES

SHOCK-PROOF

GROUP 2

.01mm GRADUATION 0-100-0 READING

Limited Supply!

METRIC DIAL INDICATORS -GROUP 2

- Reading: 0-100
- Rack & contact point made of hardened stainless steel.
- Jeweled movement.
- 2" diameter dial face.
- Stem: 8mm
- Lug back.

GROUP 2

* Limited Supply

Item#	Range
4400-1110*	0~5mm
4400-1101	0~10mm
4400-0019	0~20mm

.01mm GRADUATION

Teclock METRIC DIAL INDICATORS-GROUP 2

- Easy-to-read graduations.
- Hard satin-chrome finish.
- Spindle rack, pinions and gear trains are superior quality, ensuring longevity.
- Conforms to AGD specifications.
- Meets or exceeds applicable federal specifications.
- Stem: 8mm
- Revolution counter.
- Lug back.

Limited Supply!

.01mm GRADUATION

GROUP 2

Item#	Range
4409-1112	0~10mm
4409-1114	0~20mm
4409-1115	0~30mm

QUICK ACTION DIGITAL ELECTRONIC INDICATORS-GROUP 2

- Excellent repeatability with quick movement of measurements
- True Inch/MM conversion
- Absolute zero reset button
- On/Off button
- Stem: 8mm
- Lug back
- With fitted case

GROUP 2

INCH/METRIC .0005"/ .01mm RESOLUTION

Limited Supply!

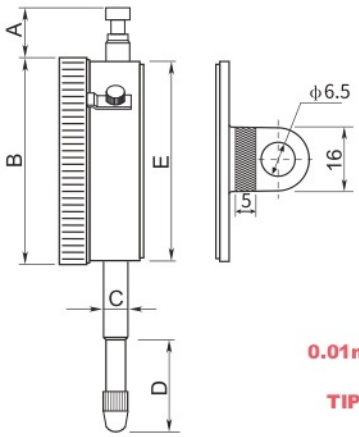
PRECISION MEASURING TOOLS

Dasqua® 0-10MM METRIC DIAL INDICATOR -GROUP 2

DIN 878

- Measuring range 0-10mm
- Graduation is 0.01mm
- Reading is 0-100-0
- Accuracy is 0.017mm
- Hysteresis is 0.003mm
- Scale divisions are 0.01mm
- Strictly made in accordance with DIN 878
- Body diameter is 58mm, shank diameter is 8mm.

GROUP 2



0.01mm GRADUATION

TIP THREAD: M2.5

Specification

Range	Graduation	Style	(mm) A	B	C	D	E	Accuracy	Hysteresis
0-10	0.01	Lug back & Flat back	10.5	58	8	20.5	53.5	0.017	0.003

Dasqua® METRIC DIAL INDICATOR-JEWELED -GROUP 2

DIN 878

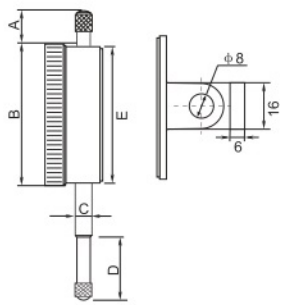
- Used to measure surface flatness as well as axial runout and also used to check tool set up and squareness.
- Limit indicator clips included.
- Strictly made in accordance with DIN 878.
- Jeweled bearing providing the lowest passible bearing friction.
- With narrowed range and highter accuracy.
- Calibration certificate
- Fitted case

SHOCK-PROOF

• Internal gears, teeth, clamps, etc. are all plated.

• Strictly made in accordance with DIN878;

• Poles are precisely grinded, which guarantees concentricity.



GROUP 2

Flat Back Installed & Lug Back Included

Specifications

Range	Graduation	(mm) A	B	C	D	E	Accuracy	Hysteresis
0-10	0.01	6	Ø58	Ø8	18.5	Ø55	0.017	0.003

Dasqua® DIGITAL ELECTRONIC INDICATORS -GROUP 2

Battery + CR2032 | mm/in | Data output

- Calibration certificate provided with total forward error, hysteresis error, total error and deviation error on it.
- Watchcase made of high-strength aluminum alloy guaranteeing low deformation.
- Glass grating for high accuracy and stable performance.
- Temperature and humidity test for each product, ensuring the normal use of each in harsh environment.
- Copper sleeve and rod precisely ground to reduce shaking.
- The functions of tolerance set and tolerance alarm are optional.
- Alarm light is also available for quick-checking products' tolerance.
- 3 Bottons: On/Off, Inch/mm & ABS/PRESET
- Contact Point Thread: M2.5x0.45
- Stem Diameter: 8mm
- Standard CR-2032(3V) battery included.
- Flat back
- Fitted case

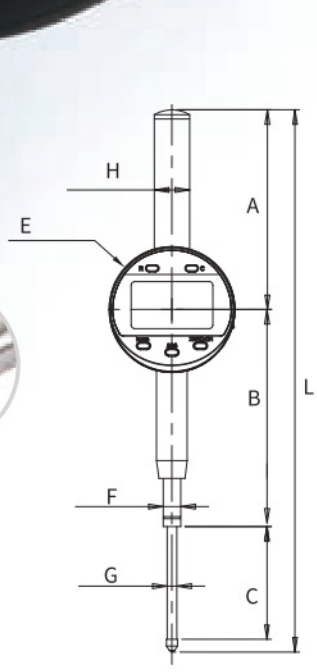
Glass grating for high accuracy and stable performance

Housing entirely cast made of high-strength aluminum alloy guaranteeing low deformation

GROUP 2

INCH/METRIC
0.0005" GRADUATION

Temperature and humidity test for each product, ensuring the normal use of each in harsh environment



REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Resolution	(mm) A	B	C	D	E	F	G	H	L
5260-1105	0-0.5"/0-12.7mm	.0005"/.01mm	47.7	51.5	25.8	32.4	Ø57.4	Ø8h6	Ø4.5	Ø10	125
5260-1110	0-1.0"/0-25.4mm	.0005"/.01mm	68	76	33	34.7	Ø57.4	Ø8h6	Ø4.5	Ø16	183
5260-1115	0-2.0"/0-50.8mm	.0005"/.01mm	91	102.8	51.5	34.7	Ø57.4	Ø8h6	Ø4.5	Ø16	247

Dasqua® ABSOLUTE DIGITAL ELECTRONIC INDICATORS -GROUP 2

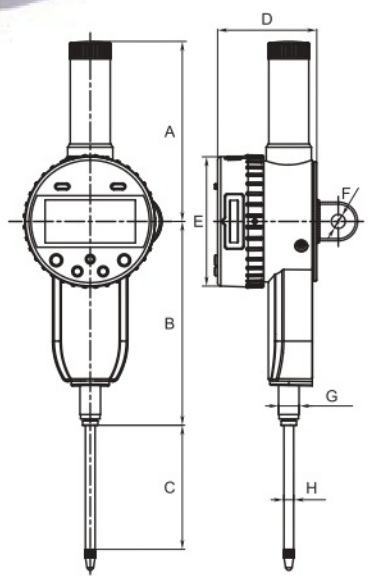
- Positive, tactile-feel button activation.
- Data output.
- "+" or "-" direction set.
- High precision contact point.
- Flat back.
- Lug back optional.

CABLE 01 | Absolute | Data output | mm/in | BLUETOOTH TRANSMITTER | WIRELESS TRANSMITTER

GROUP 2

INCH/METRIC/FRACTION
.0005" OR .00005" GRADUATION

- Large rotatable LCD display with clear reading
- Low power consumption assures longer service life
- More function:On/Off button, Preset, Origin, ABS/Zero and mm/inch switchable, achieving multifunctional



REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Resolution	(mm) A	B	C	D	E	F	G	H	Accuracy
5340-8105	0-1/2"/0-12.7mm	.0005"/.01mm	60.2	53.8	14.2	40.2	Ø60.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.0005"/.01mm
5340-8110	0-1"/0-25.4mm	.0005"/.01mm	55.7	68.8	32.7	46.2	Ø61.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.0005"/.01mm
5340-8115	0-2"/0-50.8mm	.0005"/.01mm	83.7	94.8	57.7	46.1	Ø61.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.001"/.015mm
5340-9105	0-1/2"/0-12.7mm	.00005"/.001mm	60.2	53.8	14.2	40.2	Ø60.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.00016"/.004mm
5340-9110	0-1"/0-25.4mm	.00005"/.001mm	55.7	68.8	32.7	46.2	Ø61.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.00016"/.004mm
5340-9115	0-2"/0-50.8mm	.00005"/.001mm	83.7	94.8	57.7	46.1	Ø61.1	Ø6.5	Ø8 or Ø1/8"	Ø4.5	.0002"/.005mm

PRECISION DIAL TEST INDICATORS

- Dovetail mount top, back & front.
- Includes fitted case & 2 stems(5/32" & 3/8").
- Precision pivot bearing.
- 0.098" Contact point.
- Satin chrome finish.
- Jeweled movements.
- Automatic reversing.

Item#	Range	Graduation	Face	Reading
4400-0010	0~0.03"	.0005"	White	0-15-0
4400-0101	0~0.03"	.0005"	Yellow	0-15-0
4400-1001	0~0.03"	.0005"	Black	0-15-0
4400-0100	0~0.008"	.0001"	White	0-40-0

Replacement Point For 0~0.03"(Item #4400-1007) (M1.8 Thread)
Replacement Point For 0~0.008"(Item #4400-1008) (M2 Thread)

Ultra-Series DIAL TEST INDICATORS

- **Manufactured and inspected at world class factory that produces highest quality European brands.**
- Three dovetail positioning mounts work with most existing test indicator accessories.
- Precision gear-driven design with smooth, jeweled movement.
- Contact point reverses automatically, always maintaining clockwise hand rotation.
- Frictionally adjustable contacts.
- Meets or exceeds ANSI/ASME accuracy specifications.
- High contrast, easy-to-read dials with white background.
- Satin chrome finish.

1-1/4"(32mm) DIAL FACE
INCLUDES CASE & 2 STEMS(5/32&3/8")

Ultra-Series DIAL TEST INDICATOR WITH DOVETAIL MOUNT

- **Manufactured and inspected at world class factory that produces highest quality European brands.**
- Three dovetail positioning mounts work with most existing test indicator accessories.
- Precision gear-driven design with smooth, jeweled movement.
- Contact point reverses automatically, always maintaining clockwise hand rotation.
- Frictionally adjustable contacts.
- Meets or exceeds ANSI/ASME accuracy specifications.
- High contrast, easy-to-read dials with white background.
- Narrow body for in reach ability.
- Satin chrome finish for durability.

Kit includes:
2-contact points,
2-dovetail clamps(stem 5/32&3/8"),
1-swivel post holder,
1-tool post holder,
1-contact wrench with fitted case.

1-1/2" LARGE FACE, DIAL TEST INDICATORS

- Dial Face: 1-1/2" diameter
- Contact Point: .098"
- Dovetail mount top, back & front
- 2 stems (5/32 & 3/8") included
- Jeweled movements
- Satin chrome finish
- Automatic reversing
- With fitted case.

HHIP PRO-SERIES

Replacement Point For 0~0.03"(Item #4400-1007) (M1.8 Thread)
Replacement Point For 0~0.008"(Item #4400-1008) (M2 Thread)

Ultra-Series LARGE FACE DIAL TEST INDICATOR

- **Manufactured and inspected at world class factory that produces highest quality European brands.**
- Three dovetail positioning mounts work with most existing test indicator accessories.
- Precision gear-driven design with smooth, jeweled movement.
- Contact point reverses automatically, always maintaining clockwise hand rotation.
- Frictionally adjustable contacts.
- Meets or exceeds ANSI/ASME accuracy specifications.
- High contrast, easy-to-read dials with white background.
- Satin chrome finish.

1-9/16" (40mm) DIAL FACE

2 stems (5/32 & 3/8") included

DIAL TEST INDICATORS

VERTICAL DIAL TEST INDICATOR

- Dovetail mounting top, back and bottom.
- Adjustable bezel and dial are easily set and reset to zero.
- Satin chrome finishing.
- Contact point can be displaced 210°.
- Includes 2 stems (5/32" & 3/8").

Range	Graduation	Reading
0~0.03"	.0005"	0-15-0

Pro-Series LONG RANGE TEST INDICATOR

- Swiss style horizontal dial test indicator
- Automatic reversal
- Jeweled movement
- Dial reading 0-15-0
- Easy-to-read tilted dial
- 210° swivel arc.
- Dial diameter: 30mm(1.185")
- .080" carbide contact point.
- Very large measuring range.
- 4mm(5/32') swivel stem.
- With revolution counter.
- 2 Stems (5/32" & 3/8") included.
- With fitted case.

.0005 GRADUATION
Reading: 0-15-0

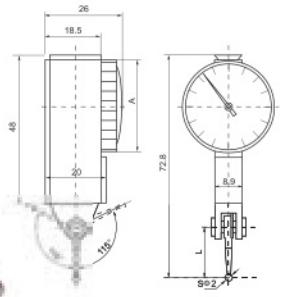
Limited Supply!

METRIC DIAL TEST INDICATORS

- Precision pivot bearing.
- 2.5mm contact point.
- Satin chrome finish.
- Jeweled movements.
- Automatic reversing.
- Includes fitted case & 2 stems (6mm&8mm).
- Dovetail mount top, back, & front.

Dasqua® METRIC DIAL TEST INDICATORS

- A hard frame body providing excellent rigidity.
- White edge of dial for easy to read.
- Hardened and ground contact point.
- Satin chrome-finish case for durability.
- Shock resistant.
- Strictly made in accordance with DIN2270.
- Precision gear-driven design with smooth movement.



Item#	(mm) Range	Graduation	Casing Diameter (A)	Length of Stylus (L)
5221-0005	0.8	0.01	Ø30	16.5
5221-0000	0.8	0.01	Ø37.5	16.5

Interapid Style TEST INDICATOR & SET

- Swiss type horizontal dial test indicator
- Automatic reversal
- Jeweled movement
- Dial reading 0-15-0
- Easy-to-read tilted dial
- Dial diameter: 1-1/2"
- 210° swivel arc.
- .080" steel contact point.

.0005 GRADUATION

Kit Includes:
- 3 contact point (0.040", 0.080", 0.120")
- 2 dovetail clamps (sems 5/32",3/8")
- Axial support
- Height gage bar with dovetail clamp-3/8" hole

REPLACEMENT PARTS FOR Interapid Style INDICATORS

Holding Bar

Stem 5/32" Dia.

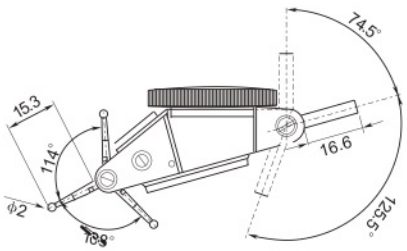
Replacement Point

Dovetail Clamp

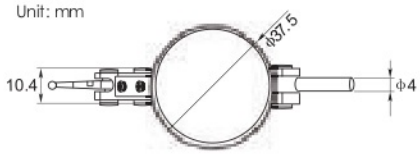
Item#	Description
4401-0731	1/4x1/2" Holding Bar with 1/4" pin
4401-0732	Stem 5/32" dia. with dovetail washer
4401-0734	Dovetail Clamp, bore dia. 1/4 & 3/8"
4401-0735	Replacement Point 0.04"(M1.4 thread)
4401-0736	Replacement Point 0.08" (M1.4 thread)
4401-0737	Replacement Point 0.12" (M1.4 thread)

Dasqua® DOUBLE RANGE TEST INDICATORS

- High precision contact point.
- 210° swivel arc.
- Jeweled bearing.
- Automatic reversal.
- Includes 3 contact points: 0.040", 0.080", 0.120" and 2 dovetail stem clamps.



Unit: mm



Item#	Range	Reading	Dial	Dial Reading
5221-1115	1.6mm	0.01mm	25mm	0-40-0
5222-6110	0.060"	0.0005"	1.5"	0-15-0

Replacement Points for Inch or Metric Indicators

Item#	Description
5222-6003	Replacement Point 0.040" (M1.6 Thread)
5222-6004	Replacement Point 0.080" (M1.6 Thread)
5222-6005	Replacement Point 0.120" (M1.6 Thread)

Dasqua® DOUBLE RANGE DIAL TEST INDICATOR KIT

- Tough shock-proof gearing.
- A hard frame body providing excellent rigidity.
- White edge of dial for easy to read.
- Satin chrome-finish case for durability.
- Precision gear-driven design with smooth movement.
- With twice the range on large easy-to-read tilted dial.

.0005 GRADUATION
Reading: 0-15-0

Kit includes:

- 3 contact points (0.040", 0.080", 0.120")
- 2 dovetail clamps (stems 5/32", 3/8")
- Axial support
- Height gage bar with dovetail clamp-3/8" hole

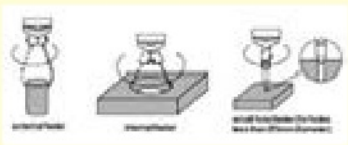
Replacement Points

Item#	Description
5222-6003	Replacement Point 0.040" (M1.6 Thread)
5222-6004	Replacement Point 0.080" (M1.6 Thread)
5222-6005	Replacement Point 0.120" (M1.6 Thread)

CENTERING INDICATORS

PRECISION CENTERING INDICATOR

- Quick, accurate, easy centering in boring and milling set-up on horizontal or vertical machines.
- Operates at an angle from horizontal to vertical machines, and from internal to external diameter without any change by simply changing the feeler.
- Face of the indicator remains stationary at any desired position while the machine spindle rotates, leaving the operator with both hands free to accurately position the table.



SPECIFICATIONS	
Body Length:	5-1/2"
Shank:	3/8" diameter x 7/8" long
Weight:	9-1/2 OZ
Feeler Ball:	1/8" diameter
Measuring Range:	250 axis offset
Capacity:	Internal 5/32" to 4-1/4" dia. External 0 to 4-1/4" dia.
Speed:	Spindle rotation up to 800RPM (Exceeding this speed is not recommended)
Locating Accuracy:	0.0002" of true center

Includes:

- Restraining rod
- Center point feeler
- 2" straight feeler
- 4" straight feeler
- 6" straight feeler
- 2" curved feeler
- 4" curved feeler
- 6" curved feeler

Pro-Series CENTERING INDICATORS

- Provides a simplified method of centering a workpiece or fixture on horizontal or vertical machines, internal or external diameters. Face of indicator remains stationary in any desired position while the machine spindle rotates, leaving the operator with both hands free to accurately position the machine table.
- Length: 6-7/8", Shank Dia.: 3/8", Feeler Dia.: 1/8".
- Locating accuracy within .0002" of true center.
- Operating speed not to exceed 800 RPM.
- Capacity: 5/32"-12" internal, up to 12" external.
- With fitted wooden case.

HHIP PRO-SERIES

Kit Includes:

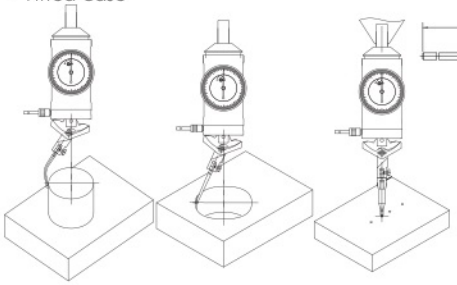
3 ID Feeler: 2, 3 & 4" long
3 OD Feeler: 2, 3, & 4" long
1 Center Locating Feeler

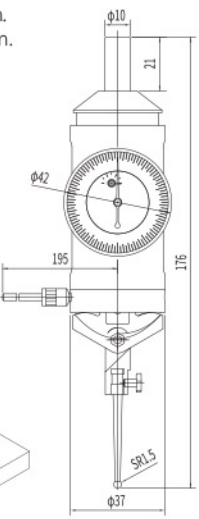
Dasqua® CENTERING INDICATORS

- Use this indicator to quickly center work pieces or fixtures on your bore and milling set-ups.
- Determining the centers of bores and shafts.
- Sturdy metal housing suitable for workshop.
- Internal or external centering.
- Operates at any angle from vertical to horizontal without a change.
- The shank is 10mm diameter and 20mm long.
- The indicator is 180mm long with 45mm straight feeler.
- Internal diameter is from 4mm to 300mm.
- External diameter is from 0mm to 300mm.
- Straight feeler length: 45mm/100mm/154mm.
- Curved feeler length: 46mm/100mm/154mm.
- Center point feeler length: 52.5mm.

Kit Includes:

- 3 internal & external feelers.
- Restraining arm
- Center point finder
- Wrench
- Fitted case





.0005" or .01mm GRADUATION

Item#	Range	Graduation	Accuracy
5711-6100	0-0.15"	0.0005"	0.001"
5712-1100	0-3mm	0.01mm	0.02mm

PRECISION MEASURING TOOLS

PRECISION TEST INDICATOR HOLDER & KIT

0~0.03" TEST INDICATOR

- Resolution: 0.0005" .
- Precision pivot bearing.
- 0.098" Contact point.
- Satin chrome finish.
- Dovetail mount top, back, & front.
- 2 stems(5/32" & 3/8").
- Jeweled movements.
- Automatic reversing.

UNIVERSAL TEST INDICATOR HOLDER

- 1-7/8" Clamping diameter.
- Length from center of clamping bracket to indicator: 6-1/2".
- Fits Bridgeport "J" head.

Z-Limit QUILL CLAMP HOLDER

- **Manufactured and inspected at world class factory that produces highest quality European brands.**
- Fits Bridgeport type milling machines.
- Fits milling machines with 1-7/8" dia. quills.
- Clamps directly onto machine quill.
- Will not disturb working tool in the machine.

Z-Limit ULTRA-SERIES

INDICATOR IS NOT INCLUDED

HALF-ROUND COMBINATION HOLDER

- Versatile holder for test indicators equipped with stems or dovetails
- 1/4 x 2" long holding bar
- Accepts 5/32" stem or dovetails
- 3-1/2" effective measuring range

INDICATOR IS NOT INCLUDED

AXIAL SUPPORT BRACKET

- Used for mounting indicators with dovetails or rods
- 3/8" diameter body for secure support
- Multi-position, 360° capability
- .375" shank
- Constant tension
- 6.500 radial sweep

UNIVERSAL EXTENSION ARM

- Unique central locking mechanism.
- Both sides with male threads(M8x1.25x8mm VS 5/16"-18x8mm)
- Rigid universal steel arm.
- Extends up to 12"

UNIVERSAL ARM FOR INDICATORS

- Rigid universal steel arm.
- Indicator stem hole: 8mm
- Unique central locking mechanism.
- Dovetail groove for clamping test indicator.
- Fine adjustment.
- Arm length 11"
- Rod side dimension (dia.x L): 8mmx40mm

MINI UNIVERSAL ARM FOR INDICATORS

- Unique central locking mechanism.
- Dovetail groove for clamping test indicator.
- Indicator stem hole: 8mm
- Rigid universal steel arm.
- Arm length 6"
- Rod side dimension (dia.x L): 8mmx40mm

Standard Shown

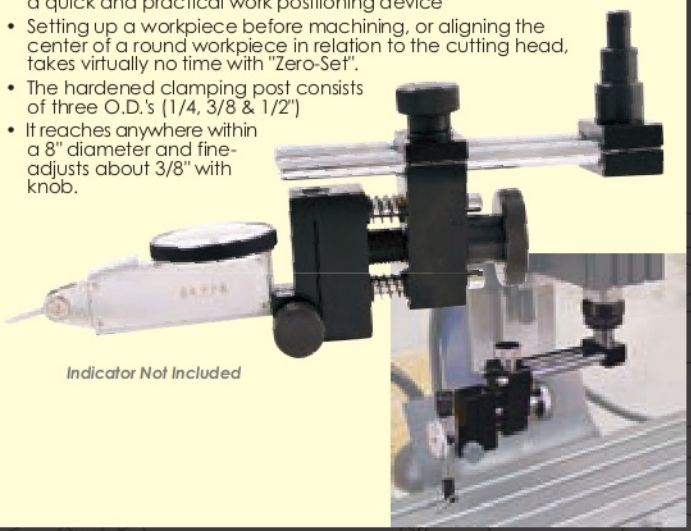
MINI UNIVERSAL ARM W/FINE ADJUSTMENT

- Unique central locking mechanism.
- Dovetail groove for clamping test indicator.
- Indicator stem hole: 8mm
- Fine adjustable knob.
- Arm length 6"
- Thead side: M8x1.25x8mm

INDICATOR ACCESSORIES

ZERO-SET UNIVERSAL KIT FOR TEST INDICATORS

- Designed for test indicator with dovetails or 1/4" post and functions as a quick and practical work positioning device
- Setting up a workpiece before machining, or aligning the center of a round workpiece in relation to the cutting head, takes virtually no time with "Zero-Set".
- The hardened clamping post consists of three O.D.'s (1/4, 3/8 & 1/2")
- It reaches anywhere within a 8" diameter and fine-adjusts about 3/8" with knob.



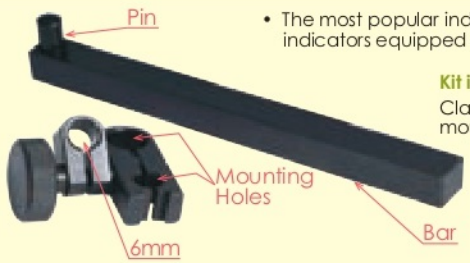
Indicator Not Included

ZERO SET UNIVERSAL ATTACHMENT

- Allows placement of any test indicator with dovetails or 1/4" posts in a multitude of positions
- Angles up to 90° on either side and bends both forward and backward
- Allows for an infinite range of measurement over an extensive area

Limited Supply!

HEIGHT GAGE ATTACHMENT CLAMP SET



- The most popular indicator clamp. Fits all indicators equipped with rods or dovetails

Kit includes:
Clamp with dovetail and mounting holes

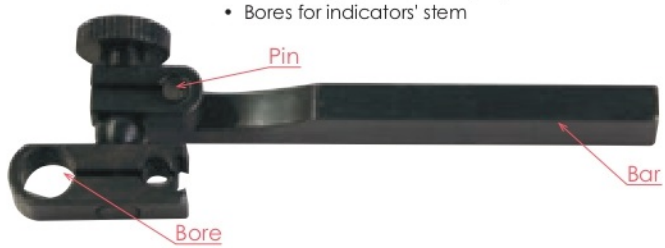
Item#	Mounting Holes	Bar	Pin
4401-0419	5/32 & 1/4"	5/16 x 5/16 x 3"	6mm
4401-0420	6 & 8 mm	9 x 9 x 75mm	6mm
4401-0421	7/32 & 3/8"	3/8 X 3/8 x 4"	6mm

ADAPTER CLAMP

- Adapter for mag. base, indicator stems and connect rods
- Rigid steel construction.
- Bore Diameter: 5/32, 1/4 & 1/4"

SWIVEL HEAD CLAMPING HOLDERS

- Rigid steel construction
- Dovetail groove for clamping test indicators
- Bores for indicators' stem



Item#	Bore	Bar	Pin
4401-0450	5/32 & 1/4"	1/2 x 1/4 x 3"	1/4
4401-0453	5/32 & 3/8"	1/2 x 1/4 x 3"	1/4
4401-0456	1/4 & 3/8"	1/2 x 1/4 x 3"	1/4

DOVETAIL INDICATOR CLAMPS

- 3" overall length
- For use with all test indicators and probes with dovetails
- Locks in four 90° quadrants

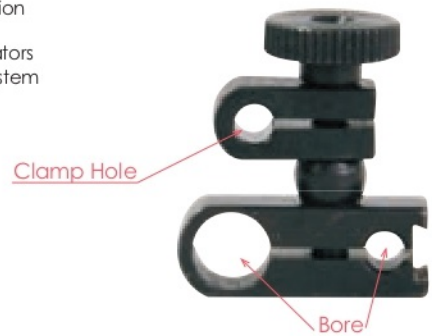
Item#	Dia. of Rod
4401-0426	1/4"
4401-0427	6mm
4401-0428	8mm

INDICATOR GRIP HOLDER

- Made for test indicator with 5/32" stem.
- Rod side dimension (dia.x L): 1/4"x 1-1/2"

DOVETAIL CLAMPS

- Rigid steel construction
- Dovetail groove for clamping test indicators
- Bores for indicators' stem



Item#	Bore	Clamp Hole
4401-0466	6 & 8mm	6mm
4401-0467	4 & 6mm	4mm
4401-0468	5/32 & 3/8"	1/4"
4401-0469	1/4 & 3/8"	4mm
4401-0470	5/32 & 1/4"	5/32"

Pro-Series FLEX & RIGID RULES

Style	Graduation
4R.....	8ths & 16ths, 32nds & 64ths
5R.....	32nds & 64ths, 10ths & 100ths
16R.....	32nds & 64ths, 50ths & 100ths
3R.....	32nds & 64ths, 10ths & 50ths
E/M.....	32nds & 64ths, mm & .5mm

- Made from the finest steel available.
- All fully hardened, tempered and chrome finished.
- Precisely etched for accuracy and readability.

Length (Inch)	Style	FLEX Item#	Width (Inch)
6	4R	4901-0131	1/2
12	4R	4901-0132	1/2
24	4R	4901-0134	3/4
36	4R	4901-0136	3/4
48	4R	4901-0138	3/4
6	5R	4901-0140	1/2
12	5R	4901-0142	1/2
24	5R	4901-0144	3/4
36	5R	4901-0146	3/4
48	5R	4901-0148	3/4
6	16R	4901-0150	1/2
12	16R	4901-0152	1/2
24	16R	4901-0154	3/4
36	16R	----------	------
6	3R	4901-0161	1/2
6	E/M	4901-0166	1/2
12	E/M	4901-0168	1/2

RIGID Item#	Width (Inch)
4901-0201	3/4
4901-0202	1
4901-0204	1-1/8
4901-0206	1-1/4
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----------	-------
4901-0212	1
4901-0214	1-1/8
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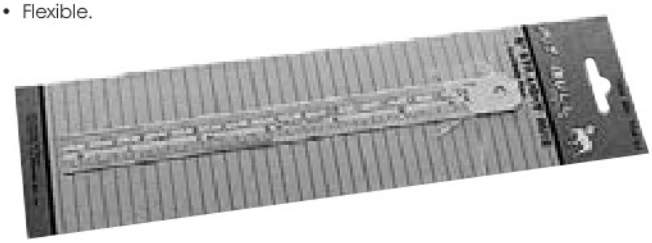
4901-0220	3/4
4901-0222	1
4901-0224	1-1/8
4901-0226*	1-1/4
4901-0231	3/4
4901-0236	3/4
4901-0238	1

* Limited Supply

STAINLESS STEEL RULE

- Hardened stainless steel.
- Flexible.



Item#	Size	Reading
7019-0001	6"/15cm	3R-16ths, 32nd, 1mm

POCKET STAINLESS STEEL RULES

- Made from hardened stainless steel.
- Graduations are properly etched for accurae measurements.
- Packed in attractive PVC jacket.
- Clip included.

Item#	Length x Width	Reading
7006-0001	6 x 15/32"	32nds, 64ths & Decimal Equiv.
7006-0003	6 x 15/32"	E/M-32nds, 64ths, mm & 0.5mm

MULTI-USE RULE & GAUGE

- This indispensable pocket tool performs six separate functions: drill point gauge, bevel protractor, circle center finder, circle divider, tap and drill table and 4" rule with etched graduations 0 in 64ths and millimeters.

STEEL PROTRACTORS

- Measures angles from 0 to 180°.
- Used for drawing radial lines, transferring angles and setting bevels.
- Blade secured firmly by lock nut at any angle.
- Made of tempered steel with satin chrome finish.
- Semi-circle Head Radius: 2"
- Features 6" arm and knurled thumb locknut.

Head Shape	Item #
Round	4901-0005
Square	4901-0006

Made in USA Item #
4901-0015
4901-0016

5PC MEASURING & MARKING SET

- Made of hardend tool steel.
- **Set consists of one of each:**
  - Machinest Square: 6" (6" Blade x 4" Beam)
  - Center Finder Square: 1-1/2"
  - Round Head Protractor
  - Carbide Tipped Scriber with magnet other side.
  - Center Punch: 4"
- Complete in a fitted ABS case

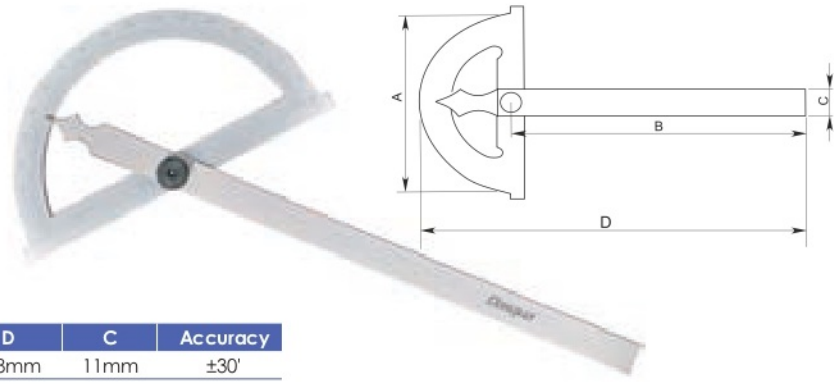
DRILL POINT GAGE

NEW

- For properly grinding 59° drill points and for measuring drill tips.
- Rule and slide are made of steel with satin chrome finish.
- 6" rigid rule is calibrated in 8ths, 16ths, 32nds and 64ths.
- End clip is adjustable and removable.
- Slide is calibrated in 32nds and 64ths.

Dasqua® 0-180° OPEN HEAD PROTRACTOR

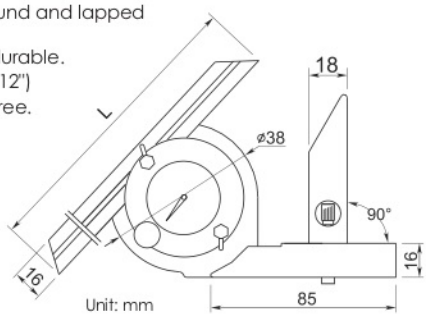
- Multi-purpose, engineering drawing, angle measurement, architectural design, woodworking, length measurement, etc.
- Packaged in a beautiful and durable leather bag.
- Measures angles from 0-180°
- Useful and accurate tool for setting bevels, transferring angles, and small squaring tasks.
- Blade secured firmly at any angle by a lock joint and knurled screw.
- Satin chrome finish for easy reading and resistance to rust.
- Hardened stainless steel.



Item#	Range	Graduation	Size (AxB)	D	C	Accuracy
1012-1005	0-180°	1°	80x120mm	168mm	11mm	±30'

Dasqua® 0-360° UNIVERSAL DIAL PROTRACTOR

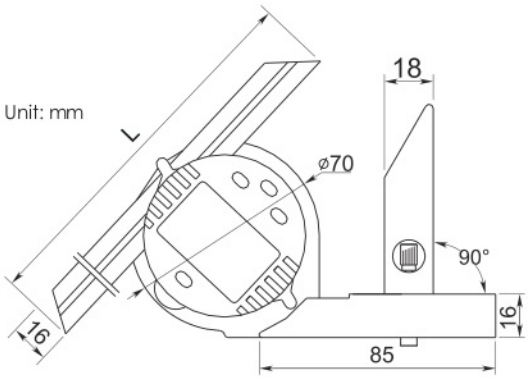
- Made of stainless steel.
- With a dial for easy and accurate reading.
- Measuring surface hardened, ground and lapped ensures smooth movement.
- Satin chrome finish, anti-rust and durable.
- Provided with three blades (6", 8", 12")
- Indicator pointer shows each degree.
- Packed in fitted case.



Item#	Range	Graduation	L	Accuracy
1031-2010	0-360°	5'	6"/150mm, 8"/200mm, 12"/300mm	±5'

Dasqua® 0-360° UNIVERSAL DIGITAL ELECTRONIC PROTRACTOR

- High contact display.
- All measuring face are hardened, ground and lapped.
- Hardened stainless steel.
- With fine adjustment.



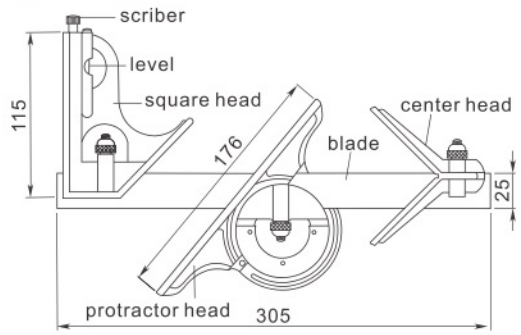
Data Output

REPLACEMENT BATTERY (ITEM #4102-0032)

Item#	Range	Reading	L	Accuracy
1021-2005	0-360°	1'	6"/150mm, 8"/200mm, 12"/300mm	±5'

Dasqua® 4 PC COMBINATION SQUARE SET

- Made by procoated mold and no blister on the surface.
- Low surface roughness and high accuracy with surfaces precisely ground.
- Powder-coated process guaranteeing high surface durability.
- Distinct lines and figures against the satin chrome finish making reading easily.

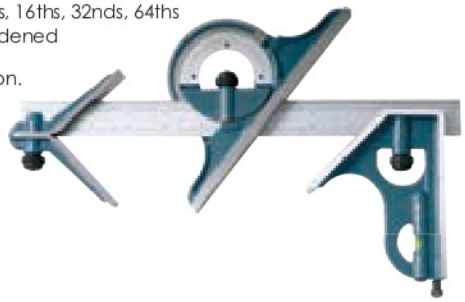


1/64" / 1.0mm & 1/32" / 0.5mm GRADUATION

- Strong and elegant packing.

4PC COMBINATION SQUARE SET

- Set includes: square head, center head, protractor and blade.
- Double indexed protractor is graduated 180° in both directions.
- Graduation: 4R-8ths, 16ths, 32nds, 64ths
- Blade made of hardened stainless steel.
- Microfine graduation.
- Accuracy ±15'.



16R Blade (32nds,64ths,50ths&100ths) Item#4901-0316'
Satin Chrome Finish

* Limited Supply

3PC COMBINATION SQUARE SET

- Microfine graduation.
- Easy-to-ready blade is fully hardened and tempered
- Square head has level and scriber point
- Graduation: E/M 0.5mm & 32nds, 1.0mm & 64ths.
- Blade satin chrome finish.

UNIVERSAL DIAL PROTRACTOR SET

- The measuring value can be read on the dial indicator.
- An inspection window reads a full 360° with four 0-90° sections.
- Hardened stainless steel construction throughout this tool.
- It can be used as a ruler, straight edge, cross or miter square.
- Blades are beveled at 45° on one side and 60° on the other side.
- Blade Length: 6, 8-1/2, 12"

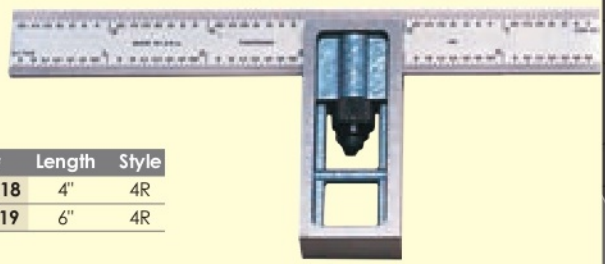
WITH 3 BLADES

Limited Supply!

DOUBLE SQUARES

- Made of steel hardened and satin chrome finished.
- Slide is adjustable and removable.
- 4R: 8ths & 16ths, 32nds & 64ths

Limited Supply!



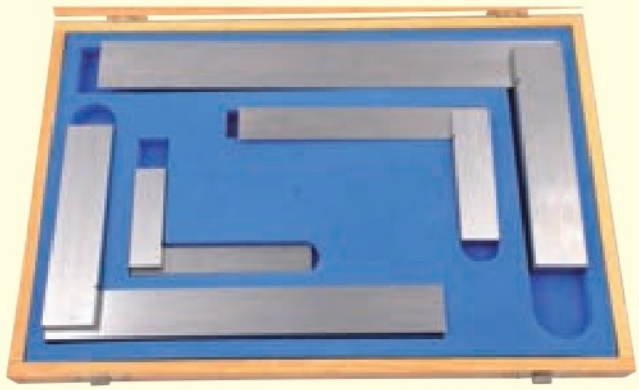
Item#	Length	Style
4901-0318	4"	4R
4901-0319	6"	4R

SQUARES & SETS

MACHINIST STEEL SQUARES & SETS

- Made of high grade tool steel & hardened spring steel, blades have a ground finish.
- Accurate right angles both inside and outside.
- Precision ground.

4906-0020 Shown



Item#	Blade Length	Beam Length
4906-0003	3	2.5
4906-0004	4	3.0
4906-0006	6	4.0
4906-0008	8	5.0
4906-0009	9	6.0
4906-0012	12	8.0

HHIP MACHINIST STEEL SQUARES & SET

- Made from fully seasoned tool steel.
- Accurate right angles both inside and outside.
- Fully hardened.
- Beam ground and lapped.

Item#	Blade Length	Beam Length	Squareness of Blade to Working Face
4901-0602	4"	3"	0.001"
4901-0604	6"	4"	0.001"
4901-0906	9"	6"	0.0015"
4901-1208	12"	8"	0.002"

Pro-Series SOLID SQUARES

- Made from tool steel, hardened and ground.
- Accurate right angles both inside and outside.

* Limited Supply

Item#	Blade Length	Beam Length
4901-0590	2"	1-1/2"
4901-0591	3"	2-1/2"
4901-0592	4"	3"
4901-0593	6"	4"
4901-0594	9"	6"
4901-0595*	12"	8"
4901-0598*	Set of 2,3,4 & 6"	
4901-0599*	Set of 4,6,9 & 12"	

ROUND BAR CENTER FINDERS

- Very useful to find the centers on any round object.
- Can be held in collets or drill chucks.
- Shank: 3/8"

MACHINISTS CENTER SQUARES

- For rapid location of exact center of round, square and octagnal parts.
- Made from precision gound tool steel.
- Hardened and tempered blade.
- To execute place the item between the center square. Scribe different lines on the workpiece each time changing its position. Center of the scribed lines will give the accurate center of the work piece.

Z-Limit BEVEL EDGE SQUARES

- Manufactured and inspected at world calss factory that produces highest quality European brands.
- Made of high grade stainless steel, hardened and ground.
- Accurate right angles both inside and outside

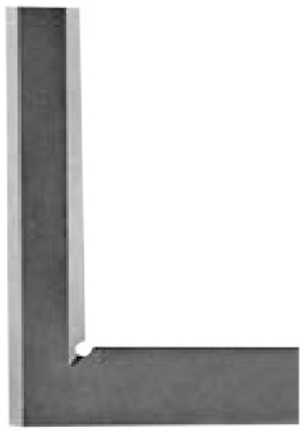
Tolerance(Squareness): +/- .0002"

Item#	Blade Length	Beam Length
4909-0003	3	2
4909-0006	6	4
4909-0008	8	5

Limited Supply!

PRECISION BEVEL EDGE SQUARES

- Squares have accurate right angles both inside and outside.
- Beveled blade on both sides.
- Made from a single piece of fully seasoned tool steel.
- Fully hardened.
- Beam ground and lapped.
- Accuracy class H.



PRECISION CYLINDRICAL SQUARES

- Used for checking squares, height gages and many instruments.
- Easy to access from any angle around it.
- Hardened and both ends are lapped.
- Absolute 90° angle.

Item#	Dimension Dia.	Height	Squareness	W.T. (lbs.)
4901-2601	3"	6"	± 0.00010"	13
4901-2602	4"	12"	± 0.00015"	45

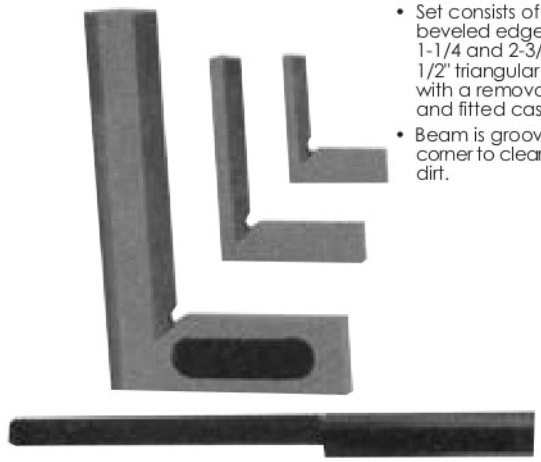
90° WIDE BASE SQUARES

- Used for checking squares.
- Wide base for easy free standing.
- Hardened and both ends are lapped.
- Absolute 90° angle.

Item#	Blade Length	Beam Length
4901-1213	3"	2"
4901-1214	4"	3"
4901-1216	6"	4"
4901-1218	8"	5"

.0002" SQUARENESS

4PC DIEMAKER'S SQUARE SET



- Set consists of 3 hardened beveled edge squares (3/4, 1-1/4 and 2-3/8") plus a 1-1/2" triangular straight edge with a removable handle and fitted case.
- Beam is grooved at inner corner to clear out burrs and dirt.

PRECISION GRANITE SQUARES

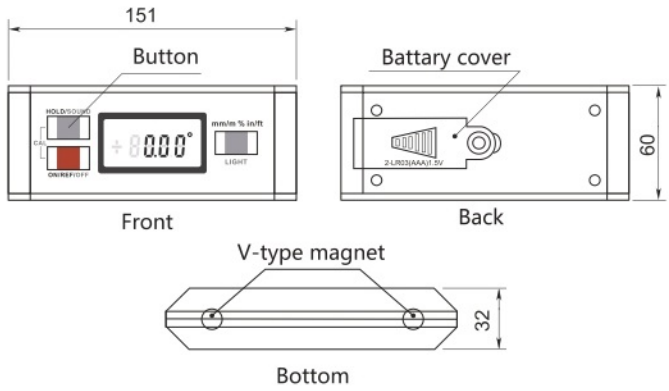
- To squareness check and for inspection purposes.
- Round hole for less weight and easy handling (larger size with multi-holes).
- Complete with inspection certificate.

Item#	H x W x Thick	Squareness	Wt. (lbs.)
4901-2705	10x 6x 1"	0.0002"	6
4901-2706	15x10x1.5"	0.00028"	18

Dasqua® DIGITAL ELECTRONIC PROTRACTOR

Absolute | IP65 COOLANT & FLUID RESISTANT

- Absolute function, zero setting is unnecessary when the battery is replaced.
- Used as level and inclinometer to measure the included angle of non-continuous working surfaces.
- V-groove base with powerful embedded magnets, which secures strong attachment to the measuring surfaces (including cylindrical surface).
- Backlight function enables it to use in the dim plac.
- IP65 dust-proof and water-proof.

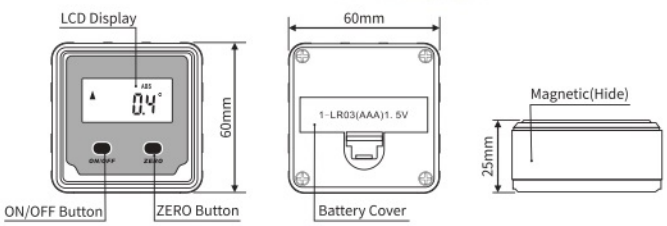


Item#	Range	Resolution	Accuracy
8400-0005	4 x 90°	0.1°	0°-90°: ±0.05° Rest of angle: ±0.15°

Dasqua® DIGITAL ELECTRONIC ANGLE GAGE

NEW

- Large easy-to-read backlight LCD display.
- Absolute 0° measuring at level surface.
- Measure relative bevel.
- With permanent strong magnet on measuring faces.
- CNC machined aluminum body.



Item#	Range	Resolution	Accuracy
8400-0010	4 x 90°	0.1°	±0.2°

Dasqua® 180° DIGITAL ELECTRONIC GAGE WITH FLIP-OUT DISPLAY

- With flip-out tilting display.
- Ultra-precise magnetic gage sets the angle of saw blades jointer fences, bandsaw tables and drill press tables.
- Measures both absolute level and relative bevel with readings that are always visible.
- V-groove in base for round objects like pipe and drill bits.

Item#	Range	Resolution	Accuracy	Repeatability	Size
8400-0000	±180°	0.1°	±0.1°	±0.1°	2.2x2.3x1.3"

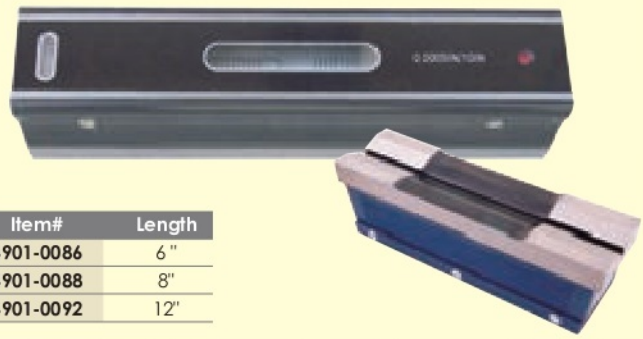
MASTER PRECISION LEVELS

- Graduation: 0.0005" per 10" .
- For accurately checking the work of machinists and toolmakers setting up machinery and other work that requires extreme leveling accuracy.
- Ground and graduated main vial of 10 second accuracy.

Item#	Length
4901-0084	4"
4901-0081	8"
4901-0008	12"

INSPECTION BLOCK LEVELS WITH 2 VIALS

- For accurately checking the work of machinists and toolmakers setting up machinery and other work that requires extreme leveling accuracy.
- Feature a cross and main vial that is easiily adjustable. They are heat insulated and are resistant to shock.
- 0.0005 Graduation Sensitivity per 10 Inch.



Item#	Length
4901-0086	6 "
4901-0088	8"
4901-0092	12"

Dasqua® MASTER PRECISION LEVEL

DIN 877

- Strictly made in accordance with D1N877.
- Used to measure the straightness and flatness of machine guide rails.
- Robust cast iron model, precision ground measuring surface ensures high accuracy.
- Base with V-groove to allow use on round bars and shafts, cylindrical surfaces.
- With main vial and cross test vial

10 Second Accuracy!
1 Division Equals 0.0005" Per 10"

Item#	Range	Graduation
8302-0005	6"	0.0005"
8302-0010	8"	0.0005"
8302-0015	10"	0.0005"
8302-0020	12"	0.0005"

Dasqua® PRECISION FRAME SPIRIT LEVELS

DIN 877

- Strictly made in accordance with DIN 877.
- Used to measure the straightness and flatness of machine guide rails.
- Robust cast iron model, precision ground measuring surface ensures high accuracy.
- Base with V-groove to allow use on round bars and shafts.
- The adjustable glass buble is highly sensitive and easy to read.
- Lapped, hardened and polished stee body.

.0005" GRADUATION

Item#	Range	Graduation
8302-0003	6x6"	0.0005"
8302-0006	8x8"	0.0005"
8302-0009	10x10"	0.0005"
8302-0013	12x12"	0.0005"

PRECISION FRAME SPIRIT LEVELS

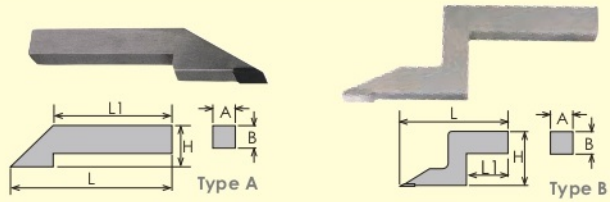
- This level comes with frame level and master level
- With fitted case

.0005" GRADUATION

Item#	Range	Graduation
4901-0077	6 x 6"	0.0005"
4901-0078	8 x 8"	0.0005"
4901-0007	12 x 12"	0.0005"

HEIGHT GAGES

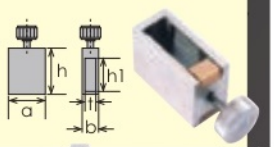
CARBIDE SCRIBERS & CLAMP FOR HEIGHT GAGES



Unit: Inch

Scriber Item#	Type	L	L1	H	A	B
4300-0016	A	2.15	1.3	0.5	0.23	0.33
4300-0035	B	1.7	0.8	1.3	0.23	0.32
4300-0126	B	3.2	1.6	1.2	0.35	0.35
3001-4105	B	2.52	1.1	1.9	0.20	0.31
3110-4120	B	3.15	1.4	1.6	0.35	0.35
3110-4125	B	8.0	4.3	1.9	0.39	0.63
3130-4115	B	2.57	1.6	1.2	0.50	0.25
3130-4125	A	4.13	2.6	1.4	0.39	0.47
3130-4130	B	4.33	2.6	1.5	0.39	0.59

Clamp Item#	h	a	h1	b	t
4300-0151	1.34	0.79	0.80	0.59	0.355



Dasqua®

DOUBLE-BEAM DIAL HEIGHT GAGE

- Provided with a dial and two digit counters for more accurate reading.
- Double-beam ensures higher measuring accuracy.
- One counter reads in the plus direction and the other reads in the minus direction.
- With a feed wheel on the back.
- Carbide tipped scriber for sharp, clean lines.
- Both counters and dial can be re-zeroed at any scriber position.
- Base hardened, ground and lapped for maximum flatness.
- Dustproof shield optional.

Item#	Range	Resolution	Graduation
3222-4205	0-12"	0.001"	0.1"

Z-Limit 12"/300MM VERNIER HEIGHT GAGE

- Manufactured and inspected at world class factory that produces highest quality US brands.
- Made of stainless steel.
- The finest of vernier scribers for accurate work.
- Satin-chrome finished scale and vernier.
- **.001"/.02mm reading.**

Limited Supply!

Z-Limit DIAL HEIGHT GAGE

- Manufactured and inspected at world class factory that produces highest quality European brands.
- Fine feed adjustment with positive lock.
- Other side of scriber has a pin to attach indicator clamp and dovetail.
- Made of high quality stainless steel.
- Scriber is carbide tipped.
- Complete with fitted case.

Limited Supply!

CLAMP SHOWN INCLUDED

Z-Limit ULTRA-SERIES

.001" GRADUATION

DIAL HEIGHT GAGES

- Made of high quality stainless steel and satin chrome finish.
- Carbide tipped scriber for longer life.
- Fine feed adjustment.
- Positive lock screw.
- Come with fitted case.

.001" GRADUATION

Item#	Range
4300-0028	0~6"
4300-0029	0~8"
4300-0030	0~12"

Replacement Scriber (see above for dimensions)

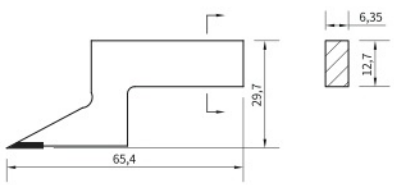
Scriber Item#
4300-0035

Dasqua®

ABSOLUTE DIGITAL ELECTRONIC HEIGHT GAGE

Absolute | Data output | mm/inch

- Built-in absolute liner encoder, no need to set the reference point at every power-on.
- Carbide tipped scriber for sharp, clean lines.
- With SPC data output.
- Large, easy-to-read LCD display.
- Rigid, heavy duty beam and base.
- Made of stainless steel.



Replacement Scriber (Item# 3130-4115)
(see page 67 for dimensions)

Item#	Range	Resolution	Accuracy
3130-8115	0-300/0-12"	0.01/0.0005"	±0.04

Z-Limit DIGITAL ELECTRONIC HEIGHT GAGES

- Manufactured and inspected at world class factory that produces highest quality European brands.
- Made of high quality stainless THROUGHOUT.
- Function Keys: On/Off/Zero, mm/inch, Tol, ABS, Hold and Set.
- Power: SR 44, 1.55V battery (included).
- True inch/metric conversion.
- Complete with fitted case.
- Scriber is carbide tipped .
- Fine adjustment.

Z-Limit ULTRA-SERIES

Limited Supply!

INCH/METRIC
.0005"/.01mm RESOLUTION

Item#	Range
4309-0112	12"/300mm
4309-0124	24"/600mm

Replacement Battery (Item #4102-0030)

DIGITAL ELECTRONIC HEIGHT GAGES WITH SPC OUTPUT

- Made of stainless steel throughout.
- Fine adjustment control for smooth movement
- Inch/mm conversion
- ABS and Inc. mode.
- Zero setting.
- Carbide tipped scriber
- With RS232 output port.
- Standard CR-2032(3V) battery included.

Limited Supply!

INCH/METRIC
.0005" /.01mm RESOLUTION

Item#	Range	Accuracy
4300-0138	8"/200mm	.0015"/.03mm
4300-0146	24"/600mm	.0025"/0.05mm

Replacement Battery (Item #4102-0032)

Replacement Clamp & Scriber
(see Page 67 for Dimensions)

Scriber Item#	Clamp Item#
4300-0016	4300-0151

DIGITAL ELECTRONIC HEIGHT GAGES

- Large display screen
- Hardened and ground stainless steel frame
- Preset memorizing function
- Cast iron base
- True inch/metric conversion.
- Button battery SR 44,1.55 V

INCH/METRIC
.0005" /.01mm
RESOLUTION

* Limited Supply

Item#	Range	Accuracy
4300-0112*	12"/300mm	.0020"/0.04mm
4300-0120*	20"/500mm	.0022"/0.05mm
4300-0124	24"/600mm	.0025"/0.05mm

Replacement Battery (Item #4102-0030)

Replacement Scriber (see Page 67 for Dimensions)

Scriber Item#
4300-0126

PRECISION MEASURING TOOLS

DIGITAL ELECTRONIC HEIGHT GAGES

Dasqua®

IP65 COOLANT & FLUID RESISTANT | Data output | BLUETOOTH TRANSMITTER | Battery + CR2032 | mm/inch

BUILT-IN BLUETOOTH ABSOLUTE HEAVY DUTY DIGITAL ELECTRONIC HEIGHT GAUGE

- The new generation measuring serie with Built-in Bluetooth transmission.
- Absolute function.
- Heavy duty main beam and base.
- Direct inch/metric conversion.
- Large, easy-to-read digital display.
- Carbide tipped scriber for sharp, clean lines.
- Class A for electrostatic discharge.
- Zeros-setting at any position.

Item#	Range	Resolution	Accuracy
3230-1110*	0-24"/0-600mm	.0005"/.01mm	.002"/.05mm

* Limited Supply

With Wireless Transmitter

Item#	Range	Resolution	Accuracy
3230-4705	0-12"/0-300mm	.0005"/.01mm	.001"/.03mm
3230-4710	0-24"/0-600mm	.0005"/.01mm	.002"/.05mm

Replacement Clamp & Scriber (see Page 67 for Dimensions)

Replacement Battery (Item #4102-0030)

DIGITAL ELECTRONIC HEIGHT GAGES WITH WHEEL

- Large control panel.
- Beam is made of stainless steel.
- Fine adjustment.
- Inch/mm conversion.
- Zero setting.
- Carbide tipped scriber.
- Power: 1.5V SR44 battery.
- Ergonomic heavy duty base.

INCH/METRIC .0005"/ .01MM RESOLUTION

SUPPLIED WITH INDICATOR ADPATER WITH 5/16" HOLE

* Limited Supply

Item#	Range	Accuracy
4300-0161	12"/300mm	+/- .002"/ .04mm
4300-0162*	20"/500mm	+/- .002"/ .05mm
4300-0163	24"/600mm	+/- .002"/ .05mm

Replacement Battery (Item #4102-0030)

Dasqua®

DIGITAL ELECTRONIC DOUBLE-BEAM HEIGHT GAGE

- Heavy duty construction for industry use.
- Large LCD display.
- Zero-setting at any position.
- Double stainless beams assure high accuracy.
- Base is hardened, ground and lapped for maximum flatness.
- Carbide tipped scriber for sharp, clean lines.
- On/Off switch ABS/INC switchable and hold function.
- Micro-adjustable wheel for easy head displacement/precision positioning.

INCH/METRIC .0005"/ .01MM GRADUATION

Replacement Scriber (Item# 3130-4115)

Item#	Range	Accuracy
3230-8105	0-12"/0-300mm	+/- 0.002"/0.04mm

STEEL SURFACE GAGES

- Fine adjustment.
- Retractable pins in base for working on flat surfaces.
- Bottom V-groove ground for cylindrical works.
- Spindle can be adjustable to any angle above or below base.
- Scriber head hardened has spring control.
- Base fully hardened throughout.
- Two posts included.

Item#	Post Length
4401-2012	4 & 7"
4401-2014	9 & 12"

HDF-TYPE SURFACE GAGE

- There are two frictional held gage pins in the base, which can be pushed down and used against the edge of a surface plate or T-slot for linear works.
- One handed fine adjustment.
- Steel base hardened and ground on one end and bottom surface.
- Bottom V-groove for cylindrical works.
- V groove on the front end which allows the spindle to adjust to any angle above or below the base
- Scriber head hardened.

Post Length 12 & 18" Included

SURFACE GAGE - Fine Tune On Top

- Knob on top of surface gage for easy adjustament.
- One handed fine adjustment.
- Steel base hardened and ground with magnet On/Off switch.
- Scriber head hardened.

Limited Supply!

Post Length 12"

BLACK GRANITE SURFACE PLATES

- Surface plates are checked by auto-collimator for overall accuracy assurance.
- Granite surface plates meet or exceed Federal Specifications GGG-P-463C.

INCLUDES CERTIFICATE OF INSPECTION. NOT NIST TRACEABLE

Grade: A • Ledge: 0

Item#	Size	Accuracy	Wt. (lbs)
4401-1812	18 x 12 x 3"	±.000050"	80
4401-2418	24 x 18 x 3"	±.000075"	150

Item#	Size	Accuracy	Wt. (lbs)
4401-3624	36 x 24 x 4"	±.0001"	495
4401-4836	48 x 36 x 6"	±.0002"	1200

Please let us know if you require calibration

Grade: B • Ledge: 0

Item#	Size	Accuracy	Wt. (lbs)
4401-1596	6 x 6 x 2"	±.0001"	10
4401-1597	6 x 8 x 2"	±.0001"	12
4401-1598	12 x 8 x 2"	±.0001"	20
4401-1599	12 x 9 x 2"	±.0001"	26
4401-0011	12 x 9 x 3"	±.0001"	40

Item#	Size	Accuracy	Wt. (lbs)
4401-0012	18 x 12 x 3"	±.0001"	80
4401-0013	24 x 18 x 3"	±.00015"	150
4401-0014	36 x 24 x 4"	±.0002"	495
4401-1604	48 x 36 x 6"	±.0004"	1200
4401-1607	48 x 72 x 6"	±.0004"	2480

GRANITE SURFACE PLATE STANDS

- Overall working height: 36"
- Made of heavy-gauge steel with durable baked enamel finish.
- Assembly required.
- Stand comes with leveling screws

For 0 Ledge

Item#	For Plate Size	Wt. (lbs)
4401-1301	24 x 18"	64
4401-1401	36 x 24"	82
4401-1602	48 x 36"	126
4401-1608	48 x 72"	225

GAGE BLOCK SETS & ACCESSORIES

Pro-Series RECTANGULAR STEEL GAGE BLOCK SETS

- Meets or exceeds Federal GGG-G-15C.
- Surface hardness: HRC 64
- Made of the highest quality tool steel.
- Complete with manufacturer's calibration or certificate.
- With fitted wooden case with sizes labeled.

HHIP PRO-SERIES

Offering N.I.S.T. Traceable Calibration Conforms to

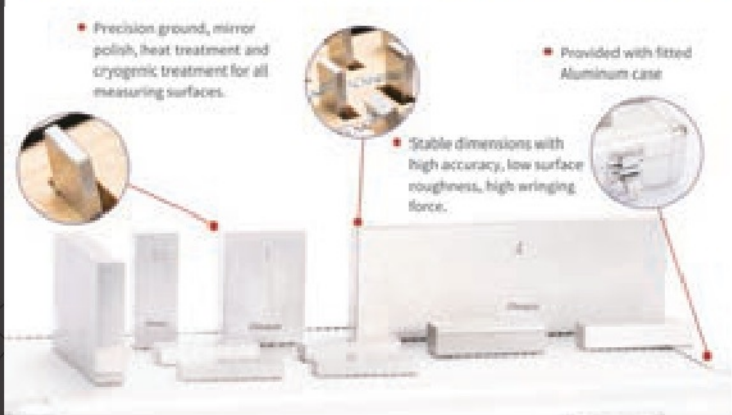
- MIL-STD 45662A
- GGG-G-15C
- ISO/IEC 17025 Accredited
- ISO 9000, 10012-1
- ANSI-NCSL Z540-1
- ISO GUIDE 25 Certified

Item#	No. of Blocks	Grade
4101-0001	81pc	AS-0
4101-0021	81pc	AS-1
4101-0022	81pc	AS-2
NIST Calibration Certificate 81pc/Set		
4101-0002	36pc	AS-0
4101-0004	36pc	AS-2
NIST Calibration Certificate 36pc/Set		

Blocks Included in All Sets
9 Blocks: .1001" thru .1009" step of .0001"
49 Blocks: .101" thru .149" step of .001"
19 Blocks: .050" thru .950" step of .050"
4 Blocks: 1.000" thru 4.000" step of 1.000"
10 Blocks: .1000" thru .1009" step of .0001"
9 Blocks: .101" thru .109" step of .001"
9 Blocks: .110" thru .190" step of .010"
8 Blocks: .050, .200,.300, .400, .500, 1.0, 2.0 & 4.0"

ACCURACY
Grade AS-0= Grade 2(At) : +4/-2 millionth
Grade AS-1= Grade 3(Bt): +8/-4 millionth
Grade AS-2= Grade B: ± 50 millionth

Dasqua® 81PC RECTANGULAR CALIBRATION GAGE BLOCK SETS



- Used to calibrate and adjust measuring equipment precision instruments, machine and fixtures and to standardze the measurement of length in manufacturing.
- Made of premium hardened steel. High-carbon, high-chrome steel provides high hardness HRC63 and wear resistance.
- Stable dimensions with high accuracy, low surface roughness, high wringing force.
- Strictly made in accordance with DIN ISO 3650.
- Precision ground, mirror polish, heat treatment and cryogenic treatment of all measuring surfaces.
- Certificate of accuracy is fumished.
- Edges are slightly bevelled for protection.
- Each block is serialized and marked for easy identification.

ACCURACY		
Length Range (L)	AS 0(in.)	AS 1(in.)
L-0.05"	4	6
0.05<L–0.4"	4	6
0.45<L-1"	4	6
1<L-2"	4	6
2<L-3"	4	6
3<L-4"	5	8

Item#	Grade	Pcs/Set	Nominal Size	Steps	Pieces
6111-3281	AS 1	81	0.05"	/	1
			0.1000-0.1009"	0.0001"	10
			0.101-0.149"	0.001"	49
6110-3281	AS 0		0.150-0.950"	0.05"	17
			1.000-4.000"	1.000"	4

Grade 0: mainly used in calibration laboratory by specialized inspection staff, as reference standards for calibration of high precision measuring equipment and accuracy lower than 1/2 of accuracy of gauge blocks.

Grade 1: mainly used in laboratory to inspect htgh precision workpieces, gauge blocks and measuring equipment.

RECTANGULAR GAGE BLOCK ACCESSORIES

- Made with gage block accuracy.
- Base block's mounting surface lapped flat and parallel with base.

RADIUS CYLINDRICAL JAWS

CLAMP

BASE BLOCK

Item#	Description
4101-0601	Base Block 4x2.750x1/7"
4101-0606	Clamp 4" capacity
4101-0607	Clamp 8" capacity
4101-0610	Radius 0.0787" Cylindrical Jaws (pair)
4101-0611	Radius 0.200" Cylindrical Jaws (pair)
4101-0612	Radius 0.750" Cylindrical Jaws (pair)

WOOD CASE FOR 81PC RECTANGULAR GAGE BLOCK SETS

- Fits any grade.
- Well made wood case with high quality hardware.
- Insert is perfect fit each block.
- Clear sizes labeled.

SIZES LABELED	
9 Blocks	.1001" thru .1009" step of .0001"
49 Blocks	.101" thru .149" step of .001"
19 Blocks	.050" thru .950" step of .050"
4 Blocks	1.000" thru 4.000" step of 1.000"
10 Blocks	.1000" thru .1009" step of .0001"
9 Blocks	.101" thru .109" step of .001"
9 Blocks	.110" thru .190" step of .010"
8 Blocks	.050, .200,.300, .400, .500, 1.0, 2.0 & 4.0"

METRIC RECTANGULAR STEEL GAGE BLOCK SETS

- Fitted case supplied.
- Meets or exceeds JS Standard.
- Furnished with manufacturer's calibration or certificate.
- Each block has a series no.
- Made of the highest quality tool steel.

ACCURACY		
Nominal Size (mm)	JIS 1 Tolerances in Microns (0.001mm)	JIS 2
10 or Less	±0.20	±0.45
10~25	±0.30	±0.60
25~50	±0.40	±0.80
50~75	±0.50	±1.00
75~100	±0.60	±1.20

Offering N.I.S.T. Traceable Calibration Conforms to
- MIL-STD 45662A
- GGG-G-15C
- ISO/IEC 17025 Accredited
- ISO 9000, 10012-1
- ANSI-NCSL Z540-1
- ISO GUIDE 25 Certified

Item#	No. of Blocks	Grade
4101-1041	87pc	JIS 1
4101-1042	87pc	JIS 2
NIST Calibration Certificate 87pc/Set		

Blocks Included in All Sets

9Blocks: 1.001~1.009 Step of 0.001mm
49Blocks: 1.01~1.49 Step of 0.01mm
19Blocks: 0.5~9.5 Step of 0.5mm
10Blocks: 10~100 Step of 25mm

81PC STEEL SQUARE GAGE BLOCK SETS

- Each block with center hole threaded.
- Meet or exceeds U.S. Federal specification GGG - G - 15C.
- Complete with manufacturer's calibration or certification.
- Made of the highest quality tool steel.
- Surface Hardness: HRC 64
- With sturdy fitted wooden case.
- With center hole.

Offering N.I.S.T. Traceable Calibration Conforms to
- MIL-STD 45662A
- GGG-G-15C
- ISO/IEC 17025 Accredited
- ISO 9000, 10012-1
- ANSI-NCSL Z540-1
- ISO GUIDE 25 Certified

ACCURACY

Grade AS-0= Grade 2(At) : +4/-2 millionth
Grade AS-1= Grade 3(Bt): +8/-4 millionth
Grade AS-2= Grade B: ± 50 millionth

Item#	Grade
4101-0051	AS-0
4101-0005	AS-1
4101-0052	AS-2
NIST Calibration Certificate 81pc/Set	

Blocks Included in All Sets

9 Blocks: .1001~ .1009" step of .0001"
49 Blocks: .101~ .149" step of .001"
19 Blocks: .050~ .950" step of .050"
4 Blocks: 1.000~ 4.000" step of 1.000"

INDIVIDUAL RECTANGULAR GAGE BLOCKS

Offering N.I.S.T. Traceable Calibration Conforms to
- MIL-STD 45662A
- GGG-G-15C
- ISO/IEC 17025 Accredited
- ISO 9000, 10012-1
- ANSI-NCSL Z540-1
- ISO GUIDE 25 Certified

- Grade AS-0 (Grade 2(At)
- Each block is supplied with a manufacturer's certificate

Tolerance

0-1".....+.000004/ -.000002"
2" .....+.000008/-.000004"
3" .....+.000010/-000005"
4" .....+.000012/ -.000006"

Item#	Size (Inch)
4101-0701	0.0500
4101-0702	0.1000
4101-0703	0.1001
4101-0704	0.1002
4101-0705	0.1003
4101-0706	0.1004
4101-0707	0.1005
4101-0708	0.1006
4101-0709	0.1007
4101-0710	0.1008
4101-0711	0.1009
4101-0712	0.101
4101-0713	0.102
4101-0714	0.103
4101-0715	0.104
4101-0716	0.105
4101-0717	0.106
4101-0718	0.107
4101-0719	0.108
4101-0720	0.109
4101-0721	0.110
4101-0722	0.111
4101-0723	0.112
4101-0724	0.113
4101-0725	0.114
4101-0726	0.115
4101-0727	0.116
4101-0728	0.117
4101-0729	0.118
4101-0730	0.119
4101-0731	0.120
4101-0732	0.121
4101-0733	0.122
4101-0734	0.123
4101-0735	0.124
4101-0736	0.125
4101-0737	0.126
4101-0738	0.127
4101-0739	0.128
4101-0740	0.129
4101-0741	0.130
4101-0742	0.131
4101-0743	0.132
4101-0744	0.133
4101-0745	0.134
4101-0746	0.135
4101-0747	0.136
4101-0748	0.137
4101-0749	0.138
4101-0750	0.139
4101-0751	0.140
4101-0752	0.141
4101-0753	0.142
4101-0754	0.143
4101-0755	0.144
4101-0756	0.145
4101-0757	0.146
4101-0758	0.147
4101-0759	0.148
4101-0760	0.149
4101-0761	0.150
4101-0766	0.200
4101-0767	0.250
4101-0768	0.300
4101-0769	0.350
4101-0770	0.400
4101-0771	0.450
4101-0772	0.500
4101-0773	0.550
4101-0774	0.600
4101-0775	0.650
4101-0776	0.700
4101-0777	0.750
4101-0778	0.800
4101-0779	0.850
4101-0780	0.900
4101-0781	0.950
4101-0782	1.000
4101-0783	2.000
4101-0784	3.000
4101-0785	4.000

INDIVIDUAL SQUARE GAGE BLOCKS

- Grade AS-0 (Grade 2(At) : +4/-2 millionth)
- Each block is supplied with a manufacturer's certificate

Tolerance

0-1".....+.000004/ -.000002"
2" .....+.000008/-.000004"
3" .....+.000010/-000005"
4" .....+.000012/ -.000006"

Limited Supply!

EACH BLOCK HAS 1/4" DIA. HOLE

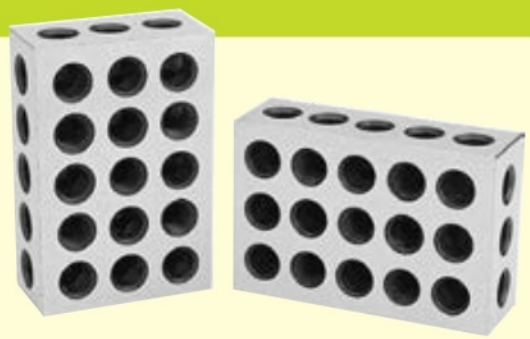
Item#	Size (Inch)
4101-0903	.1001
4101-0904	.1002
4101-0905	.1003
4101-0906	.1004
4101-0907	.1005
4101-0908	.1006
4101-0909	.1007
4101-0910	.1008
4101-0911	.1009
4101-0912	.101
4101-0913	.102
4101-0914	.103
4101-0915	.104
4101-0916	.105
4101-0917	.106
4101-0918	.107
4101-0919	.108
4101-0920	.109
4101-0921	.110
4101-0922	.111
4101-0923	.112
4101-0924	.113
4101-0925	.114
4101-0926	.115
4101-0927	.116
4101-0929	.118
4101-0930	.119
4101-0931	.120
4101-0932	.121
4101-0933	.122
4101-0934	.123
4101-0935	.124
4101-0936	.125
4101-0937	.126
4101-0938	.127
4101-0939	.128
4101-0940	.129
4101-0941	.130
4101-0942	.131
4101-0943	.132
4101-0944	.133
4101-0945	.134
4101-0946	.135
4101-0947	.136
4101-0948	.137
4101-0949	.138
4101-0950	.139
4101-0951	.140
4101-0952	.141
4101-0953	.142
4101-0954	.143
4101-0955	.144
4101-0956	.145
4101-0957	.146
4101-0958	.147
4101-0959	.148
4101-0960	.149
4101-0961	.150
4101-0966	.200
4101-0967	.250
4101-0968	.300
4101-0969	.350
4101-0970	.400
4101-0971	.450
4101-0972	.500
4101-0973	.550
4101-0974	.600
4101-0975	.650
4101-0977	.750
4101-0978	.800
4101-0979	.850
4101-0980	.900
4101-0981	.950
4101-0982	1.000
4101-0983	2.000
4101-0984	3.000
4101-0985	4.000

1-2-3 BLOCKS

PRECISION 1-2-3 BLOCKS SETS

- Heat treated and case hardened to HRC 55 to 60.
- Hardened and precision ground on all 6 sides of each block.
- Accuracy with squareness on all sides within .0002" per inch.
- 23 holes consists of 5 tapped holes (3/8" - 16 for 1-2-3) for clamping and 18 untapped holes drilled.
- Cross drilling design gives minimum weight and maximum strength.
- Dimensions: 1-2-3 is 1 x 2 x 3"

MATCHED PAIRS AND SOLD AS PAIR



5 Tapped Holes & 18 Untapped Through Holes

Dasqua® 1-2-3 BLOCKS

- Supplied with durable fitted ABS case.
- Product Dimensions: 1" x 2" x 3".
- Heat treated and case hardened to HRC 58-62.
- Hardened and precision ground on all 6 sides of each block.
- 23 holes consists of 5 tapped holes that are 3/8-16 for clamping and 18 untapped holes
- Sold in pairs.
- Tolerance of size ±.0002",Parallelism 0.0002",Height of pair 0.0002".
- Cross drilling design gives minimum weight and maximum strength.

Item#	Size	Squareness
8407-0005	1 x 2 x 3"	0.0001"/1"
8407-0010	1 x 2 x 3"	0.0003"/1"

ULTRA PRECISION 8PC 1-2-3 BLOCKS & SCREWS SET

- Hardened and precision ground on all 6 sides of each block.
- Accuracy with Squareness on all sides within .0001 per inch.
- 23 holes consist of 5 (3/8"-16) tapped holes for clamping and 18 untapped holes drilled .
- Supplied with fitted case.

5 TAPPED HOLES & 18 UNTAPPED THROUGH HOLES

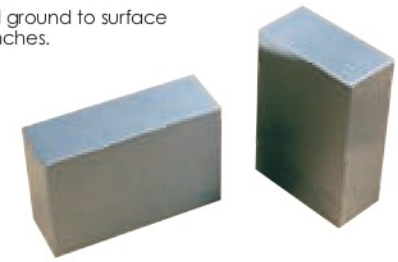
MATCHED PAIRS

INCLUDES
Matched pair of 1-2-3 blocks with 23 holes, 5pc of 3/8 -16 Socket Screws, Hex key

ULTRA PRECISION 1-2-3 BLOCKS WITH NO HOLE

- Hardened to RC 58-60 and ground to surface finish from 6 to 10 micron inches.
- Dimensions: 1 x 2 x 3 .

MATCHED PAIRS AND SOLD AS PAIR



ULTRA PRECISION 1-2-3 BLOCKS WITH ONE HOLE

- For precision grinding, layout, etc.
- Drilled Hole Size: .500 ~.501
- Accuracy with squareness on all sides within .0001 per inch.
- Hardened to RC 58-60 and ground to surface finish from 6 to 10 micron inches.
- Dimensions: 1 x 2 x 3"

MATCHED PAIRS AND SOLD AS PAIR

ULTRA PRECISION 1-2-3 BLOCKS WITH 11 HOLES

5 TAPPED HOLES & 6 UNTAPPED THROUGH HOLES

MATCHED PAIRS AND SOLD AS PAIR

- Hardened and precision ground on all 6 sides of each block.
- Accuracy with squareness on all sides within .0001 per inch.
- Consists of 5 tapped holes 5/16 - 18 for clamping and 6 untapped holes drilled through.
- Dimensions: 1 x 2 x 3 ".

PRECISION 2-3-4 BLOCKS SET

- Hardened and precision ground on all 6 sides of each block.
- Accuracy with squareness on all sides within .0001" per inch.
- 23 holes consist of 5 (3/8"-16)tapped holes for clamping and 18 untapped holes drilled.
- Dimensions: 2 x 3 X 4".

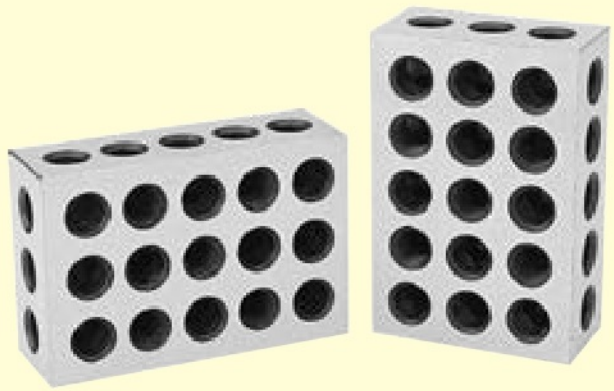
MATCHED PAIRS AND SOLD AS PAIR

5 TAPPED HOLES & 18 UNTAPPED THROUGH HOLES

PRECISION 2-4-6 BLOCKS SET

- Heat treated and case hardened to HRC 55 to 60.
- Hardened and precision ground on all 6 sides of each block.
- Accuracy with squareness on all sides within .0002" per inch.
- 23 holes consists of 5 tapped holes (5/8"-11 for 2-4-6) for clamping and 18 untapped holes drilled.
- Cross drilling design gives minimum weight and maximum strength.
- Dimensions: 2-4-6 is 2 x 4 x 6"

MATCHED PAIRS AND SOLD AS PAIR



5 TAPPED HOLES & 18 UNTAPPED THROUGH HOLES

36PC SPACE BLOCK SET

- Four connecting screws 1/4"~28 are included to make any length desired.
- **ID is threaded 1/4"~28.**
- Meets or exceeds federal specifications.
- Work surface hardened to 57~60 RC.
- Made of precision tool steel.
- Individually marked.
- Complete in fitted case.

ACCURACY: ±0.0001"

Set Includes:

9 Blocks: .101 to .109 by .001"
15 Blocks: .050 to .190 by .010"
9 Blocks: . 200 to 1.000 by .100"
2 Blocks: .0625" and .125"
1 Extra Block: 1.000"

SINE BARS

- For angles set up by using Sine Bar with 1-2-3 Blocks or Gage Block.
- Parallelism: 0.0004".
- Working face accuracy 0.00003"/ per inch.
- Rolls center distance accuracy 0.0002".
- Flange on the end for the resting of workpiece.

1-2-3 BLOCK NOT INCLUDED

10 PAIR 1/8" PRECISION PARALLEL SETS

- Made from fine quality tool steel stress relieved against distortion, precision ground and hardened.
- Complete with fitted durable plastic or wooden case.
- 2 holes in each parallel.

3900-3010 Shown

DIMENSIONS
ThickxHt.xLong
1/8 x 1/2 x X"
1/8 x 5/8 x X"
1/8 x 3/4 x X"
1/8 x 7/8 x X"
1/8 x 1 x X"
1/8 x 1-1/8 x X"
1/8 x 1-1/4 x X"
1/8 x 1-3/8 x X"
1/8 x 1-1/2 x X"
1/8 x 1-5/8 x X"

- TOLERANCE: PARALLEL TO 0.0003 ON 2 SIDES, TOP AND BOTTOM.
- DIMENSIONS: WITHIN 0.001"ALLOWANCE.

3900-3012
Shown

Dasqua® 1/8" PRECISION PARALLEL SET WITH ALUMINUM CASE

- Made of premium alloy steel, hardened, stress-relieved, precision ground, used in pairs.
- With high perpendicularity, parallelism, dimension accuracy, convenient to use and maintain.
- Easy to operate during the drilling, milling, assembling work, convenient to clamp workpiece, and provide a reliable and accurate posotion for the workpiece.
- Accuracy: Height ±0.0004", thickness ±0.0004", use in pairs: ±0.0004"(height/thickness).
- Edges are slightly beveled.
- Superior surface finish: Ra 0.4um/16uin, high hardness: HRC56-61, long service life.
- Matched pairs are marked with sizes.
- Fitted aluminum case.

Item#	Set	Lenght x Thickness	Height
8204-0015	10 Pairs	1/8 x 6"	1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8"

Dasqua® PREMIUM MAGNETIC PARALLEL SET WITH HANDLE

- Higher accuracy from Dasqua.
- Height tolerence: ±0.005mm, Width tolerence: 0.01mm.
- Hardness: 55-60HRC.
- Newly designed embeded magnets leaving your hands for clamping and setting up, reduce the clamping time significantly.

Patented Design for Easy Installation and Disassembly

BEFORE USE

IN USE

Item#	Set (Pairs)	Length	Width	Thickness
1801-0115	5	5"/150mm	1"/25mm, 1.37"/35mm, 1.57"/40mm, 1.77"/45mm, 1.85"/47mm	0.1"/2.5mm

PRECISION PARALLEL SETS

- Made from fine quality tool steel stress relieved against distortion, precision ground and hardened.
- These precision parallels are recommended for layout work, standards and set-up.
- The holes are designed for easier handling and set-ups.
- Hardness: Case hardened RC 55 to 62 on 2 sides, top and bottom only.
- Complete with fitted durable plastic case.
- TOLERANCE: PARALLEL TO 0.0003 ON 2 SIDES, TOP AND BOTTOM.
- DIMENSIONS: WITHIN 0.001"ALLOWANCE.

DIMENSIONS
3/16 x 1 x 6"
3/16 x 1-1/4 x 6"
3/16 x 1-1/2 x 6"
3/16 x 1-3/4 x 6"

DIMENSIONS
1/4 x 3/4 x 6"
1/4 x 7/8 x 6"
1/4 x 1 x 6"
1/4 x 1-1/8 x 6"
1/4 x 1-1/4 x 6"
1/4 x 1-3/8 x 6"
1/4 x 1-1/2 x 6"
1/4 x 1-5/8 x 6"
1/4 x 1-3/4 x 6"

DIMENSIONS
1/2 x 7/8 x 6"
1/2 x 1 x 6"
1/2 x 1-1/8 x 6"
1/2 x 1-1/4 x 6"
1/2 x 1-3/8 x 6"
1/2 x 1-1/2 x 6"
1/2 x 1-5/8 x 6"
1/2 x 1-3/4 x 6"

DIMENSIONS
1/2 x 1 x 6"
1/2 x 1-1/4 x 6"
1/2 x 1-1/2 x 6"
1/2 x 1-3/4 x 6"

Item 3900-3014 Shown

INDIVIDUAL PRECISION PARALLELS

- Made from fine quality tool steel stress relieved against distortion, precision ground and hardened.
- 2 Holes in each parallel, are designed for easier handling and set-ups.
- Tolerance: Parallel to 0.0003 on 2 sides, top and bottom.
- Dimensions: Within 0001" allowance.

SOLD BY PAIR

Item#	DIMENSION (ThinkxHt.xLong)
3900-3061	1/8 x 1/2 x 6"
3900-3062	1/8 x 5/8 x 6"
3900-3063	1/8 x 3/4 x 6"
3900-3064	1/8 x 7/8 x 6"
3900-3065	1/8 x 1 x 6"
3900-3066	1/8 x 1-1/8 x 6"
3900-3067	1/8 x 1-1/4 x 6"
3900-3068	1/8 x 1-3/8 x 6"

Item#	DIMENSION (ThinkxHt.xLong)
3900-3069	1/8 x 1-1/2 x 6"
3900-3070	1/8 x 1-5/8 x 6"
3900-3075	1/4 x 3/4 x 6"
3900-3077	1/4 x 1 x 6"
3900-3079	1/4 x 1-1/4 x 6"
3900-3085	1/2 x 1 x 6"
3900-3086	1/2 x 1-1/8 x 6"
3900-3087	1/2 x 1-1/4 x 6"

ULTRA PRECISION INSPECTION PARALLEL

- Parallels are furnished by pair.
- Made of high grade tool steel, stabilized and thoroughly hardened to HRC 58.
- Surface finish to 16 microninches.
- High precision - 4 faces accuracy within .00015" per 6 inches

PRICED IN PAIR

Item#	Size	Weight (lbs.)
3900-3049	1 x 2 x 12"	14

PARALLELS & ANGLE BLOCKS

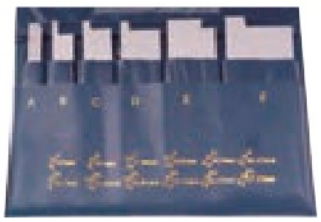
9PC UNIVERSAL ANGLE BLOCK SET

- HRC 45 to 50 heat treatment.
- Angle Accuracy: ±5'
- Combination V-block and angle plate for rapid, easy setting.
- No sine vise, sine plate, angle vise, chart or gage block needed.

BLOCK SIZE: 2.75 L x 1.18 W

Set Includes
V-Blocks: 10, 15, 30°
Angle plates: 0.5, 1, 2, 3, 4, 5°

6PC ADJUSTABLE PARALLEL SET

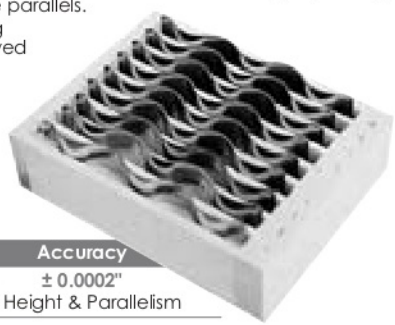


- Made of precision ground tool steel.
- Easily expanded to size in openings for quick reference measurements.
- Lock desired size by set screws provided.
- Exact size can be set with micrometer.
- Furnished in fitted plastic case with size range markings.

DIMENSIONS
3/8~1/2", 1/2~11/16", 11/16~15/16", 15/16~1-5/16", 1-5/16~1-3/4", 1-3/4~2-1/4"

9 PAIR WAVY PARALLEL SET

- For use on: Precision clamping of parts in drilling, boring, milling, grinding, assembly work, etc.
- Can readily be used as elastic shims.
- Thin and fragile workpieces can be secured without damage by utilizing the spring pressure of these parallels.
- Made of high quality spring steel, hardened, stress relieved and precision ground.
- Fitted case.



Range	Accuracy
1/2" ~ 1-1/2" in 1/8" Height Increments	± 0.0002" in Height & Parallelism

10PC ANGLE BLOCKS SET

BLOCK SIZE:
3" Length x 1/4" Thickness

- Simple, quick angle set ups.
- Manufactured of tool steel-hardened, stabilized and ground.
- Angle accuracy: 20'.
- Fitted case.

INCLUDES
1, 2, 3, 4, 5, 10, 15, 20, 25, 30°

17PC PRECISION ANGLE BLOCK SET

- Get quick setups for fringing various angles from 1/4 to 45°
- Hardened steel
- With fitted case

ACCURACY: .0003"

BLOCK SIZE:
3" Length x 1/4" Thickness

INCLUDES
1/4, 1/2, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 35, 40, & 45° and 2 riser blocks

1/32" ULTRA THIN STEEL PARALLEL SET

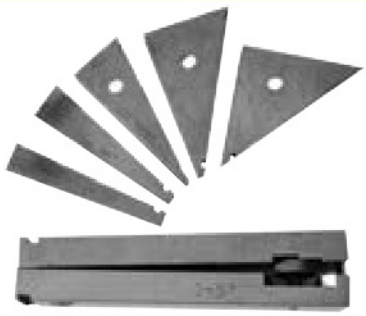
- Length: 6
- Parallelism: ± .0001"
- Paired ± .0001" in height.
- Hardness: RC 50~55
- Thickness: 1/32"
- Made from fine quality tool steel, stress relieved against distortion, precision ground, hardened and blue finished.

DIMENSIONS
1/32 x 1/2 x 6"
1/32 x 9/16 x6
1/32 x 5/8 x 6"
1/32 x 11/16 x 6"
1/32 x 3/4 x 6"
1/32 x 13/16 x 6"
1/32 x 7/8 x 6"
1/32 x 15/16 x 6"
1/32 x 1 x 6"
1/32 x 1-1/16 x 6"
1/32 x 1-1/8 x 6"
1/32 x 1-3/16 x 6"
1/32 x 1-1/4 x 6"
1/32 x 1-5/16 x 6"
1/32 x 1-3/8 x 6"
1/32 x 1-7/16 x 6"
1/32 x 1-1/2 x 6"
1/32 x 1-9/16x 6"
1/32 x 1-5/8 x 6"
1/32 x 1-11/16 x 6"

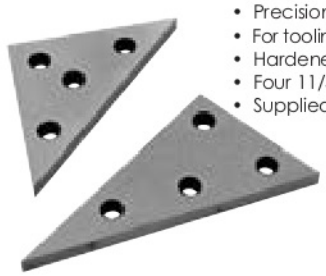
TANGENT BAR & ANGLE GAGE BLOCK SET

- Made of tool steel hardened and precision ground
- Tangent bar is micrometric

INCLUDES:
one Tangent Bar, one each of Angle Block 5, 10, 20, 30, 45°



2PC SOLID ANGLE PLATE SET

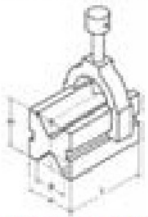


- Precision ground angles.
- For tooling setups, production and inspection.
- Hardened and ground steel.
- Four 11/32" holes.
- Supplied in fitted case.

Includes
1pc- 45° x 45° x 90° (3 x 3 x 5/16)
1pc- 30° x 60° x 90° (2 x 3-3/8 x 5/16)

V-BLOCKS & CLAMPS SET

- 90° V groove accuracy are central, parallel and square with all surfaces within 0.0003".
- Case is hardened and ground.
- Clamps are included.

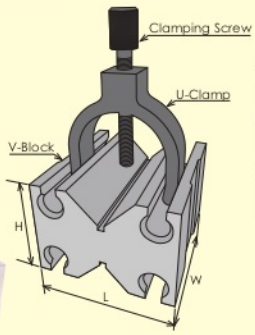


SUPPLIED IN MATCHED PAIR

Item#	Vee Capacity	Dimension (W x H x L)
3402-0952	1"	1-1/4 x 1-1/4 x 1-5/8"
3402-0951	1"	1-3/8 x 1-5/8 x 1-3/4"
3402-0953	1-1/2"	1-5/8 x 1-3/4 x 2-3/4"
3402-0954	1-1/2"	1-3/4 x2-1/2 x 2-3/4"
3402-0955	2-1/8"	2-3/4 x 3-1/2 x 4-7/8"

Pro-Series V-BLOCK WITH CLAMP

- Made of hardened tool steel machined & ground in pairs toclose tolerance.
- A versatile tool for Toolmakers & Machinists
- Clamps can easily slide in & are included.
- Both sides have different Vee sizes



MADE IN TAIWAN

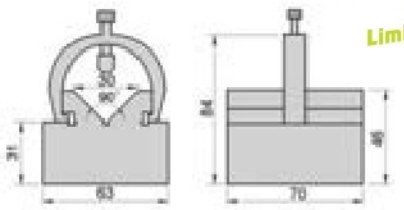
SUPPLIED IN MATCHED PAIR

W	H	L	Small Vee	Large Vee	G.W.
2-1/2	1-3/4	2-3/4	1	1-3/16	6 lbs

Pro-Series Toolmaker's V-BLOCK SET

- Made of hardened tool steel precision machined & ground with high accuracy V groove. Tolerance 0.005mm.
- A versatile tool for Toolmakers & Machinists to check concentricity.
- Clamps can easily slide in & are included.
- Clamping range Ø3~20 mm.
- Height Deviation: 0.005mm
- Squareness: 0.005mm.

SOLD IN PAIR

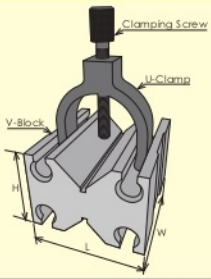


Limited Supply!

MADE IN TAIWAN

Toolmaker's V-BLOCKS -Slot-In CLAMP

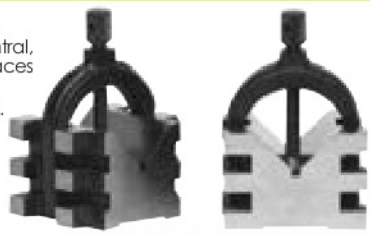
- Made of hardened & ground tool steel.
- Supplied in matched pair, machined to close tolerance.
- A versatile tool for Toolmakers & Machinists
- Clamps can easily slide in & are included.
- Both sides have different Vee sizes



Item #	W	H	L	Small Vee	Large Vee	G.W.
3402-0968	2-1/2	1-3/4	2-3/4	1	1-3/16	6 lbs.
3402-0970	3-1/2	2-3/4	4-7/8	1.22	1.38	24 lbs.

MULTI-USE V-BLOCKS & CLAMPS SET

- Stepped groove construction.
- 90° V groove accuracy are central, parallel and square with all surfaces within 0.0003".
- Case is hardened and ground.
- Clamps are included.



SUPPLIED IN MATCHED PAIR

Item#	Size (L x W x H)	Capacity Round	Capacity Square
3402-0112	2.50 x 2.75 x 2.00"	2"	1-7/16"

Replacement Clamp (Item #3402-0115)

ULTRA PRECISION V-BLOCK & CLAMP SETS

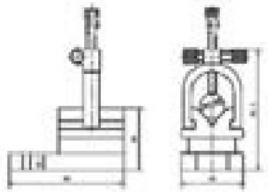
- Guaranteed square parallel within .0002".
- Hardened & ground to RC 58-60.
- 90° Vee blocks.
- Supplied with bolts and clamps in wooden case.

SUPPLIED IN MATCHED PAIR

Item#	Length (Inch)	Width	Height
3402-0001	1-3/8	1-3/8	1-3/16
3402-0002	2-3/8	2-3/8	2
3402-0003	4-1/8	4-1/8	3-1/16

TOOLMAKER'S V-BLOCKS & CLAMP

- Blocks have four 3/8"~26 tapped holes, two in the base and one on each side for attachment to an angle iron. The angle iron holding the block can then be attached to a lathe faceplate or held by a magnetic chuck.
- Versatile tool for grinding, milling or drilling
- A clearance hole for drilling or removing dowel pins is provided in the block
- Blocks are hardened and precision ground
- Side screw supports the block and prevents tilting.



PRECISION MEASURING TOOLS

V-BLOCKS

SUPER VEE BLOCK SET

- A unique and universal holding tool for small, miniature or intricate parts, used in conjunction with larger V-blocks
- Furnished with bridges to straddle long workpieces, allowing top hold down screw of V-block clamp to be utilized
- Hardened and high-precision ground
- With fitted case

SOLD AS PAIR

SQUARENESS & PARALLELISM: .0002"

INCLUDES
2 V-blocks: ..... 0.030~ .156" & .050~ .281" capacity 2 bridges and 5 upper prisms: .....1/8, 5/32 & 3/16" capacity

TRIPLE "V" STEEL V-BLOCKS SETS

- All sides hardened and precision ground parallel and square.
- "V" grooves ground central & parallel and square.
- Every angle 90°.
- Perfect alignment in matched pair.

SUPPLIED IN MATCHED PAIR

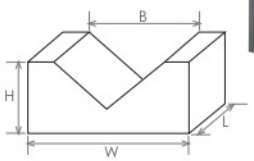
90° Square Angle 0.0006" Parrallel

Item #	Length	(mm) Width	Height	Suitable for Dia.	Wt. (lbs.)
3406-1032	50	20	14	5~33	0.5
3406-1034	100	33	52	8~60	5.1
3406-1035	125	44	69	8~75	11.1

ELONGATED STEEL V-BLOCK SETS

- All sides hardened and precision ground parallel and square.
- "V" grooves ground central & parallel and square.
- Perfect alignment in matched pair.
- Holds square and round work.

SUPPLIED IN MATCHED PAIR



90° Square Angle 0.0003" Parrallel

Item#	W	(mm) H	L	Capacity B	Wt. (lbs)
3406-1017	40	30	75	5~40	2.4
3406-1019	44	40	100	5~55	5.2
3406-1023	65	55	200	5~75	19

Pro-Series STEEL V-BLOCK SETS

- Made of hardened & ground tool steel.
- Supplied in a matched pair.
- Machined to close tolerance.
- Accuracy: .00079"/per 4"
- Hardness: HRC 52.

Limited Supply!

Unit: Inch

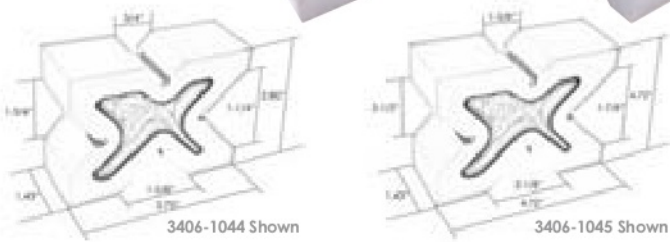
Item #	Length	Thickness	Height	Wt.	A	B	C	F	G	H
3402-1024	2.87	0.98	1.44	2.0 lbs.	0.39	0.87	0.71	1.57	0.71	0.31
3402-1025	3.94	1.42	2.36	6.5 lbs.	0.59	1.26	0.71	1.97	0.94	0.31

FOUR WAY V-BLOCK SETS

- Made from quality casted seasoned steel.
- Very useful tool for laying out round work & holding it for machining.
- Each block incorporates 4 different sized Vee's (90°) for wide range of jobs.

SUPPLIED IN MATCHED PAIR

90° Square Angle 0.0006" Parrallel



3406-1044 Shown

3406-1045 Shown

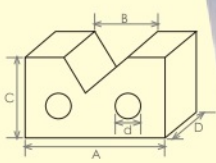
SQUARE & PARRALLEL .0008"

Item #	Length	(Inch) Thick	Height	Wt. (lbs)
3406-1044	3-3/4	1-3/8	2-3/4	5.4
3406-1045	4-3/4	1-3/8	4-3/4	11.8

STEEL V-BLOCKS SETS

- Made of tool steel, hardened and ground.
- Machined square and parallel to meet standard specifications.

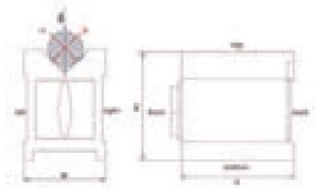
SUPPLIED IN MATCHED PAIR



Item#	A	B	(Inch) C	D	d	Wt. (lbs)
3402-1302	2"	1	1.26	0.90	0.24	1.1
3402-1303	3"	1.7	2.38	1.33	0.45	4.6
3402-1304	4"	2.2	2.66	1.66	0.54	8.3
3402-1305	5"	2.45	3.14	2.03	0.78	15.3
3402-1306	6"	3.1	3.52	2.52	0.93	25

Pro-Series MAGNETIC V-BLOCKS WITH SWITCH

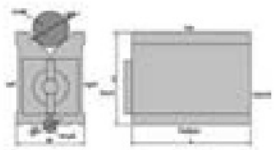
- Precision ground finished working surfaces.
- Ideal for scribing, grinding, measuring and machining round or irregular shape items.
- On/Off switch.



Item#	Dimensions W	H	L	Vee Width	Power Pull (lbs)
3402-0995	2.13"	2.87"	2.76"	1.5"	66
3402-0997	2.36"	2.87"	4.29"	1.5"	77

MAGNETIC V-BLOCKS WITH SWITCH

- Precision ground finished working surfaces.
- Ideal for scribing, grinding, measuring and machining round or irregular shape items.
- On/Off switch.
- Two-centered 90° Vees.

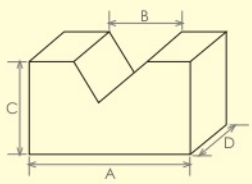


* Limited Supply

Item#	Dimensions W	H	L	Power Pull (lbs)
3402-0990	2-3/4"	3-3/4"	3"	130
3402-0901	2-3/4 "	3-3/4"	4"	250
3402-0992*	2-3/4"	3-3/4"	5"	275
3402-0993	3"	3-3/4"	6"	320

CAST IRON V-BLOCKS SETS

- Made of high quality casting, properly seasoned against distortion.
- Machined square and parallel to meet standard specifications.

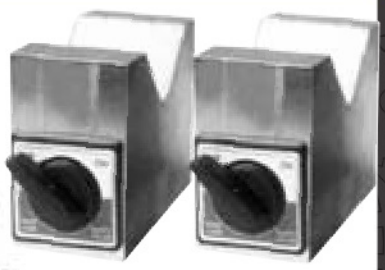


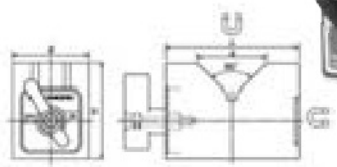
SUPPLIED IN MATCHED PAIR

Item#	Dimensions A	B	C	D	Square & Parrallel	Wt. (lbs)
3402-1000	2"	1-5/8	1-3/8	7/8	0.0005"	2
3402-1001	3"	1-3/4	2-3/8	1-5/16	0.0005"	3
3402-1002	4"	2-1/4	2-5/8	1-5/8	0.0005"	5
3402-1003	5"	2-1/2	3-1/8	2	0.0005"	8
3402-1006	6"	3-1/8	3-1/2	2-1/2	0.0005"	13
3402-1007	7"	3-1/2	4-1/2	3	0.0006"	27
3402-1008	8"	4-1/2	5-1/2	4	0.0007"	44
3402-1010	10"	5	6-5/8	5	0.001"	73
3402-1012	12"	6	8	7	0.0012"	135

ALUMINUM CAST MAGNETIC V-BLOCK SETS

- Holds cylindrical workpieces for grinding.
- 90° Vee blocks.
- Precision ground flat, square and parallel to 0.0005".
- Switch on/off.



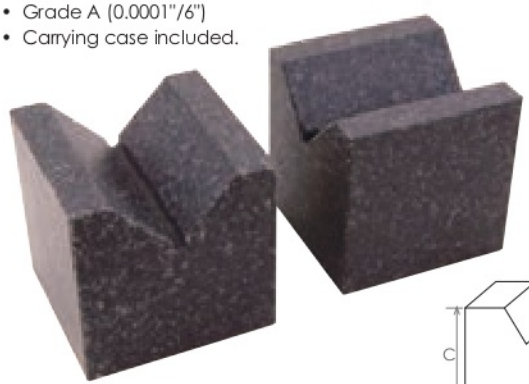


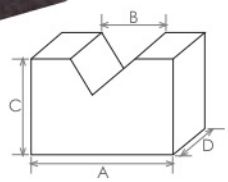
SUPPLIED IN MATCHED PAIR

Item#	Dimensions B	H	L	Max. Hold Dia.	Power Pull Each (lbs)
3402-0890	1-1/2"	2"	2-3/4"	1.90"	33
3402-0900	2"	3"	4"	3.15"	44
3402-0902	2"	4"	6"	3.90"	50

MATCHED GRANITE V-BLOCK SET

- Matched Granite V-Block Set
- 90° V-centered and parallel to bottom, two sides and ends.
- Application For Inspection and Calibration Operations.
- Grade A (0.0001"/6")
- Carrying case included.





SUPPLIED IN MATCHED PAIR

Item#	Capacity (Dia.) Min.	Max.	(mm) A	B	C	D	Squareness & Parallism Accuracy	Wt. (Lbs.)
3402-1312	5	63	63	38	63	63	.00012"	3.8

MAGNETIC V-BLOCKS & PARALLELS

- Universal-holds in any direction on the magnetic chuck.
- Aluminum cast.
- Ground all over.
- Blocks transmit magnetism, they are not magnetic.

V-BLOCKS:

- 90° Vee Capacity: Small Vee-1/2" , Large Vee-2"

FOR USE ON MAGNETIC CHUCK

	Item#	Length	Width	Height
SINGLE 90° V-BLOCK:	3402-0007	4-3/8"	2-3/8"	1-7/8"
MATCHED PAIR 90° V-BLOCK:	3402-0006	2"	2-3/8"	1-7/8"
MATCHED PAIR PARALLELS:	3402-0009	4"	2"	1"

ANGLE PLATES

0-60° PRECISION ANGLE BLOCKS

- For drilling, milling, and set up applications.
- 0~60° adjustable angle by locking the hex screw on the bottom.
- Squareness: - 0.0002".
- Angle accuracy: ±10'.
- Hardness: HRC 50-55.

PLANER AND SHAPER GAGE

- Hardened and ground forged steel.
- Ground, flat and V ways assure accuracy.
- Both sides are ground square with working edges.
- In-built precision level.
- Base size: 5-1/4" long and 3/4" wide.
- Includes 3" extension rod.
- Supplied in wooden case.

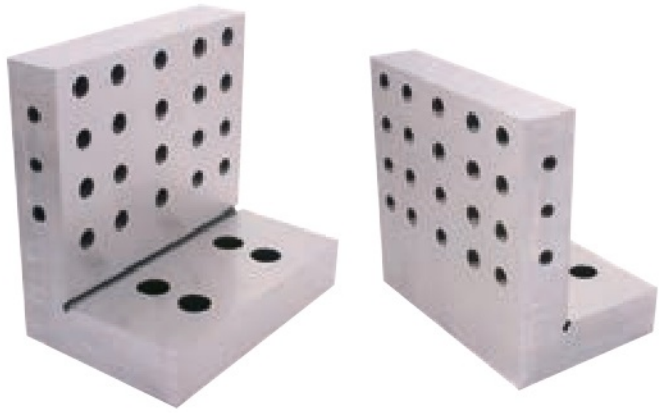
COMPOUND ANGLE PLATE

- Features ground vees for convenient holding of small round parts
- Ground flat, square and parallel within 0.0002"
- Wall dimension: 6"x4"x1"
- Solid 1 piece steel construction
- Hardened to RC 58-62
- Tapped 16 holes: 1/4"-20
- Includes 1 clamp and 3 bolts

Item #	Length	Wall Height	Thickness	Tapped Holes	W.t. lbs
3402-1101	6"	4"	1"	(16) 1/4"-20	12

ANGLE PLATES WITH BACK HOLES

- Solid, one piece angle plate is made from hardened tool steel
- Square and parallel within .0002"
- Precision ground finishing
- (4) Bolt Holes: 7/16" diameter



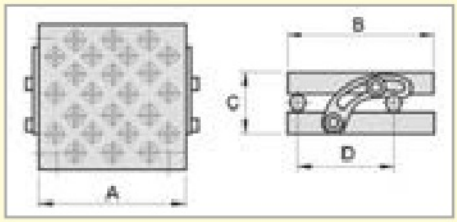
Item#	Dimension	Thread of tapped holes	W.t. (lbs.)
3402-2664	6x6x4x1-1/4"	(26)1/4"-20	20

6 x 6 ULTRA PRECISION SINE PLATES

MADE IN TAIWAN

HHIP PRO-SERIES

SPECIFICATIONS	
Capacity:	0~60°
Squareness:	within 0.0002"
Parallelism:	within 0.0002"
Center Distance of Rolls Accuracy:	within 0.0002"
Minute Angle Step on Gage Block Roll:	0.200"
Tapped holes:	1/4"-20 UNC
Size (B x A)	6" x 6"
Height (C)	2.36
Center Distance of Rolls (D)	5"
No. of Tapped Hole	24
Wt.(lbs.)	18



- Made of high grade tool steel hardened and precision ground HRC 55~58.
- Two hardened side rails and one locking strap included.

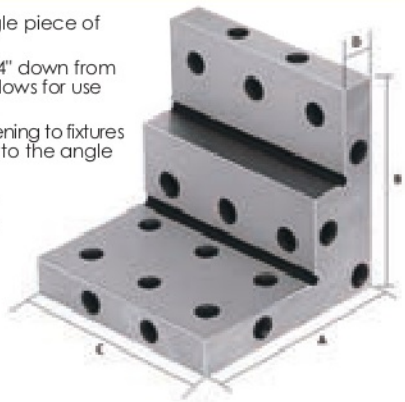
STEEL RIGHT ANGLE PLATES

- Solid, one piece angle plate is made from hardened steel
- Square and parallel within 0.0002".
- Furnished with 1/4"-20 tapped holes

Item#	Size	Holes
3402-0443	4 x 4 x 3 x 1-1/8"	Yes
3402-1443	4 x 4 x 3 x 1-1/8"	No

STEPPED ANGLE PLATES

- Manufactured from a single piece of hardened tool steel.
- A convenient step of 1-1/4" down from the top and a 1/2" seat allows for use with smaller work pieces.
- Tapped holes allow for fastening to fixtures and clamping workpiece to the angle plate.
- Precision ground finishing.
- Square and parallel within 0.0002".



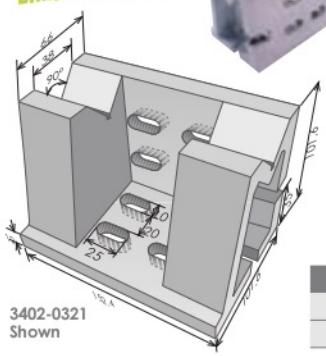
* Limited Supply

Item#	Dimension A x B x C x D	Thread of tapped holes
3402-0100*	3 x 3 x 3 x 1-1/2"	(20)1/4"-20
3402-0101	4 x 4 x 4 x 1-1/4"	(20)5/16"-18

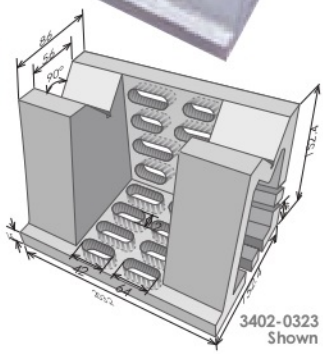
V - ANGLE PLATES

- As the name rightly suggests it has dual usage as a vee block and an angle plate.
- Having a single piece close grained cast iron construction, which ensures rigidity.
- Casting are stress relieved.
- Useful for easy operations in set up jobs.
- The angle block is precision ground and has a parallelism of + 0.005" and a squareness of + 0.005".

Limited Supply!



3402-0321
Shown



3402-0323
Shown

Item#	Size
3402-0321	4 x 4 x 6"
3402-0323	6 x 6 x 8"

PRECISION GROUND ANGLE PLATES

- Webbed end
- Made from high tensile cast iron normalized and stress relieved.
- Precision ground finishing: Square and parallel to .0005" per 6" on two working surfaces.

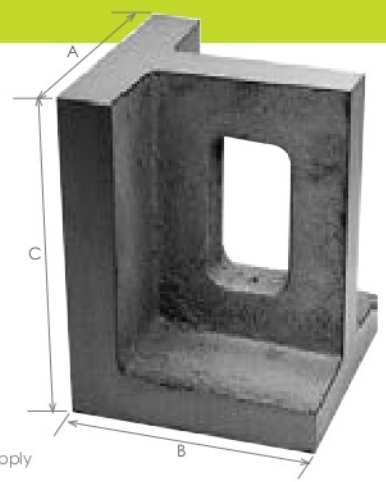
Item#	(Inch) A	B	C
3402-1052	2	2	2
3402-1053	3	3	3
3402-1054	4	4	5
3402-1055*	5	5	5
3402-1056	6	6	6
3402-1058	8	8	8
3402-1060	10	10	10
3402-1062	12	12	12

PRECISION GROUND UNIVERSAL RIGHT ANGLE PLATES

- Widely used for fixture components.
- All face, ends and edges are finished square and parallel.
- The opening provides a convenient hand grip for handling.
- Square within 0.0005" per 6".
- Parallel within 0.00025" per 6".

PRECISION GROUND SURFACE

Item#	(Inch) A	B	C	Wt. (lbs)
3402-1031	3-3/4	4	5	10
3402-1032	4	5	6	16
3402-0103	4	4	6	15
3402-1033	4-1/2	5	8	21
3402-1041	5	8	12	49
3402-1043*	5-1/2	8	10	49
3402-0109	6	6	8	35
3402-0110	8	10	12	78



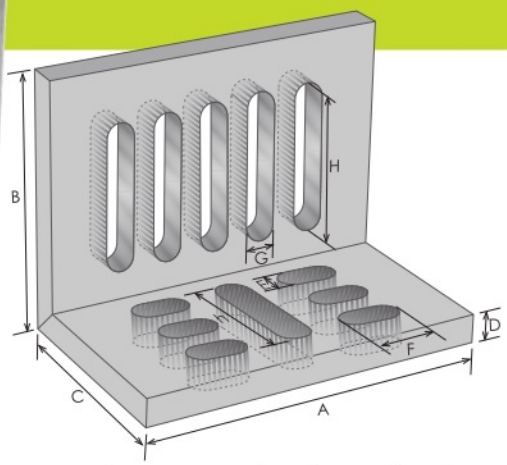
Limited Supply

ANGLE PLATES

SLOTTED ANGLE PLATES -OPEN END

- Convenient clamping slots for mounting and are widely used for machining, layout and inspection.
- Made of high tensile cast iron properly seasoned against distortion.
- Open-End style, accurately machined square and parallel on all faces.
- Slot A is 90° to slot C.

MACHINED TO .002 PER 6"



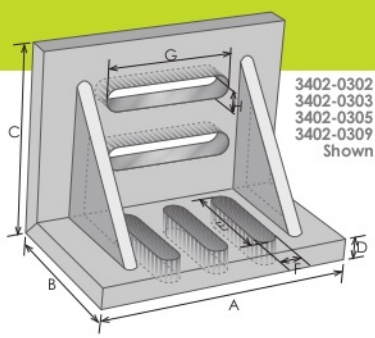
Item#	(Inch) A x B x C	(mm) D	E	F	G	H	h	W.T. (lbs)
3402-0203	6 x 5 x 4-1/2	15	12	87	12	74	-	8
3402-0209	8 x 6 x 5	18	16	118	16	86	-	13
3402-0210	10 x 8 x 6	20	20	67	20	118	85	28
3402-0212	12 x 9 x 8	23	22	81	22	120	153	45

SLOTTED ANGLE PLATES -Webbed

- Made of high tensile cast iron properly seasoned against distortion.
- Clamping slots are widely used for machining, layout and inspection.
- Accurately machined and ground square and parallel on outside and ends.

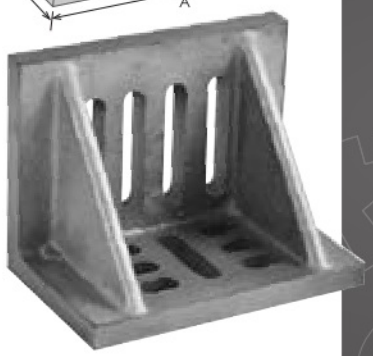
MACHINE TO .002 PER 6"

3402-0300
3402-0301
Shown



3402-0302
3402-0303
3402-0305
3402-0309
Shown

3402-0310
3402-0311
3402-0312
Shown

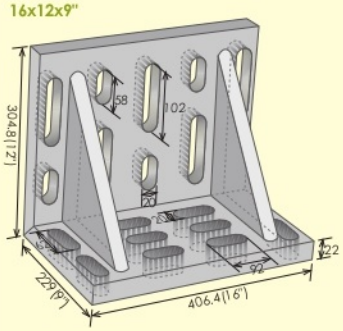


Item#	(Inch) A	B	C	(mm) D	E	F	G	H	I	J	K	L	M	N	W.T. (lbs)
3402-0300	3	2.5	2	9	40	10	37	10	-	-	-	-	-	-	5
3402-0301	3.5	3	2.5	11	48	10	47	10	-	-	-	-	-	-	6
3402-0302	4.5	3.5	3	12.5	50	11	70	11	-	-	-	-	-	-	7
3402-0303	6	5	4.5	13	74	12	86	12	-	-	-	-	-	-	11
3402-0305	7	5.5	4.5	15	88	13	105	13	-	-	-	-	-	-	14
3402-0309	8	6	5	15	98	14	105	14	-	-	-	-	-	-	17
3402-0311	9	6	7	15	-	-	-	-	94	10	116	18	52	18	27
3402-0310	10	6	8	16	-	-	-	-	89	18	130	18	52	18	38
3402-0312	12	8	9	18	-	-	-	-	128	20	150	20	58	20	50

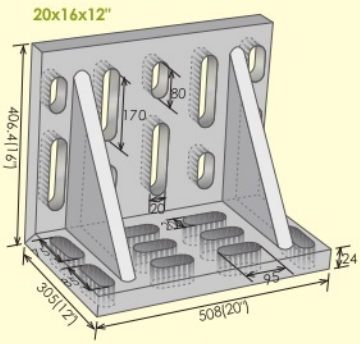
GIANT SLOTTED ANGLE PLATES-Webbed

- Machined on outside faces and with cored slots arranged for maximum clamping versatility.
- Made of high grade closegrained cast iron, stress relieved against distortion.

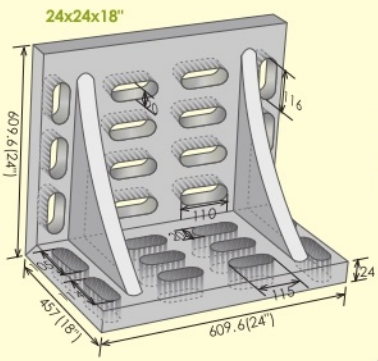
16x12x9"

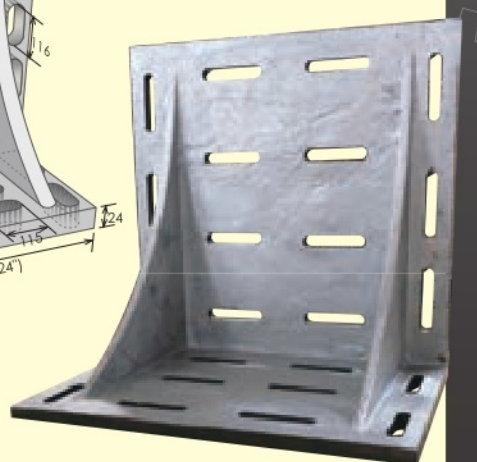


20x16x12"



24x24x18"





3R ROCKWELL HARDNESS TESTER

- This hardness tester is used to determine Rockwell hardness of hard alloys, quenched and unquenched steels.
- It can be applied in the laboratories, scientific research institutes and colleges.

Standard Accessories Included:

- 5-3/4" testing table.
- 2-3/16" testing table.
- 2-3/16" testing table with "V" groove.
- 120° diamond penetrator.
- 1/16" steel ball penetrating.
- Rockwell A test block (1pc)
- Rockwell B test block (1pc)
- Rockwell C test block (3pc)
- Screwdrivers (2)
- Complete instruction manual.
- Dust-proof plastic cover.

SPECIFICATIONS	
Maximum load	330 lbs.
Load range	132lbs, 220lbs, 330lbs.
Initial range load	22 lbs.
Maximum test load	4-1/4"
Depth throat	5-1/4"
Maximum depth of spindle below base	2"
Base size	7" x18"
Height	24-1/2"
Approx.. weight	209 lbs.

Load Range	132lbs	220lbs	330lbs
Penetrator	Diamond 120	Ball 1/16"	Diamond 120
Test Scales	Rockwell A	Rockwell B	Rockwell C
Suitable for	Test on case hardened steel	Annealed ferrous & non-ferrous metal	Annealed hardened & tempered or deep case hardened steel

PENETRATORS FOR HARDNESS TESTER

Item#	Description
8902-0151	C Diamond
8902-0152	1/16" Steel Ball

TEST BLOCKS FOR HARDNESS TESTER

Item#	Description
8902-0130	20-30 HRC Test Block
8902-0155	35~55 HRC Test Block
8902-0170	60~70 HRC Test Block
8902-0188	80~88 HRA Test Block
8902-0195	85~95 HRB Test Block

6PC COMPOSITE SET OF SPECIMENS

- Each Specimen 7/8" x 3/8" of electroformed solid nickel.
- Each type of surface finish is truly and consistently reproduced with a realistic idea of the feel, appearance and texture of the machined components.
- For quick and easy comparisons.
- Conforms to S.A.E and military specifications.
- Supplied with wallet, instructions and certificate.

Item#	Surface Type	Micron Inch AA
4101-0024	Plain Grinding	2, 4, 8, 16, 32 & 63
4101-0025	Horizontal Milling	16, 32, 63, 125, 250 & 500
4101-0026	Vertical Milling	16, 32, 63, 125, 250 & 500
4101-0027	Turning	16, 32, 63, 125, 250 & 500
4101-0028	External Grinding	8, 16, 32 & 63

COMPOSITE SET OF SURFACE ROUGHNESS STANDARDS

- 30 Specimens 7/8" x 3/8" of electroformed solid nickel.
- Each type of surface finish is truly and consistently reproduced with a realistic idea of the feel, appearance and texture of the machined components.
- For quick and easy comparisons.
- Conforms to S.A.E and military specifications.
- Supplied with wallet, instructions and certificate.

SPECIFICATIONS	
Horizontal Milling (6 specimens)	16, 32, 63, 125, 250 and 500*
Vertical Milling (6 specimens)	16, 32, 63, 125, 250 and 500*
Turning (6 specimens)	16, 32, 63, 125, 250 and 500*
Plain Grinding (6 specimens)	2, 4, 8, 16, 32 and 63*
Flat Lapping (2 specimens)	2 and 4*
External Grinding (4 specimens)	8, 16, 32 and 63*

* Micron Inch AA

MICROSCOPES & BOROSCOPES

20X & 40X STEREO MICROSCOPE

- Optical glass lens.
- Illuminator both stand and overhead switchable.
- Stereo body rotatable 360°.
- Possible magnification from 20 x through 80 x (Depending upon accessories selected).
- Dioptric adjustment: Ø5 diopter
- Eyepiece: 10X , 30.50 mm (insertion part)
- objective: 2X & 4X rotatable
- Direct measuring on workpiece.
- Microscope illuminator (tungsten) 10W, 12V.
- Impeccable performance through coated optics assures better resolution.
- Locking adjustable head.
- Stage difussing glass: Ø3-3/4"
- Eyepiece rubber protectors & dust cover included.
- Power supply: 115V / 60Hz / 1PH.

Limited Supply!

Item#	Description
8902-3005	5X Eyepiece (Pair)
8902-3015	15X Eyepiece (Pair)
8902-3020	20X Eyepiece (Pair)
8902-3081	Replacement Bulb

STEREO MICROSCOPE WITH UNIVERSAL STAND-BOOM STAND

- Optical glass lens.
- Stand with 11" vertical and 9" horizontal extension bar with chrome finished.
- Stand: 8" L x 4.6" W x 2.5" H.
- Rack & pinion focus adjustable.
- Locking collar.
- Universal movement with no limit for most working applications.
- Focal Distance: 4.50"
- Illumination system: (halogen, top only) attached with head of microscope.
- Eyepiece rubber protectors & dust cover included.
- Power supply: 110V/60Hz/1Ph.

Limited Supply!

Item#	Description
8902-3005	5x Eyepiece (pair)
8902-3015	15x Eyepiece (pair)
8902-3020	20x Eyepiece (pair)
8902-5081	Replacement Bulb 10W

MICROSCOPE HALOGEN LIGHT

- Portable light to provide illumination image for microscope or other application.
- Universal movement arm.
- Power On/Off switch.
- 4 steps brightness 3, 6, 9 & 12.
- Max. Height: 10-1/2" .
- Power Supply (5 ft. cord): 115 V/60 Hz, 15 W.

Limited Supply!

SPARE BULB 15W (Item #8902-3086)

VIDEO BORESCOPE WITH LCD DISPLAY

- Vivid 2.4" color TFT LCD monitor allows image rotation for detailed images
- 39" flexible gooseneck cable retains configured shape.
- Optional 78" flexible shaft with 9mm or 17mm camera available
- Mini waterproof 9mm(IP67) camera head provides on-the-spot viewing.
- Night Vision Range: 20".
- Power indicator, low voltage indicator.
- Mirrow button.
- LED brightness control.
- LCD contrast control.
- Power Supply: 4 x AA battery.
- Dimension: (WxDxH) 8x3.3x2.4".
- Operating Temperature: 14 ~122° F.
- Weight: 14 oz.

Light, handheld design enables you to easily find, diagnose and solve problems in hard-to-reach areas. Perfect for all kinds of inspections.

Limited Supply!

640 X 480 PIXEL

3 Useful Accessories Included.

OPTIONAL EXTENSION CABLES WITH CAMERA

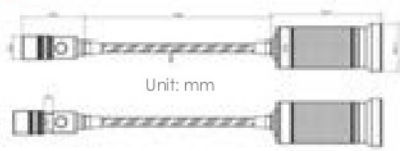
Item#	Camera Head	Shaft Length
8902-6010	9mm (IP67)	78"/2M
8902-6017	17mm (IP67)	78"/2M

FLEXABLE SHAFT IP54 WATER RESISTENT LED WORK LIGHT

- CREE XPG high performance LED light provide an excellent solution for heat sensitive environment.
- Small head (0.8" Diameter) with zoom ring for adjusting brightness
- IP54 dustproof and waterproof
- Strong magnetic base with 1.5" diameter grip can be handled as a flash light or stick on a metal surface.
- Battery Run Time: 8 hours high(200 LUMENS), 20 hours low(80 LUMENS)
- On/Off button
- 18" flexable shaft.
- Use 3xAA battery.

IP 54

OVERALL LENGTH: 24"
BRIGHTNESS: 200 LUMENS



10X POCKET OPTICAL COMPARATOR SET

- Widely used by machinists, toolmakers and inspectors for checking angles, diameters, radii, thread pitches, hole sizes, etc.
- The scales are photo etched into glass reticle for easy reading.
- Reticle screw-in mounting are interchangeable.
- **9 pc/set includes: Comparator and 8 pc Reticle.**
- Lens diameter: 21mm

20X SHOP MICROSCOPE

- Easy focal adjustment .
- Illuminated light allows use in dark places and are adjustable.
- 2 in 1 metric and inch straight line scale.
- Operations on 2 AAA battery.

Limited Supply!

40X, 80X SHOP MICROSCOPES WITH RETICLE

- Wide field eyepiece with direct reading reticle (no calibration required. Eyepiece turns to permit sharp focus of reticle scale
- Penlight illuminator in swivel mount. requires 2 AAA batteries
- Jack and pinion focusing with dual focusing knobs
- Cast aluminum structure
- Height: 9"

RETICLE: 0-18mm/.02mmx90

Limited Supply!

HASTINGS TRIPLET MAGNIFIER

- Triplet lens system
- Case color: black

Item#	Power	Lens Dia.
4902-0045	10 X	21mm

INDUSTRIAL GRADE LED LAMP MAGNIFIER

- Light source LED, 390 Lums brightness.
- Lens Size: 7.5x6.0".
- Lens frame: 12x9".
- Lens material: glass.
- 3 diopter lens provides 1.75x magnification.
- Swing arm with 32" reach.
- Max. 2-1/2" adjustable bench clamp.
- Power On/Off switch.
- Power Supply: 115V.

8X LED LIGHT DESK TOP MAGNIFIER

- 8x powerful magnifier
- Flexible arm any desired position adjustable
- Diameter of Visible Area: 5"
- Adjustable LED light with 300 LUX brightness, 2.5Watt.
- Power Supply: 110V/1 phase
- Furnished with 60" cord.

SPARE LED BULB 2.5W(Item #8070-0004)

DRILLS & SETS

29PC JOBBER DRILL SETS

- Production grade
- Straight shank **1/16~1/2" by 64ths**
- Right hand
- Supplied in metal drill index
- **COBALT** used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel
- **TiN Coated** will improve the tool life and is used where elevated speeds & feeds are the objective. TiN provides high lubricity and facilitates chip flow which reduces heat and edge build-up.

HSS WIRE GAGE DRILL SETS

- Supplied in metal index case
- High speed steel
- Right hand

5001-1020 Shown

NC SPOTTING DRILLS - M35 5% COBALT
RIGHT HAND • 90° SPLIT POINT

- Ground from solid.
- Designed for quick starting and a constant web to allow for re-sharpening without the need for web thinning.

MADE FOR CNC DRILLING!

Limited Supply!

Dia. A	Flute Length B	OAL C	Item#
.197"(5mm)	1"	2-3/8"	5000-1004
.236"(6mm)	1"	2-3/4"	5000-1006
.315"	1-1/8"	3-1/8"	5000-1010
3/8"	1-1/8"	3-1/2"	5000-1012
1/2"	1-1/2"	4"	5000-1018
3/4"	1-3/4"	5-1/8"	5000-1024

29PC HSS BLACK & GOLD JOBBER DRILL SET

- Premium high-speed steel withstands extended drilling in tough materials.
- Black and gold oxide finish provide maximum corrosion resistance.
- 135-degree split-point tip starts drilling immediately with less force and eliminates "walking" across the work surface.
- Metal USA made index case for easy bit access and identification.
- Includes drill bit sizes 1/16- to 1/2-inch in 1/64-inch increments.
- Reduced Tri-Flat shank from 5/32" to 1/2"

1/16~1/2" by 64ths

115PC HSS JOBBER DRILL SETS

SET INCLUDES: 1/16~1/2" By 64ths, #1~60, A~Z

- Supplied in metal drill index
- Production grade
- High speed steel
- **TiN Coated** will improve the tool life and is used where elevated speeds & feeds are the objective. TiN provides high lubricity and facilitates chip flow which reduces heat and edge build-up.
- Right hand
- Straight shank

25PC METRIC 118° DRILL SET

- Production grade
- High speed steel
- Black surface treated

MM DRILL SETS IN METAL INDEX

Item#	Set	Range
5000-0007	25	1~13mm x 0.5mm

19PC COBALT METRIC DRILL SET-135°

- Cobalt is used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel.
- 135° split point provides self-centering properties and secure positioning on work surface face treatment increases abrasion resistance.
- With index steel case.
- Ground from solid blank.

Set Includes
1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10MM

18PC HSS TAP & DRILL COMBO SETS

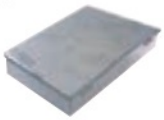
- High speed steel made taps and drills.
- Steel case.
- Drills are matched with taps to make jobs much easier.

National Course Pitch Set Includes
1 each HSS Hand Tap
6-32 NC, 8-32 NC, 10-24 NC, 10-32 NF, 1/4"-20 NC, 5/16"-18 NC, 3/8"-16 NC, 7/16"-14 NC, 1/2"-13 NC
1 each HSS Jobbers Drill
#36, #29, #25, #21, #7, F, 5/16" ,U, 27/64"

National Fine Pitch Set Includes
1 each HSS Hand Tap
6-40 NF, 8-36 NF, 10-24 NF, 10-32 NF, 1/4"-28 NF, 5/16"-24 NF, 3/8"-24 NF, 7/16"-20 NF, 1/2"-20 NF
1 each HSS Jobbers Drill
#33, #29, #25, #21, #3, I, Q, 25/34", 29/64"

18PC HSS METRIC TAP & DRILL COMBO SET

- High speed steel made taps and drills.
- Plug taps are fully ground.
- With index steel case.
- Drills are matched with taps to make jobs much easier.



Set Includes
1 each HSS Hand Tap
M2.5x0.45, M3.0x0.50, M3.5x0.60, M4.0x0.70, M5.0x0.80, M6.0x1.00, M8.0x1.25, M10.0x1.50 & M12.0x1.75
1 each HSS Jobbers Drill
2.05, 2.50, 2.90, 3.30, 4.20, 5.00, 6.70, 8.50 & 10.20mm

14 PC H.S.S. 3-IN-1 COMBINED DRILL/TAP/COUNTERSINK & SCREWDRIVER BIT SETS

- Complete hole drilling, tapping, deburring and countersinking in one operation with power drill saves labor and time.
- For use to tap steel, copper, brass, aluminum and plastic up to 10-gauge(metal).
- Back tapered design helps prevent thread damage from over-drilling.
- One-piece drill/tap assures proper drill for tap size.
- Made of high speed steel for longer life.
- 14pc Includes: 6pc of combinaition drill & tap countersink.
  1pc of high torque tested quick-change adapter
  6pc of quick change CRV steel bit.
  1pc of carry case.

1011-0140 Shown

1011-0141 Shown

Item#	Thread Range	CRV Bit
1011-0140	6~32, 8~32, 10~24	Slot3, Slot4, PZ1
	10~32, 12~24, 1/4~20	PZ2, PH1, PH2
1011-0141	M3X0.5, M4x0.7, M5x0.8,	Slot3, Slot4, PZ1
	M6x1.0, M8x1.25 & M10x1.5	PZ2, PH1, PH2

M35 5% COBALT DRILLS
135° SPLIT POINT

- **COBALT** used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel
- **135° SPLIT POINT** provides self-centering properties and secure positioning on work surface face treatment increases abrasion resistance

GROUND FROM SOLID

Size	OAL	Item#
1/16	1-7/8	5002-4004*
5/64	2	5002-4005*
3/32	2-1/4	5002-4006
7/64	2-5/8	5002-4007*
1/8	2-3/4	5002-4008
5/32	3-1/8	5002-4010
11/64	3-1/4	5002-4011*
3/16	3-1/2	5002-4012
13/64	3-5/8	5002-4013*
7/32	3-3/4	5002-4014
15/64	3-7/8	5002-4015*
1/4	4	5002-4016
17/64	4-1/8	5002-4017*
9/32	4-1/4	5002-4018

Size	OAL	Item#
19/64	4-3/8	5002-4019*
5/16	4-1/2	5002-4020
21/64	4-5/8	5002-4021*
11/32	4-3/4	5002-4022*
23/64	4-7/8	5002-4023*
3/8	5	5002-4024
25/64	5-1/8	5002-4025*
13/32	5-1/4	5002-4026*
27/64	5-3/8	5002-4027*
7/16	5-1/2	5002-4028*
29/64	5-5/8	5002-4029*
15/32	5-3/4	5002-4030*
31/64	5-7/8	5002-4031*
1/2	6	5002-4032

* Limited Supply

SOLID CARBIDE DRILLS
STANDARD LENGTH, 118° SPLIT POINT

- **SOLID CARBIDE** used for low tensile strength materials such as zinc, brass, plastics and other abrasive material

Size	OAL	Item#
1/16	1-1/2	5003-4004
5/64	1-3/4	5003-4005*
3/32	2	5003-4006
7/64	2-1/4	5003-4007*
1/8	2-1/4	5003-4008
9/64	2-1/2	5003-4009*
5/32	2-1/2	5003-4010
3/16	2-3/4	5003-4012
7/32	3	5003-4014
1/4	3-1/4	5003-4016
9/32	3-1/2	5003-4018
19/64	3-3/4	5003-4019*
5/16	3-3/4	5003-4020

Size	OAL	Item#
21/64	4	5003-4021*
11/32	4	5003-4022
23/64	4-1/4	5003-4023*
3/8	4-1/4	5003-4024
25/64	4-1/4	5003-4025*
13/32	4-1/4	5003-4026
27/64	4-1/4	5003-4027*
7/16	4-1/4	5003-4028
29/64	4-3/4	5003-4029*
15/32	4-3/4	5003-4030
31/64	4-3/4	5003-4031*
1/2	4-3/4	5003-4032

* Limited Supply

SILVER & DEMMING DRILLS & SET
118° DRILL POINT • 1/2" STRAIGHT SHANK

- High Speed Steel.
- 6" overall length.
- Black oxide.
- Set supplied with case.

INDIVIDUALS

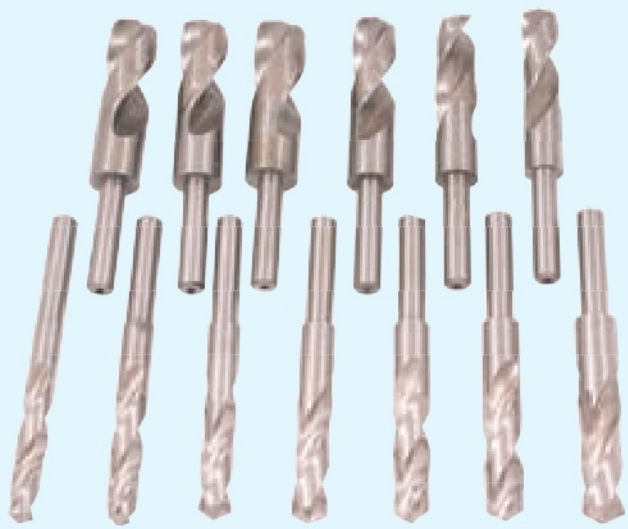
Item#	Size
5000-0050	17/32"
5000-0052	9/16"
5000-0056	5/8"
5000-0060	11/16"
5000-0064	3/4"
5000-0068	13/16"
5000-0072	7/8"
5000-0076	15/16"
5000-0078*	31/32"
5000-0080	1"
5000-0088	1-1/8"
5000-0094	1-1/4"
5000-0097	1-3/8"
5000-0099	1-1/2"

* Limited Supply

13PC M35 COBALT SILVER & DEMMING DRILL SET
118° DRILL POINT • 1/2" STRAIGHT SHANK

- M35 (5%)cobalt used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel.
- 6" overall length.
- Supplied with case.

13 PC SET INCLUDES:
17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4,13/16, 7/8, 15/16, 31/32 & 1"



METRIC SILVER & DEMMING DRILLS
118° DRILL POINT • 1/2" STRAIGHT SHANK

NEW

- High Speed Steel.
- 6" overall length.
- Black oxide.

Item#	Size
5000-0140	14mm
5000-0145	14.5mm
5000-0150	15mm
5000-0155	15.5mm
5000-0160	16mm
5000-0165	16.5mm
5000-0170	17mm
5000-0175	17.5mm
5000-0180	18mm
5000-0185	18.5mm
5000-0190	19mm
5000-0195	19.5mm
5000-0200	20mm
5000-0205	20.5mm
5000-0210	21mm
5000-0220	22mm
5000-0230	23mm

HSS TAPER SHANK DRILLS
118° SPLIT POINT

- Designed for drilling in many different materials and a wide range of applications. These drills feature a surface treatment to imporove chip flow and a taper shank made to American National Standard (Morse) dimensions. Black oxide finish for increased wear resistance and improved lubridity, reducing chip welding and galling.

HIGH SPEED STEEL

5302-2024 Shown

5302-4112 Shown

Item#	Dia. d1	Flute Length l2	Shank Taper	OAL l1
5302-1020	5/16	3-1/8	1MT	6-3/8
5302-2024	3/8	3-1/2	2MT	7-3/8
5302-2028	7/16	3-7/8	2MT	7-3/4
5302-2036	9/16	4-7/8	2MT	8-3/4
5302-2040	5/8	4-7/8	2MT	8-3/4
5302-2044	11/16	5-3/8	2MT	9-1/4
5302-2048	3/4	5-7/8	2MT	9-3/4
5302-2052	13/16	6-1/8	2MT	10
5302-3044	11/16	5-3/8	3MT	10
5302-3052	13/16	6-1/8	3MT	10-3/4
5302-3056	7/8	6-1/8	3MT	10-3/4
5302-3060	15/16	6-1/8	3MT	10-3/4
5302-3100	1	6-3/8	3MT	11
5302-3104	1-1/16	6-5/8	3MT	11-1/4
5302-3108	1-1/8	7-1/8	3MT	11-3/4
5302-3116	1-1/4	7-7/8	3MT	12-1/2
5302-4112	1-3/16	7-3/8	4MT	13
5302-4116	1-1/4	7-7/8	4MT	13-1/2
5302-4120	1-5/16	8-5/8	4MT	14-1/2
5302-4124	1-3/8	8-7/8	4MT	14-1/2
5302-4132	1-1/2	9-3/8	4MT	15
5302-4136	1-9/16	9-5/8	4MT	15-1/4
5302-4140	1-5/8	10	4MT	15-5/8
5302-4148	1-3/4	10-3/8	4MT	16-1/4
5302-4200	2	10-5/8	4MT	16-5/8

HSS & M35 COBALT ANNULAR CUTTERS, 3/4" SHANK

- **HSS** Production grade.
- Pilot holes.
- For general purpose hole making.
- Made of high speed steel, heat treated and tempered for maximum strength.
- Hardened and ground.
- **M35 Cobalt (5%)** is designed to cut difficult and abrasive materials, ranging from medium to high hardness, such ascastings and forgings. They have high heat and abrasion resistant properties and are best used when making heavy cuts, at high speeds and feeds, or where high heat is a factor.
- Pilot holes.
- Produces a slug of material.

3/4" SHANK

* Limited Supply

	HSS (High Speed Steel)				M35 (5% Cobalt)			
	1" Depth of Cut		2" Depth of Cut		1" Depth of Cut		2" Depth of Cut	
Size	Item#	Price(F)	Item#	Price(F)	Item#	Price(F)	Item#	Price(F)
7/16"	5020-0437		5021-0437		----------		----------	
1/2	5020-0500		5021-0500		5022-0500		5023-0500	
9/16	5020-0562		5021-0562		5022-0562		----------	
5/8	5020-0625		5021-0625		5022-0625		5023-0625	
11/16	5020-0687		5021-0687		5022-0687		----------	
3/4	5020-0750		5021-0750		5022-0750		5023-0750	
13/16	5020-0812		5021-0812		5022-0812		----------	
7/8	5020-0875		5021-0875		5022-0875		5023-0875	
15/16	5020-0937		5021-0937		5022-0937		----------	
1	5020-1000		5021-1000		5022-1000		5023-1000	
1-1/16	5020-1062		5021-1062		5022-1062		5023-1062*	
1-1/8	5020-1125		5021-1125		5022-1125		5023-1125	
1-3/16	5020-1187		5021-1187		5022-1187		----------	
1-1/4	5020-1250		5021-1250		5022-1250		5023-1250	
1-5/16	5020-1312		5021-1312		5022-1312*		----------	
1-3/8	5020-1375		5021-1375		5022-1375		5023-1375	
1-7/16	5020-1437		5021-1437		----------		----------	
1-1/2	5020-1500		5021-1500		5022-1500		5023-1500	
1-9/16	5020-1562		5021-1562		5022-1562*		----------	
1-5/8	5020-1625		5021-1625		5022-1625		5023-1625	
1-11/16	5020-1687		5021-1687		5022-1687		----------	
1-3/4	5020-1750		5021-1750		5022-1750		5023-1750	
1-13/16	5020-1812		5021-1812		5022-1812		----------	
1-7/8	5020-1875		5021-1875		5022-1875*		----------	
1-15/16	----------		5021-1937		5022-1937		----------	
2	5020-2000		5021-2000		5022-2000		----------	

9PC 1/2 INCH CUTTING DEPTH HSS ANNULAR CUTTER SET

- Material Application: Hardened Steel; Mild Steel; Stainless Steel
- Bright Finish, High Speed Steel
- Thread Mount Shank
- 1/2 Inch Cutting Depth
- 7/8 to 1-1/2 Inch Cutter Diameter
- 1/2-20 Thread Hole.

Set Includes:

6 - Annular Cutters 7/8, 1, 1-1/8, 1-1/4, 1-3/8 & 1-1/2"
1 - Arbor Assembly
1 - Center Punch
1 - Pilot
Fitted Case

PIN FOR ANNULAR CUTTER

- Fits annular cutters.
- Hardened and ground.

OPTICAL PUNCH SET & 4PC CENTER DRILL SET COMBO KIT

NEW

- This optical punch set is indispensable when doing cntical layout work. Just look down the mangnifying lens and align the cross hairs with the mark on your workpiece. Replace the magnifier with the supplied punch and give it a tap.
- Punch set includes 3 components: a bulls eye and cross hair lens, a 120 degree made of tempered steel, precisely manufactured of aluminum main body and fitted case.
- 4pc HSS combined drill & countersink set: #1-#4
- Made of high speed steel and ground.
- Plain style.
- Used for centering work ends. Where the workpiece is to be revolved on machine centers, 80° countersink angle fits all standard centers.

Lens Magnifier Power: 9x
Punch Size: 3/8"
Pin Length: 1.85"

Size	Body Dia.	(Inch) Drill Dia.	OAL
1	1/8	3/64	1-1/4
2	3/16	5/64	1-7/8
3	1/4	7/64	2
4	5/16	1/8	2-1/8

COMBINED DRILLS & COUNTERSINKS

HSS COMBINED DRILLS & COUNTERSINKS

- Made of high speed steel and ground.
- Plain style.
- Used for centering work ends, where the workpiece is to be revolved on machine centers, 60° countersink angle fits all standard centers.

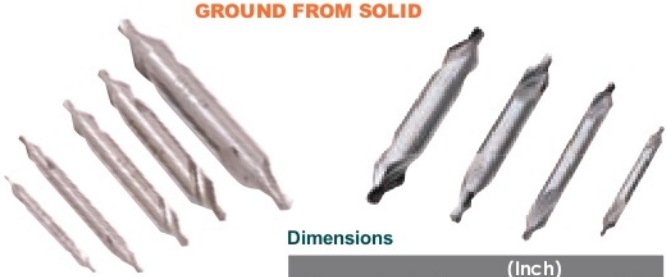
GROUND FROM SOLID

Item#	Size	Body Dia.	(Inch) Drill Dia.	OAL
5000-2020	000	1/8	.020	1-1/4
5000-2025	00	1/8	.025	1-1/4
5000-2031	0	1/8	1/32	1-1/4
5000-2047	1	1/8	3/64	1-1/4
5000-2078	2	3/16	5/64	1-7/8
5000-2109	3	1/4	7/64	2
5000-2125	4	5/16	1/8	2-1/8
5000-2187	5	7/16	3/16	2-3/4
5000-2218	6	1/2	7/32	3

HSS COMBINED DRILL & COUNTERSINK SETS

- Made of high speed steel and ground.
- Plain style.
- Used for centering work ends, where the workpiece is to be revolved on machine centers, 60° countersink angle fits all standard centers.

GROUND FROM SOLID



Dimensions

Size	Body Dia.	(Inch) Drill Dia.	OAL
1	1/8	3/64	1-1/4
2	3/16	5/64	1-7/8
3	1/4	7/64	2
4	5/16	1/8	2-1/8
5	7/16	3/16	2-3/4

HSS LONG SERIES CENTER DRILLS

- Made of high speed steel and ground.
- Combined drills and countersinks (60°).

GROUND FROM SOLID

Item#	Size	OAL	(Inch) Body Dia.	Drill Dia.
5000-0025	1	4	1/8	3/64
5000-0027	1	6	1/8	3/64
5000-0029	2	4	3/16	5/64
5000-0031	2	6	3/16	5/64
5000-0032	3	4	1/4	7/64
5000-0034	3	6	1/4	7/64
5000-0035	4	4	5/16	1/8
5000-0036	4	5	5/16	1/8
5000-0038	5	4	7/16	3/16
5000-0040	5	6	7/16	3/16
5000-0041	6	4	1/2	7/32
5000-0043	6	6	1/2	7/32

Pro-Series 8PC HSS CENTER DRILL SET

- Made of high speed steel and precision ground to accuracy.
- Plain style.
- Used for centering work ends, where the workpiece is to be revolved on machine centers, 60° countersink angle fits all standard centers.

Dimensions

Size	Body Dia.	(Inch) Drill Dia.	OAL
1	1/8	3/64	1-1/4
2	3/16	5/64	1-7/8
3	1/4	7/64	2
4	5/16	1/8	2-1/8
5	7/16	3/16	2-3/4
6	1/2	7/32	3
7	5/8	1/4	3-1/4
8	3/4	5/16	3-1/4

M42 8% COBALT CENTER DRILLS

- **COBALT** used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel
- Plain style.
- Used for centering work ends, where the workpiece is to be revolved on machine centers, 60° countersink angle fits all standard centers.

GROUND FROM SOLID

Item#	Size	Body Dia.	(Inch) Drill Dia.	OAL
5000-3020	000	1/8	.020	1-1/4
5000-3025	00	1/8	.025	1-1/4
5000-3031	0	1/8	1/32	1-1/4
5000-3047	1	1/8	3/64	1-1/4
5000-3078	2	3/16	5/64	1-7/8
5000-3109	3	1/4	7/64	2
5000-3125	4	5/16	1/8	2-1/8
5000-3187	5	7/16	3/16	2-3/4
5000-3218	6	1/2	7/32	3

COBALT

M42 Cobalt (8%) is designed to cut difficult and abrasive materials, ranging from medium to high hardness. Roughing end mills are made of cobalt to withstand elevated temperatures and assure high-edge hardnessduring rapid stock removal. Choose cobalt end mills on hardwork materials or when there is a problem with wear or short tool lige.

5PC M42 8% COBALT 60° CENTER DRILL SET

- **COBALT** used for drilling in tough high tensile strength materials like stainless steel, titanium and inconel
- Plain style.
- Used for producing center holes on parts that require matching between centers right hard cut.
- Creates 60° countersink.
- Double end provides two cutting ends.
- Right hand cut.

GROUND FROM SOLID

Dimensions

Size	Body Dia.	(Inch) Drill Dia.	OAL
1	1/8	3/64	1-1/4
2	3/16	5/64	1-7/8
3	1/4	7/64	2
4	5/16	1/8	2-1/8
5	7/16	3/16	2-3/4

SINGLE FLUTE COUNTERSINKS & SETS

- For portable and machine work when operated at comparatively high speeds
- Single flutes will countersink holes much smaller than multi-flute tools

5 PC. SETS: 1/4, 3/8, 1/2, 3/4 & 1"

Degree	Item#
60°	2000-0030
82°	2000-0031
90°	2000-0032

HIGH SPEED STEEL

INDIVIDUAL(Inch), 82°

Diameter Body	End	Dia. of Shank	OAL Approx.	82°, HSS Item#
1/4	1/32	1/4	2	2001-0250
3/8	1/32	1/4	2	2001-0375
1/2	1/32	1/4	2	2001-0500
5/8	1/32	3/8	2-1/4	2001-0625
3/4	1/8	1/2	2-3/4	2001-0750
1	1/8	1/2	2-3/4	2001-1000

HSS 82° 3-FLUTE COUNTERSINKS & SET

- Utilized in countersinking screw and rivet heads and for centering lathe work.
- 3-Flute eliminates chatter in most applications, while providing better accuracy than a single flute countersink.
- Set complete with wooden case.

HIGH SPEED STEEL

INDIVIDUALS

Diameter(Inch) Cutter	Shank	OAL Approx.	82° Item#
1/4	3/16	1-1/2	2001-1250
3/8	1/4	1-3/4	2001-1375
1/2	3/8	2	2001-1500
5/8	3/8	2-1/4	2001-1625
3/4	1/2	2-5/8	2001-1750
1	1/2	2-3/4	2001-2000

5PC ZERO-FLUTE COUNTERSINK & DEBURRING TOOL SETS

- Cam relieved for totally chatter free cuts
- Through hole design that is easy to re-sharpen using a small grinding wheel in cross-hole
- Excels in aluminum, plastics and other nonmetallics

5 PC INCLUDES

Size	Dia. Cut Range	Shank Diameter
0 double end	1/16~15/64"	1/4"
1 single end	5/32~13/32"	1/4"
2 single end	3/16~17/32"	1/4"
3 single end	5/16~25/32"	1/2"
4 single end	9/16~1-3/32"	1/2"

HIGH SPEED STEEL

Item#	Degree
2001-0006	82°
2001-0007	90°

82° 6 FLUTE CHATTERLESS COUNTERSINKS & SET
For Producing Machined Countersinks In Holes

- Right Hand.
- High speed steel.
- 6 fluted cutters with relatively short length for maximum rigidity.

INDIVIDUALS

Item#	Size	(Inch) Shank Dia.	Overall Length
2001-3187	3/16	3/16	1-1/2
2001-3250	1/4	1/4	1-1/2
2001-3312	5/16	1/4	1-3/4
2001-3375	3/8	1/4	1-3/4
2001-3500	1/2	1/4	2-1/8
2001-3625	5/8	1/2	2-3/8
2001-3750	3/4	1/2	2-11/16
2001-3875	7/8	1/2	2-13/16
2001-4000	1	1/2	2-13/16
2001-4250	1-1/4	3/4	3-3/8
2001-4500	1-1/2	3/4	3-1/2
2001-4750	1-3/4	1	4-1/4
2001-4999*	2	1	4-3/8

* Limited Supply

3 FLUTE METRIC SOLID PILOT COUNTERBORES - STRAIGHT SHANK

- Continuous pilot counterbores cut rapidly, smoothly and accurately, producing long spiraling chips rather than small metal particles.
- The pilot extends the full length of the flute portion of the tool.
- As cutter flutes are ground back due to wear, a new section of pilot becomes exposed.
- The pilot head may be cut off to any desired length when repeated sharpening make it too long for practical use.
- Continuous pilot counterbores have a life many times that of the conventional type counterbore.

HIGH SPEED STEEL

Cap Screw	Cutter Dia.	(mm) Pilot Dia.	Shank Dia.	OAL	Item#
M3	6.0	3.4	5.0	71	2007-0051
M3.5	6.5	3.7	5.0	71	2007-0053
M4	8.0	4.5	5.0	71	2007-0055
M5	10.0	5.5	8.0	80	2007-0057
M6	11.0	6.6	8.0	80	2007-0060
M8	15.0	9.0	12.5	100	2007-0062
M10	18.0	11.0	12.5	100	2007-0064
M12	20.0	13.5	12.5	100	2007-0066
M14	24.0	16.0	12.5	100	2007-0068

COUNTERBORES & SETS

40PC HSS COUNTERBORE SET
Straight Shank • Interchangeable Pilot

- High speed steel.
- 3 Flutes.
- Straight shank

SET INCLUDES:

26 Pilots

- 3/32" Shank: 1/8, 5/32, 3/16 & 1/4"
- 5/32" Shank: 3/16, 7/32, 1/4, 9/32 & 5/16"
- 3/16" Shank: 1/4, 5/16, 3/8, 7/16 & 1/2"
- 1/4" Shank: 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8"
- 5/16" Shank: 3/8, 7/16, 1/2, 9/16, 5/8 & 3/4"

13 Counterbores

- 1/4" thru 1" by 16ths.
- Supplied in fitted case.

21PC INTERCHANGEABLE PILOT COUNTERBORE SET
High Speed Steel • Straight Shank

SET INCLUDES:

14 Pilots (5/32" Shank):
0.187, 0.204, 0.213, 0.229, 1/4, 17/64, 9/32, 5/16, 21/64, 11/32, 3/8, 25/64, 13/32 & 7/16"

6 Counterbores (7/16" shank):
5/16, 3/8, 7/16,1/2, 9/16 & 5/8"

1 Holder:
3/8" Straight Shank

1 Wood Case

- High speed steel.
- Straight shank
- 3 Flute.

2 FLUTE SOLID CAP SCREW COUNTERBORES

- High speed steel.
- Straight shank

FOR SOCKET HEAD CAP SCREWS

(Inch) Size	Pilot Size	Cutting Dia.	Shank Dia.	OAL	Item#
1/4	1/4	13/32	3/8	3-5/8	**2007-0105**
5/16	5/16	15/32	7/16	4	**2007-0106**
3/8	3/8	19/32	1/2	4-3/8	**2007-0107**
7/16	7/16	21/32	1/2	4-3/4	**2007-0108**
1/2	1/2	25/32	3/4	5-1/8	**2007-0109**

2MT SHANK - For 21PC Counterbore Set

- Morse taper #2 shank.
- Overall length: 135mm.
- Hole Diamter: 14mm.

For use with our 21pc counterbore set, accepts 14mm shank counterbores.

3-FLUTE SOLID PILOT COUNTERBORES & SETS FOR SOCKET HEAD CAP SCREWS

- 3-Flute, straight shank
- Continuous pilot counterbores cut rapidly, smoothly and accurately, producing long spiraling chips rather than small metal particles
- The pilot extends the full length of the flute portion of the tool
- As cutter flutes are ground back due to wear, a new section of pilot becomes exposed
- The pilot head may be cut off to any desired length when repeated sharpening make it too long for practical use
- Continuous pilot counterbores have a life many times that of the conventional type counterbore.
- Set supplied with fitted wooden case.

HIGH SPEED STEEL

INDIVIDUALS

Cap Screw	Cutter Dia.	(Inch) Pilot Dia.	Shank Dia.	OAL	Item#
#6	.242	.150	7/32	3	**2007-0006**
#8	19/64	11/64	1/4	3	**2007-0008**
#10	21/64	13/64	5/16	3-1/2	**2007-0010**
1/4	13/32	9/32	3/8	3	**2007-0016**
5/16	1/2	11/32	7/16	5	**2007-0020**
3/8	19/32	13/32	1/2	6	**2007-0024**
1/2	25/32	17/32	3/4	7-1/2	**2007-0032**
5/8	31/32	21/32	3/4	7-1/2	**2007-0033**
3/4	1-3/16	13/16	1	8	**2007-0034**

STRAIGHT SHANK HSS CHUCKING REAMERS

- ANSI standard.
- Suitable for production reaming of most materials.
- Used in general purpose though-hole applications.

Item#	Size	Flute Length	OAL
2006-3004	1/16	3/8	1-1/2
2006-3008	1/8	7/8	3-1/2
2006-3009	9/64	1	4
2006-3010	5/32	1	4
2006-3012	3/16	1-1/8	4-1/2
2006-3014	7/32	1-1/4	5
2006-3015	15/64	1-1/2	6
2006-3016	1/4	1-1/2	6
2006-3020	5/16	1-1/2	6
2006-3023	23/64	1-3/4	7
2006-3024	3/8	1-3/4	7
2006-3027	27/64	1-3/4	7
2006-3028	7/16	1-3/4	7
2006-3031	31/64	2	8
2006-3032	1/2	2	8
2006-3036	9/16	2	8
2006-3040	5/8	2-1/4	9
2006-3044	11/16	2-1/4	9
2006-3048	3/4	2-1/2	9-1/2
2006-3056	7/8	2-5/8	10
2006-3100	1	2-3/4	10-1/2

- Used for reaming holes without interrupted cuts.
- High speed steel
- Straight flute.
- 45 degree lead chamfer allows gradual starting load.
- Designed for use in drill presses, turret lathes, and screw machines.

Over-Under Reamers

Item #	Size	Flute Length	OAL
2006-3510	.1240	7/8	3-1/2
2006-3520	.1260	7/8	3-1/2
2006-3530	.1865	1-1/8	4-1/2
2006-3540	.1885	1-1/8	4-1/2
2006-3550	.2490	1-1/2	6
2006-3560	.2510	1-1/2	6
2006-3590	.3740	1-3/4	7
2006-3600	.3760	1-3/4	7
2006-3630	.4990	2	8
2006-3640	.5010	2	8

HSS CHUCKING REAMER SETS
• HIGH SPEED STEEL • STRAIGHT SHANK • STRAIGHT FLUTES

- Used in general purpose though-hole applications.
- Used for reaming holes without interrupted cuts.
- Hight speed steel.
- Straight shank.
- Straight flutes.

14 PC SET INCLUDES:
.1240, .1260, .1865, .1885, .2490, .2510, .3115, .3135, .3740, .3760, .4365, .4385, .4995 & .5010"

HSS SPIRAL FLUTE TAPER PIPE REAMERS

- Right hand cut tapered 3/4" per foot.
- Designed for reaming holes to be tapped with American Standard Taper Pipe Taps (NPT).

HIGH SPEED STEEL • SPIRAL FLUTE

Item#	Size	Large End Dia.	(Inch) Small End Dia.	Flute Length	Overall Length
2006-2014	1/16	.291	.245	3/4	2
2006-2018	1/8	.362	.316	3/4	2-1/8
2006-2026	1/4	.472	.406	1-1/16	2-7/16
2006-2034	3/8	.606	.540	1-1/16	2-9/16
2006-2042	1/2	.751	.665	1-3/8	3-1/8
2006-2058	3/4	.962	.876	1-3/8	3-1/4
2006-2074	1	1.212	1.103	1-3/4	3-3/4

SELF STARTING STEP DRILLS & SETS

- Made of **high speed steel**, heat treated and tempered for maximum strength.
- Requires no center punch to start drilling.
- Automatically deburrs drilled hole.

5000-0890 Shown

INDIVIDUALS

Hole Range	Step	Step Depth	Shank	Uncoated Item#	TiN Coated Item#
1/8~1/2x1/32"	13	1/8"	1/4"	5000-0013	5000-0500
3/16~1/2x1/16"	6	3/8"	1/4"	5000-0014	5000-0501
1/4~3/4x1/16"	9	1/8"	3/8"	5000-0015	5000-0750
3/16~7/8x1/16"	12	1/8"	3/8"	5000-0016	5000-0875
1/4~1-3/8x1/8"	10	1/8"	1/2"	5000-0017	5000-0876

REAMERS & SETS

VALUE HSS ADJUSTABLE BLADE REAMERS & SETS

- Adjustable blade lets you handle multiple hole sizes with a single tool and multiple tools in each set let you handle even more hole sizes, making these sets virtually indispensable. Reamers are hardened, precision-ground high speed steel with a black oxide finish and include a wood storage box.
- Ends are center drilled so blades can be sharpened in place.
- Blades are adjusted by loosening one nut and tightening the other.
- Each reamer expands to the next size.
- Adjustable blades give the operator the ability to handle multiple hole sizes with a single tool, making them a good choice for users with low volume reaming needs.
- Square end allows the user to turn the reamer by hand with an adjustable wrench or straight handle tap wrench.

HIGH SPEED STEEL

2006-9120 Shown

2006-9123 Shown

2006-9125 Shown

SETS

Range	No. of Pieces	Capacity Range	Item#
#4/A - 2/A	3	3/8~15/32"	**2006-9120**
#8/A - 2/A	7	1/4~15/32"	**2006-9123**
A - F	6	15/32~27/32	**2006-9125**

STRAIGHT FLUTE REAMERS SHOULD BE USED IN THRU-HOLE APPLICATIONS ONLY

INDIVIDUALS

Item#	Size	Range	OAL
2006-9170	#8/A	1/4 to 9/32	3-1/4
2006-9172	#7/A	9/32 to 5/16	3-1/2
2006-9173	#6/A	5/16 to 11/32	4-1/8
2006-9174	#5/A	11/32 to 3/8	4-3/8
2006-9175	#4/A	3/8 to 13/32	4-3/4
2006-9176	#3/A	13/32 to 7/16	5
2006-9177	#2/A	7/16 to 15/32	5-1/4
2006-9178	A	15/32 to 17/32	5-1/2
2006-9179	B	17/3219/32	5-3/4
2006-9180	C	19/32 to 21/32	6-1/2
2006-9181	D	21/32 to 23/32	6-3/4
2006-9182	E	23/32 to 25/32	7
2006-9183	F	25/32 to 27/32	7-3/8
2006-9184	G	27/32 to 15/16	8
2006-9185	H	15/16 to 1-1/16	9
2006-9186	I	1/1/16 to 1-3/16	10
2006-9187	J	1-3/16 to 1-11/32	11
2006-9188	K	1-11/32 to 1-1/2	12
2006-9189	L	1-1/2 to 1-13/16	14
2006-9190	M	1-13/16 to 2-7/32	16

HHIP HSS ADJUSTABLE BLADE REAMERS & SETS

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- Ends are center drilled so blades can be sharpened in place.
- Blades are adjusted by loosening one nut and tightening the other.
- Each reamer expands to the next size.
- Adjustable blades give the operator the ability to handle multiple hole sizes with a single tool, making them a good choice for users with low volume reaming needs.
- Square end allows the user to turn the reamer by hand with an adjustable wrench or straight handle tap wrench.

HIGH SPEED STEEL

2006-0024 Shown

2006-0026 Shown

2006-0028 Shown

Size	Set	Capacity Range	Item#
#8/A - 5/A	4	1/4~3/8"	**2006-0024**
A-H(15/32~1-1/16")	8	15/32~1-1/16"	**2006-0026**
A-K(15/32~1-1/2")	11	15/32~1-1/2"	**2006-0028**

STRAIGHT FLUTE REAMERS SHOULD BE USED IN THRU-HOLE APPLICATIONS ONLY

INDIVIDUALS

Item#	Size	Range	OAL
2006-0070	#8/A	1/4 to 9/32	3-1/4
2006-0072	#7/A	9/32 to 5/16	3-1/2
2006-0073	#6/A	5/16 to 11/32	4-1/8
2006-0074	#5/A	11/32 to 3/8	4-3/8
2006-0075	#4/A	3/8 to 13/32	4-3/4
2006-0076	#3/A	13/32 to 7/16	5
2006-0077	#2/A	7/16 to 15/32	5-1/4
2006-0078	A	15/32 to 17/32	5-1/2
2006-0079	B	17/32 to 19/32	5-3/4
2006-0080	C	19/32 to 21/32	6-1/2
2006-0081	D	21/32 to 23/32	6-3/4
2006-0082	E	23/32 to 25/32	7
2006-0083	F	25/32 to 27/32	7-3/8
2006-0084	G	27/32 to 15/16	8
2006-0085	H	15/16 to 1-1/16	9
2006-0086	I	1-1/16 to 1-3/16	10
2006-0087	J	1-3/16 to 1-11/32	11
2006-0088	K	1-11/32 to 1-1/2	12
2006-0089	L	1-1/2 to 1-13/16	14
2006-0090	M	1-13/16 to 2-7/32	16

REPAIRMAN'S TAPER REAMER

RANGE(SMALL END~LARGE END): 1/8~5/8"

- Removes burrs from small holes, tubing, etc.
- Enlarges holes in soft metals, plastics and similar materials.
- Number of Flutes: 7
- Sliding T-Handle length: 3.5"
- Overall Length: 5"

SPIRAL POINT TAPS-Plug Type

GROUND FROM SOLID
FOR THROUGH HOLES

GROUND THREAD, HIGH SPEED STEEL

Item#	Size	H Limit/Flute
1011-6004	0~80NF	H-2/2
1011-6006	1~64NC	H-1/2
1011-6012	1~72NF	H-2/2
1011-6014	2~56NC	H-2/2
1011-6016	2~64NF	H-2/2
1011-6018	3~48NC	H-2/2
1011-6020	3~56NF	H-2/2
1011-6022	4~40NC	H-2/2
1011-6026	4~48NF	H-2/2
1011-6028	5~40NC	H-2/2
1011-6032	5~44NF	H-2/2
1011-6036	6~32NC	H-3/2
1011-6040	6~40NF	H-2/2
1011-6042	8~32NC	H-2/2

Item#	Size	H Limit/Flute
1011-6044	8~32NC	H-3/2
1011-6048	8~36NF	H-2/2
1011-6050	10~24NC	H-2/2
1011-6058	10~32NF	H-3/2
1011-6062	12~24NC	H-3/2
1011-6064*	12~28NF	H-3/2
1011-6074	1/4"~20NC	H-3/3
1011-6078	1/4"~28NF	H-3/3
1011-6094	5/16"~18NC	H-3/3
1011-6102	5/16"~24NF	H-3/3
1011-6106	3/8"~16NC	H-3/3
1011-6112	3/8"~24NF	H-3/3
1011-6114	7/16"~14NC	H-3/3
1011-6120	7/16"~20NF	H-3/3

Item#	Size	H Limit/Flute
1011-6122	1/2"~13NC	H-3/3
1011-6126	1/2"~20NF	H-3/3
1011-6130	9/16"~12NC	H-3/3
1011-6136	9/16"~18NF	H-3/3
1011-6138	5/8"~11NC	H-3/3
1011-6142	5/8"~18NF	H-3/3
1011-6146	11/16"~11NS	H-3/3
1011-6148	11/16"~16NS	H-3/3
1011-6150	3/4"~10NC	H-3/3
1011-6154	3/4"~16NF	H-3/3
1011-6160	7/8"~9NC	H-4/4
1011-6164	7/8"~14NF	H-4/4
1011-6168	1"~8NC	H-4/4
1011-6170	1"~12NF	H-4/4

* Limited Supply

SPIRAL FLUTE TAPS - Bottom Type

GROUND THREAD, HIGH SPEED STEEL

FOR BLIND HOLES
GROUND FROM SOLID

Item#	Size	H Limit/Flute
1011-8505	4-40NC	H-2/2
1011-8513	6-32NC	H-3/2
1011-8517	8-24NC	H-3/2
1011-8518	8-32NC	H-3/2
1011-8609	10-24NC	H-3/2
1011-8610	10-32NF	H-3/2
1011-8613	1/4"-20NC	H-3/3
1011-8614	1/4"-28NF	H-3/3
1011-8615	5/16"-18NC	H-3/3
1011-8616	5/16"-24NF	H-3/3
1011-8617	3/8"-16NC	H-3/3
1011-8618	3/8"-24NF	H-3/3
1011-8621	1/2"-13NC	H-3/3
1011-8622	1/2"-20NF	H-3/3
1011-8626	5/8"-11NC	H-3/3
1011-8627*	5/8"-18NF	H-3/3
1011-8628	3/4"-10NC	H-3/3
1011-8629	3/4"-16NF	H-3/3

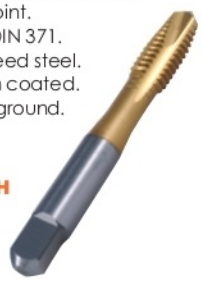
* Limited Supply

METRIC SPIRAL POINT TIN COATED TAPS-Plug

GROUND FROM SOLID

- Spiral point.
- Metric DIN 371.
- High speed steel.
- Titanium coated.
- Thread ground.

FOR THROUGH HOLES



Item#	Size	Limit
1011-7700	M2-0.4	D3
1011-7699	M2.5-0.45	D3
1011-7701	M3-0.5	D3
1011-7702	M4-0.7	D4
1011-7703	M5-0.8	D4
1011-7704	M6-1.0	D5
1011-7705	M8-1.25	D5
1011-7706	M10-1.25	D5
1011-7707	M10-1.50	D6
1011-7708	M12-1.75	D6

METRIC 35° SPIRAL FLUTE TIN COATED TAPS-Bottom

GROUND FROM SOLID

- 35° Spiral flute.
- Metric DIN 371.
- High speed steel.
- Titanium coated.
- Thread ground.

FOR BLIND HOLES

Item#	Size	Limit
1011-7752	M2-0.4	D3
1011-7750	M2.5-0.45	D3
1011-7753	M3-0.5	D3
1011-7754	M4-0.7	D4
1011-7755	M5-0.8	D4
1011-7756	M6-1.0	D5
1011-7758	M8-1.25	D5
1011-7759	M10-1.25	D5
1011-7760	M10-1.50	D6
1011-7762	M12-1.75	D6

STANDARD HAND TAPS

HIGH SPEED STEEL
GROUND THREAD
GROUND FROM THREAD

Limited Supply!

TAPER: 7-10 THREAD CHAMFER
PLUG: 3-5 THREAD CHAMFER
BOTTOM: 1-2 THREAD CHAMFER

Size	No. of Flutes	Thread Limit	*Taper* Item#	*Bottom* Item#	*Plug* Item#
4-40NC	3	H2	1012-0440	1014-0440	----------
6-32NC	3	H3	----------	----------	1013-0632
8-32NC	3	H3	1012-0832	1014-0832	1013-0832
10-24NC	4	H3	----------	1014-1024	1013-1024
10-32NF	4	H3	1012-1032	1014-1032	1013-1032
1/4-20NC	4	H3	1012-2520	----------	1013-2520
1/4-28NF	4	H3	1012-2528	1014-2528	----------
5/16-18NC	4	H3	1012-3118	----------	----------
3/8-16NC	4	H3	1012-3716	1014-3716	----------
3/8-24NF	4	H3	----------	1014-3717	----------
7/16-20NF	4	H3	1012-4320	1014-4320	1013-4320
1/2-13NC	4	H3	1012-5013	1014-5013	1013-5013
1/2-20NF	4	H3	1012-5020	1014-5020	1013-5020

TAPER PIPE (NPT) TAPS

- Cuts internal threads in pipes.
- Ideal for pipe fitting
- Tapered at a rate of 3/4" per foot.

THREAD GROUND • HIGH SPEED STEEL

Size	No. of Flutes	Thread Length	Overall Length	HSS Item#	TiN Coated Item#
1/16~27	4	11/16	2-1/8	----------	1011-3305
1/8~27	4	3/4	2-1/8	1011-3211	1011-3310
1/4~18	4	1-1/16	2-1/8	1011-3215	1011-3315
3/8~18	4	1-1/16	2-7/16	1011-3220	1011-3320
1/2~14	4	1-3/8	2-9/16	1011-3225	1011-3325
3/4~14	5	1-3/8	3-1/8	1011-3230	1011-3330
1~11-1/2	5	1-3/4	3-1/4	1011-3235	1011-3335
1-1/4~11-1/2	5	1-3/4	3-1/4	1011-3240*	----------
1-1/2~11-1/2	7	1-3/4	4	1011-3245*	----------

* Limited Supply

TAPER PIPE (NPT) TAP SETS

- Cuts internal threads in pipes.
- Ideal for pipe fitting
- Tapered at a rate of 3/4" per foot.

THREAD GROUND • HIGH SPEED STEEL

HEXAGON PIPE (NPT) DIES

- Ideal for cutting right-hand external pipe threads.
- Hex head shape die is designed for use in die stocks or adjustable wrenches.
- Each NPT tap & die is etched with the size for easy reference.
- Supplied with solid wooden case.
- Includes one of each of the following NPT tap & dies: 1/8~27, 1/4~18, 3/8~18, 1/2~14, 3/4~14 & 1~11-1/2

THREAD GROUND • HIGH SPEED STEEL

HEXAGON PIPE (NPT) DIES

- Ideal for cutting right-hand external pipe threads.
- Hex head shape die is designed for use in die stocks or adjustable wrenches.
- Each NPT die is etched with the size for easy reference.

CARBON STEEL, RIGHT HAND

Size	Item#
1/8~27	1017-1800
1/4~18	1017-1802
3/8~18	1017-1804
1/2~14	1017-1806
3/4~14	1017-1808
1~11-1/2	1017-1810

6PC TAPER PIPE (NPT) TAP & DIE SET

- Right hand NPT pipe thread.
- For use in hand operations.
- Made of carbon steel.
- Tap Chamfer: 2-3 threads.
- Die Chamfer: 1.5 threads.
- Supplied with fitted case.

6PC set includes one of each tap & die: 1/4~18, 3/8~18, 1/2~14

7PC HEXAGON RETHREADING DIE SET Metric

- Right hand.
- Supplied with fitted metal case.

7pc Includes:
M6x1.00, M8x1.25, M10x1.50, M12x1.75, M14x2.00, M16x2.00 & M20x2.50

CARBON STEEL

HEX RETHREADING DIES

CARBON STEEL, RIGHT HAND

Size	Item#
1/4~20	**1017-1717**
1/4~28	**1017-1718**
5/16~18	**1017-1719**
5/16~24	**1017-1720**
3/8~16	**1017-1721**
3/8~24	**1017-1722**
7/16~14	**1017-1723**

Size	Item#
7/16~20	**1017-1724**
1/2~13	**1017-1725**
1/2~20	**1017-1726**
9/16~12	**1017-1727**
9/16~18	**1017-1728**
5/8~11	**1017-1729**
5/8~18	**1017-1730**
3/4~10	**1017-1733**
3/4~16	**1017-1734**
1~8	**1017-1737**
1~14	**1017-1739**

16PC HEXAGON RETHREADING DIE SET

- Right hand.
- Supplied with fitted metal case.

16pc Includes:
1/4~20, 1/4~28, 5/16~18, 5/16~24, 3/8~16, 3/8~24, 7/16~14, 7/16~20, 1/2~13, 1/2~20, 9/16~12, 9/16~18, 5/8~11, 5/8~18, 3/4~10 & 3/4~16.

CARBON STEEL

20PC HEXAGON RETHREADING DIE SET

- Right hand.
- Supplied with fitted metal case.

CARBON STEEL

20pc Includes:
1/4~20, 1/4~28, 5/16~18, 5/16~24, 3/8~16, 3/8~24, 7/16~14, 7/16~20, 1/2~13, 1/2~20, 9/16~12, 9/16~18, 5/8~11, 5/8~18, 3/4~10, 3/4~16, 7/8~9, 7/8~14, 1~8 & 1~14.

ADJUSTABLE HSS ROUND SPLIT DIES

HIGH SPEED STEEL, RIGHT HAND

- Adjustable with screw

13/16" O.D.

Size	Item#
4~40	**1016-1014**
5~40	**1016-1018**
6~32	**1016-1022**
6~40	**1016-1024**
8~32	**1016-1026**
8~36	**1016-1027**
10~24	**1016-1030**
10~32	**1016-1032**
1/4~20	**1016-1040**
1/4~28	**1016-1042**
5/16~18	**1016-1044***
5/16~24	**1016-1045***

1" O.D.

Size	Item#
6~32	**1016-1122**
6~40	**1016-1124**
8~32	**1016-1126***
8~36	**1016-1128***
10~24	**1016-1130**
10~32	**1016-1132**
1/4~20	**1016-1140**
1/4~28	**1016-1142**
5/16~18	**1016-1144**
5/16~24	**1016-1146**
3/8~16	**1016-1148**
3/8~24	**1016-1150**
7/16~14	**1016-1152**
7/16~20	**1016-1154**
1/2~13	**1016-1156**
1/2~20	**1016-1158**

1-1/2" O.D.

Size	Item#
1/4~20	**1016-1240***
1/4~28	**1016-1242***
5/16~18	**1016-1244***
5/16~24	**1016-1246***
3/8~16	**1016-1248***
3/8~24	**1016-1250***
7/16~14	**1016-1252***
7/16~20	**1016-1254***
1/2~13	**1016-1258***
1/2~20	**1016-1260***
9/16~12	**1016-1262***
9/16~18	**1016-1264***
5/8~11	**1016-1266***
5/8~18	**1016-1268***
3/4~10	**1016-1270***
3/4~16	**1016-1272***

* Limited Supply

2" O.D.

Size	Item#
3/8~16	**1016-1348***
1/2~13	**1016-1356***
5/8~11	**1016-1364***
3/4~10	**1016-1368***
7/8~9	**1016-1372***
1~8	**1016-1378***

TAP & DIE SETS

24PC TUNGSTEN STEEL TAP & DIE SET WITH RATCHETING WRENCH

- SAE, NC threads
- Ratcheting tap & die wrench
- 1" O.D. die adapter
- Locking tap adapter (for big taps)
- T-handle tap wrench (for small taps) fits in ratcheting wrench
- Fitted metal case.

TUNGSTEN STEEL

Limited Supply!

Set	Range	Taps	Dies	Ratchet Wrench	T-handle Wrench	Tap Adapter	Die Adapter	Screw Driver
	#6 ~ 1/2"							
24pc	6-32, 8-32, 10-24, 12-24, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	9	9	1	1	1	1	1

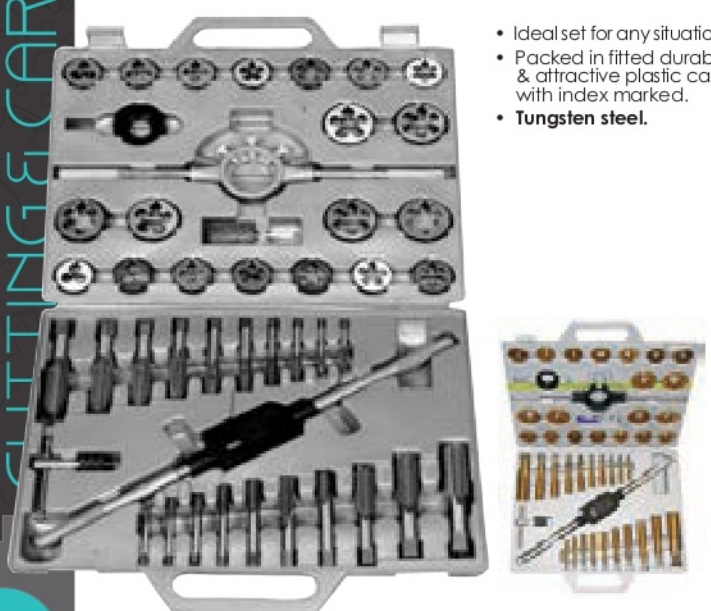
41PC TUNGSTEN STEEL TAP & DIE SETS

- Hexagon shape dies
- Packed in fitted durable & attractive plastic case with index marked.
- **Tungsten steel.**

TUNGSTEN STEEL

Range: #4-1/2" Size and Threads per inch	Screw Pitch	Taps	Dies	Die Stock	"T" Holder	Tap & Reamer Wrench	Screw Driver
NC 4~40, 6~32, 8~32, 10~24, 12~24, 1/4~20, 5/16~18, 3/8~16, 7/16~14, 1/2~13 NF 10~32, 1/4~28, 5/16~24, 3/8~24, 7/16~20, 1/2~20 NPT 1/8"~27R	1	17	17	1	2	1	1
Range: 3mm-12mm							
3 x 0.50 6 x 0.75 10 x 1.25 3 x 0.60 6 x 1.00 10 x 1.50 4 x 0.70 7 x 0.75 12 x 1.50 4 x 0.75 7 x 1.00 12 x 1.75 5 x 0.80 8 x 1.00 5 x 0.90 8 x 1.25 NPT-1/8"-27	1	17	17	1	2	1	1

45PC TUNGSTEN STEEL TAP & DIE SETS



- Ideal set for any situation.
- Packed in fitted durable & attractive plastic case with index marked.
- **Tungsten steel.**

TUNGSTEN STEEL

Range: 1/4" -1" Size and Threads per inch	Taps	Dies	Die Stock	"T" Holder	Screw Driver
NC 1/4~20, 5/16~18, 3/8~16, 7/16~14, 1/2~13, 1~1/2" O.D. 9/16~12, 5/8~11, 3/4~10, 7/8~9, 1~8 NF 1/4~28, 5/16~24, 3/8~24, 7/16 ~20, 1/2~20 2" O.D. 9/16~18, 5/8~18, 3/4~16, 7/8~14, 1~14	20	20	2	2	1
Range: 6mm-24mm					
6 x 0.75 12 x 1.75 20 x 1.50 6 x 1.00 14 x 1.50 20 x 2.50 8 x 1.00 14 x 2.00 22 x 1.50 8 x 1.25 16 x 1.50 22 x 2.50 10 x 1.25 16 x 2.00 24 x 1.50 10 x 1.50 18 x 1.50 24 x 3.00 12 x 1.50 18 x 2.50	20	20	2	2	1

110PC CARBON STEEL TAP & DIE COMBO SET

- SAE, NC, NF, NS threads
- Metric, International, Special
- American National Pipe, NPT, NPS
- 1" O.D. die stock
- 1-1/2" O.D. die stock
- No. 4 adjustable tap wrench
- No. 6 adjustable tap wrench
- T-handle tap wrench
- **Material: Carbon Steel**

CARBON STEEL

INCLUDES:
1 taper tap, 1 bottoming tap and die in each of the following sizes:
4-40, 6-32, 8-32, 10-24, 12-24, 10-32, 1/4-20, 1/4-24, 1/4-28, 1/4-40, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 1/8-27NPT, 1/4-18NPT, M6x1.0, M8x1.25, M10x1.0, M10x1.5, M11x1.5, M12x1.25, M12x1.75, M14x1.25 & M18x1.5

22PC HSS Tap & Die Set -Inch

- Made of High Speed Steel.
- Wooden case included.

INCLUDES:
1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20 Plug Tap and Die each, 1" OD Adjustable Die Stock, T-Handle Tap Wrench.

HIGH SPEED STEEL

44PC HSS Tap & Die Set -Metric

- Made of High Speed Steel.
- Wooden case included.

HIGH SPEED STEEL

INCLUDES:
20 Sizes Tap & Die Each: M2x0.4, M2.5x0.45, M3x0.50, M4x0.70, M5x0.80, M6x1.0, M7x1.0, M8x1.0, M8x1.25, M10x1.0, M10x1.25, M10x1.5, M12x1.0, M12x1.25, M12x1.50, M12x1.75, M14x1.5, M14x2.0, M16x2.0, M18x1.5, 1" & 1-1/2" OD (M14-M18) Adjustable Die Stock, 2 Tap Wrench.

110PC HSS TAP & DIE COMBO SET

- SAE, NC, NF, NS threads
- Metric, International, Special
- American National Pipe, NPT, NPS
- 1" O.D. die stock
- 1-1/2" O.D. die stock
- No. 4 adjustable tap wrench
- No. 6 adjustable tap wrench
- T-handle tap wrench

HIGH SPEED STEEL

INCLUDES:
1 taper tap, 1 bottoming tap and die in each of the following sizes:
4-40, 6-32, 8-32, 10-24, 12-24, 10-32, 1/4-20, 1/4-24, 1/4-28, 1/4-32, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 1/8-27NPT, 1/4-18NPT,
M6x1.0, M8x1.25, M10x1.0, M10x1.5, M11x1.5, M12x1.25, M12x1.75, M14x1.25 & M18x1.5

TAPPING ACCESSORIES

TAP GUIDE TOOL-SPRING CENTERED

NEW

- Spring centered tap guide tool to align tap for threading, lathe, mill or jig bore.
- Point hardened upto 50-55 HRC
- Shank Diameter: 1/2"
- For use with drill chucks to stroke the hardened point for accurate hand topped thread.

TIPS:
The center's body should be gripped in a drill chuck or collet, while the hardened point is inserted into the middle of the tapping handle. The stroke of the center will follow the tap, assuring straight and accurate hand tapped threads, One universal size for all tapping applications.

60PC HSS METRIC/INCH TAP & DIE SET

NEW

- NC, NF and NPT threads
- 1" O,D, dies
- Adjustable die stock
- Adjustable handle tap wrench
- T-handle tap wrench
- Screwdriver
- Two screw pitch gages

CARBON STEEL

INCLUDES:
27 tap & die sizes: 1/4-20NC, 5/16-18NC, 3/8-16NC, 7/16-14NC, 1/2-13NC, 4-40NC, 6-32NC, 8-32NC, 10-24NC, 12-24NC, 1/4-28NF, 5/16-24NF, 3/8-24NF, 7/16-20NF, 1/2-20NF, 10-32NF, 1/8-27NPT, 3mmx0.5, 4mmx0.7, 5mmx0.8, 6mmx1.0, 7mmx1.0, 8mmx1.25, 9mmx1.25, 10mmx1.5, 10mmx1.0, and 12mmx1.75.

COMPACT HAND TAPPER ON MAG BASE

- Compact and portable.
- Suitable for large workpieces like machine cases & thin plate tapping jobs.
- Max. stroke 2.36".
- Drill chuck enables the tap to be easily loaded and taken off.
- Powerful permanent magnet (175 lbs.) seat with On/Off switch.
- Mag. base dimensions: 2.36x2.36x2"

MADE IN TAIWAN

Tap & Round Iron Piece Not Included

RATCHET T-HANDLE TAP HOLDERS & SET

- Ratcheting type.
- This tap holder is made of tool steel, hardened and ground.
- Can be used for holding taps, reamers.

Item#	Body Length	Capacity for Tap Size	Square Shank
3900-0241	2-1/8"	1/16~3/16"	1/16~5/32"
3900-0245	2-5/8"	7/32~7/16"	5/32~1/4"
3900-0248	3-1/2"	1/4~1/2"	3/16~5/16"

TAP WRENCH EXTENTIONS

- High-quality precision tap extensions.
- Two-jaw chuck.

Item#	Tap Capacity	Length	Shank
3900-0218	#0 ~ 12	7"	3/8"
3900-0219	#12 ~ 1/2"	10-3/4"	1/2"

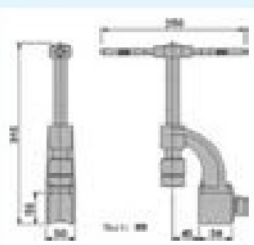
MACHINE TAPPING GUIDE

- Provide sensitive feel for hand tapping small holes on mills and drill presses
- Starts every hole straight and prevents tap breakage
- Shank dia. 3/8"
- Handle dia. 1"
- Tap capacity #0-12

HAND TAPPER ON MAG BASE

- Compact and portable design, easy to operate.
- Guide bar helps the tap positioning precisely.
- Evenly force delivering during operation prevent tap from breaking.
- Quick chuck enables the tap to be easily loaded and took off.
- Powerful permanent magnet seat with On/Off switch.

MADE IN TAIWAN



ADJUSTABLE TAP & REAMER WRENCHES & SET

- Knurled steel handles.
- Jaws surface hardened.
- Zinc die casting.

Item#	Size	Range For Hand Taps	Range For Pipe Taps	OAL
3900-0209	#0	0~1/4"	None	5"
3900-0210	#1-1/2	1/16~1/2"	None	7"
3900-0232	#2	1/64~15/32"	1/8"	11"
3900-0211	#3	3/16~3/4"	1/8~3/8"	15"
3900-0235	#4	1/4~1-1/8"	1/8~3/4"	19"
3900-0237	#5	1/2~1-1/4"	1/4~1"	30"

4PC HEAVY DUTY ADJUSTABLE TAP & REAMER WRENCH SET

- Heavy duty tap wrenches.
- Rugged drop forged construction
- Hardened jaws for increased resistance to wear.

4PC Capacity Includes(range for hand taps):
1/16~1/4"(M2~M6), 1/16~3/8"(M2~M10)
5/32~1/2"(M6~M12) & 5/32~3/4"(M6~M22)

SELF-ALIGNING TAP & REAMER HOLDERS

3900-0291 Shown

- Base of guide has two 120° Vees, which accepts round parts.
- New 4 jaw design provides firm grip and 90° alignment, eliminates tap breakage while producing perfectly aligned theads.

NEW DESIGN

3900-0293 Shown

DIE STOCKS

- For adjustable round split dies
- Designed to accommodate round screw adjustable dies

INDIVIDUALS

Item#	Size No.	Die O.D.	Length
3900-0225	2	13/16"	6-1/2"
3900-0226	3	1"	8-1/2"
3900-0227	5	1-1/2"	12"
3900-0228	6	2"	15"
3900-0229	7	2-1/2"	19"

3PC FLOATING DIE HOLDER SET

- One piece construction
- Total length 3"

Die Dia.	Body D x Length	Shank
13/16	1-1/2"x1	1/2
1	1-1/2"x1	1/2
1-1/2	2"x 1-1/4	3/4

IDEAL FOR SHORT OR MEDIUM-RUN THREADING OF SHAFTS !

MORSE TAPER TAILSTOCK DIE HOLDER SETS

- The set includes tapered Shank, Pin Punch & 4 sizes of Die Holders.
- Completely interchangeable to fit tapered shank with the help of a pin which allows about 1-1/2" travel.
- Easy knock out pin with a pin punch.
- Tang end.

Item#	Taper	Die Holder Size
3906-4910	MT 2	13/16,1,1-5/16 & 1-1/2"
3906-4911	MT 3	13/16,1,1-5/16 & 1-1/2"

SPRING-LOADED TAP GUIDES

- Adjustable tension spring
- Reversible tension pin for male and female hole centering or tapping
- 1/2" dia. hardened shank, knurled for easy handling
- 3/16" dia. hardened tension pin

FOR DRILL PRESSES & MILLS

TAPPERS

SELF REVERSING TAPPING HEAD SETS

- Adjustable torque prevents damage and tap breakage.
- High reverse ratio increases productivity.
- Jacobs mount can be adapted to most spindles with the help of an arbor.
- Thread mount are designed to adapt to tapping machines or fixed, threaded mount spindles.
- **Includes: 2 rubber flex collets and 2 shanks.**

For Drill Presses, Drill Units & Manually Operated Machines With Rotating Spindles !

* Limited Supply

Capacity in Steel	Item#	Mount	Included Shanks
#0-1/4" (M1.4-M7)	**3900-1250***	JT6	2 &3 MT
	3900-1251	JT33	2&3 MT
#6-1/2" (M3-M12)	**3900-1500**	JT6	3 & 4 MT
	3900-1501	JT33	3 & 4 MT
#10-3/4" (M3-M20)	**3900-1750**	JT3	3 & 4 MT

TC TYPE MULTI-FUNCTION TAPPING HEADS

- Can be used on tapping, drilling, high speed machine and CNC with taper mounting.
- High precision and good stability.
- Adjustable clamping range.
- Quick and easy loading and unloading.
- Includes hook wrench and Allen wrench.

* Limited Supply

Item#	Taper Mount	Capacity	D (mm)	L (mm)
3900-1255*	JT6	1/8~1/2"	48	73
3900-1256	JT33	1/8~1/2"	48	73
3900-1259	JT3	1/8~5/8"	54	85

RUBBER FLEX TAP CHUCK COLLETS

- For tapping heads
- Multi range
- Accurate gripping force

Item#	Outside Diameter (Inch)	Capacity Range (Inch/mm) Minimum	Capacity Range (Inch/mm) Maximum	Contact Length (Inch)	Cone Angle (Degree)
3900-1781	0.591	0.098/2.50	0.165/4.20	0.433	26
3900-1782	0.591	0.165/4.20	0.256/6.50	0.433	26
3900-1783	0.827	0.138/3.50	0.276/7.00	0.512	40
3900-1784	0.827	0.276/7.00	0.394/10.00	0.512	40
3900-1785	1.043	0.236/6.00	0.354/9.00	0.591	40
3900-1786	1.043	0.354/9.00	0.551/14.00	0.591	40

MINI E-Z HAND TAPPER

- Assures straight perpendicular tapped holes up to #10 diameter.

SPECIFICATIONS	
Table size	8-1/2x6"
Height	9"
Clearance height	3-3/4'
Depth of throat	4-1/2'
Approx. weight	12 lbs.

Complete with tap guide, precision ground work table, tap spindle wrench, and 7 steel tap adapters (#0-5/16")

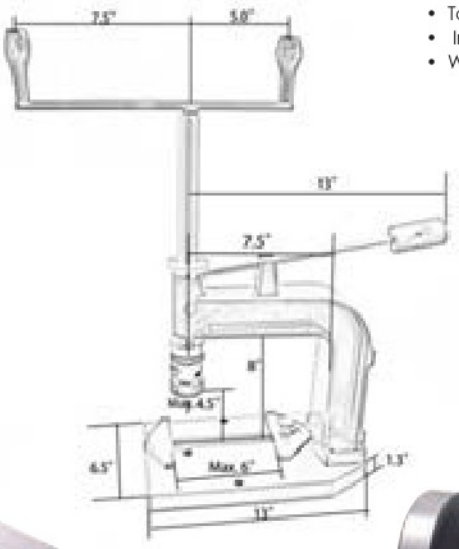
PRECISION HAND TAPPER

- Precision ground work table and spindle to high accuracy.
- **9 tap adapters included: #6, #8, #10, 1/4, 5/16, 3/8, 7/16, 1/2 & 5/8" .**
- Assures straight perpendicular tapped holes.
- Rigid structure made of high grade tool steel.
- Equipped with tap guide.
- Working Area: 6-1/2" x 10"
- Clearance Height: 7"
- Depth of Throat: 7-1/2"
- Overall Height: 13"
- Weight: 37 lbs.

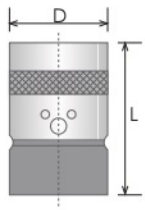
ULTRA PRECISION HAND TAPPER WITH TORQUE DRIVE HEAD

TAPPING RANGE: 1/8~1/2"/M2~M13

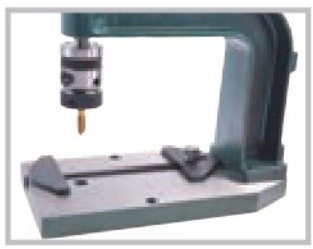
- Precision ground work table and spindle for high accuracy.
- Assures straight perpendicular tapped holes.
- Rigid structure.
- High torque tapping head with improved stability
- Adjustable clamping range.
- Tapping Range: 1/8~1/2"/M2~M13
- Includes hook wrench and Allen wrench.
- Weight: 40 lbs.

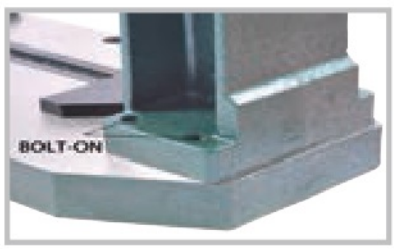


D=48mm
L=73mm



Tap Not Included





ULTRA PRECISION TORQUE DRIVE TAPPING HEAD RETROFIT KIT FOR CONVENTIONAL HAND TAPPER

UPGRADE YOUR TAPPING, ACCURACY AND STABILITY

- This precision rigidity is designed to improve the rigidity of a conventional hand tapper spindle with tapping adapters
- It works for the same type hand tapper with 25mm diameter spindle.
- High torque tapping head with improved stability
- Adjustable clamping range.
- Tapping Range: 1/8~1/2"/M2~M13
- Kit Includes: Handle, Spindle, Tapping Head, Hook Wrench and Allen Wrench.

THREAD REPAIR TOOLS

HELICAL S.T.I. THREAD REPAIR KITS - SAE & METRIC

- Simple and easy to use kit.
- For repairing tapped holes.
- Cost effective system creates stronger than original threads.
- Creates a stronger internal thread in soft metals.
- Professional kit includes drills, STI taps and lug breaking tool.

- **132pc set Includes:**
  - 110pc- Stainless Steel Inserts
  - 5pc- STI HSS Taps
  - 5pc- HSS Twist Drills
  - 5pc- Coil Drivers
  - 5pc- Tang Removers
  - 1pc- L Hex Wrench
  - 1pc- Metal Case

132PC SETS

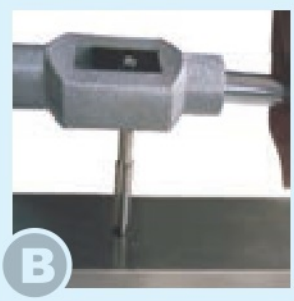
Item#	Description	Insert Thread	STI Tap	HSS Drill
1011-0055	Coarse Thread Repair Kit	25ea-1/4-20	1/4-20	17/64
		25ea-5/16-18	5/16-18	21/64
		25ea- 3/8-16	3/8-16	25/64
		25ea-7/16-14	7/16-14	29/64
		10ea-1/2-13	1/2-13	17/32
1011-0056	Fine Thread Repair Kit	25ea-1/4-28	1/4-28	17/64
		25ea-5/16-24	5/16-24	21/64
		25ea-3/8-24	3/8-24	25/64
		25ea-7/16-20	7/16-20	29/64
		10ea-1/2-20	1/2-20	17/32
1011-0051	5-12mm	25ea-M5 x 0.80	M5 x 0.80	5.2
		25ea-M6 x 1.00	M6 x 1.00	6.3
		25ea-M8 x 1.25	M8 x 1.25	8.3
		25ea-M10 x 1.50	M10 x 1.50	10.4
		10ea-M12 x 1.75	M12 x 1.75	12.4

STAINLESS STEEL INSERTS LENGTH -1.5 X Diameter

- **16pc & 31pc Kit Includes:**
  - 10pc or 25pc- Stainless Steel Inserts
  - 1pc- STI HSS Tap
  - 1pc- HSS Twist Drills
  - 1pc- Coil Driver
  - 1pc- Tang Breaker
  - 1pc- L Hex Wrench
  - 1pc- Metal Case

16PC & 31PC KITS

Item#	Insert-Thread	No of Insert In Set	STI Tap	HSS Drill
1011-0081	1/4-20	25	1/4-20	17/64
1011-0084	5/16-18	25	5/16-18	21/64
1011-0087	3/8-16	25	3/8-16	25/64
1011-0094	1/2-13	10	1/2-13	17/32
1011-0065	M5 x 0.80	25	M5 x 0.80	5.2
1011-0066	M6 x 1.00	25	M6 x 1.00	6.3
1011-0068	M8 x 1.25	25	M8 x 1.25	8.3
1011-0070	M10 x 1.50	25	M10 x 1.50	10.4
1011-0072	M12 x 1.75	10	M12 x 1.75	12.4



HELICAL THREAD REPAIR INSERTS - Stainless Steel - SAE & METRIC

- Thread repair inserts are used to fix a stripped bolt or screw thread or to install a strong, permanent threaded hole in metals, composites, wood or other materials. Helical inserts have a wired coil design. When inserted into a tapped hole with an installation tool, the coil expands to anchor the insert in place.
- Made of stainless steel
- Insert Lenth=1.5D(Diameter)

APPLICATION: Renews worn threads.

25PC/PACK Shown

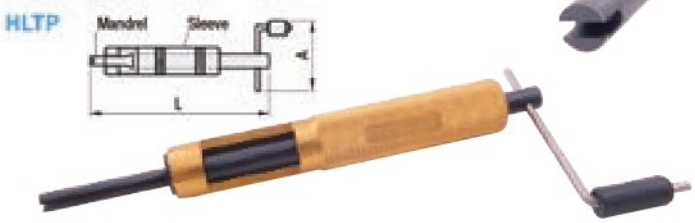
Item#	Insert-Thread	PCS/Pack
1011-0240	M5 x 0.80	25
1011-0242	M6 x 1.00	25
1011-0244	M8 x 1.25	25
1011-0246	M10 x 1.50	25
1011-0248	M12 x 1.75	10
1011-0251	1/4-20	25
1011-0252	1/4-28	25
1011-0253	5/16-18	25
1011-0254	5/16-24	25
1011-0255	3/8-16	25
1011-0256	3/8-24	25
1011-0257	7/16-14	25
1011-0258	7/16-20	25
1011-0259	1/2-13	10
1011-0260	1/2-20	10

THREADING WIRE INSERT INSTALATION TOOLS-SAE & METRIC

FOR HELICAL INSERTS

- These special tools make installing Threading Wire Inserts fast and easy.
- For use with wire thread inserts.

APPLICATION: Installation of Free Running & Screw Locking Helical Inserts.



Item#	Insert-Thread	A	L
1011-0211	1/4-20	3	5-1/2
1011-0212	1/4-28	2-3/4	5-1/4
1011-0216	5/16-18	3	6-1/4
1011-0217	5/16-24	3	6-1/4
1011-0221	3/8-16	2-3/4	6-1/4
1011-0222	3/8-24	3	6-1/2
1011-0226	7/16-14	3-1/2	6-1/2
1011-0227	7/16-20	2-3/4	6-1/2
1011-0231	1/2-13	3-1/4	6-1/2
1011-0232	1/2-20	3-1/4	7
1011-0261	M5 x 0.80	3	5
1011-0266	M6 x 1.00	3	5.1/2
1011-0271	M8 x 1.25	3	6-1/4
1011-0276	M10 x 1.50	3	6-1/2
1011-0281	M12 x 1.75	2-3/4	6-1/2

SELF TAPPING THREAD REPAIR KITS-METRIC

- Self tapping, no pre-tapping required.
- Very high pull-out resistance.
- Unlimited thread re-usability.
- Protects expensive components from damage.
- Fits almost every application.
- Produces high quality, permanent, wear-resistant threads.
- Highly resistant to vibration, can withstand vibration without loosening.

Kit Includes:

10pc- Stainless Steel Inserts 1pc- Installation Tool
1pc- HSS Twist Drills 1pc- Metal Case

Item#	Insert-Thread
1011-0205	M5 x 0.80
1011-0207	M6 x 1.00
1011-0209	M8 x 1.25
1011-0210	M10 x 1.5
1011-0213	M12 x 1.75

18PC HSS TAP & DRILL COMBO SETS

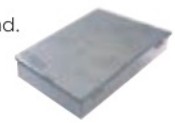
- High speed steel made taps and drills.
- Steel case.
- Drills are matched with taps to make jobs much easier.

National Course Pitch Set Includes
1 each HSS Hand Tap
6-32 NC, 8-32 NC, 10-24 NC, 10-32 NF, 1/4"-20 NC, 5/16"-18 NC, 3/8"-16 NC, 7/16"-14 NC, 1/2"-13 NC
1 each HSS Jobbers Drill
#36, #29, #25, #21, #7, F, 5/16" ,U, 27/64"

National Fine Pitch Set Includes
1 each HSS Hand Tap
6-40 NF, 8-36 NF, 10-24 NF, 10-32 NF, 1/4"-28 NF, 5/16"-24 NF, 3/8"-24 NF, 7/16"-20 NF, 1/2"-20 NF
1 each HSS Jobbers Drill
#33, #29, #25, #21, #3, I, Q, 25/34", 29/64"

18PC HSS METRIC TAP & DRILL COMBO SET

- High speed steel made taps and drills.
- Plug taps are fully ground.
- With index steel case.
- Drills are matched with taps to make jobs much easier.



Set Includes
1 each HSS Hand Tap
M2.5x0.45, M3.0x0.50, M3.5x0.60, M4.0x0.70, M5.0x0.80, M6.0x1.00, M8.0x1.25, M10.0x1.50 & M12.0x1.75
1 each HSS Jobbers Drill
2.05, 2.50, 2.90, 3.30, 4.20, 5.00, 6.70, 8.50 & 10.20mm

14 PC H.S.S. 3-IN-1 COMBINED DRILL/TAP/COUNTERSINK & SCREWDRIVER BIT SETS

- Complete hole drilling, tapping, deburring and countersinking in one operation with power drill saves labor and time.
- For use to tap steel, copper, brass, aluminum and plastic up to 10-gauge(metal).
- Back tapered design helps prevent thread damage from over-drilling.
- One-piece drill/tap assures proper drill for tap size.
- Made of high speed steel for longer life.
- 14pc Includes: 6pc of combinaition drill & tap countersink.
  1pc of high torque tested quick-change adapter
  6pc of quick change CRV steel bit.
  1pc of carry case.

1011-0140 Shown

1011-0141 Shown

Item#	Thread Range	CRV Bit
1011-0140	6~32, 8~32, 10~24	Slot3, Slot4, PZ1
	10~32, 12~24, 1/4~20	PZ2, PH1, PH2
1011-0141	M3X0.5, M4x0.7, M5x0.8,	Slot3, Slot4, PZ1
	M6x1.0, M8x1.25 & M10x1.5	PZ2, PH1, PH2

DEBURRING TOOLS

DEBURRING TOOL SETS

Item#	Style	Set Includes
2001-0220	B	4pc set -plastic handle, telescoping holder and blades B10 & B20
2001-0222	E	5pc set -plastic handle, telescoping holder and blades E100, E200 & E300

UNIVERSAL DEBURRING SET

SET INCLUDES:
4 - Handles
4 - Blades:
B10 (for Aluminum)
B20 (for Brass & Cast iron)
E100 (for Steel)
E102 (for Plastic)

ROYAL STYLE DEBURRING TOOL SET

- Pressing locking button to change blades.
- Blades can be stored in the handle.
- Accepts all " E" blades on the market.

SET INCLUDES:
HANDLE BLADES:
E100, E101, E102,
E200 & E350

5PC BLADES
(One each of E100,E101,E102,E200 & E350).....Item **2001-2261**

MINI DEBURRING & SCRAPING TOOL KIT

- Easy to reach the most inaccessible areas.
- Finishes workpiece perfectly.
- In fitted case

KIT INCLUDES:
Flat diamond coated file,
triangular scraper,
round scraper,
swivel blade tool,
rotating deburring tool,
flat scraper.

EDGE OFF STYLE DEBURRING TOOL

- Hexagonal aluminum handle with pocket clip.
- E100 blade mounted (not replaceable).

RAPID PUSH BUTTON DEBURRING TOOL

- Push button to change blade.
- Accepts E100 blade (included).

DEBURRING BLADES

SOLD IN PACKAGE QUANTITY !
Price Per Package of 10

10 PC PER PACKAGE

Blade Style	Item#	Description	Used with Set	Blade	APPLICATIONS: Straight Edge	Hole Edge	Cross-Hole Both-Edges	Hole Black-Edge	Hole Inner Surface	Flat Surface	Sheet	MATERIALS: Steel	Aluminum	Copper	Brass	Cast Iron	Stainless Steel	Hardened	Plastics
B10	2001-2201	HSS. Deburrs materials with spiral chips	B		X	X						X	X	X					X
B20	2001-2202	HSS. Rotates clockwise & counterclockwise	B		X	X									X	X			X
B30	2001-2203	Simultaneously deburrs the inside and outside of holes up to 0.16" (4mm) thick	B				X					X	X	X					X
E100	2001-2251	Heavy-duty HSS. Deburrs material with spiral chips	E									X	X	X					X
E200	2001-2252	HSS for materials with powdery chips. Rotates clockwise & counterclockwise	E		X	X									X	X			X
E300	2001-2253	HSS for materials with spiral chips. Simultaneously deburrs the inside and outside of holes up to 0.24" (6mm) thick	E				X					X	X	X					X
E350	2001-2258	HSS for materials with powdery chips. Rotates clockwise & counterclockwise	E		X	X									X	X			X

SCRAPER SET

- Triangular blades with 3 cutting edges and a telescopic blade holder that lets you reach hard to access areas.
- Provides maximum grip comfort when used with UNI handle.

SET INCLUDES:
UNI Handle with hex inner thread holder, Scraper D20, C25, D30, D40 & Wrench

Limited Supply!

6PC COUNTERSINK SET

- For chamfering and countersinking.
- Complete with fitted case.

INCLUDES:
UNI handle
M7 holder
Countersink: C12, C20 & C30
Wrench

Limited Supply!

20PC DIAMOND PIN SET

- Various shapes and grit sizes for grinding carbide, ceramics, etc.
- Overall length 1-3/4".
- Suitable for grinding in tight or precision areas, on jigs, dies and fixtures.

Limited Supply!

12PC NEEDLE FILE SETS

- Industrial grade.
- Complete with durable pouch.
- **Shapes: Barrette, Crossing, Equalling, Half Round, Round Edge Joint, Knife, Marking, Round, Slitting, Square, Three Square and Warding**

5-1/2" OAL

5PC STEEL FILE SET

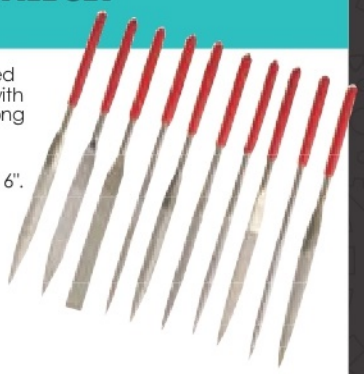
- **Shapes: Flat File, Round File, Square File, Three Square File & Half Round File**
- For general purpose.
- Complete with durable handles.

Overall Length: 12"

10PC DIAMOND NEEDLE FILE SET
MEDIUM-D126

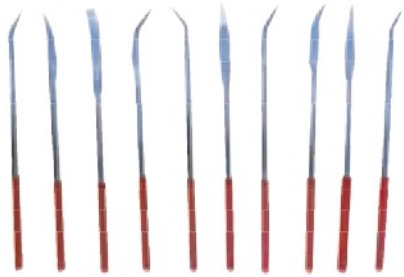
- Can be used on carbide, hardened steel, glass and ceramics. Made with a hard chrome bond that gives a long life and wears extremely well.
- Overall length 5-1/2".
- Diamond impregnated length: 1-9/16".
- In fitted pouch.

INCLUDES SHAPES:
2 of round,
2 of hand,
1 of square,
Three - square,
half round,
barrette, flat, knife.



10PC DIAMOND RIFFLER FILE SET
MEDIUM-D126

- Can be used for cleaning odd and difficult places.
- Diamond impregnated length: 1-9/16".
- Overall length 5-1/:
- With fitted pouch.



TRIANGULAR HOLLOW SCRAPER

NEW

- An extremely useful accessory for scraping, trimming and deburring metals, tubing and other materials.
- Hollow ground cutting edge stays sharper longer and resharpens easily.

THREAD RESTORING FILES

- Restores Damaged or Rusted External Threads on Bolts, Threaded Shafts, Pipe and Pipe Fittings.
- Profile Shape: Square
- File Length: 8-1/2"
- Sizes clearly marked.

BURRS & SCREW EXTRACTORS

CARBIDE ROTARY BURRS

- All rotary burs have hardened steel shanks.

SA Carbide Cylindrical Shape

Industrial No.	Cut Dia (In)	Cut Length (In)	Shank Dia. (In)	Item#
SA-1	1/4	5/8	1/4	3000-0101*
SA-3	3/8	3/4	1/4	3000-0103
SA-5	1/2	1	1/4	3000-0105
SA-6	5/8	1	1/4	3000-0106
SA-7	3/4	1	1/4	3000-0107

SC Carbide Cylindrical Ball Nose Shape

Industrial No.	Cut Dia (In)	Cut Length (In)	Shank Dia. (In)	Item#
SC-1	1/4	5/8	1/4	3000-0111
SC-3	3/8	3/4	1/4	3000-0113
SC-5	1/2	1	1/4	3000-0115
SC-6	5/8	1	1/4	3000-0116*
SC-7	3/4	1	1/4	3000-0117*

SD Carbide Ball Shape

Industrial No.	Cut Dia (In)	Cut Length (In)	Shank Dia. (In)	Item#
SD-1	1/4	1/4	1/4	3000-0121
SD-3	3/8	3/8	1/4	3000-0123
SD-5	1/2	1/2	1/4	3000-0125
SD-6	5/8	5/8	1/4	3000-0126
SD-7	3/4	3/4	1/4	3000-0127

SE Carbide Egg Shape

Industrial No.	Cut Dia (In)	Cut Length (In)	Shank Dia. (In)	Item#
SE-3	3/8	5/8	1/4	3000-0133*
SE-5	1/2	7/81	1/4	3000-0135*
SE-6	5/8	1	1/4	3000-0136*
SE-7	3/4	1	1/4	3000-0137*

SF Carbide Round Nose Tree Shape

Industrial No.	Cut Dia (In)	Cut Length (In)	Shank Dia. (In)	Item#
SF-1	1/4	5/8	1/4	3000-0141*
SF-5	1/2	1	1/4	3000-0145
SF-6	5/8	1	1/4	3000-0146
SF-7	3/4	1	1/4	3000-0147

*Limited Supply

INDIVIDUAL SCREW EXTRACTORS

- Quick & easy removal of broken screws, pipes, bolts, & studs without damaging the threads in the hole.

Item#	Size	For Remove Screw/Bolt	Drill to Use
1011-0021	#1	3/32~5/32"	5/64"
1011-0022	#2	5-32~7/32"	7/64"
1011-0023	#3	7/32~9/32"	5/32"
1011-0024	#4	9/32~3/8"	1/4"
1011-0025	#5	3/8~5/8"	17/64"

1/4" SHANK CARBIDE BURR SETS-Double Cut

Overall Length: 2"

Type	Cutting Dia.	Cutting Lenth	Shape
SA-1	1/4	5/8	Cylindrical
SA-3	3/8	3/4	Cylindrical
SA-5	1/2	1	Cylindrical
SA-14	3/16	5/8	Cylindrical
SC-1	1/4	5/8	Cylindrical Radius End
SC-3	3/8	3/4	Cylindrical Radius End
SC-5	1/2	1	Cylindrical Radius End
SD-14	3/16	--	Ball
SD-1	1/4	--	Ball
SD-3	3/8	--	Ball
SE-1	1/4	3/8	Oval
SF-1	1/4	5/8	Oval
SF-3	3/8	3/4	Oval
SF-5	1/2	1	Oval
SG-1	1/4	5/8	Tree Point End
SG-3	3/8	3/4	Tree Point End
SM-1	1/4	1/2	Cone 22 Degree
SM-2	1/4	3/4	Cone 14 Degree
SN-1	1/4	5/16	Inverted Cone 10 Degree

SCREW EXTRACTOR & LEFT HAND DRILL SET

- Quick & easy removal of broken screws, pipes, bolts, & studs without damaging the threads in the hole.
- Supplied in plastic pouch.
- High speed steel

10 PC SET
Extractors: No. 1, 2, 3, 4 & 5
Left Hand Drill Bits: 1/8, 3/16, 1/4, 5/16 & 3/8"

8PC SCREW EXTRACTOR SETS

- Quick & easy removal of broken screws, pipes, bolts, & studs w/o damaging the threads in the hole.

Includes
#1, 2, 3, 4 , 5, 6, 7 & 8 For Removing 3/32 ~ 1-3/8" of studs, bolts & screws

5PC SCREW EXTRACTOR SETS

- Quick & easy removal of broken screws, pipes, bolts, & studs w/o damaging the threads in the hole.
- Screw extractors made of chrome-molly steel.
- Supplied in plastic case.

Includes
#1, 2, 3, 4 & 5 For Removing 1/4-5/8" of studs, bolts & screws

6PC HSS END MILL SETS
Center Cut • 3/8" Shank

- Single end.
- High speed steel.
- Center cut.
- With stand.

6 PC INCLUDES:
1/8, 3/16, 1/4, 5/16, 3/8 & 1/2"

TITANIUM COATED END MILL SETS

- Titanium coated for longer life.
- High speed steel, single end.
- Complete with wooden case.

GROUND FROM SOLID CENTER CUT

*Limited Supply

6PC COBALT 4 FLUTE END MILL SETS-SINGLE END

- Center cut.
- M42 (8%) cobalt, used for cut in tough high tensile strength materials like stainless steel, titanium and inconel.
- Uniform cutting load per tooth assures minimum chatter deflections.
- Preferred for light to medium removal rates and obtaining better surface finishes on soft, tough and long chip materials.
- With wooden stand.

M42 8% COBALT

Set Includes

Size	Shank Dia.	Flute Length	OAL
1/8	3/8	1/2	2-11/32
3/16	3/8	9/16	2-3/8
1/4	3/8	11/16	2-1/2
5/16	3/8	3/4	2-17/32
3/8	3/8	3/4	2-1/2
1/2	1/2	1-1/4	3-9/32

3/16" SHANK DOUBLE-END 10PC END MILL SET

- High speed steel.
- Center-cut.
- Double end.
- Supplied with wooden stand.

6PC COBALT 4 FLUTE END MILL SET-DOUBLE END

- Center cut.
- M42 (8%) cobalt, used for cut in tough high tensile strength materials like stainless steel, titanium and inconel.
- Uniform cutting load per tooth assures minimum chatter deflections.
- Preferred for light to medium removal rates and obtaining better surface finishes on soft, tough and long chip materials.
- With wooden stand.

M42 8% COBALT

Set Includes

Size	Shank Dia.	Flute Length	OAL
1/8	3/8	3/8	3-1/16
3/16	3/8	1/2	3-1/4
1/4	3/8	5/8	3-3/8
5/16	3/8	3/4	3-1/2
3/8	3/8	3/4	3-1/2
1/2	1/2	1	4-1/8

CORNER ROUNDING END MILLS & SET

HIGH SPEED STEEL FORMED RADIUS CUTTERS-RH CUT

- Intended for use in milling rounded corners, etc.
- Form-relieved type; can be sharpened many times without changing the form

Item#	Radius	Diameter (Inch) Mill	Shank	OAL
5800-4020	1/16	7/16	3/8	2-1/2
5800-4030	3/32	1/2	3/8	2-1/2
5800-4040	1/8	5/8	1/2	3
5800-4050	5/32	3/4	1/2	3
5800-4060	3/16	7/8	1/2	3
5800-4080	1/4	1	1/2	3
5800-4090	5/16	1-1/8	1/2	3-1/4
5800-4110	3/8	1-1/4	1/2	3-1/2
5800-4115	7/16	1-3/8	1	4
5800-4160	1/2	1-1/2	3/4	3-7/8

DOUBLE-END END MILLS

DOUBLE-END MINIATURE 3/16" SHANK END MILLS

- Used for general-purpose maching of both ferrous and noferrous materials.
- Popular for small slotting, engraving, pocketing and similar applications.
- The medium-high helix angle produces and ideal shearing cut for outstanding performance.
- 3/16" shank.

HIGH SPEED STEEL

Diameter (In) Mill	Flute (In) Length	OAL (In)	2-Flure Item#	4-Flure Item#
1/32	3/32	2-1/4	5830-0002	----------
3/64	9/64	2-1/4	5830-0003*	----------
1/16	3/16	2-1/4	5830-0004*	5831-0018
5/64	15/64	2-1/4	5830-0005*	5831-0020*
3/32	9/32	2-1/4	5830-0006	5831-0022
7/64	21/64	2-1/4	5830-0007*	5831-0024
1/8	3/8	2-1/4	5830-0008*	5831-0026
9/64	13/32	2-1/4	5830-0009*	5831-0028*
5/32	7/16	2-1/4	5830-0011	5831-0030*
11/64	1/2	2-1/4	5830-0010*	5831-0031*
3/16	1/2	2-1/4	5830-0012	5831-0034

* Limited Supply

2-FLUTE DOUBLE-END END MILLS

GROUND FROM SOLID • CENTER CUTTING

- 2-Flute used for slotting, ramping, pocketing and plunging operations. Preffered for small and medium removal rates on soft, tough and long chip materials such as aluminum, copper & brass.

Limited Supply!

Diameter (In) Mill	Shank	Flute (In) Length	OAL (In)	HSS Item#	TiN Coated Item#	M42 Cobalt Item#
1/8	3/8	3/8	3-1/16	5803-0125	----------	5825-0125
5/32	3/8	7/16	3-1/8	5803-0156	----------	----------
3/16	3/8	7/16	3-1/8	5803-0187	5827-0187	5825-0187
1/4	3/8	1/2	3-1/8	5803-0250	----------	5825-0250
5/16	3/8	9/16	3-1/8	5803-0312	----------	5825-0312
3/8	3/8	9/16	3-1/8	5803-0375	5827-0375	5825-0375
1/2	1/2	13/16	4	5803-0500	5827-0500	5825-0500
9/16	5/8	1-1/8	4-1/2	5803-0562		
5/8	5/8	1-1/8	4-1/2	5803-0625		
3/4	3/4	1-5/8	5	5803-0750		
1	1	1-5/8	5-7/8	5803-1000		

HSS 4-FLUTE DOUBLE-END END MILLS

GROUND FROM SOLID • CENTER CUTTING

Diameter (In) Mill	Shank	Flute (In) Length	OAL (In)	HSS Item#	TiN Coated Item#	M42 Cobalt Item#
1/8	3/8	3/8	3-1/16	5804-0125	5829-0125	5836-0125*
3/16	3/8	1/2	3-1/4	5804-0187	5829-0187	5836-0187*
1/4	3/8	5/8	3-3/8	5804-0250	5829-0250	----------
5/16	3/8	3/4	3-1/2	5804-0312	5829-0312	5836-0312
3/8	3/8	3/4	3-1/2	5804-0375	5829-0375	----------
1/2	1/2	1	4-1/8	5804-0500	5829-0500	----------
5/8	5/8	1-3/8	5	5804-0625	5829-0625*	----------
3/4	3/4	1-5/8	5-5/8	5804-0750	----------	5836-0750*

* Limited Supply

2-FLUTE SINGLE-END CENTER CUT END MILLS

GROUND FROM SOLID • CENTER CUTTING

- 2-Flute used for slotting, ramping, pocketing and plunging operations. Preffered for small and medium removal rates on soft, tough and long chip materials such as aluminum, copper & brass.

* Limited Supply

Diameter (In) Mill	Diameter (In) Shank	Flute (In) Length	OAL (In)	HSS Item#	TiN Coated Item#	M42 (8%) Item#
1/8	3/8	3/8	2-5/16	5801-0125	5826-0125	5824-0125
3/16	3/8	7/16	2-5/16	5801-0187	5826-0187	5824-0187
1/4	3/8	1/2	2-5/16	5801-0250	5826-0250	5824-0250
5/16	3/8	9/16	2-5/16	5801-0312	5826-0312	5824-0312
3/8	3/8	9/16	2-5/16	5801-0375	5826-0375	5824-0375
7/16	3/8	13/16	2-1/2	5801-0437	----------	5824-0437
1/2	3/8	1	3	5801-0500	----------	5824-0500
1/2	1/2	1	3	5801-0501	5826-0501	----------
9/16	1/2	1-1/8	3-1/8	5801-0562	----------	5824-0562
5/8	1/2	1-1/8	3-1/8	5801-0625	----------	5824-0625
5/8	5/8	1-5/16	3-7/16	5801-0626	5826-0626	5824-0626
3/4	1/2	1-5/16	3-5/16	5801-0750	----------	5824-0751
3/4	3/4	1-5/16	3-9/16	5801-0753	----------	----------
7/8	3/4	1-1/2	3-5/8	----------	----------	5824-1001
1	1/2	1-1/2	3-5/8	5801-1000	----------	5824-1002*
1	3/4	1-1/2	3-3/4	5801-1001	----------	5824-1125*
1	1	1-5/8	4-1/8	5801-1002	----------	5824-1250*
1-1/2	3/4	1-5/8	4-1/8	5801-1500*		
2	3/4	1-5/8	4-1/8	5801-2000*		

HSS 4-FLUTE SINGLE-END CENTER CUT END MILLS

GROUND FROM SOLID • CENTER CUTTING

Diameter (In) Mill	Diameter (In) Shank	Flute (In) Length	OAL (In)	HSS Item#	TiN Coated Item#	M42 Cobalt Item#
1/8	3/8	3/8	2-5/16	5802-0125	5828-0125	5835-0125
3/16	3/8	1/2	2-3/8	5802-0187	5828-0187	5835-0187
1/4	3/8	5/8	2-1/2	5802-0250	5828-0250	5835-0250
5/16	3/8	3/4	2-1/2	5802-0312	5828-0312	5835-0312
3/8	3/8	3/4	2-1/2	5802-0375	5828-0375	5835-0375
7/16	3/8	13/16	2-1/2	5802-0437	5828-0437	5835-0437
1/2	3/8	13/16	2-1/2	5802-0500	5828-0500	5835-0500
1/2	1/2	1-1/4	3-1/4	5802-0501	5828-0501	5835-0501
9/16	1/2	1-3/8	3-3/8	5802-0562	5828-0562	5835-0562
5/8	1/2	1-5/16	3 -7/16	5802-0625	----------	5835-0625
5/8	5/8	1-5/8	3-3/4	5802-0626	5828-0626	5835-0626
3/4	1/2	1-5/8	3-5/8	5802-0750	----------	5835-0750
3/4	5/8	1-5/8	3-3/4	5802-0751	----------	----------
3/4	3/4	1-5/8	3-7/8	5802-0753	5828-0751	5835-0753
7/8	3/4	1-7/8	4-1/8	----------	----------	5835-0875
1	1/2	1-7/8	4-1/8	5802-1000	----------	5835-1000
1	3/4	1-7/8	4-1/8	5802-1001	----------	5835-1001
1	1	2	4-1/2	5802-1002	----------	5835-1002

6-FLUTE SINGLE-END CENTER CUT END MILLS

Limited Supply!

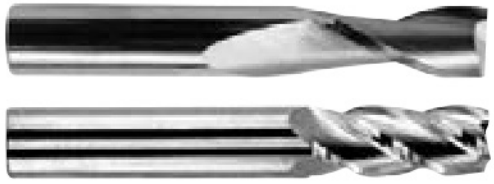
GROUND FROM SOLID • CENTER CUTTING

Diameter (In) Mill	Diameter (In) Shank	Flute (In) Length	OAL (In)	HSS Item#	M42 Cobalt Item#
1-1/4	1	2	4-1/2	----------	5835-1250
1-1/4	1-1/4	2	4-1/2	5802-1256	----------
1-1/2	1-1/4	2	4-1/2	5802-1506	----------

SINGLE-END END MILLS & ROUGHERS

2 & 4 FLUTE SOLID CARBIDE SINGLE END MILLS

Cutting diameter tolerance + .000/.002



- Regular length
- Submicron grain carbide

CENTER CUTTING

APPLICATION

- **2 Flute** - For milling lower strength materials. Offers the maximum flute volume for chip removal
- **4 Flute** - For milling tougher metals where their thicker webs offer maximum rigidity and greater feed rates

- AlTiN coating is beneficial in wet, semi-dry to dry cutting of most steels and highly abrasive materials. Provides good thermal stability for increased speeds and feeds that offers excellent heat resistance, good lubricity, better finishes and prolongs tool life.

Diameter (In) Mill	Diameter (In) Shank	Flute (In) Length	OAL (In)	2-Flute Uncoated Item#	2-Flute AlTiN Coated Item#	4-Flute Uncoated Item#	4-Flute AlTiN Coated Item#
1/32	1/8	3/32	1-1/2	8003-0005*	5806-0313*	8003-1243*	5807-0313*
1/16	1/8	1/4	1-1/2	8003-0007	5806-0625*	8003-1245	----------
3/32	1/8	3/8	1-1/2	8003-0009*	5806-0937*	----------	5807-0937*
1/8	1/8	1/2	1-1/2	8003-0012	5806-1250	8003-1250	5807-1250
3/16	3/16	5/8	2	8003-0018	5806-1875	8003-1875	5807-1875
1/4	1/4	3/4	2-1/2	8003-0025	5806-2500	8003-2500	5807-2500
5/16	5/16	13/16	2-1/2	8003-0029*	----------	8003-3125	5807-3125
3/8	3/8	1	2-1/2	8003-0037	5806-3750	8003-3750	5807-3750
1/2	1/2	1	3	8003-0050	5806-5000	8003-5000	5807-5000

M42 COBALT ROUGHING END MILLS-FINE PITCH

GROUND FROM SOLID M42 BLANK • 8% COBALT • CENTER CUTTING

- Recommended for high production milling in difficult-to-machine materials such as inconel, hasteloy, titanium alloys and other materials up to RC 40
- The pressure of the cut is distributed over many teeth.
- Low co-efficient friction.

*Limited Supply

Size (In)	Shank Dia.	Flute Length	OAL	Flute	Item#
3/16	3/8"	1/2	2-3/8	4	5823-0187
1/4	3/8	5/8	2-7/16	4	5823-0250
1/4	3/8	1-1/4	3-1/16	4	5823-0251
5/16	3/8	3/4	2-1/2	4	5823-0312
3/8	3/8	3/4	2-1/2"	4	5823-0375
3/8	3/8	1-1/2	3-1/4	4	5823-0376
7/16	3/8	1	2-11/16	4	5823-0437
1/2	1/2	1-1/4	3-1/4	4	5823-0500
1/2	1/2	2	4	4	5823-0501
1/2	1/2	3	5	4	5823-0502
9/16	1/2	1-3/8	3-3/8	4	5823-0562
5/8	5/8	2-1/2	4-5/8	4	5823-0626

Size (In)	Shank Dia.	Flute Length	OAL	Flute	Item#
3/4	3/4	3/4	2/7/8	4	5823-0750
3/4	3/4	3	5-1/4	4	5823-0752
7/8	3/4	1-7/8	4-1/8	5	5823-0875
1	1	2	4-1/2	5	5823-1000
1	1	4	6-1/2	5	5823-1002
1-1/4	1-1/4	2	4-1/2	6	5823-1250
1-1/2	1-1/4	2	4-1/2	6	5823-1500
1-1/2	1-1/4	3	5-1/2	6	5823-1501*
2	1-1/4	2	4-1/2	8	5823-2000
2	1-1/4	4	6-1/2	8	5823-2001*
2	2	2	5-3/4	8	5823-2002*
2	2	4	7-3/4	8	5823-2003*

M42 COBALT ROUGHING END MILLS

- Their uniform cutting load per tooth assures minimum chatter deflection.
- Fast stock removal.
- Ideal for N/C machines.

- **GROUND FROM SOLID M42 BLANK**
- **8% COBALT**
- **CENTER CUTTING**

Size (In)	Shank Dia.	Flute Length	OAL	Flute	Uncoated Item#	Tin Coated Item#
1/4	3/8	5/8	2-7/16	3	8002-5708	8002-6708
1/4	3/8	5/8	2-7/16	4	8002-5710	----------
5/16	3/8	3/4	2-1/2	4	8002-5716	----------
3/8	3/8	3/4	2-1/2	4	8002-5721	8002-6721
3/8	3/8	1-1/2	3-1/4	4	8002-5727	----------
1/2	1/2	1-1/4	3-1/4	4	8002-5733	8002-6733
1/2	1/2	2	4	4	8002-5736	----------
5/8	5/8	1-5/8	3-3/4	4	8002-5748	8002-6748
3/4	3/4	1-5/8	3-3/4	4	8002-5766	----------
3/4	3/4	1-5/8	3-7/8	4	8002-5770	8002-6770
3/4	3/4	3	5-1/4	4	8002-5775	----------
1	3/4	1-1/2	3-3/8	5	8002-5794	----------
1	1	2	4-1/2	5	8002-5802	8002-6802
1	1	3	5-1/2	5	8002-5805	----------

HSS BALL NOSE END MILL SETS

- Single end.
- Full radius cutting edge.
- Designed for milling radius bottom slots, fillets and special contours.
- Wooden stand included.

8001-0009 Shown

DIMENSIONS
(Mill x Shank x Flute Length x OAL)

1/8 x 3/8 x 3/8 x 2-5/16"
3/16 x 3/8 x 1/2 x 2-3/8"
1/4 x 3/8 x 5/8 x 2-7/16"
5/16 x 3/8 x 3/4 x 2-1/2"
3/8 x 3/8 x 3/4 x 2-1/2"
7/16 x 1/2 x 1 x 3"
1/2 x 1/2 x 1 x 3"
5/8 x 1/2 x 1-1/8 x 3-1/8"
3/4 x 1/2 x 1-5/8 x 3-5/8"

CENTER CUT • HIGH SPEED STEEL

Item#	Set	Flute	Size Includes
8001-0006	6PC	2	1/8,3/16,1/4,5/16,3/8 & 1/2"
8001-0007	6PC	4	1/8,3/16,1/4,5/16,3/8 & 1/2"
8001-0009	9PC	2	1/8,3/16,1/4,5/16,3/8,7/16,/2,5/8 & 3/4"

2-FLUTE HSS BALL NOSE END MILLS

- Used for general-purpose maching of both ferrous and noferrous materials.

HIGH SPEED STEEL

Diameter (In) Mill	Shank	Flute (In) Length	OAL (In)	Item#
1/8	3/8	3/8	2-5/16	5841-0125
3/16	3/8	7/16	2-5/16	5841-0187
1/4	3/8	5/8	2-7/16	5841-0250
5/16	3/8	3/4	2-1/2	5841-0312
3/8	3/8	3/4	2-1/2	5841-0375
7/16	1/2	1	3	5841-0437*
1/2	1/2	1	3	5841-0500
9/16	1/2	1	3	5841-0562
5/8	5/8	1-3/8	3-3/8	5841-0625

*Limited Supply

2-FLUTE M42 COBALT BALL NOSE END MILLS

- M42 Cobalt (8%) is designed to cut difficult and abrasive materials, ranging from medium to high hardness. Roughing end mills are made of cobalt to withstand elevated temperatures and assure high-edge hardnessduring rapid stock removal. Choose cobalt end mills on hardwork materials or when there is a problem with wear or short tool lige.

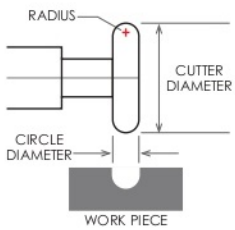
M42 (8%) COBALT

Diameter (In) Mill	Shank	Flute (In) Length	OAL (In)	M42 COBALT Item#
1/8	3/8	3/8	2-5/16	5842-0125
3/16	3/8	1/2	2-3/8	5842-0187
1/4	3/8	5/8	2-7/16	5842-0250
3/8	3/8	3/4	2-1/2	5842-0375
1/2	1/2	1	3	5842-0500
1	1	2-1/4	4-3/4	5842-1000*

*Limited Supply

CONVEX RADIUS HSS MILLING CUTTERS

- Precision ground
- Performance at lower cost
- Better finish possible in many materials with profile ground.
- Used for milling female half circle.



HIGH SPEED STEEL

Item#	No. of Teeth	Radius (Inch)	Cutter Dia(In)	Shank Dia(In)	OAL (Inch)
2006-0401	6	1/32	3/4	1/2	3
2006-0406	6	1/16	3/4	1/2	3
2006-0416	6	1/8	1-1/4	3/4	3-1/2

CONVEX MILLING CUTTERS

- Teeth are relieved and straight gashed.
- Cutting sufaces may be resharperened on face without changing contour.

HIGH SPEED STEEL

NEW

Use For Milling Female Half Circle

Item#	Circle Dia.	Cutter Dia.	Hole Size
2006-0421	1/8"	2-1/4"	1
2006-0424	3/16"	2-1/4"	1
2006-0427	1/4"	2-1/2"	1

60° ANGLE DOVETAIL CUTTERS & SET

5PC SET INCLUDES:
- Cutter Diameters: 3/8, 1/2, 3/4, 1-3/8 & 1-7/8"
- Supplied with wooden stand

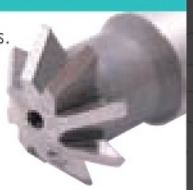
Individual

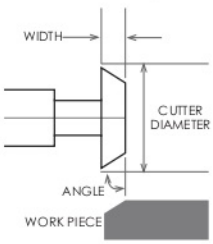
HIGH SPEED STEEL • RIGHT HAND CUT • 60° ANGLE

Item#	Cutter Dia. (Inch)	Shank Dia. (Inch)	Face OAL (Inch)	Length of Cut (Inch)
2006-0210	3/8	3/8	2-1/8	3/16
2006-0212	1/2	3/8	2-1/8	1/4
2006-0214	3/4	3/8	2-1/8	5/16
2006-0216	1-3/8	5/8	2-7/8	9/16
2006-0218	1-7/8	7/8	3-1/4	13/16
2006-0220	2-1/4	1	3-3/4	1-1/16

SINGLE ANGLE 45° HSS CHAMFERING CUTTERS

- Use for chamfering and other angular milling operations.
- Made from high speed steel.





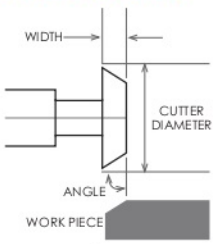
• HIGH SPEED STEEL
• RIGHT HAND CUT
• 45° CHAMFER ANGLE

Cutter Dia.	Cutter Width	Shank Dia.	Overall Length	Item#
1/2	1/8	3/8	2-1/8	2006-0381
3/4	3/16	3/8	2-1/8	2006-0383
1	5/16	1/2	2-1/2	2006-0385
1-1/2	1/2	3/4	2-3/4	2006-0387

SINGLE ANGLE 45° COBALT CHAMFERING CUTTERS

M42 (8%) COBALT • RIGHT HAND CUT • 45° CHAMFER ANGLE

- Use for chamfering and angle milling operations.

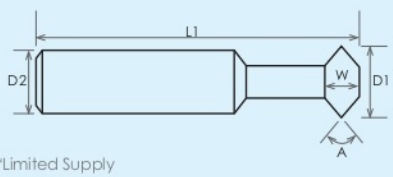


Cutter Dia.	Cutter Width	Shank Dia.	Overall Length	Item#
1/2	1/8	3/8	2-1/8	2006-0351
3/4	3/16	3/8	2-1/8	2006-0353
1	5/16	1/2	2-1/2	2006-0356
1-1/2	1/2	3/4	2-3/4	2006-0360

DOUBLE ANGLE COBALT SHANK CUTTERS

- Double angle cutters are available with either a 60° or 90° included angle for milling a double angle cut in one pass.

M42 (8%) COBALT



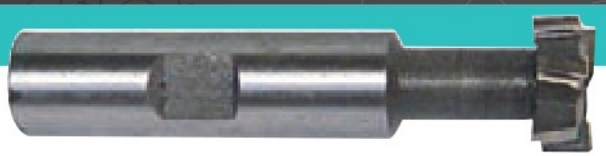
Cutter Angle A	Cutter Dia. D1	Shank Dia. D2	Cutter Width W	Overall Length L1	Item #
60°	3/4	3/8	3/16	2-3/8	2006-0301
	1	1/2	5/16	2-27/32	2006-0303
	1-1/2	5/8	1/2	3-3/8	2006-0306
	2-1/4	7/8	3/4	4-5/32	2006-0310
90°	3/4	3/8	1/4	2-7/16	2006-0331*
	1	1/2	3/8	2-29/32	2006-0333*
	1-1/2	5/8	9/16	3-7/16	2006-0336*
	2-1/4	7/8	3/4	4-5/32	2006-0340*

*Limited Supply

HSS T-SLOT CUTTERS

- High speed steel.
- Rugged design with free cutting features.
- Cutters have positive radial rake, right and left hand spiral with alternate side cutting teeth for maximum chip clearance.

HIGH SPEED STEEL



*Limited Supply

Bolt Size	Cutter Dia.	Cutter Width	Neck Dia.	Shank Dia.	Undercut Length	OAL	Tooth	Item#
1/4	9/16	15/64	17/64	1/2	35/64	2-19/32	8	2006-0161
5/16	21/32	17/64	21/64	1/2	39/64	2-11/16	8	2006-0163
3/8	25/32	21/64	13/32	3/4	3/4	3-1/4	8	2006-0165
1/2	31/32	25/64	17/32	3/4	3/4	3-7/16	8	2006-0167
5/8	1-1/4	31/64	21/32	1	1-9/64	3-15/16	10	2006-0169*
3/4	1-15/32	5/8	25/32	1	1-1/2	4-7/16	10	2006-0171*
1	1-27/32	53/64	1-1/32	1-1/4	1-43/64	4-13/16	10	2006-0173*
1-1/4	2-7/32	1-3/32	1-9/32	1-1/4	1-31/32	5-3/8	12	2006-0175*
1-1/2	2-21/32	1-11/32	1-17/32	1-1/4	2-1/8	5-29/32	12	2006-0177*

PLAIN METAL SLITTING SAWS

- For general-purpose slotting and cut-off operations. Sides concave for smooth cuts.
- With keyway (except 3").

HIGH SPEED STEEL

*Limited Supply

Dia. (Inch)	No. of Teeth	Face (Inch)	Hole (Inch)	Item #
3	30	1/64	1	**5071-4201**
3	30	1/32	1	**5071-4202**
3	30	3/64	1	**5071-4203**
3	30	1/16	1	**5071-4204**
3	30	3/32	1	**5071-4206**
3	30	1/8	1	**5071-4208**
3	30	5/32	1	**5071-4210**
4	36	1/32	1	**5071-4402**
4	36	1/16	1	**5071-4404**
4	36	3/32	1	**5071-4406**
4	36	1/8	1	**5071-4408**
4	36	5/32	1	**5071-4410***
5	40	1/16	1	**5071-4604**
5	40	3/32	1	**5071-4606***
5	40	1/16	1-1/4	**5071-4704***
5	40	3/32	1-1/4	**5071-4706***
5	40	1/8	1-1/4	**5071-4708***
5	40	5/32	1-1/4	**5071-4710***
5	40	3/16	1-1/4	**5071-4712***
6	42	3/32	1	**5071-4806***
6	42	1/8	1	**5071-4808***
6	42	5/32	1	**5071-4810***

5PC METAL SLITTING SAW KIT

- For general-purpose slotting and cut-off operations. Sides concave for smooth cuts.
- Mandrel: 1/8"

HIGH SPEED STEEL

KIT INCLUDES

Dia. (Inch)	Thickness (Inch)	Hole (Inch)
7/8	0.016	1/4
1	0.020	1/4
1-1/4	0.024	1/4
1-1/2	0.028	1/4
1-3/4	0.031	1/4

SLOTTING SAW ARBORS

- For saw blades upto 3/16" thick

3900-0144 Shown

3900-0145 Shown

Item#	Shank	OAL	For Saw Hole Size
3900-0144	R8	5-3/32"	1/2, 5/8, 3/4, 7/8 & 1"
3900-0145	1/2"	2-9/16"	1/2, 5/8, 3/4, 7/8 & 1"

14.5° & 20° PRESSURE ANGLE INVOLUTE GEAR CUTTERS

NEW

- Involute gear cutters make it possible to machine gears on your mill -either CNC mills or manual mills. The gear cutter is made into the involute profile, which transfers its shape to your gear blank, allowing it to run with other gears. The gear cutter needs to be matched to your gear specifications: diametral pitch or module, pressure angle, and even the number of teeth it will cut.
- The profile of all involute spur gears changes slightly as the tooth count changes, and so the profile of the gear cutter changes as well. Cutters are numbered from #1-#8 depending on how many teeth it will cut.
- For spur gears with 14.5° & 20°.
- Made from ghigh speed steel
- Ground from solid.
- Straight teeth on periphery of cutters.
- Bright finish.

2041-1012 Shown

2040-0825 Shown

HIGH SPEED STEEL

Cutter Number	Range of Teeth Cut
#1	135 to rack
#2	55-134
#3	35-54
#4	26-34
#5	21-25
#6	17-20
#7	14-16
#8	12-13

4.5° Pressure Angle

Pitch	Cutter Diameter	Arbor Hole	#1 Item#	#3 Item#	#4 Item#	#5 Item#	#6 Item#	#7 Item#	#8 Item#
10	2-3/4	1	**2041-1012**	**2041-1038**	----------	----------	**2041-1061**	----------	----------
12	2-5/8	1	**2041-1210**	----------	----------	----------	----------	**2041-1277**	**2041-1285**
16	2-1/2	1	----------	----------	----------	----------	----------	----------	**2041-1688**
20	2-3/8	1	----------	----------	----------	**2041-2051**	----------	----------	----------
48	1-3/4	7/8	----------	----------	**2041-4842**	----------	----------	**2041-4875**	**2041-4883**

20° Pressure Angle

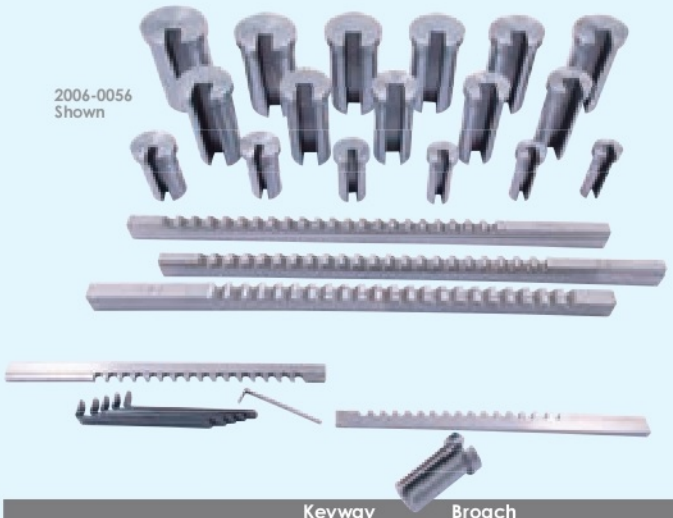
Pitch	Cutter Diameter	Arbor Hole	#2 Item#	#3 Item#	#4 Item#	#7 Item#	#8 Item#
8	2-7/8	1	**2040-0825**	----------	----------	----------	----------
10	2-3/4	1	----------	----------	**2040-1047**	----------	----------
12	2-5/8	1	**2040-1229**	----------	**2040-1045**	**2040-1278**	**2040-1286**
16	2-1/2	1	----------	**2040-1633**	----------	**2040-1674**	**2040-1682**
20	2-3/8	1	----------	**2040-2137**	----------	----------	----------

KEYWAY BROACHES & SETS

HSS KEYWAY BROACH SETS-HEAVY DUTY • HIGH SPEED STEEL

- Heavy duty.
- High speed steel.
- Provides great versatility.
- Specialty tools designed for cutting keyways in machined holes.
- Typically used manually with an arbor press or hydraulic press to produce the keyways.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Includes shims & wooden case.

2006-0054 Shown



2006-0056 Shown

2006-0051 Shown

Item#	Set	Keyway Size	Broach Style	Collared Bushing	Keyway Combination
2006-0051	9PC	1/16, 3/32, 1/8"	A	1/4, 5/16",3/8, 7/16",1/2"	15
2006-0054	17PC	1/8, 3/16"	B	1/2, 5/8, 3/4, 7/8",	18
		1/4, 3/8"	C	1, 1-1/8, 1-1/4,1-3/8, 1-1/2"	
2006-0056	30PC	1/8, 3/16"	B	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8,	47
		1/4, 5/16, 3/8"	C	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16"	

SHIMS - FOR KEYWAY BROACHES

A Style

C Style

Item#	Style-Size
2006-1552	A-1/8"
2006-1556	B-1/8"
2006-1558	B-5/32"
2006-1562	B-3/16"
2006-1566	C-3/16"
2006-1570	C-1/4 & 3/8"

Item#	Style-Size
2006-1574	C-5/16"
2006-1578	D-5/16"
2006-1582	D-3/8 & 1/2"
2006-1586	D-7/16"
2006-1590	E-5/8 & 3/4"
2006-1594	F-7/8 & 1"

KEYWAY BROACHES
HEAVY DUTY • HIGH SPEED STEEL

- Broach is tapered and ground with bright finishing.
- Shim included.
- One-pass keyway broaches require appropriate guide bushing.

Item#	Broach Size	Type	Broach Dimensions	Shims Required	Length of Cut(Min.)	Length of Cut(Max)	Tolerances
2006-1008	1/8"	A	1/8 x 5	1	13/64	1-1/8	.1252~.1262
2006-1018	1/8"	B	3/16 x 6-3/4	1	19/64	1-11/16	.1252~.1262
2006-1022	3/16	B	3/16 x 6-3/4	1	19/64	1-11/16	.1877~.1887
2006-1024	3/16	C	3/8 x 11-3/4	1	25/64	2-1/2	.1877~.1887
2006-1026	1/4	C	3/8 x 11-3/4	1	25/64	2-1/2	.2502~.2512
2006-1030	5/16	C	3/8 x 11-3/4	2	25/64	2-1/2	.3127~.3137
2006-1034	3/8	C	3/8 x 11-3/4	2	25/64	2-1/2	.3755~.3765
2006-1046	1/2	D	9/16 x 13-7/8	3	1	6	.5006~.5016
2006-1050	5/8	E	3/4 x 15-1/2	4	1	6	.6260~.6270

KEYWAY BUSHINGS

- Different size bushings enable the individual keyway broach to be used in a variety of sizes.

D,E STYLE: Plain
A,B,C STYLE: Collared

The letter designation signifies the body width of the keyway broach

STYLE "A", 1/8" SLOT-COLLARED

Bushing	Diameter	Item#
A	1/4	2006-1102
A	5/16	2006-1104
A	3/8	2006-1106
A	7/16	2006-1108
A	1/2	2006-1110

STYLE "B", 3/16" SLOT-COLLARED

Bushing	Diameter	Item#
B	1/2	2006-1202
B	9/16	2006-1204
B	5/8	2006-1206
B	11/16	2006-1208
B	3/4	2006-1210
B	13/16	2006-1212
B	7/8	2006-1214

STYLE "C", 3/8" SLOT-COLLARED

Bushing	Diameter	Item#
C	3/4	2006-1302
C	13/16	2006-1304
C	7/8	2006-1306
C	15/16	2006-1308
C	1	2006-1310
C	1-1/16	2006-1312
C	1-1/8	2006-1314
C	1-3/16	2006-1316
C	1-1/4	2006-1318
C	1-5/16	2006-1320
C	1-3/8	2006-1322
C	1-7/16	2006-1324
C	1-1/2	2006-1326
C	1-9/16	2006-1328

STYLE "D", 9/16" PLAIN TYPE

Bushing	Diameter	Item#
D	1-7/16	2006-1402
D	1-1/2	2006-1404
D	1-9/16	2006-1406
D	1-5/8	2006-1408
D	1-11/16	2006-1410
D	1-3/4	2006-1412
D	1-13/16	2006-1414
D	1-7/8	2006-1416
D	2	2006-1420
D	2-1/16	2006-1422
D	2-1/8	2006-1424
D	2-3/16	2006-1426
D	2-1/4	2006-1428
D	2-5/16	2006-1430
D	2-3/8	2006-1432
D	2-7/16	2006-1434
D	2-1/2	2006-1436
D	2-9/16	2006-1438
D	2-5/8	2006-1440
D	2-11/16	2006-1442
D	2-3/4	2006-1444
D	2-13/16	2006-1446
D	2-7/8	2006-1448
D	2-15/16	2006-1450
D	3	2006-1452

STYLE "E", 3/4" SLOT-PLAIN TYPE

Bushing	Diameter	Item#
E	2-5/16	2006-1502
E	2-3/8	2006-1504
E	2-7/16	2006-1506
E	2-1/2	2006-1508
E	2-9/16	2006-1510
E	2-5/8	2006-1512
E	2-11/16	2006-1514
E	2-3/4	2006-1516
E	2-13/16	2006-1518
E	2-7/8	2006-1520
E	2-15/16	2006-1522
E	3	2006-1524

SQUARE PUSH BROACHES
HEAVY DUTY • HIGH SPEED STEEL

- Broach is tapered and ground with bright finishing.
- Used for cutting square shaped hole in round pilot holes.
- Well suited for ferrous and non-ferrous materials.

Item#	Broach Size	Broach Length	Pilot Dia.	(Inch) Drill Size	LengthofCut Min.	LengthofCut Max.	Tolerance
2006-0114	1/4	6-1/2	17/64	17/64	1/4	3/4	.2505~.2515
2006-0122	3/8	9-3/8	25/64	25/64	3/8	1-1/4	.3755~.3765
2006-0124	7/16	10-7/8	29/64	9/64	1/2	1-3/8	.4385~.4395
2006-0126	1/2	12	17/32	17/32	1/2	1-3/8	.5005~.5015
2006-0138	3/4	17-3/4	13/16	13/16	5/8	1-5/8	.7510~.7520

1/2" SHANK 10PC WOODRUFF KEYSEAT CUTTER SET

NEW

- Straight tooth.
- Designed for using together with normal end mills for milling standard woodruff keyseat, slots.

HIGH SPEED STEEL

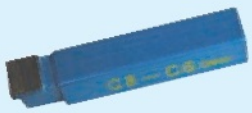
Dimensions

American Standard	Cutter Diameter	Face Width	Overall Legth
204	1/2	1/16	2-1/16
305	5/8	3/32	2-3/32
403	3/8	1/8	2-1/8
404	1/2	1/8	2-1/8
406	3/4	1/8	2-1/8
505	5/8	5/32	2-5/32
606	3/4	3/16	2-3/16
608	1	3/16	2-3/16
806	3/4	1/4	2-1/4
808	1	1/4	2-1/4

CARBIDE-TIPPED SINGLE-POINT BRAZED TOOL BITS

RIGHT HAND CUTS FROM RIGHT TO LEFT
LEFT HAND CUTS FROM LEFT TO RIGHT

GRADE C-2 for cast iron and non-ferrous materials
GRADE C-6 for steel and steel alloys.



Style C

(Inch) Size	OAL	Style C Tool Style	C-6 Item#
1/4	2	C-4	2008-1104
5/16	2-1/4	C-5	2008-1105
3/8	2-1/2	C-6	2008-1106
1/2	3-1/2	C-8	2008-1108

Style D

(Inch) Size	OAL	Style D Tool Style	C-6 Item#
1/4	2	D-4	2008-1204
3/8	2-1/2	D-6	2008-1206
1/2	3-1/2	D-8	2008-1208

Style A

Style E

(Inch) Size	OAL	Style E Tool Style	C-6 Item#
1/4	2	E-4	2008-1304
5/16	2-1/4	E-5	2008-1305
3/8	2-1/2	E-6	2008-1306
1/2	3-1/2	E-8	2008-1308
5/8	4	E-10	2008-1310

Style A (Inch) Size	OAL	Right Hand Tool Style	Right Hand C-2 Item#	Right Hand C-6 Item#	Left hand C-2 Item#	Left hand C-6 Item#
1/4	2	AR-4	2008-0014	2008-0004	2008-1014	2008-1004
5/16	2-1/4	AR-5	2008-0015	2008-0005	2008-1015	2008-1005
3/8	2-1/2	AR-6	2008-0016	2008-0006	2008-1016	2008-1006
1/2	3-1/2	AR-8	2008-0018	2008-0008	2008-1018	2008-1008
5/8	4	AR-10	2008-0020	2008-0010	2008-1020	2008-1010
3/4	4-1/2	AR-12	----------	2008-0012		

8PC HSS LATHE TURNING TOOL SETS

- Square shank sizes.
- Manufactured from HSS (M-2) material.
- Shanks are heat treated and ground.

Item #	Shank	Shank Length
2006-9022	1/4	2-1/2
2006-9024	5/16	3-1/8
2006-9026	3/8	4
2006-9028	1/2	4

Set Includes:

No.1 Left-Hand Turning Tool (80°),
No.2 Right-Hand Turning Tool(80°),
No.3 Straight Finishing Tool, No.4 Corner (45°) Tool,
No.5 Parting Tool, No.6 Boring Tool,
No.7 Threading (60°) Tool, No.8 Corner (60°) Tool.
Fitted Case.

TURNING TOOL HOLDERS-For Use With Rocker Style Turning Tool Holders

- Accurately machined and carefully heat-treated, these tool holders feature a relieved cutter bit hole to assure proper seating of tool bits, thereby reducing breakage. These holders are for use with high speed steel tool bits.

RIGHT HAND

Tool Bit NOT Included

Limited Supply!

Holder Size	Tool Bit Size	RH Offset Item#
3/8 x 7/8 x 5"	1/4"	2206-0375
1/2 x 1-1/8 x 6"	5/16"	2206-0500
5/8 x 1-3/8 x 7"	3/8"	2206-0625
3/4 x 1-5/8 x 8"	7/16"	2206-0750

SQUARE TOOL BITS - HSS & COBALT GROUND

- **M2 HIGH SPEED STEEL** A fine general purpose ground tool bits show exceptional result on mild steel, alloys and tool steels. This tool bit makes a superior finishing tool.
- **COBALT** Superior types of high speed steel which will work better where high heat is present. Used for heavy cuts in hard materials.

REGULAR LENGTH

Size (Inch) SQ x OAL	HSS Item#	M42 8% Cobalt Item#
1/8 x 2-1/2	2000-0001	2000-0041
3/16 x 2-1/2	2000-0002	2000-0042
1/4 x 2-1/2	2000-0003	2000-0043
5/16 x 2-1/2	2000-0004	2000-0044
3/8 x 3	2000-0005	2000-0045
7/16 x 3-1/2	2000-0006	2000-0046
1/2 x 4	2000-0007	2000-0047
5/8 x 4-1/2	2000-0008	2000-0048
3/4 x 5	2000-0009	2000-0049
1 x 7	2000-0011	2000-0051

EXTRA LONG

Size (Inch) SQ x OAL	HSS Item#	M35 5% Cobalt Item#
1/4 x 4	2000-0071	2000-0020
1/4 x 6	2000-0072	2000-0021
1/4 x 8	2000-0073	2000-0022
5/16 x 6	2000-0075	2000-0025
3/8 x 4	2000-0077	2000-0027
3/8 x 6	2000-0078	2000-0028
3/8 x 8	2000-0079	2000-0029
1/2 x 6	2000-0083	2000-0060

RECTANGULAR TOOL BITS - HSS

HIGH SPEED STEEL

Size (Inch)	Item#
1/4 x 3/8 x 3	2000-0203
1/4 x 1/2 x 4	2000-0220
1/4 x 3/4 x 5	2000-0235
3/8 x 3/4 x 5	2000-0248
3/8 x 1-1/4 x 6	2000-0252
1/2 x 3/4 x 5	2000-0257*

ROUND TOOL BITS - HSS

Size (Inch)	Item#
1/8x2-3/4	2000-0331
3/16x3-1/2	2000-0353
1/4x4	2000-0377

HIGH SPEED STEEL

Size (Inch)	Item#
3/8x5	2000-0385
1/2x6	2000-0389

FLY CUTTERS - Morse Taper & R8

- A fly cutter usually has two cutting heads and it is able to cut with a constant depth to face any surface to obtain a uniform surface.
- Utilizes standard tool bits.
- Counter balanced.
- Made of durable hardened steel.

Morse Taper
4006-0022 Shown

R8 4002-0018 Shown

INDIVIDUALS

Item#	Shank	Diameter of Head (In)	Fit Tool Bit (In)	Drawbar Thread
4006-0022	MT2	1.5	3/16	3/8~16
4006-0023	MT3	1.5	1/4	1/2~13
4002-0018	R8	2.5	5/16	-

3PC FLY CUTTER SETS - Straight Shank

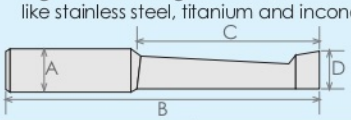
- Utilizes standard tool bits.
- Counter balanced.
- Made of durable hardened steel.
- Cuts flat and smooth surface with a single cut.

Item#	Set	Diameter Tool Bit Head (In)	Shank (In)	Fit (In)
4002-0001	3	3/4 1-1/8 1-1/2	1/2	3/16 1/4 5/16
4002-0002	3	1-1/2 2 2-1/2	3/4	5/16 5/16 5/16
4002-0003	3	1-1/2 2 2-1/2	3/4	3/8 3/8 1/2

BORING BARS & SETS

COBALT (M42) BORING BAR SETS

- One piece cobalt structure to give more boring accuracy and longer life.
- All purpose.
- All shanks are held 0.000~0.005" from the nominal size.
- **COBALT** used for boring in tough high tensile strength materials like stainless steel, titanium and inconel.

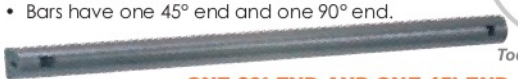


Item#	B (In) Length	C (In) Bore Depth	D (In) Min.bore
1001-0033 (8pc/set)	2	3/4	1/4
	2-3/8	1-1/8	1/4
	2-3/4	1-1/2	5/16
	2-3/16	15/16	3/8
	2-21/32	1-13/32	3/8
	3-1/8	1-7/8	3/8
	2-3/8	1-1/8	7/16
	3-15/16	1-11/16	7/16
1001-0035 (10pc/set)	2-1/8	5/8	5/16
	2-1/4	3/4	5/16
	2-5/8	1-1/8	5/16
	3	1-1/2	5/16
	2-5/8	1-1/8	7/16
	3-3/16	1-11/16	7/16
	3-3/4	2-1/4	7/16
	3	1-1/2	9/16
	3-3/4	2-1/4	9/16
	4-1/2	3	9/16

M42 8% COBALT
MADE OF SOLID COBALT

DOUBLE-END BORING BARS & SETS

- Machined from selected steel for greater strength and rigidity.
- Broached holes accept standard tool bits.
- Black oxide finish.
- Bars have one 45° end and one 90° end.



Tool Bits Not Included

INDIVIDUALS

ONE 90° END AND ONE 45° END

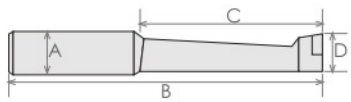
Item#	Bar Dia.	Bar OAL	Bit Size	Bit Type
1015-0250	1/4"	5	5/32	Round
1015-0312	5/16"	5	3/16	Round
1015-0375	3/8"	6	3/16	Round
1015-0500	1/2"	6	3/16	Square
1015-0502	1/2"	9	3/16	Square
1015-0561	9/16"	6-3/4	3/16	Square
1015-0562	9/16"	9	3/16	Square
1015-0564	9/16"	6-3/4	1/4	Square
1015-0625	5/8"	10	1/4	Square
1015-0748	3/4"	8	1/4	Square
1015-0750	3/4"	12	1/4	Square
1015-0938	15/16"	9	5/16	Square
1015-1000	1"	12	5/16	Square
1015-1001	1"	12	1/4	Square
1015-1002	1"	12	3/8	Square
1015-1004	1-1/8"	14	7/16	Square
1015-1250	1-1/4"	16	1/2	Square
1015-1500	1-1/2"	18	1/2	Square

SETS

Item#	No. of Pieces	Includes
1001-0007	4	1015-0250, 1015-0312, 1015-0375 & 1015-0500
1001-0008	5	1015-0250, 1015-0375, 1015-0500, 1015-0625 & 1015-0750
1001-0010	5	1015-0375, 1015-0500, 1015-0625, 1015-0750 & 1015-1000

CARBIDE-TIPPED BORING BAR SETS

- Quality tool designed to be used as a boring tool bit.
- All shanks are held to 0.000 - 0.0005" from the nominal size.
- Shanks are made of special heat treated alloy steel.
- Three lengths for each minimum bore size.



GRADE C-6
FOR ALL STEEL AND ALL PURPOSE

C-6 Item#	A Shank Dia. (In)	Set PC.	B (In) Length	C (In) Bore Depth	D (In) Min.bore
1001-0001	3/8	9	2	3/4	5/16
			2-3/8	1-1/8	5/16
			2-3/4	1-1/2	5/16
			2-3/16	15/16	3/8
			2-21/32	1-13/32	3/8
			3-1/8	1-7/8	3/8
			2-3/8	1-1/8	7/16
			3-15/16	1-11/16	7/16
			3-1/2	2-1/4	7/16
1001-0002	1/2	9	2-1/4	3/4	5/16
			2-5/8	1-1/8	5/16
			3	1-1/2	5/16
			2-5/8	1-1/8	7/16
			3-3/16	1-11/16	7/16
			3-3/4	2-1/4	7/16
			3	1-1/2	9/16
			3-3/4	2-1/4	9/16
			4-1/2	3	9/16
1001-0003	5/8	12	2-1/4	3/4	5/16
			2-5/8	1-1/8	5/16
			3	1-1/2	5/16
			2-5/8	1-1/8	7/16
			3-3/16	1-11/16	7/16
			3-3/4	2-1/4	7/16
			3	1-1/2	9/16
			3-3/4	2-1/4	9/16
			4-1/2	3	9/16
			3-3/8	1-7/8	11/16
			4-5/16	2-13/16	11/16
			5-1/4	3-3/4	11/16
1001-0004	3/4	12	3-1/8	1-1/8	7/16
			3-11/16	1-11/16	7/16
			4-1/4	2-1/4	7/16
			3-1/2	1-1/2	9/16
			4-1/4	2-1/4	9/16
			5	3	9/16
			3-7/8	1-7/8	11/16
			4-13/16	2-13/16	11/16
			5-3/4	3-3/4	11/16
			4-1/4	2-1/4	13/16
			5-3/8	3-3/8	13/16
			6-1/2	4-1/2	13/16
1001-0005	1	7	5	3	9/16
			5-3/4	3-3/4	11/16
			6-1/2	4-1/2	7/8
			6-1/2	4-1/2	1-1/16
			7-3/4	5-3/4	1-1/4
			8-1/4	6-1/2	1-1/2
			9-1/2	7-1/2	1-5/8

82° INDEXABLE COUNTERSINK & CHAMFER TOOLS

- Deburr and countersink large diameter holes.
- Positive rake for smooth cutting without chatter.
- Carbide indexable tool, so re-sharpening tool needed.
- 7° relief.

Item#	Max. Cutting Dia.	Min. Cutting Dia.	Shank Dia.	No. of Inserts	Insert Used	Screw	Torx Wrench
2001-0036	3/4"	1/4"	1/2"	1	TC_ _32.5_	M4x8	T15
2001-0038	1-3/4"	1/2"	1/2"	1	SC_ _43_	M5x10	T20
2001-0040	2-1/2"	1-1/4"	3/4"	1	SC_ _43_	M5x10	T20

INSERTS - Replacement

Item #	Size
6004-9031	TCMT32.51
6004-4432	SCMT432

SCREWS - Replacement

Item #	Size
2100-0069	M4x8
2100-0075	M5x10

TORX WRENCHES - Replacement

Item #	Size
2100-0095	T15
2100-0096	T20

3PC INDEXABLE COUNTERSINK & CHAMFERING TOOL SETS

- Use for deburring and countersinking large diameter holes.
- Positive rake for smooth cutting without chatter.
- Carbide indexable tool so no tool resharpening is needed.
- 7° relief.

Set Includes 1 of Each: 1/4x3/4x1/2" shank, 1/2x1-3/4x1/2" shank, 1-1/4x2-1/2x3/4" shank, C-6 inserts & wrenches (T15,T20)

Item#	Degree	Max. Cutting Dia.	Min. Cutting Dia.	Shank Dia.	No. of Inserts	Insert Used	Screw	Torx Wrench
2001-0010	60°	3/4"	1/4"	1/2"	1	TC_ _32.5_	M4x8	T15
2001-0011	82°	1-3/4"	1/2"	1/2"	1	SC_ _43_	M5x10	T20
2001-0012	90°	2-1/2"	1-1/4"	3/4"	1	SC_ _43_	M5x10	T20

INSERTS - Replacement

Item #	Size
6004-9031	TCMT32.51
6004-4432	SCMT432

SCREWS - Replacement

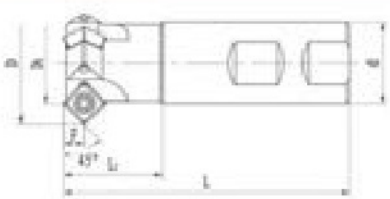
Item #	Size
2100-0069	M4x8
2100-0075	M5x10

TORX WRENCHES - Replacement

Item #	Size
2100-0095	T15
2100-0096	T20

45° INDEXIABLE CHAMFERING END MILLS
-Accepts SPMT Carbide Insert

- Straight shank.
- Inserts are not included.



Item#	Max. Cutting Dia.	Min. Cutting Dia.	Shank Dia.	OAL	No. of Inserts	Use Insert	Screw	Torx Wrench
2076-0001	1"	0.528"	3/4"	3-3/8"	2	SP_ _32.5_	M4x10	T15
2076-0003	1-1/8"	0.652"	3/4"	3-3/8"	2	SP_ _32.5_	M4x8	T15
2076-0006	1-1/4"	0.776"	3/4"	3-3/8"	2	SP_ _32.5_	M4x10	T15
2076-0010	1-1/2"	1.025"	1"	3-1/2"	3	SP_ _32.5_	M4x10	T15
2076-0013	1-3/4"	1.274"	1-1/4"	3-1/2"	3	SP_ _32.5_	M4x10	T15
2076-0016	2"	1.522"	1-1/2"	4"	4	SP_ _32.5_	M4x10	T15

INSERTS - Optional

Item #	Size
6018-3251	SPMT32.51
6018-3252	SPMT32.52

SCREWS - Replacement

Item #	Size
2100-0069	M4x8
2100-0074	M4x10

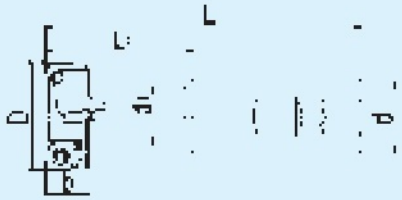
TORX WRENCH - Replacement

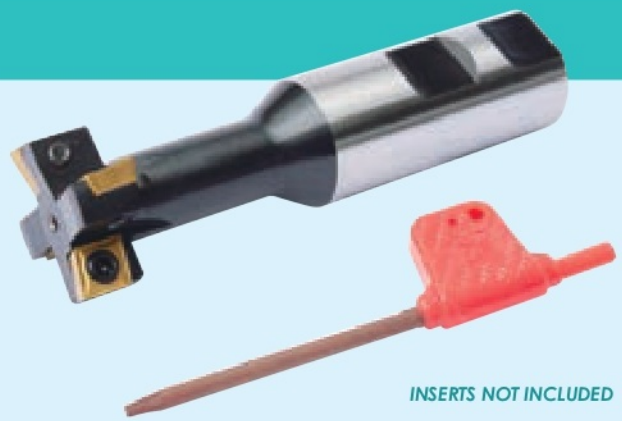
Item #	Size
2100-0095	T15

INDEXABLE CUTTERS

INDEXABLE T-SLOT CUTTERS
Accepts CCMT Carbide Inserts

- 7° relief.
- Setting rake 90°.
- For milling, "T" slotting, bottom shouldering & side slotting.
- Weldon shank.





INSERTS NOT INCLUDED

Item#	Cutting Dia. D	Cutter Thickness b	Shank Dia. d	OAL L	Neck Dia. d1	No. of Inserts	Insert Used	Screw	Torx Wrench
2077-0500	31/32"	25/64"	3/4"	3-3/4"	17/32"	4	CC_ _21.5_	M2.5x6	T8
2077-0502	5/8"	17/32"	1"	4-3/8"	41/64"	4	CC_ _32.5_	M4x8	T15
2077-0504	1-15/32"	5/8"	1"	4-3/4"	25/32"	4	CC_ _32.5_	M4x10	T15
2077-0506	1-27/32"	53/64"	1-1/4"	5-1/8"	1-1/32"	4	CC_ _43_	M5x12	T20

INSERTS - Optional

Item #	Size
6053-0111	CCMT21.51
6053-0112	CCMT21.51
6053-0221	CCMT32.51
6053-0222	CCMT32.52
6053-0432	CCMT432

SCREWS - Replacement

Item #	Size
2100-0070	M2.5x6
2100-0069	M4x8
2100-0074	M4x10
2100-0075	M5x10

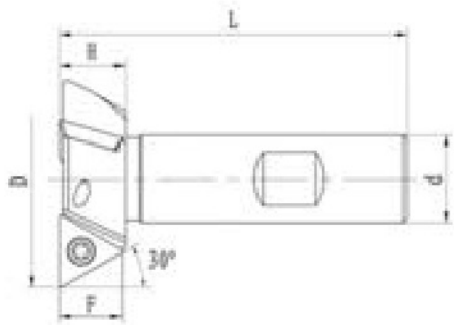
TORX WRENCHES - Replacement

Item #	Size
2100-0092	T8
2100-0095	T15
2100-0096	T20

60° INDEXIABLE DOVETAIL CUTTERS -Accepts TDEX Carbide Inserts

- Right hand cut.
- 60° angle, 15° clearance.
- For milling, roughing & finishing at high speeds & feeds.
- Inserts are not included.

INSERTS NOT INCLUDED



Item#	Cutting Dia. D	Shank Dia. d	OAL L	Cutting Depth F	Height H	No. of Insert	Insert Used	Screw	Torx Wrench
2075-0500	1/2"	3/8"	2.390"	0.32"	0.375"	1	TDEX21.5	M2.5x5	T8
2075-0502	3/4"	3/8"	2.390"	0.32"	0.375"	2	TDEX21.5	M2.5x6	T8
2075-0504	1"	1/2"	2.375"	0.32"	0.375"	3	TDEX21.5	M2.5x6	T8
2075-0506	1-3/8"	5/8"	2.862"	0.51"	0.550"	3	TDEX32	M4x10	T15
2075-0508	1-7/8"	3/4"	3"	0.51"	0.550"	3	TDEX32	M4x10	T15
2075-0510	2-1/4"	1"	3.5"	0.70"	0.750"	3	TDEX43	M5x11	T20
2075-0512	2-1/2"	1"	3.5"	0.70"	0.750"	3	TDEX43	M5x11	T20

INSERTS - Optional

Item #	Size
6062-0215	TDEX21.5
6062-0320	TDEX32
6062-0430	TDEX43

SCREWS - Replacement

Item #	Size
2100-0067	M2.5x5
2100-0070	M2.5x6
2100-0074	M4x10
2100-0079	M5x11

TORX WRENCHES - Replacement

Item #	Size
2100-0092	T8
2100-0095	T15
2100-0096	T20

MINI INDEXABLE END MILLS & SET

- Made of high grade tool steel hardened.
- Carbide triangle inserts included TPG222.

Item#	Cutting Dia.	Shank Dia.	Body Length	OAL	No. of Insert	Inserts	Locking Screw
5820-0500	1/2"	1/2"	1"	3"	1	TP_ 22_	PM5x5
5820-0562	9/16"	1/2"	1"	3"	1	TP_ 22_	PM5x5
5820-0625	5/8"	1/2"	1"	3"	1	TP_ 22_	PM5x5

TPG carbide inserts shown below.

SCREW - Replacement

Item #	Size
2100-0105	PM5x5

90° SQUARE SHOULDER INDEXABLE END MILLS -Straight Shank

- For use in heavy duty milling application.
- Higher metal removal rates.
- Cutting rake angle 0°.
- Axial rake angle 0°.
- Setting angle 90°.
- Positive rake 90°.
- Right hand cut.
- Unique clamping mechanism. One clamp fits all sizes.
- **Inserts included.**

STRAIGHT SHANK

Item#	Cutting Dia. D	Shank Dia. d	OAL L	No. of Inserts	Inserts Used	Screw	Torx Wrench
5820-0750	3/4"	3/4"	3-1/4"	2	TP_ _22_	PM5x8	S3
5820-1000	1"	3/4"	3-1/4"	2	TP_ _22_	PM5x8	S3
5820-1250	1-1/4"	3/4"	3-3/8"	2	TP_ _32_	PM6x12	S4
5820-1500	1-1/2"	3/4"	3-1/2"	3	TP_ _32_	PM6x12	S4
5820-1750	1-3/4"	3/4"	3-1/2"	3	TP_ _32_	PM6x12	S4
5820-2000	2"	3/4"	3-3/4"	3	TP_ _43_	PM8x16	S5
5820-4000	2"	1"	4"	3	TP_ _43_	PM8x12	S5

TPG carbide inserts shown below.

SCREWS - Replacement

Item #	Size
2100-0105	PM5x8
2100-0106	PM6x12
2100-0108	PM8x12

R8 INDEXABLE END MILLS & SET

- For use in heavy duty milling application.
- Higher metal removal rates.
- Unique clamping mechanism. One clamp fits all sizes.
- **Inserts included.**

R8 SHANK

TPG carbide inserts shown below.

Individuals

Item#	Cutting Dia.	Shank Dia.	OAL	No. of Inserts	Insert Used	Locking Screw	Torx Wrench
1006-0005	1"	R8	5-9/16"	2	TP_ _22_	PM5x8	S3
1006-0006	1-1/4"	R8	5-9/16"	2	TP_ _32_	PM6x12	S4
1006-0011	1-1/2"	R8	5-9/16"	3	TP_ _32_	PM6x12	S4
1006-0012	2"	R8	6"	3	TP_ _32_	PM6x12	S4

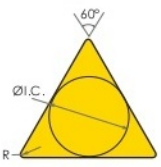
SCREWS - Replacement

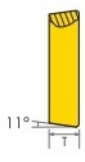
Item #	Size
2100-0105	PM5x8
2100-0106	PM6x12

TPG - POSITIVE RAKE CARBIDE INSERTS TPG

GRADE C-2 FOR CAST IRON AND GENERAL PURPOSE
GRADE C-6 FOR ALL STEEL AND GENERAL PURPOSE

- Single sided without chipbreaker.
- Suitable for difficult to cut materials.
- 11° relief angle.





Insert No.	I.C.	(Inch) T	R	Uncoated C-2 Item#	Uncoated C-6 Item#	TiN Coated (C-6) Item#
TPG-21.51	1/4	.094	1/64	--------	--------	6020-1121
TPG-221	1/4	1/8	1/64	6020-2221	6020-0221	6020-1221
TPG-222	1/4	1/8	1/32	6020-2222	6020-0222	6020-1222
TPG-223	1/4	1/8	3/64	6020-2223	6020-0223	6020-1223
TPG-32.51	3/8	5/32	1/64	--------	--------	6020-1122*
TPG-321	3/8	1/8	1/64	6020-2321	6020-0321	6020-1321
TPG-322	3/8	1/8	1/32	6020-2322	6020-0322	6020-1322
TPG-323	3/8	1/8	3/64	6020-2323	6020-0323	6020-1323
TPG-324	3/8	1/8	1/16	6020-2324	6020-0324	6020-1324
TPG-431	1/2	3/16	1/64	6020-2431	6020-0431*	6020-1431*
TPG-432	1/2	3/16	1/32	6020-2432	6020-0432*	6020-1432*
TPG-433	1/2	3/16	3/64	--------	6020-0433*	6020-1433*
TPG-434	1/2	3/16	1/16	6020-2434*	6020-0434*	6020-1434*

10 PC PER PACKAGE

*Limited Supply

INDEXABLE END MILLS

SQUARE SHOULDER INDEXABLE END MILLS - Accepts APKT(10mm) Carbide Insert

- 90° square shoulder milling
- Used for slotting and peripheral milling
- Uses standard APKT-1003 inserts (not included)
- Excellent alternative to HSS, cobalt and carbide end mills for heavy material removal rates

INSERTS NOT INCLUDED

SQUARE SHOULDER

Item#	Cutter Dia.	Shank Dia.	(Inch) OAL	No of Inserts	Use Insert	Screw	Torx Wrench
5822-0375	3/8	1/2	3"	1	APKT1003	M2.5x6	T8
5822-0500	1/2	5/8	3-1/4"	1	APKT1003	M2.5x6	T8
5822-0625	5/8	5/8	3-1/4"	2	APKT1003	M2.5x6	T8
5822-0750	3/4	3/4	3-1/4"	3	APKT1003	M2.5x6	T8
5822-1000	1	1	3-3/2"	4	APKT1003	M2.5x6	T8
5822-1250	1-1/4	1-1/4	3-3/4"	5	APKT1003	M2.5x6	T8
5822-1500	1-1/2	1-1/2	4-1/4"	6	APKT1003	M2.5x6	T8

INSERT - Optional

Item #	Size
6010-4203	APKT1003

SCREWS - Replacement

Item #	Size
2100-0070	M2.5x6

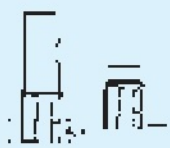
TORX WRENCH - Replacement

Item #	Size
2100-0092	T8

3PC SQUARE SHOULDER INDEXABLE END MILL SET

- 90° square shoulder milling
- Used for slotting and peripheral milling
- Excellent alternative to HSS, cobalt and carbide end mills for heavy material removal rates
- Used standard APKT-1003 inserts (not included) with M2.5x6mm screw.

SQUARE SHOULDER



INSERTS NOT INCLUDED

Cutting Dia.	Shank Dia.	OAL L	No. of Inserts	Insert Used	Screw	Torx Wrench
3/8"	1/2"	3"	1	APKT1003	M2.5x5mm	T8
1/2"	1/2"	3"	1	APKT1003	M2.5x5mm	T8
5/8"	1/2"	3"	2	APKT1003	M2.5x6mm	T8

INSERT - Optional

Item #	Size
6010-4203	APKT1003

TORX WRENCH - Replacement

Item #	Size
2100-0092	T8

SCREWS - Replacement

Item #	Size
2100-0067	M2.5x5
2100-0070	M2.5x6

SQUARE SHOULDER COOLANT-THRU INDEXABLE END MILLS - Accepts APKT(10mm) Carbide Insert

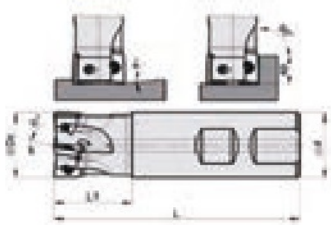
- Coolant thru.
- 90° square shoulder milling
- Used for slotting and peripheral milling
- Excellent alternative to HSS, cobalt and carbide end mills for heavy material removal rates
- Uses standard APKT-1003 inserts (not included).

5822-1700 Shown

INSERTS NOT INCLUDED

SQUARE SHOULDER

Item#	Cutting Dia. D	Shank Dia. d	OAL L	No. of Inserts	Use Insert	Screw	Torx Wrench
5822-1601	3/8"	1/2"	3"	1	APKT1003	M2.5x6	T8
5822-1603	1/2"	1/2"	3-1/4"	1	APKT1003	M2.5x6	T8
5822-1605	5/8"	1/2'	3-1/4"	2	APKT1003	M2.5x6	T8
5822-1606	3/4"	3/4"	3-1/2"	3	APKT1003	M2.5x6	T8
5822-1608	1"	3/4"	3-1/2"	4	APKT1003	M2.5x6	T8
5822-1700	1-1/4"	3/4"	3-3/4"	5	APKT1003	M2.5x6	T8



INSERT - Optional

Item #	Size
6010-4203	APKT1003

SCREW - Replacement

Item #	Size
2100-0070	M2.5x6

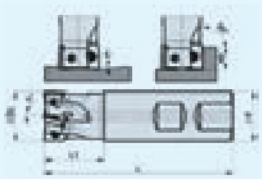
TORX WRENCH - Replacement

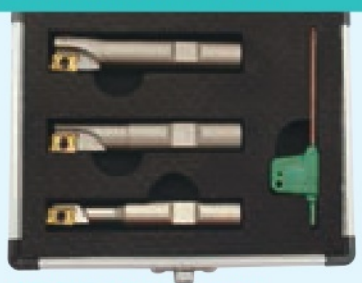
Item #	Size
2100-0092	T8

3PC SQUARE SHOULDER COOLANT-THRU INDEXABLE END MILL SET - Accepts APKT(10mm) Carbide Inserts

- Coolant thru.
- 90° square shoulder milling
- Used for slotting and peripheral milling
- Excellent alternative to HSS, cobalt and carbide end mills for heavy material removal rates
- Uses standard APKT-1003 inserts (not included) with M2.5x6mm screw.

SQUARE SHOULDER





INSERTS NOT INCLUDED

Cutting Dia. D	Shank Dia. d	OAL L	No. of Inserts	Insert Used	Screw	Torx Wrench
3/8"	1/2"	3"	1	APKT1003	M2.5x5mm	T8
1/2"	1/2"	3"	1	APKT1003	M2.5x5mm	T8
5/8"	1/2"	3"	2	APKT1003	M2.5x6mm	T8

INSERT - Optional

Item #	Size
6010-4203	APKT1003

TORX WRENCH - Replacement

Item #	Size
2100-0092	T8

SCREWS - Replacement

Item #	Size
2100-0057	M2.5x5
2100-0070	M2.5x6

Helical COOLANT THRU INDEXIABLE FACE MILLS - Accepts APKT (16mm) Carbide Inserts

- This 90° major cutting edge angle square shoulder milling cutter with helical have longer tool life and less cutting resistance.
- Insert(16mm) is NOT included.

INSERTS NOT INCLUDED

Item#	Cutting Dia. D	Arbor Hole d	Height H	No. of Flutes	No. of Inserts	Insert Used	Screw	Torx Wrench
2066-7000	2"	1"	2-3/8"	3	6	APKT1604	M4x10	T15
2066-7500	2-1/2"	1-1/4"	2-3/8"	4	8	APKT1604	M4x10	T15
2066-8000	3"	1-1/4"	2-3/8"	5	15	APKT1604	M4x10	T15

INSERT - Optional

Item #	Size
6010-4003	APKT1604

SCREW - Replacement

Item #	Size
2100-0074	M4x10

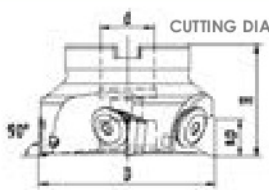
TORX WRENCH - Replacement

Item #	Size
2100-0095	T15

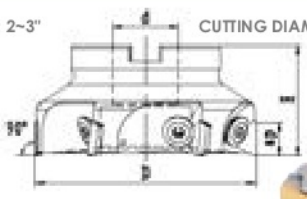
90° SQUARE SHOULDER INDEXABLE FACE MILLS - Clamp Style, Accepts TPG Carbide Inserts

- Setting angle 90°.
- Nickel coating.
- 11° positive triangular inserts allowing high depth of cut and feed per tooth.
- Radial rake angle +1°
- Axial rake +7° .
- The clamping system (screw) makes quick and easy insert mounting (indexing) and removal.

CUTTING DIAMETER: 2~3"



CUTTING DIAMETER: >3"



INSERTS NOT INCLUDED

SQUARE SHOULDER

Item#	Cutting Dia. D	Arbor Hole d	Height H	No. of Flutes	No. of Inserts	Shim	Shim Screw	Insert Screw	Hex Key Wrench
2061-3003	3"	1"	1.97"	5	TP_ _32_	TP16D	M3x6.5-D5	SM815.18	S2, S4
2061-4004	4"	1-1/2"	1.97"	5	TP_ _43_	TP22D	M3x6.5-D5	SM1018.22	S2, S4
2061-5005	5"	1-1/2"	2.48"	6	TP_ _43_	TP22D	M3x6.5-D5	SM1018.22	S2, S5

SHIM SCREWS - Replacement

Item #	Size
2100-0089	M3x6.5-D5

SCREWS - Replacement

Item #	Size
2100-0051	SM815.18
2100-0052	SM1018.22

HEX KEY WRENCHES - Replacement

Item #	Size
2100-1087	S2
2100-1089	S4
2100-1090	S5

SHIMS - Replacement

Item #	Size
2100-1100	TP16D
2100-1101	TP22D

See page 189 for carbide inserts

R8 SHELL END MILL HOLDERS

- Hardened and ground.

for *Bridgeport*® type mills

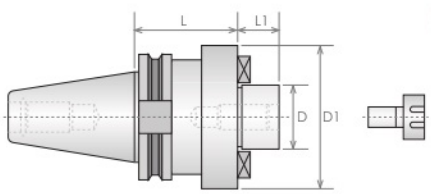
DRAWBAR END THREAD: 7/16" -20

INDIVIDUALS

Item#	d	W (mm)	L (mm)	Dia. Range of Std. End Mill
3900-1711	1/2"	6.35	150	1-1/4 to 1-1/2"
3900-1712	3/4"	7.94	154	1-1/4 to 2-1/2"
3900-1713	1"	9.53	155	2-1/4 to 2-3/4"
3900-1714	1-1/4"	12.70	156	3 to 3-1/2"
3900-1715	1-1/2"	15.88	163	4 to 5"

CAT 40 "V" FLANGE SHELL END MILL HOLDERS

- CAT 40 Shell End Mill Holder.
- For CNC machines having CAT 40 taper spindles.
- Hardened and precision ground.

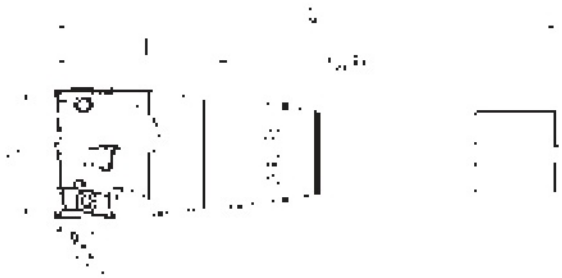


RETENTION KNOB THREAD: 5/8" -11

Item#	Dia. for Bore in Shell End Mill D	D1	Gage Length L	L1	Bore Thread
3900-4255	3/4"	1.5"	1.50"	0.69"	3/8"~24
3900-4257	1"	2.0"	2.00"	0.69"	1/2"~20
3900-4259	1-1/4"	2.5"	2.19"	0.69"	5/8~18
3900-4261	1-1/2"	3.0"	2.19"	0.94"	3/4"~-16

90° SQUARE SHOULDER R8 SHANK INDEXABLE END MILLS-Accepts APKT(16mm) Carbide Insert

- R8 shank.
- 90° cutting angle.
- Screwdown insert
- Used for slotting and peripheral milling.
- **Insert is NOT included.**



SQUARE SHOULDER

INSERTS NOT INCLUDED

Item#	Cutting Dia. D	Shank Dia. d	OAL L	No. of Inserts	Use Insert	Screw	Torx Wr.
5822-3000	1"	R8	5-27/32"	2	APKT1604	M4x8	T15
5822-3250	1-1/4"	R8	5-27/32"	3	APKT1604	M4x8	T15
5822-3500	1-1/2"	R8	6-1/8"	4	APKT1604	M4x10	T15
5822-4000	2"	R8	6-1/8"	5	APKT1604	M4x10	T15
5822-4500	2-1/2"	R8	6-1/8"	6	APKT1604	M4x10	T15
5822-5000	3"	R8	6-1/4"	6	APKT1604	M4x10	T15

INSERT - Optional

Item #	Size
6010-4003	APKT1604

SCREWS - Replacement

Item #	Size
2100-0069	M4x8
2100-0074	M4x10

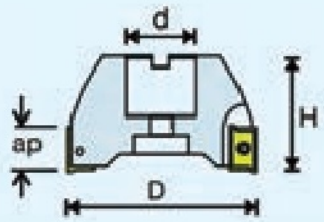
TORX WRENCH - Replacement

Item #	Size
2100-0095	T15

90° SQUARE SHOULDER INDEXABLE FACE MILLS - Accepts APKT Carbide Inserts

- This 90° major cutting edge angle square shoulder milling cutter is fitted with strong 11° positive rectangular inserts allowing high depth of cut and feed per tooth.
- Inserts not included

INSERTS NOT INCLUDED



Item#	Cutting Dia. D	Arbor Hole d	Height H	No. of Inserts	Insert Used	Screw	Torx Wrench
2063-2000	2"	3/4"	1.75"	5	APKT1003	M2.5x6	T8
2063-2500	2-1/2"	3/4"	2.00"	6	APKT1003	M2.5x6	T8
2063-3000	3"	1"	2.00"	7	APKT1003	M2.5x6	T8
2063-4000	4"	1-1/2"	2.00"	8	APKT1003	M2.5x6	T8
2063-5000	5"	1-1/2"	2.00"	8	APKT1003	M2.5x6	T8
2066-2000	2"	3/4"	1.75"	5	APKT1604	M4x10	T15
2066-2500	2-1/2"	3/4"	2.00"	6	APKT1604	M4x10	T15
2066-3000	3"	1"	2.00	7	APKT1604	M4x10	T15
2066-4000	4"	1-1/2"	2.00	8	APKT1604	M4x10	T15
2066-5000	5"	1-1/2"	2.00	8	APKT1604	M4x10	T15

INSERTS - Optional

Item #	Size
6010-4203	APKT1003
6010-4003	APKT1604

SCREWS - Replacement

Item #	Size
2100-0070	M2.5x6
2100-0074	M4x10

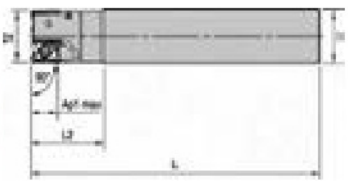
TORX WRENCHES - Replacement

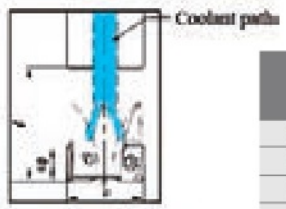
Item #	Size
2100-0092	T8
2100-0095	T15

90° SQUARE SHOULDER INDEXABLE END MILLS- Coolant -Thru
- Accepts ANGX Carbide Inserts

- ANGX double-sided insert provides 4-cutting edges, has a bigger depth of cut(ap) value and economy.
- ANGX inserts with high precision cutting edge are more agressive, have more cutting edges than APKT and are disigned to improve shoulder milling surface finish.
- Double negative rake angle of the cutter body in combination with extra thick insert achieves double positive tool angle, reduces cutting resistance and improves impact resistance.
- Coolant-thru allows the cutting edge to cool and revoves chips.
- This 90° major cutting edge angle square shoulder milling cutter is fitted with strong 11° positive rectangular inserts allowing high depth of cut and feed per tooth.
- **Insert is NOT included**

INSERTS NOT INCLUDED





Coolant end mill shown

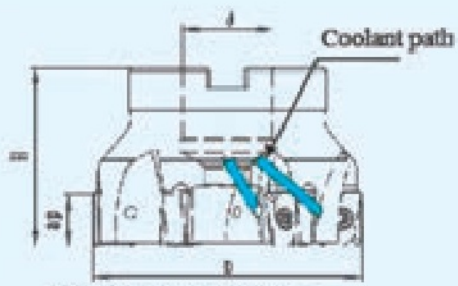
Item#	Cutting Diameter D1	Shank Size D	Head Length L2	OAL L	No. of Inserts	Ap1	Use Insert	Screw	Torx Wrench
5822-7750	3/4"	3/4"	1-1/4"	4"	1	0.441"	ANGX110508	M3x8	T10
5822-8000	1"	1"	1-1/2"	4.5"	2	0.441"	ANGX110508	M3x8	T10
5822-8250	1-1/4"	1-1/4"	1-21/32"	5"	3	0.441"	ANGX110508	M3x8	T10
5822-8500	1-1/2"	1-1/2"	1-21/32"	5"	4	0.441"	ANGX110508	M3x8	T10

Carbide inserts shown on page 171. Screws are shown on page 165.

90° SQUARE SHOULDER INDEXABLE FACE MILLS - Coolant -Thru
- Accepts ANGX Carbide Inserts

- ANGX double-sided insert provides 4-cutting edges, has a bigger depth of cut(ap) value and economy.
- ANGX inserts with high precision cutting edge and are more agressive, have more cutting edges than APKT and are disigned to improve shoulder milling surface finish.
- Double negative rake angle of the cutter body in combination with extra thick insert achieves double positive tool angle, reduces cutting resistance and improves impact resistance.
- Coolant-thru allows the cutting edge to cool and removes chips.
- This 90° major cutting edge angle square shoulder milling cutter is fitted with strong 11° positive rectangular inserts allowing high depth of cut and feed per tooth.
- **Insert is NOT included.**

INSERTS NOT INCLUDED



Coolant face mill shown

Item#	Cutting Diameter D	Arbor Size d	Height H	ap	Teeth	Uses Insert	Screw	Torx Wrench
2069-2000	2"	3/4"	1-3/4"	0.571"	4	ANGX150608PNR-GM	M4x11	T15
2069-3000	3"	1"	2"	0.571"	6	ANGX150608PNR-GM	M4x11	T15
2069-4000	4"	1-1/2"	2-1/2"	0.571"	8	ANGX150608PNR-GM	M4x11	T15
2069-5000	5"	1-1/2"	2-1/2"	0.571"	10	ANGX150608PNR-GM	M4x11	T15

Carbide inserts are shown on page 171. Screws are shown on page 165.

INDEXABLE FACE MILLS

45° INDEXABLE FACE MILLS
- Accepts SCMT Carbide Inserts

- This positive cutter, 45° major cutting edge angle, is fitted with strong 7° positive square inserts.

INSERTS NOT INCLUDED

Item#	Cutting Dia.	Arbor Hole	Height	No. of Inserts	Use Insert	Screw	Torx Wrench
2062-2000	2"	3/4"	1.57"	4	SC_ _432	M5x10	T20
2062-3000	3"	1"	1.97"	6	SC_ _432	M5x10	T20
2062-3500	3-1/2"	1"	1.97"	6	SC_ _432	M5x10	T20
2062-4000	4"	1-1/2"	1.97"	6	SC_ _432	M5x10	T20

INSERT - Optional

Item #	Size
6056-0432	SCMT432

SCREW - Replacement

Item #	Size
2100-0075	M5x10

TORX WRENCH - Replacement

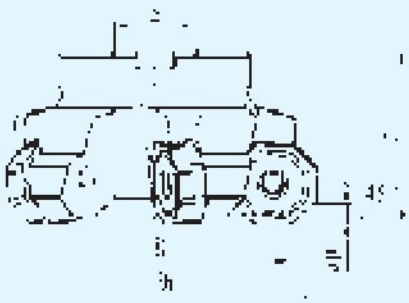
Item #	Size
2100-0096	T20

45° INDEXIABLE FACE MILLS
- Accepts OCTAGON Carbide Inserts

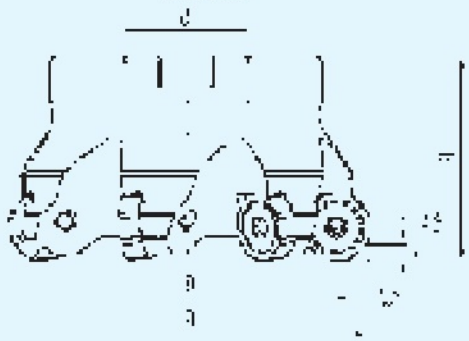
- Octagonal double side insert with 16 cutting edges is the most economical insert on the market for face machining application.
- Negative radial rake angle and axial rake angle structure combined with thick ONHU insert body improves cutter overall resistance to impact and toughness.
- Insert is NOT included.

INSERTS NOT INCLUDED

2068-2500
2068-3000 Shown



2068-4000
2068-4001 Shown
2068-5000



Item#	Cutting Dia. D	Arbor Hole d	Height H	No. of Inserts	Use Insert	Screw	Torx Wrench
2068-2500	2-1/2"	3/4"	1-3/4"	5	ONHU08	M5x14	T20
2068-3000	3"	1"	2"	6	ONHU08	M5x14	T20
2068-4000	4"	1-1/4"	2-1/2"	7	ONHU08	M5x14	T20
2068-4001	4"	1-1/2"	2-1/2"	7	ONHU08	M5x14	T20
2068-5000	5"	1-1/2"	2-1/2"	8	ONHU08	M5x14	T20

INSERT - Optional

Item #	Size
6063-0008	ONHU08

SCREW - Replacement

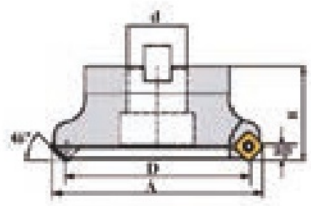
Item #	Size
2100-0077	M5x14

TORX WRENCH - Replacement

Item #	Size
2100-0096	T20

45° INDEXABLE FACE MILLS - Accepts SQUARE Carbide Inserts

- The close pitch, super positive, 45° major cutting edge angle milling cutter reduces cutting forces and permits high cutting speeds with limited power machines.



INSERTS INCLUDED

Item#	Cutting Diameter D	Arbor Hole d	Height H	No. of Inserts	Insert Used	Screw	Torx Wrench
2065-2000	2"	3/4"	1.57"	4	SE_ _43_ AFTN	M5x10	T20
2065-2500	2-1/2"	3/4"	1.57"	5	SE_ _43_ AFTN	M5x10	T20
2065-3000	3"	1"	1.97"	6	SE_ _43_ AFTN	M5x10	T20
2065-4000	4"	1-1/2"	1.97"	6	SE_ _43_ AFTN	M5x11	T20

INSERT - Optional

Item #	Size
6017-0432	SEHT-432

SCREWS - Replacement

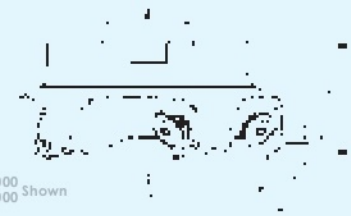
Item #	Size
2100-0075	M5x10
2100-0079	M5x11

TORX WRENCH - Replacement

Item #	Size
2100-0096	T20

45° INDEXIABLE FACE MILLS - Accepts SE Carbide Insert

- 45° lead angle allows an increase of feed rate by 50% over 90 degree face mill and also allows this face mill to used on smaller horse power mills. It accepts industry standard SEAN / SEKN / SEKR 42 insert which has a positive 20° clearance angle.
- The insert pockets are designed to be 19° positive inclined to minimize vibration and allowing fast cutting and lowering cutting noise.
- Insert is NOT included.



2067-4000
2067-5000 Shown

2067-2000
2067-2500 Shown
2067-3000

INSERTS NOT INCLUDED

Item#	Cutting Dia. D	Arbor Hole d	Height H	No. of Inserts	Insert Used	Insert Screw	Shim	Shim Screw	Insert Hex Key	Shim Torx Wrench
2067-2000	2"	3/4"	1-57/64"	3	SE_ _42AFTN	SM815.18L	SE1203X	I86M4x7	S4	T15
2067-2500*	2-1/2"	3/4"	1-57/64"	4	SE_ _42AFTN	SM815.18L	SE1203X	I86M4x7	S4	T15
2067-3000	3"	1"	1-31/32"	5	SE_ _42AFTN	SM815.18L	SE1203X	I86M4x7	S4	T15
2067-4000*	4"	1-1/4"	1-31/32"	5	SE_ _42AFTN	SM815.18L	SE1203X	I86M4x9	S4	T15
2067-5000	5"	1-1/2"	2-31/64"	6	SE_ _42AFTN	SM815.18L	SE1203X	I86M4x9	S4	T15

*Limited Supply

INSERTS - Optional

Item #	Size
6016-1123	SEET/DM42
6016-0123	SEET/DR43

SCREWS - Replacement

Item #	Size
2100-0069	I86M4x7
2100-0071	I86M4x9

TORX WRENCH - Replacement

Item #	Size
2100-0095	T15

INSERT SCREW - Replacement

Item #	Size
2100-0051	SM815.18L

SCREW - Replacement

Item #	Size
2100-4200	SE1203X

INSERT HEX KEY - Replacement

Item #	Size
2100-1089	S4

THREADING INSERTS

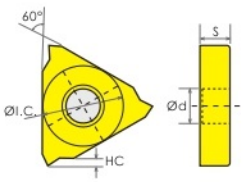
INTERNAL THREADING & GROOVING CARBIDE INSERTS-Metric Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-1006*	RT16.01N-1.25GM	3/8"	1.25	5/32"	0.173"	XAF799
6006-1007	RT16.01N-1.50GM	3/8"	1.50	5/32"	0.173"	XAF799
6006-1008	RT16.01N-1.75GM	3/8"	1.75	5/32"	0.173"	XAF799
6006-1009	RT16.01N-2.00GM	3/8"	2.00	5/32"	0.173"	XAF799
6006-1010	RT16.01N-2.50GM	3/8"	2.50	5/32"	0.173"	XAF799
6006-1011	RT16.01N-3.00GM	3/8"	3.00	5/32"	0.173"	XAF799

*Limited Supply

RIGHT HAND

10 PC PER PACKAGE



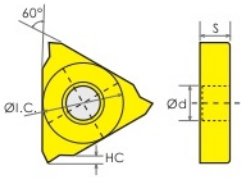
EXTERNAL THREADING & GROOVING CARBIDE INSERTS-Metric Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-3006*	RT16.0W-1.25GM	3/8"	1.25	5/32"	0.173"	XAF799
6006-3007	RT16.0W-1.50GM	3/8"	1.50	5/32"	0.173"	XAF799
6006-3008	RT16.0W-1.75GM	3/8"	1.75	5/32"	0.173"	XAF799
6006-3009	RT16.0W-2.00GM	3/8"	2.00	5/32"	0.173"	XAF799
6006-3010	RT16.0W-2.50GM	3/8"	2.50	5/32"	0.173"	XAF799
6006-3011	RT16.0W-3.00GM	3/8"	3.00	5/32"	0.173"	XAF799

*Limited Supply

RIGHT HAND

10 PC PER PACKAGE

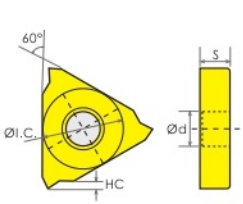


INTERNAL THREADING & GROOVING CARBIDE INSERTS-Inch Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-4008	RT16.01N-8UN	3/8"	8 TPI	5/32"	0.173"	XAF799
6006-4010	RT16.01N-10UN	3/8"	10TPI	5/32"	0.173"	XAF799
6006-4012	RT16.01N-12UN	3/8"	12 TPI	5/32"	0.173"	XAF799
6006-4014	RT16.01N-14UN	3/8"	14 TPI	5/32"	0.173"	XAF799
6006-4016	RT16.01N-16UN	3/8"	16 TPI	5/32"	0.173"	XAF799
6006-4018	RT16.01N-18UN	3/8"	18 TPI	5/32"	0.173"	XAF799
6006-4020	RT16.01N-20UN	3/8"	20 TPI	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

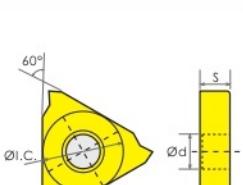


EXTERNAL THREADING & GROOVING CARBIDE INSERTS-Inch Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-4108	RT16.01N-8UN	3/8"	8 TPI	5/32"	0.173"	XAF799
6006-4110	RT16.01N-10UN	3/8"	10TPI	5/32"	0.173"	XAF799
6006-4112	RT16.01N-12UN	3/8"	12 TPI	5/32"	0.173"	XAF799
6006-4114	RT16.01N-14UN	3/8"	14 TPI	5/32"	0.173"	XAF799
6006-4116	RT16.01N-16UN	3/8"	16 TPI	5/32"	0.173"	XAF799
6006-4118	RT16.01N-18UN	3/8"	18 TPI	5/32"	0.173"	XAF799
6006-4120	RT16.01N-20UN	3/8"	20 TPI	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

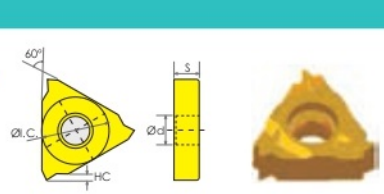


INTERNAL (NPT) THREADING CARBIDE INSERTS-Pipe Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-6008	RT16.001N-8NPT	.375"	8 TPI	.156"	0.173"	XAF799
6006-6011	RT16.001N-11.5NPT	.375"	11.5 TPI	.156"	0.173"	XAF799
6006-6014	RT16.001N-14NPT	.375"	14 TPI	.156"	0.173"	XAF799
6006-6018	RT16.001N-18NPT	.375"	18 TPI	.156"	0.173"	XAF799
6006-6027	RT16.001N-27NPT	.375"	27 TPI	.156"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

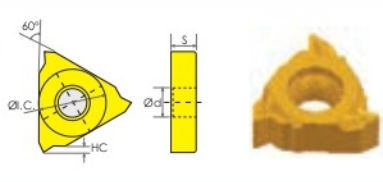


EXTERNAL (NPT) THREAD CARBIDE INSERTS-Pipe Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-6108	RT16.001W-8NPT	.375"	8 TPI	.156"	0.173"	XAF799
6006-6111	RT16.001W-11.5NPT	.375"	11.5 TPI	.156"	0.173"	XAF799
6006-6114	RT16.001W-14NPT	.375"	14 TPI	.156"	0.173"	XAF799
6006-6118	RT16.001W-18NPT	.375"	18 TPI	.156"	0.173"	XAF799
6006-6127	RT16.001W-27NPT	.375"	27 TPI	.156"	0.173"	XAF799

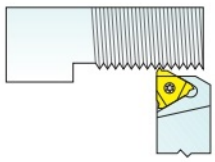
RIGHT HAND

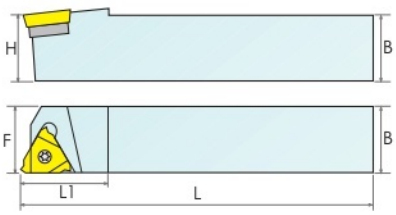
10 PC PER PACKAGE



See page 169 For grade information

INDEXABLE EXTERNAL THREADING TOOL HOLDERS





*Limited Supply

See page 165 & 166 for spare parts

RH Item#	Style	Shank BXB	(Inch) L	Insert I.C.	Insert	Insert Screw	Shim	Shim Screw	Wrench
2301-0375*	SER0375D16	3/8 x 3/8	2-1/2	3/8	16ER..	M3.5x12	LT16R-3.0	SDN535	T15+S3.5
2301-0500	SER0500F16	1/2 x 1/2	3-1/4	3/8	16ER..	M3.5x12	LT16R-3.0	SDN535	T15+S3.5
2301-0625	SER0625K16	5/8 x 5/8	5	3/8	16ER..	M3.5x12	LT16R-3.0	SDN535	T15+S3.5
2301-0750	SER0750K16	3/4 x 3/4	5	3/8	16ER..	M3.5x12	LT16R-3.0	SDN535	T15+S3.5
2301-1000	SER1000M16	1 x 1	6	3/8	16ER..	M3.5x12	LT16R-3.0	SDN535	T15+S3.5

INDEXABLE EXTERNAL THREADING TOOL HOLDER KITS

- Right hand external threads cut.
- AG60 inserts range 0.5~3.00mm/8~48 TPI
- A60 inserts range 0.5~1.5mm/16~48 TPI
- Complete with aluminium case.

*Limited Supply

Kit includes:
1-Tool Holder
10-TiN Coated Carbide Insert
1-Torx Wrench
Fitted Case

Item#	Style	Shank	(Inch) OAL	Insert I.C.	Insert	Insert Screw	Wrench
2301-1375*	SER0312D08	5/16	2.5	.197"	08ERA60	M2.5x6	T8
2301-1500	SER0375E11	3/8	3	1/4"	11ERA60	M2.5x7	T8
2301-1625	SER0500H11	1/2	4	1/4"	11ERA60	M2.5x7	T8
2301-1750	SER0625H16	5/8	4	3/8"	16ERAG60	M3.5x12	T15
2301-2000	SER0750K16	3/4	5	3/8"	16ERAG60	M3.5x12	T15

INDEXABLE INTERNAL & EXTERNAL THREADING TOOL HOLDER KITS

Kit includes:
1-Internal Tool Holder
1-External Tool Holder
3-IR (Internal) TiN Coated Carbide Insert
4-ER (External) TiN Coated Carbide Insert
1-Torx Wrench
Fitted Case

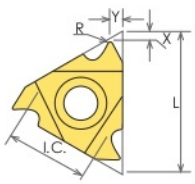
See page 165 & 166 for spare parts

*Limited Supply

RH Item#	Style (INT & EXT)	Shank	Insert	Insert Screw	Shim Screw	Shim	Wrench
2301-2250*	SIR0250H06 & SER0250D06	1/4	06IR/06ER..	M2x5	-	-	T6
2301-2312*	SIR0312H08 & SER0312D08	5/16	06IR/08ER..	M2.5X6	-	-	T8
2301-2375*	SIR0375H11 & SER0375E11	3/8	11IR/11ER..	M2.5x6	-	-	T8
2301-2500	SIR0500K11 & SER0500F11	1/2	11IR/11ER..	M2.5x6	-	-	T8
2301-2625	SIR0625M16 & SER0625H16	5/8	16IR/16ER..	M3.5x8/M3.5x12	SDN535(EXT)	LT16R-3.0(EXT)	T15+S3.5
2301-2750	SIR0750P16 & SER0750K16	3/4	16IR/16ER..	M3.5x8/M3.5x12	SDN535 (EXT)	LT16R-3.0(EXT)	T15+S3.5

THREADING CARBIDE INSERTS/PARTIAL PROFILE 60°

- 60° V partial profile threading insert.
- Right hand cut.



TiN COATED

10 PC PER PACKAGE

	Item#	Insert	I.C.	Pitch Range mm	Pitch Range TPI	L (in)	R (in)	X (in)	Y (in)
INTERNAL	**6061-0156**	06IRA60	.156"	0.5-1.25	48-20	.236	.002	.020	.024
	6061-0187	08IRA60	.188"	0.5-1.5	48-16	.315	.002	.024	.028
	6007-0008	11IRA60	1/4"	0.5~1.5	48~16	.435	.003	.031	.035
	6007-0015	16IRAG60	3/8"	0.5~3.0	48~8	.630	.003	.047	.035
	6007-0018	22IRN60	1/2"	3.5~5.0	5~7	.866	.010	.067	.098
EXTERNAL	**6007-0002**	06ERA60	.156"	0.5~1.25	48~20	.236	.002	.020	.024
	6007-0001	08ERA60	.197"	0.5~1.5	48~16	.315	.002	.024	.028
	6007-0004	11ERA60	1/4"	0.5~1.5	48~16	.435	.003	.031	.035
	6007-0012	16ERAG60	3/8"	0.5~3.0	48~8	.630	.003	.047	.035
	6007-0020	22ERN60	1/2"	3.5~5.0	5~7	.866	.016	.067	.098

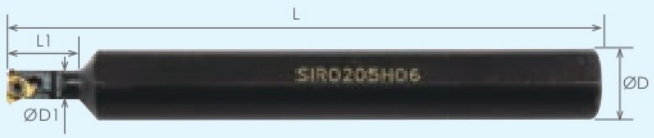
INDEXABLE THREADING TOOLS

MINI INDEXABLE THREADING TOOL HOLDER KIT

- Right hand.
- Super for running at low speeds
- Threads all the way down in a blind hole
- 3 cutting edge on insert provides 3x tool life
- 06IR A60 insert range 48-20 TPI/ 0.5~1.25mm.
- 08IR A60 insert range 48-16 TPI/ 0.5~1.50mm.

Set Includes:

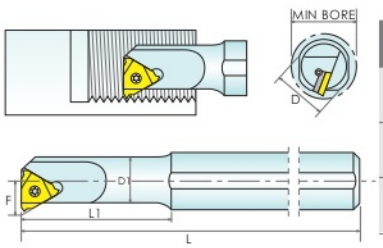
- 1-mini tool holder
- 10 -60° partial profile internal insert, TiN coated
- 1 - Torx wrench
- 1 -Aluminium fitted case



Limited Supply!

Item#	Shank Dia. D	D1	(Inch) L	L1	Min. Bore	Use Insert	Screw	Wrench
2305-0312	5/16	0.205	4	0.500	0.240	06IRA60	M2x3.5mm	T6
2305-0375	3/8	0.265	5	0.710	0.310	08IRA60	M2.5x5mm	T8
2305-0500	1/2	0.205	4	0.500	0.240	06IRA60	M2x3.5mm	T6
2305-0626	5/8	0.265	5	0.710	0.307	08IRA60	M2.5x5mm	T8

INDEXABLE INTERNAL THREADING TOOL HOLDERS



RH Item#	Style	Shank D	(Inch) L	Min. Bore	F	Insert I.C.	Insert	Insert Screw	Wrench	Anvil Screw	Shim
2302-0375	SIR0375H11	3/8	4	.47	0.29	1/4	11IR..	M2.5x6	T8	----	----
2302-0500	SIR0500K16	1/2	5	.64	0.39	3/8	16IR..	M3.5x8	T15	----	----
2302-0625	SIR0625P16	5/8	7	.75	0.45	3/8	16IR..	M3.5x8	T15	----	----
2302-0750	SIR0750P16	3/4	7	1.00	0.51	3/8	16IR..	M3.5x8	T15	----	----
2302-0751	SIR0750P22	3/4	7	1.00	0.51	1/2	22IR..	M4x12-Ø6.8	T15	----	----
2302-1000	SIR1000R16	1	8	1.20	0.65	3/8	16IR..	M3.5x12	T15+S3.5	SDN535	LT16L-3.0

INDEXABLE INTERNAL THREADING TOOL HOLDER KITS

- Right hand internal threads cut.
- AG60 inserts range 0.5~3.00mm/8~48 TPI
- A60 inserts range 0.5~1.5mm/16~48 TPI
- Complete with aluminium case.

- **Kit includes:** 1-Tool Holder, 10-TiN Coated Carbide Insert, 1-Torx Wrench

Item#	Style	Shank	OAL	Insert I.C.	Insert	Insert Screw	Wrench
2302-1250	SIR0375H11	3/8	4	1/4	11IRA60	M2.5x6	T8
2302-1500	SIR0500K11	1/2	5	1/4	11IRA60	M2.5x6	T8
2302-1625	SIR0625M16	5/8	6	3/8	16IRAG60	M3.5x8	T15
2302-1787	SIR0750P16	3/4	7	3/8	16IRAG60	M3.5x8	T15

5PC INDEXABLE INTERNAL THREADING TOOL HOLDER SET

- Suitable for varied pitch internal threading.
- Supplied with fitted aluminium case.
- Carbide inserts are included for semi-finishing/roughing.

Specifications

Size in Set	Insert	OAL	Screw	Wrench
5/16	08IR A60	4"	M2.5x5mm	T6
3/8	11IRA A60	5"	M2.5x5mm	T6
1/2	11IRA A60	6"	M2.5x5mm	T6
5/8	16IR AG60	7"	M3.5x10mm	T15+S3.5
3/4	16IR AG60	10"	M3.5x10mm	T15+S3.5

NEW

MTVO STYLE EXTERNAL THREADING & GROOVING HOLDERS

- For OD threading and grooving
- Neutral rake.
- Right hand.
- Torx & Allen wrench included.

ALSO USES INSERTS: TNMA-NV, TNMC-NC, TPMC-NV

INSERT NOT INCLUDED

RH Item#	Holder Style	Shank	(Inch) OAL	Insert I.C.	Use Insert	Insert Screw	Clamp	Spring	Locking Screw	Torx Wr.	Allen Wr.
2304-1500	MTVOR08-3B	1/2x1/2	4-1/2	3/8	TNMA-32NV	M3.5x8	MTH0820	MTH0610	GB/T70.2 M6x20	T15	S4
2304-1750	MTVOR12-3B	3/4x3/4	4-1/2	3/8	TNMA-32NV	M3.5x8	MTH0820	MTH0610	GB/T70.2 M6x20	T15	S4
2304-1751	MTVOR12-4B	3/4x3/4	4-1/2	1/2	TNMA-43NV	M5X12	MTH0820	MTH0610	DLS5 M6x26	T20	S4
2304-2000*	MTVOR16-3D	1x1	6	3/8	TNMA-32NV	M3.5X8	MTH0820	MTH0610	DLS5 M6x26	T15	S4
2304-2001	MTVOR16-4D	1x1	6	1/2	TNMA-43NV	M5X12	MTH0820	MTH0610	DLS5 M6x26	T20	S4

*Limited Supply

Repacement Parts

Item#	Insert Screw
2100-0073	M3.5x8
2100-0076	M5X12

Item#	Locking Clamp
2100-0015	MTH0820

Item#	Locking Screw
2100-0026	GB/T70.2 M6X20
2100-0027	DLS5 M6X26

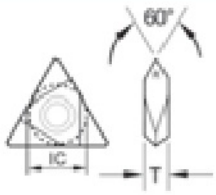
Item#	Spring
2100-0100	MTH0610

TNMA THREADING CARBIDE INSERTS
0-Degree Rake, Precision Ground

- 60° "V"-threading.
- 0° Rake angle.
- Cylindrical thru hole.

Item#	Insert No.	I.C.	Pitch	Radiu R	Thread Degree	Thick T	Hole d	Grade C6
6043-0375	TNMA-32NV	3/8	8 TPI Max.	.003~.005	60	.125"	.150"	TiN
6043-0500	TNMA-43NV	1/2	6 TPI Max.	.005~.008	60	.187"	.202"	TiN
6043-0005	TNMA-43NV	1/2	6 TPI Max.	.005~.008	60	.187"	.202"	Uncoated

10 PC PER PACKAGE

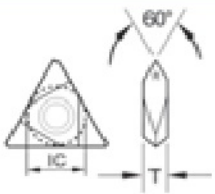


TPMC THREADING INSERTS
10-Degree Rake, Precision Ground

- 60° "V"-threading.
- 10° Rake angle.
- Double countersink thru hole.
- TiN coated.

Item#	Insert No.	I.C.	Pitch	Radiu R	Thread Degree	Groove Width
6043-1375	TPMC-32NV	3/8	8 TPI Max.	.003~.005	60	.125"
6043-1500	TPMC-43NV	1/2	6 TPI Max.	.005~.008	60	.187"
6043-1625*	TPMC-54NV	5/8	4 TPI Max.	.005~.008	60	.250"

10 PC PER PACKAGE



TNMC GROOVING CARBIDE INSERTS

- Right hand on two sides.
- Neutral rake angle.
- Double countersink thu hole.
- TiN coated.

TiN Coated

*Limited Supply

Item#	Insert No.	I.C. (In)	Pitch	Groove Width (In)	Groove Depth (In)
6043-0632	TNMC-32NGR031	0.375	8 TPI Max.	.031	.075
6043-0633	TNMC-32NGR062	0.375	8 TPI Max.	.062	.150
6043-0634	TNMC-32NGR094	0.375	8 TPI Max.	.094	.150
6043-0635	TNMC-32NGR125	0.375	8 TPI Max.	.125	.150
6043-0643	TNMC-43NGR062	0.500	6 TPI Max.	.062	.125
6043-0644	TNMC-43NGR094	0.500	6 TPI Max.	.094	.150
6043-0645	TNMC-43NGR125	0.500	6 TPI Max.	.125	.210
6043-0646*	TNMC-43NGR156	0.500	6 TPI Max.	.156	.210
6043-0647*	TNMC-43NGR187	0.500	6 TPI Max.	.187	.210
6043-0654*	TNMC-54NGR250	0.625	4 TPI Max.	.250	.210

INDEXABLE TOOL SETS

TOP NOTCH STYLE INTERNAL THREADING & GROOVING TOOLHOLDERS

- Right hand.
- Excellent all-purpose system for threading and grooving.
- Very strong insert design and wide insert selection and range.
- Clamping system draws the insert consistently back into the pocket for superior repeatability.
- Fully interchangable with other simliar "notch" type tools and inserts.
- Insert not included.

Right Hand Holder Use Left Hand Inserts

Insert Not Included

Item#	Holder #	D min.	L1	(Inch) D	F	(mm) D2	(mm) L2	CLAMP	Screw	Gage Insert Size
2301-3010	S10S-TNER2	1.000	10	0.625	.500	14.88	34	TNSN02B	M4X12	2
2301-3016	S16T-TNER3	1.375	12	1.000	.688	23.4	47.8	TNSN-3B	M5X16	3
2301-3020	S20U-TNER3	1.750	14	1.250	.875	29.75	50.6	TNSN-3B	M5X18	3
2301-3024	S24U-TNER3	2.000	14	1.500	1.000	35.1	50.6	TNSN-3B	M5X18	3

TOP NOTCH STYLE EXTERNAL THREADING & GROOVING TOOLHOLDERS

- Right hand.
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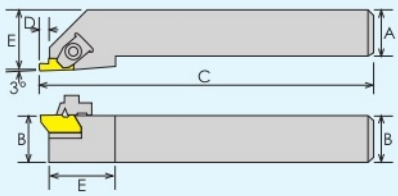
Right Hand Holder Use Right Hand Inserts



Insert Not Included

Item#	Holder #	A	B	C	(Inch) D	F	E	Clamp	Screw	Gage Insert Size	Shim	Shim Screw	Keys
2301-3108	TNSR08-2V	.50	.500	3.5	.138	.75	.75	TNSB-2B	M4x14	2	---	---	S2.5
2301-3112	TNSR12-2B	.75	.750	4.5	.138	1.00	.75	TNSB-2B	M4x14	2	TNSN-2Z	M2x4	S2.5 & T6
2301-3113	TNSR12-3B	.75	.750	4.5	.210	1.00	1.25	TNSB-3B	M5x18	3	TNSN-3A-3	M2.5x8	S3 & T8
2301-3116	TNSR16-3D	1	1.000	6.0	.210	1.25	1.25	TNSB-3B	M5x18	3	TNSN-3A	M2.5x8	S3 & T8
2301-3117	TNSR16-4D	1	1.000	6.0	.294	1.25	1.38	TNSB-3B	M5x18	4	TNSN-3A	M2.5x8	S3 & T8

NOTCH THREADING & GROOVING CARBIDE INSERTS

- Completely interchangeable with the *Kennametal TopNotch and the Teledyne Firth Notch systems.
- 60° Negitive rake, netural.
- NT-600 parting profile general purpose threading inserts.
- NG-Grooving & Turning inserts.
- Grade: C5/TIC-65 coated, which is same as KENNAMETAL KC810, KC850, KC950, KC730
- Trademark of Kennametal.

SPECIFICATIONS

Insert #	External TPI	Internal TPI
T/NT-2R/2L	8-36	7-20
T/NT-3R/3L	6-20	5-12
T/NT-4R/4L	4-20	4-12

THREADING INSERTS *Grade C5/TIC 65*

Item#	Insert #	R	B	(Inch) T	E	A	Gage Dia.
6062-5001	T/NT-2R	.003	.2661	.150	.075	.219	.1875
6062-5002	T/NT-2L	.005	.2661	.150	.075	.219	.1875
6062-5003	T/NT-3R	.005	.3999	.195	.098	.344	.3750
6062-5004	T/NT-3L	.008	.3999	.195	.098	.344	.3750
6062-5005	T/NT-4R	.005	.6293	.255	.128	.453	.3750
6062-5006	T/NT-4L	.008	.6293	.255	.128	.453	.3750

CLAMP

Item #	Style
2100-0011	TNSB-2B
2100-0010	TNSB-3B

GROOVIING INSERTS

Grade C5/TIC 65

R=Right Hand
L=Left Hand

Item#	Insert #	Groove Width R	W	B	(Inch) Depth of Cut T	E	A	Gage Dia.
6062-2030	T/NG-2031R	.002	.031	.2700	.150	.050	.219	.1875
6062-2031	T/NG-2031L	.005	.031	.2700	.150	.050	.219	.1875
6062-2046	T/NG-2047R	.002	.047	.2700	.150	.050	.219	.1875
6062-2047	T/NG-2047L	.005	.047	.2700	.150	.050	.219	.1875
6062-2061	T/NG-2062R	.005	.062	.2700	.150	.050	.219	.1875
6062-2062	T/NG-2062L	.010	.062	.2700	.150	.050	.219	.1875
6062-2093	T/NG-2094R	.005	.094	.2700	.150	.050	.219	.1875
6062-2094	T/NG-2094L	.010	.094	.2700	.150	.050	.219	.1875
6062-2124	T/NG-2125R	.005	.125	.2700	.150	.050	.219	.1875
6062-2125	T/NG-2125L	.010	.125	.2700	.150	.050	.219	.1875
6062-3046	T/NG-3047R	.005	.047	.4050	.195	.075	344	.3750
6062-3047	T/NG-3047L	.010	.047	.4050	.195	.075	.344	.3750
6062-3061	T/NG-3062R	.005	.062	.4050	.195	.075	.344	.3750
6062-3062	T/NG-3062L	.010	.062	.4050	.195	.075	.344	.3750
6062-3077	T/NG-3078R	.005	.078	.4050	.195	.075	.344	.3750
6062-3078	T/NG-3078L	.010	.078	.4050	.195	.075	.344	.3750
6062-3087	T/NG-3088R	.005	.088	.4050	.195	.075	.344	.3750
6062-3088	T/NG-3088L	.010	.088	.4050	.195	.075	.344	.3750
6062-3093	T/NG-3094R	.005	.094	.4050	.195	.075	.344	.3750
6062-3094	T/NG-3094L	.010	.094	.4050	.195	.075	.344	.3750
6062-3124	T/NG-3125R	.005	.125	.4050	.195	.075	.344	.3750
6062-3125	T/NG-3125L	.010	.125	.4050	.195	.075	.344	.3750
6062-3155	T/NG-3156R	.005	.156	.4050	.195	.075	.344	.3750
6062-3156	T/NG-3156L	.010	.156	.4050	.195	.075	.344	.3750
6062-3188	T/NG-3189R	.005	.189	.4050	.195	.075	.344	.3750
6062-3189	T/NG-3189L	.010	.189	.4050	.195	.075	.344	.3750
6062-4124	T/NG-4125R	.005	.125	.6360	.255	.250	.453	.3750
6062-4125	T/NG-4125L	.010	.125	.6360	.255	.250	.453	.3750
6062-4188	T/NG-4189R	.020	.189	.6360	.255	.250	.453	.3750
6062-4189	T/NG-4189L	.025	.189	.6360	.255	.250	.453	.3750
6062-4249	T/NG-4250R	0.20	.250	.6360	.255	.250	.453	.3750
6062-4250	T/NG-4250L	.025	.250	.6360	.255	.250	.453	.3750

MINI-SYSTEM EXTERNAL GROOVING & CUT-OFF HOLDERS

INSERTS NOT INCLUDED

- Right hand shank external holder.
- Insert not included.
- Set Includes: 1pc- External Holder, 1pc-T10 Wrench, 1pc-Aluminum Case.
- Accepts NIKCOLE style inserts.
- For use with .019 to .125" thin inserts.
- Ideal for external grooving, threading, cut-off, turning & copying under .125" width.

RIGHT HAND HOLDER ONLY ACCEPT RIGHT HAND INSERTS

2306-0375 Shown

2306-0500 Shown

2306-0625 Shown

Item#	Toolholder Designation	Shank Dia (In)	OAL (In)	Use Insert	Screw	Tox Wrench
2306-0375	THE-7-3/8-R	3/8	4.5	GIE-7-SG-	M3x8mm	T10
2306-0500	THE-7-1/2-R	1/2	4.5	GIE-7-SG-	M3x8mm	T10
2306-0625	THE-75/8-R	5/8	5.0	GIE-7-SG-	M3x8mm	T10

MINI-SYSTEM INTERNAL GROOVING & CUT-OFF HOLDERS

2306-2000 Shown *INSERTS NOT INCLUDED*

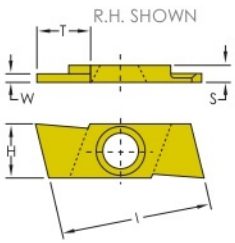
- Right hand shank.
- Insert not included.
- Set Includes: 1pc- Internal Holder, 1pc-T10 Wrench, 1pc-Aluminum Case.
- Accepts NIKCOLE style inserts.
- For use with .019 to .125" thin inserts.
- Ideal for internal grooving, threading, cut-off, turning & copying under .125" width.

RIGHT HAND HOLDER ONLY ACCEPT RIGHT HAND INSERTS

Item#	Toolholder Designation	Shank Dia (In)	OAL (In)	Use Insert	Screw	Tox Wrench
2306-1750	THI-7-3/4-R	3/4	5.6	GIE-7-SG-	M3x8mm	T10
2306-2000*	THI-7-1-R	1	6.0	GIE-7-SG-	M3x8mm	T10

MINI-SYSTEM STANDARD CARBIDE GROOVING, CUT-OFF INSERTS-GRADE C6-PV

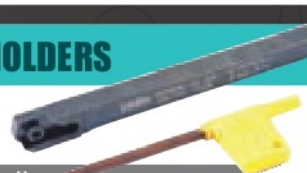
- Grade C6-PV-Coated grade recommented for machining steels, cutting off and grooving at higher speeds.
- Tolerance: Width: +.0009"/ -.0000"
- Fits NIKCOLE style mini groove RH tool holders.

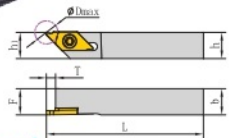


Item#	Insert #	Hand	Depth of Cut	Width of Cut	Price (E)
6061-0300	GIE-7-SG-05	R	.100" (2.54mm)	.019" (0.5mm)	
6061-0301	GIE-7-SG-07	R	.100" (2.54mm)	.027" (0.7mm)	
6061-0302	GIE-7-SG-08	R	.100" (2.54mm)	.031" (0.8mm)	
6061-0303	GIE-7-SG-09	R	.100" (2.54mm)	.035" (0.9mm)	
6061-0304	GIE-7-SG-1.1	R	.235" (6.0mm)	.043" (1.1mm)	
6061-0305	GIE-7-SG-1.3	R	.235" (6.0mm)	.051" (1.3mm)	
6061-0306	GIE-7-SG-1.6	R	.235" (6.0mm)	.063" (1.6mm)	
6061-0307	GIE-7-SG-1.85	R	.235" (6.0mm)	.073" (1.85mm)	
6061-0311	GIE-7-SG-07	L	.100" (2.54mm)	.027" (0.7mm)	
6061-0312	GIE-7-SG-08	L	.100" (2.54mm)	.031" (0.8mm)	
6061-0313	GIE-7-SG-09	L	.100" (2.54mm)	.035" (0.9mm)	
6061-0314	GIE-7-SG-1.1	L	.235" (6.0mm)	.043" (1.1mm)	
6061-0315	GIE-7-SG-1.3	L	.235" (6.0mm)	.051" (1.3mm)	
6061-0316	GIE-7-SG-1.6	L	.235" (6.0mm)	.063" (1.6mm)	
6061-0317	GIE-7-SG-1.85	L	.235" (6.0mm)	.073" (1.85mm)	

TKEH EXTERNAL PARTING, GROOVING & TURNING TOOLHOLDERS

- Right hand.
- Tool holder design provides precision clamping & insert indexing accuracy.
- Ideal for external grooving, turning, part-off, reliefing & profile machining.





Item#	Toolholder Designation	h=h1	b	F	L	L1	T	Dmax.	Use Insert	Screw	Key
2306-2375	TKEHR06-16C	3/8	3/8	3/8	5"	0.79	0.32	0.630	TKF16R	M4x9	T15
2306-2500	TKEHR08-16D	1/2	1/2	1/2	6"	-	0.32	0.630	TKF16R	M4x9	T15
2306-2625	TKEHR10-16D	5/8	5/8	5/8	6"	-	0.32	0.630	TKF16R	M4x9	T15

TKEH INSERTS: GradeWM125-Right Hand-AlTiN Coated

Item#	Insert	H	T	d	(mm) W	R	0	DMax
6061-1016	TKF16R100-S	9.5	4	5	1.0	0.05	0°	16
6061-1020	TKF16R150-S	9.5	4	5	1.5	0.05	0°	16
6061-1024	TKF16R200-S	9.5	4	5	2.0	0.05	0°	16

Limited Supply!

INDEXABLE PARTING & GROOVING TOOLS

MGEHR EXTERNAL PARTING GROOVING & TURNING TOOLHOLDERS

- Right hand.
- Tool holder design provides precision clamping & insert indexing accuracy.
- Ideal for external grooving, turning, part-off, reliefing & profile machining.

Item#	Toolholder Designation	Insert Width	Max. Cutting Depth	Shank Height	Shank Width	OAL	Use Insert	Screw	Hex Key
2207-0375	MGEHR06-2	0.079"	1/2"	3/8"	3/8"	3"	MGMN200	GB70-85-M4X12	S3
2207-0500	MGEHR08-2A	0.079"	1/2"	1/2"	1/2"	4"	MGMN200	GB70-85-M4X12	S3
2207-0625	MGEHR10-2B	0.079"	1/2"	5/8"	5/8"	4.5"	MGMN200	GB70-85-M5X14	S4
2207-0750	MGEHR12-2C	0.079"	1/2"	3/4"	3/4"	5"	MGMN200	GB70-85-M5X14	S4
2207-1000	MGEHR16-2D	0.079"	1/2"	1"	1"	6"	MGMN200	GB70-85-M6X20	S5

MGIV INTERNAL PARTING GROOVING & TURNING TOOLHOLDERS

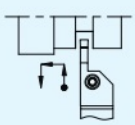
- Right hand.
- Tool holder design provides precision clamping & insert indexing accuracy.
- Ideal for internal grooving, turning & profile machining.

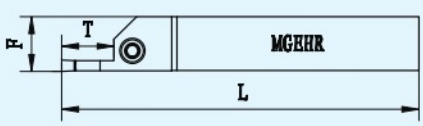
Item#	Toolholder Designation	Insert Width W	Max. Cutting Depth T	Shank Dia. d	F	OAL L	Use Insert	Screw	Hex Key
2208-0625	S10K-MGIVR/L2	0.079"	0.197"	5/8"	1/2"	5"	MGMN200	GB70-85-M4X12	S3
2208-0750	S12M-MGIVR/L2	0.079"	0.197"	3/4"	5/8"	6"	MGMN200	GB70-85-M5X14	S4
2208-1000	S16R-MGIVR/L2	0.079"	0.197"	1"	3/4"	8"	MGMN200	GB70-85-M5X14	S4

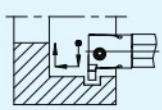
EXTERNAL & INTERNAL GROOVING TOOL SETS

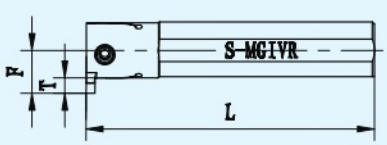
- Right hand.
- Suitable for varied external & internal grooving.
- Carbide inserts are included for semi-finishing/roughing machining.

Set Includes:
1-External tool holder (MGEHR)
1-Internal tool holder (S-MGIVR)
10 - TiN coated inserts
2 - Hex key
1 -Aluminium fitted case









Dimensions

Item#	Shank Size	Holder Style	F	T	L	Screw	Hex Key	Insert Used
2208-0003	**5/8"**	MGEHR10-2B S10K-MGIVR2	0.64" 0.488"	0.57" 0.2"	4" 5"	GB70-85-M4X10	S3	MGMN200
2208-0006	**3/4"**	MGEHR12-3C S12M-MGIVR-3	0.803" 0.614"	0.71" 0.236"	5" 6"	GB70-85-M4X12	S3	MGMN300
2208-0009	**1"**	MGEHR16-4D S16R-MGIVR4	1" 0.744"	0.71" 0.236"	6" 8"	GB70-85-M5X16	S4	MGMN400

MGMN INDEXABLE CUT-OFF AND GROOVING BLADES

- Righ hand cutting.
- Double end.
- Use MGMN Inserts.

Limited Supply!

INSERT IS NOT INCLUDED

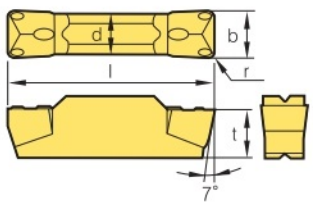
Item#	Width W	Dmax.	(Inch) h	h1	OAL L	Use Insert	Key
2209-0020	0.079	1.10	1.06	0.79	4.33	MGMN200	KD4
2209-0025	0.098	1.26	1.06	0.79	4.33	MGMN250	KD4
2209-0030	0.118	1.42	1.06	0.79	4.33	MGMN300	KD4
2209-0040	0.157	1.42	1.06	0.79	4.33	MGMN400	KD4
2209-0060	0.079	1.10	1.26	0.94	5.91	MGMN200	KD5
2209-0065	0.098	1.26	1.26	0.94	5.91	MGMN250	KD5
2209-0070	0.118	1.42	1.26	0.94	5.91	MGMN300	KD5
2209-0080	0.157	1.42	1.26	0.94	5.91	MGMN400	KD5

MGMN-G GROOVING CARBIDE INSERTS

MGMN-G

- Specially designed chip breaker allows narrower chips to promote better chip flow.
- Specifically designed for grooving applications.

10 PC PER PACKAGE



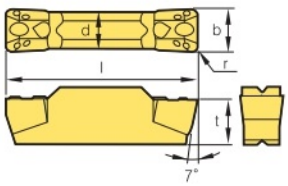
Item#	Insert No.	Cutting Width b	OAL L	(Inch) d	Cutting Edge Heigh t	r	Grade
6024-3021	MGMN-150-G	.059	.63	.047	.138	.006	BPS253-CVD
6024-3022	MGMN-200-G	.079	.63	.063	.138	1/128	BPS253-CVD
6024-3051	MGMN-200-G	.079	.63	.063	.138	1/128	BPG20B-PVD

MGMN-M GROOVING CARBIDE INSERTS

MGMN-M

- Specially designed chip breaker allows as moother chip flow versus conventional flattop geometries through the use of a central chip breaker.
- Specially placed convex dots assits twith chip control in external machining, for a smoother chip flow.
- Chip breaker designed for turning , grooving & parting applications.

10 PC PER PACKAGE



Item#	Insert No.	Cutting Width	OAL L	(Inch) d	Cutting Edge Heigh t	r	Grade
6024-3002	MGMN-250-M	.098	.73	.079	.152	1/128	BPS253-CVD
6024-3003	MGMN-300-M	.118	.83	.093	.189	1/64	BPS253-CVD
6024-3004	MGMN-400-M	.157	.83	.130	.189	1/64	BPS253-CVD
6024-3052	MGMN-250-M	.098	.73	.079	.152	1/128	BPG20B-PVD
6024-3053	MGMN-300-M	.118	.83	.093	.189	1/64	BPG20B-PVD

MRMN-M GROOVING CARBIDE INSERTS

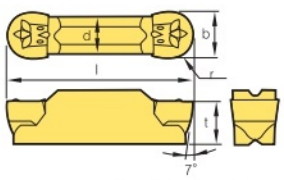
MRMN-M

- Full radius geometry for applications that require profiling
- Available for relief machining

*Limited Supply

Item#	Insert No.	Cutting Width b	OAL L	(Inch) d	Cutting Edge Heigh t	r	PVD Grade
6024-3031	MRMN-200-M	.079	.630	.059	.079	3/64	BPS253
6024-3032	MRMN-300-M	.118	.827	.093	.118	1/16	BPS253
6024-3033	MRMN-400-M	.157	.827	.130	.157	5/64	BPS253
6024-3034*	MRMN-500-M	.197	1.024	.161	.197	3/32	BPS253
6024-3035	MRMN-600-M	.236	1.024	.197	.236	1/8	BPS253

10 PC PER PACKAGE



GRADE COMPARISON

BPG253-CVD

CVD coated universal grade is suitable for steel and cast steel continuous cutting and interrupted cutting, finishing to roughing, With a wide range of application, Stainless steel continuous cutting and interrupted cutting.

BPG20B-PVD

PVD coated micro-grain carbide to use for a variety of stainless steel finishing at medium to low cutting speed. Excellent edge strength and high surface quality, provide the perfect ride cutting. High thermal shock resistance. Suitable for light interrupted cuts.

INDEXABLE CUT-OFF TOOLS

INDEXABLE CUT-OFF & GROOVING TOOLS & KITS - For Larger Tool Posts

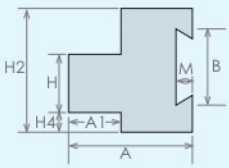
All Tools Are Interchangeable With ISCAR & Other Fine Brands !

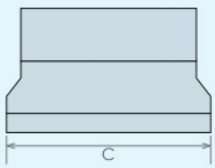
ISCAR TYPE CUT-OFF TOOLS

Kit includes:
Tool block, blade(s), C6 carbide inserts, insert holder, Allen wrench and case.

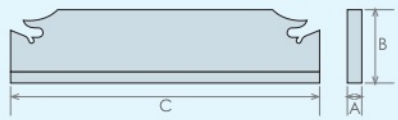
16 PC 3/4" SHANK KIT
Item#3900-5361 Shown

Tool Block





Cut-off Blade



Item#	No. of Pieces	Tool Block Dimension (Inch)									Cut-off Blade Dimension (Inch)			Blade Fil	Insert
			H	A1	A	B	H2	H4	M	C		C	B		
3900-5359	15	SLTBN16-5	5/8"	0.750	1.50	1.02	1.71	.52	.21	3.47 (1 pc)	NCIH26-3	4-5/16	1-1/32 (1 pc)	26-3	GTN-3 (10 pcs)
3900-5361	16	SLTBN19-5	3/4"	0.750	1.45	1.02	1.70	.39	.21	3.47 (1 pc)	NCIH26-3	4-5/16	1-1/32 (1 pc)	26-3	GTN-3 (5 pcs)
											NCIH26-4	4-5/16	1-1/32 (1 pc)	26-4	GTN-4 (5 pcs)
3900-5364	22	SLTBN25-6	1"	0.750	1.50	1.26	1.97	.30	.21	4.33 (1 pc)	NCIH32-3	5-7/8	1-1/4 (2 pcs)	32-3	GTN-3 (4 pcs)
											NCIH32-4	5-7/8	1-1/4 (2 pcs)	32-4	GTN-4 (4 pcs)
											NCIH32-5	5-7/8	1-1/4 (2 pcs)	32-5	GTN-5 (4 pcs)

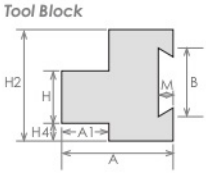
INDEXABLE CUT-OFF & GROOVING TOOL KITS - For Smaller Tool Posts

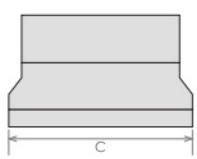
All Tools Are Interchangeable With ISCAR & Other Fine Brands !

ISCAR TYPE CUT-OFF TOOLS

15 PC KIT INCLUDES:
- 1 - Tool Block (SLTBN)
- 1 - Cut-off Blade (NCIH)
- 10 - C-6 GTN Inserts (TiN Coated)
- 2 - Allen Wrench
- 1 - Fitted case

Tool Block





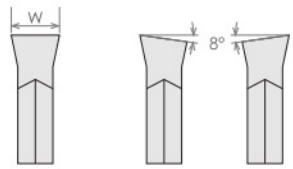
Cut-off Blade

Item#	Tool Block Dimension (Inch)									Cut-off Blade Dimension (Inch)			Blade Fil	Insert (10pc)
		H	A1	A	B	H2	H4	M	C		C	B		
3900-5366	SLTBN0250-2	1/4	0.472	0.984	0.787	1.161	0.498	0.118	2.2	NCIH19-2	3.38	3/4	19-2	GTN-2
3900-5367	SLTBN0312-2	5/16	0.472	0.984	0.787	1.161	0.435	0.118	2.2	NCIH19-2	3.38	3/4	19-2	GTN-2
3900-5368	SLTBN0375-2	3/8	0.472	0.984	0.787	1.161	0.373	0.118	2.2	NCIH19-2	3.38	3/4	19-2	GTN-2
3900-5369	SLTBN0500-2	1/2	0.472	0.984	0.787	1.161	0.248	0.118	2.2	NCIH19-2	3.38	3/4	19-2	GTN-2

CARBIDE CUT-OFF INSERTS

GRADE
C-2 FOR CAST IRON AND GENERAL PURPOSE
C-6 FOR ALL STEEL AND GENERAL PURPOSE
TIN (C-6) FOR INCREASED PRODUCTIVITY

10 PC PER PACKAGE

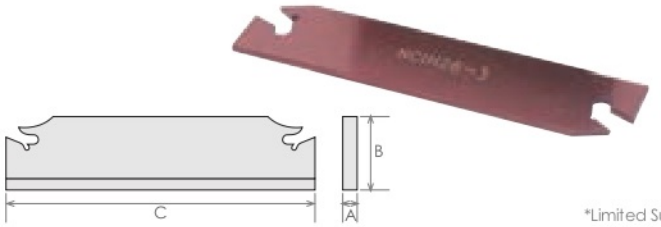


Insert Style	Insert Size (W) (In)	C-2 Item#	C-6 Item#	TiN Coated (C-6) Item#
GTN-2	.087	3900-5802	3900-5309	6024-2002
GTN-2.4	.094	6024-0002*	----------	----------
GTN-3	.120	----------	6024-1003	6024-2003
GTN-4	.160	6024-0004	6024-1004	6024-2004
GTN-4.8	.187	6024-0008*	6024-1008*	6024-2008*
GTN-5	.200	6024-0005	6024-1005	6024-2005
GTR-4.8	.187	6024-1014*	6024-1015*	----------
GTL-4.8	.187	6024-1024*	----------	6024-2034*

INDEXABLE CUT-OFF BLADES

All Tools Are Interchangeable With ISCAR & Other Fine Brands !

ISCAR TYPE CUT-OFF TOOLS



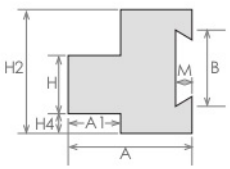
*Limited Supply

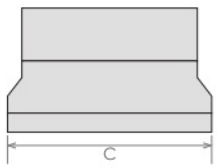
Item#	Insert Width A	Blade Style	C	B
3900-5313	.087&.094"	19-2	3.38	3/4
3900-5311	.087&.094"	26-2	4-5/16"	1-1/32
3900-5312	.120"	26-3	4-5/16"	1-1/32
3900-5314	.160"	26-4	4-5/16"	1-1/32
3900-5316	.187& .200"	26-5	4-5/16"	1-1/32
3900-5315*	.250"	26-6	4-5/16"	1.1/32
3900-5317	.120"	32-3	5-7/8"	1-1/4
3900-5318	.160"	32-4	5-7/8"	1-1/4
3900-5319	.187&.200"	32-5	5-7/8"	1-1/4
3900-5325	.250"	32-6	5-7/8"	1-1/4

INDEXABLE CUT-OFF TOOL BLOCKS

All Tools Are Interchangeable With ISCAR & Other Fine Brands !

ISCAR TYPE CUT-OFF TOOLS





Clamping Height H (In)	Blade Height B(In)	Clamping Depth A1(In)	Block Width A (In)	Block Height H2(In)	Shoulder Depth H4(In)	Blade Pocket M (In)	Block Length C (In)	Blade Fit	Item#
0.625	0.75	0.625	1.19	1.30	.16	.12	3.00	19-2	**3900-5353**
0.625	1.02	0.750	1.50	1.71	.52	.21	3.47	26-2, 26-3, 26-4,26-5, 26-6	**3900-5354**
0.750	1.02	0.750	1.50	1.71	.39	.21	3.47	26-2, 26-3, 26-4, 26-5, 26-6	**3900-5351**
0.750	1.25	0.750	1.50	1.97	.55	.21	3.97	32-3, 32-4, 32-5, 32-6	**3900-5352**
1.000	1.25	0.750	1.50	1.97	.30	.21	4.33	32-3, 32-4, 32-5, 32-6	**3900-5355**
1.250	1.25	0.750	1.81	1.92	--	.21	4.33	32-3, 32-4, 32-5, 32-6	**3900-5356**

SGTH STYLE CUT-OFF TOOL HOLDERS

Accepts GTN Carbide Inserts

INSERT IS NOT INCLUDED

*Limited Supply

Holder Style	Shank Size	Insert Width	Use Insert	Max. Work Diameter	RH Item#
9.5-2	3/8 x 3/8"	.087 & .094"	GTN-2	1.10"	**2203-0952**
12.7-2	1/2 x 3/8"	.087 & .094"	GTN-2	1.18"	**2203-1272**
12.7-3	1/2 x 3/8"	.120"	GTN-3	1.26"	**2203-1273***
16-4	5/8 x 1/2"	.160"	GTN-4	1.34"	**2203-1640***
19-4	3/4 x 1/2"	.160"	GTN-4	1.38"	**2203-1940**
19-5	3/4 x 1/2"	.187 & .200"	GTN-5	1.38"	**2203-1950**

SLTH STYLE CUT-OFF TOOL HOLDERS

Accepts GTN Carbide Inserts

*Limited Supply

Holder Style	Shank Size	Insert Width	Use Insert	Max. Work Diameter	RH Item#
9.5-2	3/8 x 3/8"	.087 & .094"	GTN-2	1-7/64"	**2201-0952**
12.7-2	1/2 x 25/64"	.087 & .094"	GTN-2	1-11/64"	**2201-1272**
12.7-3	1/2 x 25/64"	.120"	GTN-3	1-17/64"	**2201-1273***
16-3	5/8 x 15/32"	.120"	GTN-3	1-17/64"	**2201-1630***
16-4	5/8 x 15/32"	.160"	GTN-4	1-21/64"	**2201-1640***
19-4	3/4 x 15/32"	.160"	GTN-4	1-17/32"	**2201-1940***

GROOVING INTERGRAL SHANK TOOL HOLDERS

Accepts GTN Carbide Inserts

INSERT IS NOT INCLUDED

Holder Style	Shank Size	Use Insert	Max. Depth	RH Item#
08R-25	1/2 x 1/2"	GTN-3	.79"	**2204-0825**
10R-25	5/8 x 5/8"	GTN-3	.79"	**2204-1025**
12R-30	3/4 x 3/4"	GTN-3	.79"	**2204-1230**
12R-40	3/4 x 3/4"	GTN-4	.79"	**2204-1240**
16R-30	1 x 1"	GTN-4	.98"	**2204-1630**

CUT-OFF TOOLS

RETROFIT GTN CUT-OFF AND GROOVING BLADES

INSERT IS NOT INCLUDED

See page 139 for inserts

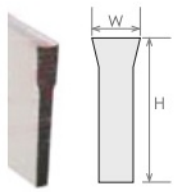
- Used on Aloris and DORAIN Type Quick-Change Tool Holders
- High performance rates. No more re-grinding. Insert indexability.
- Also can use GTL, GTR inserts.

Item#	Fits Holder	HSS Blade Reference	Blade Height	Cutting Width	Overall Length	Use Insert
3900-5971	AXA-7	P2	1/2	.087 & .093"	4-11/32	GTN/R/L 2
3900-5973	BXA-7	P3N	11/16	.087 & .093"	4-11/32	GTN/R/L 2
3900-5975	BXA-7	P3, T3	11/16	.120"	4-11/32	GTN/R/L 3
3900-5977	CXA-7	P3W	3/4	.120"	4-11/32	GTN/R/L 3
3900-5979	CA-7	P5X	7/8	.120"	5-29/32	GTN/R/L 3
3900-5981*	CA-7	P5N	7/8	.160"	5-29/32	GTN/R/L 4

*Limited Supply

P-TYPE CUT-OFF BLADES

- Parallel style blades have continuous width of cutting edge throughout length of blade.
- Used with Aloris, DORIAN & KDK type quick-change tool holders.



- **M2 HIGH SPEED STEEL** A fine general purpose ground tool bits show exceptional result on mild steel, alloys and tool steels. This tool bit makes a superior finishing tool.
- **COBALT** M42 (8%) Superior types of high speed steel which will work better where high heat is present. Used for heavy cuts in hard materials.

Parallel Style	Width W (In)	Height H (In)	Length (In)	HSS Item#	8% Cobalt Item#
P1N	.04	1/2	3-1/2	2000-6008	2000-7008
P1	1/16	1/2	4-1/2	2000-6010	2000-7010
P2	3/32	1/2	4-1/2	2000-6020	2000-7020
P2N	5/64	1/2	4-1/2	2000-6022	----------
P3S	1/8	1/2	4-1/2	2000-6025	2000-7025
P3N	3/32	11/16	5	2000-6030	2000-7030
P3	1/8	11/16	5	2000-6035	2000-7035
P3W	1/8	3/4	5	2000-6050	2000-7050
P4	5/32	11/16	5	2000-6055	2000-7055
P5	3/16	7/8	6	2000-6064	----------
P5X	1/8	7/8	6	2000-6065	2000-7065
P5N	5/32	7/8	6	2000-6066*	2000-7066
P6	1/4	7/8	6	2000-6070	----------

*Limited Supply

CUT-OFF BLADES, BEVELED

- **M2 HIGH SPEED STEEL** A fine general purpose ground tool bits show exceptional result on mild steel, alloys and tool steels. This tool bit makes a superior finishing tool.
- **COBALT** M35 (5%) Superior types of high speed steel which will work better where high heat is present. Used for heavy cuts in hard materials.

(Inch) Size (TxWxL)	HSS Item#	COBALT 5% Item#
3/32 x 1/2 x 4-1/2	2000-1002	2000-1102
3/32 x 5/8 x 5	2000-1003	2000-1106
1/8 x 1/2 x 4-1/2	2000-1000	2000-1110
1/8 x 3/4 x 5	2000-1004	2000-1114
1/8 x 7/8 x 6	2000-1005	2000-1118

- Used with Aloris, DORIAN & KDK type quick-change tool holders.
- 10° double beveled.

CUT-OFF TOOL HOLDERS
For Use With Cut-Off Blades

- Machined to precise tolerances and carefully heat-treated, these cut-off tool holders support the blade over a wide area, reducing the chance of blade breakage. Blade can be adjusted to any desired clearance for greater versatility, and it is beveled on both sides and held at an angle, providing necessary side clearance and top rake for a clean smooth cut. These holders DO NOT hold parallel type cut-off blades.

Blade NOT Included

Holder Size	Cut-Off Blade Size	Item#
5/16 x 3/4 x 4-1/2"	3/32 x 1/2"	2205-0312*
3/8 x 7/8 x 5"	3/32 x 5/8"	2205-0375
1/2 x 1-1/8 x 6"	1/8 x 3/4"	2205-0500
5/8 x 1-3/8 x 7"	1/8 x 7/8"	2205-0625
3/4 x 1-5/8 x 8"	3/16 x 1"	2205-0750*

7PC MINI TOOL HOLDER SET-Accept CCMT Inserts

- Use CCMT inserts
- Complete with fitted case.

*Limited Supply

Item#	Turn Shank	Bore Shank	Insert	Screw
2003-0250*	1/4"	5/16"	CCMT21.5	M2.5x6
2003-0375	3/8"	3/8"	CCMT21.5	M2.5x6
2003-0500	1/2"	1/2"	CCMT21.5	M2.5x6
2003-0625*	5/8"	5/8"	CCMT32.5	M4x10

- **Set includes:**
  6-Turning Holder (SCMCN, SCDCN, SCLCR, SCLCL, SCKCR & SCBCR)
  1-Boring Holder (SCLCR)
  1-T8 Torx Wrench

Inserts see page 172

5PC INDEXABLE CARBIDE TURNING TOOL SETS

5PC SETS

Item#	Square Shank	Insert I.C.	Set No.	Torx Wr.
2003-0001	1/4"	7/32"	ST-4	T6
2003-0002	3/8"	1/4"	ST-6	T8
2003-0003	1/2"	3/8"	ST-8	T15
2003-0004	5/8"	3/8"	ST-10	T15
2003-0005	3/4"	3/8"	ST-12	T15
2003-0006	1"	1/2"	ST-16	T20

5pc set includes:
- One of each - AR, AL, BR, BL & E Holder
- C-5 Inserts, TCMT style
- 5pc spare screws
- 2 Torx wrench
- Fitted case.

INDIVIDUAL (Insert & Torx Wrench Included)

Type	1/4 Shank 7/32 IC Insert Item#	3/8 Shank, 1/4 IC Insert Item#	1/2 Shank, 3/8 IC Insert Item#	5/8 Shank, 3/8 IC Insert Item#	3/4 Shank, 3/8 IC Insert Item#	1 Shank, 1/2 IC Insert Item#
AR	2003-0101	2003-0111	2003-0121	2003-0131	2003-0141	2003-0151
AL	2003-0102	2003-0112	2003-0122	2003-0132	2003-0142	2003-0152
BR	2003-0103	2003-0113	2003-0123	2003-0133	2003-0143	2003-0153
BL	2003-0104	2003-0114	2003-0124	2003-0134	2003-0144	2003-0154
E	2003-0105	2003-0115	2003-0125	2003-0135	2003-0145	2003-0155

REPLACEMENT INSERTS

Fit Shank	Insert I.C.	Insert No.	TiN (C-6) Item#
1/4"	7/32	TCMT090204	6004-9020
3/8"	1/4	TCMT110204	6004-9021
1/2, 5/8 & 3/4"	3/8	TCMT16T304	6004-9031
1"	1/2	TCMT220408	6004-6142

See page 185 for more inserts

10 PC PER PACKAGE

REPLACEMENT SCREWS

Screw	For Set	Item#
M2.5	1/4, 3/8"	2003-0012
M4	1/2, 5/8 & 3/4"	2100-0074
M5	1"	2100-0076

5PC INDEXABLE TURNING & BORING TOOL SETS-Accepts TCMT Inserts

- Use TCMT inserts
- Set comes with 4 turning tools, 1 boring tool, inserts & torx wrenches
- Complete with fitted aluminium case.

STACR

STFCR STCCR STECN STNCR

Inserts see page 185

*Limited Supply

Item #	Shank	Style in Set	Insert	Screw
2003-0031	5/16	STACR05-1.8	TCMT090204	M2.2x6
		STDCR05-1.8	TCMT090204	M2.2x6
		STNCR05-1.8	TCMT090204	M2.2x6
		STECN05-1.8	TCMT090204	M2.2x6
		S05H-STFCR1.8	TCMT090204	M2.2x6
2003-0032	3/8	STACR06-2	TCMT110204	M2.5x6
		STDCR06-2	TCMT110204	M2.5x6
		STNCR06-2	TCMT110204	M2.5x6
		STECN06-2	TCMT110204	M2.5x6
		S06M-STFCR2	TCMT110204	M2.5x6
2003-0033	1/2	STACR08-2	TCMT110204	M2.5x6
		STDCR08-2	TCMT110204	M2.5x6
		STNCR08-2	TCMT110204	M2.5x6
		STECN08-2	TCMT110204	M2.5x6
		S08Q-STFCR2	TCMT110204	M2.5x6
2003-0034*	5/8	STACR10-3	TCMT16T304	M4x10
		STDCR10-3	TCMT16T304	M4x10
		STNCR10-3	TCMT16T304	M4x10
		STECN10-3	TCMT16T304	M4x10
		S10R-STFCR3	TCMT16T304	M4x8
2003-0035*	3/4	STACR12-3	TCMT16T304	M4x10
		STDCR12-3	TCMT16T304	M4x10
		STNCR12-3	TCMT16T304	M4x10
		STECN12-3	TCMT16T304	M4x10
		S12S-STFCR3	TCMT16T304	M4x10

INDEXABLE TURNNING & BORING TOOLS

6PC 1/2" SHANK INDEXABLE TURNING TOOL SETS

- Made of 40Cr alloy steel.
- Screw down style.
- Tin coated inserts included.
- Complete with fitted aluminium case.

Holder Style	Shank	Holder	OAL	Use Insert	Use Torx Wr.	Use Screw
SVJCR06-2	3/8"	Turning	3	VCMT21.51	T-8	M2.5x7
SVJCL06-2	3/8"	Turning	3	VCMT21.51	T-8	M2.5x7
SCLCR06-2	3/8"	Boring	3	CCMT21.51	T-8	M2.5x7
SSDCN06-2J	3/8"	Turning	3	SCMT21.51	T-8	M2.5x7
S06H-SCLCR2	3/8"	Boring	4	CCMT21.51	T-8	M2.5x6
(1/2x1/2 with 3/8"Hole)	3/8"	Adapter	2.75	--	--	---

Shank No.	Center Height	Shank Dia.	OAL	Insert	Screw	Torx Wr.
SVJCR08-2A	1/2"	-	4"	VCMT21.51	M2.5x7	T8
SVJCL08-2A	1/2"	-	4"	VCMT21.51	M2.5x7	T8
SCLCR08-2A	1/2"	-	4"	CCMT21.51	M2.5x7	T8
SSDCN08-2A	1/2"	-	4"	SCMT21.51	M2.5x7	T8
S06K-SCLCR2	-	1/2"	5"	CCMT21.51	M2.5x6	T8
ADAPTER 1/2" I.D.	-	-	-	-	-	-

INSERTS - Replacement

Item #	Size
6053-0111	CCMT21.51
6004-3030	SCMT21.51
6005-3403	VCMT21.51

SCREWS - Replacement

Item #	Size
2100-0070	M2.5x6
2100-0066	M2.5x7

TORX WRENCH - Replacement

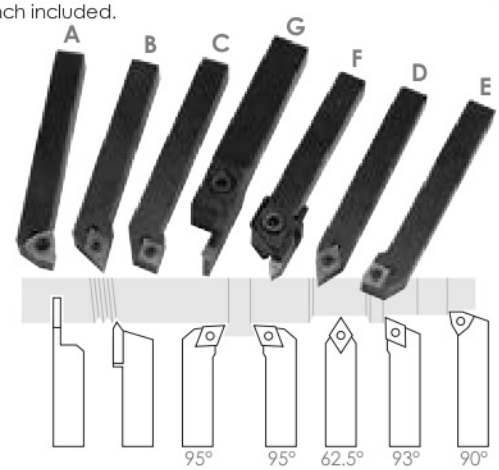
Item #	Size
2100-0092	T8

INDEXABLE CUT OFF AND TURNING TOOL SETS

- Carbide inserts and Allen wrench included.
- Multi-purpose Indexable tools
- Complete with fitted case.

7PC SET INCLUDES:

(A) Right Hand 90°
(B)Right Hand 93°
(C) Right Hand 95°
(D) Right Hand 62.5°
(E) Left Hand 95°
(F) External Threading
(G) Cut-off tool



7PC SETS

Item#	Shank
2002-0010	1/4"
2002-0012	3/8"
2002-0013	1/2"
2002-0014	5/8"
2002-0015	3/4"

C-6 REPLACEMENT INSERTS

10 PC PER PACKAGE

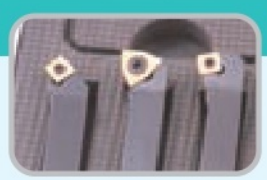
Item#	Style	For Shank	Insert No.
6003-2021	C, E	1/4,3/8 & 1/2"	CCMT060204
2002-0104	B, D	1/4,3/8 & 1/2"	DCMT070202
2002-0105	F	1/4,3/8 & 1/2"	JCL-15-120
2002-0106	G	All	JCQ3
2002-0107	A	1/4,3/8 & 1/2"	WCMX50308
6003-5031	C, E	5/8 & 3/4"	CCMT09T304
6004-0031	B, D	5/8 & 3/4"	DCMT11T304
2002-0127	F	5/8 & 3/4"	JCL20-120A
2002-0128	A	5/8 & 3/4"	WCMT06T308
2002-0126	A	5/8 & 3/4"	WCMT06T304
2002-0130	A	1/4,3/8 & 1/2"	WCMT050308

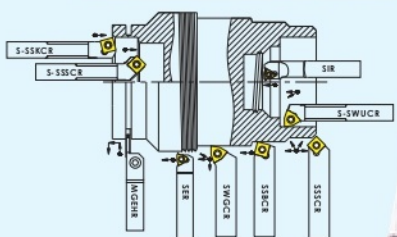
REPLACEMENT SCREWS (7pc Set)

Item#	For Shank
2002-0122	1/4,3/8 & 1/2"
2002-0142	5/8, & 3/4"

9PC INDEXABLE TURNING & BORING TOOL SETS

- Complete with fitted aluminium case.
- **Set includes:** Turning Holders, Boring Tools Holders, Inserts & Torx Wrenches





Item #	Shank	Style in Set	Insert	Screw
2002-0212	3/8	SSSCR3/8-3	SCMT09T3	M4x10
		SSBCR3/8-3	SCMT09T3	M4x10
		SWGCR3/8"-3	WCMT06T3	M4x10
		S-SSSCR5/16H3	SCMT060204	M2.5x6
		S-SSKCR5/16H3	SCMT060204	M2.5x6
		S-SWUCR5/16"H3	WCMT06T3	M4x8
		SER0375F11	11ERA60	M2.5x6
		S3/8H-SIR11	11IRA60	M2.5x6
		MGEHR3/8-02	MGMN200	GB70-85/M4x12
2002-0213	1/2	SSSCR1/2-3	SCMT09T3	M4x10
		SSBCR1/2-3	SCMT09T3	M4x10
		SWGCR1/2-3	WCMT06T3	M4x10
		S-SSSCR3/8J3	SCMT09T3	M4x10
		S-SSKCR3/8J3	SCMT09T3	M4x10
		S-SWUCR3/8J3	WCMT06T3	M4x10
		SER0500H11	11ERA60	M2.5x6
		S1/2J-STR11	11IRA60	M2.5x6
		MGEHR1/2-02	MGMN200	GB70-85/M4x12

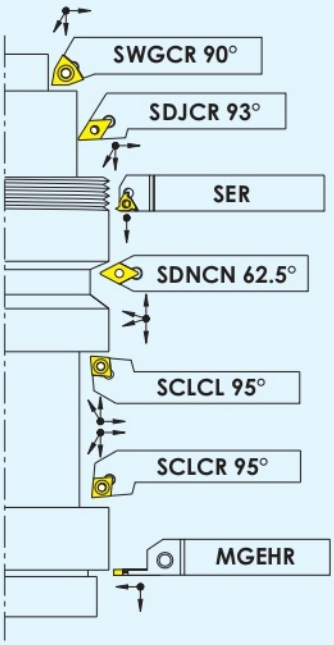
INSERTS - Replacement

Item#	Insert No.	Coated Grade
6004-3031	SCMT09T304	XAB749
2002-0128	WCMT06T308	TiN
6004-3030	SCMT060204	TiN

Pro-Series 7PC INDEXABLE TURNING TOOL SETS

- Complete with fitted aluminium case.
- **Set includes:** Turning Holders, Inserts & Torx Wrenches

Item #	Shank	Style in Set	Insert	Screw
2002-0112	3/8	MGEHR3/8-02 (CUT OFF BLADE)	MGMN200	GB70-85/M4x12
		SER3/8-11	11ERA60	M2.5x6
		SWGCR3/8-05	WCMT050308	M3x8
		SCLCR3/8-2	CCMT060204	M2.5x6
		SCLCL3/8-2	CCMT060204	M2.5x6
		SDNCN3/8-2	DCMT070204	M2.5x6
		SDJCR3/8-2	DCMT070204	M2.5x6
2002-0113	1/2	MGEHR1/2-02 (CUT OFF BLADE)	MGMN200	GB70-85/M4x12
		SER1/2-11	11ER A60	M2.5x6
		SWGCR1/2-05	WCMT050308	M3x8
		SCLCR1/2-2	CCMT060204	M2.5x6
		SCLCL1/2-2	CCMT060204	M2.5x6
		SDNCN1/2-2	DCMT070204	M2.5x6
		SDJCR1/2-2	DCMT070204	M2.5x6
2002-0114	5/8	MGEHR5/8-03 (CUT OFF BLADE)	MGMN300	GB70-85/M5x14
		SER5/8-16	16ER A60	M3.5x11
		SWGCR5/8-06	WCMT06T308	M4x8
		SCLCR5/8-3	CCMT09T304	M4x10
		SCLCL5/8-3	CCMT09T304	M4x10
		SDNCN5/8-3	DCMT11T304	M4x10
		SDJCR5/8-3	DCMT11T304	M4x10
2002-0115	3/4	MGEHR3/4-03 (CUT OFF BLADE)	MGMN300	GB70-85/M5x14
		SER3/4-16	16ER A60	M3.5x11
		SWGCR3/4-06	WCMT06T308	M4x10
		SCLCR3/4-3	CCMT09T304	M4x10
		SCLCL3/4-3	CCMT09T304	M4x10
		SDNCN3/4-3	DCMT11T304	M4x10
		SDJCR3/4-3	DCMT11T304	M4x10



REPLACEMENT CARBIDE INSERTS

- **For 7pc Indexable Tools Sets.**
- Coated.

DCMT Style Shown

CCMT Style Shown

WCMT Style Shown

11ERA60 16ERA60 Style Shown

MGMN Style Shown

Item#	Insert No.	Coated Grade
6024-3022	MGMN-200-G	BPS253CVD
6007-0004	11ERA60	TiN
6015-0005	WCMT050308	XAF799
6003-2021	CCMT060204	TiN
6004-0021	DCMT070204	XAB749
6024-3003	MGMN300-M	BPS-253CVD
6007-0012	16ERA60	TiN
6015-0008	WCMT06T304	XAF799
6003-2032	CCMT09T304	TiN
6004-0032	DCMT11T304	XAB749

REPLACEMENT CARBIDE INSERTS-TCMT

- **For 5pc Indexable Tools Sets.**
- Tin Coated.

Item#	Insert No.	Grade
6004-9020	TCMT090204	TiN
6004-9021	TCMT110204	TiN
6004-9031	TCMT16T304	TiN

SCREWS

Item#	Style
2100-0065	M2.2x6
2100-0070	M2.5x6
2100-0003	M3x8
2100-0083	M3.5x11
2100-0069	M4x8
2100-0074	M4x10
2100-0082	GB70-85 M4x12
2100-0087	GB70-85 M5x14

INDEXABLE BORING BARS

INDEXABLE BORING BAR IDENTIFICATION SYSTEM

S 8 R - S C L P R 2

TYPE OF BAR
S = Steel
A = Steel with coolant hole
C = Carbide
E = Carbide with coolant hole

SHANK DIAMETER (INCH)
Indicates bar diameter in sixteenths of an inch. Consult catalog for minimum bore diameter capability

BORING BAR LENGTH (INCH)
F=3" Q=7"
G=3.5 R=8
H=4 S=10
J=4.5 T=12
K=5 U=14
L=5.5 V=16
M=6 W=18
N=6.5 T=20
P=6.75 X=Special Length

HAND OF BAR
R = Right
L = Left

INSERT SIZE (I.C.)
1.2 = .1562"
1.5 = .1875
1.8 = .2187
2 = .250
2.5 = .3125
3 = .375
4 = .500
5 = .625
6 = .750
8 = 1.000

METHOD OF HOLDING INSERT
M = Clamp and lock pin
P = Lock pin
C = Clamp
S = Screw

INSERT SHAPE
C = 80° Diamond Insert
D = 55° Diamond Insert
S = Square Insert
T = Triangle Insert
V = 35° Diamond Insert
R = Round (Inch)
W = Trigon

BAR STYLE
U=Offset shank with negative 3° (93°) end or side cutting edge angle
F=Offset shank with 0° (90°) end cutting edge angle
G=Offset shank side/end cutting (round insert)
K=Offset shank with 15° (75°) end cutting edge angle
L=Offset shank with negative 5° (93°) end or side cutting edge angle
Q=Offset shank with negative 17.5° (107.5°) cutting edge angle
LX=Offset shank with negative 5° (95°) end cutting edge angle, back boring
X=Offset shank with negative 27.5° (117.5°) side or end cutting edge angle

SCLCR INDEXABLE BORING BARS & SETS

SCLCR

- Utilize CCMT 80° diamond inserts.
- 7° Relief angle.
- Negative 5° Lead angle for boring.
- 3° Side & end cutting edge angle.
- Torx wrench included.
- CCMT insert included.

Application:
- Profiling bars for semi-finishing and finishing operations

INDIVIDUALS

Item#	SET/Style	Dia. x OAL	Min. Bore	Insert	Screw	Torx Wrench
1001-0025	A	5/16 x 4"	.415"	CCMT-21.5	M2.5x5	T-8
1001-0026	B	3/8 x 6"	.480"	CCMT-21.5	M2.5x6	T-8
1001-0024	C	1/2 x 8"	.600"	CCMT-21.5	M2.5x6	T-8
1001-0027	D	1/2 x 7"	.600"	CCMT-32.5	M4x8	T-15
1001-0028	E	5/8 x 8"	.770"	CCMT-32.5	M4x8	T-15
1001-0029	F	3/4 x 10"	.945"	CCMT-32.5	M4x10	T-15
1001-0030	G	1 x 12"	1.250"	CCMT-32.5	M4x10	T-15
1001-0031	H	1 x 12"	1.250"	CCMT-432	M5x12	T-20

See page 172 for carbide inserts. Spare parts shown on pages 165-166.

INSERTS - Replacement

Item #	Size
6053-0111	CCMT21.51
6053-0112	CCMT21.52
6053-0222	CCMT32.52
6053-0432	CCMT432

SCREWS - Replacement

Item #	Size
2100-0070	M2.5x6
2100-0069	M4x8
2100-0074	M4x10
2100-0076	M5x12

TORX WRENCHES - Replacement

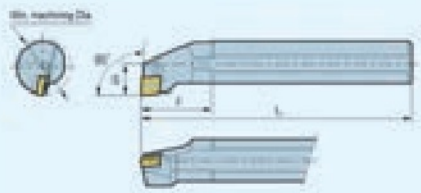
Item #	Size
2100-0092	T8
2100-0095	T15
2100-0096	T20

SCLCR COOLANT-THRU INDEXABLE BORING BARS & SETS

SCLCR

- Utilizes CCMT 80° diamond inserts.
- 7° Relief angle.
- Negative 5° Lead angle for boring.
- Torx wrench included.
- CCMT insert included.

4pc Set Includes:
- (4) Indexable Boring Bars.
- (2) Torx wrenches.
- (14) CCMT inserts



Application:
- Profiling bars for semi-finishing and finishing operations
- The coolant hole allows the cutting edge to cool and removes chips.

See pages 171-172 for carbide inserts.
Spare parts shown on pages 165-166.

INDIVIDUAL

Dimension Style	(Inch) Dia. x OAL	Min. Bore	Insert	Screw	Torx Wrench	Item#
A05H-SCLCR2	5/16 x 4	0.415"	CCMT-21.5	M2.5x5	T-8	**1001-0312**
A06J-SCLCR2	3/8 x 4-1/2	0.48"	CCMT-21.5	M2.5x6	T-8	**1001-0375**
A08K-SCLCR2	1/2 x 5	0.6"	CCMT-21.5	M2.5x6	T-8	**1001-0500**
A10M-SCLCR2	5/8 x 6	0.77"	CCMT-21.5	M2.5x6	T-8	**1001-0625**

SCLPR INDEXABLE BORING BARS-SCREW ON STYLE
Negative 5-Degree Lead Angle for Boring and Profiling, 11° Relief

SCLPR

- Use for boring & facing

Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Insert Style	Screw	Torx Wrench	Item#
6M-2	0.375	0.480	6	CPMT-21.51	M2.5x6	T-8	**1009-0375**
8R-2	0.500	0.600	8	CPMT-21.51	M2.5x6	T-8	**1009-0500**
10S-3	0.625	0.770	10	CPMT-32.52	M4x8	T-15	**1009-0625**
12S-3	0.750	.0945	10	CPMT-32.52	M4x10	T-15	**1009-0750**
16T-4	1.000	1.250	12	CPMT-432	M5x12	T-20	**1009-1000**
18S-09	18mm	22mm	250mm	CPMT09T304	M4x9	T15	**1009-1018***

See page 175 for carbide inserts. Spare parts shown on pages 165-166.

INSERT NOT INCLUDED

*Limited Supply

SDJCR INDEXABLE BORING BARS - SCREW ON
Negative 3-Degree Lead Angle, 7° Relief

SDJCR-RH

- Use DCMT 55° rhombic positive inserts

Application: Profiling and copying boring bar for semi finishing

Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Use Insert	Screw	Torx Wrench	Item#
8-2	1/2	.780	8	DCMT-21.52	M2.5x6	T-8	**1010-0500**
10-2	5/8	.840	10	DCMT-21.52	M2.5x6	T-8	**1010-0625**
12-3	3/4	1.125	10	DCMT-32.52	M4x10	T-15	**1010-0750**
16-3	1	1.500	12	DCMT-32.52	M4x10	T-15	**1010-1000**

See pages 175-176 for carbide inserts. Spare parts shown on pages 165-166.

INSERT NOT INCLUDED

SDUCR INDEXABLE BORING BARS - SCREW ON STYLE
Negative 3-Degree Lead Angle for Boring and Profiling, 7° Relief
Offset shank with negative 3° (93°) end or side cutting edge

SDUCR

- Use DCMT 55° rhombic positive inserts

Application: Profiling and copying boring bar for semi finishing

Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Use Insert	Screw	Torx Wrench	Item#
6-2	0.375	0.520	6	DCMT-21.51	M2.5x6	T-8	**1003-2375**
8-2	0.500	0.640	6	DCMT-21.51	M2.5x6	T-8	**1003-2500**
10-2	0.625	0.770	8	DCMT-21.51	M2.5x6	T-8	**1003-2625**
12-3	0.750	0.945	10	DCMT-32.52	M4x10	T-15	**1003-2750**

See page ??? for carbide inserts. Spare parts shown on pages ???.

INSERT NOT INCLUDED

INDEXABLE BORING BARS

STFCR INDEXABLE BORING BARS-SCREW ON STYLE
0-Degree Lead Angle for Boring and Profiling, 7° Relief

STFCR

- Use TCGT or TCMT inserts

Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Screw	Torx Wrench	Item#
6-2	0.375"	0.480"	6"	TCMT-21.51	M2.5x6	T-8	**1004-2375**
8-2	0.500"	0.600"	8"	TCMT-21.51	M2.5x6	T-8	**1004-2500**
10-2	0.625"	0.770"	10"	TCMT-21.51	M2.5x6	T-8	**1004-2625**
12-3	0.750"	0.945"	10"	TCMT-32.52	M4x10	T-15	**1004-2750**
18S-16	18mm	22mm	250mm	TCMT16T304	M4x8	T-15	**1004-3018***

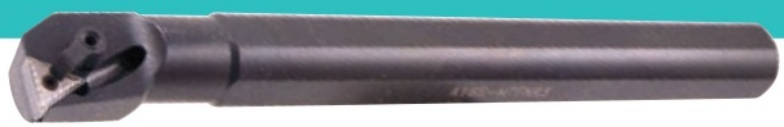
*Limited Supply

INSERT NOT INCLUDED

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

MTFNR3 INDEXABLE BORING BARS - CLAMP ON - COOLANT-THRU
0-Degree Lead Angle

MTFNR3



Uses TNMG, TNMM, TNMA Inserts

Limited Supply!

INSERT NOT INCLUDED

Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Use Insert	Shim	Lock Pin	Clamp	Hex Wrench	Clamp Screw	Item#
A20T	1-1/4	1.57	14	TN..-33.	T1603B	NL-0414	CL-6	2.5mm	XNS-0520	**1007-1250**
A24T	1-1/2	2.00	14	TN..-33.	T1603B	NL-0414	CL-6	2.5mm	XNS-0520	**1007-1500**

See pages 186-188 for carbide inserts. Spare parts shown on pages 165-166.

STFPR INDEXABLE BORING BARS - SCREW ON
0-Degree Lead Angle For Boring and Facing, 11° Relief

STFPR

- Use TPMT inserts

Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Screw	Torx Wrench	Item#
6M-2	3/8"	0.480"	6"	TPMT-21.51	M2.5x6	T-8	**1021-0375**
8R-2	1/2"	0.600"	8"	TPMT-21.51	M2.5x6	T-8	**1021-0500**
10S-2	5/8"	0.770"	10"	TPMT-21.51	M2.5x6	T-8	**1021-0625**
12S-3	3/4"	0.945"	10"	TPMT-32.52	M4x10	T-15	**1021-0750**
16T-3	1"	1.250"	12"	TPMT-32.52	M4x10	T-15	**1021-1000**
18S-16	18mm	22	250mm	TPMT16T304	M4x8	T-15	**1021-1018***

*Limited Supply

INSERT NOT INCLUDED

See page 189 for carbide inserts. Spare parts shown on pages 165-166.

CTFPR INDEXABLE BORING BARS - CLAMP ON
0-Degree Lead Angle For Boring and Facing

MCTFPR

- Use TPG inserts

Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Clamp	Clamp Screw	Hex Wrench	Item#
12S-3	3/4"	0.945"	10"	TPG-32.	CTFPN-5	CTFP-M5	3.0mm	**1023-0750**
16T-3	1"	1.250"	12"	TPG-32.	CTFPN-5	CTFP-M5	3.0mm	**1023-1000**
20U-3	1-1/4"	1.570"	14"	TPG-32.	CL-20	XNS-620	3.0mm	**1023-1250**
24U-4	1-1/2"	2.000"	14"	TPG-43.	CL-20	XNS-620	3.0mm	**1023-1500**

Limited Supply!

INSERT NOT INCLUDED

See page 189 for carbide inserts. Spare parts shown on pages 165-166.

MCLNR INDEXABLE BORING BARS - CLAMP ON
Negative 5-Degree Lead Angle

MCLNR

- Use CNMG inserts

INSERT NOT INCLUDED

Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Lock Pin	Shim	Clamp	Clamp Screw	Hex Wrench	Item#
20T-4	1-1/4"	1.57"	12"	CNMG-432	NL-0617	C1203B	CL-6	XNS0520	2.5mm	**1024-1250**
24U-4	1-1/2"	2.00"	14"	CNMG-432	NL-0617	C1203B	CL-6	XNS0520	2.5mm	**1024-1500**
28U-4	1-3/4"	2.03"	14"	CNMG-432	NL-0617	C1203B	CL-6	XNS0520	2.5mm	**1024-1750***

*Limited Supply

See pages 173-175 for carbide inserts. Spare parts shown on pages 165-166.

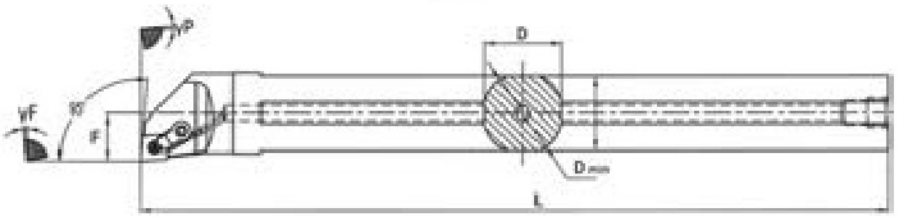
HARLINGEN® MCLNR INDEXABLE BORING BARS -CLAMP ON - COOLANT THRU

MCLNR

- 5-degree lead angle for turning, profiling or facing.
- Uses CNMG432 insert.
- Coolant through.

INSERT NOT INCLUDED

Up to 30% Higher Productivity & Profitability !



Item#	Tool Holder Style	Dimensions F	P	D	D min	L	F	Shim	Lock Pin	Clamp	Clamp Screw	Hex Wrench
9710-0008	A24-4	-12°	-5°	1.453"	1.5"	14"	89/100"	ICSN-433	NL-46	CK-20	SCT-20	S3/32,S1/8

See pages 173-175 for carbide inserts. Spare parts shown on pages 165-166.

MTFNR INDEXABLE BORING BARS - CLAMP ON 0-Degree Lead Angle

MTFNR

Uses TNMG, TNMM, TNMA Inserts

Limited Supply!

INSERT NOT INCLUDED

Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Lock Pin	Hex Wrench	Shim	Use Insert	Hex Wrench	Clamp	Clamp Screw	Item#
12-3	3/4	0.945	10	NL-0410	2mm	----	TN..-33.	2.5mm	CL-6	XNS0520	**1025-0750**
20-3	1-1/4	1.570	14	NL-0410	2mm	T-1603B	TN..-33.	2.5mm	CL-6	XNS0520	**1025-1250**
24-3	1-1/2	2.00	14	NL-0410	2mm	T-1603B	TN..-33.	2.5mm	CL-6	XNS0520	**1025-1501**
24-4	1-1/2	2.00	14	NL-0617	2.5mm	T-2203B	TN..-43.	4mm	CL-12	XNS0829	**1025-1500**

See pages 186-188 for carbide inserts. Spare parts shown on pages 165-166.

MVUR INDEXABLE BORING BARS - CLAMP ON Negative 3-Degree Lead Angle

MVUR

Uses VNMG, VNMM, VNMA,VBMT Inserts

INSERT NOT INCLUDED

Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Clamp	Lock Pin	Clamp Screw	Hex Wrench	Item#
16T-3	1"	1.30"	12"	VBMT-332	CL-20	NL-0410	XNS0620	2mmx3mm	**1026-1000**

See page 191 for carbide inserts. Spare parts shown on pages 165-166.

MWLNR INDEXABLE BORING BARS - CLAMP ON Negative 5-Degree Lead Angle, 0° Relief

MWLNR

Uses WNMG, WNMA Inserts

INSERT NOT INCLUDED

Boring Bar Style	Shank	Min. Bore	OAL	Hex Wrench	Use Insert	Lock Pin	Shim	Clamp	Clamp Screw	Hex Wrench	Item#
12S-3	3/4"	0.945"	10"	2mm	WNMG-332	NL-0410	---	CL-6	XNS0520	2.5mm	**1028-0750**
16T-4	1"	1.250"	12"	2mm	WNMG-432	NL-0611	---	CL-20	XNS0620	2.5mm	**1028-1001**
20U-3	1-1/4"	1.540"	14"	2mm	WNMG-332	NL-0414	W0603B	CL-6	XNS0520	2.5mm	**1028-1250**
20U-4	1-1/4"	1.57"	14"	2mm	WNMG-432	NL-0617	W0803B	CL-20	XNS0620	2.5mm	**1028-1251**

See pages 194-195 for carbide inserts. Spare parts shown on pages 165-166.

INDEXABLE BORING BARS

TBB INDEXABLE BORING BARS
Use TPGH, TPMM, TPGW Inserts, 11° Relief

Limited Supply!

INSERT NOT INCLUDED

See page 191 for carbide inserts. Spare parts shown on pages 165-166.

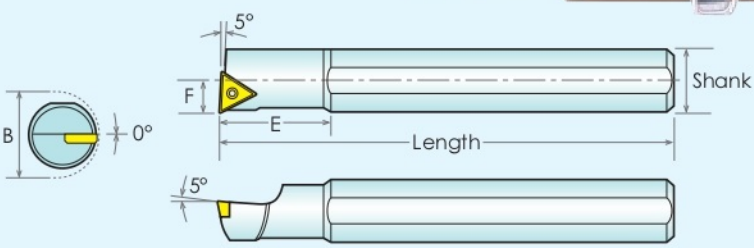
Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Use Insert	Angle Enter	Screw	Torx Wrench	Item#
S6-2	1/2	.430	5	TPG.-22.	91°	M2.5x6	T-8	**1029-0500**
S8	1/2	.700	6	TPG.-32.	91°	M4x8	T-15	**1029-0503**
L8	1/2	.700	6	TPG.-32.	85°	M4x8	T-15	**1029-0504**
N8	1/2	.700	6	TPG.-32.	95°	M4x8	T-15	**1029-0505**
L10	5/8	.710	7	TPG.-32.	85°	M4x8	T-15	**1029-0626**
N10	5/8	.710	7	TPG.-32.	95°	M4x8	T-15	**1029-0627**
S12-3	3/4	.845	10	TPG.-32.	91°	M4x10	T-15	**1029-0750**

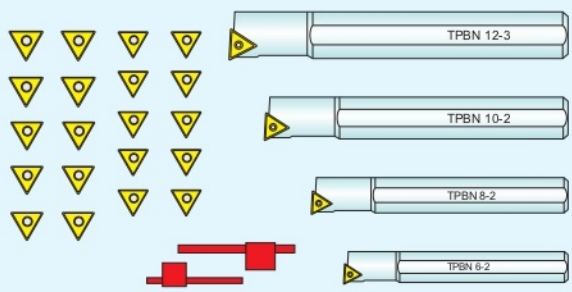
TPBN INDEXABLE BORING BAR SETS
Use TPGW Inserts

Features:

- Small hole capacity to a minimum of .430"
- Insert pocket has been scientifically designed to eliminate vibration and maximize the depth of cut.
- Bars made of heat treated, precision ground alloy steel.
- Clearance angle of the insert, in relation to cutting edge, gives best micro finish.
- The positive insert with advanced chip breaker design allows for heavier cuts.

1001-0727 Shown





27pc Set Includes:

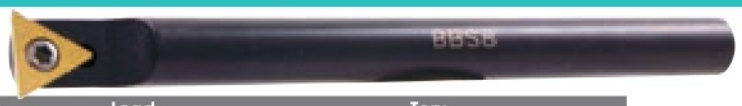
Boring Bar Style	Shank	(Inch) Min. Bore	OAL	Screw	Torx Wr.	Use Insert
6-2	1/2	.430	5	M2.5x6	T8	TPGW-21.5
8-2	1/2	.590	6	M2.5x6	T8	TPGW-21.5
10-2	5/8	.682	8	M2.5x6	T8	TPGW-21.5
12-3	3/4	.845	10	M4x8	T15	TPGW-32.
16-3	1	1.115	12	M4x10	T15	TPGW-32.
20-3	1-1/4	1.370	12	M4x10	T15	TPGW-32.
20-4	1-1/4	1.370	12	M5x12	T20	TPGW-43.
24-4	1-1/2	1.680	12	M5x12	T20	TPGW-43.

31pc Set Includes:

Boring Bar Style	Shank	Min. Bore	OAL	Screw	Torx Wr.	Use Insert
6-2	1/2"	.430"	5"	M2.5x6	T8	TPGW-21.5
8-2	1/2"	.590"	6"	M2.5x6	T8	TPGW-21.5
10-2	5/8"	.682"	8"	M2.5x6	T8	TPGW-21.5
12-3	3/4"	.845"	10"	M4x8	T15	TPGW-32.

See page 190 for carbide inserts. Spare parts shown on pages 165-166.

BBN/BBS INDEXABLE BORING BARS
Use TPGH, TPMM, TPGW Inserts • Positive Rake • 11° Relief



Boring Bar Style	Shank	Min. Bore	OAL	Use Insert	Lead Angle	Screw	Torx Wrench	Item#
S8	1/2"	.700"	6"	TP..-32.	-1	M4x10	T-15	**1030-0500**
N8	1/2"	.700"	6"	TP..-32.	-5	M4x10	T-15	**1030-0502***
S10	5/8"	.710"	7"	TP..-32.	-1	M4x10	T-15	**1030-0625***
N10	5/8"	.710"	7"	TP..-32.	-5	M4x10	T-15	**1030-0627**
N12-3	3/4"	.845"	10"	TP..-32.	-5	M4x10	T-15	**1030-0750**
S12-3	3/4"	.845"	10"	TP..-32.	-1	M4x10	T-15	**1030-0751***

See page 191 for carbide inserts. Spare parts shown on pages 165-166.

*Limited Supply

MINI INDEXABLE BORING BARS
Use CCMT Inserts, 7° Relief

- Screw down style

See page 171 for carbide inserts. Spare parts shown on pages 165-166

Boring Bar Style	Shank	Min. Bore	OAL	Neck Dia.	Neck Length	Use Insert	Screw	Torx	Item#
S05 SCLCR06	5/16"	.415"	4.00"	.236"	.985"	CCMT-21.5	M2.5x5	T-8	**1031-0312**
S06 SCLCR06	3/8"	.472"	4.33"	.315"	1.26"	CCMT-21.5	M2.5x6	T-8	**1031-0375**
S08 SCLCR06	1/2"	.552"	5.00"	.393"	1.50"	CCMT-21.5	M2.5x6	T-8	**1031-0500**
S10 SCLCR06	5/8"	.708"	5.90"	.472"	1.97"	CCMT-21.5	M2.5x6	T-8	**1031-0625**

INDIVIDUAL ROUND SHANK INDEXABLE BORING BARS
Use TCMT Inserts • Positive Rake 90° Lead, 7° Relief

- Negative 3° lead angle.
- Uses TCMT insert.
- Screw down style.
- Includes TiN coated insert.

Item#	Shank Dia.	Length	Bore Depth	Min. Bore	Insert	Screw	Torx Wr.
1001-0741	1/2	2-3/4	1-1/4	7/16	TCMT21.51	M2.5x5	
1001-0743	1/2	3-5/8	2-1/8	7/16	TCMT21.51	M2.5x5	
1001-0745	1/2	3	1-1/2	1/2	TCMT21.51	M2.5x6	
1001-0747	1/2	4	2-1/2	1/2	TCMT21.51	M2.5x6	
1001-0751	5/8	3	1-1/4	7/16	TCMT21.51	M2.5x5	T-8
1001-0753*	5/8	3-7/8	2-1/8	7/16	TCMT21.51	M2.5x5	
1001-0755*	5/8	3-1/4	1-1/2	1/2	TCMT21.51	M2.5x6	
1001-0757	5/8	4-1/4	2-1/2	1/2	TCMT21.51	M2.5x6	
1001-0759	5/8	3-1/2	1-3/4	9/16	TCMT221	M2.5x6	

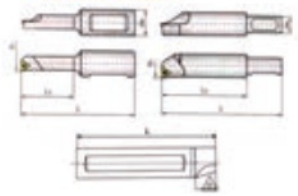
Item#	Shank Dia.	Length	Bore Depth	Min. Bore	Insert	Screw	Torx Wr.
1001-0761*	5/8	4-5/8	2-7/8	9/16	TCMT221	M2.5x6	
1001-0771	3/4	3-3/8	1-3/8	7/16	TCMT21.51	M2.5x5	
1001-0773	3/4	4-1/4	2-1/4	7/16	TCMT21.51	M2.5x5	
1001-0775	3/4	3-5/8	1-5/8	1/2	TCMT21.51	M2.5x6	
1001-0777	3/4	4-5/8	2-5/8	1/2	TCMT21.51	M2.5x6	T-8
1001-0779	3/4	3-7/8	1-7/8	9/16	TCMT221	M2.5x6	
1001-0781	3/4	5	3	9/16	TCMT221	M2.5x6	
1001-0783*	3/4	4-1/4	2-1/4	11/16	TCMT221	M2.5x7	
1001-0785	3/4	5-1/2	3-1/2	11/16	TCMT221	M2.5x7	

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

*Limited Supply

7PC 18MM ROUND SHANK INDEXABLE BORING BAR SET
Use TCMT Inserts • Positive Rake 90° Lead, 7° Relief

- Negative 3° lead angle.
- TCMT21-5. insert fits all bars.
- Made of 40Cr alloy steel.
- Screw down style.
- Includes C-6 inserts.
- Furnished with fitted aluminium case.

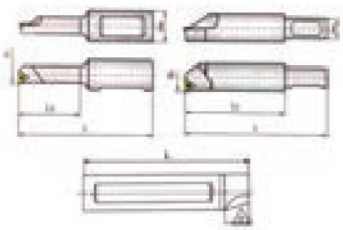


Shank No.	Dc Min.	Shank dm	L	Lc	Insert	Screw	Torx Wr.
SBJ1810-40TC06	10	18	88	40	TCMT06T104L	M2x5	T6
SBJ1812-53TC09	12	18	100	53	TCMT090204L	M2.5x6	T8
SBJ1816-68TC09	16	18	113	68	TCMT090204L	M2.5x6	T8
SBJ1820-83TC11	20	18	123	83	TCMT110304L	M3x7	T10
SBJ1825-90TC11	25	18	130	90	TCMT110304L	M3x7	T10
SBJ1830-90TC11	30	18	130	90	TCMT110304L	M3x7	T10
SBJ18F-108TC11	110	18	108	-	TCMT110340L	M3x7	T10

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

7PC 1/2" ROUND SHANK INDEXABLE BORING BAR SET
Uses TCMT Inserts, 7° Relief

- Made of 40Cr steel.
- Use TC__ Style inserts.
- Screw down style.
- Includes inserts.
- Complete with fitted aluminuim case.



Shank dm	Min. Bore Dc.	Bore Depth Lc	OAL L	Use Insert	Use Torx Wr.	Use Screw	Bar Style Code
1/2"	5/16	1.25	2.75	TCMT06T-104L	T-6	M2x4	SBJ0805-1.25TC52
	3/8	1.57	3.00	TCMT06T-104L	T-6	M2x5	SBJ0806-1.57TC52
	1/2	2.09	3.42	TCMT090204L	T-8	M2.5x6	SBJ0808-2.09TC73
	5/8	2.68	3.94	TCMT090204L	T-8	M2.5x6	SBJ0810-2.68TC73
	3/4	3.25	4.53	TCMT110304L	T-10	M3x8	SBJ0812-3.25TC22
	1	3.54	4.80	TCMT110304L	T-10	M3x8	SBJ0816-3.54TC22
	3	-	2.75	TCMT110304L	T-10	M3x7	SBJ08F-2.75TC22

See page 185 for carbide inserts.
Spare parts shown on pages 165-166.

4PC 1/2" ROUND SHANK INDEXABLE BORING BAR SET
Use TCMT Inserts • Positive Rake 90° Lead, 7° Relief

- Negative 3° lead angle.
- TCMT21-5. insert fits all bars.
- Screw down style.
- Includes inserts.

Set	Shank	Min. Bore	(Inch) OAL	Bore Depth	Use Insert	Use Torx Wr.	Use Screw
4	1/2	7/16	2-3/4	1-1/4	TCMT21-51	T-8	M2.5x5
	1/2	7/16	3-5/8	2-1/8			M2.5x5
	1/2	1/2	3	1-1/2			M2.5x6
	1/2	1/2	4	2-1/2			M2.5x6

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

6PC 5/8" ROUND SHANK INDEXABLE BORING BAR SET
Use TCMT Inserts • Positive Rake 90° Lead, 7° Relief

- Negative 3° lead angle.
- TCMT21-5. insert fits all bars.
- Screw down style.
- Includes inserts.
- Includes fitted case.

Set	Shank	Min. Bore	(Inch) OAL	Bore Depth	Use Insert	Use Torx Wr.	Use Screw
6	5/8	7/16	3	1-1/4	TCMT21-51	T-8	M2.5x5
		7/16	3-7/8	2-1/8			M2.5x5
		1/2	3-1/4	1-1/2			M2.5x6
		1/2	4-1/4	2-1/2			M2.5x6
		9/16	3-1/2	1-3/4	TCMT221		M2.5x6
		9/16	4-5/8	2-7/8			M2.5x6

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

8PC 3/4" ROUND SHANK INDEXABLE BORING BAR SET
Use TCMT Inserts • Positive Rake 90° Lead, 7° Relief

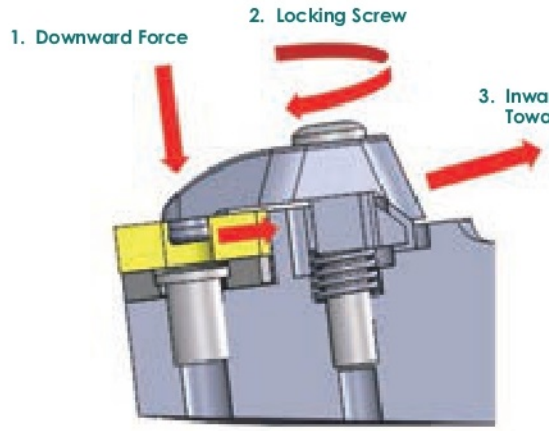
- Negative 3° lead angle.
- TCMT21-5. insert fits all bars.
- Screw down style.
- Includes inserts.
- Includes fitted case.

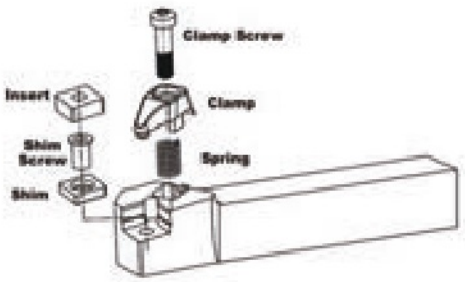
Set	Shank	Min. Bore	(Inch) OAL	Bore Depth	Use Insert	Use Torx Wr.	Use Screw
8	3/4	7/16	3-3/8	1-3/8	TCMT21-51	T-8	M2.5x5
		7/16	4-1/4	2-1/4			M2.5x5
		1/2	3-5/8	1-5/8			M2.5x6
		1/2	4-5/8	2-5/8			M2.5x6
		9/16	3-7/8	1-7/8	TCMT221		M2.5x6
		9/16	5	3			M2.5x6
		11/16	4-1/4	2-1/4			M2.5x7
		11/16	5-1/2	3-1/2			M2.5x7

See page 185 for carbide inserts. Spare parts shown on pages 165-166.

ADVANTAGES OF T-STYLE TOOL HOLDERS - RIGID CLAMP DESIGN

- New clamping mechanism allows clamping force to be applied not only downward but also pulling inward towards the tool body.
- Unique feature improves clamping rigidity and position accuracy which in turn will extend insert tooling life.
- Locating pin on the front of the clamp makes an arc contact with the inner wall of insert hole, resulting in an evenly distributed clamping force that is more secure and rigid.
- Locating lug on the back of the clamp matches with the slot on the tool body to guide the clamp to be seated repetitively which will improve the clamping accuracy.





HARLINGEN® HIGH QUALITY INDEXABLE TURNING TOOL HOLDERS - ADVANTAGES

- Superior edge toughness.
- Excellent wear and depth-of-cut notch resistance.
- For use in all finishing, medium, and roughing applications.

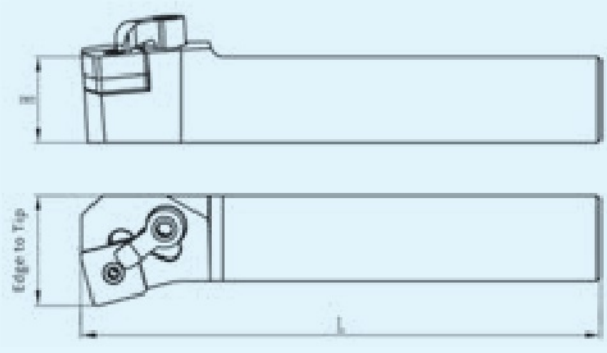
Up to 30% Higher Productivity & Profitability !

- **SURFACE FINISHING**
  Each tool holder is black oxidized. The ultra smooth surface is rust proof and extremely durable.
- **TOOL HOLDER HARDNESS HRC 45**
  High grade alloy steel provides outstanding strength and rigidity delivering higher productivty, stability, and longer tool life.

- **100% INSERT SEATING CONTROL**
  Using a .02mm feeler gage, each tool is qualified to assure the gap between the insert and pocket base is <0.02mm. We guarantee the Gap is <.02mm
- **CHAMFERS**
  All the chamfers are processed by CNC machines to ensure uniformity.

INSERT BASE, NOSE HEIGHT, EDGE TO TIP, LENGTH OF TOOL HOLDER.

Each dimension is 100% inspected by testing with specific inspection insert according to ISO standard.

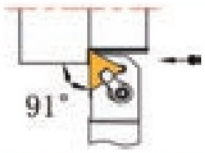


INDEXABLE TURNING TOOL HOLDERS

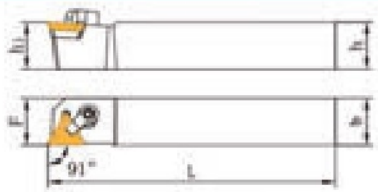
CTAPR TOP CLAMP STYLE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

CTAPR

- 11° Relief
- For turning and facing.



Limited Supply!



90° RIGHT HAND

See pages 165-166 for spare parts. Replacement inserts shown on page 189.

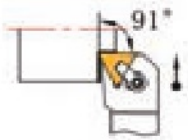
INSERTS NOT INCLUDED

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Key
2016-2102	CTAPR10-2B	5/8"	5/8"	.63"	4-1/2"	TP..22.	T11D	M2.5x6	CL-6	XNS-0520	T8 S2.5
2016-2163	CTAPR16-3D	1"	1"	1.00"	6"	TP..32.	T16D	M3x8-D5	CL-6	XNS-0520	S2 S2.5

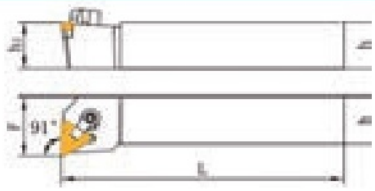
CTFPR TOP CLAMP STYLE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

CTFPR

- 11° Relief



Limited Supply!



90° RIGHT HAND

INSERTS NOT INCLUDED

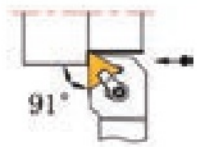
See pages 165-166 for spare parts. Replacement inserts shown on page 189.

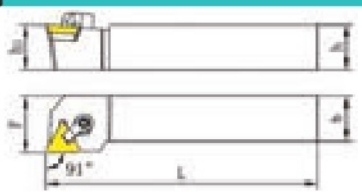
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Key
2031-0124	CTFPR12-3B	3/4"	3/4"	1.00"	4-1/2"	TP..32.	T16D	M3x8-D5	CL-6	XNS-0520	S2 S2.5
2031-0164	CTFPR16-4D	1"	1"	1.25"	6"	TP..43.	T22D	M3x8-D5	CL-12	XNS-0829	S2 S4
2031-0204	CTFPR20-4D	1-1/4"	1-1/4"	1.50"	6"	TP..43.	T22D	M3x8-D5	CL-12	XNS-0829	S2 S4

CTGPR TOP CLAMP STYLE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

CTGPR

- 11° Relief





90° RIGHT HAND

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on page 189.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Key
2015-1103	CTGPR12-3B	5/8"	5/8"	.75"	4-1/2"	TP..32.	T16D	M3x8-D5	CL-6	XNS-0520	S2 S2.5
2015-1123	CTGPR16-4D	3/4"	3/4"	1.00"	4-1/2"	TP..43.	T22D	M3x8-D5	CL-12	XNS-0229	S2 S2.5
2015-1163	CTGPR20-4D	1"	1"	1.25"	6"	TP..43.	T22D	M3x8-D5	CL-12	XNS-0229	S2 S2.5

DCLNR TOP & HOLE CLAMP STYLE TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

DCLNR

- 0° Relief

Limited Supply!

RIGHT HAND

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 173-174.

Tool Holder Style	Shank	(Inch) OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
20-4E	1-1/4	7	1-1/2	CN..-43.	C1203B	THT0706	DLM4	LE06	**2017-0204**
20-5E	1-1/4	7	1-1/2	CN..-54.	C1604B	THT0907	DLM4	LE06	**2017-0205**

DDJNR TOP & HOLE CLAMP STYLE TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

DDJNR

- 0° Relief

INSERTS NOT INCLUDED

RIGHT HAND

Limited Supply!

See pages 165-166 for spare parts. Replacement inserts shown on pages 176-178.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
20-4E	1-1/4	7	1-1/2	DNM.-43.	D1504B	THT0706	DLM4	LE06	**2018-0204**

DTGNR TOP & HOLE CLAMP STYLE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

DTGNR

- 0° Relief

INSERTS NOT INCLUDED

Limited Supply!

RIGHT HAND

See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
12-3C	3/4	4-1/2	1	TNM.-32.	T1603B	THT0505	DLM3	LE05	**2019-0123**
16-3D	1	6	1-1/4	TNM.-32.	T1603B	THT0505	DLM3	LE05	**2019-0163**
16-4D	1	6	1-1/4	TNM.-43.	T2203B	THT0706	DLM4	LE06	**2019-0164**
20-4E	1-1/4	7	1-1/2	TNM.-43.	T2203B	THT0706	DLM4	LE06	**2019-0204**

DTJNR TOP & HOLE CLAMP STYLE TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

DTJNR

- 0° Relief

INSERTS NOT INCLUDED

Limited Supply!

RIGHT HAND

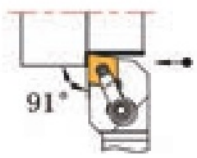
See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
12-3C	3/4	5	1	TNM.-32.	T1603B	THT0505	DLM3	LE05	**2020-0123**
16-3D	1	6	1-1/4	TNM.-32.	T1603B	THT0505	DLM3	LE05	**2020-0163**
16-4D	1	6	1-1/4	TNM.-43.	T2203B	THT0706	DLM4	LE06	**2020-0164**
20-4E	1-1/4	7	1-1/2	TNM.-43.	T2203B	THT0706	DLM4	LE06	**2020-0204**

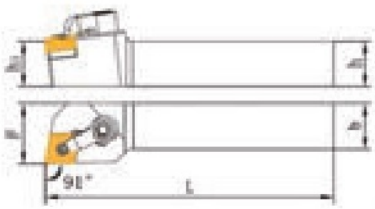
MCGNR PIN & CLAMP STYLE TOOL HOLDERS
90° Lead Angle • RIGHT HAND

MCGNR

- -5° Negative Rake



Limited Supply!



INSERTS NOT INCLUDED

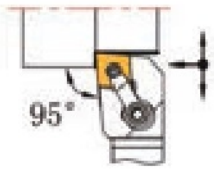
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2010-1124	MCGNR12-4C	3/4"	3/4"	1"	5"	CN...43.	C1203B	NL-0617	CL-12	XNS-0829	S2.5 S4
2010-1165	MCGNR16-5D	1"	1"	1-1/4"	6"	CN...54.	C1604B	NL-0822	CL-12	XNS-0829	S3 S4
2010-1204	MCGNR20-4D	1-1/4"	1-1/4"	1-1/2"	6"	CN...54.	C1604B	NL-0617	CL-20	XNS-0829	S3 S4
2010-1206	MCGNR20-5E	1-1/4"	1-1/4"	1-1/2"	7"	CN...54.	C1604B	NL-0822	CL-12	XNS-0829	S3 S4

See pages 165-166 for spare parts. Replacement inserts shown on pages 173-174.

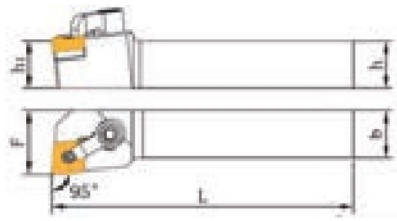
MCLNR PIN & CLAMP STYLE TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

MCLNR

- 0° Relief
- For turning and facing.



Limited Supply!



INSERTS NOT INCLUDED

See pages 165-166 for spare parts.

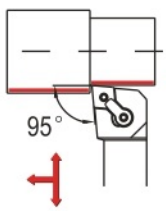
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2011-1204	MCLNR20-4D	1-1/4"	1-1/2"	1.50"	6"	CH..43..	C1203B	NL-0617	CL-12	XNS-0829	S2.5 S4
2011-1205	MCLNR20-5E	1-1/4"	1-1/4"	1.50"	7"	CH..54..	C1604B	NL-0822	CL-12	XNS-0829	S4

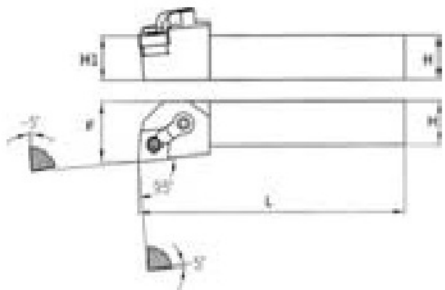
HARLINGEN® MCLNR PIN & CLAMP STYLE TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

MCLNR

- 0° Relief
- For turning and facing.

Up to 30% Higher Productivity & Profitability !





INSERTS NOT INCLUDED

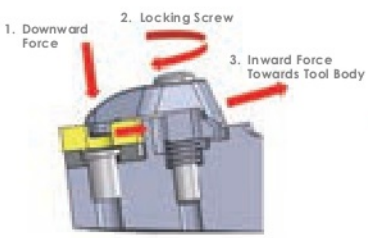
See pages 165-166 for spare parts. Replacement inserts shown on pages 173-174.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Torx Wrench
9710-0109	MCLNR12-4B	3/4"	3/4"	1"	4-1/2"	CNMG4...	ICSN-433	NL-46	CK-20	STC-20	S3/32 S1/8
9710-0104	MCLNR16-4D	1"	1"	1-1/4"	6"	CNMG4...	ICSN-433	NL-46	CK-20	STC-20	S3/32 S1/8

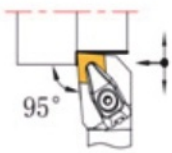
MCLNR TOOL HOLDERS - RIGID CLAMP DESIGN
-5° LEAD ANGLE • RIGHT HAND

TMCLNR

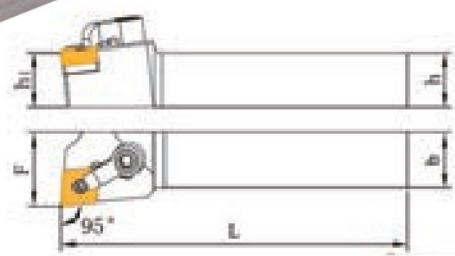
- 0° Relief



New Design!



INSERTS NOT INCLUDED



See page 152 for advantages.

See pages 165-166 for spare parts. Replacement inserts shown on pages 173-174.

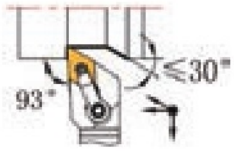
Item #	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2011-1122	TMCLNR12-4B	3/4"	3/4"	1.00"	4.5"	CN..43..	C0903B	LYM0610	TP-2	MS0523	YB6512	S3
2011-1162	TMCLNR16-4D	1"	1"	1.25"	6"	CN..43..	C0903B	LYM0610	TP-2	MS0523	YB6512	S3
2011-1167	TMCLNR16-5D	1"	1"	1.25"	6"	CN..54..	C1604B	LYM0810	TP-4	MS0523	YB6512	S3
2011-1202	TMCLNR20-5E	1-1/4"	1-1/4"	1.50"	7"	CN..54..	C1604B	LYM0810	TP-4	MS0523	YB6512	S4

MDJNR PIN & CLAMP STYLE TOOL HOLDERS
3° LEAD ANGLE • RIGHT HAND

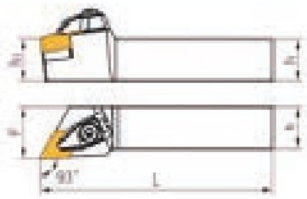
MDJNR

- 0° Relief
- For profiling and facing.

INSERTS NOT INCLUDED



Limited Supply!



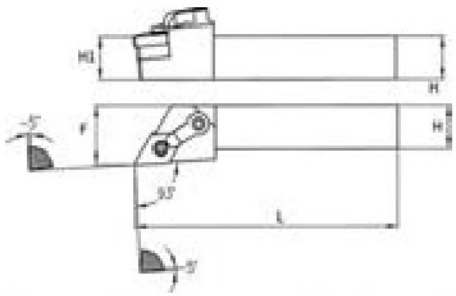
See pages 165-166 for spare parts. Replacement inserts shown on pages 176-178.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2012-1204	MDJNR20-4E	1-1/4"	1-1/4"	1.50"	7"	DN..43..	D1504B	NL-0617	CL-30	XNS-0829	S2.5 S4

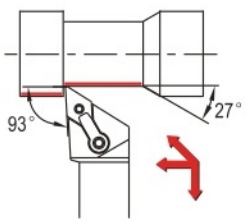
HARLINGEN® MDJNR PIN & CLAMP STYLE TOOL HOLDERS
3° LEAD ANGLE • RIGHT HAND

MDJNR

- 0° Relief
- For turning and profiling.



Up to 30% Higher Productivity & Profitability !



INSERTS NOT INCLUDED

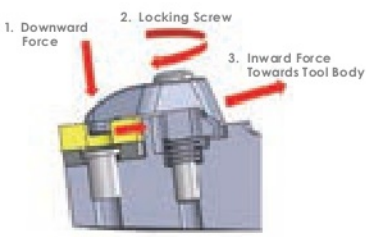
See pages 165-166 for spare parts. Replacement inserts shown on pages 176-178.

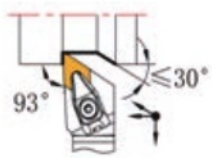
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Torx Wrench
9710-0110	MDJNR12-4B	3/4"	3/4"	1"	4-1/2"	DN..43..	ISDN-443	NL-46L	CK-23	STC-20	S3/32 S1/8

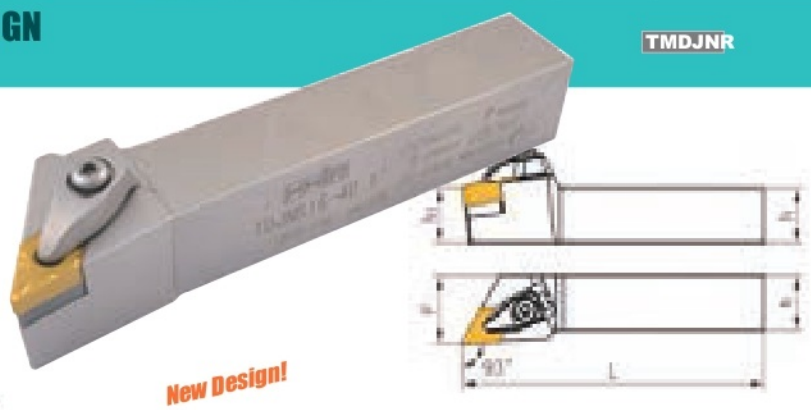
MDJN TOOL HOLDERS - RIGID CLAMP DESIGN
3° LEAD ANGLE • RIGHT HAND

TMDJNR

- 0° Relief
- For profiling and facing.







New Design!

INSERTS NOT INCLUDED

See page 152 for advantages.

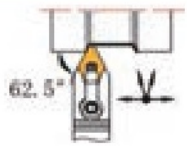
See pages 165-166 for spare parts. Replacement inserts shown on pages 176-178.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2012-1122	TMDJNR12-4B	3/4"	3/4"	1"	4-1/2"	DN..43.	D1504B	LYM0610	TP-2	MS0523	YB6512	S3
2012-1162	TMDJNR16-4D	1"	1"	1-1/4"	6"	DN..43.	D1504B	LYM0610	TP-2	MS0523	YB6512	S3

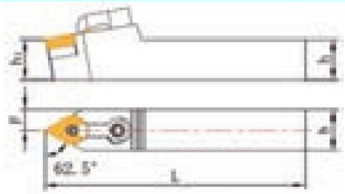
MDPNN PIN & CLAMP STYLE TOOL HOLDERS
27.5° LEAD ANGLE • NEUTRAL

MDPNN

- 0° Relief
- For turning and profiling.



Limited Supply!



INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 176-178.

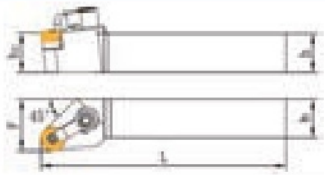
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2024-0165	MDPNN16-5D	1"	1"	.50"	6"	DN...53..	D1904B	NL-0822	CL-30	XNS-0829	S2.5 S5
2024-0204	MDPNN20-4D	1-1/4"	1-1/4"	.63"	6"	DN...43..	D1504B	NL-0617	CL-30	XNS-0829	S2.5 S4

MRGNR PIN & CLAMP STYLE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

MRGNR

- 0° Relief
- For turning and profiling.

Limited Supply!



INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on page 179.

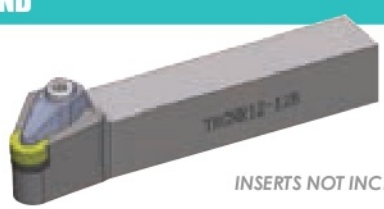
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2026-0123	MRGNR12-10B	3/4"	3/4"	1"	4-1/2"	RN...10T3MO	R1003B	NL-0413	CL-12	XNS-0829	S2 S4
2026-0163	MRGNR16-12D	1"	1"	1-1/4"	6"	RN...32..	R1203B	NL-0617	CL-12	XNS-0829	S2.5 S4

MRGNR PIN & CLAMP STYLE TOOL HOLDERS - RIGID CLAMP DESIGN
0° LEAD ANGLE • RIGHT HAND

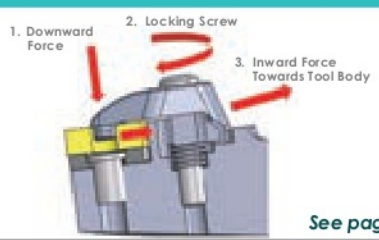
TMRGNR

- 0° Relief

New Design!



INSERTS NOT INCLUDED



NEW

See pages 165-166 for spare parts. Replacement inserts shown on page 179.

See page 152 for advantages.

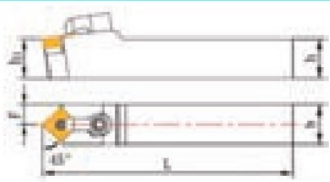
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2026-0120	TMRGNR12-10B	3/4"	3/4"	1"	4-1/2"	RN...10T3MO	R1003B	LYM0508	TP-1	MS0422	YB5512	S3
2026-0122	TMRGNR12-12B	3/4"	3/4"	1"	4-1/2"	RN...1204MO	R1203B	LYM0610	TP-2	MS0523	YB6512	S3
2026-0161	TMRGNR16-12D	1"	1"	1-1/4"	6"	RN...1204MO	R1203B	LYM0610	TP-2	MS0523	YB6512	S3

MSDNN PIN & CLAMP STYLE TOOL HOLDERS
45° LEAD ANGLE • NEUTRAL

MSDNN

- 0° Relief

INSERTS NOT INCLUDED



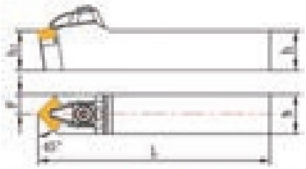
See pages 165-166 for spare parts. Replacement inserts shown on pages 181-183.

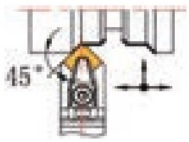
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2027-0083	MSDNN08-3A	1/2"	1/2"	.25"	4"	SN...32..	S0903B	NL-0412	CL-6	XNS-0520	S2, S2.5

MSDNN TOOL HOLDERS - RIGID CLAMP DESIGN
45° LEAD ANGLE • NEUTRAL HAND

TMSDNN

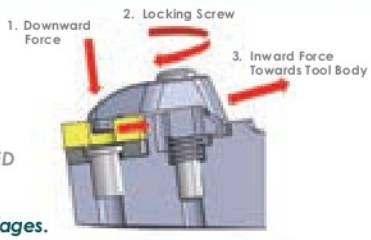
- 0° Relief





New Design!

INSERTS NOT INCLUDED



See pages 165-166 for spare parts. Replacement inserts shown on pages 181-183.

See page 152 for advantages.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2027-0101	TMSDNN10-3B	5/8"	5/8"	0.31"	4-1/2"	SN..32..	S0903B	LYM0508	TP-1	MS0422	YB5512	S3
2027-0121	TMSDNN12-4B	3/4"	3/4"	0.38"	4-1/2"	SN..43..	S1203B	LYM0610	TP-2	MS0523	YB6512	S3
2027-0161	TMSDNN16-4D	1"	1"	0.5"	6"	SN..43..	S1203B	LYM0610	TP-2	MS0523	YB6512	S3

MSKNR INDEXABLE TOOL HOLDERS- CLAMP ON
15° LEAD ANGLE • RIGHT HAND

MSKNR

- 0° Relief

Limited Supply!

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 181-183.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
12-4C	3/4	5	1	SN..-43.	S1203B	NL-0617	CL-12	XNS-0829	**2021-0124**
16-4D	1	6	1-1/4	SN..-43.	S1203B	NL-0617	CL-12	XNS-0829	**2021-0164**
16-5D	1	6	1-1/4	SN..-54.	S1504B	NL-0822	CL-12	XNS-0829	**2021-0165**

MSRNR INDEXABLE TOOL HOLDERS- CLAMP ON
15° LEAD ANGLE • RIGHT HAND

MSRNR

- 0° Relief

Limited Supply!

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 181-183.

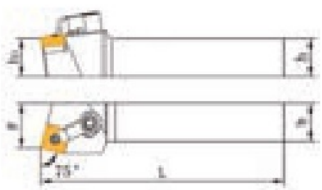
Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
12-4B	3/4	4-1/2	.880	SN..-43.	S1203B	NL-0617	CL-12	XNS-0829	**2028-0124**
16-4D	1	6	1.130	SN..-43.	S1203B	NL-0617	CL-12	XNS-0829	**2028-0164**
16-5D	1	6	1.103	SN..-54.	S1504B	NL-0822	CL-12	XNS-0829	**2028-0165**
20-4D	1-1/4	6	1.353	SN..-54.	S1203B	NL-0617	CL-12	XNS-0829	**2028-0204**

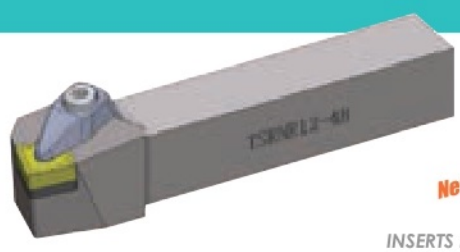
MSRNR TOOL HOLDERS - RIGID CLAMP DESIGN
15° LEAD ANGLE • RIGHT HAND

TMSRNR

NEW

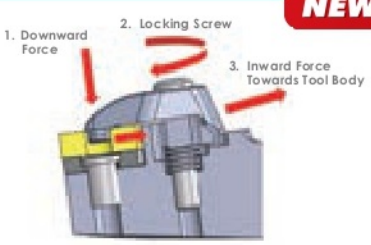
- 0° Relief





New Design!

INSERTS NOT INCLUDED



See pages 165-166 for spare parts. Replacement inserts shown on pages 181-183.

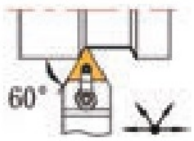
See page 152 for advantages.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2028-0121	TMSRNR12-3B	3/4"	3/4"	0.88"	4-1/2"	SN__-32_	S0903B	LYM0508	TP-1	MS0422	YB5512	S3

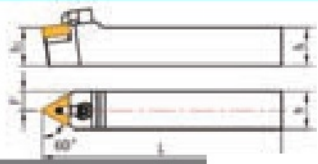
MTENN PIN & CLAMP STYLE TOOL HOLDERS
60° LEAD ANGLE • NEUTRAL

MTENN

• 0° Relief



INSERTS NOT INCLUDED



Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Key
2029-0082	MTENN08-2A	1/2"	1/2"	0.25"	4"	TN...22..	----	M-ZX0410	CL-6	XNS-0520	S2 S2.5
2029-0123*	MTENN12-3B	3/4"	3/4"	0.38"	4-1/2"	TN...33..	T1603B	NL-0414	CL-6	XNS-0520	S2 S2.5
2029-0124	MTENN12-4B	3/4"	3/4"	0.38"	4-1/2"	TN...43..	T2203B	NL-0617	CL-12	XNS-0829	S2.5 S4
2029-0205*	MTENN20-5E	1-1/4"	1-1/4"	0.63"	7"	TN...54..	T2704B	NL-0822	CL-12	XNS-0829	S3 S4

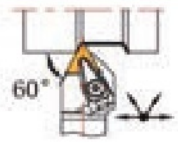
See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

MTENN TOOL HOLDERS - RIGID CLAMP DESIGN
60° LEAD ANGLE • NEUTRAL

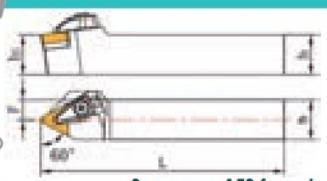
TMTENN

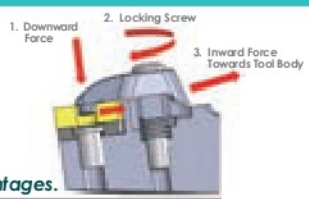
• 0° Relief

New Design!



INSERTS NOT INCLUDED



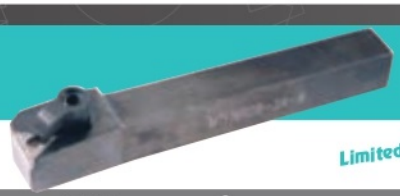


See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188. *See page 152 for advantages.*

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2029-0120	TTENN12E-3B	3/4"	3/4"	0.45"	4-1/2"	TN...33..	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2029-0161	TTENN16E-4D	1"	1"	0.58"	6"	TN...43..	T2203B	LYM0610	TP-2	MS0523	YB6512	S3

MTFNR PIN & CLAMP TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

MTFNR



Limited Supply!

• 0° Relief

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

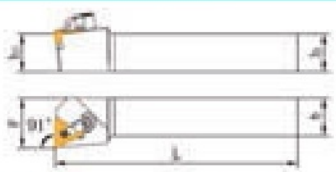
Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	RH Item#
8-2A	1/2	4	1/2	TN__-22_	----	NL-0409	CL-6	XNS-0520	**2022-0082**
10-2B	5/8	4-1/2	5/8	TN__-22_	----	NL-0409	CL-6	XNS-0520	**2022-0102**
10-3B	5/8	4-1/2	5/8	TN__-33_	T1603B	NL-0414	CL-6	XNS-0520	**2022-0103**
12-3C	3/4	5	3/4	TN__-33_	T1603B	NL-0414	CL-6	XNS-0520	**2022-0123**
16-3D	1	6	1-1/4	TN__-33_	T1603B	NL-0414	CL-6	XNS-0520	**2022-0163**
16-4D	1	6	1-1/4	TN__-43_	T2203B	NL-0617	CL-12	XNS-0829	**2022-0164**
20-4E	1-1/4	7	1-1/2	TN__-43_	T2203B	NL-0617	CL-12	XNS-0829	**2022-0204**

MTFNR TOOL HOLDERS - RIGID CLAMP DESIGN
0° LEAD ANGLE • RIGHT HAND

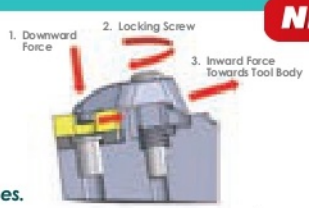
TMTFNR

NEW

• 0° Relief



INSERTS NOT INCLUDED



See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188. *See page 152 for advantages.*

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2022-0100	TMTFNR 10-3B	5/8"	5/8"	0.75"	4-1/2"	TN__-33_	T1603B	LYM0508	TP-1	MS0422	YB5512	S3

MTGNR PIN & CLAMP STYLE TURNING TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

MTGNR

- 0° Relief
- For turning to square shoulders.

Limited Supply!

Tool Holder Style	Shank	(Inch) OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
8-2A	1/2	4	0.630	TNMG-22.	------	M-7X0418	CL-6	XNS-0520	**2013-1082**
10-2B	5/8	4-1/2	0.750	TNMG-22.	------	M-7X0440	CL-6	XNS-0520	**2013-1102**
10-3B	5/8	4-1/2	0.750	TNMG-33.	T1603B	NL-0414	CL-6	XNS-0520	**2013-1103**
12-3B	3/4	4-1/2	1	TNMG-33.	T1603B	NL-0414	CL-6	XNS-0520	**2013-1123**
85-4E	1-1/4	7	1-1/4	TNMG-43.	T2203B	NL-0617	CL-12	XNS-0829	**2013-1854**
20-4E	1-1/4	7"	1-1/2	TNMG-43.	T2203B	NL-0617	CL-12	XNS-0829	**2013-1204**

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

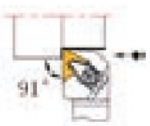
MTGNR TOOL HOLDERS - RIGID CLAMP DESIGN
0° LEAD ANGLE • RIGHT HAND

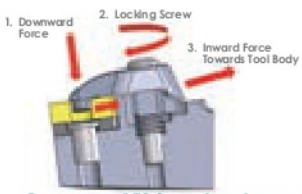
TMTGNR

- 0° Relief
- For turning to square shoulders.

New Design!

INSERTS NOT INCLUDED





See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

See page 152 for advantages.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2013-1101	TMTGNR10-3B	5/8"	5/8"	1"	4-1/2"	TN...33.	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2013-1121	TMTGNR12-3B	3/4"	3/4"	1"	4-1/2"	TN...33.	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2013-1160	TMTGNR16-3D	1"	1"	1-1/4"	6"	TN...33.	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2013-1161	TMTGNR16-4D	1"	1"	1-1/4"	6"	TN...43.	T2203B	LYM0610	TP-2	MS0523	YB6512	S3

MTJNR PIN & CLAMP TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

MTJNR

- 0° Relief

Limited Supply!

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

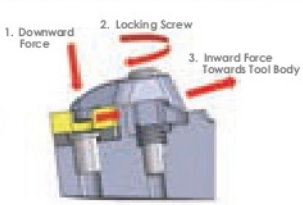
Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
16-3D	1	6	1-1/4	TN...33.	T1603B	NL-0414	CL-6	XNS-0520	**2023-0163**
16-4D	1	6	1-1/4	TN...43.	T2203B	NL-0617	CL-12	XNS-0829	**2023-0164**
20-4E	1-1/4	7	1-1/2	TN...43.	T2203B	NL-0617	CL-12	XNS-0829	**2023-0204**

MTJNR TOOL HOLDERS - RIGID CLAMP DESIGN
-3° LEAD ANGLE • RIGHT HAND

TMTJNR

- 0° Relief

New Design!



INSERTS NOT INCLUDED

See page 152 for advantages.

See pages 165-166 for spare parts. Replacement inserts shown on pages 186-188.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2023-0120	TMTJNR12-3B	3/4"	3/4"	1"	4-1/2"	TN...33.	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2023-0160	TMTJNR16-3D	1"	1"	1-1/4"	6"	TN...33.	T1603B	LYM0508	TP-1	MS0422	YB5512	S3
2023-0161	TMTJNR16-4D	1"	1"	1-1/4"	6"	TN...43.	T2203B	LYM0610	TP-2	MS0523	YB6512	S3

MVJNR PIN & CLAMP TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

MVJNR

INSERTS NOT INCLUDED

- 0° Relief
- For turning and profiling.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
16-4D	1	6	1-1/4	VNMG-43.	V2203B	NL-0617	CL-30	XNS-0829	**2014-1164**
20-3E	1-1/4	7	1-1/2	VNMG-33.	V1603B	NL-0414	CL-30	XNS-0829	**2014-1203***
20-4E	1-1/4	7	1-1/2	VNMG-43.	V2203B	NL-0617	CL-30	XNS-0829	**2014-1204***

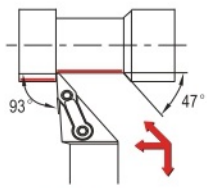
See pages 165-166 for spare parts. Replacement inserts shown on pages 192-193.

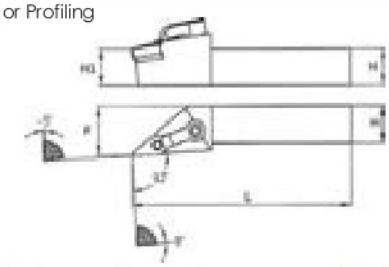
*Limited Supply

HARLINGEN® MVJNR PIN & CLAMP TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

MVJNR

- 3-Degree Lead Angle for Turning or Profiling
- USE VNMG332 INSERT





Up to 30% Higher Productivity & Profitability !

INSERTS NOT INCLUDED

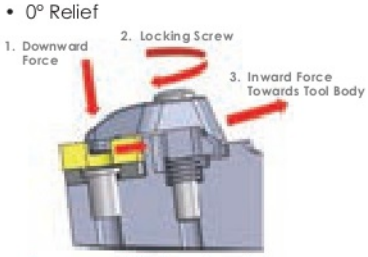
See pages 165-166 for spare parts. Replacement inserts shown on pages 192-193.

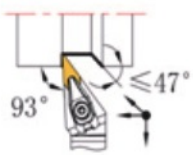
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Torx Wrench
9710-0195	MVJNR12-3B	3/4"	3/4"	1"	4-1/2"	VN..33.	IVSN-322	NL-34L	CK-43	STC-4	S5/64 S5/32

MVJNR TOOL HOLDERS - RIGID CLAMP DESIGN
-3° LEAD ANGLE • RIGHT HAND

TMVJNR

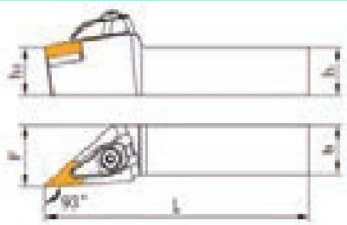
- 0° Relief





New Design!

INSERTS NOT INCLUDED



See page 152 for advantages.

See pages 165-166 for spare parts. Replacement inserts shown on pages 192-193.

Item #	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2014-1120	TMVJNR12-3B	3/4"	3/4"	1.00"	4-1/2"	VN..33.	V1603B	LYM0508	TP-3	MS0422	YB5512	S3
2014-1160	TMVJNR16-3D	1"	1"	1.25"	6"	VN..33.	V1603B	LYM0508	TP-3	MS0422	YB5512	S3

MVVNN PIN & CLAMP TOOL HOLDERS
-17.5° LEAD ANGLE • NEUTRAL

MVVNN

- 0° Relief

Limited Supply!

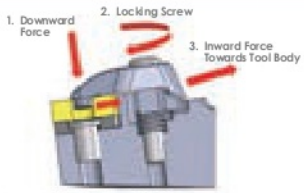
INSERTS NOT INCLUDED

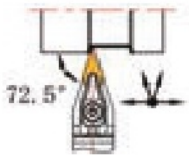
See pages 165-166 for spare parts. Replacement inserts shown on pages 192-193.

Tool Holder Style	(Inch) Shank	OAL	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
16-4D	1	6	VNMG-43.	V2203B	NL-0617	CL-30	XNS-0829	**2030-0164**

MVVNN TOOL HOLDERS - RIGID CLAMP DESIGN
17.5° LEAD ANGLE • NEUTRAL HAND

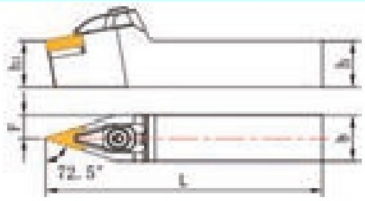
TMVVNN





New Design!

INSERTS NOT INCLUDED



See page 152 for advantages.

See pages 165 for spare parts. Replacement inserts shown on pages 192-193.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2030-0120	TMVVNN12-3B	3/4"	3/4"	0.38"	4-1/2"	VN...33.	V1603B	LYM0508	TP-3	MS0422	YB5512	S3
2030-0160	TMVVNN16-3D	1"	1"	0.50"	6"	VN...33.	V1603B	LYM0508	TP-3	MS0422	YB5512	S3

MWLNR INDEXABLE TOOL HOLDERS- CLAMP ON
-5° LEAD ANGLE • RIGHT HAND

MWLNR

Limited Supply!

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 194-195.

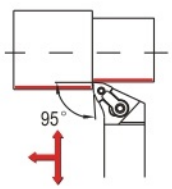
Tool Holder Style	Shank (Inch)	OAL	Insert Style	Shim	Lock Pin	Clamp	Clamp Screw	Item#
16-3C	1	5	WNM.-32.	W0603B	NL-0414	CL-6	XNS-0520	**2025-0162**
16-3D	1	6	WNM.-32.	W0603B	NL-0414	CL-6	XNS-0520	**2025-0163**
16-4D	1	6	WNM.-43.	W0803B	NL-0617	CL-12	XNS-0829	**2025-0164**

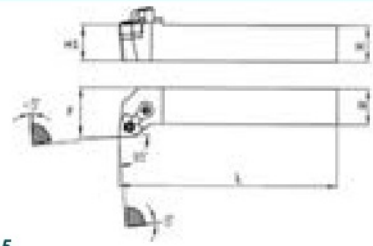
HARLINGEN® MWLNR PIN & CLAMP TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

MWLNR

- 5-Degree Lead Angle for Turning or Profiling
- USE WNMG332 INSERT

Up to 30% Higher Productivity & Profitability !





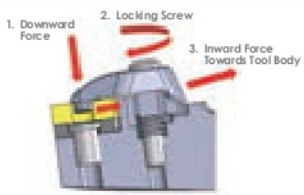
INSERTS NOT INCLUDED

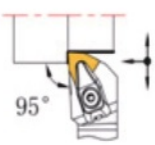
See pages 165-166 for spare parts. Replacement inserts shown on pages 194-195.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Lock Pin	Clamp	Clamp Screw	Torx Wrench
9710-0205	MWLNR12-3B	3/4"	3/4"	1"	4-1/2"	WN...33.	IWSN-322	NL-34L	CK-6	STC-5	S5/64 S5/32

MWLNR TOOL HOLDERS - RIGID CLAMP DESIGN
-5° LEAD ANGLE • RIGHT HAND

TMWLNR





New Design!

INSERTS NOT INCLUDED

See page 152 for advantages.

See pages 165-166 for spare parts. Replacement inserts shown on pages 194-195.

Item #	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Clamp	Clamp Screw	Spring	Key
2025-0100	TMWLNR10-3B	5/8"	5/8"	0.75"	4-1/2"	WN...33.	W0603B	LYM0508	TP-1	MS0422	YB5512	S3
2025-0121	TMWLNR12-4B	3/4"	3/4"	1"	4-1/2"	WN...43.	W0803B	LYM0610	TP-2	MS0523	YB6512	S3
2025-0166	TMWLNR16-4D	1"	1"	1-1/4"	6"	WN...43.	W0803B	LYM0610	TP-2	MS0523	YB6512	S3

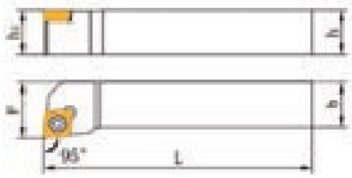
INDEXABLE TURNING TOOL HOLDERS

SCLCR SCREW TYPE TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

SCLCR

- 7° Relief

INSERTS NOT INCLUDED



See pages 165-166 for spare parts. Replacement inserts shown on page 172.

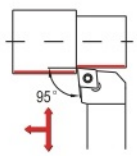
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Clamp Screw	Key
2039-0083	SCLCR8-3A	1/2"	1/2"	0.63"	4"	CC...33.5..	M4 x 10	T15
2039-0103	SCLCR10-3B	5/8"	5/8"	0.75"	4-1/2"	CC...33.5..	M4 x 10	T15
2039-0123	SCLCR12-3B	3/4"	3/4"	1"	4-1/2"	CC...33.5..	M4 x 10	T15
2039-0164	SCLCR16-4D	1"	1"	1-1/4"	6"	CC...43..	M5 x 12	T20

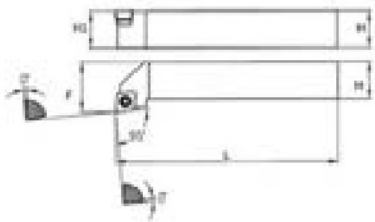
HARLINGEN® SCLCR SCREW TYPE TOOL HOLDERS
-5° LEAD ANGLE • RIGHT HAND

SCLCR

- 5-Degree Lead Angle for Turning, Profiling or facing
- USE CCMT32.52 INSERT

Up to 30% Higher Productivity & Profitability !





INSERTS NOT INCLUDED

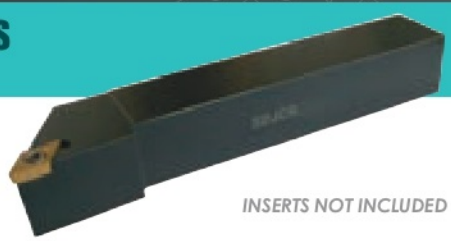
See pages 165-166 for spare parts. Replacement inserts shown on page 172.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Shim	Shim Screw	Insert Screw	Torx Wrench
9710-0018	SCLCR12-3B	3/4"	3/4"	1"	4-1/2"	CC...32...	SKCP-343	SRS-3	MS-1156	S3.5 T15

SDJCR SCREW TYPE TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

SDJCR

- 7° Relief



INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on pages 175-176.

Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Clamp Screw	Key
2033-0062	SDJCR06-2J	3/8"	3/8"	0.50"	3-1/2"	DC...21.5..	M2.5 x 6	T8
2033-0083	SDJCR08-3A	1/2"	1/2"	0.63"	4"	DC...32.5..	M4 x 10	T15
2033-0103	SDJCR10-3B	5/8"	5/8"	0.75"	4-1/2"	DC...32.5..	M4 x 10	T15
2033-0123	SDJCR12-3B	3/4"	3/4"	1"	4-1/2"	DC...32.5..	M4 x 10	T15

SDNCR SCREW TYPE TOOL HOLDERS
-27.5° LEAD ANGLE • RIGHT HAND

SDNCR

- 7° Relief

Limited Supply!

INSERTS NOT INCLUDED

Tool Holder Style	Shank	(Inch) OAL	Offset	Insert Style	Screw	Item#
6-2J	3/8	3-1/2	3/16	DCMT-21.5	M2.5X6	**2032-0062**
10-3B	5/8	4-1/2	5/16	DCMT-32.5	M4X10	**2032-0103**
16-4D	1	6	1/2	DCMT-43.	M5X12	**2032-0164**

See pages 165-166 for spare parts. Replacement inserts shown on pages 175-176.

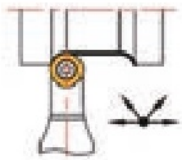
SRDCN SCREW TYPE TOOL HOLDERS
0° LEAD ANGLE • NEUTRAL

SRDCN

- 7° Relief

See pages 165-166 for spare parts. Replacement inserts shown on page 179.

INSERTS NOT INCLUDED



Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Clamp Screw	Key
2037-0106	SRDCN06-6A	3/8"	3/8"	3/16"	4"	RC...0602	M2.5 x 6	T8
2037-1210	SRDCN08-08A	1/2"	1/2"	1/4"	4"	RC...0803MD	M3 x 8	T8
2037-1612	SRDCN10-10B	5/8"	5/8"	.31"	4-1/2"	RC...1013MD	M4 x 10	T15

SRGCR SCREW TYPE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

SRGCR

- 7° Relief

Limited Supply!

INSERTS NOT INCLUDED

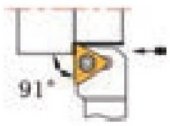
Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Screw	Item#
12-2B	3/4	4-1/2	1	RCMT-22.	M2.5x6	**2038-0122**
16-3D	1	6	1-1/4	RCMT-32.5	M4x10	**2038-0163**
20-2D	1-1/4	6	1-1/2	RCMT-22.	M2.5x6	**2038-0202**
20-3D	1-1/4	6	1-1/2	RCMT-32.5	M4x10	**2038-0203**

See pages 165-166 for spare parts. Replacement inserts shown on page 179.

STGCR SCREW TYPE TOOL HOLDERS
0° LEAD ANGLE • RIGHT HAND

STGCR

INSERTS NOT INCLUDED



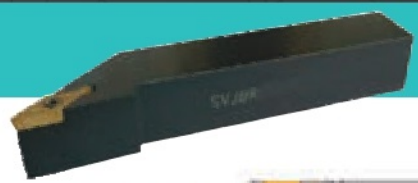
Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Clamp Screw	Key
2036-0062	STGCR06-2J	3/8"	3/8"	0.50"	2-1/2"	TC...21.5..	M2.5 x 6	T8
2036-0082	STGCR08-2J	1/2"	1/2"	0.63"	3-1/2"	TC...21.5..	M2.5 x 6	T8
2036-0103	STGCR10-3B	5/8"	5/8"	0.75"	4-1/2"	TC...32.5..	M4 x 10	T15
2036-0123*	STGCR12-3B	3/4"	3/4"	1"	4-1/2"	TC...32.5..	M4 x 10	T15

See pages 165-166 for spare parts. Replacement inserts shown on page 185.

*Limited Supply

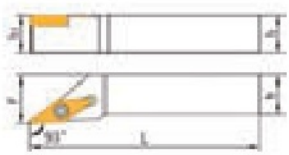
SVJBR SCREW TYPE TOOL HOLDERS
-3° LEAD ANGLE • RIGHT HAND

SVJBR



- 5° Relief

INSERTS NOT INCLUDED



Item#	Industry Ref. No.	Dimensions h=h1	Shank Dia. b	Offset F	OAL L	Insert	Clamp Screw	Key
2034-0062	SVJBR06-2J	3/8"	3/8"	0.50"	3-1/2"	VB...21.5..	M2.5 x 6	T8
2034-0082	SVJBR08-2A	1/2"	1/2"	0.63"	4"	VB...21.5..	M2.5 x 6	T8
2034-0083	SVJBR08-3A	1/2"	1/2"	0.63"	4"	VB...33..	M4 x 10	T15
2034-0102	SVJBR10-2B	5/8"	5/8"	0.75"	4"	VB...21.5..	M4 x 10	T15
2034-0123	SVJBR12-3B	3/4"	3/4"	1"	4-1/2"	VB...33..	M4 x 10	T15
2034-0163	SVJBR16-3D	1"	1"	1-1/4"	6"	VB...33..	M4 x 10	T15

See pages 165-166 for spare parts. Replacement inserts shown on page 191.

SVVBN SCREW TYPE TOOL HOLDERS
-17.5° LEAD ANGLE • NEUTURAL

SVVBN

- 5° Relief

Limited Supply!

INSERTS NOT INCLUDED

See pages 165-166 for spare parts. Replacement inserts shown on page 191.

Tool Holder Style	(Inch) Shank	OAL	Offset	Insert Style	Screw	Item#
6-2J	3/8	3-1/2	1/2	VBMT-22.	M2.5x6	**2035-0062**
8-3A	1/2	4	5/8	VBMT-33.	M4X10	**2035-0083**
10-2B	5/8	4-1/2	3/4	VBMT-22.	M2.5x6	**2035-0102**
12-3B	3/4	4-1/2	1	VBMT-33.	M4x10	**2035-0123**
16-3D	1	6	1-1/4	VBMT-33.	M4x10	**2035-0163**
16-4D	1	6	1-1/2	VBMT-43.	M5x12	**2035-0164**

SPARE PARTS FOR INDEXABLE TOOLS

SCREWS FOR INDEXABLE TOOLING
METRIC THREAD

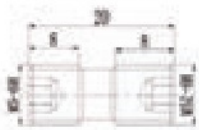
Item#	Style	Size	Wrench Used
2100-0060	M2 x 4	M2 x 4	T6
2100-0061	M2 x 5	M2 x 5	T6
2100-0065	M2.2 x 6	M2.2 x 6	T6
2100-1066	M2.5 x 3.5	M2.5 x 3.5	T8
2100-0067	M2.5 x 5	M2.5 x 5	T8
2100-0070	M2.5 x 6	M2.5 x 6	T8
2100-0066	M2.5 x 7	M2.5 x 7	T8
2100-0072	M2.5 x 8	M2.5 x 8	T8
2100-0063	M3 x 7	M3 x 7	T10
2100-0003	M3.0 x 8	M3.0 x 8	T10
2100-0073	M3.5 x 8	M3.5 x 8	T15
2100-1080	M3.5 x 10	M3.5 x 10	T16
2100-0083	M3.5 x 11	M3.5 x 11	T15
2100-0084	M3.5 x 12	M3.5 x 12	T15
2100-0069	M4.0 x 8	M4.0 x 8	T15
2100-0071	M4.0 x 9	M4.0 x 9	T15
2100-0074	M4.0 x 10	M4.0 x 10	T15
2100-0064	M4.0 x 11	M4.0 x 11	T15
2100-0075	M5.0 x 10	M5.0 x 10	T20
2100-0076	M5.0 x 12	M5.0 x 12	T20
2100-0077	M5.0 x 14	M5.0 x 14	T20
2100-1078	M5.0 x 16	M5.0 x 16	T20
2100-0088*	M5.0 x 18	M5.0 x 18	T20
2100-0026	M6.0 x 20	M6.0 x 20	S4
2100-0078	CTFP-M5	M5.0 x 13	S3
2100-0027	DLS5 M6 x 26	M6 x 26	S4
2100-0082	GB70-85 M4 x 12	M4 x 16	S3
2100-0087	GB70-85 M5 x 14	M5 x 19	S4
2100-0026	GB/T70.2 M6 x 20	M6 x 25	S5
2100-1070	I86M 4 x 7	M4X7	T15
2100-0071	I86M 4 x 9	M4X9	T15

*Limited Supply

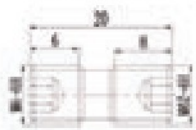
Item#	Style	Size	Wrench Used
2100-4301	LYM0308		
2100-4300	LYM0508		
2100-4303	LYM0610		
2100-4305	LYM0810		
2100-0005	LE05	M5 x 23	S3
2100-0007	LE06	M6 x 26	S4
2100-0089	M3x6.5-D5	M3 x 6.5	S2
2100-0070	MLD-M25	M2.5 x 6	T8
2100-0084	MLD-M35	M3.5 x 12	T15
2100-0074	MLD-M40	M4 x 10	T15
2100-0076	MLD-M50	M5 x 12	T20
2100-4350	MS0422		S3
2100-4353	MS0523		S3
5820-2001	PM4 x 8	M4.0 x 12	S3
2100-0105	PM5 x 8	M5.0 x 12	S3
2100-0106	PM6 x 12	M6.0 x 17	S4
2100-0107	PM8 x 12	M8.0 x 17	S5
2100-0108	PM8 x 16	M8.0 x 21	S5
2100-0008	SDN535	M5 (Ext.) M3.5 (Int.)	
2100-0009	SDN850	M8 (Ext.) M5 (Int.)	
2100-0051	SM815.18L	M8 x 1 x 18	S4
2100-0052	SM81018.22L	M8 X 1 X 22	S4
2109-0031	SRS-3		
2109-0158	STC-4		
2109-0154	STC-5		
2109-0150	STC-20		
2100-0001	XNS-0520	M5X20	
2100-0004	XNS-0620	M6X20	
2100-0002	XNS-0829	M8X20	
2100-0089	M3X6.5 D5	M3X6.5	S2

XNS STYLE SCREWS:

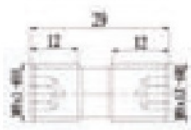
XNS-0520 Shown



XNS-0620 Shown



XNS-0820 Shown



HEX KEY WRENCHES

Item#	Style	Size
2100-1085	S5/64	5/64
2100-1092	S3/32	3/32
2100-1094	S5/32	5/32
2100-1095	S1/8	1/8
2100-0085	S2	2mm

Item#	Style	Size
2100-0086	S2.5	2.5mm
2100-1084	S3	3mm
2100-1088	S3.5	3.5mm
2100-1089	S4	4mm
2100-1090	S5	5mm

TORX WRENCHES

Item#	Size
2100-0091	T-6
2100-0092	T-8
2100-0093	T-9
2100-0094	T-10

Item#	Size
2100-0095	T-15
2100-0096	T-20
2100-0097	T-25

CLAMPS FOR INDEXABLE TOOLING
METRIC THREAD

Item#	Style
2109-0100	CK-20
2109-0110	CK-23
2109-0108	CK-43
2100-0006	CL-6
2100-0012	CL-12
2100-0020	CL-20
2100-0030	CL-30
2100-0031	CTF-5/CTFPN-5
2100-0032	DLM2
2100-0033	DLM3/TP-1
2100-0034	DLM4/TP-3

2100-0010 Shown

2100-0012 Shown

2100-0031 Shown

2100-0032 Shown

Item#	Style
2100-0015	MTH0820
2100-0011	TNSB-2B
2100-0010	TNSB-3B
2100-2901	TP-1
2100-2902	TP-2
2100-2903	TP-3
2100-2904	TP-4

2100-0015 Shown

2100-0011 Shown

2100-2901 Shown

2100-2902 Shown

SHIMS FOR INDEXABLE TOOLING

Item#	Style
2100-0903	C0903B
2100-1203	C1203B
2100-1604	C1604B
2100-1904	C1904B
2100-1103	D1103B
2100-1504	D1504B
2100-1905*	D1904B
2109-0002	IDSN-443
2109-0001	ICSN-433
2100-1630	LT16R-30
2100-2204	LT22R-4B
2100-0904	R0903B
2100-1003	R1003B
2100-1204	R1203B
2100-0905	S0903B
2100-1205	S1203B
2100-1505	S1504B
2100-1906	S1904B

Item#	Style
2100-4200	SE1203X
2100-0903	SKCP-343
2100-1051	SM815.182
2100-1102	TP11D
2100-1100	TP16D
2100-1101	TP22D
2100-1603	T1603B
2100-2203	T2203B
2100-2703	T2703B
2100-2210	TNSN-2A
2100-2212	TNSN-3A-3
2100-2214	TNSN-3A
2109-1602	V1603B
2100-2202	V2203B
2109-0008	IVSN-322
2100-0603	W0603B
2100-0803	W0803
2109-0004	IWSN-322

*Limited Supply

SHIM PINS

Item#	Style
2100-0055	THT0505
2100-0056	THT0706
2100-0057	THT0907
2100-0058	THT1212

SPRINGS FOR INDEXABLE TOOLING

Item#	Style
2100-0100	MTH0610
2100-4380	YB5512
2100-4384	YB6512

LOCK PINS FOR INDEXABLE TOOLING
METRIC THREAD

Item#	Style
2100-0800	M-ZX0410
2109-0014	NL-34L
2109-0010	NL-46L
2109-0016	NL-46L

Item#	Style
2100-0409	NL-0409
2100-0410	NL-0410
2100-0414*	NL-0414
2100-0611	NL-0611
2100-0412	NL-412
2100-0617*	NL-0617
2100-0822	NL-0822
2100-0823*	NL-0823

* Use a shim

EXTERNAL TURNING TOOLHOLDERS IDENTIFICATION SYSTEM (INCH)

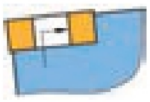
P	S	B	N	R	16		-	4	D
1	2	3	4	5	6	7		8	9

1 METHOD OF HOLDING

Top clamping — C

Top and hole clamping — M

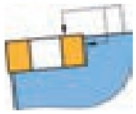
Pin only — P



Screw clamping — S

Double clamping — T

Wedge clamping — W



2 INSERT SHAPE

C

D

K

R

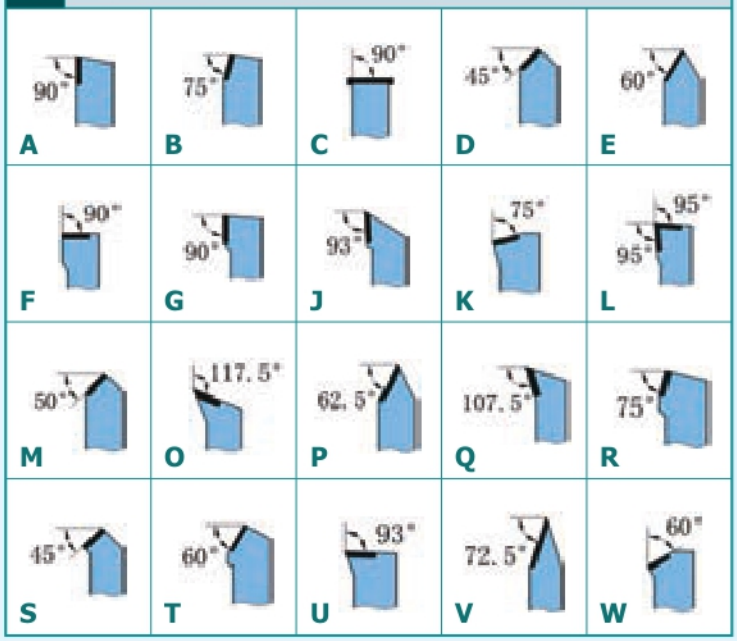
S

T

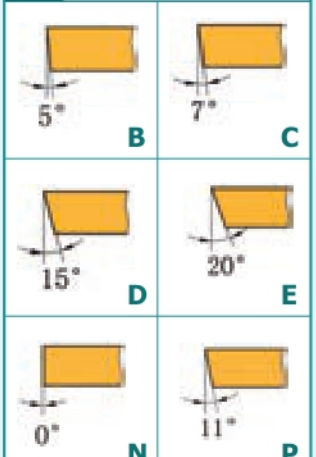
V

W

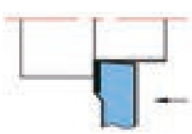
3 TOOL STYLE OR LEAD ANGLE

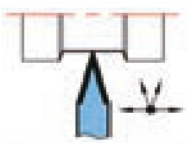


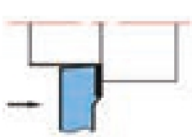
4 INSERT CLEARANCE ANGLE



5 CUTTING DIRECTION

R 

N 

L 

6 SHANK SIZE

For square shank, the number represents the of sixteenths (1/16) of width and height.

6=3/8" Square
8=1/2" Square
10=5/8" Square
12=3/4" Square
16=1" Square
20=1-1/4" Square
24=1-1/2" Square

For rectangular shanks, the first digit represents the number of eights (1/8) of width and the second digit represents the number of quarters of height.

64=3/4" x 1"
85=1" x 1-1/4"
86=1" x 1-1/2"

7 ADDITIONAL CODES

D=Extended+1mm

E=Extended+2mm

F=Neutral, no offset

8 INSERT SIZE (I.C.)

Number of eights (1/8) of I.C. (Inscribed Circle)

Insert less than 1/4" I.C.

5=5/32" 6=3/16"
7=7/32"

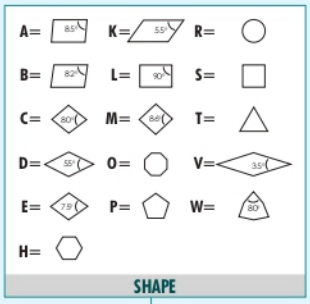
Insert 1/4" I.C. and over (in)

2=1/4" 2.5=5/16"
3=3/8" 4=1/2"
5=5/8" 6=3/4"

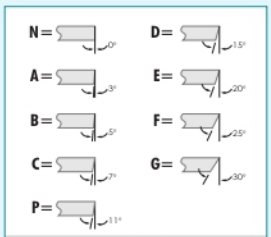
9 HOLDER LENGTH

Q	2"	B	4.5"
P	2.5"	C	5"
N	2.75"	D	6"
M	3"	E	7"
K	3.15"	F	8"
J	3.5"	G	10"
A	4"	H	12"

INSERT DESIGNATION - ANSI



SHAPE



CLEARANCE

Number of 1/16's on inserts less than 1/4" I.C.

Number of 1/8's on inserts 1/4" I.C. and over

Rectangle and parallelogram inserts require two digits:
-1st, Number of 1/8's in width
-2nd, Number of 1/4's in length

2=1/4" 5=5/8"
3=3/8" 6=3/4"
4=1/2" 8=1"

I.C.

0=Sharp Corner 4=1/16" radius
1=1/64" radius 6=3/32" radius
2=1/32" radius 8=1/8" radius
3=3/64" radius 12=3/16" radius

A=Square w/45° chamfer
D=Square w/30° chamfer
E=Square w/15° chamfer
K=Square w/15° double chamfer
N=Truncated triangle insert
P=Flattened corner triangle

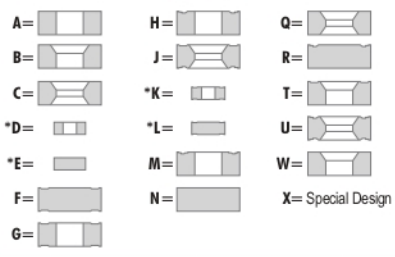
CORNER

C N M G · 4 3 2

TOLERANCE

	d	m	t
A=	± .0010	± .0002	± .001
F=	± .0005	± .0002	± .001
C=	± .0010	± .0005	± .001
H=	± .0005	± .0005	± .001
E=	± .0010	± .0010	± .001
G=	± .0010	± .0010	± .005
**J=	± .002 to ± .006	± .0002	± .001
**K=	± .002 to ± .006	± .0005	± .001
**L=	± .002 to ± .006	± .0010	± .001
**M=	± .002 to ± .006	± .003 to ± .008	± .005
**N=	± .002 to ± .006	± .003 to ± .008	± .001
**U=	± .003 to ± .010	± .005 to ± .015	± .005

GEOMETRY



THICKNESS

Number of 1/32's on inserts less than 1/4" IC

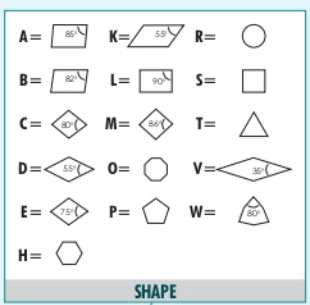
Number of 1/16's on inserts 1/4" IC and over

1=1/16" 4=1/4"
2=1/8" 5=5/16"
3=3/16" 6=3/8"

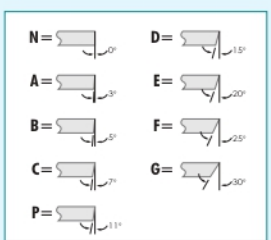
* Smaller than 1/4" I.C.
** Exact tolerance is determined by the size of the insert.

Geometry:
B, C, H, J - countersink is between 70~90 degrees.
Q, T, U, W - countersink is between 40~60 degrees.

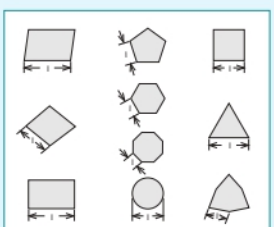
INSERT DESIGNATION - ISO



SHAPE



CLEARANCE



If less than 10 use 0 in first place.
Example: 9.525=09

LENGTH OF CUTTING EDGE

00=Round Insert 12=1.2mm
00=Sharp Corner 16=1.6mm
02=0.2mm 24=2.4mm
04=0.4mm 32=3.2mm
08=0.8mm 40=4.0mm

A=Square w/45° chamfer
D=Square w/30° chamfer
E=Square w/15° chamfer
K=Square w/15° double chamfer
N=Truncated triangle insert
P=Flattened corner triangle

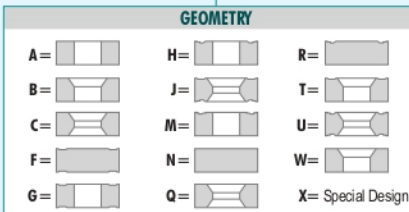
CORNER

C N M G · 12 04 08

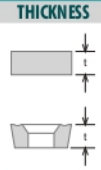
TOLERANCE

	d	m	t
A=	± 0.025	± 0.005	± 0.025
F=	± 0.013	± 0.005	± 0.025
C=	± 0.025	± 0.013	± 0.025
H=	± 0.013	± 0.013	± 0.025
E=	± 0.025	± 0.025	± 0.025
G=	± 0.025	± 0.025	± 0.130
*J=	± 0.05 to ± 0.15	± 0.005	± 0.025
*K=	± 0.05 to ± 0.15	± 0.013	± 0.025
*L=	± 0.05 to ± 0.15	± 0.025	± 0.025
*M=	± 0.05 to ± 0.15	± 0.08 to ± 0.20	± 0.130
*N=	± 0.05 to ± 0.15	± 0.08 to ± 0.20	± 0.025
*U=	± 0.08 to ± 0.25	± 0.13 to ± 0.38	± 0.130

GEOMETRY



THICKNESS



If less than 10 use 0 in first place.

Example: 3.18=03

* Exact tolerance is determined by the size of the insert.

Geometry:
B, C, H, J - countersink is between 70~90 degrees.
Q, T, U, W - countersink is between 40~60 degrees.

CUTTING & CARBIDE TOOLS

CARBIDE INFORMATION

GRADE COMPARISON

C-2	General purpose-for cast iron and non-ferrous materials.
C-5	For heavy roughing to semi finishing of all steels.
C-6	Designed for heavy roughing to semi finishing of steels.
BPG253-CVD	CVD coated universal grade is suitable for steel and cast steel continuous cutting and interrupted cutting, finishing to roughing.
BPG20B-PVD	PVD coated micro-grain carbide to use for a variety of stainless steel finishing at medium to low cutting speed. Excellent edge strength and high surface quality, provides the perfect ride cutting. High thermal shock resistance. Suitable for light interrupted cuts.
TiN Coated	For turning and milling carbon and alloy steels, tool steel and stainless steel. Provides longer life than uncoated grades. For high heat & wear resistance on alloys, stainless steel & ductile iron
XAB599	CVD all round coated cemented carbide. Optimized for medium to rough steel milling, but also a good solution for nodular cast iron.
XAB649	A secure all around CVD coated grade for high productive P30 applications. It is tough enough for the most difficult steel machining. Use in dry and wet machining and interruptions. A grade you can rely on when the going gets tough.
XAB698	Possesses an excellent thermal and chemical stability with a optimized combination of high performance Nano coating and a highly tough substrate of ultra fine grains aimed at materials hard to machine, such as stainless steel, heat resistant alloys, titanium alloys, high temperature alloys, etc. It is especially suitable for finishing and semi-finishing applications.
XAB699	CVD all round coated cemented carbide. Optimized for steel milling, but also a good solution for nodular cast iron. This grade provides an economic solution in medium to long series production.
XAB748	Comprising of thick TiCN and Al2O3 coating has high anti-plastic yield and cutting edge strength and is the preferred universal grade from steel finishing to roughing. It behaves steady in wicked cutting conditions and can realizes environmental dry-cutting. The cutting speed can increase more than 25% at the same cutting condition and the life will be improved more than 30% at the same cutting speed.
XAB749	The cutting edge has special strength and toughness, in an optimal combination with MT-TiCN, thick layer Al2O3TiN coating. It is a suitable grade for a wide variety of applications. It is good for finishing, semi-finishing and light roughing of steel, cast steel, stainless steel and cast iron.
XAB848	Comprised of thick TiCN and Al2O3 coatings makes it suitable for finishing and semi-finishing at high speed. It upgrades abrasive resistance greatly on the premise of increasing toughness. The cutting speed can increase more than 25% and the life will be improved more than 30% at the same cutting speed.
XAB849	Substrate with excellent wear-resistance, in combination with MT-TiCN, thick layer Al2O3TiN coating. It is an ideal grade for finishing steel, cast steel and stainless steel under high speed and dry machining.
XAC849	CVD all round coated cemented carbide. Optimized for steel milling, but also a good solution for nodular cast iron. This grade provides good economy in medium to long series production.
XAC898	CVD coated grade, which is the combination of hard substrate and coating(thick Al_2O_3 + thick TiCN), shows excellent wear resistance and impact resistance when machining nodular cast iron at high speed.
XAF795	Unique grade material with near perfect wear resistance and high temperature resistance. The nc-TiAlN coating, ultrafine grain substrate , and unique surface treatment make this grade suitable for high precision cutting of "difficult to machine" materials, such as stainless steel, etc.
XAF798	A combination of 2-4 um nc-TiAlN coating and ultrafine grain carbide substrate with high strength and toughness. Suitable for light to medium milling, and boring of all kinds of materials. Recommended for finish and semi-finish turning of stainless steel and roughing turning of high-temperature alloys of steel from finishing to roughing. Under the same cutting conditions, the cutting speed can be increased by more than 25%, while the tool life can be 30% longer under the same cutting speed.
XAF799	PVD TiN coated carbide grade with good toughness and wear resistance. It is good for threading and drilling (both peripheral and central inserts) low carbon steel, stainless steel and heat resistance for steel and cast irons.
XAL649	Substrate with good toughness and strength, in combination with TiCN, thin layer Al2O3, TiN coating. It is a premium grade for semi-finishing to light roughing milling of stinless steel at continuous and intermittent milling conditions.
XAL749	A very all around CVD coated cemented carbide grade optimized for medium machining to roughing of stainless steel in both continuous and interrupted cuts. The grade has an excellent resistance to both thermal and mechanical shock.
XC899	With fine size grain. Good for fine and semi-finishing machining of cast iron and nonferrous metal. Particularly for machining of aluminum.
XMF849	TiCN based cermet, with fine resistant thermoplastic transmutation and resistant built-up. It is suitable for semi-finishing and finishing of steel, stainless steel and cast iron.

CARBIDE GRADE INFORMATION/COMPARISON

GRADE	MITSUBISHI	SANDVIK	SECO	KENNAMETAL	VALENITE	KORLOY	WALTER	TaeguTec
XAB849	UE6005/UE6010	GC4015	TX110	KC9110/KC935			WTL41/WTA33	
XAB848	F7010	GC4215	TX110	KC9010/KC910	SV305	NC310	WTA21	TT1500
XAB749	UC6010/EU6020	GC4020	TP200	KC725M/KC9125	SV410		WTA31/WXK15/WQM25/WTL82	TT3500
XAB748	UC6025/F620	GC4025	T250M/T25M	KC9040/KC625M	SV325	NC310	WAP20/WTN43	
XAB699	UP20M/AP20M	GC4030/GC4035	CP20TP200	KC850/CM4KC7025/KC7215	SV935	NC320/NC330	WXM15/WTA41	TT7200
XAB698								
XAB649	UE6035	GC4125	CP30	CD4/KC7020	SV330	NC320	WXP25/WTA61/WTL71/WTL14	
XAB599	UE6035	GC1120	TP40	CS3(KC7030)	SM245	NC330	WQM35/WTP30	TT8020
XAC849	UC6010/EU6020	GC3015/GC3115	TP100	KC625M/KC631M	SV305		WAK15	
XAF799	UP10H	GC1020/GC1120	TX150	KC992M/KC7215/KC9315/KC7225	SV415	NC315K	WAK20/WTA43/WTA33/WTA/41	
XAF798	AP20M	GC3040	F25M	KC9025/KC631M		NCM325	WXP20/WTP20	
XAF797								
XAF960	AP15TF	GC3040		CS3(KC7030)	SV515		WAP35	TT8020
XAL849		GC2015		KC510M			WAM10/WAP10	TT9030
XAL749	F620	GC2025	CP50	KC9225/KC7020	SV415	NC325S	WAM20/WTA43	TT5100
XAL748	F620	GC2025	CP50	KC9225/KC7020	SV415	NC325S	WAM20/WTA43	TT5100
XAL649	F730	GC2035	CP50	KC9040/KC7020		NCM335	WTP35/WTA51	TT8020
XB970R								
XMF849								

CHIP-BREAKER INFORMATION

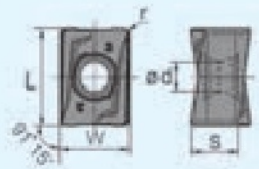
Characteristics	Description
-DF	**Recommended for finishing steel materials.** With a satisfactory flow of chips and an excellent surface quality.
-DM	**Recommended for semi-finishing steel materials.** With a light cutting force and a wide range of chipping, it can achieve better results in machining alloyed steel with a high adhesiveness.
-DR	**Recommended for quasi-roughing steel materials.** It is the first option for roughing operations under general working conditions. It can achieve a high rate of metal removal and economy.
-EF	**Recommended for finishing materials heat-resistant steel.** A specially designed rake angle and an inclined edge angle aimed at machining highly adhesive and plastic material hard to machine, like stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining an excellent surface quality, which makes it most suitable for ultra fine and fine machining of such materials.
-EM	**Recommended for 300 series stainless steels.** Impact resistance of the cutting edge is strengthened for interrupted cutting. The sharp cutting edges function to shear low machinability rated metals while resisting edge-build-up.
-HF	**Recommended for finishing of universal applications.** Suitable for finishing internal and peripheric operations in machining steel and cast iron. Fine finishing of surface can be achieved with a slow feed rate.
-HM	**Recommended for semi-finishing of universal applications.** With sharp wave cutting edges to reduce cutting force. Suitable for semi-finishing internal and peripheric operations of steel and cast iron. It is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.
-HR	**Recommended for roughing operations.** With tough cutting edge. Suitable for internal and peripheric machining of steel, stainless steel and cast iron with irregular surface.
-LH	**Recommended for aluminum alloy.** Suitable maching aluminum alloy with larger cutting depth and higher feed rate.
-PF	**Recommended for finishing steel materials.** Suitable for finishing operations under unstable cutting conditions with a light cutting force.
-PM	**Recommended for semi-finishing steel materials.** With a stronger edge than -DM. Suitable for semi-finishing operations under unstable cutting conditions and for machining cast iron as well with a light cutting force.
-PR	**Recommended for roughing of steel.** With a high safety of cutting edges. It can achieve a high rate of metal removal with a low cutting force under working conditions of deep cuts and fast feed rates.

ANGX CARBIDE INSERTS

ANGX

- Double-sided insert provides 4-cutting edges, has a bigger depth of cut providing value and economy.
- High precision cutting edges are more agressive & they have twice the cutting edges of APKT.
- Disigned to improve shoulder milling surface finish.

10 PC PER PACKAGE

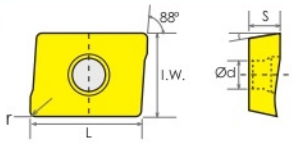


Item#	ANSI Insert No.	L	W	S	d	r	Grade
6064-0011	ANGX110508 PNR-GM	0.467"	0.331"	0.224"	0.138"	0.031"	XAF795
6064-0015	ANGX150608 PNR-GM	0.608"	0.433"	0.287"	0.173"	0.031"	XAF795

APKT-SQUARE SHOULDER MILLING CARBIDE INSERT (10MM)
Positive Rake Angle

APKT

10 PC PER PACKAGE



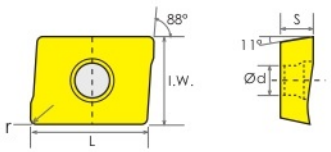
Item#	ANSI Insert No.	I.W.	L	S	d	r	Grade
6010-4203	APKT-1003PDER	.265"	.441"	.137"	.110"	1/64"	XAF798

APKT/PF CARBIDE SHOULDER MILLING INSERTS (11MM, 16MM)
11° Relief Clearance

APKT-PF

PF - Excellent Surface Finishing

10 PC PER PACKAGE



Item#	ANSI Insert No.	I.W.	(Inch) L	S	d	r	Grade
6010-3002	APKT-11T304-PF	.256	.482	.142	.110	.0157	XAB699
6010-3312*	APKT-11T312-PF	.256	.482	.142	.110	.0472	XAF798

*Limited Supply

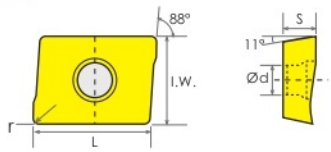
APKT/PM CARBIDE SHOULDER MILLING INSERTS (11MM, 16MM)
11° Relief Clearance

APKT-PM

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials.

PM - Suitable for Mixed Production

10 PC PER PACKAGE



Item#	ANSI Insert No.	I.W.	(Inch) L	S	d	r	Grade
6010-4002	APKT-11T304-PM	.256	.482	.142	.110	.0157	XAB699
6010-4308	APKT-11T308-PM	.256	.482	.142	.110	.0315	XAF798
6010-4608*	APKT-11T308-PM	.256	.482	.142	.110	.0315	XAL649
6010-4316*	APKT-11T316-PM	.256	.482	.142	.110	.0630	XAF798
6010-4003	APKT-160408-PM	.363	.704	.227	.173	.0315	XAB699

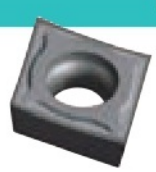
*Limited Supply

CCGX/LH CARBIDE INSERTS FOR ALUMINUM ALLOY

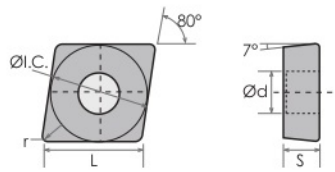
CCGX-LH

LH Chip-Breaker is more suitable for machining aluminum alloy with larger cutting depth and higher feed rate

Limited Supply!



10 PC PER PACKAGE



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6054-0110	CCGX2(1.5)0-LH	CCGX060202-LH	1/4	.252	3/32	.110	.008	XC899
6054-0112	CCGX2(1.5)2-LH	CCGX060208-LH	1/4	.252	3/32	.110	.031	XC899
6054-0221	CCGX3(2.5)1-LH	CCGX09T304-LH	3/8	.382	5/32	.173	.016	XC899
6054-0222	CCGX3(2.5)2-LH	CCGX09T308-LH	3/8	.382	5/32	.173	.031	XC899
6054-0431	CCGX-431-LH	CCGX120404-LH	1/2	.508	3/16	.219	.016	XC899
6054-0432	CCGX-432-LH	CCGX120408-LH	1/2	.508	3/16	.219	.031	XC899

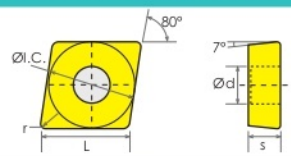
Carbide grades and insert classification shown on pages 167-170

CCMT 80° DIAMOND - POSITIVE RAKE CARBIDE INSERTS

CCMT

- Use for turning.
- 7° relief angle.
- Single sided.
- Use for light cuts.

TiN(C-5) Coated



10 PC PER PACKAGE

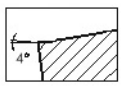
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6003-2021	CCMT-21.51	CCMT060204	1/4	1/4	3/32	7/64	.0157	TiN(C5)
6003-2022	CCMT-21.52	CCMT060208	1/4	1/4	3/32	7/64	.0315	TiN(C5)
6003-2031	CCMT-32.50	CCMT09T302	3/8	3/8	5/32	0.17	.0157	TiN(C5)
6003-2032	CCMT-32.51	CCMT09T304	3/8	3/8	5/32	0.17	.0315	TiN(C5)

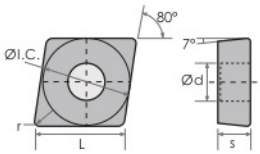
CCMT/EM 80° DIAMOND - POSITIVE RAKE CARBIDE INSERTS

CCMT-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM - Single-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6053-0111	CCMT-21.51-EM	CCMT060204EM	1/4	1/4	3/32	7/64	.0157	XAF798
6053-0112	CCMT-21.52-EM	CCMT060208EM	1/4	1/4	3/32	7/64	.0315	XAF798
6053-0221	CCMT-32.51-EM	CCMT09T304EM	3/8	3/8	5/32	0.17	.0157	XAF798
6053-0222	CCMT-32.52-EM	CCMT09T308EM	3/8	3/8	5/32	0.17	.0315	XAF798
6053-0432*	CCMT-432-EM	CCMT120408EM	1/2	1/2	3/16	7/32	.0315	XAF798

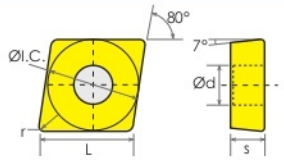
*Limited Supply

CCMT/HM 80° DIAMOND-POSITIVE RAKE CARBIDE INSERTS

CCMT-HM

HM - Medium Geometry. Periphery Ground Insert. Mixed Production

HM - With a sharp wave cutting edge to reduce cutting force, it is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6003-5021	CCMT-21.51-HM	CCMT060204HM	1/4	1/4	3/32	7/64	.0157	XAB749
6003-5022*	CCMT-21.52-HM	CCMT060208HM	1/4	1/4	3/32	7/64	.0315	XAB749
6003-5031	CCMT-32.51-HM	CCMT09T304HM	3/8	3/8	5/32	0.17	.0157	XAB749
6003-5032	CCMT-32.52-HM	CCMT09T308HM	3/8	3/8	5/32	0.17	.0315	XAB749
6003-5431*	CCMT-431-HM	CCMT120404HM	1/2	1/2	3/16	7/32	.0157	XAB749
6003-5432*	CCMT-432-HM	CCMT120408HM	1/2	1/2	3/16	7/32	.0315	XAB749
6003-5433*	CCMT-433-HM	CCMT120412HM	1/2	1/2	3/16	7/32	.0472	XAB749

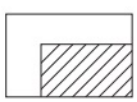
*Limited Supply

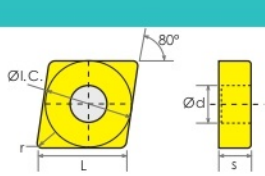
CNMA DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

CNMA

- Use for turning & boring
- 0° relief angle.
- No chipbreaker.
- 80° diamond negative rake.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6000-6431	CNMA-431	CNMA120404	1/2	1/2	3/16	13/64"	.0157	XAC849
6000-6432	CNMA-432	CNMA120408	1/2	1/2	3/16	13/64	.0315	XAC849
6000-6433	CNMA-433	CNMA120412	1/2	1/2	3/16	13/64	.0472	XAC849
6000-6543	CNMA-543	CNMA160612	5/8	5/8	1/4	1/4	.0472	XAC849
6000-6643	CNMA-643	CNMA190612	3/4	3/4	1/4	5/16	.0472	XAC849
6000-6644	CNMA-644	CNMA190616	3/4	3/4	1/4	5/16	.0630	XAC849

Carbide grades and insert classification shown on pages 167-170

CARBIDE INSERTS

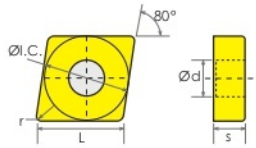
CNMG TiN (C5) DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

CCMT

- Use for turning & boring
- 0° relief angle.
- Chipbreaker two sides.
- 80° diamond negative rake.

TiN(C-5) COATED

Limited Supply!



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6000-6831	CNMG-431	CNMG120404	1/2	1/2	3/16	13/64"	.0157	TiN(C5)
6000-6832	CNMG-432	CNMG120408	1/2	1/2	3/16	13/64	.0315	TiN(C5)
6000-6943	CNMG-643	CNMG190612	3/4	3/4	1/4	5/16	.0472	TiN(C5)

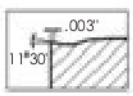
CNMG/DF DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

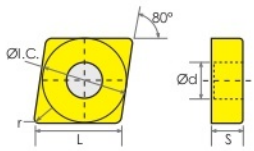
CNMG-DF

DF-For Steel Finishing

DF-Chip-breaker with special angle design allows for easy cuttings, controls chip flow and provides good surface finish

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6000-1431	CNMG-431-DF	CNMG120404DF	1/2	1/2	3/16	13/64	.0157	XAB849
6000-1432	CNMG-432-DF	CNMG120408DF	1/2	1/2	3/16	13/64	.0315	XAB849
6000-1433	CNMG-433-DF	CNMG120412DF	1/2	1/2	3/16	13/64	.0472	XAB849

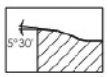
CNMG/DM DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

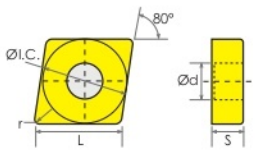
CNMG-DM

DM - For Steel Medium Machining

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6000-2431	CNMG-431-DM	CNMG120404DM	1/2	1/2	3/16	13/64	.0157	XAB749
6000-2432	CNMG-432-DM	CNMG120408DM	1/2	1/2	3/16	13/64	.0315	XAB749
6000-2433	CNMG-433-DM	CNMG120412DM	1/2	1/2	3/16	13/64	.0472	XAB749
6000-2542	CNMG-542-DM	CNMG160608DM	5/8	5/8	1/4	1/4	.0315	XAB749
6000-2543	CNMG-543-DM	CNMG160612DM	5/8	5/8	1/4	1/4	.0472	XAB749
6000-2643	CNMG-643-DM	CNMG190612DM	3/4	3/4	1/4	5/16	.0472	XAB749

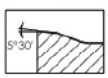
CNMG/DM DIAMOND-NEGATIVE RAKE CERMET INSERTS

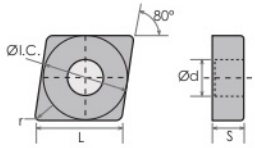
CNMG-DM

DM - For Steel Medium Machining

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Cermet Grade
6000-5431	CNMG-431-DM	CNMG120404DM	1/2	1/2	3/16	13/64	.0157	XMF849
6000-5432	CNMG-432-DM	CNMG120408DM	1/2	1/2	3/16	13/64	.0315	XMF849

Carbide grades and insert classification shown on pages 167-170

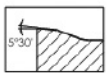
CNMG/DM -BLACK-DIAMOND COATED CARBIDE INSERTS

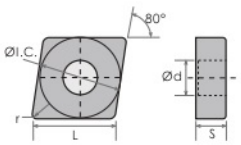
CNMG-DM

DM - For Steel Medium Machining

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

TiCN& Al_2O_3 COATED





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6030-2431	CNMG-431-DM	CNMG120404DM	1/2	1/2	3/16	13/64	.0157	XAB748
6030-2432	CNMG-432-DM	CNMG120408DM	1/2	1/2	3/16	13/64	.0315	XAB748
6030-2433	CNMG-433-DM	CNMG120412DM	1/2	1/2	3/16	13/64	.0472	XAB748
6030-2542*	CNMG-542-DM	CNMG160608DM	5/8	5/8	1/4	1/4	.0315	XAB748
6030-2543*	CNMG-543-DM	CNMG160612DM	5/8	5/8	1/4	1/4	.0472	XAB748
6030-2643*	CNMG-643-DM	CNMG190612DM	3/4	3/4	1/4	5/16	.0472	XAB748

*Limited Supply

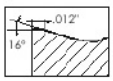
CNMG/DR DIAMOND - NEGATIVE RAKE CARBIDE INSERTS

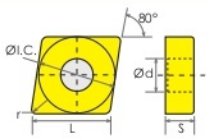
CNMG-DR

DR- For Light Roughing of Steel, Stainless Steel Material

DR - Single-side chipbreaker with M-class tolerance has high security on cutting edge for higher removal rates and low cutting force at large cutting depth and high feed rates.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6048-0433	CNMG-433-DR	CNMG120412DR	1/2	1/2	3/16	13/64	.0472	XAB748
6048-0543	CNMG-543-DR	CNMG160612DR	5/8	5/8	1/4	1/4	.0472	XAB748
6048-0544	CNMG-544-DR	CNMG160616DR	5/8	5/8	1/4	1/4	.0630	XAB748
6048-0643	CNMG-643-DR	CNMG190612DR	3/4	3/4	1/4	5/16	.0472	XAB748
6048-0644	CNMG-644-DR	CNMG190616DR	3/4	3/4	1/4	5/16	.0630	XAB748

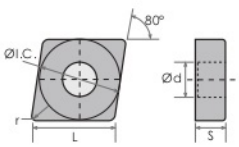
CNMG/EF -CARBIDE INSERTS

CNMG-EF

EF - For Stainless Steel, Highly Adhesive and Plastic Materials

EF Chip-Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.

Limited Supply!



10 PC PER PACKAGE

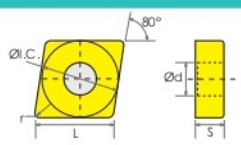
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6030-5431	CNMG-431-EF	CNMG120404EF	1/2	1/2	3/16	13/64	.0157	XAF795
6030-5432	CNMG-432-EF	CNMG120408EF	1/2	1/2	3/16	13/64	.0315	XAF795
6030-5433	CNMG-433-EF	CNMG120412EF	1/2	1/2	3/16	13/64	.0472	XAF795

CNMG/PM DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

CNMG-PM

PM - Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6000-3431	CNMG-431-PM	CNMG120404PM	1/2	1/2	3/16	13/64	.0157	XAB749
6000-3432	CNMG-432-PM	CNMG120408PM	1/2	1/2	3/16	13/64	.0315	XAB749
6000-3433*	CNMG-433-PM	CNMG120412PM	1/2	1/2	3/16	13/64	.0472	XAB749
6000-3542*	CNMG-542-PM	CNMG160608PM	5/8	5/8	1/4	1/4	.0315	XAB749
6000-3543*	CNMG-543-PM	CNMG160612PM	5/8	5/8	1/4	1/4	.0472	XAB749
6000-3642*	CNMG-642-PM	CNMG190608PM	3/4	3/4	1/4	5/16	.0315	XAB749
6000-3643*	CNMG-643-PM	CNMG190612PM	3/4	3/4	1/4	5/16	.0472	XAB749

*Limited Supply

Carbide grades and insert classification shown on pages 167-170

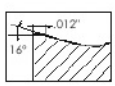
CNMM/DR DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

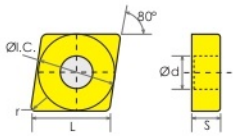
CNMM-DR

DR - For Light Roughing of Steel

DR - Special chip-breaker with high toughness cutting edge can reduce cutting force

Limited Supply!





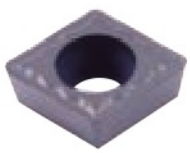
10 PC PER PACKAGE

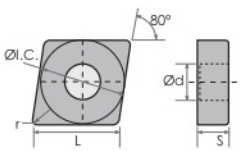
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6001-2432	CNMM-432-DR	CNMM120408HDR	1/2	1/2	3/16	13/64	.0315	XAB749
6001-2433	CNMM-433-DR	CNMM120412DR	1/2	1/2	3/16	13/64	.0472	XAB749
6001-2543	CNMM-543-DR	CNMM160612DR	5/8	5/8	1/4	1/4	.0472	XAB749
6001-2544	CNMM-544-DR	CNMM160616DR	5/8	5/8	1/4	1/4	.0630	XAB749
6001-2643	CNMM-643-DR	CNMM190612DR	3/4	3/4	1/4	5/16	.0472	XAB749
6001-2644	CNMM-644-DR	CNMM190616DR	3/4	3/4	1/4	5/16	.0630	XAB749

CPMT 80° BLACK-DIAMOND COATED - POSITIVE RAKE CARBIDE INSERTS

CPMT

- Use for boring & facing.
- 11° relief angle.
- Single sided with chip control.





10 PC PER PACKAGE

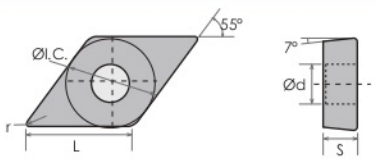
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6060-0211	CPMT-21.51	CPMT060204	1/4	1/4	3/32	7/64	.0157	XAC898
6060-0322	CPMT-32.52	CPMT09T308	3/8	3/8	5/32	0.17	.0315	XAC898
6060-0431	CPMT-432	CPMT120408	1/2	1/2	3/16	0.217	.0315	XAC898

DCGX/LH CARBIDE INSERTS FOR ALUMINUM ALLOY

DCGX-LH

LH Chip-Breaker is more suitable for machining aluminum alloy with larger cutting depth and higher feed rate

Limited Supply!



10 PC PER PACKAGE

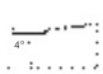
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6055-0110	DCGX2(1.5)0-LH	DCGX070202-LH	1/4	.307	3/32	.110	.008	XC899
6055-0111	DCGX2(1.5)1-LH	DCGX070204-LH	1/4	.307	3/32	.110	.016	XC899
6055-0221	DCGX3(2.5)1-LH	DCGX11T304-LH	3/8	.457	5/32	.173	.016	XC899
6055-0222	DCGX3(2.5)2-LH	DCGX11T308-LH	3/8	.457	5/32	.173	.031	XC899

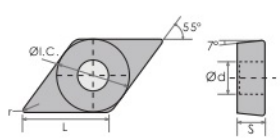
DCMT/EM 55° DIAMOND - POSITIVE RAKE CARBIDE INSERTS

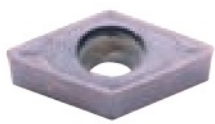
DCMT-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM -Single-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.







10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6004-1021	DCMT-21.51-EM	DCMT070204EM	1/4	0.307	3/32	7/64	.0157	XAF798
6004-1022*	DCMT-21.52-EM	DCMT070208EM	1/4	0.307	3/32	7/64	.0315	XAF798
6004-1031*	DCMT-32.51-EM	DCMT11T304EM	3/8	29/64	5/32	0.17	.0157	XAF798
6004-1032	DCMT-32.52-EM	DCMT11T308EM	3/8	29/64	5/32	0.17	.0315	XAF798

*Limited Supply

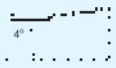
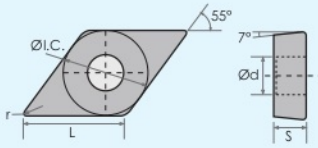
Carbide grades and insert classification shown on pages 167-170

DCMT/HF 55° DIAMOND-POSITIVE RAKE CERMET INSERTS

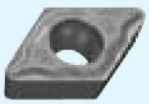
DCMT-HF

HF - With sharp cutting edge, used for finishing internal holes, fine finishing of surface can be achieved with a slow feed rate.

HF - Finishing Geometry. Mixed Production

Limited Supply!



10 PC PER PACKAGE

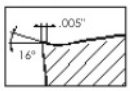
ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Item#	Cermet Grade
DCMT-32.50-HF	DCMT11T302HF	3/8	29/64	5/32	0.17	.0080	6003-8030	XMF849
DCMT-32.52-HF	DCMT11T308HF	3/8	29/64	5/32	0.17	.0315	6003-8032	XMF849

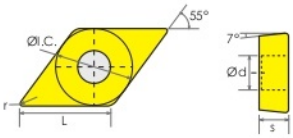
DCMT/HM 55° DIAMOND-POSITIVE RAKE CARBIDE INSERTS

DCMT-HM

HM - Medium Geometry. Periphery Ground Insert. Mixed Production

HM - With sharp wave cutting edge to reduce cutting force, it is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6004-0021	DCMT-21.51-HM	DCMT070204HM	1/4	0.307	3/32	7/64	.0157	XAB749
6004-0031	DCMT-32.51-HM	DCMT11T304HM	3/8	29/64	5/32	0.17	.0157	XAB749
6004-0032*	DCMT-32.52-HM	DCMT11T308HM	3/8	29/64	5/32	0.17	.0315	XAB749
6004-0033*	DCMT-32.53-HM	DCMT11T312HM	3/8	29/64	5/32	0.17	.0472	XAB749

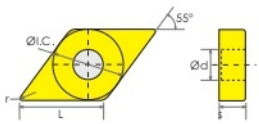
*Limited Supply

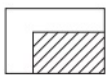
DNMA 55° DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

DNMA

- 55° diamond for profiling.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6001-3442	DNMA-442	DNMA150608	1/2	39/64	1/4	13/64	.0315	XAC849
6001-3443	DNMA-443	DNMA150612	1/2	39/64	1/4	13/64	.0472	XAC849
6001-3444	DNMA-444	DNMA150616	1/2	39/64	1/4	13/64	.0630	XAC849

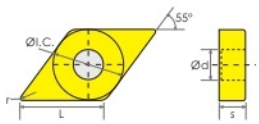
DNMG/DF 55° DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

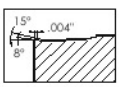
DNMG-DF

DF - For Steel Finishing

DF-Chip-breaker with special angle design allows for easy cuttings, controls chip flow and provides good surface finish

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6000-7331	DNMG-331-DF	DNMG110404-DF	3/8	29/64	3/16	0.15	.0157	XAB749
6000-7332	DNMG-332-DF	DNMG110408DF	3/8	29/64	3/16	0.15	.0315	XAB749
6000-7333	DNMG-333-DF	DNMG110412DF	3/8	29/64	3/16	0.15	.0472	XAB749
6000-7431	DNMG-431-DF	DNMG150404DF	1/2	39/64	3/16	13/64	.0157	XAB749
6000-7432	DNMG-432-DF	DNMG150408DF	1/2	39/64	3/16	13/64	.0315	XAB749

Carbide grades and insert classification shown on pages 167-170

DNMG/DF 55° -BLACK-DIAMOND COATED CARBIDE INSERTS

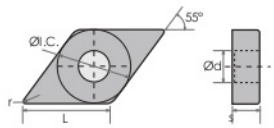
DNMG-DF

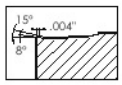
DF - For Steel Finishing

DF-Chip-breaker with special angle design allows for easy cuttings, controls chip flow and provides good surface finish

TiCN& Al_2O_3 COATED

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6033-0331	DNMG-331-DF	DNMG110404-DF	3/8	29/64	3/16	0.15	.0157	XAB848
6033-0332	DNMG-332-DF	DNMG110408DF	3/8	29/64	3/16	0.15	.0315	XAB848
6033-0432	DNMG-432-DF	DNMG150408DF	1/2	39/64	3/16	13/64	.0315	XAB848

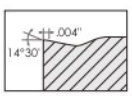
DNMG/DM 55° DIAMOND-NEGATIVE RAKE INSERTS

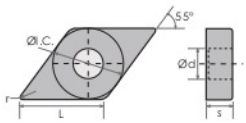
DNMG-DM

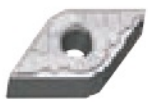
DM - Widely used chip-breaker is used for semi-finishing and finishing of steel and stainless steel

DM - For Steel Medium Machining

Black-Diamond: TiCN& Al_2O_3 COATED







10 PC PER PACKAGE

ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Carbide Item#	Carbide Grade	Cermet Item#	Cermet Grade	Black-Diamond Item#	Black-Diamond Grade
DNMG-331-DM	DNMG110404DM	3/8	29/64	3/16	0.15	.0157	**6000-8331***	XAB749	----------		**6033-1331**	XAB748
DNMG-332-DM	DNMG110408DM	3/8	29/64	3/16	0.15	.0315	**6000-8332***	XAB749	----------		**6033-1332**	XAB748
DNMG-431-DM	DNMG150404DM	1/2	39/64	3/16	13/64	.0157	----------	--------	**6001-1431***	XMF849	**6033-1431***	XAB748
DNMG-432-DM	DNMG150408DM	1/2	39/64	3/16	13/64	.0315	**6000-8432***	XAB749	**6001-1432***	XMF849	**6033-1432**	XAB748
DNMG-433-DM	DNMG150412DM	1/2	39/64	3/16	13/64	.0472	**6000-8433***	XAB749	----------		**6033-1433***	XAB748

*Limited Supply

DNMG/DR 55° BLACK-DIAMOND - NEGATIVE RAKE CARBIDE INSERTS

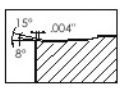
DNMG/DR

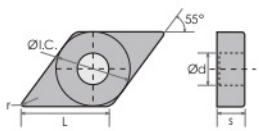
DR- For Light Roughing of Steel, Stainless Steel Material

Black-Diamond: TiCN& Al_2O_3 COATED

DR - Single-side chipbreaker with M-class tolerance has high security on cutting edge for higher removal rates and low cutting force at large cutting depth and high feed rates.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6046-0433	DNMG-433-DR	DNMG150412DR	1/2	39/64	3/16	13/64	.0472	XAB748
6046-0443	DNMG443-DR	DNMG150612DR	1/2	39/64	13/64	0.17	.0472	XAB748

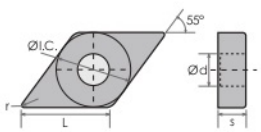
DNMG/EF 55° - CARBIDE INSERTS

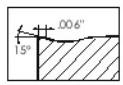
DNMG-EF

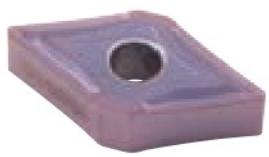
EF - For Stainless Steel, Highly Adhesive and Plastic Materials

Limited Supply!

EF Chip-Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.







10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6033-5331	DNMG-331-EF	DNMG110404EF	3/8	29/64	3/16	0.15	.0157	XAF795
6033-5332	DNMG-332-EF	DNMG110408EF	3/8	29/64	3/16	0.15	.0315	XAF795
6033-5431	DNMG-431-EF	DNMG150404EF	1/2	39/64	3/16	13/64	.0157	XAF795
6033-5432	DNMG-432-EF	DNMG150408EF	1/2	39/64	3/16	13/64	.0315	XAF795

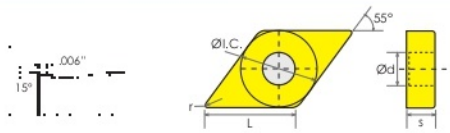
Carbide grades and insert classification shown on pages 167-170

DNMG/PM 55° DIAMOND-NEGATIVE RAKE CARBIDE INSERTS

DNMG-PM

PM-Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6000-9331*	DNMG-331-PM	DNMG110404PM	3/8	29/64	3/16	0.15	.0157	XAB749
6000-9332	DNMG-332-PM	DNMG110408PM	3/8	29/64	3/16	0.15	.0315	XAB749
6000-9333*	DNMG-333-PM	DNMG110412PM	3/8	29/64	3/16	0.15	.0472	XAB749
6000-9432	DNMG-432-PM	DNMG150408PM	1/2	39/64	3/16	13/64	.0315	XAB749
6000-9433*	DNMG-433-PM	DNMG150412PM	1/2	39/64	3/16	13/64	.0472	XAB749
6000-9434*	DNMG-434-PM	DNMG150416PM	1/2	39/64	3/16	13/64	.0630	XAB749
6000-9443*	DNMG-443-PM	DNMG150612PM	1/2	39/64	3/16	0.17	.0472	XAB749

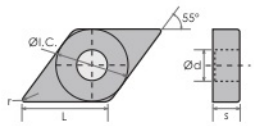
*Limited Supply

DPMT CARBIDE INSERTS, 11° Relief

DPMT

Item#	ANSI No.	I.C.	r
6027-2151*	DPMT-21.51	1/4"	.0157"
6027-3252	DPMT-32.52	3/8"	.0315"

*Limited Supply

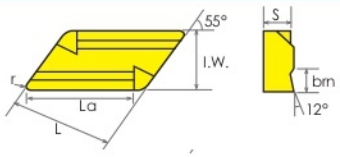


10 PC PER PACKAGE

KNUX PROFILE CARBIDE INSERTS

KNUX

- Turning insert.
- Parallelogram insert for profiling.
- Clamp on style.
- Negetive along cutting edge and positive flank along the narrow edge.



Limited Supply!

10 PC PER PACKAGE

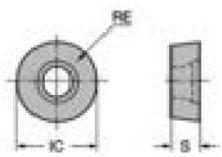
Item#	ANSI Insert No.	La	L	I.W.	(Inch) S	bm	r	Grade
6005-4005	KNUX-160405L11	5/8	5/8	3/8	3/16	.0087	0.02	XAB749
6005-4010	KNUX-160410L11	5/8	5/8	3/8	3/16	.0087	0.04	XAB749
6005-4105	KNUX-160405L12	5/8	5/8	3/8	3/16	.0126	0.02	XAB749
6005-4110	KNUX-160410L12	5/8	5/8	3/8	3/16	.0126	0.04	XAB749
6005-4205	KNUX-160405R11	5/8	5/8	3/8	3/16	.0087	0.02	XAB749
6005-4210	KNUX-160410R11	5/8	5/8	3/8	3/16	.0087	0.04	XAB749
6005-4305	KNUX-160405R12	5/8	5/8	3/8	3/16	.0126	0.02	XAB749
6005-4310	KNUX-160410R12	5/8	5/8	3/8	3/16	.0126	0.04	XAB749

RCKT/DM CARBIDE FACE MILL INSERTS

RCKT-DM

7° Positive Relief Angle - For Turning & Facing

DM - Widely used chip-breaker is used for semi-finishing and finishing of steel and stainless steel



10 PC PER PACKAGE

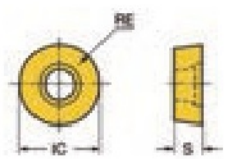
Item#	ANSI Insert No.	I.C.	Thickness	Hole	Grade
6034-1204	RCKT1204MO-DM	0.472"	3/16"	0.157"	XAF798

RCKT/DR CARBIDE FACE MILL INSERTS

RCKT-DR

7° Positive Relief Angle - For Turning & Facing

DR - Used for roughing of material. It can achieve a high rate of metal removal & a low cutting force .



10 PC PER PACKAGE

Item#	ANSI Insert No.	I.C.	Thickness	Hole	Grade
6034-2204	RCKT1204MO-DR	0.472"	3/16"	0.157"	XAL649
6034-2607*	RCKT2006MO-DR	0.787"	1/4"	0.258"	XAL649

*Limited Supply

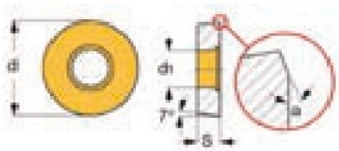
Carbide grades and insert classification shown on pages 167-170

RCMT CARBIDE INSERTS

RCMT

7° Positive Relief Angle - For Turning & Facing

10 PC PER PACKAGE



ANSI Insert No.	I.C.	(Inch) Thickness	Hole	Grade C-2 Item#	TiN Coated (C-6) Item#
RCMT-0602	.236	.0940	.110	6034-3012	6034-3062
RCMT-0803	.315	.1250	.134	6034-3013*	6034-3083
RCMT-10T3	.393	.1563	.173	6034-3023	6034-3103
RCMT-32	3/8	1/8	.150	6034-3032*	6034-3132
RCMT-1204	.472	.1870	.157	----------	6034-3124
RCMT-43	.500	3/16	.217	6034-3043*	----------

*Limited Supply

RDKW CARBIDE INSERTS

RDKW

15° Relief Angle

10 PC PER PACKAGE

Item#	ANSI Insert No.	Nose Radius	I.C.	(Inch) Thickness	Hole	Grade
6045-0803*	RDKW0803MO	.157	.315	.125	0.134	XAF798
6045-1003*	RDKW10T3MO	.197	.394	.156	0.173	XAF798
6045-1204	RDKW1204MO	.236	.472	.186	0.173	XAF798

*Limited Supply

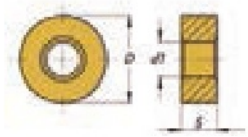
RNMG CARBIDE FACE MILL INSERTS

RNMG

0° Relief Angle - For Turning, Plunging & Profilling

Limited Supply!

10 PC PER PACKAGE



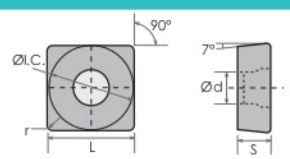
ANSI Insert No.	ISO Insert No.	I.C.	(Inch) Thickness	Hole	Grade C-2 Item#	TiN Coated (C5) Item#
RNMG-32	RNMG0903	3/8	1/8	.150	6005-6030	----------
RNMG-43MO	RNMG-1204MO	0.472	3/16	.157	----------	6005-5204
RNMG-43	RNMG1204	0.500	3/16	.203	6005-6043	6005-6143
RNMG-64	RNMG1906	0.750	1/4	.312	----------	6005-6164

*Limited Supply

SCMT CARBIDE INSERTS

SCMT

7° Relief Angle-Single Sided



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6004-4431*	SCMT-431	SCMT120404	1/2	1/2	3/16	7/32	.0157	C-6
6004-4432	SCMT-432	SCMT120408	1/2	1/2	3/16	7/32	.0315	C-6

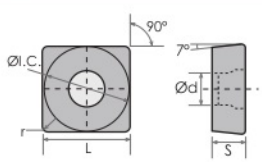
*Limited Supply

SCMT/EM SQUARE - POSITIVE RAKE CARBIDE INSERTS

SCMT-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM - Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6056-0221*	SCMT32.51-EM	SCMT09T304EM	3/8	3/8	5/32	0.17	.0157	XAF798
6056-0431	SCMT-431-EM	SCMT120404EM	1/2	1/2	3/16	7/32	.0157	XAF798
6056-0432	SCMT-432-EM	SCMT120408EM	1/2	1/2	3/16	7/32	.0315	XAF798

*Limited Supply

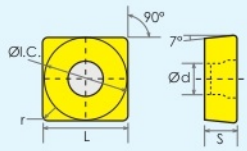
Carbide grades and insert classification shown on pages 167-170

SCMT/HM SQUARE - POSITIVE RAKE CARBIDE INSERTS

SCMT-HM

HM - Medium Geometry. Periphery Ground Insert. Mixed Production

HM - With a sharp wave cutting edge to reduce cutting force, it is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6004-3030*	SCMT-21.51	SCMT060204	1/4	1/4	3/32	2.8	.0157	TiN(C6)
6004-3031	SCMT-32.51-HM	SCMT09T304HM	3/8	3/8	5/32	0.17	.0157	XAB749
6004-3032	SCMT-32.52-HM	SCMT09T308HM	3/8	3/8	5/32	0.17	.0315	XAB749
6004-3432	SCMT-432-HM	SCMT120408HM	1/2	1/2	3/16	7/32	.0315	XAB749

*Limited Supply

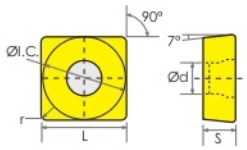
SCMT/HR SQUARE - POSITIVE RAKE CARBIDE INSERTS

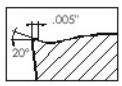
SCMT-HR

HR- General Chipbreaker for Roughing, Stainless Steel Material

HR - M-class tolerance; suitable for both boring and O.D. roughing materials as steel, stainless steel and cast iron etc.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6056-1431	SCMT-431-HR	SCMT120404HR	1/2	1/2	3/16	7/32	.0157	XAB749

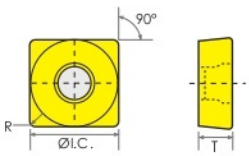
SD-POSITIVE RAKE CARBIDE INSERTS

SD

11° Relief Angle-Positive Rake

TiN COATED(C-6)

10 PC PER PACKAGE



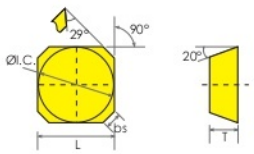
Item#	ANSI Insert No.	ISO Insert No.	I.C.	T	r
6029-2322	SD-322P	SD160308P	3/8"	1/8"	1/32"
6029-2422	SD-422P	SD220308P	1/2"	1/8"	1/32"

SEAN TiN (C5) CARBIDE INSERTS

SEAN

- Square 20° positive milling insert
- Used for face mill

TiN COATED(C-5)



10 PC PER PACKAGE

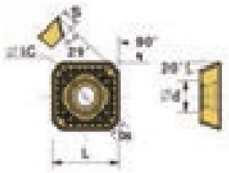
Item#	ANSI Insert No.	ISO Insert No.	bs	(Inch) I.C.	T
6016-0040*	SEAN-42AFN	SEAN1203AFN	.071	.500	1/8
6016-0042	SEAN-42AFTN	SEAN1203AFTN	.071	.500	1/8
6016-0043*	SEAN-43AFN	SEAN1204AFN	.071	.500	3/16

*Limited Supply

SEET/DR CARBIDE INSERT

SEET-DR

DR - Used for roughing of material. It can achieve a high rate of metal removal & a low cutting force .



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	bs	S	Grade
6016-0123	SEET-42-AFER	SEET12T3-DR	.500"	.071"	.157"	XAB699

Carbide grades and insert classification shown on pages 167-170

CARBIDE INSERTS

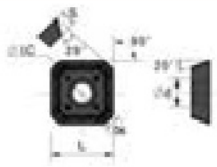
SEET/DM CARBIDE INSERT

SEET-DM

DM - Widely used chip-breaker is used for semi-finishing and finishing of steel and stainless steel

Limited Supply!

Item#	ANSI Insert No.	ISO Insert No.	I.C.	bs	S	Grade
6016-1123	SEET-42-AFEM	SEET12T3-DM	.500"	.071"	.157"	XAB698



10 PC PER PACKAGE

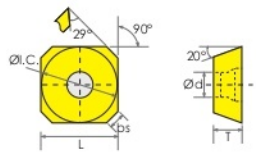
SEHT CARBIDE FACE MILL INSERT

SEHT

- 20° positive single sided chip breaker
- 4 cutting edges
- Wiper flat parallel land.

TiN COATED(C-6)

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	bs	T	d
6017-0432	SEHT120408	SEHT-432	1/2"	1/2"	.071"	3/16"	13/64"



10 PC PER PACKAGE

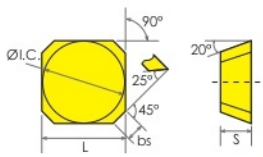
SEKN/AFTN CARBIDE FACE MILL INSERTS

SEKN

- Without chip breaker
- 20° relief angle
- Medium milling aplications.

Limited Supply!

Item#	ANSI Insert No.	I.C.	L	bs	S	Grade
6010-0002	SEKN-1203AFTN	1/2"	1/2"	.094"	1/8"	XAL749
6010-0012	SEKN-1204AFTN	1/2"	1/2"	.094"	3/16"	XAL649
6010-0006	SEKN-1504AFTN	5/8"	5/8"	.094"	3/16"	XAL749

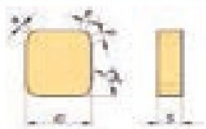


10 PC PER PACKAGE

SNKN CARBIDE FACE MILL INSERTS

SNKN

Item#	ANSI Insert No.	I.C.	F	a	S	Grade
6010-1003	SNKN-1204ENN	1/2"	0.059"	0.035"	3/16"	XAB699
6010-1006	SNKN-1504ENN	5/8"	0.059"	0.035"	3/16"	XAB699



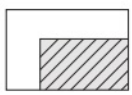
Limited Supply!

10 PC PER PACKAGE

SNMA SQUARE - NEGATIVE RAKE CARBIDE INSERTS WITH HOLE

SNMA

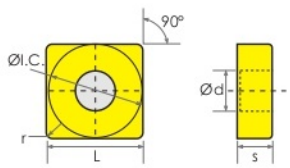
- Square without chip breaker.
- 0° relief angle.
- Double sided.



Limited Supply!

10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	(Inch) I.C.	L	S	d	r	Grade
6001-8432	SNMA-432	SNMA120408	1/2	1/2	3/16	13/64	.0315	XAC849
6001-8433	SNMA-433	SNMA120412	1/2	1/2	3/16	13/64	.0472	XAC849
6001-8542	SNMA-542	SNMA150608	5/8	5/8	1/4	1/4	.0315	XAC849
6001-8643	SNMA-643	SNMA190612	3/4	3/4	1/4	5/16	.0472	XAC849
6001-8644	SNMA-644	SNMA190616	3/4	3/4	1/4	5/16	.0630	XAC849



SNMG TiN (C5) CARBIDE FACE MILL INSERTS

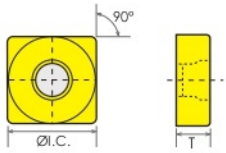
SNMG

- Square with chip breaker
- 0° relief angle
- Double sided cutting edges.
- Used for a wide range of materials and aplications.

TiN COATED(C-5)

Limited Supply!

Item#	ANSI Insert No.	ISO Insert No.	(Inch) I.C.	T	Price (F)
6001-0322	SNMG-322	SNMG090308	3/8	1/8	5.45
6001-0432	SNMG-432	SNMG120408	1/2	3/16	10.63
6001-0433	SNMG-433	SNMG120412	1/2	3/16	9.35
6001-0643	SNMG-643	SNMG190612	3/4	1/4	17.59



10 PC PER PACKAGE

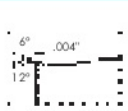
Carbide grades and insert classification shown on pages 167-170

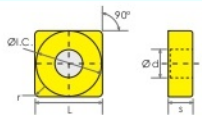
SNMG/DF SQUARE-NEGATIVE RAKE CARBIDE INSERTS

SNMG-DF

DF - For Steel Finishing

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6001-4432	SNMG-432-DF	SNMG120408DF	1/2"	1/2"	3/16"	13/64"	.0315"	XAB749
6001-4433	SNMG-433-DF	SNMG120412DF	1/2"	1/2"	3/16"	13/64"	.0472"	XAB749

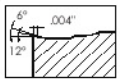
SNMG/DF BLACK DIAMOND COATED CARBIDE INSERTS

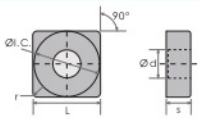
SNMG-DF

DF - For Steel Finishing

TiCNAI COATED

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6035-1432	SNMG-432-DF	SNMG120408DF	1/2"	1/2"	3/16"	13/64"	.0315"	XAB848
6035-1433	SNMG-433-DF	SNMG120412DF	1/2"	1/2"	3/16"	13/64"	.0472"	XAB848

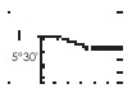
SNMG/DM SQUARE-NEGATIVE RAKE CARBIDE INSERTS

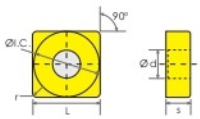
SNMG-DM

DM - For Steel Medium Machining

DM - Widely used chip-breaker is used for semi-finishing and finishing of steel and stainless steel

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6001-5433	SNMG-433-DM	SNMG120412DM	1/2	1/2	3/16	13/64	.0472	XAB749
6001-5543	SNMG-543-DM	SNMG150612DM	5/8	5/8	1/4	1/4	.0472	XAB749
6001-5643	SNMG-643-DM	SNMG190612DM	3/4	3/4	1/4	5/16	.0472	XAB749
6001-5644	SNMG-644-DM	SNMG190616DM	3/4	3/4	1/4	5/16	.0630	XAB749

SNMG/DM BLACK DIAMOND COATED CARBIDE INSERTS

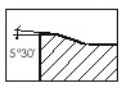
SNMG-DM

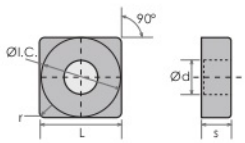
DM - For Steel Medium Machining

DM - Widely used chip-breaker is used for semi-finishing and finishing of steel and stainless steel

Limited Supply!

TiCNAI COATED





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6035-0543	SNMG-543-DM	SNMG150612DM	5/8	5/8	1/4	1/4	.0472	XAB748
6035-0643	SNMG-643-DM	SNMG190612DM	3/4	3/4	1/4	5/16	.0472	XAB748
6035-0644	SNMG-644-DM	SNMG190616DM	3/4	3/4	1/4	5/16	.0630	XAB748

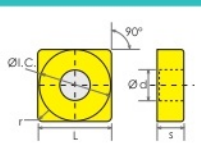
SNMG/DR SQUARE - NEGATIVE RAKE CARBIDE INSERTS

SNMG-DR

DR- For Light Roughing of Steel, Stainless Steel Material

DR - Single-side chipbreaker with M-class tolerance has high security on cutting edge for higher removal rates and low cutting force at large cutting depth and high feed rates.

Limited Supply!



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6049-1432	SNMG-432-DR	SNMG120408DR	1/2	1/2	3/16	13/64	.0315	XAB748
6049-1433	SNMG-433-DR	SNMG120412DR	1/2	1/2	3/16	13/64	.0472	XAB748
6049-1543	SNMG-543-DR	SNMG150612DR	5/8	5/8	1/4	1/4	.0472	XAB748
6049-1544	SNMG-544-DR	SNMG150616DR	5/8	5/8	1/4	1/4	.0630	XAB748
6049-1644	SNMG-644-DR	SNMG190616DR	3/4	3/4	1/4	5/16	.0630	XAB748

Carbide grades and insert classification shown on pages 167-170

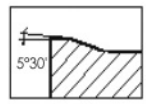
SNMG/EF CARBIDE INSERTS

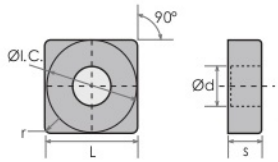
SNMG-EF

EF - For Stainless Steel, Highly Adhesive and Plastic Materials

EF Chip-Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6035-5322	SNMG-322-EF	SNMG090308EF	3/8	3/8	1/8	0.15	.0315	XAF798
6035-5432	SNMG-432-EF	SNMG120408EF	1/2	1/2	3/16	13/64	.0315	XAF798
6035-5543	SNMG-543-EF	SNMG150612EF	5/8	5/8	1/4	1/4	.0472	XAF798

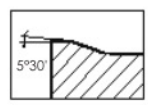
SNMG/EM SQUARE - NEGATIVE RAKE CARBIDE INSERTS

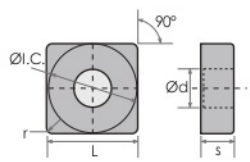
SNMG-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM - Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6049-0432	SNMG-432-EM	SNMG120408EM	1/2	1/2	3/16	13/64	.0315	XAF798
6049-0433	SNMG-433-EM	SNMG120412EM	1/2	1/2	3/16	13/64	.0472	XAF798
6049-0543	SNMG-543-EM	SNMG150612EM	5/8	5/8	1/4	1/4	.0472	XAF798

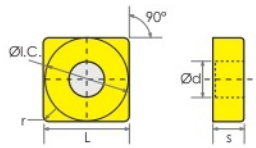
SNMG/PM SQUARE - NEGATIVE RAKE CARBIDE INSERTS

SNMG-PM

PM - Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials

Limited Supply!



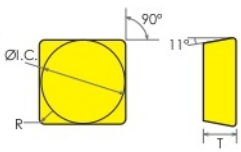
10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6001-6432	SNMG-432-PM	SNMG120408PM	1/2	1/2	3/16	13/64	.0315	XAB749
6001-6433	SNMG-433-PM	SNMG120412PM	1/2	1/2	3/16	13/64	.0472	XAB749
6001-6434	SNMG-434-PM	SNMG120416PM	1/2	1/2	3/16	13/64	.0630	XAB749
6001-6543	SNMG-543-PM	SNMG150612PM	5/8	5/8	1/4	1/4	.0472	XAB749
6001-6643	SNMG-643-PM	SNMG190612PM	3/4	3/4	1/4	5/16	.0472	XAB749

SPG CARBIDE INSERTS

SPG

C-6 for all steel and general purpose
TiN Coated for high heat & wear resistance on alloys, stainless steel & ductile iron



TiN Coated(C-6)

10 PC PER PACKAGE

Item#	ANSI Insert No.	I.C.	(Inch) T	R
6021-2322*	SPG-322	3/8	1/8	1/32
6021-2422	SPG-422	1/2	1/8	1/32
6021-2432	SPG-432	1/2	3/16	1/32
6021-2533*	SPG-533	5/8	3/16	3/64
6021-2633	SPG-633	3/4	3/16	3/64

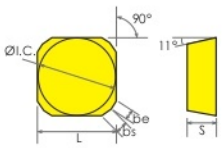
*Limited Supply

Carbide grades and insert classification shown on pages 167-170

SPKN/ED CARBIDE FACE MILL INSERTS

SPKN

- **Used** for milling
- **11°** relief angle



10 PC PER PACKAGE

Item#	ANSI Insert No.	Feeding Direction	I.C.	L	(Inch) bs	be	s	Grade
6010-2003*	SPKN-1203EDL	Left	1/2	1/2	0.055	0.039	1/8	XAB699
6010-2004	SPKN-1203EDR	Right	1/2	1/2	0.055	0.039	1/8	XAB699
6010-2009*	SPKN-1504EDL	Left	5/8	5/8	0.055	0.039	3/16	XAB699
6010-2010*	SPKN-1504EDR	Right	5/8	5/8	0.055	0.039	3/16	XAB699

*Limited Supply

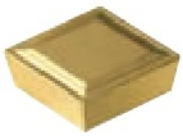
SPMR CARBIDE INSERT

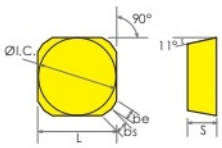
SPMR

- Screw on style.
- Single sided with chip breaker.
- -11° relief.

Limited Supply!

10 PC PER PACKAGE





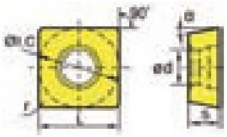
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	r	Grade
6004-5321	SPMR-321	SPMR090304	3/8	3/8	1/8	.0156	XAB749
6004-5322	SPMR-322	SPMR090308	3/8	3/8	1/8	.031	XAB749
6004-5421	SPMR-421	SPMR120304	1/2	1/2	1/8	.0156	XAB749
6004-5422	SPMR-422	SPMR120308	1/2	1/2	1/8	.031	XAB749

SPMT CARBIDE INSERT

SPMT

- Screw on style.
- Single sided with chip breaker.
- -11° relief.

10 PC PER PACKAGE



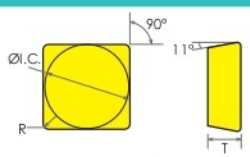
Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) S	d	r	Grade
6018-3251	SPMT32.51	SPMT09T304	3/8	5/32	0.173	0.0156	TiN
6018-3252	SPMT32.52	SPMT09T308	3/8	5/32	0.173	0.031	TiN
6018-3432	SPMT432	SPMT120408	1/2	3/16	0.216	0.031	XAF698

*Limited Supply

SPU CARBIDE INSERTS

SPU

C-2 for cast iron and general purpose,
C-6 for all steel and general purpose
TiN Coated for high heat & wear resistance on alloys, stainless steel & ductile iron



10 PC PER PACKAGE

ANSI Insert No.	I.C.	T	R	C-2 Item#	C-6 Item#	TiN Coated(C-6) Item#
SPU-322	3/8"	1/8"	1/32"	---------	-------	**6022-2322***
SPU-422	1/2"	1/8"	1/32"	--------	**6022-1422**	**6022-2422**
SPU-633	3/4"	3/16"	3/64"	**6022-0633***	**6022-1633***	-------

*Limited Supply

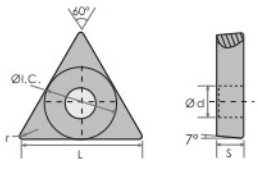
TCGX/LH CARBIDE INSERTS FOR ALUMINUM ALLOY

TCGX-LH

LH Chip-Breaker is more suitable for machining aluminum alloy with larger cutting depth and higher feed rate

Limited Supply!

10 PC PER PACKAGE



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6057-0100	TCGX1.8(1.5)0-LH	TCGX090202-LH	7/32	.378	3/32	.098	.008	XC899
6057-0101	TCGX1.8(1.5)1-LH	TCGX090204-LH	7/32	.378	3/32	.098	.016	XC899
6057-0110	TCGX2(1.5)0-LH	TCGX110202-LH	1/4	.433	3/32	.110	.008	XC899
6057-0111	TCGX2(1.5)1-LH	TCGX110204-LH	1/4	.433	3/32	.110	.016	XC899
6057-0112	TCGX2(1.5)2-LH	TCGX110208-LH	1/4	.433	3/32	.110	.031	XC899
6057-0221	TCGX3(2.5)1-LH	TCGX16T304-LH	3/8	.650	5/32	.173	.016	XC899
6057-0222	TCGX3(2.5)2-LH	TCGX16T308-LH	3/8	.650	5/32	.173	.031	XC899

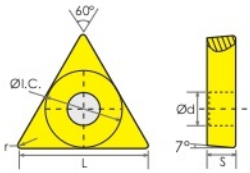
Carbide grades and insert classification shown on pages 167-170

TCMT TiN (C6) TRIANGLE - POSITIVE RAKE CARBIDE INSERTS

TCMT

- Single sided for semi-finishing.
- 7° relief angle
- Triangle with chipbreaker.

TiN COATED (C-6)



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r
6004-9020	TCMT-1.8(1.5)	TCMT090204	0.219	0.378	0.094	0.098	0.016
6004-9021	TCMT-21.51	TCMT110204	1/4	7/16	3/32	7/64	.0157
6004-9022	TCMT-21.52	TCMT110208	1/4	7/16	3/32	7/64	.0315
6004-9018*	TCMT1.2(1.2)1L	TCMT06T104L	0.156	0.272	0.078"	0.071"	0.016
6004-9024	TCMT221L	TCMT110304L	0.250	0.41	0.126"	0.125"	.0157
6004-9031	TCMT-32.51	TCMT16T304	3/8	5/8	5/32	0.17	.0157
6004-9032	TCMT-32.52	TCMT16T308	3/8	5/8	5/32	0.17	.0315
6004-6141	TCMT-431	TCMT220404	1/2	7/8	3/16	0.22	.0157
6004-6142	TCMT-432	TCMT220408	1/2	7/8	3/16	0.22	.0315

10 PC PER PACKAGE

*Limited Supply

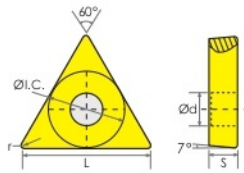
TCMT/HF TRIANGLE - POSITIVE RAKE CARBIDE INSERTS

TCMT-HF

HF - Finishing Geometry. Mixed Production

HF - With sharp cutting edge, used for finishing internal holes, fine finishing of surface can be achieved with a slow feed rate.

Limited Supply!



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6004-6022	TCMT-21.52-HF	TCMT110208HF	1/4	7/16	3/32	7/64	.0315	XAB849
6004-6032	TCMT-32.52-HF	TCMT16T308HF	3/8	5/8	5/32	0.17	.0315	XAB849

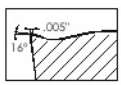
TCMT/HM TRIANGLE - POSITIVE RAKE CARBIDE INSERTS

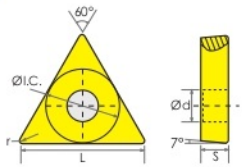
TCMT-HM

HM - Medium Geometry. Periphery Ground Insert. Mixed Production

HM - With sharp wave cutting edge to reduce cutting force, it is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.

Limited Supply!





10 PC PER PACKAGE

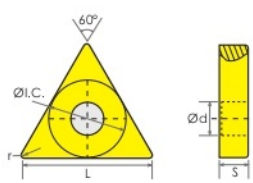
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6004-7032	TCMT-32.52-HM	TCMT16T308HM	3/8	5/8	5/32	0.17	.0315	XAB749
6004-7033	TCMT-32.53-HM	TCMT16T312HM	3/8	5/8	5/32	0.17	.0472	XAB749

TDEX 60° TRIANGLE CARBIDE INSERTS

TDEX

- 60° indexiable dovetail milling cutter
- Honed edge allows for a heavier cuts.
- For special applications
- 3 cutting edges.

TiN (C5) COATED



10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	TiN Coated Grade
6062-0215	TDEX 21.5	TDEX110204	1/4	7/16	3/32	7/64	.0157	C-5
6062-0320	TDEX32	TDEX16T308	3/8	5/8	5/32	0.17	.0315	C-5
6062-0430	TDEX43	TDEX220408	1/2	7/8	3/16	0.22	.0315	C-5

Carbide grades and insert classification shown on pages 167-170

TNMA TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

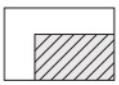
TNMA

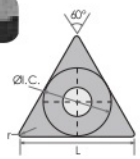
11° Relief Angle, Flat Top Insert

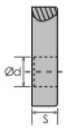
Limited Supply!

10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-6332	TNMA-332	TNMA160408	3/8	5/8	3/16	0.15	.0315	XAC849
6002-6333	TNMA-333	TNMA160412	3/8	5/8	3/16	0.15	.0472	XAC849
6002-6432	TNMA-432	TNMA220408	1/2	7/8	3/16	13/64	.0315	XAC849







TNMC GROOVING CARBIDE INSERTS

TNMC

- Right hand on two sides.
- Neutral rake angle.
- Double countersink thu hole.
- TiN coated.

TiN Coated

*Limited Supply

Item#	ANSI Insert No.	Pitch	I.C. (In)	Pitch	Groove Width (In)	Groove Depth (In)
6043-0632	TNMC-32NGR031	8 TPI Max.	0.375	8 TPI Max.	.031	.075
6043-0633	TNMC-32NGR062	8 TPI Max.	0.375	8 TPI Max.	.062	.150
6043-0634	TNMC-32NGR094	8 TPI Max.	0.375	8 TPI Max.	.094	.150
6043-0635	TNMC-32NGR125	8 TPI Max.	0.375	8 TPI Max.	.125	.150
6043-0643	TNMC-43NGR062	6 TPI Max.	0.500	6 TPI Max.	.062	.125
6043-0644	TNMC-43NGR094	6 TPI Max.	0.500	6 TPI Max.	.094	.150
6043-0645	TNMC-43NGR125	6 TPI Max.	0.500	6 TPI Max.	.125	.210
6043-0646*	TNMC-43NGR156	6 TPI Max.	0.500	6 TPI Max.	.156	.210
6043-0647*	TNMC-43NGR187	6 TPI Max.	0.500	6 TPI Max.	.187	.210
6043-0654*	TNMC-54NGR250	4 TPI Max.	0.625	4 TPI Max.	.250	.210

TNMG TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

TNMG

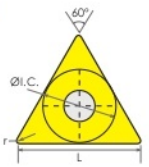
- Triangle with chipbreaker
- 0° relief angle

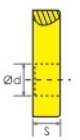
TiN (C5) COATED

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r
6002-0001	TNMG-221	TNMG110304	1/4	7/16	1/8	.093	.0157
6002-0002	TNMG-222	TNMG110308	1/4	7/16	1/8	.093	.0315
6002-0011	TNMG-321	TNMG160404	3/8	5/8	1/8	0.15	.0157
6002-0012*	TNMG-322	TNMG160408	3/8	5/8	1/8	0.15	.0315
6002-0013	TNMG-323	TNMG160412	3/8	5/8	1/8	0.15	.0472
6002-0021	TNMG-431	TNMG220404	1/2	7/8	3/16	13/64	.0157
6002-0022	TNMG-432	TNMG220408	1/2	7/8	3/16	13/64	.0315
6002-0023*	TNMG-433	TNMG220412	1/2	7/8	3/16	13/64	.0472
6002-0024*	TNMG-434	TNMG220416	1/2	7/8	3/16	13/64	.0630

10 PC PER PACKAGE

*Limited Supply





TNMG TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

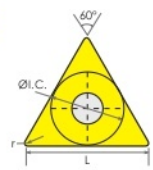
TNMG

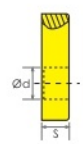
0° Relief Angle, Molded Chipbraker

Limited Supply!

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-3433	TNMG-433	TNMG220412	1/2	7/8	3/16	13/64	.0472	XAB749
6002-3434	TNMG-434	TNMG220416	1/2	7/8	3/16	13/64	.0630	XAB749
6002-2543	TNMG-543	TNMG270612	5/8	1.08	1/4	1/4	.0472	XAB749
6002-2544	TNMG-544	TNMG270616	5/8	1.08	1/4	1/4	.0630	XAB749

10 PC PER PACKAGE





TNMG/DF TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

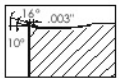
TNMG-DF

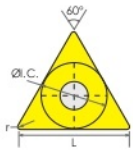
DF - For Steel Finishing

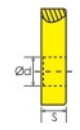
Limited Supply!

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6001-9332	TNMG-332-DF	TNMG160408DF	3/8	5/8	3/16	0.15	.0315	XAB849
6001-9333	TNMG-333-DF	TNMG160412DF	3/8	5/8	3/16	0.15	.0472	XAB849
6001-9433	TNMG-433-DF	TNMG220412DF	1/2	7/8	3/16	13/64	.0472	XAB849

10 PC PER PACKAGE







Carbide grades and insert classification shown on pages 167-170

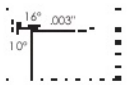
TNMG/DF BLACK DIAMOND CARBIDE INSERTS

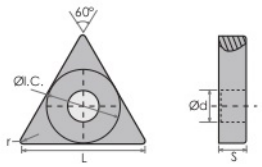
TNMG-DF

DF - For Steel Finishing

TiCNAI COATED

Limited Supply!





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6036-0332	TNMG-332-DF	TNMG160408DF	3/8	5/8	3/16	0.15	.0315	XAB848
6036-0333	TNMG-333-DF	TNMG160412DF	3/8	5/8	3/16	0.15	.0472	XAB848
6036-0432	TNMG-432-DF	TNMG220408	1/2	7/8	3/16	13/64	.0315	XAB848
6036-0433	TNMG-433-DF	TNMG220412DF	1/2	7/8	3/16	13/64	.0472	XAB848

10 PC PER PACKAGE

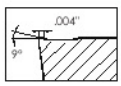
TNMG/DM BLACK DIAMOND CARBIDE INSERTS

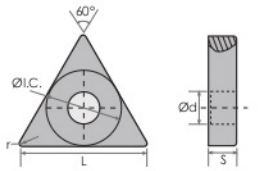
TNMG-DM

DM - For Steel Medium Machining

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

TiCNAI COATED





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6036-1222	TNMG-222-DM	TNMG110308DM	1/4	7/16	1/8	0.09	.0157	XAB748
6036-1331	TNMG-331-DM	TNMG160404DM	3/8	5/8	3/16	0.15	.0157	XAB748
6036-1332	TNMG-332-DM	TNMG160408DM	3/8	5/8	3/16	0.15	.0315	XAB748
6036-1333*	TNMG-333-DM	TNMG160412DM	3/8	5/8	3/16	0.15	.0472	XAB748
6036-1431*	TNMG-431-DM	TNMG220404DM	1/2	7/8	3/16	13/64	.0157	XAB748
6036-1432	TNMG-432-DM	TNMG220408DM	1/2	7/8	3/16	13/64	.0315	XAB748
6036-1433*	TNMG-433-DM	TNMG220412DM	1/2	7/8	3/16	13/64	.0472	XAB748
6036-1434*	TNMG-434-DM	TNMG220416DM	1/2	7/8	3/16	13/64	.0630	XAB748

*Limited Supply

10 PC PER PACKAGE

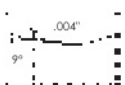
TNMG/DM TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

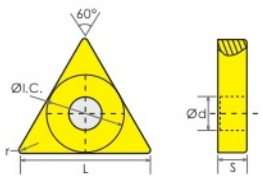
TNMG-DM

DM - For Steel Medium Machining

Limited Supply!

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-0222	TNMG-222-DM	TNMG110308DM	1/4	7/16	1/8	0.09	.0157	XAB749
6002-0331	TNMG-331-DM	TNMG160404DM	3/8	5/8	3/16	0.15	.0157	XAB749
6002-0333	TNMG-333-DM	TNMG160412DM	3/8	5/8	3/16	0.15	.0472	XAB749
6002-0431	TNMG-431-DM	TNMG220404DM	1/2	7/8	3/16	13/64	.0157	XAB749
6002-0432	TNMG-432-DM	TNMG220408DM	1/2	7/8	3/16	13/64	.0315	XAB749
6002-0433	TNMG-433-DM	TNMG220412DM	1/2	7/8	3/16	13/64	.0472	XAB749
6002-0434	TNMG-434-DM	TNMG220416DM	1/2	7/8	3/16	13/64	.0630	XAB749

10 PC PER PACKAGE

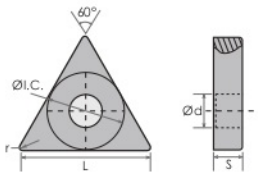
Carbide grades and insert classification shown on pages 167-170

TNMG/EF - CARBIDE INSERTS

TNMG-EF

EF - For Stainless Steel, Highly Adhesive and Plastic Materials

EF Chip-Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6036-5331	TNMG-331-EF	TNMG160404EF	3/8	5/8	3/16	0.15	.0157	XAF798
6036-5332	TNMG-332-EF	TNMG160408EF	3/8	5/8	3/16	0.15	.0315	XAF798
6036-5333*	TNMG-333-EF	TNMG160412EF	3/8	5/8	3/16	0.15	.0472	XAF798
6036-5432	TNMG-432-EF	TNMG220408EF	1/2	7/8	3/16	13/64	.0315	XAF798
6036-5433*	TNMG-433-EF	TNMG220412EF	1/2	7/8	3/16	13/64	.0472	XAF798

10 PC PER PACKAGE

*Limited Supply

TNMG/EM TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

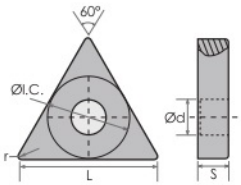
TNMG-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM - Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6050-0331*	TNMG-331-EM	TNMG160404EM	3/8	5/8	1/8	0.15	.0157	XAF795
6050-0332	TNMG-332-EM	TNMG160408EM	3/8	5/8	1/8	0.15	.0315	XAF795
6050-0432	TNMG-432-EM	TNMG220408EM	1/2	7/8	3/16	13/64	.0315	XAF795
6050-0433*	TNMG-433-EM	TNMG220412EM	1/2	7/8	3/16	13/64	.0472	XAF795

10 PC PER PACKAGE



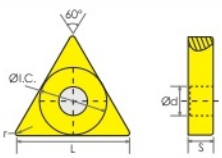
*Limited Supply

TNMG/PM TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

TNMG-PM

PM - Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-1222	TNMG-222-PM	TNMG110308PM	1/4	7/16	1/8	0.09	.0157	XAB749
6002-1331*	TNMG-331-PM	TNMG160404PM	3/8	5/8	3/16	0.15	.0157	XAB749
6002-1332	TNMG-332-PM	TNMG160408PM	3/8	5/8	3/16	0.15	.0315	XAB749
6002-1333*	TNMG-333-PM	TNMG160412PM	3/8	5/8	3/16	0.15	.0472	XAB749
6002-1432*	TNMG-432-PM	TNMG220408PM	1/2	7/8	3/16	13/64	.0315	XAB749
6002-1433*	TNMG-433-PM	TNMG220412PM	1/2	7/8	3/16	13/64	.0472	XAB749
6002-1434*	TNMG-434-PM	TNMG220416PM	1/2	7/8	3/16	13/64	.0630	XAB749

10 PC PER PACKAGE

*Limited Supply

TNMM TRIANGLE - NEGATIVE RAKE CARBIDE INSERTS

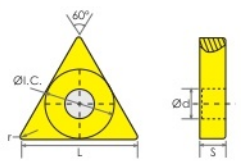
TNMM

0° Relief Angle, Chipbreaker

Limited Supply!

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-5332	TNMM-332	TNMM160408	3/8	5/8	1/8	0.15	.0315	XAB749
6002-5432	TNMM-432	TNMM220408	1/2	7/8	3/16	13/64	.0315	XAB749
6002-5433	TNMM-433	TNMM220412	1/2	7/8	3/16	13/64	.0472	XAB749

10 PC PER PACKAGE



Carbide grades and insert classification shown on pages 167-170

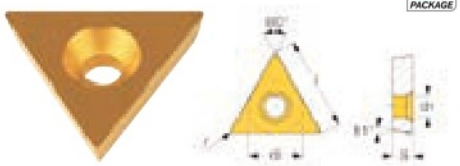
TPGB CARBIDE INSERTS 11° Positive Single Sided

TPGB

- TPGB for machinging short chip materials without chipbreaker.
- With countersunk hole.
- Fits popular boring bar & turning tool holders.

10 PC PER PACKAGE

TiN COATED(C6)



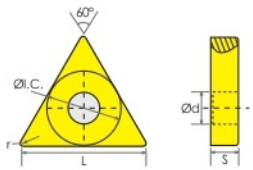
Item#	ANSI Insert No.	I.C.	Thick (In)	Hole (In)
6025-0251	TPGB-21.51	1/4"	.094	.118
6025-0252*	TPGB-21.52	1/4"	.094	.118
6025-0321	TPGB-321	3/8"	.125	.125
6025-0322	TPGB-322	3/8"	.125	.125
6025-0431*	TPGB-431	1/2"	.188	.220
6025-0432	TPGB-432	1/2"	.188	.220

*Limited Supply

TPGC CARBIDE INSERTS, TRANGLE POSITIVE

TPGC

- Single sided with chipbreaker.
- 11° relief angle.
- Fully ground with countersink hole.
- Suitable for materials that create a short chip.



Limited Supply!

TiN (C5) COATED

10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) T	R	Thru Hole
6025-0731	TPGC-321	TPGC160304	3/8	1/8	1/64	.125
6025-0732	TPGC-322	TPGC160308	3/8	1/8	1/32	.125

TPGH - POSITIVE RAKE CARBIDE INSERTS

TPGH

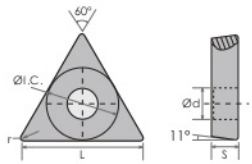
- Single sided with chipbreaker.
- 11° relief angle.
- Suitable for turning, facing and boring.

GRADE C-2 FOR CAST IRON AND GENERAL PURPOSE
GRADE C-6 FOR ALL STEEL AND GENERAL PURPOSE

10 PC PER PACKAGE

Insert No. ANSI	Insert No. ISO	I.C.	(Inch) S	r	Hole d	C-2 Item#	C-5 Item#	TiN-55 (C-6) Item#
TPGH-731	----------	7/32	3/32	1/64	.098	6025-0010*	2003-0010	2003-0020
TPGH-21.51	TPGH110204	1/4	0.094	1/64	.110	6025-0011	2003-0011	2003-0021
TPGH-32.51	TPGH16T304	3/8	5/32	1/64	.173	6025-0014	2003-0014	2003-0023
TPGH-321	TPGH160304	3/8	1/8	1/64	.173	---	6025-1321	6025-2321
TPGH-322	TPGH160308	3/8	1/8	1/32	.173	---	6025-1322	6025-2322

*Limited Supply



TPGN - POSITIVE RAKE CARBIDE INSERTS (TPG)

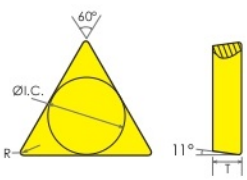
TPG

- Single sided without chipbreaker.
- 11° relief angle.
- Suitable for difficult to cut materials.

GRADE C-2 FOR CAST IRON AND GENERAL PURPOSE
GRADE C-6 FOR ALL STEEL AND GENERAL PURPOSE

ANSI Insert No.	I.C.	(Inch) T	R	Uncoated C-2 Item#	Uncoated C-6 Item#	TiN Coated (C-6) Item#
TPG-21.51	1/4	.094	1/64	---	---	6020-1121
TPG-221	1/4	1/8	1/64	6020-2221	6020-0221	6020-1221
TPG-222	1/4	1/8	1/32	6020-2222	6020-0222	6020-1222
TPG-223	1/4	1/8	3/64	6020-2223	6020-0223	6020-1223
TPG-32.51	3/8	5/32	1/64	----	----	6020-1122
TPG-321	3/8	1/8	1/64	6020-2321	6020-0321	6020-1321
TPG-322	3/8	1/8	1/32	6020-2322	6020-0322	6020-1322
TPG-323	3/8	1/8	3/64	6020-2323	6020-0323	6020-1323
TPG-324	3/8	1/8	1/16	6020-2324	6020-0324	6020-1324
TPG-332	3/8	15/32	5/32	----	----	6004-9332
TPG-431	1/2	3/16	1/64	6020-2431	6020-0431*	6020-1431*
TPG-432	1/2	3/16	1/32	----	6020-0432*	6020-1432
TPG-433	1/2	3/16	3/64	----	6020-0433*	6020-1433*
TPG-434	1/2	3/16	1/16	6020-2434*	6020-0434*	6020-1434*

*Limited Supply



10 PC PER PACKAGE

Carbide grades and insert classification shown on pages 167-170

TPGW CARBIDE INSERT 11° Positive Single Sided

TPGW

- 11° clearance angle.
- Positive insert shape.
- Screw on style.
- Fits many popular boring bar & turning tool holders.
- For machining short chip materials without a chipbreaker.

TiN (C6) coated

Item#	ANSI Insert No.	ISO Insert No.	I.C.	Thickness S	(Inch) Corner Radius R	Hole Size d	Grade
6025-2152*	TPGW-21.52	TPGW110208	0.250	.093	.0315	0.110	TiN(C6)
6025-0222*	TPGW-222	TPGW110308	0.250	.125	.0315	0.110	TiN(C6)
6025-3321	TPGW-321	TPGW160304	0.375"	.125	.0157	0.173	TiN(C6)
6025-3322*	TPGW-322	TPGW160308	0.375"	.125	.0315	0.173	TiN(C6)
6025-4432*	TPGW-432	TPGW220408	0.500"	.187	.0315	0.217	TiN(C6)

10 PC PER PACKAGE

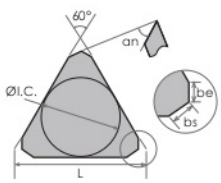
*Limited Supply

TPKN CARBIDE MILLING INSERTS

TPKN

- For 90° mills.
- Wedge held inserts.
- 3 Indexes.

11° Relief Angle



Limited Supply!

Item#	ANSI Insert No.	I.C.	L	bs	be	an	S	Grade
6010-5003	TPKN-1603PDR	3/8"	5/8"	0.047"	0.039"	15°	1/8"	XB970R
6010-5010	TPKN-2204PDL	1/2"	7/8"	0.055"	0.028"	15°	3/16"	XB970R
6010-5011	TPKN-2204PDR	1/2"	7/8"	0.055"	0.028"	15°	3/16"	XB970R

10 PC PER PACKAGE

TT/TPMM- POSITIVE RAKE CARBIDE INSERTS

TT/TPMM

- Single sided with chipbreaker.
- 11° relief angle.
- Suitable for turning, facing and boring.

Insert No. ANSI	Insert No. ISO	(Inch) I.C.	S	R	d	C-2 Item#	C-5 Item#	TiN Coated Item# (C-6)
TPMM-321	TPMM160304	3/8	1/8	1/64	.150	**6026-0321**	**6026-1321**	**6026-2321**
TPMM-322	TPMM160308	3/8	1/8	1/32	.150	**6026-0322**	**6026-1322**	**6026-2322**
TPMM-431	TPMM220404	1/2	3/16	1/64	.203	**6026-0431***	**6026-1431***	**6026-2431**
TPMM-432	TPMM220408	1/2	3/16	1/32	.203	**6026-0432***	**6026-1432***	**6026-2432**

10 PC PER PACKAGE

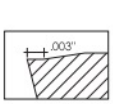
*Limited Supply

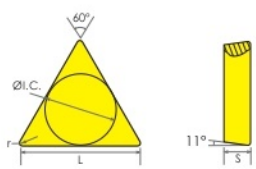
TPMR - POSITIVE RAKE CARBIDE INSERTS

TRMR

- Single sided with chipbreaker.
- 11° relief angle.
- Suitable for semi finish cuts where chip control is required.

Limited Supply!





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	r	Grade
6005-0221	TPMR-221	TPMR110304	1/4	7/16	1/8	.0157	XAB849
6005-0222	TPMR-222	TPMR110308	1/4	7/16	1/8	.0315	XAB849
6005-0321	TPMR-321	TPMR160304	3/8	5/8	1/8	.0157	XAB849
6005-0323	TPMR-323	TPMR160312	3/8	5/8	1/8	.0472	XAB849

10 PC PER PACKAGE

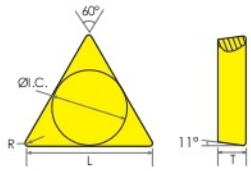
Carbide grades and insert classification shown on pages 167-170

TPU CARBIDE INSERTS WITHOUT HOLE

TPU

C-6 for all steel and general purpose
TiN Coated for high heat & wear resistance on alloys, stainless steel & ductile iron

10 PC PER PACKAGE



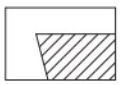
Insert No. ANSI	ISO	I.C.	(Inch) T	R	TiN Coated(C-6) Item#
TPU-322	TPU160308	3/8	1/8	1/32	**6023-1322**
TPU-323	TPU160312	3/8	1/8	3/64	**6023-1323***

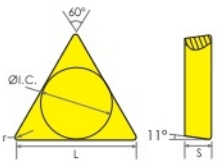
*Limited Supply

TPUN - POSITIVE RAKE CARBIDE INSERTS WITHOUT HOLE

TPUN

Limited Supply!





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	r	Grade
6005-2321	TPUN-321	TPUN160304	3/8	5/8	1/8	.0157	XAC849
6005-2322*	TPUN-322	TPUN160308	3/8	5/8	1/8	.0315	XAC849
6005-2323*	TPUN-323	TPUN160312	3/8	5/8	1/8	.0472	XAC849
6005-2432	TPUN-432	TPUN220408	1/2	7/8	3/16	.0157	XAC849
6005-2433	TPUN-433	TPUN220412	1/2	7/8	3/16	.0315	XAC849
6005-2434*	TPUN-434	TPUN220416	1/2	7/8	3/16	.0472	XAC849

10 PC PER PACKAGE

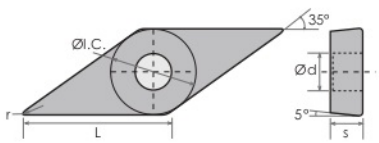
VBMT/EM 35° DIAMOND- POSITIVE RAKE CARBIDE INSERTS

VBMT-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

Limited Supply!

EM - Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6059-0221	VBMT-0221-EM	VBMT110304EM	1/4	.017	1/8	0.11	.0157	XAF795
6059-0222	VBMT-0222-EM	VBMT110308EM	1/4	.017	1/8	0.11	.0315	XAF795

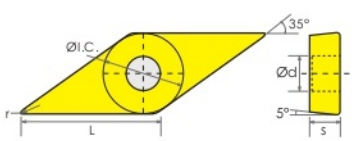
10 PC PER PACKAGE

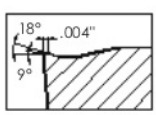
VBMT/HM 35° DIAMOND - POSITIVE RAKE CARBIDE INSERTS

VBMT-HM

HM - Medium Geometry. Periphery Ground Insert. Mixed Production

HM - With sharp wave cutting edge to reduce cutting force, it is the first choice for semi-finishing of internal holes and allows chips to flow smoothly.





Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) S	d	r	Grade
6005-2331	VBMT-331-HM	VBMT160404HM	3/8	3/16	.17	.0157	XAB749
6005-2332	VBMT-332-HM	VBMT160408HM	3/8	3/16	.17	.0315	XAB749

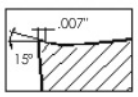
10 PC PER PACKAGE

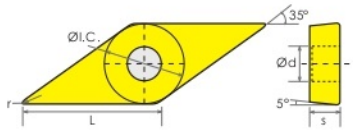
Carbide grades and insert classification shown on pages 167-170

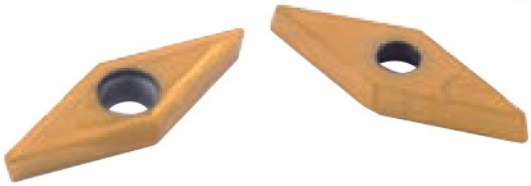
VCMT Tin 35° DIAMOND - POSITIVE RAKE CARBIDE INSERT

VCMT

- Tin coated, C-6 grade.







10 PC PER PACKAGE

Item#	ANSI Insert No.	I.C.	L	(Inch) S	d	r
6005-3403	VCMT21.51	0.250	0.41	0.10	0.106	.0157

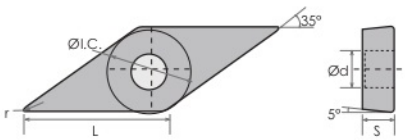
VCGX/LH CARBIDE INSERTS FOR ALUMINUM ALLOY

VCGX-LH

LH Chip-Breaker is more suitable for machining aluminum alloy with larger cutting depth and higher feed rate

Limited Supply!

10 PC PER PACKAGE



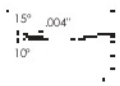
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6058-0111	VCGX2(1.5)1-LH	VCGX110104-LH	1/4	.433	3/32	.110	.016	XC899
6058-0221	VCGX-221-LH	VCGX110204-LH	1/4	.433	1/8	.110	.016	XC899
6058-0222	VCGX-222-LH	VCGX110208-LH	1/4	.433	1/8	.110	.031	XC899
6058-0332	VCGX-332-LH	VCGX160408-LH	3/8	.650	3/16	.173	.031	XC899

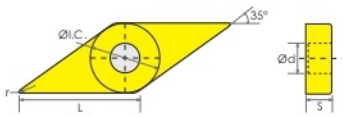
VNMG/DF 35° DIAMOND - NEGATIVE RAKE CARBIDE INSERTS

VNMG-DF

DF - For Steel Finishing

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6002-7331	VNMG-331-DF	VNMG160404DF	3/8	5/8	3/16	0.15"	.0157"	XAB849
6002-7332	VNMG-332-DF	VNMG160408DF	3/8	5/8	3/16	0.15"	.0315"	XAB849

VNMG/DM 35° BLACK-DIAMOND CARBIDE INSERTS

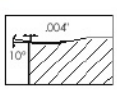
VNMG-DM

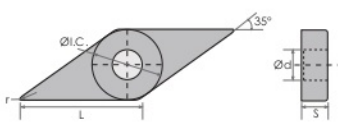
DM - For Steel Medium Machining

Limited Supply!

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

TiCNAI COATED





10 PC PER PACKAGE

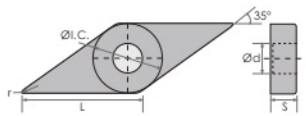
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6038-1332	VNMG-332-DM	VNMG160408DM	3/8	5/8	3/16	0.15"	.0315"	XAB748
6038-1333	VNMG-333-DM	VNMG160412DM	3/8	5/8	3/16	0.15"	.0472"	XAB748

VNMG/EF 35° - CARBIDE INSERTS

VNMG-EF

EF - For Stainless Steel, Highly Adhesive and Plastic Materials

EF Chip - Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.



Limited Supply!

10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6038-5332	VNMG-332-EF	VNMG160408EF	3/8	5/8	3/16	0.15"	.0315"	XAF798
6038-5333	VNMG-333-EF	VNMG160412EF	3/8	5/8	3/16	0.15"	.0472"	XAF798

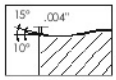
Carbide grades and insert classification shown on pages 167-170

VNMG/EM 35° DIAMOND- NEGATIVE RAKE CARBIDE INSERTS

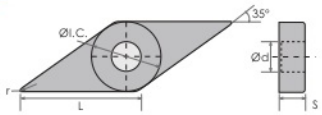
VNMG-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM -Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.



Limited Supply!



10 PC PER PACKAGE

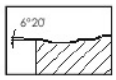
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6051-0331	VNMG-331-EM	VNMG160404EM	3/8	5/8	3/16	0.15	.0157	XAF795
6051-0332	VNMG-332-EM	VNMG160408EM	3/8	5/8	3/16	0.15	.0315	XAF795

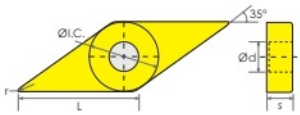
VNMG/PM 35° - CARBIDE INSERTS

VNMG-PM

PM - Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials





10 PC PER PACKAGE

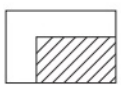
Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6002-9331	VNMG-331-PM	VNMG160404PM	3/8	5/8	3/16	0.15	.0157	XAB749
6002-9332	VNMG-332-PM	VNMG160408PM	3/8	5/8	3/16	0.15	.0315	XAB749
6002-9333	VNMG-333-PM	VNMG160412PM	3/8	5/8	3/16	0.15	.0472	XAB749

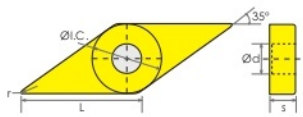
VNMS-TiN(C5) - CARBIDE INSERT

VNMS

- Double sided with chipbreaker
- 35° relief angle
- Used for turning and finishing on a wide range of materials.

Limited Supply!





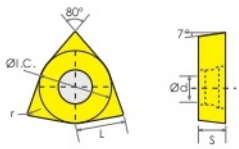
10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6040-1332	VNMS-332	VNMS160408	3/8	5/8	3/16	0.15"	.0315"	TiN(C-5)

WCMT 80° TRIGON CARBIDE DRILLING INSERTS

WCMT

- Trigon 80° drilling insert.
- Positive rake.
- Chipbreaker.



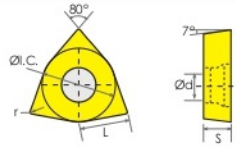
10 PC PER PACKAGE

Item#	ANSI Insert No.	I.C.	L	S	d	r	Grade
2002-0130	WCMT050308	5/16"	0.21"	1/8"	.126"	.0315"	TiN(C6)
2002-0126	WCMT06T304	3/8"	0.26"	5/32"	.173"	.0157"	TiN(C6)
2002-0128	WCMT06T308	3/8"	0.26"	5/32"	.173"	.0315"	TiN(C6)

WCMX 80° TRIGON CARBIDE DRILLING INSERTS

WCMX

- Trigon 80° drilling insert.
- Positive rake.
- Chipbreaker.



10 PC PER PACKAGE

Item#	ANSI Insert No.	I.C.	L	S	d	r	Grade
6015-0001*	WCMX030208-53	7/32"	0.15"	3/32"	7/64"	.0315"	XAF799
6015-0004*	WCMX040208R-53	1/4"	0.17"	3/32"	.122"	.0315"	XAF799
6015-0005	WCMX050308R-53	5/16"	0.21"	1/8"	1/8"	.0315"	XAF799
6015-0008	WCMX06T308R-53	3/8"	0.26"	5/32"	.146"	.0315"	XAF799

*Limited Supply

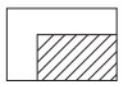
Carbide grades and insert classification shown on pages 167-170

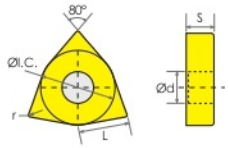
WNMA 80° TRIGON - NEGATIVE RAKE CARBIDE DRILLING INSERTS

WNMA

- Used for negative tool holders & boring bars.
- Trigon 80° drilling insert.
- No chipbreaker.
- 0° relief angle.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	S	d	r	Grade
6003-1431	WNMA-431	WNMA080404	1/2"	0.343"	3/16"	13/64"	.0157"	XAC849
6003-1433	WNMA-433	WNMA080412	1/2"	0.343"	3/16"	13/64"	.0472"	XAC849

WNMG/DF 80° TRIGON BLACK DIAMOND COATED CARBIDE DRILLING INSERTS

WNMG-DF

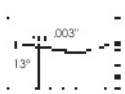
DF - For Finishing Geometry. Steel Materials

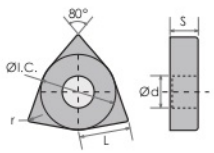
TiCNAI COATED

DF - Double-side chipbreaker with M-class tolerance for finish machining carbon and alloy steels.

Limited Supply!

10 PC PER PACKAGE





Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6039-0333	WNMG-333-DF	WNMG060412DF	3/8	0.256	0.187	0.15	.0472	XAB848

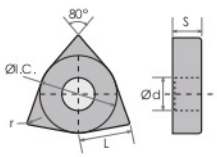
WNMG/DM 80° TRIGON BLACK DIAMOND COATED CARBIDE INSERTS

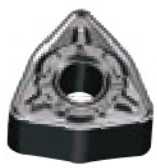
WNMG-DM

DM - For Steel Medium Machining

DM - Widely used chipbreaker is used for semi-finishing and finishing of steel and stainless steel.

TiCNAI COATED





10 PC PER PACKAGE

Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6039-1431	WNMG-431-DM	WNMG080404DM	1/2	0.343	3/16	13/64	.0157	XAB748
6039-1432	WNMG-432-DM	WNMG080408DM	1/2	0.343	3/16	13/64	.0315	XAB748

WNMG/DR 80° TRIGON BLACK DIAMOND COATED- CARBIDE INSERTS

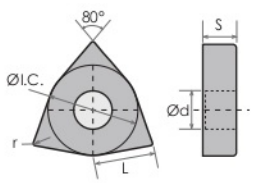
WNMG-DR

DR - For Light Roughing of Steel

Limited Supply!

DR - Special chip-breaker with high toughness cutting edge can reduce cutting force

10 PC PER PACKAGE



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6052-1332	WNMG-332-DR	WNMG060408DR	3/8	0.256	3/16	0.15	.0315	XAB748
6052-1432	WNMG-432-DR	WNMG080408DR	1/2	0.343	3/16	13/64	.0315	XAB748
6052-1433	WNMG-433-DR	WNMG080412DR	1/2	0.343	3/16	13/64	.0472	XAB748

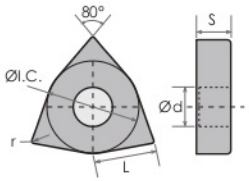
WNMG/EF 80° TRIGON- CARBIDE INSERTS

WNMG-EF

EF - For Stainless Steel, Highly Adhesive and Plastic Materials

EF Chip-Breaker specially designed rake angle and an inclined edge angle for machining stainless steel. The edges are sharp making the cutting light and smooth, getting a good control of the chips and obtaining a good surface quality, which makes it most suitable for ultra fine and fine machining of highly adhesive and plastic materials.

10 PC PER PACKAGE



Item#	ANSI Insert No.	ISO Insert No.	I.C.	L	(Inch) S	d	r	Grade
6039-5431	WNMG-431-EF	WNMG080404EF	1/2	0.343	3/16	13/64	.0157	XAF798
6039-5432	WNMG-432-EF	WNMG080408EF	1/2	0.343	3/16	13/64	.0315	XAF798

Carbide grades and insert classification shown on pages 167-170

WNMG/EM 80° TRIGON- NEGATIVE RAKE CARBIDE INSERTS

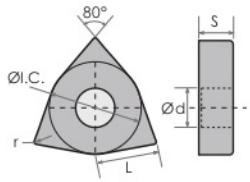
WNMG-EM

EM - Semi-Finishing Geometry. Stainless Steel Material

EM - Double-side chipbreaker with M-class tolerance serves to reduce cutting force and workpiece adhesion when machining stainless steel. Possesses higher feed and depth of cut capability than EF chipbreaker.

Limited Supply!

10 PC PER PACKAGE



Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) L	S	d	r	Grade
6052-0332	WNMG-332-EM	WNMG060408EM	3/8	0.256	0.187	0.15	.0315	XAF795
6052-0432	WNMG-432-EM	WNMG080408EM	1/2	0.343	3/16	13/64	.0315	XAF795
6052-0433	WNMG-433-EM	WNMG080412EM	1/2	0.343	3/16	13/64	.0472	XAF795

WNMG/PM 80° TRIGON - NEGATIVE RAKE CARBIDE INSERTS

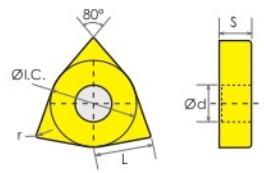
WNMG-PM

PM - Suitable for Mixed Production

PM - With stronger cutting edge, it is better for intermittent cutting than -DM, with wider cutting zone of steel materials

10 PC PER PACKAGE

Limited Supply!



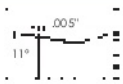
Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) S	d	r	Grade
6003-0431	WNMG-431-PM	WNMG080404PM	1/2	3/16	13/64	.0157	XAL749

WNMG 80° TRIGON - NEGATIVE RAKE CARBIDE INSERTS

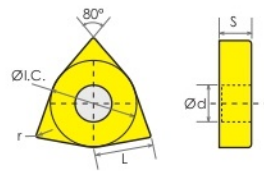
WNMG

0° Relief Angle

TiN (C-5) Coated



10 PC PER PACKAGE

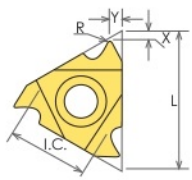


Item#	ANSI Insert No.	ISO Insert No.	I.C.	(Inch) S	d	r	Grade
6052-2331	WNMG-331	WNMG060404	3/8	3/16	0.15	.0157	TiN(C5)
6052-2332	WNMG-332	WNMG060408	3/8	3/16	0.15	.0315	TiN(C5)
6052-2432*	WNMG-432	WNMG080408	1/2	3/16	13/64	.0315	TiN(C5)
6052-2433*	WNMG-433	WNMG080412	1/2	3/16	13/64	.0472	TiN(C5)

*Limited Supply

INTERNAL V PARTIAL PROFILE CARBIDE THREADING INSERTS

- 60° V partial profile threading insert.
- Right hand cut.



TiN COATED

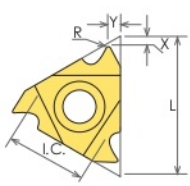
RIGHT HAND

10 PC PER PACKAGE

Item#	Insert	I.C.	Pitch Range mm	TPI	L (in)	R (in)	X (in)	Y (in)
6061-0156	06IRA60	.156"	0.5-1.25	48-20	.236	.002	.020	.024
6061-0187	08IRA60	.188"	0.5-1.5	48-16	.315	.002	.024	.028
6007-0008	11IRA60	1/4"	0.5~1.5	48~16	.435	.003	.031	.035
6007-0015	16IRAG60	3/8"	0.5~3.0	48~8	.630	.003	.047	.035
6007-0018	22IRN60	1/2"	3.5~5.0	5~7	.866	.010	.067	.098

EXTERNAL V PARTIAL PROFILE CARBIDE THREADING INSERTS

- 60° V partial profile threading insert.
- Right hand cut.



TiN COATED

RIGHT HAND

10 PC PER PACKAGE

Item#	Insert	I.C.	Pitch Range mm	TPI	L (in)	R (in)	X (in)	Y (in)
6007-0002	06ERA60	.156"	0.5-1.25	48-20	.236	.002	.020	.024
6007-0001	08ERA60	.197"	0.5~1.5	48~16	.315	.002	.024	.028
6007-0004	11ERA60	1/4"	0.5~1.5	48~16	.435	.003	.031	.035
6007-0012	16ERAG60	3/8"	0.5~3.0	48~8	.630	.003	.047	.035
6007-0020	22ERN60	1/2"	3.5~5.0	5~7	.866	.016	.067	.098

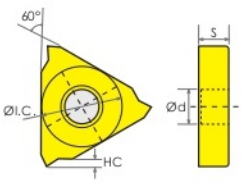
Carbide grades and insert classification shown on pages 167-170

UN-60° INTERNAL THREADING & GROOVING CARBIDE INSERTS-Inch Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-4008	RT16.01N-8UN	3/8"	8 TPI	5/32"	0.173"	XAF799
6006-4010	RT16.01N-10UN	3/8"	10TPI	5/32"	0.173"	XAF799
6006-4012	RT16.01N-12UN	3/8"	12 TPI	5/32"	0.173"	XAF799
6006-4014	RT16.01N-14UN	3/8"	14 TPI	5/32"	0.173"	XAF799
6006-4016	RT16.01N-16UN	3/8"	16 TPI	5/32"	0.173"	XAF799
6006-4018	RT16.01N-18UN	3/8"	18 TPI	5/32"	0.173"	XAF799
6006-4020	RT16.01N-20UN	3/8"	20 TPI	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

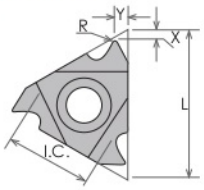


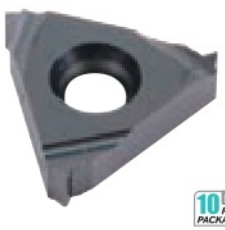
UN-60° INTERNAL THREADING & GROOVING CARBIDE INSERTS -Inch Thread

- UN-60° full profile threading insert.
- Tolerance Class: 2A/2B
- TiALN (TP04) coated .

TiALN COATED

RIGHT HAND





10 PC PER PACKAGE

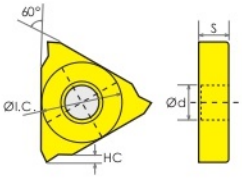
Item#	Insert	I.C.	Screw Pitch TPI	L (in)	X (in)	Y (in)	Thick (in)
6006-4502	11NR-16UN	1/4	16	.433	.035	.043	.126
6006-4504	11NR-18UN	1/4	18	.433	.031	.039	.126
6006-4508	16NR-8UN	3/8	8	.630	.047	.079	.143
6006-4510	16NR-10UN	3/8	10	.630	.043	.059	.143
6006-4511	16NR-11UN	3/8	11	.630	.043	.059	.143
6006-4512	16NR-12UN	3/8	12	.630	.043	.055	.143
6006-4513	16NR-13UN	3/8	13	.630	.039	.051	.143
6006-4514	16NR-14UN	3/8	14	.630	.039	.047	.143
6006-4516	16NR-16UN	3/8	16	.630	.035	.043	.143
6006-4518	16NR-18UN	3/8	18	.630	.031	.039	.143
6006-4524	16NR-24UN	3/8	24	.630	.028	.031	.143
6006-4528	16NR-28UN	3/8	28	.630	.024	.024	.143

UN-60° EXTERNAL THREADING & GROOVING CARBIDE INSERTS-Inch Thread

Item#	Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-4108	RT16.01N-8UN	3/8"	8 TPI	5/32"	0.173"	XAF799
6006-4110	RT16.01N-10UN	3/8"	10TPI	5/32"	0.173"	XAF799
6006-4112	RT16.01N-12UN	3/8"	12 TPI	5/32"	0.173"	XAF799
6006-4114	RT16.01N-14UN	3/8"	14 TPI	5/32"	0.173"	XAF799
6006-4116	RT16.01N-16UN	3/8"	16 TPI	5/32"	0.173"	XAF799
6006-4118	RT16.01N-18UN	3/8"	18 TPI	5/32"	0.173"	XAF799
6006-4120	RT16.01N-20UN	3/8"	20 TPI	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

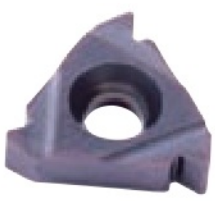


UN-60° EXTERNAL THREADING & GROOVING CARBIDE INSERTS -Inch Thread

- UN-60° full profile threading insert.
- Tolerance Class: 2A/2B
- TiALN (TP04) coated .

TiALN COATED

RIGHT HAND



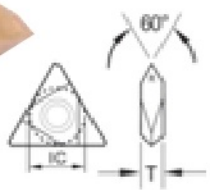
10 PC PER PACKAGE

Item#	Insert	I.C.	Screw Pitch TPI	L (in)	X (in)	Y (in)	Thick (in)
6006-4609	16ER-9UN	3/8	9	.630	.047	.067	.143
6006-4610	16ER-10UN	3/8	10	.630	.043	.059	.143
6006-4611	16ER-11UN	3/8	11	.630	.043	.059	.143
6006-4612	16ER-12UN	3/8	12	.630	.043	.055	.143
6006-4613	16ER-13UN	3/8	13	.630	.043	.051	.143
6006-4614	16ER-14UN	3/8	14	.630	.039	.047	.143
6006-4618	16ER-18UN	3/8	18	.630	.031	.039	.143
6006-4620	16ER-20UN	3/8	20	.630	.031	.035	.143
6006-4624	16ER-24UN	3/8	24	.630	.028	.031	.143
6006-4628	16ER-28UN	3/8	28	.630	.024	.028	.143
6006-4632	16ER-32UN	3/8	32	.630	.024	.024	.143

TPMC THREADING INSERTS 10-Degree Rake, Precision Ground

- 60° "V"-threading.
- 10° Rake angle.
- Double countersink thru hole.
- TiN coated.

10 PC PER PACKAGE



Item#	ANSI Insert No.	I.C.	Pitch	Radiu R	Thread Degree	Groove Width
6043-1375	TPMC-32NV	3/8	8 TPI Max.	.003~.005	60	.125"
6043-1500	TPMC-43NV	1/2	6 TPI Max.	.005~.008	60	.187"
6043-1625*	TPMC-54NV	5/8	4 TPI Max.	.005~.008	60	.250"

*Limited Supply

Carbide grades and insert classification shown on pages 167-170

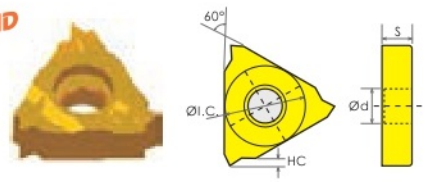
THREADING INSERTS

INTERNAL THREADING & GROOVING CARBIDE INSERTS - Metric Thread

Item#	ANSI Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-1006	RT16.01N-1.25GM	3/8"	1.25	5/32"	0.173"	XAF799
6006-1007	RT16.01N-1.50GM	3/8"	1.50	5/32"	0.173"	XAF799
6006-1008	RT16.01N-1.75GM	3/8"	1.75	5/32"	0.173"	XAF799
6006-1009	RT16.01N-2.00GM	3/8"	2.00	5/32"	0.173"	XAF799
6006-1010	RT16.01N-2.50GM	3/8"	2.50	5/32"	0.173"	XAF799
6006-1011	RT16.01N-3.00GM	3/8"	3.00	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

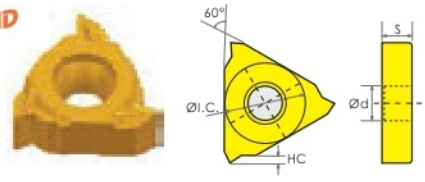


EXTERNAL THREADING & GROOVING CARBIDE INSERTS - Metric Thread

Item#	ANSI Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-3006	RT16.0W-1.25GM	3/8"	1.25	5/32"	0.173"	XAF799
6006-3007	RT16.0W-1.50GM	3/8"	1.50	5/32"	0.173"	XAF799
6006-3008	RT16.0W-1.75GM	3/8"	1.75	5/32"	0.173"	XAF799
6006-3009	RT16.0W-2.00GM	3/8"	2.00	5/32"	0.173"	XAF799
6006-3010	RT16.0W-2.50GM	3/8"	2.50	5/32"	0.173"	XAF799
6006-3011	RT16.0W-3.00GM	3/8"	3.00	5/32"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

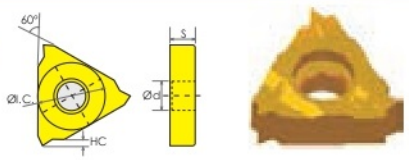


INTERNAL (NPT) THREADING CARBIDE INSERTS-Pipe Thread

Item#	ANSI Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-6008	RT16.001N-8NPT	.375"	8 TPI	.156"	0.173"	TiN(C6)
6006-6011	RT16.001N-11.5NPT	.375"	11.5 TPI	.156"	0.173"	XAF799
6006-6014	RT16.001N-14NPT	.375"	14 TPI	.156"	0.173"	XAF799
6006-6018	RT16.001N-18NPT	.375"	18 TPI	.156"	0.173"	XAF799
6006-6027	RT16.001N-27NPT	.375"	27 TPI	.156"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE

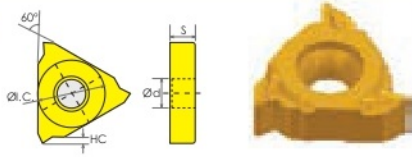


EXTERNAL (NPT) THREAD CARBIDE INSERTS - Pipe Thread

Item#	ANSI Insert No.	I.C.	Screw Pitch	S	d	Grade
6006-6108	RT16.001W-8NPT	.375"	8 TPI	.156"	0.173"	TiN(C6)
6006-6111	RT16.001W-11.5NPT	.375"	11.5 TPI	.156"	0.173"	XAF799
6006-6114	RT16.001W-14NPT	.375"	14 TPI	.156"	0.173"	XAF799
6006-6118	RT16.001W-18NPT	.375"	18 TPI	.156"	0.173"	XAF799
6006-6127	RT16.001W-27NPT	.375"	27 TPI	.156"	0.173"	XAF799

RIGHT HAND

10 PC PER PACKAGE



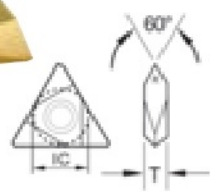
TNMA THREADING CARBIDE INSERTS 0-Degree Rake, Precision Ground

TNMA

- 60° "V"-threading.
- 0° Rake angle.
- Cylindrical thru hole.

Item#	ANSI Insert No.	I.C.	Pitch	Radiu R	Thread Degree	Thick T	Hole d	Grade C6
6043-0375	TNMA-32NV	3/8	8 TPI Max.	.003~.005	60	.125"	.150"	TiN
6043-0500	TNMA-43NV	1/2	6 TPI Max.	.005~.008	60	.187"	.202"	TiN
6043-0005	TNMA-43NV	1/2	6 TPI Max.	.005~.008	60	.187"	.202"	Uncoated

10 PC PER PACKAGE



TNMC GROOVING CARBIDE INSERTS

TNMC

- Right hand on two sides.
- Neutral rake angle.
- Double countersink thu hole.
- TiN coated.

TiN Coated

*Limited Supply

Item#	ANSI Insert No.	Pitch	I.C. (In)	Pitch	Groove Width (In)	Groove Depth (In)
6043-0632	TNMC-32NGR031	8 TPI Max.	0.375	8 TPI Max.	.031	.075
6043-0633	TNMC-32NGR062	8 TPI Max.	0.375	8 TPI Max.	.062	.150
6043-0634	TNMC-32NGR094	8 TPI Max.	0.375	8 TPI Max.	.094	.150
6043-0635	TNMC-32NGR125	8 TPI Max.	0.375	8 TPI Max.	.125	.150
6043-0643	TNMC-43NGR062	6 TPI Max.	0.500	6 TPI Max.	.062	.125
6043-0644	TNMC-43NGR094	6 TPI Max.	0.500	6 TPI Max.	.094	.150
6043-0645	TNMC-43NGR125	6 TPI Max.	0.500	6 TPI Max.	.125	.210
6043-0646*	TNMC-43NGR156	6 TPI Max.	0.500	6 TPI Max.	.156	.210
6043-0647*	TNMC-43NGR187	6 TPI Max.	0.500	6 TPI Max.	.187	.210
6043-0654*	TNMC-54NGR250	4 TPI Max.	0.625	4 TPI Max.	.250	.210

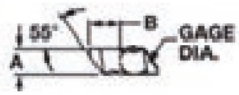
Carbide grades and insert classification shown on pages 167-170

NOTCH THREADING & GROOVING CARBIDE INSERTS

- Completely interchangeable with the *Kennametal TopNotch and the Teledyne Firth Notch systems.
- 60° Negitive rake, netural.
- NT-600 parting profile general purpose threading inserts.
- NG-Grooving & Turning inserts.
- Grade: C5/TIC-65 coated, which is same as KENNAMETAL KC810, KC850, KC950, KC730
- Trademark of Kennametal.

SPECIFICATIONS

Insert #	External TPI	Internal TPI
T/NT-2R/2L	8-36	7-20
T/NT-3R/3L	6-20	5-12
T/NT-4R/4L	4-20	4-12



THREADING INSERTS Grade C5/TIC 65

Item#	Insert #	(Inch) R	B	T	E	A	Gage Dia.
6062-5001	T/NT-2R	.003	.2661	.150	.075	.219	.1875
6062-5002	T/NT-2L	.005	.2661	.150	.075	.219	.1875
6062-5003	T/NT-3R	.005	.3999	.195	.098	.344	.3750
6062-5004	T/NT-3L	.008	.3999	.195	.098	.344	.3750
6062-5005	T/NT-4R	.005	.6293	.255	.128	.453	.3750
6062-5006	T/NT-4L	.008	.6293	.255	.128	.453	.3750

CLAMP

Item #	Style
2100-0011	TNSB-2B
2100-0010	TNSB-3B

GROOVIING INSERTS Grade C5/TIC 65

R=Right Hand
L=Left Hand

Item#	Insert #	Groove Width R	W	B	(Inch) Depth of Cut T	E	A	Gage Dia.
6062-2030	T/NG-2031R	.002	.031	.2700	.150	.050	.219	.1875
6062-2031	T/NG-2031L	.005	.031	.2700	.150	.050	.219	.1875
6062-2046	T/NG-2047R	.002	.047	.2700	.150	.050	.219	.1875
6062-2047	T/NG-2047L	.005	.047	.2700	.150	.050	.219	.1875
6062-2061	T/NG-2062R	.005	.062	.2700	.150	.050	.219	.1875
6062-2062	T/NG-2062L	.010	.062	.2700	.150	.050	.219	.1875
6062-2093	T/NG-2094R	.005	.094	.2700	.150	.050	.219	.1875
6062-2094	T/NG-2094L	.010	.094	.2700	.150	.050	.219	.1875
6062-2124	T/NG-2125R	.005	.125	.2700	.150	.050	.219	.1875
6062-2125	T/NG-2125L	.010	.125	.2700	.150	.050	.219	.1875
6062-3046	T/NG-3047R	.005	.047	.4050	.195	.075	344	.3750
6062-3047	T/NG-3047L	.010	.047	.4050	.195	.075	.344	.3750
6062-3061	T/NG-3062R	.005	.062	.4050	.195	.075	.344	.3750
6062-3062	T/NG-3062L	.010	.062	.4050	.195	.075	.344	.3750
6062-3077	T/NG-3078R	.005	.078	.4050	.195	.075	.344	.3750
6062-3078	T/NG-3078L	.010	.078	.4050	.195	.075	.344	.3750
6062-3087	T/NG-3088R	.005	.088	.4050	.195	.075	.344	.3750
6062-3088	T/NG-3088L	.010	.088	.4050	.195	.075	.344	.3750
6062-3093	T/NG-3094R	.005	.094	.4050	.195	.075	.344	.3750
6062-3094	T/NG-3094L	.010	.094	.4050	.195	.075	.344	.3750
6062-3124	T/NG-3125R	.005	.125	.4050	.195	.075	.344	.3750
6062-3125	T/NG-3125L	.010	.125	.4050	.195	.075	.344	.3750
6062-3155	T/NG-3156R	.005	.156	.4050	.195	.075	.344	.3750
6062-3156	T/NG-3156L	.010	.156	.4050	.195	.075	.344	.3750
6062-3188	T/NG-3189R	.005	.189	.4050	.195	.075	.344	.3750
6062-3189	T/NG-3189L	.010	.189	.4050	.195	.075	.344	.3750
6062-4124	T/NG-4125R	.005	.125	.6360	.255	.250	.453	.3750
6062-4125	T/NG-4125L	.010	.125	.6360	.255	.250	.453	.3750
6062-4188	T/NG-4189R	.020	.189	.6360	.255	.250	.453	.3750
6062-4189	T/NG-4189L	.025	.189	.6360	.255	.250	.453	.3750
6062-4249	T/NG-4250R	0.20	.250	.6360	.255	.250	.453	.3750
6062-4250	T/NG-4250L	.025	.250	.6360	.255	.250	.453	.3750

TOP NOTCH STYLE INTERNAL THREADING & GROOVING TOOLHOLDERS

- Right hand.
- Excellent all-purpose system for threading and grooving.
- Very strong insert design and wide insert selection and range.
- Clamping system draws the insert consistently back into the pocket for superior repeatability.
- Fully interchangable with other simliar "notch" type tools and inserts.
- Insert not included.

Right Hand Holder Use Left Hand Inserts

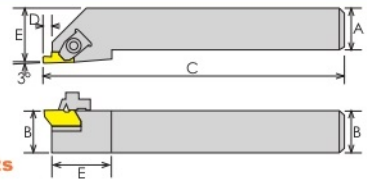
Insert Not Included

Item#	Holder #	B	C	(Inch) D	F	CLAMP	Screw	Gage Insert Size
2301-3010	S10S-TNER2	1.000	10	0.625	.500	TNSN02B	M4X12	2
2301-3016	S16T-TNER3	1.375	12	1.000	.688	TNSN-3B	M5X16	3
2301-3020	S20U-TNER3	1.750	14	1.250	.875	TNSN-3B	M5X18	3
2301-3024	S24U-TNER3	2.000	14	1.500	1.000	TNSN-3B	M5X18	3

TOP NOTCH STYLE EXTERNAL THREADING & GROOVING TOOLHOLDERS

- Right hand.
- Excellent all-purpose system for threading and grooving.
- Very strong insert design and wide insert selection and range.
- Clamping system draws the insert consistently back into the pocket for superior repeatability.
- Fully interchangable with other simliar "notch" type tools and inserts.
- Fit notch carbide inserts above.

Right Hand Holder Use Right Hand Inserts



Insert Not Included

Item#	Holder #	A	B	C	(Inch) D	F	E	CLAMP	Screw	Gage Insert Size
2301-3108	TNSR08-2V	.50	.500	3.5	.138	.75	.75	TNSB-2B	M4x14	2
2301-3112	TNSR12-2B	.75	.750	4.5	.138	1.00	.75	TNSB-2B	M4x14	2
2301-3113	TNSR12-3B	.75	.750	4.5	.210	1.00	1.25	TNSB-3B	M5x18	3
2301-3116	TNSR16-3D	1	1.000	6.0	.210	1.25	1.25	TNSB-3B	M5x18	3
2301-3117	TNSR16-4D	1	1.000	6.0	.294	1.25	1.38	TNSB-3B	M5x18	4

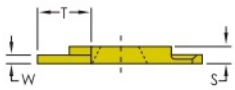
Carbide grades and insert classification shown on pages 167-170

CUT-OFF GROOVING INSERTS & TOOL HOLDERS

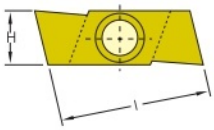
MINI-SYSTEM STANDARD CARBIDE GROOVING & CUT-OFF INSERTS

- Grade C6-PV-Coated grade recommented for machining steels, cutting off and grooving at higher speeds.
- Toerances: Width: +.0009"/ -.0000"
- Fits NIKCOLE style mini groove RH tool holders.

GRADE C6-PV



R.H. SHOWN



Item#	Insert #	Hand	Depth of Cut	Width of Cut
6061-0300	GIE-7-SG-05	R	.100" (2.54mm)	.019" (0.5mm)
6061-0301	GIE-7-SG-07	R	.100" (2.54mm)	.027" (0.7mm)
6061-0302	GIE-7-SG-08	R	.100" (2.54mm)	.031" (0.8mm)
6061-0303	GIE-7-SG-09	R	.100" (2.54mm)	.035" (0.9mm)
6061-0304	GIE-7-SG-1.1	R	.235" (6.0mm)	.043" (1.1mm)
6061-0305	GIE-7-SG-1.3	R	.235" (6.0mm)	.051" (1.3mm)
6061-0306	GIE-7-SG-1.6	R	.235" (6.0mm)	.063" (1.6mm)
6061-0307	GIE-7-SG-1.85	R	.235" (6.0mm)	.073" (1.85mm)

Item#	Insert #	Hand	Depth of Cut	Width of Cut
6061-0311	GIE-7-SG-07	L	.100" (2.54mm)	.027" (0.7mm)
6061-0312	GIE-7-SG-08	L	.100" (2.54mm)	.031" (0.8mm)
6061-0313	GIE-7-SG-09	L	.100" (2.54mm)	.035" (0.9mm)
6061-0314	GIE-7-SG-1.1	L	.235" (6.0mm)	.043" (1.1mm)
6061-0315	GIE-7-SG-1.3	L	.235" (6.0mm)	.051" (1.3mm)
6061-0316	GIE-7-SG-1.6	L	.235" (6.0mm)	.063" (1.6mm)
6061-0317	GIE-7-SG-1.85	L	.235" (6.0mm)	.073" (1.85mm)

MINI-SYSTEM EXTERNAL GROOVING & CUT-OFF HOLDERS

INSERTS NOT INCLUDED

- Right hand shank external holder.
- Insert not included.
- Set Includes: 1pc- External Holder, 1pc-T10 Wrench, 1pc-Aluminum Case.
- Accepts NIKCOLE style inserts.
- For use with .019 to .125" thin inserts.
- Ideal for external grooving, threading, cut-off, turning & copying under .125" width.

RIGHT HAND HOLDER ONLY ACCEPT RIGHT HAND INSERTS

2306-0375 Shown

2306-0500 Shown

2306-0625 Shown

Item#	Toolholder Designation	Shank Dia (In)	OAL (In)	Use Insert	Screw	Tox Wrench
2306-0375	THE-7-3/8-R	3/8	4.5	GIE-7-SG-	M3x8mm	T10
2306-0500	THE-7-1/2-R	1/2	4.5	GIE-7-SG-	M3x8mm	T10
2306-0625	THE-75/8-R	5/8	5.0	GIE-7-SG-	M3x8mm	T10

GTN-CARBIDE INSERTS

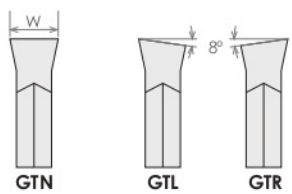
- Self locking inserts.
- Interchangeable with ISCAR & other popular brands.

Insert Style	Insert Size (W) (In)	C-2 Item#	C-6 Item#	TiN Coated (C-6) Item#
GTN-2	.087	3900-5802	3900-5309	6024-2002
GTN-2.4	.094	6024-0002*	----------	----------
GTN-3	.120	----------	6024-1003	6024-2003
GTN-4	.160	6024-0004	6024-1004	6024-2004
GTN-4.8	.187	6024-0008*	6024-1008*	6024-2008*
GTN-5	.200	6024-0005	6024-1005	6024-2005
GTR-4.8	.187	6024-1014*	6024-1015*	----------
GTL-4.8	.187	6024-1024*	----------	6024-2034*

*Limited Supply

GRADE
C-2 FOR CAST IRON AND GENERAL PURPOSE
C-6 FOR ALL STEEL AND GENERAL PURPOSE
TiN (C-6) FOR INCREASED PRODUCTIVITY

10 PC PER PACKAGE



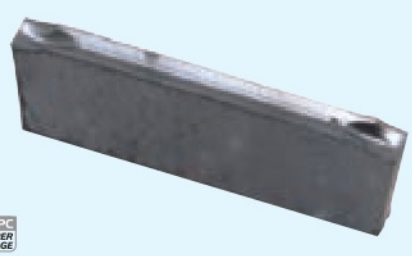
CUT-OFF & GROOVING INSERTS

DGN

- Used for applications in parting and grooving.
- Fits ISCAR Heliface, Do-Grip and Groove Turn holders.
- Double ended, two cutting edges.

Limited Supply!

Item#	ANSI Insert No.	(mm) Cutting Width	OAL	r	Grade
6024-5001	DGN2202J	2.2	19.8	0.2	BPG20B-PVD
6024-5004	DGN3102C	3.1	20.1	0.2	BPS253-CVD
6024-5014	GRIP4004Y	4.0	19.0	0.4	BPS253-CVD



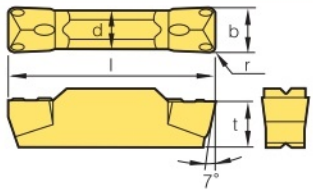
10 PC PER PACKAGE

Carbide grades and insert classification shown on pages 167-170

MGMN-G GROOVING CARBIDE INSERTS

MGMN-G

- Specially designed chip breaker allows narrower chips to promote better chip flow.
- Specifically designed for grooving applications.



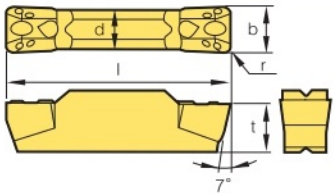
10 PC PER PACKAGE

Item#	ANSI Insert No.	Cutting Width b	OAL L	(Inch) d	Cutting Edge Height t	r	Grade
6024-3021	MGMN-150-G	.059	.138	.047	.138	.006	BPS253-CVD
6024-3022	MGMN-200-G	.079	.138	.063	.138	1/128	BPS253-CVD
6024-3051	MGMN-200-G	.079	.138	.063	.138	1/128	BPG20B-PVD

MGMN-M GROOVING CARBIDE INSERTS

MGMN-M

- Specially designed chip breaker allows as moother chip flow versus conventional flattop geometries through the use of a central chip breaker.
- Specially placed convex dots assits twith chip control in external machining, for a smoother chip flow.
- Chip breaker designed for turning , grooving & parting applications.



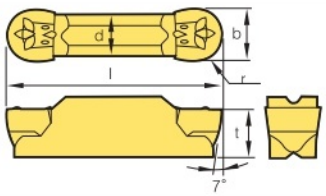
10 PC PER PACKAGE

Item#	ANSI Insert No.	Cutting Width	OAL L	(Inch) d	Cutting Edge Height t	r	Grade
6024-3002	MGMN-250-M	.098	.152	.079	.152	1/128	BPS253-CVD
6024-3003	MGMN-300-M	.118	.189	.093	.189	1/64	BPS253-CVD
6024-3004	MGMN-400-M	.157	.189	.130	.189	1/64	BPS253-CVD
6024-3052	MGMN-250-M	.098	.152	.079	.152	1/128	BPG20B-PVD
6024-3053	MGMN-300-M	.118	.189	.093	.189	1/64	BPG20B-PVD

MRMN-M GROOVING CARBIDE INSERTS

MRMN-M

- Full radius geometry for applications that require profiling
- Available for relief machining



10 PC PER PACKAGE

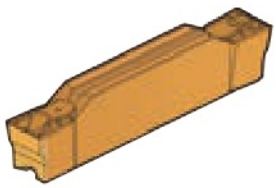
Item#	ANSI Insert No.	Cutting Width b	OAL L	(Inch) d	Cutting Edge Height t	r	PVD Grade
6024-3031	MRMN-200-M	.079	.630	.059	.079	3/64	BPS253
6024-3032	MRMN-300-M	.118	.827	.093	.118	1/16	BPS253
6024-3033	MRMN-400-M	.157	.827	.130	.157	5/64	BPS253
6024-3034	MRMN-500-M	.197	1.024	.161	.197	3/32	BPS253
6024-3035	MRMN-600-M	.236	1.024	.197	.236	1/8	BPS253

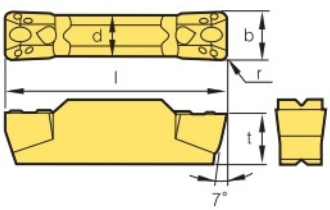
N123 GROOVING CARBIDE INSERTS

N123E2

- For internal & external grooving.
- For use with Sandvik style holders with V or Rail shape clamp.
- Two cutting edges.

Limited Supply!





10 PC PER PACKAGE

Item#	ANSI Insert No.	(mm) Cutting Width	OAL L	Cutting Edge Height t	r	Grade
6024-4001	N123E2-0200-0004-GF	2	20.05	4.3	0.4	BPS253-CVD
6024-4002	N123E2-0260-0008-GF	2.6	20.70	4.5	0.8	BPS253-CVD
6024-4003	N123G2-0318-0008-GF	3.18	20.70	4.5	0.8	BPS253-CVD

Carbide grades and insert classification shown on pages 167-170

DIGITAL MACHINE SCALES

ELECTRONIC MACHINE SCALES

- Can be installed on almost any surface, offering the user precise linear measurement capability.
- LCD readout with push button control for in/mm conversion
- Absolute zero setting
- Scale body is hardened stainless steel.
- Two mounting brackets are included
- Standard SR 44, 1.55V battery included.
- With fitted case.

Limited Supply!

INCH/METRIC
.0005" RESOLUTION

Size	Horizontal Item#	Vertical Item#
12"/300mm	**4100-4012**	**4100-4042**

STANDARD DIGITAL READOUT SCALES

- Compatible with our LCD Digital Display Units with Mini USB plugs. Not for use with a PC.
- Two mounting brackets are included.
- On/Off button.
- In/mm conversion.
- Absolute zero setting.
- Standard CR2032, 3V battery included.

.0005"/.01MM RESOLUTION

HORIZONTAL

Item#	Size	Accuracy
3129-0216	6"/150mm	±0.0012"/0.03mm
3129-0218	8"/200mm	±0.0012"/0.03mm

Limited Supply!

VERTICAL

Item#	Size	Accuracy
3129-0234	4"/100mm	±0.001"/0.02mm
3129-0236	6"/150mm	±0.0012"/0.03mm
3129-0240	12"/300mm	±0.0012"/0.03mm

LCD DIGITAL DISPLAY UNITS

- Remote Digital Display Units for connection to our compatible digital scales with Mini USB Socket.
- Large, easy to read backlit LCD displays, millimetres and Inches.
- Any axis can be set to read Positive or Negative in either direction.
- Fitted with 1.9m long data cables with Mini USB Plug.
- Powered by 2x AAA batteries or 6V DC Power Supply (Both are included).
- Switched Backlight.
- Zero in any position.
- Hold function.
- Magnetic Back.

Display Dimensions:
1 Axis: 104x62x20mm
3 Axis: 130x85x20mm

Limited Supply!

Item#	Discription
3129-0201	1-Axis Display Unit-USB
3129-0203	3-Axis Display Unit-USB

2 IN 1 DRAWBAR HAMMER/WRENCH

- Hammer head made from brass
- 2 in 1 drawbar tools

QUICK INDEXING QUILL FEED HANDLE

- Speeds up all operations and allows to move the handle into any position.
- For mill with 1" diameter hub.
- Quick flick of wrist retracts index plate pin of quill.
- Spring loaded pin activates quill speed.

1" DIA. HUB

QUILL STOP

- Increase productivity-reduce cost.
- For Bridgeport, any other mill with 1/2"~20 stop rod.
- Rapid depth setting on quill.
- Fast on-off clip action.
- Rigid clamping.

3900-0200
Shown

DISPLAY CONSOLE FOR GLASS SCALE ENCODERS

INCH/METRIC
.0002"/.005MM RESOLUTION

General Functions: *Limited Supply!*

- Inch/mm Conversion.
- Zero Reset.
- Preset Dimension.
- 1/2 Distance Mode to aid Centre Finding.
- Absolute and Incremental coordinate display modes.
- Recall Memorized Position.
- Mechanical Zero & Workpiece Zero.
- Shrink Function: Shrinkage allowance can be set to compensate for casting or moulding shrinkage.
- Pitch Circle Diameter (PCD) Function: The console will output X and Y coordinates for each hole.

Lathe Functions:

- Tool Compensation and Tool Number.
- Diameter or Radius Reading.

Calculator Functions:

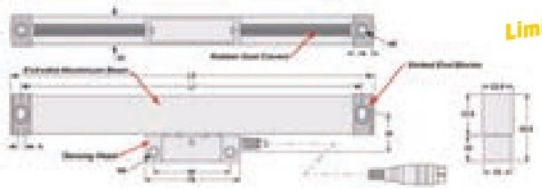
- Math Functions: Add, Subtract, Multiply, Divide.
- Trig Functions: SIN, COS, TAN, SIN-1, COS-1, TAN-1, X2, v, p (pi).
- Axis position can be transferred to calculator as an operator.
- Result can be transferred back to an axis.

Display Console Specifications:

- Resolution: .0002"/0.005mm (5 Microns).
- Display: 8 Digit LED.
- Response Speed: 60m/min.
- Error: ±1 Count.
- Power: 110-250VAC 50-60Hz.
- Operating Temperature Range: 0-40°C.
- Supplied with mounting arm.
- **Connector: 7 pin DIN (screw locking)**

OPTICAL LINEAR SCALES

- Grating Pitch: 0.001"/0.02mm
- Accuracy: ±0.0005"/0.01mm (200C1000mm)
- Reference Marks: 1 ref. mark every 2"/50mm
- Max Traversing Speed: 60m/minute
- Output Signal: TTL
- **Connector: 7 pin DIN (screw locking)**
- Operating Temperature: 0-45°C.



Limited Supply!

IP 53

.0002"/.005MM RESOLUTION

Item#	Size	(mm) L1	L2
3129-0256	6"/150mm	264	281
3129-0262	12"/300mm	414	431
3129-0264	14"/350mm	464	481
3129-0270	16"/400mm	514	531
3129-0268	20"/500mm	614	631
3129-0274	30"/800mm	914	931
3129-0278	35"/900mm	1014	1031

Pro-Series HEAVY DUTY 150 LBS. POWER TABLE FEEDS

- Complete with all hardware.
- 110V/ 60Hz/ 1 PH power supply.
- Adjustable table speeds.
- 150 lbs torque guaranteed.
- Rapid speed switch.

MADE IN TAIWAN

HHIP PRO-SERIES

for ***Bridgeport***® type mills

Bridgeport BRAND
REQUIRES MODIFICATION

Replacement Plastic Gear (Item #3129-0001)

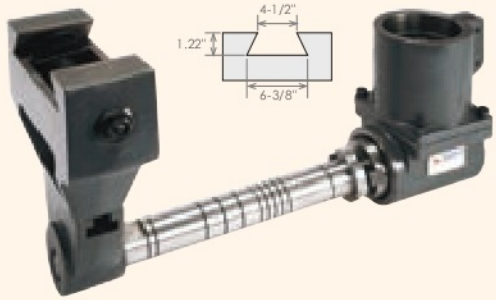
QUICK QUILL FEED (Z-Axis) ADAPTER
-Driven by Power Drill

- Works with 1/2" power drill speeds up quill (knee) operation function as a power feed
- Fits most mills with 5/8" diameter hub
- Heavy duty made, hardened steel
- Flats cut on shaft for stronger power drill grip

MACHINE TOOL ACCESSORIES

Pro-Series R8 RIGHT ANGLE ATTACHMENT KIT

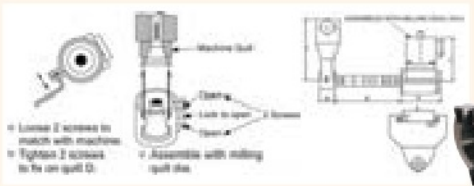
- Suitable for most mills
- Your vertical mill to a horizontal mill
- Designed to simplify right angle work by reducing the need for special tooling and complex fixtures
- For use on your R8 spindle with 3-3/8" overall diameter
- Max. speed: 2000 RPM



MADE IN TAIWAN

R8 KIT INCLUDES:

Right Angle Head, R8 Stub Arbor & Drawbar Extension Socket



MILLING MACHINE DRAW BARS

for ***Bridgeport®*** mills

7/16"~20 THREADER

Double Life Model

Item#	Description	OAL
3900-0205	For Step Pulley	21-1/8"
3900-0207	For Variable Speed	24-3/16"

NEOPRENE MACHINERY LEVELING MOUNTS

- The simplicity of up 5/8" leveling with a single bolt per location while providing shock and vibration isolation solves many problems.
- Friction is developed by the neoprene element.
- Eliminating the need for bolting to the floor.
- Typical applications are punch presses, brakes, shears, lathers, milling machines and injection molding macines.

Limited Supply!

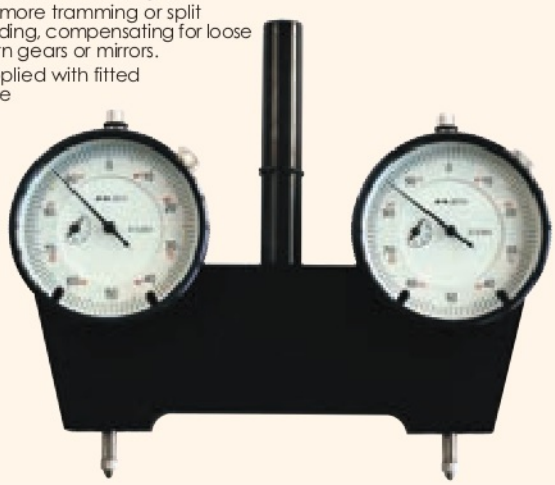
Item#	Capacity (Lbs.)	Steel Cap Dia.(mm)	Height (mm)	Leveling Bolt(mm)
3129-0300	880	50	23	M10x40
3129-0304	1100	80	24	M10x100
3129-0308	1320	100	26	M10x120
3129-0310	2200	120	32	M12x100
3129-0314	4400	160	37	M16x120

SPINDLE SQUARE

A SIMPLE SOLUTION T SQUARING YOUR MACHINE

Just zero indicators on flat surface, install in milling machine spindle , bring the spindle down to the table and adjust the head until both indicators read the same. It's that simple!

- 1/2" shank.
- Fully assembled with indicators mounted and ready for use.
- Can also be used with a sine bar or protractor to set angle.
- No more tramming or split reading, compensating for loose worn gears or mirrors.
- Supplied with fitted case



DRILL PRESS CENTER FINDER

- Accurately and quickly locates center on round workpieces
- Satin chrome finish.
- Place tool in drill chuck or collet and line up pointer with line scribed on shaft.

CENTER GAGES

- Graduated in 14ths and 20ths on one side and 24ths and 32nds on the other
- Micro-fine graduations
- Accuracy meets Federal Specifications.

EDGE FINDERS, CENTER FINDERS & SET

- Accurately locates the starting point for all types of machine work and jig boring
- Hardened and ground all over
- Accuracy .0002"

INCH

Item#	Style	End	Shank Dia	Tip Dia
4401-0029	Edge & Edge	Double	1/2"	.20/.50"
4401-0030	Edge	Single	3/8"	0.200"
4401-0031	Edge	Single	1/2"	0.200"
4401-0032	Edge	Single	1/2"	0.500"
4401-0040	Edge & Center	Double	3/8"	0.200"
4401-0041	Edge & Center	Double	1/2"	0.200"

METRIC

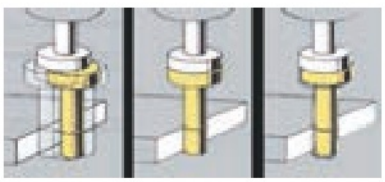
Item#	Style	End	Shank Dia	Tip Dia
4406-0032	Edge & Center	Double	10mm	4mm
4406-0042	Edge	Single	12mm	4mm
4406-0044	Edge	Single	10mm	10mm

Z TYPE EDGE FINDERS-Metric Shank

- The edge finder is a processing tool used to help accurate positioning. It can locate edges of work pieces with reference to the centerline of the spindle to which it is attached and also height offsets.

4mm

10mm



Item#	Shank Dia	Tip Dia
4406-0046	10mm	4mm
4406-0047	10mm	10mm

WIGGLER OR CENTER FINDER SET

- The original snap-in ball and socket wiggler
- For accurately locating working points on drill press, milling and other machines

SET INCLUDE:

- Snap-in holder, needle point, disc point & ball shaft

ELECTRONIC EDGE FINDERS

- Will locate work surfaces quickly and easily at almost any angle.
- B40 "beeps" when stylus meets conductive metal surface. Great for blind and deep applications.
- All models have 5 LED lights -last for years without replacement.
- 12 V batteries included
- Repeatability +/- .0002"
- Precision ground on all surfaces

Item#	Style	Shank	Stylus Break-Away	Beep
4401-0034	B20	1/2"	.200"	No
4401-0035	B40	1/2"	.400"	Yes

ELECTRONIC SHORT SHANK EDGE FINDER

- Quickly locates work edges
- Save time positioning
- One piece construction for strength and accuracy within 0.005mm/ 0.0002"
- Highly visible LED lights
- Precision ground on all surfaces

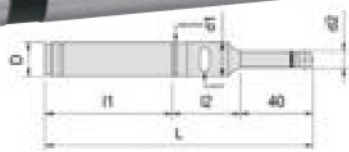
SPECIFICATIONS	
Ball diameter	0.394"
Shank diameter	0.750"
Overall length	3.875"

REPLACEMENT BATTERY SR 44 (ITEM #4102-0030)

Pro-Series ELECTRONIC EDGE FINDERS

- Will locate work surfaces quickly and easily at almost any angle.
- Red pilot will be lighted when the ball touch the working edge.
- High sensitive positional sensor.
- Supplied with wooden case.
- Battery: 2 x LR1,1.5V.

MADE IN TAIWAN



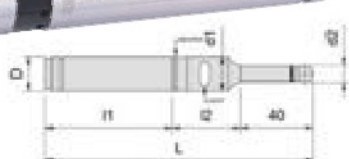
* Limited Supply

Item#	Shank	Ball Dia.	OAL
4401-0036	20mm	10mm	6.20"
4401-0037*	32mm	10mm	6.20"

Pro-Series ELECTRONIC AUDIBLE EDGE FINDER

- Unit will sound at the same time when the red lamp lights up.
- Accuracy within +/- .005mm/ .0002"
- LED light
- Battery: 1 x UM #5 (12V)

MADE IN TAIWAN



Item#	Shank	Ball Dia.	OAL
4401-0047	3/4"	.394"	6.2"
4401-0049	20mm	.394"	6.2"

R8 COLLETS & ACCESSORIES

Pro-Series R8 ROUND COLLET SET

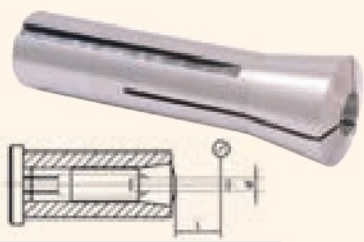
- Guaranteed T.I.R : < 0.0005" .
- Made of high grade tool steel.
- Hardened and precision ground.
- Internally Threaded: 7/16" -20

HHIP PRO-SERIES

R8 ROUND COLLETS & SETS - Inch

- Made of high grade tool steel.
- Hardened.
- Precision ground to close tolerance.
- Internally threaded: 7/16" -20

d	L(mm)	Run out
1/32-1/16	6.35	0.0007"
1/16-1/8	12.70	0.0007"
1/8-3/8	25.40	0.0007"
3/8-5/8	38.10	0.0007"
5/8-7/8	50.80	0.0007"



Item#	Size (Inch)	Item#	Size (Inch)
3900-0008	1/16	3900-0814	1/2
3900-0801	3/32	3900-0815	17/32
3900-0802	1/8	3900-0816	9/16
3900-0803	5/32	3900-0817	19/32
3900-0804	3/16	3900-0818	5/8
3900-0805	7/32	3900-0819	21/32
3900-0806	1/4	3900-0820	11/16
3900-0807	9/32	3900-0821	23/32
3900-0808	5/16	3900-0822	3/4
3900-0809	11/32	3900-0823	25/32
3900-0810	3/8	3900-0824	13/16
3900-0811	13/32	3900-0825	27/32
3900-0812	7/16	3900-0826	7/8
3900-0813	15/32	3900-0827	1

11PC R8 COLLET SET & 12PC R8 COLLET RACK COMBO

NEW

11 Piece R8 Collet Set - 1/8-3/4" x 16ths (3900-0007)

- Hardened and precision ground to close tolerance.
- Made of high grade tool steel.
- Run out is 0.0007".
- Internally threaded: 7/16"-20.

R8 12 Piece Collet Rack (3900-0016)

- Open and close cover protects collets from debris.
- Mounting bolts are included.
- Easy side mount with two screws.

12PC R8 COLLET RACK

HOLDS 12PC R8 COLLETS

- Easy side mount with two screws.
- Open, close cover protects collets from debris.

COLLET NOT INCLUDED

R8 ROUND COLLETS & SET - Metric

- Made of high grade tool steel.
- Hardened.
- Precision ground to close tolerance.
- Internally threaded: 7/16" -20

Item#	Size (mm)
3903-0102	2
3903-0104	3
3903-0106	4
3903-0108	5
3903-0110	6
3903-0112	7
3903-0114	8
3903-0116	9
3903-0118	10
3903-0120	11

Item#	Size (mm)
3903-0122	12
3903-0124	13
3903-0126	14
3903-0128	15
3903-0130	16
3903-0132	17
3903-0134	18
3903-0136	19
3903-0138	20

R8 ROTATING COLLET HOLDER

- Easily mounts anywhere for quick accessibility.
- Hold 11 R8 collets.
- Made of durable ABS material.

R8 COLLET & TOOL TRAY

- This convenient tray will cut down set up and tool changing time.
- Operator works more organized.
- Easy to install, drill and tap two holes in the base casting 1" below the degree ring.

Pro-Series R8 END MILL HOLDERS

- Made of 20CrMnTi alloy steel
- Electrolysis nickel coating
- **Thread of Drawbar End: R8- 7/16" -20**
- Premium hardened & all ground body for extended tool life.

Limited Supply!

MAX. RPM: 8,000
T.I.R. ≤ .0002"
SUPERIOR FINISH

Item#	Size
3901-0100	1/8"
3901-0101	3/16"
3901-0102	1/4"
3901-0103	5/16"
3901-0105	7/16"

Item#	Size
3901-0106	1/2"
3901-0110	7/8"
3901-0113	1-1/4"
3901-0114	1-1/2"

R8 TO JACOBS DRILL CHUCK ARBORS

- Hardened and ground.

for *Bridgeport*® type mills

DRAWBAR END THREAD: 7/16" -20

Item#	Arbor Taper to Chuck	D (mm)	L (mm)
3700-0131	R8 to JT33	15.85	132
3700-0135	R8 to JT2	14.199	128
3700-0138	R8 to JT3	20.599	137
3700-0139	R8 to JT4	28.55	148
3700-0140	R8 to JT6	17.17	132

48PC R8 COLLET RACK

- Baked enamel paint finish.
- Hangs on wall or machine, or sets on a shelf or work bench.

COLLETS NOT INCLUDED

HOLDS 48PC R8 COLLETS

R8 END MILL HOLDERS & SETS

- Hardened and ground.
- For Bridgeport type milling machines. **DRAWBAR END THREAD: 7/16" -20**
- For double and single end mill (single end mill only for sizes over 5/8").

Item#	Size d
3900-0100	1/8"
3900-0101	3/16"
3900-0112	1/4"
3900-1211	5/16"
3900-0102	3/8"
3900-0121	7/16"
3900-0103	1/2"
3900-0104	5/8"
3900-0105	3/4"
3900-0106	7/8"
3900-0107	1"
3900-0108	1-1/4"
3900-0109	1-1/2"

3PC BORING TOOL COMBO SETS

KIT INCLUDES:
BORING HEAD, SHANK, C6 CARBIDE TIPPED BORING BAR SET

- **BORING HEAD:** Bar holder moves freely and smoothly. Design assures superior rigidity for chatter-free boring and precise hole size accuracy. Hardened and ground adjusting screw designed for long lasting and trouble free use.

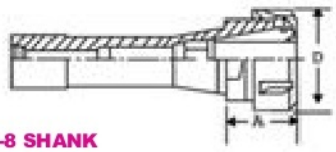
Item#	Head Size	Shank Taper	Shank To Head	Boring Bar	Tool Capacity
1001-0105	2"	3MT	7/8"~20	1/2"-9pc	Up to 1/2"
1001-0106	2"	R8	7/8"~20	1/2"-9pc	Up to 1/2"
1001-0107	3"	R8	1-1/2"~18	3/4"-12pc	Up to 3/4"

See page 245 for more heads & sets.

R8 SHANK ER COLLET CHUCKS & TOOLING

R8 SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.
- **Thread of Drawbar End: 7/16" -20**

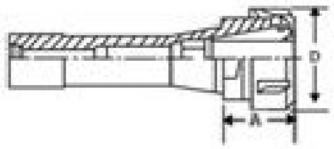


R-8 SHANK

Item#	Type	Nut Style	(Inch) A	D
3900-5061	ER-16	Hex	1.50	1.10
3900-5066	ER-32	Spanner	157	1.97
3900-5069	ER-40	Spanner	2.76	2.48

Pro-Series R8 Shank ER Collet Chucks

- Premium hardened & all ground body for extended tool life.
- **Thread of Drawbar End: R8- 7/16" -20**

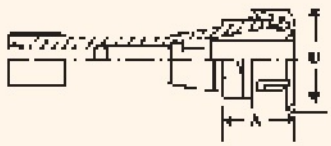


T.I.R. ≤ .0002"
SUPERIOR FINISH

Item#	No.	Nut Style	(Inch) A	D
3901-5061	ER-16	Hex	1.50	1.10
3901-5063	ER-20	Hex	1.50	1.38
3901-5064	ER-25	Spanner	1.57	1.66
3901-5066	ER-32	Spanner	157	1.97
3901-5069	ER-40	Spanner	2.76	2.48

R8 SHANK ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0005".



R-8 SHANK

ER-16	ER-32	ER-40
• 11PC SET INCLUDES 9-Collet 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32 & 3/8" 1-Collet Chuck 1-Wrench 1-Wrench	• 8PC SET INCLUDES 6-Collet 1/4, 5/16, 3/8, 1/2, 5/8 & 3/4" 1-Collet Chuck 1-Wrench • 14PC SET INCLUDES 12-Collet 1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16" 1-Collet Chuck 1-Wrench	• 10PC SET INCLUDES 8-Collet 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8 & 1" 1-Collet Chuck 1-Wrench • 17PC SET INCLUDES 15-Collet 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1" 1-Collet Chuck 1-Wrench

Item#	No.	Nut Style	Collet Set	(Inch) A	D	Drawbar Thread
3900-0501	ER-16	Hex	11	1.50	1.10	7/16-20
3900-0507	ER-32	Spanner	8	1.57	1.97	7/16-20
3900-0508	ER-32	Spanner	14	157	1.97	7/16-20
3900-0004	ER-40	Spanner	10	2.76	2.48	7/16-20
3900-0005	ER-40	Spanner	17	2.76	2.48	7/16-20

R8 INTEGRAL SHANK PRECISION KEYLESS DRILL CHUCKS

- Integrated design maximizes rigidity & accuracy.
- Integral R8 shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.
- Keyless, self tightening design.

R-8 SHANK

T.I.R. ≤ .0025"

Item#	Clamping Capacity	Brand	Origin	T.I.R.
3701-1501	0~1/2"	HHIP	China	.0025"
3701-1626	1/64~5/8"	HHIP	China	.0025"

Max. T.I.R. ≤ .002"

Item#	Clamping Capacity	Brand	Origin	T.I.R.
3701-1500	0~1/2"	VERTEX	Taiwan	.0020"
3701-1625	1/8~5/8"	VERTEX	Taiwan	.0020"

*** Tightening Wrench Included.**

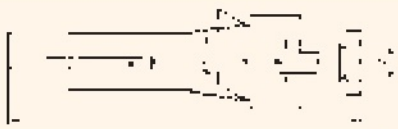
R8 SHELL END MILL HOLDERS

- Hardened and ground.

DRAWBAR END THREAD: 7/16" -20

Shell end mill holder screws shown on pages 222.

for ***Bridgeport®*** type mills

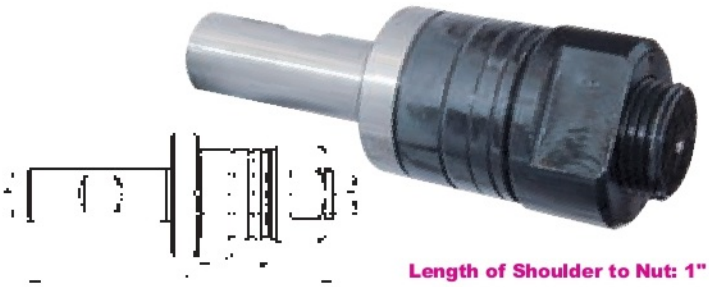


INDIVIDUALS

Item#	d	W (mm)	L (mm)	Dia. Range of Std. End Mill
3900-1711	1/2"	6.35	150	1-1/4 to 1-1/2"
3900-1712	3/4"	7.94	154	1-1/4 to 2-1/2"
3900-1713	1"	9.53	155	2-1/4 to 2-3/4"
3900-1714	1-1/4"	12.70	156	3 to 3-1/2"
3900-1715	1-1/2"	15.88	163	4 to 5"

STRAIGHT SHANK STUB MILLING MACHINE ARBORS

- Fit into standard end mill adapters
- Furnished with standard keyways and left hand arbor nut



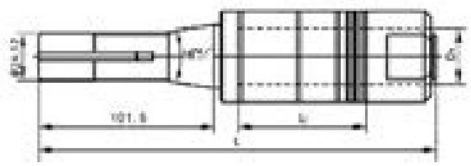
Length of Shoulder to Nut: 1"

Item#	Shank d1 (Inch)	Dia. of Arbor d (Inch)	L (Inch)
3900-0156	1/2	1/2	4.0
3900-0157	1/2	5/8	4.0
3900-0158	1/2	3/4	4.2
3900-0159	3/4	1/2	4.3
3900-0161	3/4	3/4	4.4
3900-0162	3/4	7/8	4.4
3900-0163	3/4	1	4.7
3900-0164	3/4	1-1/4	4.7
3900-0115	1	3/4	4.7
3900-0116	1	1	5.6

STUB MILLING MACHINE ARBORS

for ***Bridgeport®*** type milling machines

- Hardened and precision ground.



Item#	Shank	Dia. of Arbor	Length Shoulder to Nut
3900-0110	R8	1"	2"
3900-0111	R8	1-1/4"	2"

SLOTTING SAW ARBORS

- For saw blades upto 3/16" thick

3900-0144 Shown

3900-0145 Shown

Item#	Shank	OAL	For Saw Hole Size
3900-0144	R8	5-3/32"	1/2, 5/8, 3/4, 7/8 & 1"
3900-0145	1/2"	2-9/16"	1/2, 5/8, 3/4, 7/8 & 1"

CIRCULAR SAW ARBORS

- 1/2" SHANK
- Up to 3/16" thickness
- Steel, heat treated shank

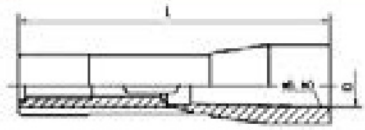
INDIVIDUALS

Item#	OD Flange	For Saw Hole Size
3900-0147	1/2"	1/4"
3900-0148	5/8"	3/8"
3900-0149	3/4"	1/2"

MORSE TAPER TOOLING

R8 TO MORSE TAPER SLEEVES

- Made of high grade tool steel.
- Hardened and precision ground.



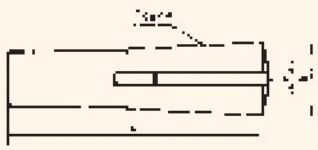
Thread of Drawbar End:
R8- 7/16" -20

Item#	Description	D (mm)	L (mm)
3900-1812	R8 to MT2	17.78	127
3900-1813	R8 to MT3	23.825	153
3900-1814	R8 to MT4	31.267	240

MORSE TAPER COLLETS & SETS

- Morse taper: external.
- Made of high grade tool steel.
- Hardened and precision ground to close tolerance.

Drawbar End Threads:
MT2: 3/8" ~ 16
MT3: 3/8" ~ 16



MT3 SHANK

Item#	Hole Dia.	(mm) D	L
3900-0855	1/8"	24.1	86
3900-0859	3/16"	24.1	86
3900-0863	1/4"	24.1	86
3900-0865	5/16"	24.1	86
3900-0867	3/8"	24.1	86
3900-0875	7/16"	24.1	86
3900-0883	1/2"	24.1	86
3900-0887	5/8"	24.1	86
3900-0889	11/16"	24.1	86
3900-0891	3/4"	24.1	86

MT2 SHANK

Item#	Hole Dia.	(mm) D	L
3900-0837	1/8"	18	68
3900-0839	3/16"	18	68
3900-0841	1/4"	18	68
3900-0843	5/16"	18	68
3900-0845	3/8"	18	68
3900-0847	7/16"	18	68
3900-0849	1/2"	18	68

MORSE TAPER (MT) SLEEVES

- Used to convert spindles to larger or smaller tapers and extend the spindles of drill presses, radial drills, boring mills and turret lathes.

INDIVIDUALS

Item#	Inside Taper	Outside Taper
3900-1843	MT1	MT2
3900-1841	MT1	MT3
3900-1842	MT2	MT3
3900-1844	MT2	MT4
3900-1848	MT3	MT4
3900-1849	MT3	MT5
3900-1853	MT4	MT5
3900-1856	MT5	MT6

MORSE TAPER DRILL CHUCK ARBORS

HARDENED & GROUND

MT TO JT

Item#	Arbor Taper to Chuck
3700-0111	MT1 to JT0
3700-0112	MT1 to JT1
3700-0113	MT1 to JT33
3700-0115	MT2 to JT1
3700-0151	MT2 to JT2
3700-0149	MT2 to JT3
3700-0117	MT2 to JT4
3700-0150	MT2 to JT6
3700-0152	MT2 to JT33
3700-0153	MT3 to JT33
3700-0154	MT3 to JT2

Item#	Arbor Taper to Chuck
3700-0155	MT3 to JT3
3700-0159	MT3 to JT4
3700-0156	MT3 to JT6
3700-0160	MT4 to JT3
3700-0161	MT4 to JT4
3700-0157	MT4 to JT33
3700-0120	MT4 to JT5
3700-0158	MT4 to JT6
3700-0123	MT5 to JT3
3700-0124	MT5 to JT4

Pro-Series DAYTON STYLE HAND DRIFT TOOL

- Forged and hardened, high rigid tools.
- Used to remove taper shank tools from machinery spindles, sleeves, and extension sockets.
- Morse Taper Drift Range: MT2 ~ MT5

15" LONG

MADE IN TAIWAN

MORSE TAPER EXTENSION SOCKETS

- For adapting tools with morse taper shanks to machines having smaller, same or larger morse taper spindle.

Item#	Inside Taper	Outside Taper
3900-1845	MT3	MT2
3900-1852	MT4	MT3
3900-1872	MT5	MT4

MORSE TAPER END MILL HOLDERS

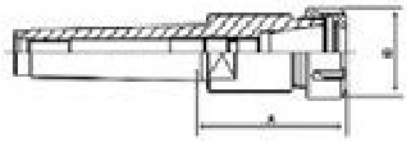
- For single end mills.
- **Drawbar End Thread**
  MT2- 3/8" - 16
  MT3- 3/8" - 16
  MT4- 1/2" - 13

Item#	Shank Taper	Hole Dia.
3900-1217	MT2	3/16"
3900-1212	MT2	1/4"
3900-1215	MT2	3/8"
3900-1214	MT2	1/2"
3900-0127	MT3	3/16"
3900-0128	MT3	3/8"
3900-0129	MT3	1/2"

Item#	Shank Taper	Hole Dia.
3900-0130	MT3	5/8"
3900-0131	MT3	3/4"
3900-0132	MT3	7/8"
3900-0133	MT3	1"
3900-0140	MT4	1"
3900-0141	MT4	1-1/4"
3900-0142	MT4	1-1/2"

MT SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.



Item#	Shank	Type	Nut Style	Drawbar End	A (mm)	D (mm)
3900-5072	MT2	ER-20	Hex	3/8"~16	43	34
3900-5073	MT2	ER-25	Spanner	3/8"~16	47	42
3900-5077	MT3	ER-32	Spanner	3/8"~16	70	50
3900-5078	MT3	ER-40	Spanner	3/8"~16	80	63
3900-5079	MT4	ER-40	Spanner	5/8"~11	82	63

MORSE TAPER ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0005".

ER-25	ER-32	ER-40
• 12PC SET INCLUDES 10-Collet 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8" 1-Collet Chuck 1-Wrench	• 14PC SET INCLUDES 12-Collet 1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16" 1-Collet Chuck 1-Wrench	• 17PC SET INCLUDES 15-Collet 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1" 1-Collet Chuck 1-Wrench

- **Drawbar End Thread**
  MT2- 3/8"~16
  MT3- 3/8"~16
  MT4- 1/2"~13

Item#	No.	Chuck Shank	Nut Style	Set
3900-0502	ER-25	MT2	Spanner	12
3900-0503	ER-32	MT3	Spanner	14
3900-0531	ER-40	MT3	Spanner	17
3900-0504	ER-40	MT4	Spanner	17

Pro-Series ER MORSE TAPER COLLET CHUCKS & SETS

- Made of high grade tool steel Morse Tapper shank high precision collet chuck system.
- Hardened & ground body for extended tool life.
- With fitted case.
- Chuck T.I.R. to .0002".

3900-4050 Shown

3900-4052 Shown

Limited Supply!

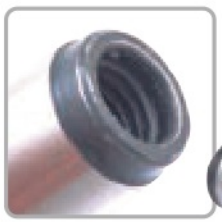
3900-4050	3900-4052
• 12PC SET INCLUDES 10-ER-25 Collet 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8" 1-MT2 Collet Chuck 1- Spanner Wrench	• 14PC SET INCLUDES 12-ER-32 Collet 1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16" 1-MT3 Collet Chuck 1-Spanner Wrench

3900-4054	3900-4056
• 17PC SET INCLUDES 15-ER-40 Collet 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8,15/16 & 1" 1-MT3 Collet Chuck 1-Spanner Wrench	• 17PC SET INCLUDES 15-ER-40 Collet 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1" 1-MT4 Collet Chuck 1-Spanner Wrench

Item#	Type	Chuck Shank	No. of Pieces	Nut Style	Nut Dia. D	Gage Length A	Drawbar End
3900-4050	ER-25	MT2	12	Spanner	1.7"	2.50"	3/8"-16
3900-4052	ER-32	MT3	14	Spanner	2.0"	2.75"	3/8"-16
3900-4054	ER-40	MT3	17	Spanner	2.5"	3.20"	3/8"-16
3900-4056	ER-40	MT4	17	Spanner	2.5"	3.20"	5/8"-11

FLY CUTTERS-Morse Taper Shank

- A fly cutter usually has two cutting heads and it is able to cut with a constant depth to face any surface to obtain a uniform surface.
- Utilizes standard tool bits.
- Counter balanced.
- Made of durable hardened steel.



Item#	Shank	Diameter of Head (In)	Fit Tool Bit (In)	Drawbar Thread
4006-0022	MT2	1.5	3/16	3/8~16
4006-0023	MT3	1.5	1/4	1/2~13

Tool bits shown on page 120

MORSE TAPER TAILSTOCK DIE HOLDER SETS

- The set includes tapered Shank, Pin Punch & 4 sizes of Die Holders.
- Completely interchangeable to fit tapered shank with the help of a pin which allows about 1-1/2" travel.
- Easy knock out pin with a pin punch.
- Tang end.

Item#	Taper	Die Holder Size
3906-4910	MT 2	13/16,1,1-5/16 & 1-1/2"
3906-4911	MT 3	13/16,1,1-5/16 & 1-1/2"

MT TO JT REVOLVING TAILSTOCK ARBORS/ADAPTERS

- Use to support small diameter work where a live center is not practical.
- This is a "live" adapter with smooth, sealed bearings for the tailstock.
- Use it to mate with any Jacob Taper (JT) drill chuck.
- The shank is Morse taper(MT).

* Drill Chuck Not Included

Item#	Taper	Drawbar Thread
3906-4922	MT 2 x JT2	M10
3906-4925	MT2 x JT3	M10
3901-4910	MT2 x JT33	M10
3906-4928	MT3 x JT2	M12
3906-4932	MT3 x JT3	M12

INTEGRAL SHANK PRECISION KEYLESS DRILL CHUCKS

- Integrated design maximizes rigidity & accuracy.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.
- Keyless, self tightening design.

MT SHANK

T.I.R. ≤ .0025"

Item#	Brand	Morse Taper	Clamping Capacity	T.I.R.	Origin
3701-2490	HHIP	2	1/64~5/16"	.0025"	CHINA
3701-2499	HHIP	3	1/64~1/2"	.0025"	CHINA
3701-2502	HHIP	4	1/64~1/2"	.0025"	CHINA
3701-2624	HHIP	3	1/64~5/8"	.0025"	CHINA
3701-2627	HHIP	4	1/64~5/8"	.0025"	CHINA

T.I.R. ≤ .0020"

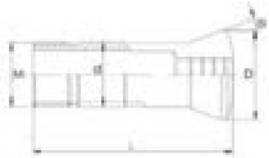
Item#	Brand	Morse Taper	Clamping Capacity	T.I.R.	Origin
3701-2500	VERTEX	3	0~1/2"	.0020"	Taiwan
3701-2501	VERTEX	4	0~1/2"	.0020"	Taiwan
3701-2625	VERTEX	3	1/8~5/8"	.0020"	Taiwan
3701-2626	VERTEX	4	1/8~5/8"	.0020"	Taiwan

*** Vertex Hook Tightening Wrench Included**

SCHAUBLIN STYLE LATHE COLLETS

- Made of high quality tool steel
- Hardened and precision ground to highest concentricity.
- These collets are closed by being drawn back into the collet seating by means of a draw bar.
- The W10 collets differ from the other pull-type collets because of their external thread, which has a nominal diameter almost identical to the collet shank diameter.
- The collets only open a minimal amount.

- The pull-type collets generally only clamp the nominal diameter.
- To obtain optimal concentricity, it is recommended not to clamp less than 0.1 mm below the nominal diameter.



W10 STYLE

Item#	Size D
3900-4965	3/32"
3900-4966	7/64"
3900-4967	1/8"
3900-4968	9/64"
3900-4969	5/32"
3900-4970	11/64"

Item#	Size D
3900-4971	3/16"
3900-4972	13/64"
3900-4973	7/32"
3900-4974	15/64"
3900-4975	1/4"

DIMENSIONS

Style	Type	D	d	Thread M	a	L
W10	Inch	14mm	9mm	M8.74X0.833	15°	50mm
W20	Inch	1.036"	.7874	M19.7x1.666	15°	2.874"
W20	Metric	26.3mm	20mm	M19.7x1.666	15°	73mm

W20 STYLE

Item#	Size
3903-0804	4mm
3903-0805	5mm
3903-0806	5.5mm
3903-0808	6mm
3903-0809	6.5mm
3903-0812	7mm
3903-0815	8mm
3903-0816	10mm
3903-0818	12mm
3903-0822	14mm

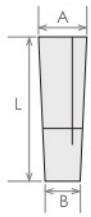
Item#	Size
3903-0904	1/8"
3903-0906	3/16"
3903-0908	1/4"
3903-0910	5/16"
3903-0912	3/8"
3903-0914	7/16"
3903-0916	1/2"
3903-0918	9/16"

Brown & Sharpe TAPER ROUND COLLETS

- Made of high grade tool steel.
- Precision ground and hardened.

DIMENSIONS

Taper	A	B	L	Drawbar End
#7	0.725"	0.600"	3.00"	3/8"~16
#9	1.067"	0.900"	4.00"	1/2"~13



≤ .0008" TIR

#7 TAPER COLLETS

Item#	Size
3900-0970	1/8"
3900-0972	3/16"
3900-0973	1/4"
3900-0974	5/16"
3900-0975	3/8"
3900-0976	7/16"
3900-0977	1/2"

#9 TAPER COLLETS

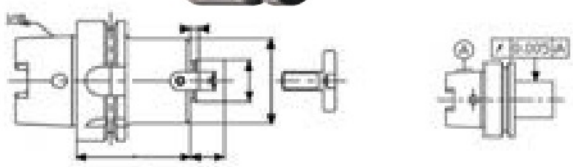
Item#	Size
3900-0989	1/8"
3900-0990	3/16"
3900-0991	1/4"
3900-0992	5/16"
3900-0993	3/8"
3900-0994	7/16"
3900-0995	1/2"
3900-0996	9/16"
3900-0997	5/8"
3900-0998	11/16"
3900-0999	3/4"

Pro-Series HSK FACE MILL HOLDERS

- Blanced to G2.5, 25,000 RPM.
- Made from high grade alloy steel.

Limited Supply!

MADE IN TAIWAN



Item#	Taper	Bore Dia.	Projection Gage Line to Nose End
3901-6040	HSK63A	1"	60mm
3901-6044	HSK63A	1-1/4"	60mm
3901-6048	HSK63A	1-1/2"	60mm

Pro-Series HSK ER COLLET CHUCKS

- Blanced to G2.5, 25,000 RPM.
- Made from high grade alloy steel.

MADE IN TAIWAN

Limited Supply!

Item#	Taper	Collet Series	Projection Gage Line to Nose End	OAL
3901-6010	HSK63A	ER-32	80mm	112mm
3901-6030	HSK100A	ER-32	100mm	150mm

NMTB 30 & 40 TAPER TO JACOBS ARBORS

- Hardened and precision ground.

Jacob Taper	Taper 30 Item#	Taper 40 Item#
JT2	3900-1762	3900-1772
JT3	3900-1763	3900-1773
JT33	3900-1764	3900-1774
JT6	3900-1766	3900-1776

Drawbar End:
#30- 1/2" -13
#40- 5/8" -11

NMTB 30 & 40 TAPER END MILL HOLDERS

- For milling machines having 30-40 standard taper spindles.
- Hardened and precision ground.
- Accepts single and double end mills. (single end mill only for sizes over 7/8").

Drawbar End:
#30- 1/2" -13
#40- 5/8" -11

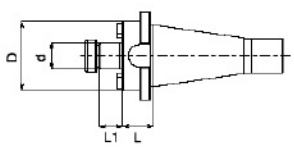
Bore A	Taper 30 Item#	B	C
3/16	3900-1690	1.75"	0.75"
1/4	3900-1683	1.75"	0.79"
5/16	3900-1691	1.75"	0.87"
3/8	3900-1692	1.75"	1.00"
1/2	3900-1693	1.75"	1.38"
5/8	3900-1694	1.75"	1.43"
3/4	3900-1695	2.25"	1.89"
7/8	3900-1696	2.50"	2.01"
1	3900-1697	2.69"	2.36"
1-1/4	3900-1698	3.62"	2.48"
1-1/2			
2			

Taper 40 Item#	B	C
3900-1700	2.31"	0.75"
3900-1718	2.31"	0.79"
3900-1701	2.31"	0.87"
3900-1702	2-5/16	1
3900-1703	2-5/16	1-3/8
3900-1704	2-5/16	1-5/8
3900-1705	2-5/16	1-7/8
3900-1706	3.19"	1.93"
3900-1707	2-11/16	2
3900-1708	2-29/32	2-3/8
3900-1709	3.95"	2.99"
3900-2711	3.95"	4.95"

NMTB 30 & 40 TAPER SHELL END MILL HOLDERS

- For shell end mills and indexable face mills.
- Heat treated and precision ground.
- Perfectly concentric to prevent runout of your cutting tools.

Drawbar End: #30- 1/2" -13
#40- 5/8" -11



Bore d	Taper 30 Item#	(Inch) L	D	L1
3/4"	3900-0742	1.31	1.93	0.67
1"	3900-0743	1.31	2.38	0.67
1-1/4"	3900-0744	1.44	2.88	0.67
1-1/2"	3900-0745	2.00"	3.00"	0.94
2"	3900-0746	2.50"	3.86	0.94

Taper 40 Item#	(Inch) L	D	L1
3900-1742	0.87	1.93	0.67
3900-1743	1.31	2.38	0.67
3900-1744	1.50	2.88	0.67
3900-1745	2.00"	3.00"	0.94"
3900-1746	2.50"	3.86"	0.94"

Pro-Series NMTB 30 & 40 SHANK ER COLLET CHUCKS

- Tolerance: .0003" Max.

SUPERIOR FINISH & CRAFTSMANSHIP

Item#	Shank	Type	Nut Style	(mm) L	L1	d1	Drawbar End
3901-5083	#30	ER-32	Spanner	128.4	60	50	1/2"~13
3901-5084	#30	ER-40	Spanner	138.4	70	63	1/2"~13
3901-5088	#40	ER-16	Hex	138.4	45	28	5/8"~11
3901-5090	#40	ER-32	Spanner	153.4	60	50	5/8"~11
3901-5091	#40	ER-40	Spanner	163.4	70	63	5/8"~11

NMTB 30 & 40 SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.

Item#	Shank	Type	Nut Style	Drawbar End
3900-5083	#30	ER-32	Spanner	1/2"~13
3900-5084	#30	ER-40	Spanner	1/2"~13
3900-5088	#40	ER-16	Hex	5/8"~11
3900-5090	#40	ER-32	Spanner	5/8"~11
3900-5091	#40	ER-40	Spanner	5/8"~11

NMTB 30 & 40 TAPER ER COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0005".

ER-32

- **14PC SET INCLUDES**
  12-Collet
  1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16"
  1-Collet Chuck
  1-Wrench

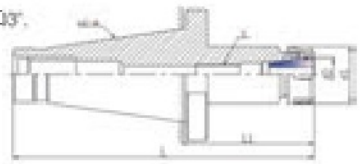
ER-40

- **10PC SET INCLUDES**
  8-Collet
  1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8 & 1"
  1-Collet Chuck
  1-Wrench
- **17PC SET INCLUDES**
  15-Collet
  1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1"
  1-Collet Chuck
  1-Wrench

Item#	Chuck Shank	No.	Nut Style	Gage Length	Collet Set
3900-5300	#30	ER-32	Spanner	2.36"	14
3900-0505	#40	ER-32	Spanner	2.75"	14
3900-5301	#30	ER-40	Spanner	2.75"	17
3900-0538	#40	ER-40	Spanner	2.36"	10
3900-0540	#40	ER-40	Spanner	2.36"	17

Pro-Series NMTB 30 TAPER ER COLLET CHUCK SETS

- Made of high grade tool steel NMTB shank high precision collet chuck system.
- Hardened & ground body for extended tool life.
- With fitted case.
- Chuck T.I.R. to .0003".



3900-4060 Shown

3900-4060

- **14PC SET INCLUDES**
  12-ER-32 Collet
  1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16"
  1-#30 Collet Chuck
  1-Spanner Wrench

3900-4062

- **17PC SET INCLUDES**
  15-ER-40 Collet
  1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1"
  1-#30 Collet Chuck
  1-Spaner Wrench

Item#	Collet	NMTB Chuck Shank	Collet Set	Nut Style	Nut Dia. d1	Gage Length L1	L	Drawbar End
3900-4060	ER-32	#30	14	Spanner	2.0"	2.36"	2.36"	1/2"-13
3900-4062	ER-40	#30	17	Spanner	2.5"	2.75"	2.75"	1/2"-13

NMTB TAPER INTEGRAL PRECISION KEYLESS DRILL CHUCKS

- Integrated design maximizes rigidity & accuracy.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.
- Keyless, self tightening design.

HHIP PRO-SERIES

T.I.R. ≤ .0022"

Item#	Brand	Clamping Capacity	Shank	T.I.R.
3701-3001	HHIP	0~1/2"	#30	.0022"
3701-3011	HHIP	0~1/2"	#40	.0022"
3701-3015	HHIP	0~5/8"	#40	.0022"

VERTEX

Max. T.I.R. ≤ .002"

Item#	Brand	Clamping Capacity	Shank	T.I.R.
3701-3500	VERTEX	0~1/2"	#40	.0020"
3701-3625	VERTEX	1/8~5/8"	#40	.0020"

* Vertex Tightening Wrench Included

Z-AXIS SETTERS

PRECISION DIAL Z-AXIS SETTERS

- Efficient to set "0" point with built in dial indicator.
- Positioning accuracy and repeatability: 0.0004".
- Height: 2" or 4" (with mag base)
- Setter Dimension: 1.45" (square) x 2" (height).

Pro-Series DIAL Z-AXIS SETTER

- Efficient to set "0" point with built in dial indicator.
- Positioning accuracy and repeatability: 0.0002" .
- With magnetic base.
- Dimension: 2" (square) x 4" (height).

Pro-Series Z-Axis HEIGHT PRE-SETTER

- Base with magnet
- 50mm height
- Reading 0-50-0
- Accuracy: 0.01mm
- Weight: 2.6 lbs.
- Checking bar & case included.

MADE IN TAIWAN

Pro-Series DIAL Z-AXIS SETTERS

- Efficient to set "0" point with built in dial indicator.
- Positioning accuracy and repeatability: 0.0005" .
- Dimension: 2" (square) x 2" (height).
- With fitted wooden case.

Pro-Series OPTICAL HEIGHT PRE-SETTER

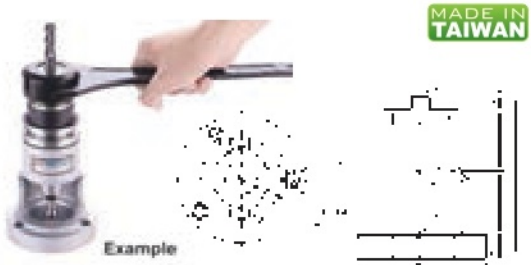
- Magnetic base
- 50mm height
- Red lamp illuminates when touched by ferrous material

MADE IN TAIWAN

VERTEX BT TOOL HOLDER TIGHTENING FIXTURE STANDS

- Lightweight and compact design.
- Quick tool holder setting and locking.
- Securely hold BT tooling for pull stud installation and tool/collet change.

MADE IN TAIWAN



Item#	Shank Taper	D	d	3 Hole P.C.D.	H	(mm) A	B	C	D	E	F	Wt. Lbs.
3900-4091	BT30	90	50	70	14(Dia.)x9x9(Dia.)	108	20	48	30	10	16	2.7
3900-4092	BT40	105	65	85	14(Dia.)x9x9(dia.)	130	20	50	50	10	16	4.9

HORIZONTAL/VERTICAL CNC TOOL HOLDER TIGHTENING FIXTURES

- 2 positions
- For mounting on worktable or cart.
- Quick and easy way to set tool holders horizontal or vertical

Item#	Tool Shank
3900-4080	BT30
3900-4081	BT40
3900-4083*	CAT30
3900-4084	CAT40
3900-4085	CAT50

*Limited Supply

Dasqua® WATERPROOF DIGITAL IP65 Z-AXIS SETTERS

Battery + CR2032

0.001MM RESOLUTION

- Accuracy (toleranace range): ±0.002mm/0.0001", Repeatability:0.003mm/0.0001"
- 3V Lithium battery CR2032

IP65

- **Used to help tool setting**
  Can be used in IP65 working environment (with inductive measurement against splash water) and will not damage the tool edge
- **Resolution reaches 0.001mm**
  Higher than other zero setting devices
- **Lighting indicating at "0"**
  More obvious and accurate compared to mechanic zero setting device
- **With magnetic base**
  Fixed on machine steadily and shorten tool setting time and improve work efficiency greatly
- **Provided in fitted aluminum case**

Item#	Height	Resolution
1801-1005	50mm	0.001mm/0.00005"
1801-1010	100mm	0.001mm/0.00005"

Dasqua® 1-2-3 BLOCKS

- Supplied with durable fitted ABS case.
- Product Dimensions: 1" x 2" x 3".
- Heat treated and case hardened to HRC 58-62.
- Hardened and precision ground on all 6 sides of each block.
- 23 holes consists of 5 tapped holes that are 3/8-16 for clamping and 18 untapped holes
- Sold in pairs.
- Tolerance of size ±.0002",Parallelism 0.0002",Height of pair 0.0002".
- Cross drilling design gives minimum weight and maximum strength.

Item#	Size	Squareness
8407-0005	1 x 2 x 3"	0.0001"/1"
8407-0010	1 x 2 x 3"	0.0003"/1"

MATCHED PAIRS AND SOLD AS PAIR

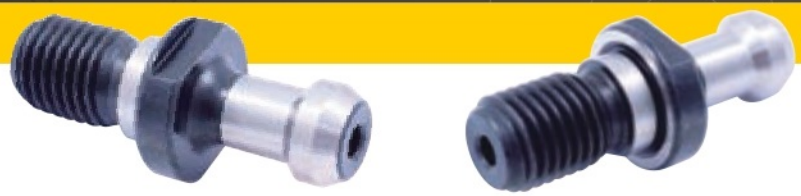
RETENTION KNOBS

Style 1, RETENTION KNOBS-BT 40

- Heat treated alloy steel.
- All dimensions in accordance to ANSI specifications for CAT holders and MAS specifications for BT holders.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5392	BT40	YES	M16x2.0	45°	0.591/15	0.394/10	0.150/3.8	0.669/17	0.906/23	2.374/60.3	1.102/28	2.421/61.5
3900-5393	BT40	YES	M16x2.0	60°	0.591/15	0.394/10	0.150/3.8	0.669/17	0.906/23	2.374/60.3	1.102/28	2.421/61.5
3900-5503	BT40	N/A	M16x2.0	45°	0.591/15	0.394/10	N/A	0.669/17	0.906/23	2.374/60.3	1.102/28	2.421/61.5
3900-5504	BT40	N/A	M16x2.0	60°	0.591/15	0.394/10	N/A	0.669/17	0.906/23	2.374/60.3	1.102/28	2.421/61.5

Style 1, RETENTION KNOBS-BT 50



- SNCM 21 alloy steel hardened to HRC 52~56°
- All dimensions in accordance to ANSI specifications for CAT holders and MAS specifications for BT holders.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5397	BT50	YES	M24x3.0	45°	0.906/23	0.669/17	0.268/6.8	0.984/25	1.496/38	3.346/85	1.378/35	3.937/100
3900-5508	BT50	N/A	M24x3.0	45°	0.906/23	0.669/17	0.268/6.8	0.984/25	1.496/38	3.346/85	1.378/35	3.937/100

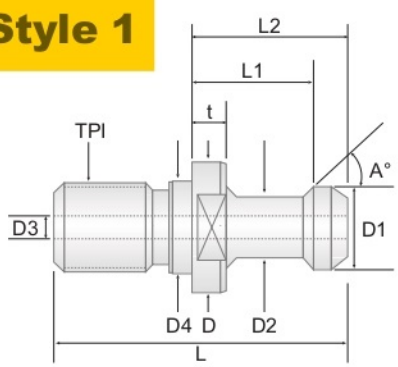
Style 1, RETENTION KNOBS-CAT 40

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

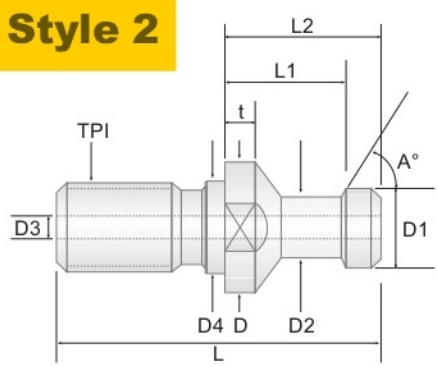
*Limited Supply

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5485	CAT40	N/A	M16x2.0	45°	0.591/15	0.394/10	N/A	0.669/17	0.906/23	2.244/57	0.984/25	2.362/60
3900-5486*	CAT40	N/A	M16x2.0	60°	0.591/15	0.394/10	N/A	N/A	0.906/23	2.244/57	0.984/25	2.362/60
3900-5491	CAT40	N/A	5/8~11	60°	0.591/15	0.394/10	N/A	N/A	0.906/23	2.244/57	0.984/25	2.362/60
3900-5528	CAT40	N/A	5/8~11	45°	0.591/15	0.394/10	N/A	N/A	0.906/23	2.244/57	0.984/25	2.362/60
3900-5529	CAT40	YES	5/8~11	45°	0.591/15	0.394/10	0.150/3.8	N/A	0.906/23	2.244/57	0.984/25	2.362/60
3900-5539	CAT40	YES	M16x2.0	45°	0.591/15	0.394/10	0.150/3.8	0.669/17	0.906/23	2.244/57	0.984/25	2.362/60

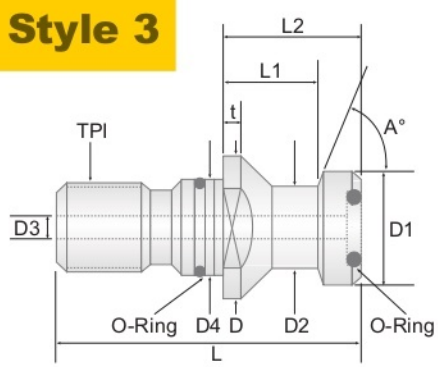
Style 1



Style 2



Style 3



Retention Knob Safety!

Retention knobs are not intended to last forever. Your Safety Program must include Retention Knob Inspections. Knobs must be visually inspected for damage and checked for tightness every time the tool in the holder is changed. Every 2 or 3 years, depending on use, knobs should be removed from the holder and Magnetic Particle inspected. Any Retention Knobs showing indications of cracking must be discarded. If your machine is in a crash, or releases a tool prematurely., this is an indication that either the Retention Knob Fingers. Finger Guide, Belleville Washers in the Spindle, or the Retention Knob is damaged. The machine tool should not be used until inspected by Maintenance Personnel. In this case all the Retention Knobs in the machine should be checked for cracks or damage immediately.

Style 1, RETENTION KNOBS-CAT 50

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5493	CAT50	N/A	1~8	60°	0.906/23	0.669/17	N/A	N/A	1.496/38	3.094/78.6	1.386/35.2	3.937/100
3900-5535	CAT50	N/A	1~8	45°	0.906/23	0.669/17	N/A	N/A	1.496/38	3.094/78.6	1.386/35.2	3.937/100

Style 2, RETENTION KNOBS-ISO 40A

- Heat treated alloy steel.
- All dimensions in accordance to ISO/DIS7388/2-1984A specifications.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5376	ISO40A	N/A	M16x2.0	15°	0.748/19	0.551/14	N/A	0.669/17	0.906/23	2.126/54	0.787/20	1.575/40
3900-5381	ISO40A	YES	M16x2.0	15°	0.748/19	0.551/14	0.276/7	0.669/17	0.906/23	2.126/54	0.787/20	1.575/40

Style 2, RETENTION KNOBS-CAT 50

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5378	CAT50	YES	M24x3.0	15°	1.102/28	0.827/21	0.451/11.45	0.984/25	1.417/36	2.913/74	0.984/25	1.575/40

Style 3, RETENTION KNOBS-ISO 50A

- Heat treated alloy steel.
- All dimensions in accordance to ISO/DIS7388/2-1984A specifications.

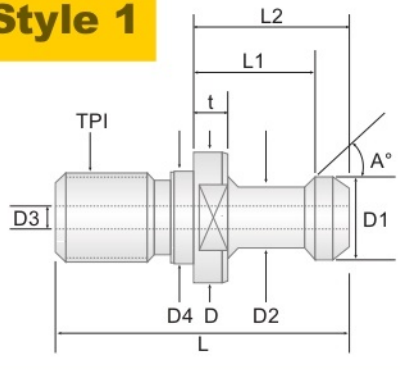
Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5373	ISO50A	YES	M24x3.0	45°	1.102/28	0.827/21	0.451/11.45	0.984/25	1.417/36	2.913/74	0.984/25	1.575/40

Style 3, RETENTION KNOBS-CAT 50

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5383	CAT50	N/A	M24x3.0	15°	1.142/29	0.768/19.5	0.445/11.3	0.984/25	1.417/36	2.567/65.2	0.692/17.58	1.811/46

Style 1



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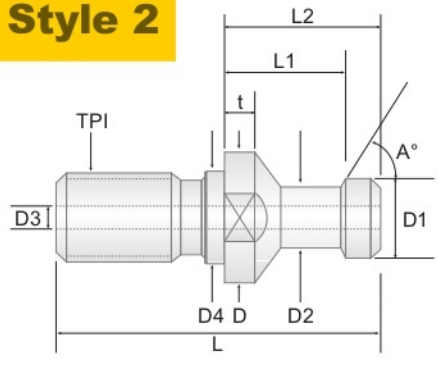
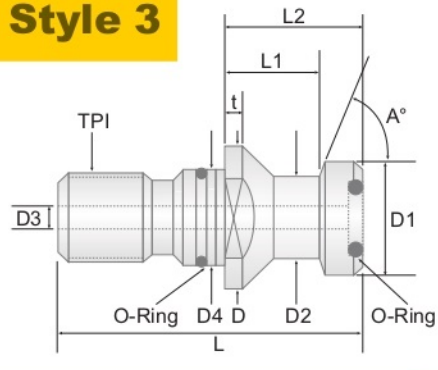


Style 3



RETENTION KNOBS

Style 4, RETENTION KNOBS-ISO 40B

- Heat treated alloy steel.
- All dimensions in accordance to ISO/DIS7388/2-1984A specifications.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5372	ISO40B	YES	M16x2.0	45°	0.748/19	0.512/13	0.276/7	0.669/17	0.906/23	1.752/44.5	0.433/11	1.181/30

Style 4, RETENTION KNOBS-BT 40

- Heat treated alloy steel.
- All dimensions in accordance to ANSI specifications for CAT holders and MAS specifications for BT holders.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5497	BT40	YES	M16x2.0	45°	0.740/18.8	0.490/12.45	0.315/8	0.669/17	0.866/22	1.736/44.1	0.551/14	1.22/31

Style 4, RETENTION KNOBS-BT 50

- Heat treated alloy steel hardened to HRC 52~56°.
- All dimensions in accordance to ANSI specifications for CAT holders and MAS specifications for BT holders.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5499	BT50	YES	M24x3.0	45°	1.140/28.95	0.820/20.83	0.394/10	0.984/25	1.457/37	2.567/65.2	0.692/17.58	1.969/50

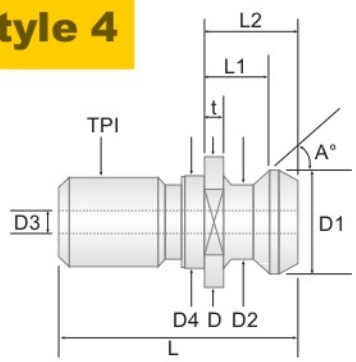
Style 4, RETENTION KNOBS-ISO 50B

- Heat treated alloy steel.
- All dimensions in accordance to ISO/DIS7388/2-1984A specifications.

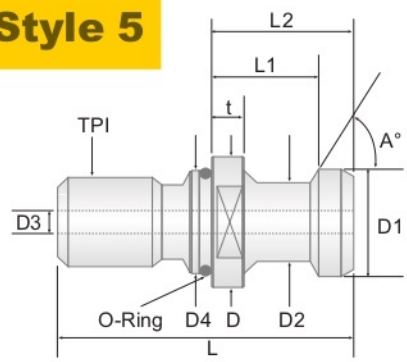
Limited Supply!

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5374	ISO50B	YES	M24x3.0	45°	1.142/29	0.768/19.5	0.445/11.3	0.984/25	1.417/36	2.583/65.6	0.692/17.58	1.969/50

Style 4



Style 5



Retention Knob Safety!

Retention knobs are not intended to last forever. Your Safety Program must include Retention Knob Inspections. Knobs must be visually inspected for damage and checked for tightness every time the tool in the holder is changed. Every 2 or 3 years, depending on use, knobs should be removed from the holder and Magnetic Particle inspected. Any Retention Knobs showing indications of cracking must be discarded. If your machine is in a crash, or releases a tool prematurely., this is an indication that either the Retention Knob Fingers. Finger Guide, Belleville Washers in the Spindle, or the Retention Knob is damaged. The machine tool should not be used until inspected by Maintenance Personnel. In this case all the Retention Knobs in the machine should be checked for cracks or damage immediately.

Style 4, RETENTION KNOBS-CAT 40

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5512	CAT40	N/A	5/8~11	45°	0.740/18.79	0.488/12.4	N/A	N/A	0.886/22.5	1.535/39	0.433/11	1.26/32
3900-5513	CAT40	N/A	M16x2.0	45°	0.590/18.79	0.486/12.34	N/A	N/A	0.886/22.5	1.535/39	0.433/11	1.26/32
3900-5520	CAT40	YES	5/8~11	45°	0.740/18.79	0.400/12.34	0.276/7	N/A	0.886/22.5	1.496/38	0.433/11	1.24/31.5
3900-5521	CAT40	YES	M16x2.0	45°	0.740/18.79	0.486/12.34	0.276/7	N/A	0.937/23.8	1.496/38	0.433/11	1.24/31.5

Style 4, RETENTION KNOBS-CAT 50

- Heat treated alloy steel hardened to HRC 52~56°.
- ANSI/AMSE B5.50-1994

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5492	CAT50	N/A	1~8	45°	1.140/28.95	0.820/20.83	N/A	N/A	1.417/36	2.307/58.6	0.692/17.58	1.969/50
3900-5519	CAT50	N/A	M24X3.0	45°	1.140/28.95	0.820/20.83	N/A	N/A	1.437/36.5	2.307/58.6	0.692/17.58	1.969/50
3900-5522	CAT50	YES	1~8	45°	1.140/28.95	0.820/20.83	0.451/11.45	N/A	1.43736.5	2.307/58.6	0.692/17.58	1.969/50
3900-5524	CAT50	YES	M24x3.0	45°	1.140/28.95	0.820/20.83	0.451/11.45	N/A	1.43736.5	2.307/58.6	0.692/17.58	1.969/50

Style 5, RETENTION KNOBS-ISO 40A

- Heat treated alloy steel.
- All dimensions in accordance to ISO/DIS7388/2-1984A specifications.

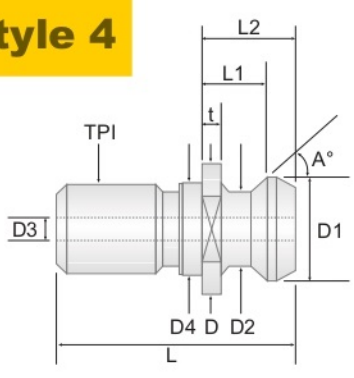
Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5371	ISO40A	YES	M16x2.0	45°	0.748/19	0.551/14	0.276/7	0.669/17	0.906/23	1.752/44.5	0.433/11	1.181/30

Style 5, RETENTION KNOBS-BT 50

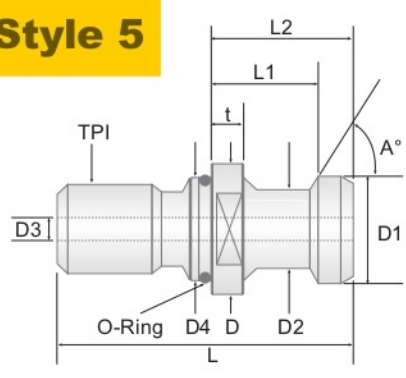
- SNCM 21 alloy steel hardened to HRC 52~56°
- All dimensions in accordance to ANSI specifications for CAT holders and MAS specifications for BT holders.

Item#	Machine Taper	Thru Coolant	Thread T.P.I.	Angle A.	Knob Dia. D1 (Inch/mm)	Neck Dia. D2 (Inch/mm)	Hole Dia. D3 (Inch/mm)	Pilot Dia. D4 (Inch/mm)	Dia. D (Inch/mm)	OAL L (Inch/mm)	Shoulder L1 (Inch/mm)	Shoulder L2 (Inch/mm)
3900-5398	BT50	YES	M24x3.0	60°	0.906/23	0.669/17	0.236/6	0.984/25	1.496/38	3.346/85	1.378/35	3.937/100

Style 4



Style 5



Retention Knob Safety!

Retention knobs are not intended to last forever. Your Safety Program must include Retention Knob Inspections. Knobs must be visually inspected for damage and checked for tightness every time the tool in the holder is changed. Every 2 or 3 years, depending on use, knobs should be removed from the holder and Magnetic Particle inspected. Any Retention Knobs showing indications of cracking must be discarded. If your machine is in a crash, or releases a tool prematurely., this is an indication that either the Retention Knob Fingers. Finger Guide, Belleville Washers in the Spindle, or the Retention Knob is damaged. The machine tool should not be used until inspected by Maintenance Personnel. In this case all the Retention Knobs in the machine should be checked for cracks or damage immediately.

CAT40 TOOL HOLDERS

CAT 40 "V" FLANGE END MILL HOLDERS

INCH

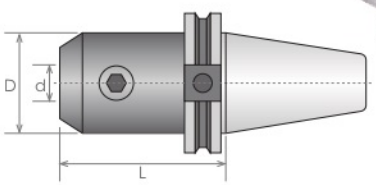
RETENTION KNOB THREAD: 5/8" ~11

Item#	Bore Dia. d	Gage Depth L	Nose Dia. D	Item#	Bore Dia. d	Gage Depth L	Nose Dia. D
3900-4101*	3/16	1.38	0.68	**3900-4111**	1/2	2.50	1.25
3900-4102*	3/16	2.50	0.68	**3900-4112***	1/2	4.72	1.38
3900-4103	1/4	1.38	0.88	**3900-4113***	5/8	1.75	1.75
3900-4104*	1/4	2.50	0.88	**3900-4114**	5/8	2.50	1.50
3900-4105	5/16	1.38	1	**3900-4115**	5/8	3.94	1.62
3900-4106	5/16	2.50	1	**3900-4116**	3/4	1.75	1.75
3900-4107	3/8	1.38	1	**3900-4117**	3/4	2.50	1.75
3900-4108	3/8	2.50	1	**3900-4118**	3/4	3.94	1.75
3900-4191*	7/16	1.38	1.25	**3900-4120**	7/8	3.94	2
3900-4109	7/16	2.50	1.25	**3900-4125***	1-1/4	3.94	2.62
3900-4110	1/2	1.75	1.75				

*Limited Supply

- For CNC machines having CAT 40 taper spindles
- "V" flange end mill adapter
- Hardened and precision ground

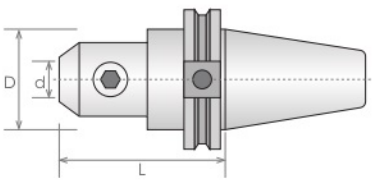
T.I.R. ≤ .0002"



Pro-Series CAT 40 HIGH SPEED, BALANCED END MILL HOLDERS

- Made of high grade alloy steel
- Balanced to 15,000 RPM
- Tolerance: .0003" Max.

T.I.R. ≤ 0.01mm



SUPERIOR FINISH & CRAFTSMANSHIP

Item#	Bore Dia. d	Gage Length L	Nose Dia. D
3900-7721	3/16	2.5"	0.69"
3900-7724	1/4	3.0"	0.78"
3900-7727	5/16	3.0"	0.88"
3900-7730	3/8	3.0"	1"
3900-7736	1/2	3.0"	1.25"
3900-7740	5/8	3.0"	1.5"
3900-7745	3/4	3.0"	1.75"
3900-7749	7/8	3.5"	1.88"
3900-7751	1	4.0"	2"
3900-7756	1-1/4	4.6"	2.5"
3900-7760	1-1/2	4.5"	2.5"

Pro-Series ULTRA PRECISION KEYLESS DRILL CHUCKS W/ INTEGRAL CAT 40 SHANKS

- Integrated design maximizes rigidity & accuracy.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.
- Keyless, self tightening design.
- **Tightening wrench included.**

Max. T.I.R. ≤ .002"

VERTEX

MADE IN TAIWAN

Item#	Clamping Capacity	Shank
3701-0500	1/64~1/2"	CAT-40
3701-0625	1/8~5/8"	CAT-40

HORIZONTAL/VERTICAL CNC TOOL HOLDER TIGHTENING FIXTURES

- 2 positions
- For mounting on worktable or cart.
- Quick and easy way to set tool holders horizontal or vertical

Item#	Tool Shank
3900-4080	BT30
3900-4081	BT40
3900-4083*	CAT30
3900-4084	CAT40
3900-4085	CAT50

*Limited Supply

CAT 40 "V" FLANGE DRILL CHUCK ARBORS

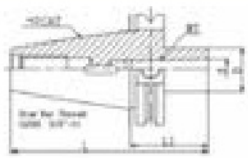
- For CNC machines having CAT 40 taper spindles
- Hardened and precision ground
- Gage depth: 1.772"

RETENTION KNOB THREAD: 5/8" -11

Item#	CAT Taper#	Jacobs No.
3900-4205	40	JT33
3900-4207	40	JT6
3900-4208	40	JT4
3900-4209	40	JT3
3900-4206	40	JT2

CAT 40 "V" FLANGE MORSE TAPER ADAPTERS

- For CNC machines having CAT 40 taper spindles
- Hardened and precision ground



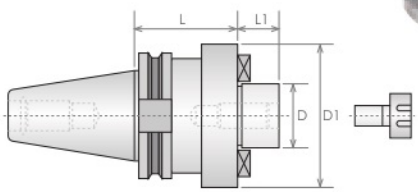
RETENTION KNOB THREAD: 5/8" ~11

Item#	CAT Taper#	Morse Taper No.	Gage Depth L1	D	OAL L
3900-4305	40	MT2	2.375"	1.26"	5.2"
3900-4307	40	MT3	3.000"	1.57"	5.6"
3900-4309	40	MT4	2.562"	1.89"	6.6"

CAT 40 "V" FLANGE SHELL END MILL HOLDERS

- CAT 40 Shell End Mill Holder.
- For CNC machines having CAT 40 taper spindles.
- Hardened and precision ground.

RETENTION KNOB THREAD: 5/8" -11



Item#	Dia. for Bore in Shell End Mill D	D1	Gage Length L	L1	Bore Thread
3900-4255	3/4"	1.5"	1.50"	0.69"	3/8"~24
3900-4257	1"	2.0"	2.00"	0.69"	1/2"~20
3901-4257	1"	2.19"	2.06"	0.69"	1/2"~20
3900-4259	1-1/4"	2.5"	2.19"	0.69"	5/8"~18
3901-4259	1-1/4"	2.75"	2.21"	0.69"	5/8"~18
3900-4261	1-1/2"	3.0"	2.21"	0.94"	3/4"~16
3901-4261	1-1/2"	3.81"	2.21"	0.94"	3/4"~16

PRECISION BORING SHANKS

- Use for boring heads.
- Made of high grade tool steel.
- Hardened and ground.

1-1/2" ~ 18 MOUNTING THREAD

Item#	Taper of Shank	Draw Bar End
1001-0440	CAT40	5/8"~11

SHELL END MILL HOLDER SCREWS

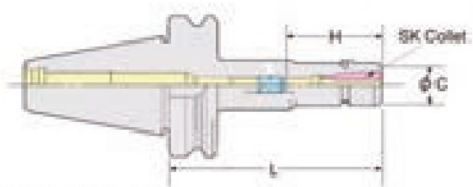
- Replacement screw for shell end mill holders.

Bore	Thread	D (mm)	L (mm)	Item#
1/2"	1/4"~28	16.7	21	3900-0761
3/4"	3/8"~24	22.2	27	3900-0764
1"	1/2"~20	30.2	33	3900-0767
1-1/4"	5/8"~18	38.1	39	3900-0770
1-1/2"	3/4"~16	47.6	45	3900-0773
2"	1"~14	63.1	52	3900-0777

CAT 40 SK LYNDEX STYLE SLIM COLLET CHUCKS

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders.
- Prevent tools from pulling into spindle.
- Balanced to 20,000 RPM.

RUNOUT ≤ 5 MICRON



CAT-40 (Drawbar End 5/8" ~11)

Item#	Collet Series	Collet Range	H	C	Gage Depth L (mm)
3901-5504	SK10	0.069~0.393"	1.181~1.969"	1.083"	90
3901-5506	SK10	0.069~0.393"	1.181~1.969"	1.083"	120
3901-5523	SK16	0.108~0.630"	1.772~2.756"	1.575"	90
3901-5525	SK16	0.108~0.630"	1.772~2.756"	1.575"	120

Collets shown on page 238

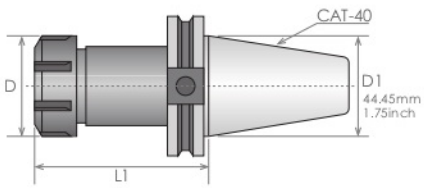
CAT 40 ER HOLDERS

CAT 40 ER COLLET CHUCKS

- For CNC machines having CAT 40 taper spindles.
- Hardened and precision ground.

CAT-40 **(DRAWBAR END: 5/8" ~11)**

T.I.R. ≤ 0.005mm

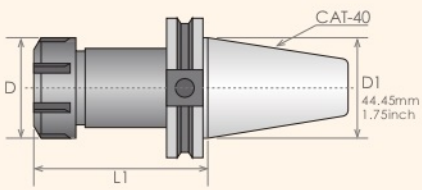


Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L1
3900-4362	ER-16	0.019~0.406"	Hex	1.1"	2.50"
3900-4361	ER-16	0.019~0.406"	Hex	1.1"	3.50"
3900-2060*	ER-16	0.019~0.406"	Hex	1.1"	2.76"
3900-2061*	ER-16	0.019~0.406"	Hex	1.1"	4.00"
3900-2028	ER-20	0.040~0.511"	Hex	1.4"	2.75"
3900-2039*	ER-20	0.040~0.511"	Hex	1.4"	4.00"
3900-2528	ER-25	0.040~0.629"	Spanner	1.7"	2.75"
3900-2539*	ER-25	0.040~0.629"	Spanner	1.7"	4.00"
3900-2073*	ER-32	0.078~0.787"	Spanner	2.0"	2.76"
3900-4369	ER-32	0.078~0.787"	Spanner	2.0"	3.20"
3900-4364*	ER-32	0.078~0.787"	Spanner	2.0"	4.00"
3900-4028	ER-40	0.120~1.020"	Spanner	2.5"	2.75"
3900-4039*	ER-40	0.120~1.020"	Spanner	2.5"	4.00"

*Limited Supply

CAT 40 ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0005".



ER-16	ER-25	ER-32	ER-40
• 11PC SET INCLUDES 9-Collet 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32 & 3/8" 1-Collet Chuck 1-Wrench	• 17PC SET INCLUDES 15-Collet 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16,11/32, 3/8,13/32, 7/16, 1/2, 17/32, 9/16 & 5/8" 1-Collet Chuck 1-Wrench	• 20PC SET INCLUDES 18-Collet 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32,11/16, 23/32 & 3/4" 1-Collet Chuck 1-Wrench	• 25PC SET INCLUDES 23-Collet 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32 & 1" 1-Collet Chuck 1-Wrench

Item#	Type	Nut Style	Collet Set	Nut Dia. D	Gage Length L1
3900-4014	ER-16	Hex	11	1.1"	2.75"
3900-4023	ER-25	Spanner	17	1.7"	2.75"
3900-4029	ER-32	Spanner	20	2.0"	3.20"
3900-4042	ER-40	Spanner	25	2.5"	2.75"

Pro-Series CAT 40 ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted metal case.
- Accuracy to .0005".

Max. T.I.R. ≤ 0.0005"

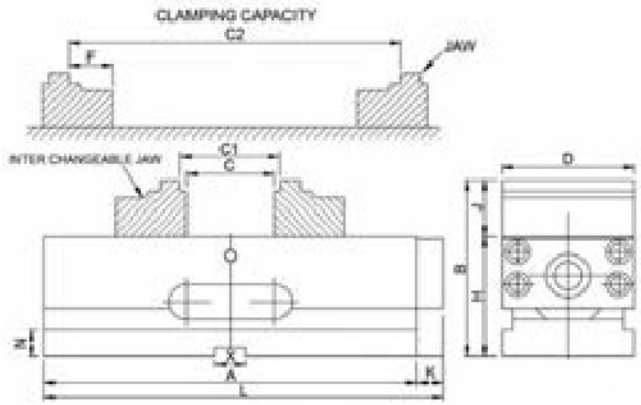
ER-16	ER-25	ER-32	ER-40
• 11PC SET INCLUDES 9-Collet 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32 & 3/8" 1-Collet Chuck 1-Wrench	• 12PC SET INCLUDES 10-Collet 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8" 1-Collet Chuck 1-Wrench	• 20PC SET INCLUDES 18-Collet 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32,11/16, 23/32 & 3/4" 1-Collet Chuck 1-Wrench	• 25PC SET INCLUDES 23-Collet 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32 & 1" 1-Collet Chuck 1-Wrench

Item#	Type	Collet Set	Size Range	Nut Style	Gage Length
3900-4016	ER-16	11	1/16~3/8"	Hex	2.50"
3900-4025	ER-25	12	3/32~5/8"	Spanner	2.75"
3900-4032	ER-32	20	3/32~3/4"	Spanner	3.20"
3900-4040	ER-40	25	1/8~1"	Spanner	2.75"

Pro-Series 3.98" SELF CENTERING CNC VISE

- Reversible Jaw: remove 4 screws to re-install jaws.
- Suitable for 4/5 axis CNC machines
- Repeat clamping tolerance +/- 0.0004"/ 0.01mm
- Material: FCD 60, high tension cast iron slide way has hardness of HRC 45.
- Interchangeable jaw heat treated to HRC 50.
- Lock down design to keep work piece from lifting.

MADE IN TAIWAN



SELF-CENTERING

Jaw Width D	Jaw Depth J	Jaw Open C	Vise Height B	OAL L	Wt.	Max. Clamping C1	Clamping Range For C2	Max. Clamping Force	Torque For Clamping	A	F	H	K	N	X
3.98"	1.57"	5.20"	4.72"	10.24"	41 lbs	5.51"	2.44~7.56"	400 kgf	2.6m/kgf	9.45"	1.18"	3.15"	0.63"	0.83"	0.79"

Pro-Series 2.36" SELF CENTERING CNC VISE WITH SWIVEL BASE

- Suitable for 4/5 axis CNC machines
- Repeat clamping tolerance +/- 0.0004"/0.01mm
- Material: FCD 60, high tension cast iron slide way has hardness of HRC 450
- Interchangeable jaw heat treatment to HRC 55°.
- Lock down force to keep work piece from lifting.
- Swivel base 8" diameter x 22mm thickness
- Clamping Capacity: 1.77~5.51"

MADE IN TAIWAN

SWIVEL BASE INCLUDED

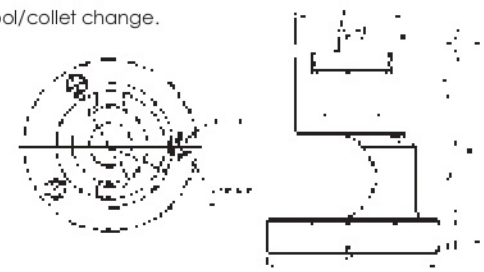
Item#	Jaw Width	Jaw Depth	Jaw Openning	Vise Height	OAL
3900-2220	2.36"	0.95"	3.94"	3.15 (w/o base)	7.3"

VERTEX BT TOOL HOLDER TIGHTENING FIXTURE STANDS

- Lightweight and compact design.
- Quick tool holder setting and locking.
- Securely hold BT tooling for pull stud installation and tool/collet change.

Example

MADE IN TAIWAN

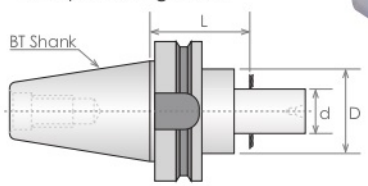


Item#	Shank Taper	D	d	3 Hole P.C.D.	H	(mm) A	B	C	D	E	F	Wt. Lbs.
3900-4091	BT30	90	50	70	14(Dia.)x9x9(Dia.)	108	20	48	30	10	16	2.7
3900-4092	BT40	105	65	85	14(Dia.)x9x9(dia.)	130	20	50	50	10	16	4.9

BT30 & 40 TOOL HOLDERS

BT 30 & 40 TO JT DRILL CHUCK ARBORS

- For CNC machines having BT taper spindles.
- Concentricity .0002".
- All critical surfaces are hardened and precision ground.



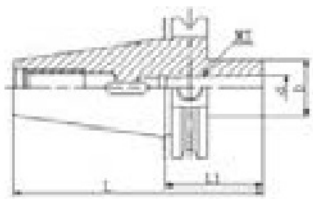
*Limited Supply

Item#	BT Taper	JT Taper	Gage Depth L (Inch)	D (Inch)	OAL (Inch)
3900-4194	30	2	1.77	1.18	4.6
3900-4195	30	3	1.77	1.38	4.9
3900-4196	30	4	1.77	1.58	5.3
3900-4198*	30	33	1.77	1.18	3.7
3900-4199	40	2	1.77	1.18	5.2
3900-4200	40	3	1.77	1.38	5.6
3900-4201	40	4	1.77	1.58	6.0
3900-4202	40	6	1.77	1.18	5.4
3900-4203	40	33	1.77	1.18	5.4

BT 30 & 40 TO MORSE TAPER ADAPTORS

- For CNC machines having BT taper spindles.
- All critical surfaces are hardened and precision ground.
- Concentricity .0002".

Item#	BT Taper	MT Taper	Gage Depth L1 (Inch)	D (Inch)	L (Inch)
3900-8701	30	MT2	2.36	1.26	4.3
3900-8702	30	MT3	3.15	1.58	5.0
3900-8705	40	Mt2	1.97	1.26	4.5
3900-8708	40	MT3	2.76	1.58	5.3
3900-8710	40	MT4	3.54	1.89	6.1



BT30 & 40 SHANK INTEGRAL ULTRA PRECISION KEYLESS DRILL CHUCKS

- Integrated design maximizes rigidity & accuracy.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.
- Keyless, self tightening design.

Item#	Brand	Clamping Capacity	Shank	Origin
3701-1050	VERTEX	1/64~1/2"	BT30	TAIWAN
3701-1054	VERTEX	1/64~1/2"	BT40	TAIWAN
3701-1062	VERTEX	1/8~5/8"	BT40	TAIWAN
3701-3503*	HHIP	1/64~1/2"	BT40	CHINA
3701-3628*	HHIP	1/64~5/8"	BT40	CHINA

* Limited Supply

Max. T.I.R. ≤ 0.002"

Pro-Series BT40 HI-TORQUE INTEGRATED KEYLESS DRILL CHUCKS

- Reinforce torque design to increase more clamping power.
- Integrated design maximizes rigidity & accuracy
- Right turn and left turn allowable.
- Maximum T.I.R. does not exceed .002".
- Max. speed 6000 RPM.
- Supplied with wrench.

Limited Supply!

BT40 TAPER

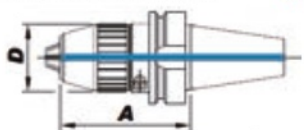
MADE IN TAIWAN

Item#	Clamping Range
3701-2650	.02~1/2"
3701-2662	.12~5/8"

BT40 ULTRA PRECISION INTEGRAL DRILL CHUCKS - HEX-KEY LOCKING

- Manufactured and tested at a world class factory that produces highest quality European brands (Babel).
- Suitable for CNC and high precision machine applications.
- High precision and concentricity.
- Right and left rotation.
- High gripping force with effortless tool clamping.
- Short and sturdy design: tool shank and chuck form one unit.
- Simple operation: Quick tool change inside or outside of machine, no unintentional opening in case of sudden spindle stop or change of direction.
- Tightening wrench included.
- Runout test of drill chucks is done with a torque of approx 12 Nm using the following test mandrels:
  1/2": 6 mm, 8 mm, 12 mm
  5/8": 6 mm, 8 mm, 12 mm und 16 mm

T.I.R. < 0.0012"

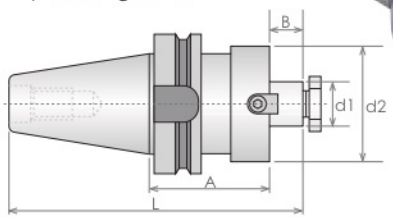


BT40 Shank

Item#	Capacity	A	D
3701-4650	1/2"	3.50"	1.77"
3701-4652	5/8"	3.74"	1.97"

BT40 SHELL END MILL HOLDERS

- For CNC machines having BT taper spindles.
- Concentricity .0002".
- All critical surfaces are hardened and precision ground.



*Limited Supply

BT40 (INCH BORE DIAMETER)

Item#	Bore Dia. d1 (Inch)	Gage Depth A (mm)	d2 (mm)	Arbor Thread
3900-4237*	7/8	60	40	M16
3900-4238*	1	60	48	M16
3900-4239*	1-1/4	60	58	M16
3900-4240*	1-1/2	60	70	M16

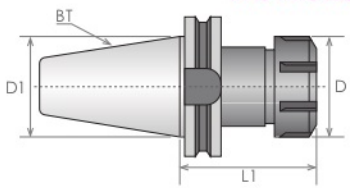
BT40 (METRIC BORE DIAMETER)

Item#	Bore Dia. d1 (mm)	Gage Depth A (mm)	d2 (mm)	Arbor Thread
3900-4241	22	45	40	M16
3900-4245	27	60	48	M16
3900-4250	32	60	58	M16
3900-4253	40	75	70	M16

BT 30 & 40 ER COLLET CHUCKS

- For CNC machines having BT taper spindles.
- Concentricity .0003".
- All critical surface are hardened and precision ground.

Draw Bar Thread: BT30 M12x1.75
BT40 M16x2.00



BT30

Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L
3900-7554	ER-16	.019~.406"	Hex	1.1"	2.76"
3900-7562	ER-25	.040~.629"	Spanner	1.7"	2.76"
3900-7566	ER-32	.078~.787"	Spanner	2.0"	2.76"
3900-7570	ER-40	.120~1.020"	Spanner	2.5"	3.15"

BT40

Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L1
3900-7604	ER-16	.019~.406"	Hex	1.1"	2.48"
3900-8604	ER-16	.019~.406"	Hex	1.1"	2.76"
3900-7608	ER-20	.040~.511"	Hex	1.4"	2.76"
3900-7612	ER-25	.040~.629"	Spanner	1.7"	2.36"
3900-8618	ER-32	3/32~3/4"	Spanner	2.0"	2.76"
3900-8620	ER-32	3/32~3/4"	Spanner	2.0"	4"

Pro-Series BT40 METRIC ER COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0004", G6.3,15,000RPM.

ER-32

- 10PC SET INCLUDES
  8-Collet: 4 ,5, 6, 8, 10, 12, 16 & 20mm
  1-Collet Chuck
  1-Wrench

ER-25

- 10C SET INCLUDES
  8-Collet: 4, 5, 6, 8, 10, 12, 14 & 16mm
  1-Collet Chuck
  1-Wrench

Item#	No.	Nut Style	Chuck Shank	Gage Length	Collet Set
3901-5101	ER-25	Spanner	BT40	3.94"	10
3901-5108	ER-32	Spanner	BT40	2.75"	10

BT30 SK LYNDEX STYLE SLIM COLLET CHUCKS

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders.
- Prevent tools from pulling into spindle.
- Balanced to 30,000 RPM.

RUNOUT ≤ 5 MICRON at 4D

Limited Supply!

BT30 (Drawbar End M12x1.75)

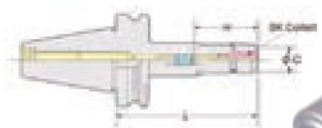
Item#	Collet Series	Collet Range	H	C	Gage Depth L (mm)
3901-5490	SK10	0.069~0.393"	1.181~1.969"	1.083"	90
3901-5492	SK16	0.108~0.630"	1.772~2.756"	1.575"	90

Wrench for SK10 **Item# 3900-0590**

BT40 SK LYNDEX STYLE SLIM COLLET CHUCKS

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders.
- Prevent tools from pulling into spindle.
- Balanced to 25,000 RPM.

RUNOUT ≤ 5 MICRON at 4D



Limited Supply!

BT40 (Drawbar End M16x2.00)

Item#	Collet Series	Collet Range	H	C	Gage Depth L (mm)
3901-5496	SK10	0.069~0.393"	1.181~1.969"	1.083"	90
3901-5498	SK16	0.108~0.630"	1.575~2.756"	1.575"	90

Wrench for SK10 **Item# 3900-0590**

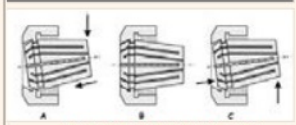
ER COLLETS & SETS

Pro-Series HIGH ACCURACY ER SPRING COLLETS - AA GRADE 5 MICRON

Series	Major Dia.	Overall Length
ER-16	.670"	1.052"
ER-20	.830"	1.230"
ER-32	1.300"	1.578"

- Made of high grade SUJ2 steel.
- Hardened and precision ground 44-48HRC.
- Exceeds Federal specifications.
- Inside diameter ground to reach mirrow finish increased grip force.
- Surface treated to reduce rust and improve hardness.
- Cyrogentic treatment to significiantely increase wear resistance.

Size/Range	ER-16 Item#	ER-20 Item#	ER-32 Item#
1/32" (.02~.04)	3901-5150		
1/16" (.04~.08)	3901-5151	3901-5180	3901-5239
3/32" (.08~.12)	3901-5152	3901-5181	3901-5240
1/8" (.12~.16)	3901-5153	3901-5182	3901-5241
3/16" (.16~.20)	3901-5154	3901-5183	3901-5242
7/32" (.20~.236)	3901-5155	3901-5184	3901-5243
1/4" (.236~.275)	3901-5156	3901-5185	3901-5244
5/16" (.275~.316)	3901-5157	3901-5186	3901-5245
11/32" (.316~.354)	3901-5158	3901-5187	3901-5246
3/8" (.354~.393)	3901-5159	3901-5188	3901-5247
13/32" (.393~.433)		3901-5189	3901-5248
7/16" (.433~.472)		3901-5190	3901-5249
1/2" (.472~.511)		3901-5191	3901-5250
17/32" (.511~.551)	*Collet must be assembled into collet chuck nut before inserting into collet chuck !*		3901-5251
9/16" (.551~.590)			3901-5252
5/8" (.590~.629)			3901-5253
21/32" (.629~.669)			3901-5254
11/16" (.669~.708)			3901-5255
23/32" (.708~.748)			3901-5256
3/4" (.748~.787)			3901-5257
25/32" (.748~.787)			3901-5258
13/16" (.787~.826)			3901-5259



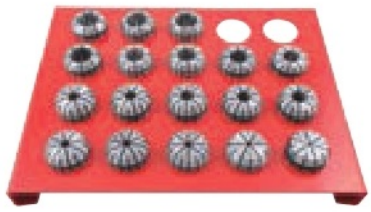
RUNOUT ≤ .0002"/.005MM
SUPERIOR FINISH

AA GRADE TOLERANCE: 5 MICRON

Pro-Series ER COLLET SETS - INCH & METRIC - AA GRADE 5 MICRON

Limited Supply!

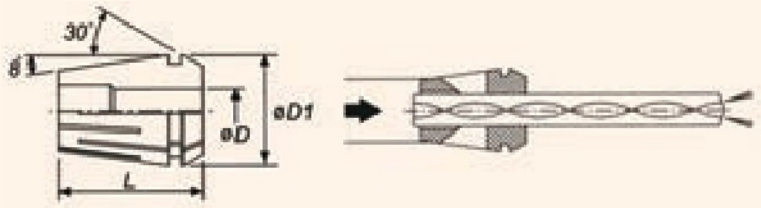
Pro-Series ER COLLET & RACK SETS - INCH - AA GRADE 5 MICRON



ER SPRING COLLETS-COOLANT THRU

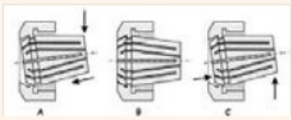
- Designed for use with cylindrical shank tools (no flats). Cutting tool should be inserted the full length of the collet. If these conditions are not met, coolant leakage may result.
- Collets meet DIN 6499B.

Series	Major Dia.	Overall Length
ER-16	.670"	1.052"
ER-20	.830"	1.230"
ER-25	1.020"	1.390"
ER-32	1.300"	1.578"
ER-40	1.620"	1.810"



Size/Range	ER-16 Item#	ER-20 Item#	ER-25 Item#	ER-32 Item#	ER-40 Item#
1/8" (.12~.16)	3900-5566	3900-5583	3900-5753		3900-5773
3/16" (.16~.20)	3900-5568	3900-5584	3900-5754	3900-5542	3900-5774
7/32" (.20~.236)	3900-5570	3900-5585	3900-5755	3900-5543	3900-5775
1/4" (.236~.275)	3900-5572	3900-5586	3900-5756	3900-5544	3900-5776
5/16" (.275~.316)	3900-5574	3900-5587	3900-5757	3900-5545	3900-5777
11/32" (.316~.354)	3900-5576	3900-5588	3900-5758	3900-5546	3900-5778
3/8" (.354~.393)	3900-5578	3900-5589	3900-5759	3900-5547	3900-5779
13/32" (.393~.433)		3900-5590	3900-5760	3900-5548	3900-5780
7/16" (.433~.472)		3900-5591	3900-5761	3900-5549	3900-5781
1/2" (.472~.511)		3900-5592	3900-5762	3900-5550	3900-5782
17/32" (.511~.551)			3900-5763	3900-5551	3900-5783
9/16" (.551~.590)			3900-5764	3900-5552	3900-5784
5/8" (.590~.629)			3900-5765	3900-5553	3900-5785
21/32" (.629~.669)				3900-5554	3900-5786
11/16" (.669~.708)				3900-5555	3900-5787
23/32" (.708~.748)				3900-5556	3900-5788
3/4" (.748~.787)				3900-5557	3900-5789
25/32" (.748~.787)					3900-5790
13/16" (.787~.826)					3900-5791
27/32" (.826~.866)					3900-5792
7/8" (.866~.905)					3900-5793
15/16" (.905~.984)					3900-5794
31/32" (.944~.984)					3900-5795
1" (.984~1.020)					3900-5796

Collet must be assembled into collet chuck nut before inserting into collet chuck !



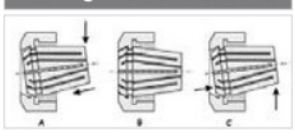
RUNOUT ≤ .0005"

Pro-Series ER SPRING COLLET & RACK SETS- METRIC - AA GRADE 5 MICRON

- Made of high grade alloy tool steel.
- Hardened and precision ground to 44-48HRC.
- Exceeds Federal specifications.
- Inside diameter ground to reach mirrow finish for increased grip force.
- Surface treated to reduce rust and improve hardness.

RUNOUT ≤ .0002"/.005MM

Collet must be assembled into collet chuck nut before inserting into collet chuck !



Series	Major Dia.	Overall Length
ER-16	.670"	1.052"
ER-32	1.300"	1.578"

ER COLLETS & SETS

PRECISION ER SPRING COLLETS & SETS

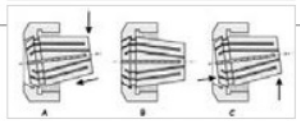
- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.

Series	Major Dia.	Overall Length
ER-11	.453"	.709"
ER-16	.670"	1.052"
ER-20	.830"	1.230"

Series	Major Dia.	Overall Length
ER-25	1.020"	1.390"
ER-32	1.300"	1.578"
ER-40	1.620"	1.810"

Size/Range	ER-11 Item#	ER-16 Item#	ER-20 Item#	ER-25 Item#	ER-32 Item#	ER-40 Item#
1/32" (.02~.04)	3900-5142	3900-5150				
1/16" (.04~.08)	3900-5143	3900-5151	3900-5180	3900-5210	3900-5239	
3/32" (.08~.12)	3900-5144	3900-5152	3900-5181	3900-5211	3900-5240	
1/8" (.12~.16)	3900-5145	3900-5153	3900-5182	3900-5212	3900-5241	3900-5270
3/16" (.16~.20)	3900-5146	3900-5154	3900-5183	3900-5213	3900-5242	3900-5271
7/32" (.20~.236)	3900-5147	3900-5155	3900-5184	3900-5214	3900-5243	3900-5272
1/4" (.236~.275)	3900-5148	3900-5156	3900-5185	3900-5215	3900-5244	3900-5273
5/16" (.275~.316)		3900-5157	3900-5186	3900-5216	3900-5245	3900-5274
11/32" (.316~.354)		3900-5158	3900-5187	3900-5217	3900-5246	3900-5275
3/8" (.354~.393)		3900-5159	3900-5188	3900-5218	3900-5247	3900-5276
13/32" (.393~.433)			3900-5189	3900-5219	3900-5248	3900-5277
7/16" (.433~.472)			3900-5190	3900-5220	3900-5249	3900-5278
1/2" (.472~.511)			3900-5191	3900-5221	3900-5250	3900-5279
17/32" (.511~.551)				3900-5222	3900-5251	3900-5280
9/16" (.551~.590)				3900-5223	3900-5252	3900-5281
5/8" (.590~.629)				3900-5224	3900-5253	3900-5282
21/32" (.629~.669)					3900-5254	3900-5283
11/16" (.669~.708)					3900-5255	3900-5284
23/32" (.708~.748)					3900-5256	3900-5293
3/4" (.748~.787)					3900-5257	3900-5285
25/32" (.748~.787)					3900-5265	3900-5286
13/16" (.787~.826)					3900-5263	3900-5287
27/32" (.826~.866)						3900-5288
7/8" (.866~.905)						3900-5289
15/16" (.905~.984)						3900-5290
31/32" (.944~.984)						3900-5291
1" (.984~1.02)						3900-5292

Collet must be assembled into collet chuck nut before inserting into collet chuck !



ER SPRING COLLET SETS-METRIC

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.

ER-32 SPRING COLLET SETS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.

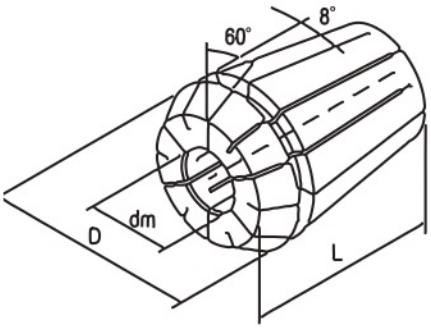
HARLINGEN® HIGH PERFORMANCE ER COLLETS - METRIC

HARLINGEN® ultra precision ER collets are made of special bearing steel, Grade GCrlS, fully hardened and precisely ground by experienced craftsmen. Our powerful clamping ability and durability are ideal for boring, milling, drilling and tapping as well as grinding operations.

- Made of high-performance special bearing steel.
- Ideal for drilling, reaming and milling for high precision machining.
- Your choice for secure and rigid holding of drills of any size while retaining the highest concentricity within the range.
- 8 taper design enables maximum gripping power.
- All slits are spaced and ground evenly.
- Made of special bearing steel.

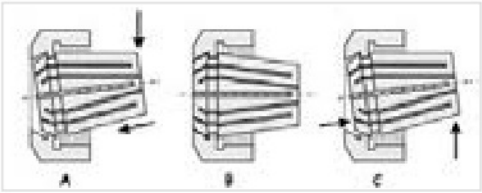
DIN6499B
RUNOUT ≤ .0005"

Ultra-Precision Made of Special Bearng Steel !



Series	Major Dia. D	Overall Length L
ER-16	17.0mm	27.5mm
ER-20	21.0mm	31.5mm
ER-25	26.0mm	34.0mm
ER-32	33.0mm	40.0mm

Collet must be assembled into collet chuck nut before inserting into collet chuck !



Size Range	ER-16 Item#	ER-20 Item#	ER-25 Item#	ER-32 Item#
3.0-2.0mm	9710-4011	9710-4019	9710-4030	9710-4044
4.0-3.0mm	9710-4012	9710-4020	9710-4031	9710-4045
5.0-4.0mm	9710-4013	9710-4021	9710-4032	9710-4046
6.0-5.0mm	9710-4014	9710-4022	9710-4033	9710-4047
7.0-6.0mm	9710-4015	9710-4023	9710-4034	9710-4048
8.0-7.0mm	9710-4016	9710-4024	9710-4035	9710-4049
9.0-8.0mm	9710-4017	9710-4025	9710-4036	9710-4050
10.0-9.0mm	9710-4018	9710-4026	9710-4037	9710-4051
11.0-10.0mm		9710-4027	9710-4038	9710-4052
12.0-11.0mm		9710-4028	9710-4039	9710-4053
13.0-12.0mm		9710-4029	9710-4040	9710-4054
14.0-13.0mm			9710-4041	9710-4055
15.0-14.0mm			9710-4042	9710-4056
16.0-15.0mm			9710-4043	9710-4057
17.0-16.0mm				9710-4058
18.0-17.0mm				9710-4059
19.0-18.0mm				9710-4060
20.0-19.0mm				9710-4061

SPINDLE TAPER WIPERS

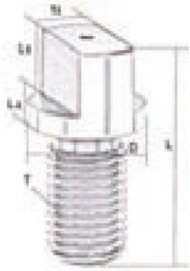
- For all 30,40 & 50 tapers
- Maintains spindle accuracy and rigid contact
- Multiple usage on tool holder tapers NMTB, CAT and BT

Item#	Taper#
7016-0013	30
7016-0014	40
7016-0015	50

TANG SCREW FOR DRAWBAR END HOLDERS

- Precision made from tool steel, hardened.
- Metric thread.

Tang for draw bar thread type holders



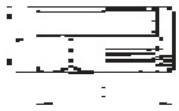
Item#	Morse Taper	Thread	Dimension (mm) D	L	L1	L2
3900-0789	MT1	M6x1.00	9.5	27	7.5	3
3900-0790	MT2	M10x1.50	12	30	7	4
3900-0791	MT3	M12x1.75	17	40	12	4
3900-0792	MT4	M16x2.00	24	46	13	5
3900-0793	MT5	M24x3.00	34	47	14	5

ER COLLET CHUCK NUTS

TYPE A HEX ER CHUCK NUTS

Type A

Type A (Bearing Type)

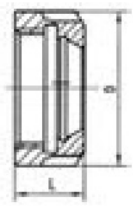


Fits	Thread	D (mm)	L (mm)	Type A Item#	Type A (Bearing) Item#
ER-11	M14 x 0.75	19	11.3	3900-0614	3900-0654
ER-16	M22 x 1.50	28	17.5	3900-0616	3900-0656
ER-20	M25 x 1.50	35	19	3900-0620	3900-0660

TYPE KM & UM SPANNER ER CHUCK NUTS

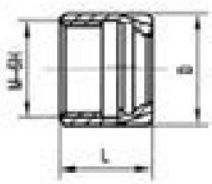
Type UM

Type KM(Bearing Type)



Fits	Thread	D (mm)	L (mm)	Type UM Item#	Type KM Item#
ER-25	M32 X 1.50	42	20	3900-0625	3900-0645
ER-32	M40 X 1.50	50	22.5	3900-0632	3900-0647
ER-40	M50 X 1.50	63	25.5	3900-0640	3900-0649
ER-50	M64 X 2.00	78	35.5	3900-0642	3900-0651

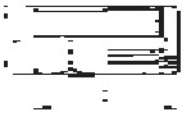
ER CHUCK NUTS-Mini-Castle Nut
FOR MINI TYPE SHANKS ONLY



Fits	Item#	Thread	D(mm)	L (mm)
ER-8 Mini	3900-0671	M10 x 0.75	12	12
ER-11 Mini	3900-0673	M13 x 0.75	16	12
ER-16 Mini	3900-0675	M19 x 1.00	22	18
ER-20 Mini	3900-0677	M24 x 1.00	28	19
ER-25 Mini	3900-0679	M30 x 1.00	35	20

Pro-Series TYPE A 18,000 RPM ER CHUCK NUTS

- **Balanced to 18,000 RPM**
- Tolerance: .0003" Max.
- Material: 42 CrMo
- Hardness: HRC 50~52
- Thread Tolerance Class: 4H-Class



Item#	Fits	Thread	D (mm)	L (mm)
3900-0685	ER-11	M14 x 0.75	19	11.3
3900-0686	ER-16	M22 x 1.50	28	17.5

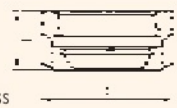
Pro-Series TYPE UM 18,000 RPM ER CHUCK NUTS

- **Balanced to 18,000 RPM**
- Tolerance: .0003" Max.
- Material: 42 CrMo
- Hardness: HRC 50~52
- Thread Tolerance Class: 4H-Class

Item#	Fits	Thread	D (mm)	L (mm)
3900-0688	ER-16	M22x1.5	32	17
3900-0689	ER-20	M25x1.5	35	19
3900-0690	ER-25	M32 X 1.50	42	20
3900-0691	ER-32	M40 X 1.50	50	22.5
3900-0692	ER-40	M50 X 1.50	63	25.5
3900-0693	ER-50	M64 X 2.00	78	35.5

Pro-Series TYPE M 18,000 RPM ER CHUCK NUTS

- **Balanced to 18,000 RPM**
- Tolerance: .0003" Max.
- Material: 42 CrMo
- Hardness: HRC 50~52
- Thread Tolerance Class: 4H-Class

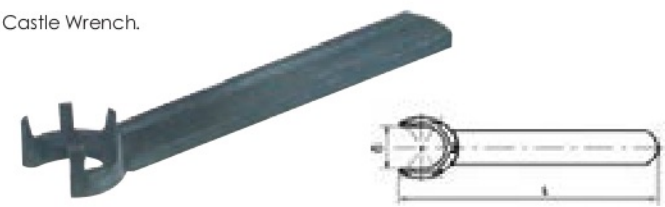


Mini Type

Item#	Fits	Thread	D (mm)	L (mm)
3900-0680	ER-11Mini	M13x.75	16	12
3900-0681	ER-16Mini	M19x1.0	22	18
3900-0682	ER-20Mini	M24x1.0	28	19

ER CHUCK CASTLE WRENCHES-Mini
FOR MINI NUTS

- Castle Wrench.



Item#	Fits	Open B (mm)	OAL L (mm)
3900-0606	ER-8 Mini	7.5	70
3900-0607	ER-11 Mini	11	90
3900-0608	ER-16 Mini	15	110
3900-0609	ER-20 Mini	19.5	120
3900-0610	ER-25 Mini	25	130

ER CHUCK HEX WRENCHES
FOR TYPE A NUT

- For hex ER chuck nuts.

Item#	Fits	Open B (mm)	OAL L (mm)
3900-0591	ER-11	17	110
3900-0593	ER-16	25	110
3900-0592	ER-20	30	160

ER CHUCK SLOTTED WRENCHES
FOR TYPE KM&UM NUT

- For ER chuck nuts with slots.

Item#	Fits	Open B (mm)	OAL L (mm)
3900-0601	ER-25	37	210
3900-0602	ER-32	45	250
3900-0603	ER-40	58	290
3900-0605	ER-50	72	350

ER CHUCK SPANNER HOOK WRENCHES
FOR TYPE KM&UM NUT

- For ER chuck nuts with slots.

Item#	Fits	Open (mm)	OAL L (mm)
3900-0594	ER-25	38-42	168
3900-0595	ER-32	45-52	190
3900-0596	ER-40	55-63	210
3900-0599	ER-50	78-85	240

COLLET RACK-5C, ER32

- Holds 8 collets: 5C, ER32 or others.
- Supplied with mounting hardware.
- 4 mounting holes: 3.5" & 5.5" apart.
- Made from durable ABS material, heavy duty.

COLLETS ARE NOT INCLUDED

ER COLLET RACKS

- Holds ER collets.
- Made from heavy duty gage steel.
- Supplied with mounting hardware.

ER-32 Shown ER-20 Shown

Item#	TYPE	HOLD COLLET	FOOTPRINT
3900-8671	ER-11	12	70x100mm
3900-8672	ER-16	12	80x110mm
3900-8676	ER-20	12	100x140mm
3900-8680	ER-25	15	130x190mm
3900-8684	ER-32	20	200x260mm
3900-8688	ER-40	24	245x360mm

ER COLLET RACKS

- Holds ER collets.
- Heavy duty gage steel.
- Supplied with mounting hardware.

ER-20 Shown ER-32 Shown

Item#	TYPE	HOLD COLLET	FOOTPRINT
3900-5171	ER-11	13	110x160mm
3900-5172	ER-16	8	110x180mm
3900-5174	ER-20	12	160x185mm
3900-5175	ER-25	15	180x300mm
3900-5176	ER-32	11	180x400mm
3900-5178	ER-40	15	250x360mm

8PC EXPANDING ARBOR SETS

NEW

- Chuck the shank of the expanding mandrel in a collet, jaw chuck, or fixture.
- With an Allen wrench tighten the hex draw bolt until it expands. Then machine the slotted part larger than bore of part.
- Loosen hex draw bolt, position part, tighten draw screw. The part is now chucked and ready for machinning.
- Can be used with standard collets, vises, jaw chucks and many other special fixtures.
- Multiple expanding mandrels are also used in other special fixtures for holding multiple work pieces "side by side".

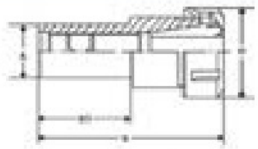
SET INCLUDES:
Sizes shown, Allen wrench and wood block.

Item#	Sizes Included
3906-4006	1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1 & 1-1/4"
3906-4008	6, 10, 12, 16, 19, 22, 25 & 32mm

See page 286 for additional arbors & sets.

ER COLLET CHUCKS

STRAIGHT SHANK ER COLLET CHUCKS

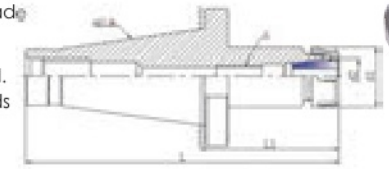


- Precision made with 0.0008" T.I.R.
- For heavy duty jobs.

Item#	Shank AxB1	Type	Capacity	Nut Style	(mm) B	(mm) D
3900-5106	5/8x2-1/2"	ER-11	.02~.275"	Hex	88.9	19
3900-7692	16mmx4"	ER-11	.02~.275 "	Mini	127	19
3900-5107	3/4x2-1/2"	ER-11	.02~.275 "	Hex	88.9	19
3900-5108	3/4x4"	ER-11	.02~.275 "	Hex	127	19
3900-5109	3/4x2-1/2"	ER-16	.02~.393"	Hex	103.5	28
3900-5110	3/4x4"	ER-16	.02~.393"	Hex	141.6	28
3900-5111	3/4x6"	ER-16	.02~.393"	Hex	192.4	28
3900-7694	20mmx4"	ER-16	.02~.393"	Hex	141.6	28
3900-5112	3/4x2-1/2"	ER-20	.04~.511"	Hex	104	34
3900-5116	3/4x4"	ER-20	.04~.511"	Hex	142.1	34
3900-5113	3/4x6"	ER-20	.04~.511"	Hex	192.9	34
3900-5115	3/4x2"	ER-25	.04~.629"	Spanner	101.8	42
3900-5114	3/4x4"	ER-25	.04~.629"	Spanner	152.6	42
3900-5118	1x2"	ER-32	.08~.787"	Spanner	101.5	50
3900-5122	1-1/4x6"	ER-32	.08~.787"	Spanner	201.5	50

NMTB 30 & 40 SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.



Item#	Shank	Type	Nut Style	L	(mm) L1	d1	Drawbar End
3900-5083	#30	ER-32	Spanner	128.4	60	50	1/2"~13
3900-5084	#30	ER-40	Spanner	138.4	70	63	1/2"~13
3900-5088	#40	ER-16	Hex	138.4	45	28	5/8"~11
3900-5090	#40	ER-32	Spanner	153.4	60	50	5/8"~11
3900-5091	#40	ER-40	Spanner	163.4	70	63	5/8"~11

Pro-Series NMTB 30 & 40 SHANK ER COLLET CHUCKS

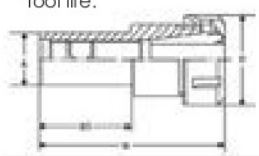
- Made of high grade alloy steel
- Tolerance: .0003" Max.

SUPERIOR FINISH & CRAFTSMANSHIP

Item#	Shank	Type	Nut Style	L	(mm) L1	d1	Drawbar End
3901-5083	#30	ER-32	Spanner	128.4	60	50	1/2"~13
3901-5084	#30	ER-40	Spanner	138.4	70	63	1/2"~13
3901-5088	#40	ER-16	Hex	138.4	45	28	5/8"~11
3901-5090	#40	ER-32	Spanner	153.4	60	50	5/8"~11
3901-5091	#40	ER-40	Spanner	163.4	70	63	5/8"~11

Pro-Series STRAIGHT SHANK BALANCED ER COLLET CHUCKS

- Made of high grade alloy steel.
- Premium hardened & all ground body for extended tool life.



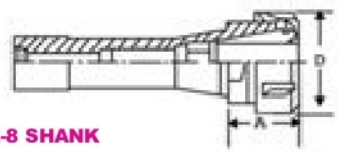
MAX. RPM: 18,000
T.I.R. ≤ .0003"
SUPERIOR FINISH

Item#	Type	Shank Ax B1	Nut Style	B	(mm) D
3900-2080	ER-11	5/8X2-1/2	Hex	3.457"	19
3900-2082	ER-11	3/4X4"	Hex	4.957"	19
3900-2083	ER-16	3/4x2-1/2"	Hex	4.087"	28
3900-2084	ER-16	3/4x4"	Hex	5.587"	28
3900-2085	ER-16	3/4x6"	Hex	7.587"	28
3900-2086	ER-20	3/4X2-1/2"	Hex	4.476"	34
3900-2088	ER-20	3/4X4"	Hex	5.976"	34
3900-2089	ER-20	3/4X6"	Hex	7.976"	34
3900-2091	ER-25	3/4X2"	Spanner	4.232"	42
3900-2092	ER-25	3/4X4"	Spanner	6.232"	42
3900-2094*	ER-32	1X2"	Spanner	4.252"	50
3900-2095*	ER-32	1X4"	Spanner	6.252"	50

*Limited Supply

R8 SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.
- **Thread of Drawbar End: 7/16" -20**



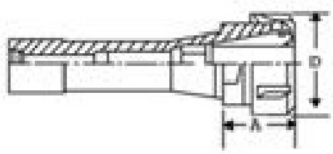
R-8 SHANK

Item#	Type	Nut Style	(Inch) A	D
3900-5061	ER-16	Hex	1.50	1.10
3900-5066	ER-32	Spanner	157	1.97
3900-5069	ER-40	Spanner	2.76	2.48

Pro-Series R8 Shank ER Collet Chucks

- Made of high grade alloy steel
- Premium hardened & all ground body for extended tool life.
- **Thread of Drawbar End: R8- 7/16" -20**

R-8 SHANK
MAX. RPM: 8,000
T.I.R. ≤ .0002"
SUPERIOR FINISH



Item#	Type	Nut Style	(Inch) A	D
3901-5061*	ER-16	Hex	1.50	1.10
3901-5063	ER-20	Hex	1.50	1.38
3901-5064*	ER-25	Spanner	1.57	1.66
3901-5066	ER-32	Spanner	157	1.97
3901-5069	ER-40	Spanner	2.76	2.48

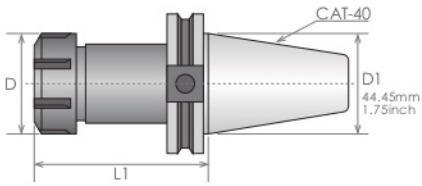
*Limited Supply

CAT 40 ER COLLET CHUCKS

- For CNC machines having CAT 40 taper spindles.
- Hardened and precision ground.

CAT-40 (DRAWBAR END: 5/8" ~11)

T.I.R. ≤ 0.005mm



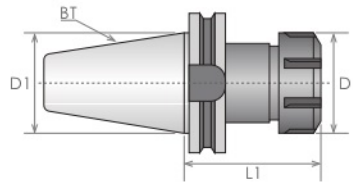
Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L1
3900-4362	ER-16	0.019~0.406"	Hex	1.1"	2.50"
3900-4361	ER-16	0.019~0.406"	Hex	1.1"	3.50"
3900-2060*	ER-16	0.019~0.406"	Hex	1.1"	2.76"
3900-2061*	ER-16	0.019~0.406"	Hex	1.1"	4.00"
3900-2028	ER-20	0.040~0.511"	Hex	1.4"	2.75"
3900-2039*	ER-20	0.040~0.511"	Hex	1.4"	4.00"
3900-2528	ER-25	0.040~0.629"	Spanner	1.7"	2.75"
3900-2539*	ER-25	0.040~0.629"	Spanner	1.7"	4.00"
3900-2073*	ER-32	0.078~0.787"	Spanner	2.0"	2.76"
3900-4369	ER-32	0.078~0.787"	Spanner	2.0"	3.20"
3900-4364*	ER-32	0.078~0.787"	Spanner	2.0"	4.00"
3900-4028	ER-40	0.120~1.020"	Spanner	2.5"	2.75"
3900-4039*	ER-40	0.120~1.020"	Spanner	2.5"	4.00"

*Limited Supply

BT 30 & 40 ER COLLET CHUCKS

- For CNC machines having BT taper spindles.
- Concentricity .0003".
- All critical surface are hardened and precision ground.

Draw Bar Thread: BT30 M12x1.75
BT40 M16x2.00



BT30

Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L
3900-7554	ER-16	.019~.406"	Hex	1.1"	2.76"
3900-7562	ER-25	.040~.629"	Spanner	1.7"	2.76"
3900-7566	ER-32	.078~.787"	Spanner	2.0"	2.76"
3900-7570	ER-40	.120~1.020"	Spanner	2.5"	3.15"

BT40

Item#	Type	Collet Range	Nut Style	Nut Dia. D	Gage Depth L1
3900-7604*	ER-16	.019~.406"	Hex	1.1"	2.48"
3900-8604*	ER-16	.019~.406"	Hex	1.1"	2.76"
3900-7608*	ER-20	.040~.511"	Hex	1.4"	2.76"
3900-7612*	ER-25	.040~.629"	Spanner	1.7"	2.36"
3900-8618*	ER-32	3/32~3/4"	Spanner	2.0"	2.76"
3900-8620*	ER-32	3/32~3/4"	Spanner	2.0"	4"

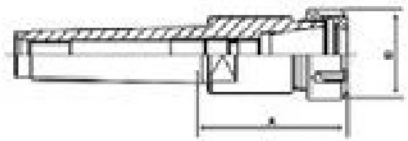
*Limited Supply

5C ER32 COLLET CHUCK

- 5C ER32 collet chuck.
- Made with DIN6499B (0.0005") Run-Out Tolerance.
- Holds all ER32 collets.
- Drawbar : 5C collet standard.
- Hardened and precision ground.
- Half-moon spanner wrench included.

MT SHANK ER COLLET CHUCKS

- Made of high grade tool steel.
- Hardened and precision ground.
- Meets or exceeds Federal specifications.



Item#	Shank	Type	Nut Style	Drawbar End	A (mm)	D (mm)
3900-5072	MT2	ER-20	Hex	3/8"~16	43	34
3900-5073	MT2	ER-25	Spanner	3/8"~16	47	42
3900-5077	MT3	ER-32	Spanner	3/8"~16	70	50
3900-5078	MT3	ER-40	Spanner	3/8"~16	80	63
3900-5079	MT4	ER-40	Spanner	5/8"~11	82	63

Jacobs Taper ER COLLET SLEEVES & DRILL CHUCKS

- ER collet sleeves provide rigid & accurate holding of ID tooling. These collet sleeves feature ground shanks and tapers.
- Compatible with standard Jacobs taper spindles.
- Precision ground & hardened for accuracy and precision
- Can be used for coolant-thru applications
- Superior to keyed and keyless drill chucks in concentricity and holding power.

MAX. RPM: 8,000
T.I.R. ≤ .0002"
SUPERIOR FINISH

Item#	Type	Female JT Taper	Nut Style	SHANK DIA. D1	(mm) SHANK L1	OAL L2
3903-6010	ER-16	JT2	Hex	26	45	65
3903-6014	ER-20	JT2	Hex	26	45	65
3903-6018	ER-25	JT2	Spanner	32	46	67
3903-6050	ER-16	JT33	Hex	26	38	65
3903-6054	ER-20	JT33	Hex	26	38	65
3903-6058	ER-25	JT33	Spanner	32	40	72
3903-6062	ER-32	JT33	Spanner	40	48	71
3903-6082	ER-32	JT6	Spanner	40	50	73

Additional sizes shown on page 237

ER COLLET CHUCK SETS

ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted case.
- Accuracy to .0005".

ER-11

- **9PC SET INCLUDES**
  7-Collet:
  1/16, 3/32, 1/8, 3/16, 7/32, 1/4&5/16"
  1-Collet Chuck
  1-Wrench

ER-16

- **11PC SET INCLUDES**
  9-Collet
  1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32 & 3/8"
  1-Collet Chuck
  1-Wrench

ER-25

- **10PC SET INCLUDES**
  8-Collet
  4, 5, 6, 8, 10, 12, 14 & 16mm
  1-Collet Chuck
  1-Wrench
- **12PC SET INCLUDES**
  10-Collet
  3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8"
  1-Collet Chuck
  1-Wrench
- **17PC SET INCLUDES**
  15-Collet
  1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16,11/32, 3/8,13/32, 7/16, 1/2, 17/32, 9/16 & 5/8"
  1-Collet Chuck
  1-Wrench

ER-32

- **8PC SET INCLUDES**
  6-Collet
  1/4, 5/16, 3/8, 1/2, 5/8 & 3/4"
  1-Collet Chuck
  1-Wrench
- **10PC SET INCLUDES**
  8-Collet
  4, 5, 6, 8, 10, 12, 16 & 20mm
  1-Collet Chuck
  1-Wrench
- **14PC SET INCLUDES**
  12-Collet
  1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16"
  1-Collet Chuck
  1-Wrench
- **20PC SET INCLUDES**
  18-Collet
  3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32,11/16, 23/32 & 3/4"
  1-Collet Chuck
  1-Wrench

ER-40

- **10PC SET INCLUDES**
  8-Collet
  1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8 & 1"
  1-Collet Chuck
  1-Wrench
- **17PC SET INCLUDES**
  15-Collet
  1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1"
  1-Collet Chuck
  1-Wrench
- **25PC SET INCLUDES**
  23-Collet
  1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32 & 1"
  1-Collet Chuck
  1-Wrench

Item#	Type	Collet Set	Size Range	Chuck Shank	Nut Style	Gage Length
3900-1172	ER-11	9	1/16~5/16"	1/2"	Mini	---
3900-1174	ER-11	9	1/16~5/16"	3/4x2-1/2"	Hex	---
3900-1176	ER-11	9	1/16~5/16"	3/4x2-1/2"	Mini	---
3900-1177	ER-11	9	1/16~5/16"	3/4x4"	Mini	---
3900-1178	ER-11	9	1/16~5/16"	3/4x6"	Hex	---
3900-1672	ER-16	11	1/16~3/8"	3/4"x4"	Hex	---
3900-0501	ER-16	11	1/16~3/8"	R8	Hex	---
3900-4014	ER-16	11	1/16~3/8"	CAT40	Hex	2.75"
3900-2573	ER-25	17	1/16~5/8"	3/4"x2-1/2"	Spanner	---
3900-0502	ER-25	12	3/32~5/8"	MT2	Spanner	1.85"
3901-5101	ER-25	10	4~16mm	BT40	Spanner	2.75"
3900-4023	ER-25	17	1/16~5/8"	CAT40	Spanner	2.75"
3900-7530	ER-32	20	3/32~3/4"	3/4"x4"	Spanner	---
3900-0507	ER-32	8	1/4~3/4"	R8	Spanner	---
3900-0508	ER-32	14	1/16~13/16"	R8	Spanner	---
3900-0503	ER-32	14	1/16~13/16"	MT3	Spanner	2.75"
3900-5300	ER-32	14	1/16~13/16"	#30	Spanner	2.36"
3900-0505	ER-32	14	1/16~13/16"	#40	Spanner	2.75"
3901-5108	ER-32	10	4~20mm	BT40	Spanner	2.75"
3900-4029	ER-32	20	3/32~3/4"	CAT40	Spanner	3.20"
3900-7538	ER-40	17	1/8~1"	3/4x3"	Spanner	---
3900-0004	ER-40	10	1/8~1"	R8	Spanner	2.76"
3900-0005	ER-40	17	1/8~1"	R8	Spanner	2.76"
3900-0531	ER-40	17	1/8~1"	MT3	Spanner	3.15"
3900-0504	ER-40	17	1/8~1"	MT4	Spanner	2.75"
3900-5301	ER-40	17	1/8~1"	#30	Spanner	2.36"
3900-0538	ER-40	10	1/8~1"	#40	Spanner	2.36"
3900-0540	ER-40	17	1/8~1"	#40	Spanner	2.36"
3900-4042	ER-40	25	1/8~1"	CAT40	Spanner	2.75"

Pro-Series ER SPRING COLLET CHUCK SETS

- High precision collet chuck system suitable for all milling and drilling applications.
- Unique self-releasing system.
- Wide holding range.
- With fitted metal case.
- Accuracy to .0003".

SUPERIOR CRAFTSMANSHIP

ER-11

- **9PC SET INCLUDES**
  7-Collet: 1/16, 3/32, 1/8, 3/16, 7/32, 1/4&5/16"
  1-Collet Chuck
  1-Wrench

ER-16

- **11PC SET INCLUDES**
  9-Collet: 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32 & 3/8"
  1-Collet Chuck
  1-Wrench

ER-32

- **20PC SET INCLUDES**
  18-Collet
  3/32, 1/8, 3/16, 7/32, 1/4, 5/16,11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 23/32 & 3/4"
  1-Collet Chuck
  1-Wrench

- **14PC SET INCLUDES**
  12-Collet
  1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 & 13/16"
  1-Collet Chuck
  1-Spanner Wrench

ER-25

- **12PC SET INCLUDES**
  10-Collet
  3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8"
  1-Collet Chuck
  1-Wrench

- **17PC SET INCLUDES**
  15-Collet
  1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16,11/32, 3/8,13/32, 7/16, 1/2, 17/32, 9/16 & 5/8"
  1-Collet Chuck
  1-Wrench

ER-40

- **17PC SET INCLUDES**
  15-Collet
  1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 & 1"
  1-Collet Chuck
  1-Wrench

- **25PC SET INCLUDES**
  23-Collet
  1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 27/32, 7/8, 15/16, 31/32 & 1"
  1-Collet Chuck
  1-Wrench

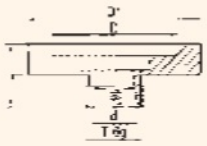
Item#	Type	Collet Set	Size Range	Chuck Shank	Nut Style	Gage Length
3900-1173	ER-11	9	1/16~5/16"	1/2"	Hex	---
3900-1175*	ER-11	9	1/16~5/16"	3/4x8"	Hex	---
3900-4016	ER-16	11	1/16~3/8"	CAT40	Hex	2.50"
3900-1675	ER-16	11	1/16~3/8"	3/4x6"	Hex	---
3900-4025	ER-25	12	3/32~5/8"	CAT40	Spanner	2.75"
3900-2575	ER-25	17	1/16~5/8"	3/4x4"	Spanner	---
3900-4050	ER-25	12	3/32~5/8"	MT2	Spanner	2.50"
3900-4032	ER-32	20	3/32~3/4"	CAT40	Spanner	3.20"
3900-7532	ER-32	20	3/32~3/4"	3/4x4"	Spanner	---
3900-4052	ER-32	14	1/16~13/16"	MT3	Spanner	2.75"
3900-4060	ER-32	14	1/16~13/16"	NMTB #30	Spanner	2.36"
3900-4040	ER-40	25	1/8~1"	CAT40	Spanner	2.75"
3900-4054	ER-40	17	1/8~1"	MT3	Spanner	3.20"
3900-4056	ER-40	17	1/8~1"	MT4	Spanner	3.20"
3900-4062	ER-40	17	1/8~1"	NMTB #30	Spanner	2.75"

*Limited Supply

ER COLLET FIXTURES & ACCESSORIES

ER COLLET FIXTURES-Plain Back

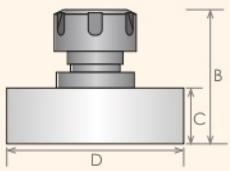
- Mount to your choice of backplate for using on a lathe or could be used as a fixture on a milling table.
- Concentricity: .04mm/ .00016"



Item#	Type	D1	(mm) D	L	No. of Bolt Hole	Bolt Hole Size
3901-5016	ER-16	45	22	25	4	5
3901-5025	ER-25	102	52	36	3	M10
3901-5032	ER-32	80	55	42	3	M6
3901-5033	ER-32	100	72	42	3	M8
3901-5034	ER-32	130	100	42	3	M8x1.25
3901-5035	ER-32	160	130	42	3	M8x1.25
3901-5036	ER-40	100	72	42	3	M8
3901-5038	ER-40	132	100	42	3	M10

ER-40 COLLET CHUCK FIXTURE-Direct Mount

- Mount to D1 spindle of lathe.
- Concentricity .0002"



Item#	Type	D	Mount	B	C
3901-5041	ER-40	125mm	D1-3	54.9mm	23mm
3901-5042	ER-40	125mm	D1-4	54.9mm	23mm

HEX / SQUARE ER COLLET BLOCKS

- Block Dimension: 1-3/4 x 1-3/4 x Height.
- For fast set-ups on CNC machines.
- For parallel, square or hex shapes as well as for cross hole drilling at 60°, 90° or 120°.
- Made of tool steel hardened and ground to .0005" flatness, squareness and parallelism.
- Through hole allows for long parts to be machined.
- May be used standing upright.
- Uses standard ER collets.
- ER nut included.

Item#	Shape	ER Collet	Block Height
3900-5123	Square	ER-25	2.7
3900-5124	Square	ER-32	2.8
3900-5125	Square	ER-40	3.2
3900-5127	Hex	ER-25	2.7
3900-5128	Hex	ER-32	2.8
3900-5129	Hex	ER-40	3.2

Jacobs Taper ER COLLET SLEEVES & DRILL CHUCKS

- ER collet sleeves provide rigid & accurate holding of ID tooling. These collet sleeves feature ground shanks and tapers.
- Compatible with standard Jacobs taper spindles.
- Precision ground & hardened for accuracy and precision
- Can be used for coolant-thru applications
- Superior to keyed and keyless drill chucks in concentricity and holding power.

3903-6062 Shown

3903-6010 Shown

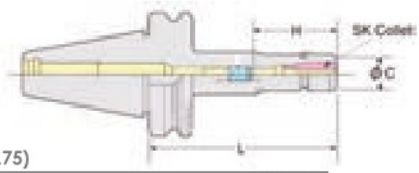
MAX. RPM: 8,000
T.I.R. ≤ .0002"
SUPERIOR FINISH

Item#	Type	Female JT Taper	Nut Style	SHANK DIA. D1	(mm) SHANK L1	OAL L2
3903-6010	ER-16	JT2	Hex	26	45	65
3903-6014	ER-20	JT2	Hex	26	45	65
3903-6018	ER-25	JT2	Spanner	32	46	67
3903-6022	ER-32	JT2	Spanner	40	40	72
3903-6028	ER-16	JT3	Hex	32	45	72
3903-6032	ER-20	JT3	Hex	32	45	72
3903-6036	ER-25	JT3	Spanner	32	56	77
3903-6040	ER-32	JT3	Spanner	40	45	77
3903-6050	ER-16	JT33	Hex	26	38	65
3903-6054	ER-20	JT33	Hex	26	38	65
3903-6058	ER-25	JT33	Spanner	32	40	72
3903-6062	ER-32	JT33	Spanner	40	48	71
3903-6070	ER-16	JT6	Hex	25	38	65
3903-6074	ER-20	JT6	Hex	26	38	65
3903-6078	ER-25	JT6	Spanner	32	38	72
3903-6082	ER-32	JT6	Spanner	40	50	73

BT30 SK SLIM COLLET CHUCKS - LYNDEX STYLE

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders.
- Prevent tools from pulling into spindle.
- BT-30 Balanced to 30,000 RPM.

RUNOUT ≤ 5 MICRON at 4D



BT30 (Drawbar End M12x1.75)

Item#	Collet Series	Collet Range	H	C	Gage Depth L (mm)
3901-5490	SK10	0.069~0.393"	1.181~1.969"	1.083"	90
3901-5492	SK16	0.108~0.630"	1.772~2.756"	1.575"	90

SK SLIM COLLET CHUCK NUTS - LYNDEX STYLE

- For SK-10 or SK-16 collet chucks.
- Holds SK-10 or SK-16 style collets.
- Economical.

Item#	Collet Series	Nut Dia.	Nut Length	Nut Thread
3901-5555	SK10	27.1mm	24mm	M21.5x1.0
3901-5558	SK16	40.0mm	31mm	M32x1.5

SK10 SK STRAIGHT SHANK SLIM COLLET & CHUCK SET - LYNDEX STYLE

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders
- Prevent tools from pulling into spindle.
- Slim design for better clearance.
- Max. Speed: 15,000 RPM

RUNOUT ≤ 5 MICRON

MADE IN TAIWAN

Set Includes:

- 1PC of Straight Shank SK10 Holder (Shank: 20mm x100mm Length)
- 8PC of SK10 Collets: 3,4,5,6,7,8,9,&10mm
- 1PC of Wrench
- Fitted Case

CAT40 SK SLIM COLLET CHUCKS - LYNDEX STYLE

- Dual contacts of taper and flange.
- Increase spindle contact by 53% over standard holders.
- Prevent tools from pulling into spindle.
- Balanced to 20,000 RPM.

CAT40 (Drawbar End 5/8" ~11)

RUNOUT ≤ 5 MICRON

Item#	Collet Series	Collet Range	H	C	Gage Depth L (mm)
3901-5504	SK10	0.069~0.393"	1.181~1.969"	1.083"	90
3901-5506	SK10	0.069~0.393"	1.181~1.969"	1.083"	120
3901-5523	SK16	0.108~0.630"	1.772~2.756"	1.575"	90
3901-5525	SK16	0.108~0.630"	1.772~2.756"	1.575"	120

SK10 & SK16 SK SLIM CHUCK COLLETS - LYNDEX STYLE

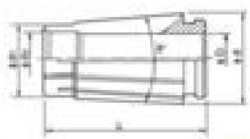
- Vacuum quenching heat treatment to hardness HRC46~50.
- Collet front cone convex platform design reduces the entry of dust and chips increasing longer service life.
- The SK slim collet system features an 8° taper angle versus the16° taper for ER type collets.
- The SK collet results in greater gripping forces. Note! This results in less range capacity for each collet.
- SK collets sit deeper in the tool holder compared to TG and ER type collet systems. This extra length results in higher accuracy and rigidity.

Collet Dimensions

Series	d	(mm) d1	d2	L
SK10	15.45	12.0	9.50	30.5
SK16	24.52	18.8	15.5	45.0

RUNOUT ≤ 5 MICRON

3901-5401 Shown



3901-5456 Shown

SK10

Item#	Size D	Collapse Range
3901-5401	1/8	0.115~ 0.125"
3901-5404	3/16	0.168 ~0.188"
3901-5407	1/4	0.230~0.250"
3901-5410	5-16	0.293~0.313"
3901-5414	3/8	0.355~0.375"

SK16

Item#	Size D	Collapse Range
3901-5431	1/8	0.112~ 0.125"
3901-5435	3/16	0.168 ~0.188"
3901-5439	1/4	0.230~0.250"
3901-5444	5-16	0.293~0.313"
3901-5448	3/8	0.355~0.375"
3901-5452	7/16	0.419~0.438"
3901-5456	1/2	0.480~0.500"
3901-5460	9/16	0.543~0.562
3901-5464	5/8	0.605~0.625"

KEYLESS DRILL CHUCKS

PRECISION KEYLESS DRILL CHUCKS WITH INTEGRAL SHANKS

- Integrated design maximizes rigidity & accuracy.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.

T.I.R. ≤ .0025"

Item#	Clamping Capacity	Shank
3701-1501	0~1/2"	R8
3701-1626	1/64~5/8"	R8
3701-2490	1/64~5/16"	MT2
3701-2499	1/64~1/2"	MT3
3701-2502	1/64~1/2"	MT4
3701-2624	1/64~5/8"	MT3
3701-2627	1/64~5/8"	MT4
3701-3503*	1/64~1/2"	BT40
3701-3628*	1/64~5/8"	BT40
3701-3001	0~1/2"	NMTB #30
3701-3011	0~1/2"	NMTB #40
3701-3015	1/64~5/8"	NMTB #40

*Limited Supply

Pro-Series ULTRA PRECISION KEYLESS DRILL CHUCKS WITH INTEGRAL SHANKS

- Integrated design maximizes rigidity & accuracy.
- Keyless, self tightening design.
- Integral shank is more compact than a combined drill chuck and arbor and eliminates the chuck slipping on its arbor.

MADE IN TAIWAN

Max. T.I.R. ≤ .002"

Item#	Clamping Capacity	Shank
3701-0500	1/64~1/2"	CAT40
3701-0625	1/8~5/8"	CAT40
3701-1050	1/64~1/2"	BT30
3701-1054	0~1/2"	BT40
3701-1062	1/8~5/8"	BT40
3701-1500	0~1/2"	R8
3701-1625	1/8~5/8"	R8
3701-2500	0~1/2"	MT3
3701-2501	0~1/2"	MT4
3701-2625	1/8~5/8"	MT3
3701-2626	1/8~5/8"	MT4
3701-3500	0~1/2"	#40NMTB
3701-3625	1/8~5/8"	#40NMTB

Pro-Series BT40 HI-TORQUE INTEGRATED KEYLESS DRILL CHUCKS

- Reinforce torque design to increase more clamping power.
- Integrated design maximizes rigidity & accuracy
- Right turn and left turn allowable.
- Maximum T.I.R. does not exceed .002".
- Max. speed 6000 RPM.
- Supplied with wrench.

Limited Supply!

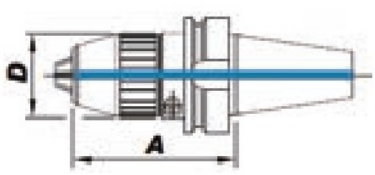
BT40 TAPER

MADE IN TAIWAN

Item#	Clamping Range
3701-2650	.02~1/2"
3701-2662	.12~5/8"

BT40 ULTRA PRECISION INTEGRAL DRILL CHUCKS - HEX-KEY LOCKING

- Manufactured and tested at a world class factory that produces highest quality European brands (Babel).
- Suitable for CNC and high precision machine applications.
- High precision and concentricity.
- Right and left rotation.
- High gripping force with effortless tool clamping.
- Short and sturdy design: tool shank and chuck form one unit.
- Simple operation: Quick tool change inside or outside of machine, no unintentional opening in case of sudden spindle stop or change of direction.
- Tightening wrench included.
- Runout test of drill chucks is done with a torque of approx 12 Nm using the following test mandrels:
  1/2": 6 mm, 8 mm, 12 mm
  5/8": 6 mm, 8 mm, 12 mm und 16 mm



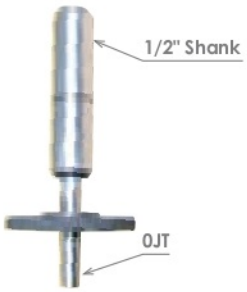
T.I.R. < 0.0012"

BT40 Shank

Item#	Capacity	A	D
3701-4650	1/2"	3.50"	1.77"
3701-4652	5/8"	3.74"	1.97"

SENSITIVE HAND DRILL FEED & SET

- 1/2" diameter hardened and precision ground straight shank x 0JT.
- Grasp free turning ring and feed drill.
- Spring loaded 3/4" travel fits any drill, mill, lathe or jig borer.
- Reduces small drill breakage.
- Suitable for drills (.008-5/32")
- TIR: .002"



1/8" JT0 KEYLESS DRILL CHUCK

- Precision made with highest T.I.R.
- Ultra smooth bearings.

Pro-Series STRAIGHT SHANK INTEGRATED KEYLESS DRILL CHUCKS

- Integrated design maximizes rigidity & accuracy
- Supplied with wrench.

T.I.R. ≤ .0002"

SUPERIOR FINISH

Item#	Clamping Range	Shank Dimension
3701-4500	1/64~1/2"	5/8x2.4"
3701-4502	1/64~1/2"	3/4x3.2"
3701-4625	1/64~5/8"	5/8x2.4"
3701-4627	1/64~5/8"	3/4x3.2"

HEAVY DUTY KEYLESS DRILL CHUCKS

- Self-tightening design.
- No chuck key required.
- Hardened tool steel to insure accuracy and extended chuck life.
- Can be used on a wide variety of machinery.
- Solid steel body.

TAPER MOUNTED

Item#	Capacity	Taper Mount
3700-0204	0~3/8"	JT2
3700-0207	0~3/8"	JT33
3700-0210	1/32~1/2"	JT33
3700-0212	1/32~1/2"	JT2
3700-0213	1/32~1/2"	JT6
3700-0215	1/8~5/8"	JT6

ULTRA PRECISION KEYLESS DRILL CHUCKS

- Super heavy duty ultra precision.
- Closer tolerances assure excellent runout accuracy.
- Normal gripping power when hand tightened and double the torque when used with spanner wrench.
- Especially suitable for CNC machines.

HHIP PRO-SERIES

TAPER MOUNTED

Item#	Capacity (Inch)	Accuracy (Inch)	Taper Mount	Body Dia.
3700-0250	1/32~3/8	.0024	JT2	1.65"
3700-0251	1/32~3/8	.0024	JT33	1.65"
3700-0255	1/32~1/2	.0024	JT33	1.89"
3700-0257	1/32~1/2	.0024	JT6	1.89"
3700-0259	1/32~5/8	.0028	JT6	2.09"

WRENCHES FOR KEYLESS DRILL CHUCKS

Hook wrench for keyless drill chucks

Item#	Fit Chuck Size	Taper Mount
3700-0291	0~5/16"	JT1
3700-0292	0~3/8"	JT2, JT33
3700-0293	0~1/2"	JT33, JT6
3700-0294	1/8~5/8"	JT3, JT6

DRILL CHUCKS

BUDGET DRILL CHUCKS

- Accuracy and strong gripping force.
- For portable, bench or floor type drill press.
- Supplied with chuck key.

TAPER MOUNTED

Item#	Capacity	Taper Mount
3700-0100	1/32~3/8"	JT2
3700-0102	1/32~1/2"	JT33
3700-0103	1/32~1/2"	JT6
3700-0105	1/8~5/8"	JT3
3700-0106	1/32~5/8"	JT33
3700-0108	3/16~3/4"	JT3

Pro-Series DRILL CHUCKS - With Key

- Precision made with the highest T.I.R.
- For heavy duty jobs.
- Supplied with chuck key.

RUNOUT: .005"
TAPER MOUNTED

Item#	Capacity	Taper Mount
3700-0081	1/32~3/8"	JT2
3700-0083	1/32~1/2"	JT33
3700-0084	1/32~1/2"	JT6
3700-0085	1/8~5/8"	JT3
3700-0086	1/8~5/8"	JT33
3700-0087	1/8~5/8"	JT6
3700-0089	3/16~3/4"	JT3

Pro-Series PRECISION DRILL CHUCKS-With Key

- Super precison durable with strong body.
- The nut and jaws are AISI-52100 (bearing steel) and heat treated.
- The taper is precision ground for improved precision.
- Accuracy: 0.0032".
- Supplied with chuck key.

MADE IN TAIWAN

Item#	Capacity	Taper Mount
3701-0100	1/64~1/4"	JT1
3701-0108	1/64~1/2"	JT33
3701-0110	1/64~1/2"	JT6
3701-0115	1/32~5/8"	JT3
3701-0120	1/8"~3/4"	JT4

4-IN-1 MASTER DRILL CHUCK KEYS

- Convenient one-key can open different chucks.
- Fits most popular chucks.

BALL BEARING DRILL CHUCKS

- Extra heavy duty.
- Anti-thrust ball bearing to increase the grip power with high speed drilling.
- All parts hardened and precision ground.
- Ultra smooth with ball bearing.
- Supplied with chuck key.

RUNOUT: < .0032"

Item#	Capacity	Taper Mount
3700-1091	1/32~3/8"	JT2
3700-1092	1/32~1/2"	JT6
3700-1093	1/32~1/2"	JT33
3700-1094	1/32~1/2"	JT3
3700-1095	1/32~5/8"	JT3
3700-1097	1/32~3/4"	JT4

STAINLESS STEEL DRILL CHUCKS- With Key

- Made of stainless steel(Anti-Rust).
- Acid resistance.
- Recommended for EDM machines and the food & marine industries.

Item#	Capacity	Taper Mount	Key Size
3700-0301	1/64~5/32"	JT0	T0-3S
3700-0302	1/64~1/4"	JT1	T1-3S
3700-0309	1/64~3/8"	JT2S	T2-3S
3700-3001*	1/64~3/8"	JT2	T2-3S

* Limited Supply

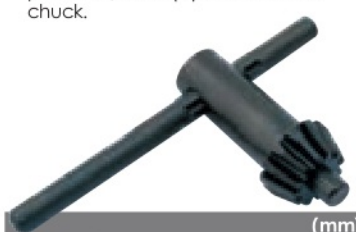
REPLACEMENT KEY

Item#	Key Size
3700-0311	T0-3S
3700-0312	T1-3S
3700-0313	T2-3S

Pro-Series REPLACEMENT DRILL CHUCK KEYS

- For key type drill.
- Measure the chucks diameter of the pilot hole/shank(D) to match drill chuck.

MADE IN TAIWAN



Item#	Type	(mm) D	(mm) L
3070-0041	T1	3.2	35
3070-0042	T2	4	42
3070-0045	T4	6	45
3070-0047	T5	6.5	45
3070-0049	T7	8	50
3070-0057	T8	9.5	65
3070-0059	T9	11	100

3PC PIN CHUCK SET

- Holds small drills firmly.
- Ensures complete collet length.
- Overall length: 2-1/2"
- Shank size: 1/4"

Includes:
3 Collets - capacity: 0 - 1/32", 1/32 - 1/16", 1/16 - 3/32"

4PC PIN VISE SET

- Hollow handle for long wire or rods.

Includes:
Ranges: 0~.055", .025~.075", .045~.125", .110~.187"

MT TO JT REVOLVING TAILSTOCK ARBORS/ADAPTERS

- Use to support small diameter work where a live center is not practical.
- This is a "live" adapter with smooth, sealed bearings for the tailstock.
- Use it to mate with any Jacob Taper (JT) taper drill chuck.
- The shank is Morse taper(MT).

MT TO JT

* Drill Chuck Not Included

Item#	Taper	Drawbar Thread
3906-4922	MT 2 x JT2	M10
3906-4925	MT2 x JT3	M10
3906-4928	MT3 x JT2	M12
3906-4932	MT3 x JT3	M12

CHUCK WEDGE SETS

Item#	JT #
3700-0401	2
3700-0402	3
3700-0405	6&33

- For removing taper mount chucks from arbors or spindles.
- 2pc per set.

DRILL CHUCK ARBORS

Hardened & Ground

Item#	Arbor Taper to Chuck
3700-0111	MT1 to JT0
3700-0112	MT1 to JT1
3700-0113	MT1 to JT33
3700-0115	MT2 to JT1
3700-0151	MT2 to JT2
3700-0149	MT2 to JT3
3700-0117	MT2 to JT4
3700-0150	MT2 to JT6
3700-0152	MT2 to JT33
3700-0153	MT3 to JT33
3700-0154	MT3 to JT2
3700-0155	MT3 to JT3
3700-0159	MT3 to JT4
3700-0156	MT3 to JT6
3700-0160	MT4 to JT3
3700-0161	MT4 to JT4
3700-0157	MT4 to JT33
3700-0120	MT4 to JT5
3700-0158	MT4 to JT6
3700-0123	MT5 to JT3
3700-0124	MT5 to JT4

Straight TO JT

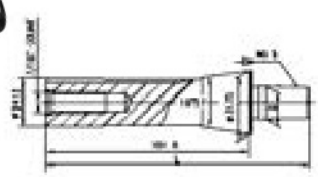
Item#	Arbor Taper to Chuck
3700-0162	1/2" to JT0
3700-0163	1/2" to JT1
3700-0164	1/2" to JT2
3700-0178	1/2" to JT3
3700-0165	1/2" to JT6
3700-0170	1/2" to JT33
3700-0166	5/8" to JT2
3700-0171	5/8" to JT33
3700-0167	3/4" to JT2
3700-0168	3/4" to JT3
3700-0172	3/4" to JT33
3700-0180	3/4" to JT4
3700-0181	3/4" to JT6
3700-0185	5/8" to JT1
3700-0187	5/8" to JT3
3700-0189	5/8" to JT6
3700-1721	7/8" to JT33
3700-0191	1" to JT2
3700-0174	1" to JT33
3700-0193	1" to JT4
3700-0173	1-1/4" to JT33
3700-0175	1-1/2" to JT33
3700-0176	1-3/4" to JT33

R8 DRILL CHUCK ARBORS

- Hardened and ground.

for ***Bridgeport***® type mills

R8 TO JT



DRAWBAR END THREAD: 7/16" -20

Item#	Arbor Taper to Chuck	D (mm)	L (mm)
3700-0135	R8 to JT2	14.199	128
3700-0138	R8 to JT3	20.599	137
3700-0131	R8 to JT33	15.85	132
3700-0139	R8 to JT4	28.55	148
3700-0140	R8 to JT6	17.17	132

DRILL CHUCK ARBORS

MORSE TAPER (MT) SLEEVES

- Used to convert spindles to larger or smaller tapers and extend the spindles of drill presses, radial drills, boring mills and turret lathes.

INDIVIDUALS

Item#	Inside Taper	Outside Taper
3900-1843	MT1	MT2
3900-1841	MT1	MT3
3900-1842	MT2	MT3
3900-1844	MT2	MT4
3900-1848	MT3	MT4
3900-1849	MT3	MT5
3900-1853	MT4	MT5
3900-1856	MT5	MT6

MORSE TAPER EXTENSION SOCKETS

- For adapting tools with Morse taper shanks to machines having smaller, same or larger Morse taper spindle.

Item#	Inside Taper	Outside Taper
3900-1845	MT3	MT2
3900-1852	MT4	MT3
3900-1872	MT5	MT4

DRIFT/CENTER KEYS

- Fully drop-forged
- Used for knocking taper shank drills, reamers, etc. out of Morse taper sleeves.

INDIVIDUALS

Item#	Size for
3900-0261	MT1
3900-0262	MT2
3900-0263	MT3
3900-0264	MT4,5,6

Pro-Series DAYTON STYLE HAND DRIFT TOOL

- Forged and hardened, high rigid tools.
- Used to remove taper shank tools from machinery spindles, sleeves, and extension sockets.
- Morse Taper Drift Range: MT2 ~ MT5

15" LONG

MADE IN TAIWAN

NMTB 30 & 40 TAPER TO JACOBS ARBORS

Drawbar End: #30- 1/2"~13
#40- 5/8"~11

Jacob Taper	*Taper 30* Item#	*Taper 40* Item#
JT2	3900-1762	3900-1772
JT3	3900-1763	3900-1773
JT33	3900-1764	3900-1774
JT6	3900-1766	3900-1776

CAT 40 "V" FLANGE DRILL CHUCK ARBORS

- For CNC machines having CAT 40 taper spindles
- Hardened and precision ground
- Gage depth: 1.772"

RETENTION KNOB THREAD: 5/8" -11

Item#	CAT Taper#	Jacobs Taper
3900-4205	40	JT33
3900-4207	40	JT6
3900-4208	40	JT4
3900-4209	40	JT3
3900-4206	40	JT2

BT 30 & 40 TO JT DRILL CHUCK ARBORS

- For CNC machines having BT taper spindles.
- Concentricity .0002".
- All critical surfaces are hardened and precision ground.

Item#	BT Taper	Jacobs Taper	Gage Depth (Inch)	OAL (Inch)
3900-4194	30	2	1.77	4.6
3900-4195	30	3	1.77	4.9
3900-4196	30	4	1.77	5.3
3900-4197	30	6	1.77	3.7
3900-4198	30	33	1.77	3.7
3900-4199	40	2	1.77	5.2
3900-4200	40	3	1.77	5.6
3900-4201	40	4	1.77	6.0
3900-4202	40	6	1.77	5.4
3900-4203	40	33	1.77	5.4

VERTEX R8 3 Inch UNIVERSAL BORING & FACING HEAD SET

- Main part of the universal boring head is the body (1), in which the tool slide (3) moves on dovetail guideways. The tool slide is provided with holes for accommodation of tools and tool holders (4). In boring holes or turning extenal cylindrical surfaces, the tool is adjusted with the aid of the graduated dial for fine setting of tool slide (5), one division of which means a change in diameter of bored hole by .0005". On the types rapid adjustment of the tool slide (3) can be produced by rotating the graduated dial for quick adjustment of the tool slide (2). During recessing, turning of front or rear facings or similar jobs calling for automatic transverse feed movement to the tool slide, the preselected feed movement to the tool slide is engaged with the aid of the engagement ring (6). After setting of tool, the automatic transverse feed movement to the tool slide is started by braking to the brake ring (7), by means of the handle (8). The cluth (9) provides for tripping of the automatic feed movement when cutting resistance increases or when the trip dog is approached. Mechanism of the boring heads has a lubrication circuit delivering oil from two lubricators to all friction surfaces. All parts are hardend and working surfaces are ground.

HHIP PRO-SERIES

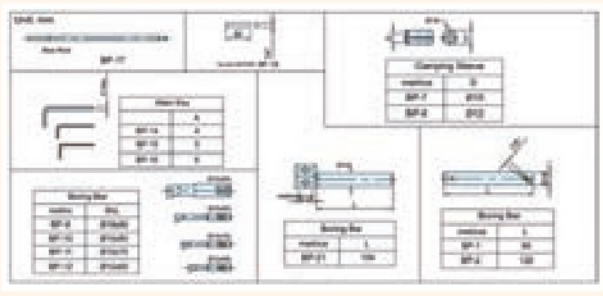
GRADUATION: 0.01MM

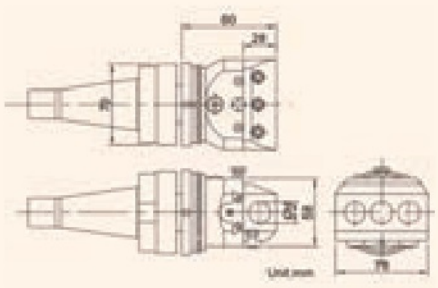
MADE IN TAIWAN

- ***Set Includes:***
  - 1 - Boring Head
  - 1 - R8 Shank
  - 4 - Carbide Tipped Boring Bars
  - 1 - BP-21 Adapter
  - 2 - Adapter (Hold 1/4" Square Tool Bit)
  - 2 - Clamping Sleeve
  - 1 - Stop Rod
  - 1 - HSS 1/4" Square Tool Bit
  - 3 - Allen Wrenches
  - 1 - Fitted Carry Case

SPECIFICATION (mm)

Actual Size	Overing Bar Hole Size	Boring Bar Hole Size	Center Dist. Between Holes	Cross Hole Dia.	Offset
78	100	18	23	18	15





MACHINE TOOL ACCESSORIES

BORING HEADS & SHANKS

BORING HEAD SETS

- BORING HEAD: Bar holder moves freely and smoothly. Design assures superior rigidity for chatter-free boring and precise hole size accuracy. Hardened and ground adjusting screw designed for long lasting and trouble free use.

KIT INCLUDES:
BORING HEAD, SHANK,
C6 CARBIDE TIPPED BORING
BAR SET

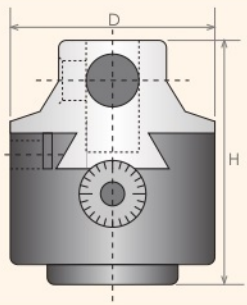
Item#	Head Size	Shank Taper	Shank To Head	Boring Bar	Tool Capacity
1001-0105	2"	3MT	7/8"~20	1/2"/9pc	Up to 1/2"
1001-0106	2"	R8	7/8"~20	1/2"/9pc	Up to 1/2"
1001-0107	3"	R8	1-1/2"~18	3/4"/12pc	Up to 3/4"

BORING HEADS

- Bar holder moves freely and smoothly.
- Design assures superior rigidity for chatter-free boring and precise hole size accuracy.
- Hardened and ground adjusting screw designed for long lasting and trouble free use.
- Threaded back for adapting to boring shank.

GRADUATION .0005"

ADAPTING THREAD



Item#	Head Dia. D	Head Ht H	Adapting Threads	Tool Capacity	Max. Offset	Boring Bar Hole Size	Shaft Hole Diameter	Dia of Boring
1001-0101	2"	2-7/16	1-1/2"~18	Up to 1/2"	5/8"	1/2	1/2	3/8~5.0
1001-1011	2"	2-7/16	7/8"~20	Up to 1/2"	5/8"	1/2	1/2	3/8~5.0
1001-0102	3"	3-5/32	1-1/2"~18	Up to 3/4"	1"	3/4	3/4	1/2~9.0
1001-0103	4"	3-1/2	1-1/2"~18	Up to 1"	1-5/8"	1	1	5/8~15.0

PRECISION BORING HEAD SHANKS

- Use for boring heads.
- Made of high grade tool steel.
- Hardened and ground.

7/8" ~ 20 MOUNTING THREAD

Item#	Taper of Shank	End Type
1001-0090	R8	Draw Bar
1001-0080	MT2	Draw Bar
1001-0431	MT3	Draw Bar
1001-0050	#30NMTB	Draw Bar
1001-0052	#40NMTB	Draw Bar
1001-0056	Straight 1/2"	
1001-0058	Straight 3/4"	
1001-0060	Straight 1"	
1001-0062	Straight 1-1/4"	

DRAWBAR END THREAD

- R8- 7/16" -20
- MT2- 3/8" -16
- MT3- 3/8" -16
- MT4- 1/2" -13
- #30- 1/2" -13
- #40- 5/8" -11
- #50- 1"-8

1-1/2" ~ 18 MOUNTING THREAD

Item#	Taper of Shank	End Type
1001-0089	R8	Draw Bar
1001-0081	MT2	Draw Bar
1001-0085	MT3	Draw Bar
1001-0068	#30NMTB	Draw Bar
1001-0069	#40NMTB	Draw Bar
1001-0070	#50NMTB	Draw Bar
1001-0072	Straight 1/2"	
1001-0073	Straight 5/8"	
1001-0074	Straight 3/4"	
1001-0076	Straight 1"	
1001-0077	Straight 1-1/4"	
1001-0078	Straight 1-1/2"	
1001-0079	Straight 2"	
1001-0440	CAT40	

Pro-Series BORING TOOL SETS

- Rugged design allows excellent rigidity for chatter-free boring.
- Head features a threaded back for multiple shanks.
- **Set complete with Boring Head, Boring Shank, Carbide Tipped Boring Bar & L-shape Hex Wrenches.**
- Dial on head with 0.0005" graduation for accurate hole sizing.
- Fitted durable carry case included.

1001-5937 Shown

	2" HEAD	3" HEAD
Boring Head Thread	7/8"-20 T.P.I.	1-1/2"-18 T.P.I.
Offset	5/8"	3/4"
Crosshole	1/2"	3/4"
Shank Thread		
(Drawbar End)R8	7/16"-20 UNC	7/16"-20 UNC
(Drawbar End)MT2	3/8"-16 UNC	
(Drawbar End)NT40		5/8"-11 UNC
Mini. Boring Diameter	0.394"	0.394"
Max. Boring Diameter	5.906"	7.874"
Max. Boring Depth	1.970"	3.150"

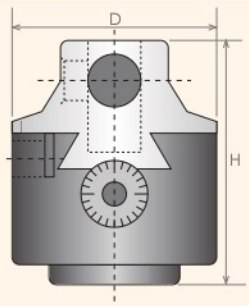
1001-5937 Shown

Item#	Boring Head (Dia.)	Shank	No. of Boring Bars	Boring Bar Hole Size
1001-5935	2"	R8	9	1/2"
1001-5937	2"	MT2	9	1/2"
1001-5940	3"	R8	12	3/4"
1001-5942	3"	NT/NMTB 40	12	3/4"

Pro-Series BORING HEADS

- Direct reading dial screw.
- Bar holder moves freely and smoothly.
- Design assures superior rigidity for chatter-free boring and precise hole size accuracy.
- Made of high grade alloy steel.
- Threaded back for adapting to boring shank.

ADAPTING THREAD GRADUATION .0005" .001"/ 0-50 READING



SUPERIOR CRAFTSMANSHIP

HARDENED & GROUND

Item#	Head Size, D	Adapting Threads	Tool Capacity	Max. Offset	Head OAL, H	Borng Bar Hole Size	Shaft Hole Diameter	Diameter of Boring
1001-1020	2"	1-1/2"~18	Up to 1/2"	5/8"	2-7/16	1/2	1/2	3/8~5.0
1001-1021	2"	7/8"~20	Up to 1/2"	5/8"	2-7/16	1/2	1/2	3/8~5.0
1001-1023	3"	1-1/2"~18	Up to 3/4"	1"	3-5/32	3/4	3/4	1/2~9.0
1001-1026	4"	1-1/2"~18	Up to 1"	1-5/8"	3-1/2	1	1	5/8~15.0

Pro-Series BORING SHANKS

- Made of 20CrMnTi alloy steel.
- Electrolysis nickel coating.
- Superior craftsmanship.

DRAWBAR END THREAD

- R8: 7/16" -20
- MT3: 3/8" -16

HARDENED & GROUND

7/8" ~ 20 MOUNTING THREAD

Item#	Taper of Shank	End Type
1001-1090	R8	Draw Bar
1001-1431	MT3	Draw Bar

1-1/2" ~ 18 MOUNTING THREAD

Item#	Taper of Shank	End Type
1001-1080	MT3	Draw Bar
1001-1089	R8	Draw Bar

BORING HEAD SETS

Pro-Series BORING TOOL SETS

- Wide bearing surface provides super accuracy.
- Rugged design allows excellent rigidity for chatter-free boring.
- Head features a threaded back for multiple shanks exchangeable.
- Set complete with Boring Head, Boring Shank, Boring Bars, Adapters and L-shape Hex Wrenches.
- Dial on head with 0.0005" graduation for accurate hole sizing.
- Fitted durable carry case included.

HHIP PRO-SERIES

MADE IN TAIWAN

3800-5935 Shown

Item#	Boring Head (Dia.)	Shank	No. of Boring Bar/Adapter	Boring Bar Hole Size	N.W. (lbs.)
3800-5935	2"	R8	2/1	1/2"	5
3800-5940	3"	R8	5/3	3/4"	10
3800-5942	3"	NT/NMTB 40	5/3	3/4"	11
3800-5943	3"	BT40	5/3	3/4"	11

3800-5940 Shown

GRADUATION .0005"
READING .0005"/0-100

3800-5942 Shown

SPECIFICATIONS

2" HEAD	
Boring Head Thread	1-1/2-18" T.P.I.
Offset	5/8"
Crosshole	1/2"
Shank Thread (Drawbar End) R8	7/16"-20 UNC
Mini. Boring Diameter	0.394"
Max. Boring Diameter	5.906"
Max. Boring Depth	1.970"
Boring Bars Size	1/2"
Adapter 1 (Hold 3/8" Boring Bar)	None
Adapter 2 (Hold 1/4"x1.2" Square Tool Bit)	Ø1/2"xØ3/4"x3.5"
Adapter 3 (Hold 1/4"x1.2" Square Tool Bit)	None
Adapter 4 (Hold 1/4"x1.2" Square Tool Bit)	None

3800-5943 Shown

3" HEAD	
Boring Head Thread	1-1/2"-18 T.P.I.
Offset	3/4"
Crosshole	3/4"
Shank Thread (Drawbar End): R8	7/16"-20 UNC
NT 40	5/8"-11 UNC
BT40	M16x2.0
Mini. Boring Diameter	0.394"
Max. Boring Diameter	7.874"
Max. Boring Depth	3.150"
Boring Bars Size	3/8" & 3/4"
Adapter 1 (Hold 3/8" Boring Bar)	Ø3/4" x Ø3/8" x 2"
Adapter 2 (Hold 1/4"x1.2" Square Tool Bit)	None
Adapter 3 (Hold 1/4"x1.2" Square Tool Bit)	Ø3/4" x 3.5"
Adapter 4 (Hold 1/4"x1.2" Square Tool Bit)	Ø3/4" x 4.7"

R8 BORING TOOL SETS
-WITH INDEXABLE BORING BARS

1001-0201 Shown

1001-0205 Shown

- Indexable boring bars take TC_21.5 C6 carbide inserts(included).
- Head features a threaded back for multiple shanks exchangeable.
- **Set complete with Boring Head, Boring Shank, Indexable Boring Bars, Torx & L-shape Hex Wrenches.**
- Fitted carry case included.
- A micrometer lead screw provides 0.001" direct reading accuracy and ease of adjusting.
- 1 DIV = 0.001 meaning **on the 0-50 dial**, when turning the dial by 1 division/graduation, the boring head's travel is 0.001" in radius movement, 0.002" in diameter movement; **on the 0-100 dial**, when turning the dial by 1 division/graduation, the boring head's travel is 0.0005" in radius movement, 0.001" in diameter movement.

Item#	Boring Head (Dia.)	Shank	No. of Boring Bar	Boring Bar Hole Size
1001-0201	2"	R8	4	1/2"
1001-0205	3"	R8	8	3/4"

C6 GRADE: carbide for steel and alloy steel

	2" HEAD	3" HEAD
Graduations	0.001"/0-50	0.0005"/0-100
Boring Head Thread	1-1/2"-18 T.P.I.	1-1/2"-18 T.P.I.
Offset	5/8"	1"
Crosshole	1/2"	3/4"
Shank Thread (Drawbar End)	7/16"-20 UNC	7/16"-20 UNC
Mini. Boring Diameter	0.394"	0.394"
Max. Boring Diameter	5.906"	7.874"
Max. Boring Depth	1.970"	3.150"

BORING BAR SET INCLUDED

Set	Shank	Min. Bore	(Inch) OAL	Bore Depth	Use Insert	Use Torx Wr.	Use Screw	Item #
4	1/2	7/16	2-3/4	1-1/4	TCMT21-51	T-8	M2.5x5.0	1001-0704
		7/16	3-5/8	2-1/8				
		1/2	3	1-1/2				
		1/2	4	2-1/2				
8	3/4	7/16	3-3/8	1-3/8	TCMT21-51	T-8	M2.5x5.0	1001-0708
		7/16	4-1/4	2-1/4				
		1/2	3-5/8	1-5/8				
		1/2	4-5/8	2-5/8				
		9/16	3-7/8	1-7/8				
		9/16	5	3				
		11/16	4-1/4	2-1/4				
		11/16	5-1/2	3-1/2				

Pro-Series OFFSET BORING TOOL SETS

- Rugged construction for smooth and chatter-free boring.
- Heat treated parts made from SCM steel.
- Feeding quantity cutting will proceed 0.0008" at every scale of 0.0004".
- Set complete with Boring Head, Boring Shank, Boring Bars, Adapters and L-shape Hex Wrenches.
- Dial on head with 0.0005" graduation for accurate hole sizing.
- Fitted durable carry case included.

SPECIFICATION

Boring Head Shank Hole.....M36
Offset.....1.1"
Crosshole.....3/4"
Shank Thread (Drawbar End):
R8.....7/16"-20 UNC
NT 40.....5/8"-11 UNC
Mini. Boring Diameter.....0.197"
Max. Boring Diameter.....9.840"
Max. Boring Depth.....3.540"
Boring Bars Size.....3/8" & 3/4"
Adapter 1 (Hold 3/8" Boring Bar).....Ø3/4" x Ø3/8" x 2"
Adapter 2 (Hold 1/4"x1.2" Square Tool Bit).....Ø3/4" x 3.5"
Adapter 3 (Hold 1/4"x1.2" Square Tool Bit).....Ø3/4" x 4.7"

3800-5945 Shown

Item#	Boring Head (Dia.)	Included Shank	No. of Boring Bar/Adapter	Boring Bar Hole Size	N.W. (lbs.)
3800-5945	3.3"	R8	5/3	3/4"	11
3800-5947	3.3"	NT/NMTB 40	5/3	3/4"	12

CLAMPING KITS

Pro-Series 58PC STEEL CLAMPING KITS

- Fits milling machines, tables & machines with T-slots.
- Made of powdered casting steel for stronger strength.
- All parts heat treated.
- Plastic rack included.

HHIP PRO-SERIES

Item#	Table Slot	Stud Size
3900-2110	3/8"	5/16"~18
3900-0002	1/2"	3/8"~16
3900-2112	7/16"	3/8"~16
3900-0001*	5/8"	1/2"~13
3900-0003	3/4"	5/8"~11

Each Kit Contains						
24	4	6	6	6	12	1
Studs 4 of ea. 3", 4", 5", 6", 7", 8" long	Coupling units	Flange nuts	Forged steel step clamps 2 ea. based on stud sets	T-Nuts	Steel step blocks	Wall rack

SET 3900-0001 Shown

*** T- SLOT CLEANER & WRENCH INCLUDED**

Ultra Quality 58PC STEEL CLAMPING KITS

- **Manufactured at world class factory that produces highest quality US brands.**
- Made of IC45e steel for stronger strength.
- All parts are case hardend or heat treated to HRC30~40.

Item#	Table Slot	Stud Size
3901-0002	7/16"	3/8"~16
3901-0006	5/8"	1/2"~13

Each Kit Contains						
24	4	6	6	6	12	1
Studs 4 of ea. 3", 4", 5", 6", 7", 8" long	Coupling units	Flange nuts	Forged steel step clamps 2 ea. based on stud sets	T-Nuts	Steel step blocks	Wall rack

Ultra Quality 5PC STEEL CLAMPING SETS

- **Manufactured at world class factory that produces highest quality US bands.**
- Made of IC45e steel for stronger strength.
- All parts are case hardend or heat treated to HRC30~40.

EACH KIT CONTAINS: Step Clamp, Step Block, Stud, T-slot Nut & Flange Nut.

Item#	Table Slot	Stud Size	(Inch) Clamp Length	Clamp Height
3901-0301	3/8	5/16~18	4	3
3901-0302	7/16	3/8~16	4	3
3901-0304	0.54	1/2~13	6	3
3901-0307	5/8	1/2~13	6	3
3901-0311*	11/16	5/8~11	6	4.5
3901-0314*	3/4	5/8~11	6	4.5

Limited Supply

Pro-Series 58PC METRIC STEEL CLAMPING KITS

NEW

- Fits milling machines, tables & machines with T-slots.
- Made of powdered casting steel for stronger strength.
- All parts heat treated.
- Plastic rack included.

Item#	Table Slot	Stud Size
3901-0008	10mm	M8x1.25P
3901-0010	12mm	M10x1.5P
3901-0012	14mm	M12x1.75P

MADE IN TAIWAN

Each Kit Contains						
24	4	6	6	6	12	1
Studs 4 of ea. 3", 4", 5", 6", 7", 8" long	Coupling units	Flange nuts	Forged steel step clamps 2 ea. based on stud sets	T-Nuts	Steel step blocks	Wall rack

3901-0012 Shown

INCH CLAMPING STUDS

- Made of alloy steel and heat treated.
- Black oxide finish.

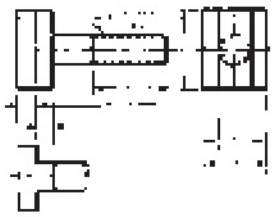
*Limited Supply

Item#	Stud Thread	Overall Length
3421-3984	1/4~20	2
3421-4008	1/4~20	3
3421-4024	1/4~20	4
3436-3250	5/16~18	2
3436-3276	5/16~18	3
3436-3292	5/16~18	4
3436-3318	3/8~16	2
3436-3334	3/8~16	3
3436-3359	3/8~16	4
3436-3375	3/8~16	5
3436-3391	3/8~16	6
3436-3409	3/8~16	7
3436-3417	3/8~16	8
3436-3425	1/2~13	2
3436-3441	1/2~13	3
3436-3466	1/2~13	4
3436-3490	1/2~13	5
3436-3516	1/2~13	6
3436-3524	1/2~13	7
3436-3532	1/2~13	8
3436-3540	1/2~13	9
3436-3581	5/8~11	3
3436-3607	5/8~11	4
3436-3623	5/8~11	5

Item#	Stud Thread	Overall Length
3436-3649	5/8~11	6
3436-3656	5/8~11	7
3436-3664	5/8~11	8
3436-3672	5/8~11	9"
3436-3680	5/8~11	10
3436-3698	5/8~11	12
3436-3722*	3/4~10	4
3436-3748*	3/4~10	5
3436-3763*	3/4~10	6
3436-3771*	3/4~10	7
3436-3789*	3/4~10	8
3436-3797*	3/4~10	10
3436-3805*	3/4~10	12
3436-3813*	7/8~9	4
3436-3821*	7/8~9	5
3436-3839*	7/8~9	6
3436-3847*	7/8~9	8
3436-3854*	7/8~9	10
3436-3870*	1~8	4
3436-3888*	1~8	5
3436-3896*	1~8	6
3436-3904*	1~8	8
3436-3912*	1~8	10
3436-3920*	1~8	12

T - SLOT BOLTS

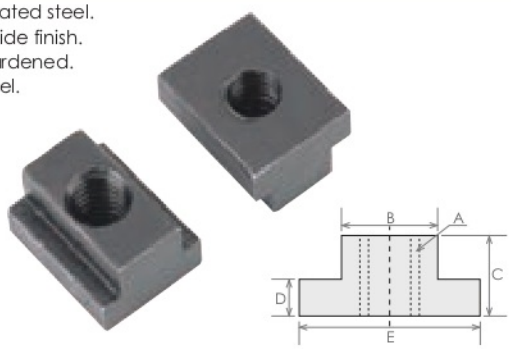
- Forged steel with milled T-slot guide
- Black oxide finish.
- Heat treated to HRC 36-40.



Item#	T-Slot F (In)	Thread (A)	Length Under Head B (In)	Thread Length E
3900-1270	1/2	1/2"~13	2	1
3900-1272	1/2	1/2"~13	3	1-1/2
3900-1274	1/2	1/2"~13	4	1-1/2
3900-1275	1/2	1/2"~13	5	2
3900-1279	5/8	5/8"~11	2-1/2	1-1/4
3900-1280	5/8	5/8"~11	3	1-1/2
3900-1281	5/8	5/8"~11	3-1/2	1-1/2
3900-1282	5/8	5/8"~11	4	1-1/2
3900-1283	5/8	5/8"~11	5	1-1/2
3900-1284	5/8	5/8"~11	6	1-1/2
3900-1285	5/8	5/8"~11	8	3
3900-1289	3/4	3/4"~10	3	1-1/4
3900-1291	3/4	3/4"~10	4	1-1/2
3900-1292	3/4	3/4"~10	5	1-1/2
3900-1298	1	1"~8	4	2

Pro-Series T - SLOT NUTS

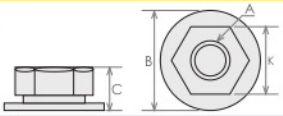
- Heat treated steel.
- Black oxide finish.
- Case hardened.
- 1040 Steel.



Item#	B (In)	Thread A	C (In)	D (In)	E (In)	Length (In)
3900-1201	3/8	5/16"~18	1/2	3/16	5/8	7/8
3900-1202	7/16	3/8"~16	1/2	7/32	11/16	7/8
3900-1203	1/2	3/8"~16	1/2	9/32	7/8	7/8
3903-1214	9/16	3/8"~16	5/8	11/32	7/8	1-1/8
3900-1204	9/16	1/2"~13	5/8	11/32	1	1-1/8
3900-1205	5/8	1/2"~13	5/8	11/32	1-1/8	1-1/8
3903-1217	11/16	1/2"~13	3/4	7/16	1-1/8	1-1/4
3903-1218	11/16	5/8"~11	3/4	7/16	1-1/4	1-1/4
3900-1213	3/4	5/8"~11	3/4	15/32	1-1/4	1-1/4
3903-1220	13/16	5/8"~11	1	9/16	1-1/4	1-1/2
3903-1221	13/16	3/4"~10	1	9/16	1-1/4	1-1/2
3900-1209	7/8	3/4"~10	1	9/16	1-1/2	1-1/2
3903-1223	1	3/4"~10	1	5/8	1-5/8	1-3/4
3903-1224	1-1/16	3/4"~10	1-1/8	11/16	1-5/8	2
3900-1210	1	7/8"~9	1	5/8	1-5/8	1-3/4
3903-1226	1-1/16	1"~8	1-1/8	11/16	1-5/8	2

FLANGED NUTS

- Heat treated steel.
- Black oxide finish.
- Case hardened.



Item#	Thread A	B (Inch)	C (Inch)	K (Inch)
3900-1221	5/16"~18	11/16	9/32	1/2
3900-1222	3/8"~16	3/4	9/32	9/16
3900-1224	1/2"~13	1-5/32	1/2	7/8
3900-1225	5/8"~11	1-5/16	5/8	15/16
3900-1228	3/4"~10	1-1/2	21/32	1-1/8
3900-1227	7/8"~9	1-3/4	3/4	1-5/16

COUPLING NUTS

- Case hardened.
- Black oxide finish.

*Limited Supply

Item#	Thread	Hex	Height
3900-1181	1/4"~20	1/2	5/8
3900-1183	5/16"~18	9/16	7/8
3900-1185	3/8"~16	11/16	1
3900-1187	1/2"~13	7/8	1-1/4
3900-1189	5/8"~11	1-1/16	1-3/4
3900-1191	3/4"~10	1-1/4	1-7/8
3900-1193*	7/8"~9	1-7/16	2-1/4
3900-1195	1"~8	1-5/8	2-1/2

HEAVY DUTY HEX NUTS

- Case hardened.
- Black oxide finish.

Limited Supply!

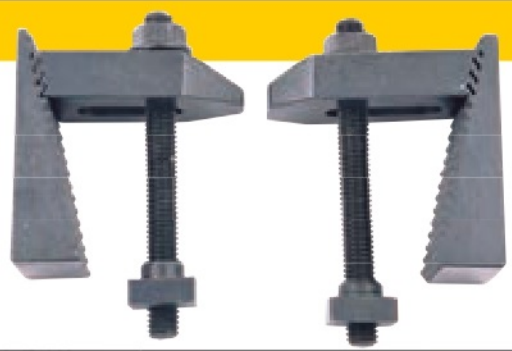
Item#	Thread	Hex	Height
3421-3885	1/4"~20	7/16	7/32
3421-3893	5/16"~18	1/2	17/64
3421-3901	3/8"~16	9/16	21/64
3421-3919	1/2"~13	3/4	7/16

Item#	Thread	Hex	Height
3421-3935	3/4"~10	1-1/8	41/64
3421-3943	7/8"~9	1-5/16	3/4
3421-3950	1"~8	1-1/2	55/64

10PC MINI STEEL CLAMPING KITS

- Drop forged steel.
- All parts are case hardend and heat treated.

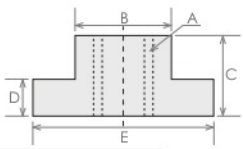
EACH KIT CONTAINS: Two pc each of Step Clamp, Step Block, Stud, T-slot Nut & Flange Nut.



Item#	T-Slot Nut Width	Stud Thread	Clamp Capacity
3906-0320	13x7.5mm	M6x1.00	Up to 22mm
3906-0322	16x10.5mm	M8x1.25	Up to 45mm

Pro-Series T - SLOT NUTS-Metric Thread

- Heat treated steel.
- Black oxide finish.
- Case hardened.
- 1040 Steel.



Item#	B (mm)	Thread A	C (mm)	D (mm)	E (mm)	Length (mm)
3903-1236	7.7	M6	9.5	4.5	14	15
3903-1238	9.7	M8	12	6	15	18
3903-1240	11.7	M10	14	7	21	22
3903-1242	13.7	M12	16	8	22	27
3903-1244	15.7	M14	18	8.5	25	28
3903-1246	17.7	M16	20	10	28	30
3903-1248	19.7	M18	24	10.5	32	32
3903-1250	21.7	M20	28	13	36	36
3903-1252*	23.7	M22	32	15	40	40
3903-1254	27.7	M24	36	16	44	44

*Limited Supply

CLAMPING STUDS-Metric Thread

- Made of alloy steel and heat treated.
- Black oxide finish.

Item#	Stud Thread	Overall Length
3436-5001	M8X1.25	75
3436-5008	M10X1.25	100
3436-5010	M10X1.25	150
3436-5013	M12X1.75	75
3436-5014	M12X1.75	100
3436-5015	M12X1.75	125
3436-5016	M12X1.75	150
3436-5017	M12X1.75	175
3436-5018	M12X1.75	200
3436-5022	M14X2.00	150

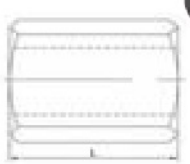
Item#	Stud Thread	Overall Length
3436-5026	M16X2.00	100
3436-5028	M16X2.00	150
3436-5030	M16X2.00	200
3436-5033	M18X2.50	150
3436-5037	M20X2.50	100
3436-5038	M20X2.50	125
3436-5039	M20X2.50	150
3436-5040	M20X2.50	175
3436-5041	M20X2.50	200
3436-5047	M22X2.50	200
3436-5052	M24X3.00	200

Pro-Series COUPLING NUTS-Metric Thread

NEW

- Cose hardened.
- Black oxide finish.

MADE IN TAIWAN



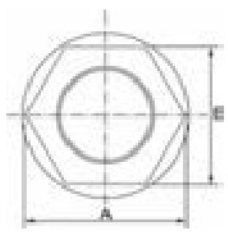
Item#	Thread A	Parallel B	Length L
3903-1312	M8x1.25	13	22
3903-1313	M10x1.5	17	25
3903-1314	M12x1.75	21	32
3903-1315	M14x2.0	21	32
3903-1316	M16x2.0	26	41
3903-1317	M18x2.5	32	48
3903-1318	M20x2.5	32	48
3903-1319	M24x3.0	41	64

Pro-Series FLANGE NUTS-Metric Thread

NEW

- Heat treated steel.
- Black oxide finish.
- Cose hardened.

MADE IN TAIWAN



Item#	Thread	A	(mm) B	C	D
3903-1262	M8x1.25	19	13	8	2
3903-1263	M10x1.5	22	17	12	3
3903-1264	M12x1.75	28	21	16	4
3903-1265	M14x2.0	28	21	16	4
3903-1266	M16x2.0	35	26	17	5
3903-1267	M18x2.5	40	32	25	6
3903-1268	M20x2.5	40	32	25	6
3903-1269	M24x3.0	50	41	32	6

BALL PLUNGERS-Metric Thread

- Body Material: 12L14 Steel
- Ball Material: 302 Stainless Steel
- Smallest and lightest spring loaded device
- Side-load tolerant
- Controlled end forces
- Screwdriver installation

Item #	Thread	Dimension (mm) d (Ball Dia.)	L	End Forces(lbs.) Inital	Final
8017-0100	M4x0.70	2.5	9	2	4.9
8017-0102	M6x1.00	3.5	13	4.9	14
8017-0104	M8x1.25	5.0	15	7	19
8017-0108	M10x1.50	6.0	16	8	24
8017-0112	M12x1.75	8.0	22	9	29

Pro-Series 4PC T-SLOT CLAMPING KITS

- Special made downward force for holding thin or small workpiece
- Used for milling, drilling and EDM with T-slot table
- Quick and easy setting with hex key wrench
- Made of tool steel hardened
- With fitted wood case

Kit includes:
4 pc of t-slot,
clamping pieces and bolts

4PC KIT

Item#	Table Slot
3900-0314	7/16"
3900-0315	1/2"
3900-0316	5/8"
3900-0317	3/4"

MADE IN TAIWAN

ADJUSTABLE CLAMPING ASSEMBLIES

- One piece assembly allows quick set-up on mill tables with T-slot.
- Instant height adjustment.
- Attached brass shims protect machine table and workpiece

PRICED PER EACH

Item#	T-slot Bolt T-slot	Clamping (Stud x Length)	Clamping Range	Each Width
3900-0301	3/8"	3/8"-16 x 3"	Up to 1-3/4"	1-1/4"
3900-0302	1/2"	1/2"-13 x 4"	Up to 2-1/16"	1-5/8"
3900-0303	5/8"	5/8"-11 x 5"	Up to 3"	1-7/8"

HEAVY DUTY HOLD-DOWN CLAMP SETS

- One piece forged steel heads, fully heat treated.
- Allows quick set-up on mill table with T-slot.
- Instant height adjustment.
- Self-positioning.
- Hinged swivel rocker.

PRICED AND SOLD BY PAIR

Item#	T-slot	Size of Head	Clamping Range	Load Limit (lbs)
3900-0306	5/8"	4.4 x 1.8"	Up to 3"	16,000
3900-0307	3/4"	5.0 x 2.1"	Up to 4"	18,000
3900-0312	7/8"	6.0 x 2.3"	Up to 5"	24,000

T-SLOT CLAMPING KIT

- Quick and easy setting with hex key wrench
- Used for working table with 5/8" T-slot
- Made of hardened tool steel.
- **Kit includes:** 4 pc of t-nuts, 6 pc of clamps, 2 pc of hex keys.
- With fitted case

HEAVY DUTY HOLD-DOWN CLAMP SETS

- One piece forged steel heads, fully heat treated.
- Allows quick set-up on mill table with T-slot.
- Instant height adjustment.
- Self-positioning.
- Hinged brass swivel rocker protecting workpiece.

PRICED AND SOLD BY PAIR

Item#	T-slot Width	Size of Clamp (WidthxLength)	Clamping Range	Stud Thread
3900-0324	0.62"	1.95x5.5"	Up to 3.5"	1/2~13
3900-0326	0.74"	2.25x7"	Up to 5"	5/8~11

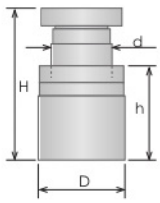
T-SLOT CLEANER

- Fits most of Bridgeport type mill tables.

SCREW JACKS

ADJUSTABLE SCREW JACKS

- Ideal for setup work where fine adjustment may be required to level work piece or as a replacement for a step block when using a clamp kit.
- Acme threads
- Made from high quality tool steel.



Item#	Adjustable Range	H	h	d	D
3901-0076	23-30mm	30	23	M16	34
3901-0077	40-60mm	60	40	M16	34
3901-0078	70-100mm	100	70	Tr30x4	50
3901-0079	100-140mm	140	100	Tr30x4	50

Pro-Series SCREW JACKS

- Ideal for setup work where fine adjustment may be required to level work piece or as a replacement for a step block when using a clamp kit.
- Acme threads
- Manufactured from toughened steel

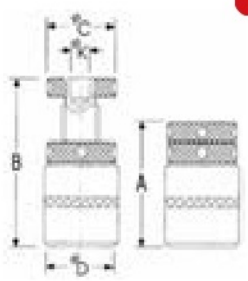
MADE IN TAIWAN

Item#	Adjustable Range	Body Dia.	Weight (lbs)
3901-0072	1.57~2.17"	1.5"	0.7
3901-0073	2.76~3.74"	1.5"	1.0
3901-0074	3.94~5.91"	2.0"	2.5
3901-0075	6~9"	2.83"	10

Pro-Series SCREW JACKS WITH MAGNETS

NEW

- Cross type fixture gives best positioning.
- Built-in magnets.
- Easy to clean chips.
- Adjustable height.



Item#	(mm) A	B	C	D	K
3901-0088	51	65	35	40	11.5
3901-0090	86	116	40	45	11.5
3901-0092	110	170	45	50	11.5

"LITTLE GIANT" STYLE JACK SCREW SETS

- For leveling work on planer beds and upright drills or for setting up machinery

Item#	Lift Range	No. of Pieces
3900-0260	1-1/2 to 2-1/4"	6
3900-0266	2-1/4 to 3-3/8"	6

MACHINIST'S JACK

- Tested lifting capacity-approximately 1000 lbs.
- Made of heavy cast steel.
- Adjustable screw and tilting swivel head.
- Adjustable pin and lock nut for permanent positioning.
- 3-4" Range, 1" height adjustment,

Pro-Series 60-140MM JACK SCREW SET

NEW

- Suitable for irregular workpieces rapid setting.
- Work clamping & support.
- Adjustable height.
- Ideal for work clamping and fixed support.

Includes:

2pcs. 65-90mm jacks
2pcs. 90-140mm jacks
6pcs. 1A, 2A, 3A, 4A, 5A, 6A pads - 1 each pad

MADE IN TAIWAN

HORIZONTAL Toggle CLAMPS
-Flanged Base

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 27Kg
Hand Moves: 80°
Bar Moves: 90°

3900-0360 Shown

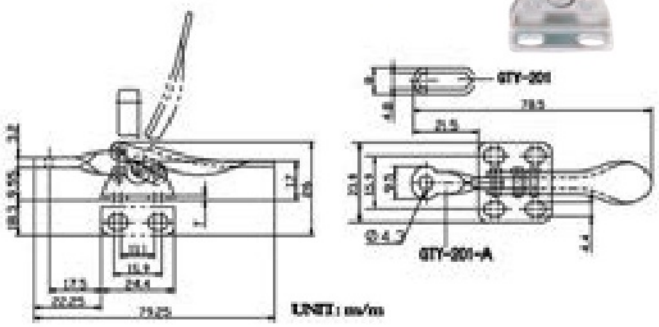
U-Bar
Weight: 29G

Item#	Bar	Holding Pressure	Mfr. #
3900-0360	U-Bar	60 lbs	201
3900-0362*	Solid	60 lbs	201A

*Limited Supply

3900-0362 Shown

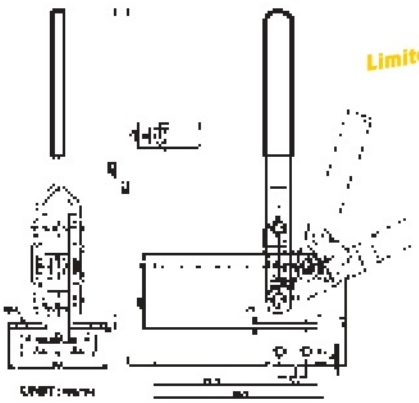
Solid Bar
Weight: 28G



VERTICAL Toggle CLAMPS
-Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 200Kg
Weight: 420G
Hand Moves: 64°
Bar Moves: 110°



Limited Supply!

Item#	Bar	Holding Pressure	Mfr. #
3900-0339	U-bar	440 lbs	11412

VERTICAL Toggle CLAMPS
-Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

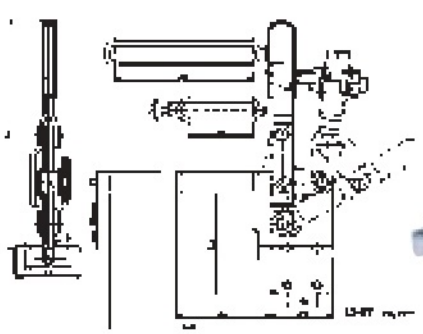
Limited Supply!

Holding Capacity: 185Kg
Hand Moves: 46°
Bar Moves: 95°

3900-0334 Shown

Weight: 370G

Item#	Bar	Holding Pressure	Bar Length	Mfr. #
3900-0334	U-bar	400 lbs	41mm	101-D
3900-0335	U-bar	400 lbs	87mm	101-E



Weight: 402G

3900-0335 Shown

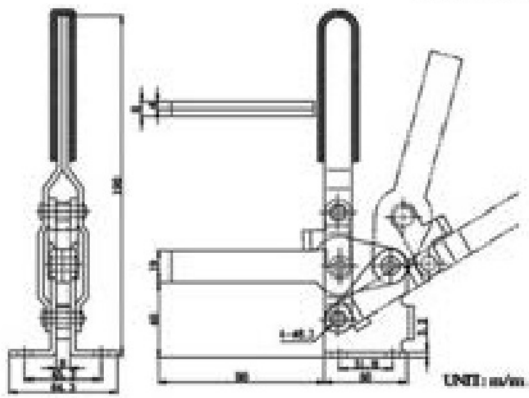
VERTICAL Toggle CLAMPS
-Open Bar, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 335Kg
Weight: 635G
Hand Moves: 59°
Bar Moves: 106°

Limited Supply!

3900-0341 Shown



Item#	Base	Holding Pressure	Mfr. #
3900-0341	Flanged	750 lbs	12265
3900-0342	Straight	750 lbs	12270

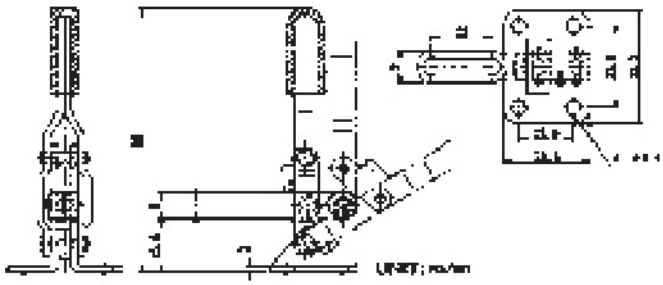
HIGH QUALITY TOGGLE CLAMPS

VERTICAL Toggle CLAMPS -Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 48Kg
Weight: 70G
Hand Moves: 57°
Bar Moves: 101°

Limited Supply!



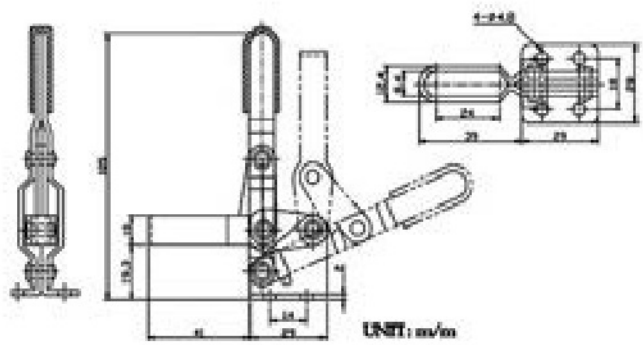
Item#	Bar	Holding Pressure	Mfr. #
3900-0330	U-bar	110 lbs	101-A

VERTICAL Toggle CLAMPS -Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 100Kg
Weight: 118G
Hand Moves: 64°
Bar Moves: 90°

Limited Supply!

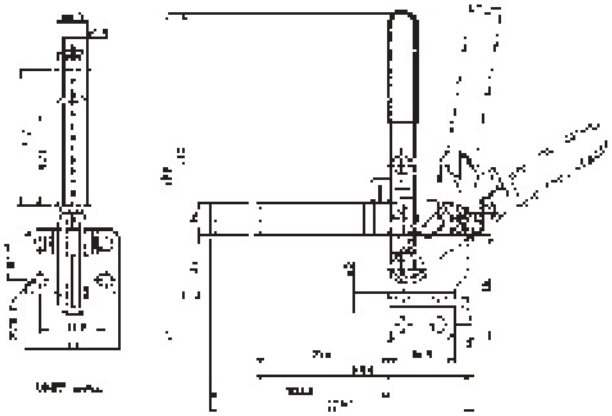


Item#	Bar	Holding Pressure	Mfr. #
3900-0336	U-bar	220 lbs	102-B

VERTICAL Toggle CLAMPS -Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.

Holding Capacity: 227Kg
Weight: 346G
Hand Moves: 60°
Bar Moves: 100°



Item#	Bar	Holding Pressure	Mfr. #
3900-0344	U-bar	500 lbs	12130

SPINDLE ASSEMBLIES

- For use with our toggle clamps
- Zinc plated.
- Black neoprene spindle cap (except where noted)

3900-0356 Shown

Item#	Screw Size	Used on Clamp Item#
3900-0350*	M5 x 40mm	101-A
3900-0353	M8 x 60mm	101-D, 101-E, 12130, 203-F, 203-FL,225-D
3900-0356	M10 x 50mm (steel head)	304-E, 305-E
3900-0357*	M8 x 50mm (steel head)	11412, 304-C, 305-C, 302-F, 36020
3900-0358	M4 x 20mm	201, 201-A
3900-0359	M12 x 50mm (steel head)	304-H, 305-H

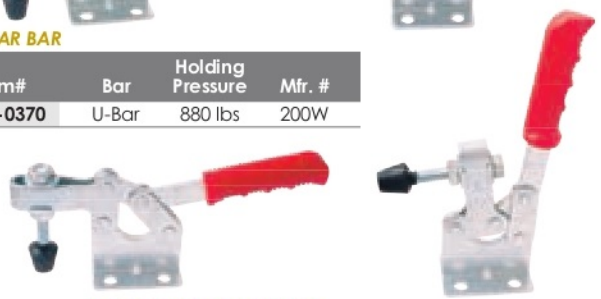
*Limited Supply

HORIZONTAL Toggle CLAMP
-Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Plastic hand grip for safety & convenience.
- Carbon steel rivet for durability.

REGULAR BAR

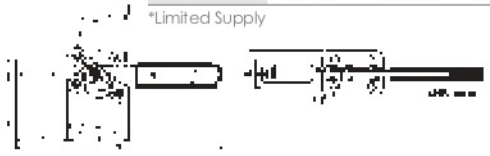
Item#	Bar	Holding Pressure	Mfr. #
3900-0370	U-Bar	880 lbs	200W



REGULAR BAR WITH LOCK

Item#	Bar	Holding Pressure	Mfr. #
3900-0375*	U-Bar	880 lbs	220WH

*Limited Supply



Hand Moves: 80°
Bar Moves: 90°

A	B	C	D	E	F	G	H	I	J	K	L
14	20.5	30	51	10	42	70	59	54	20.5	230	3.2

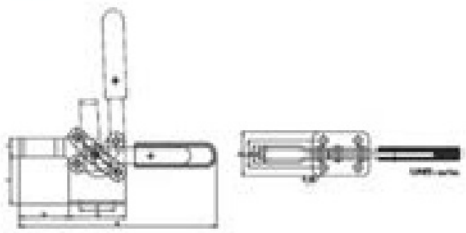
HORIZONTAL Toggle CLAMPS
-Flanged Base, Long U-Bar

Limited Supply!

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Plastic hand grip for safety & convenience.
- Carbon steel rivet for durability.

Item#	Bar	Holding Pressure	Mfr. #	Price (F)
3900-0377	Long U-Bar	880 lbs	220-WHL	13.75

Item#	Bar	Holding Pressure	Mfr. #
3900-0372	Long U-Bar	880 lbs	200WL

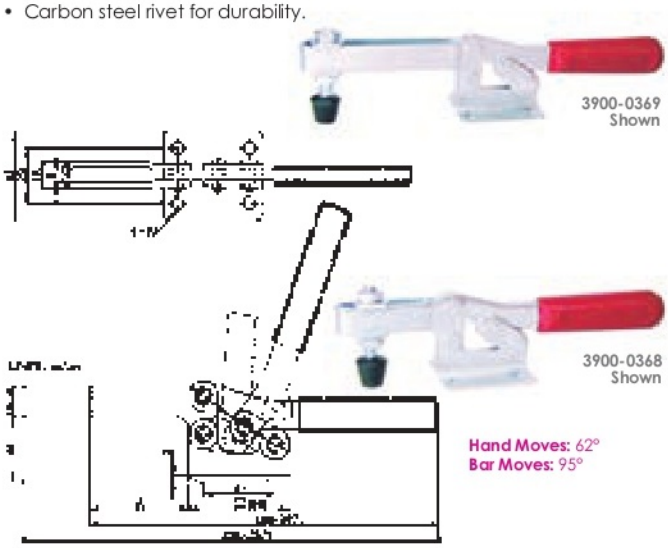


Hand Moves: 80°
Bar Moves: 90°

A	B	C	D	E	F	G	H	I	J	K	L
14	20.5	30	51	10	42	70	110	54	20.5	280	3.2

HORIZONTAL Toggle CLAMPS
-Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Plastic hand grip for safety & convenience.
- Carbon steel rivet for durability.



3900-0369
Shown

3900-0368
Shown

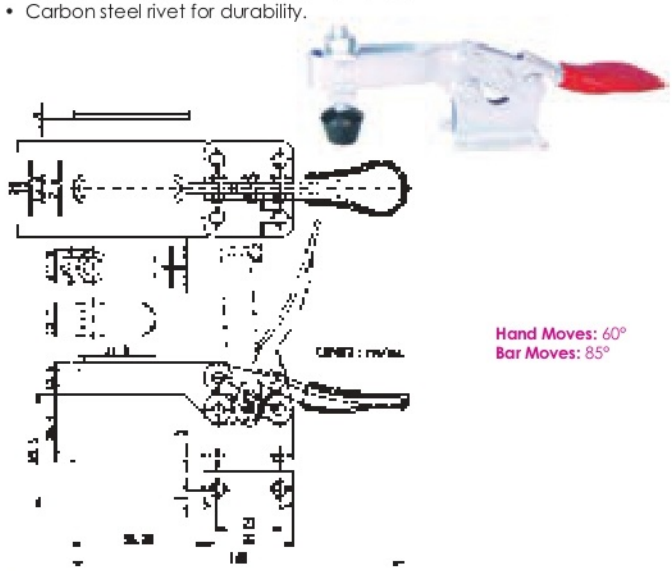
Hand Moves: 62°
Bar Moves: 95°

Item#	Bar	A	Holding Pressure	Mfr. #
3900-0368*	U-bar	2.24"	500 lbs	203-F
3900-0369	Long U-Bar	3.70"	500 lbs	203-FL

*Limited Supply

HORIZONTAL Toggle CLAMPS
-Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Plastic hand grip for safety & convenience.
- Carbon steel rivet for durability.



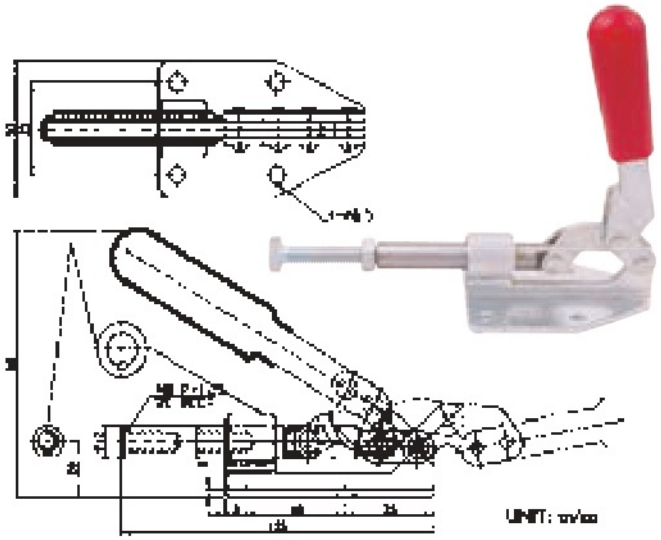
Hand Moves: 60°
Bar Moves: 85°

Item#	Bar	Holding Pressure	Mfr. #
3900-0365	U-bar	200 lbs	201B

HIGH QUALITY TOGGLE CLAMPS

PUSH/PULL TOGGLE CLAMP

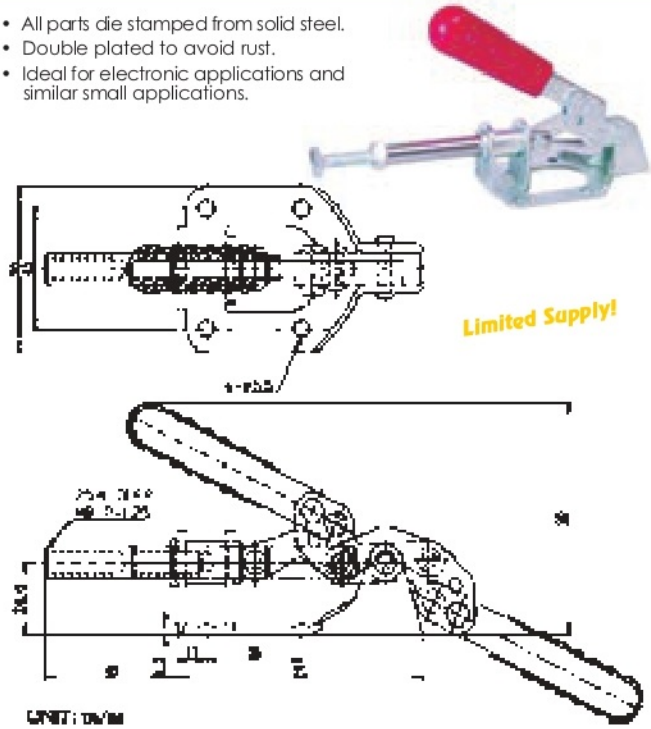
- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Ideal for electronic applications and similar small applications.



Item#	Handle Move	Holding Capacity	Plunger Travel	Mfr. #
3900-0397	144°	400 lbs	30mm	36020

PUSH/PULL TOGGLE CLAMP

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Ideal for electronic applications and similar small applications.

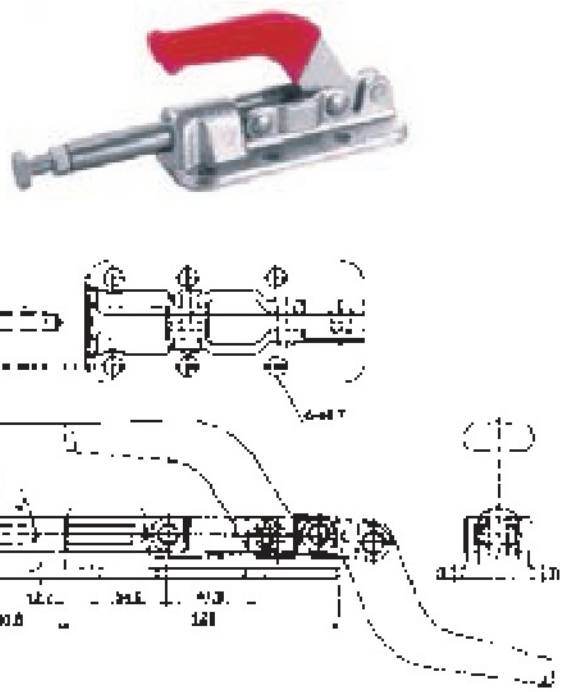


Limited Supply!

Item#	Handle Move	Holding Capacity	Plunger Travel	Mfr. #
3900-0398	180°	300 lbs	32mm	302-F

HEAVY DUTY PUSH/PULL TOGGLE CLAMP

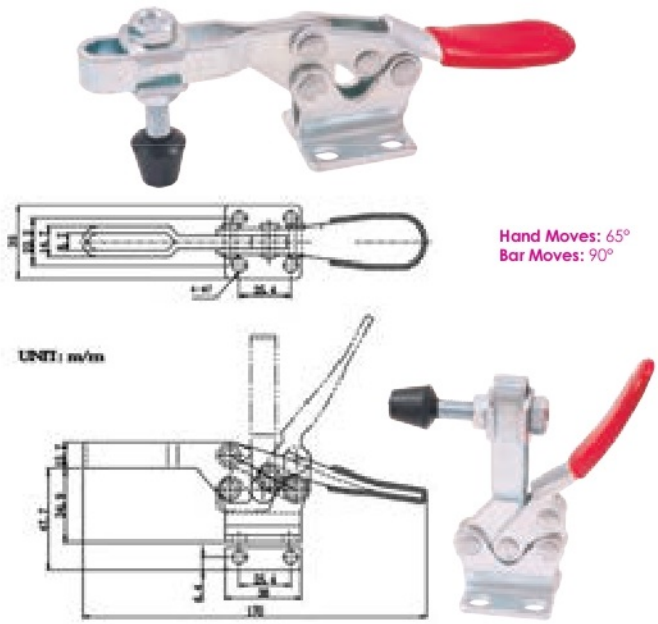
- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Ideal for electronic applications and similar small applications.



Item#	Handle Move	Holding Capacity	Plunger Travel	Mfr. #
3900-0399	180°	2500 lbs	50mm	36330

HORIZONTAL Toggle CLAMPS -Flanged Base, U-Bar

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Plastic hand grip for safety & convenience.
- Carbon steel rivet for durability.

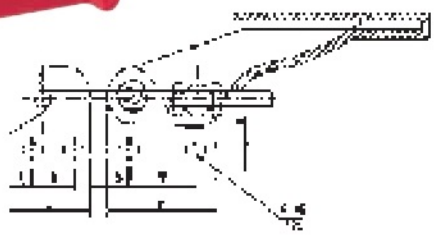


Hand Moves: 65°
Bar Moves: 90°

Item#	Bar	Holding Pressure	Mfr. #
3900-0380	U-bar	500 lbs	225-D

PULL ACTION LATCH TOGGLE CLAMP

- All parts die stamped from solid steel.
- Double plated to avoid rust.
- Ideal for electronic applications and similar small applications.



Item#	Holding Capacity	Mfr. #	A	B	C	D	E	F	G	H	I	J	K	L	M	N
3900-0402	350 lbs	40323	6	9.9	19.8	5.2	15.9	26.2	4.4	2	29.3	5.2	19	28.2	24	57
3900-0403	660 lbs	431	6.8	11.5	25.4	6.4	19	39.7	6.7	3.2	41.3	6.35	31.6	44.5	38	90

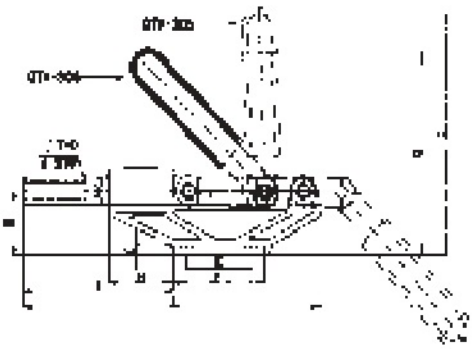
HOOK TYPE PULL ACTION CLAMP

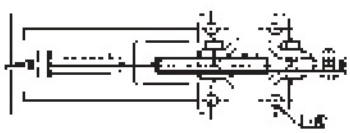
- Excellent for many types of latching operations.
- With base bolted or welded in place, unit can be use for latching pressure vessels, etc.
- Pull bar is threaded for convenient adjustment
- Furnished with red vinyl grip

Item#	Holding Capacity	Mfr. #	A	B	C	D	E	F	G	H	L	J
3900-0408	380 lbs	451	5.6	12.7	19	38.1	217	54.88	8	48	33.2	36.5
3900-0409	750 lbs	40371	8.7	-	31.8	47.6	286	79.4	9.5	65.7	48.2	57.3

DELUXE PUSH/PULL

- All parts die stamped from solid steel.
- Plastic hand grip for safety & convenience.
- Double plated to avoid rust.
- Carbon steel rivet for durability.





Item#	Handle Move	Mfr. #	Holding Capacity	A	B	C	D	E	F	G	H	I	J	K	L	M	O	Stroke
3900-0388	45°	304-C	500 lbs	12.7	41.1	57.2	6.7	35	52.4	4.8	20.6	52.4	M8P=1.25	30.2	125.4	25.4	74.6	32
3900-0389*	90°	305-C	500 lbs	12.7	41.1	57.2	6.7	35	52.4	4.8	20.6	52.4	M8P=1.25	30.2	125.4	25.4	90.5	32
3900-0390	45°	304-E	800 lbs	16	41.1	57.2	8.3	41.1	58.8	4.8	31.8	81	M10P=1.5	39.2	158.8	31.8	98.4	42
3900-0391	90°	305-E	800 lbs	16	41.1	57.2	8.3	41.1	58.8	4.8	31.8	81	M10P=1.5	39.2	158.8	31.8	122.8	42
3900-0392*	45°	304-H	1500 lbs	19.2	50.8	72	8.3	50.8	72	6.4	50.8	120.8	M12P=1.75	49.2	238.2	50.8	133.4	60
3900-0393	90°	305-H	1500 lbs	19.2	50.8	72	8.3	50.8	72	6.4	50.8	120.8	M12P=1.75	49.2	238.2	50.8	171.6	60

* Limited Supply

DRILL PRESS & CROSS SLIDE VISES

Pro-Series ANGLE DRILL PRESS VISES - With Base

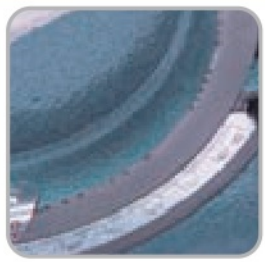
- Full 90° adjustment, horizontal to vertical.
- Two bolt lugs on base for setting on machine table.
- One grooved and one plain jaw plate.
- Swivel base providing 360° rotation.

Item#	Jaw Width	Jaw Opening	Jaw Depth	Wt. (Lbs.)
3901-1735	4"	4"	1.8"	38
3901-1737	6"	6"	2.1"	86

DELUXE TILT VISES

- Full 90° horizontal to vertical adjustment.
- Base with multi-bolt slots for working table setting.
- One side of vise with angle dial and another side with lock knob very convenient for angle set-up.
- Strong cast iron with rail for secure angle adjustment.

Item#	Jaw Width	Jaw Depth	Jaw Opening
3900-2683	3"	1-3/8"	3"
3900-2684	4"	1-5/8"	4"



SUPER CROSS SLIDE VISES

- Suitable for clamping soft materials such as aluminum, copper, etc.
- Secures firmly on drill press table and moves similar to vertical mill.
- Accurate positioning in two directions(crossed).
- Each dial is graduated in .1mm increments for precise adjustments and easily adjusts to 0.
- Ball crank handles are solid and balanced.
- Feed screws have precision cut acme threads.
- Dial in 1mm increments.
- High grade cast body.
- Heat treated steel jaws.
- Jaws interchangeable with Wilton.

Item#	Jaw Width	Jaw Depth	Cross Travel	(Inch) Jaw Opening	Longitudinal Travel	Weight lbs.
3901-2703	3	1.38	3	3	5	16
3901-2704	4	1.81	4	4	5	20
3901-2705	5	1.97	5	5	6	41
3901-2706	6	2.09	6	6	8	60
3901-2708	8	2.09	8	8	8	77

Pre-Series X-Y CROSS SLIDE VISES

- Suitable for clamping soft materials such as aluminum, copper, etc.
- Secures firmly on drill press table and moves similar to vertical mill.
- Accurate positioning in two directions(crossed).
- Each dial is graduated in .1mm increments for precise adjustments and easily adjusts to 0.
- Ball crank handles are solid and balanced.
- Feed screws have precision cut acme threads.
- High grade cast body.
- Heat treated steel jaws.

HANDLES ARE CLEAR FROM MILL TABLE

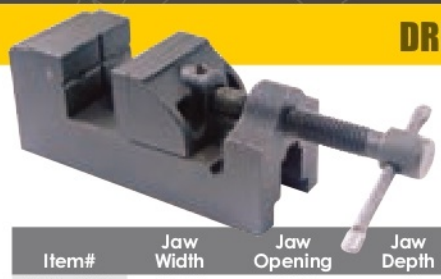
Item#	Jaw Width	Jaw Depth	Cross Travel	Jaw Opening	Longitudinal Travel	Weight lbs.
3900-2703	3"	1-1/8"	3"	2.80"	5"	17
3900-2704	4"	1-7/16"	4"	3.80"	6"	21
3900-2706	6"	1-11/16"	6"	5.80"	8"	63

DRILL PRESS VISES

- Four slots for easy clamping to tables.
- Body and slide made of selected cast iron.
- Guiding groove controls the parallel movement and rigidity of moveable jaw.
- Replaceable steel jaws.
- Handle adjusts to any angle.

Item#	Jaw Width	Jaw Opening	Jaw Depth
3900-0177	3"	3"	1"
3900-0174	4"	4"	1-3/8"
3900-0175	5"	5"	1-1/2"
3900-0176	6"	6"	1-5/8"

DRILL PRESS VISES

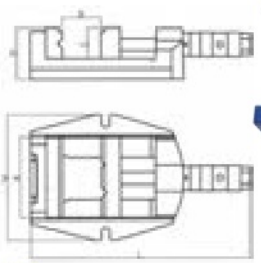


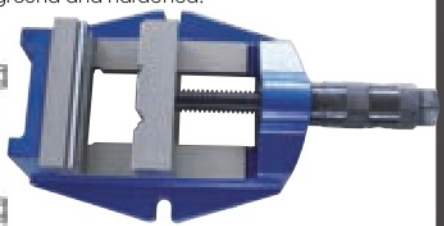
- Grooved jaw

Item#	Jaw Width	Jaw Opening	Jaw Depth	OAL
3900-1730	1-1/2"	1-1/2"	1"	5-1/4"
3900-1731	2-1/2"	2-1/2"	1-1/2"	7-1/2"
3900-1732	3-1/2"	3-1/2"	1-3/4"	9-1/4"

Pro-Series 5" SUPER DUTY DRILL/MILL VISE

- Made of top grade strong stress relieved casting.
- Quick action handle with hex end for strong force tightening.
- Grooved jaws.
- All working surfaces are ground and hardened.



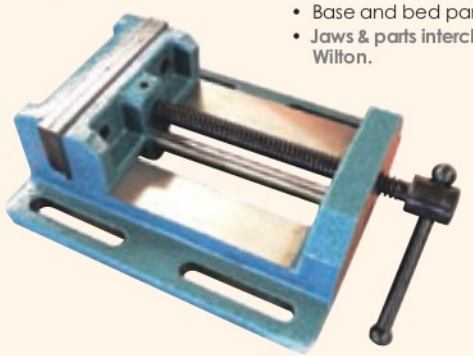


Unit: mm

Jaw Width A	Jaw Opening B	Jaw Depth C	OAL L	Base Width W	Height H	Wt. (Lbs.)
125	90	50	350	200	82	23

Pro-Series LOW PROFILE DRILL PRESS VISES

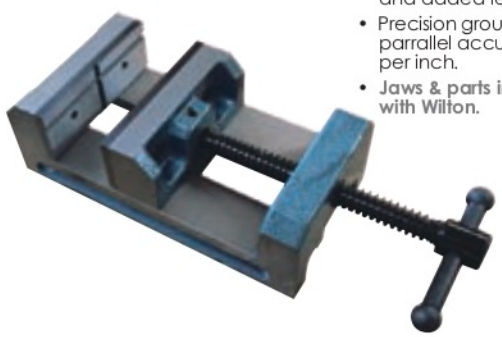
- Low profile clearance provides increased working room on machine table.
- Hardened V-groove jaws hold round shapes in either vertical or horizontal position.
- Slip handle allows for easy turning and added leverage body and slide are made of selected fine grain cast iron.
- Four slots for secure mounting to machine table.
- Base and bed parallel to 0.001".
- **Jaws & parts interchangeable with Wilton.**



Item#	Jaw Width	Jaw Opening	Throat Depth	Wt. (Lbs.)
3901-0173	3"	3"	1-1/8	9
3901-0174	4"	4"	1-3/4	12
3901-0176	6"	6"	2	32
3901-0178	8"	8"	2	51

Pro-Series INDUSTRIAL DRILL PRESS VISES

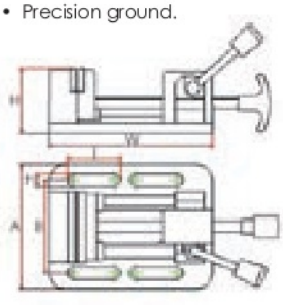
- Precision machined on 4 sides, can be used on base, sides or end.
- Body & slide are made of selected fine grain cast iron.
- Hardened steel V-groove jaws hold round shapes in both vertical or horizontal position.
- Slip handle allows for easy turning and added leverage.
- Precision ground for square and parrallel accuracy to +/- 0.001" per inch.
- **Jaws & parts interchangeable with Wilton.**



Item#	Jaw Width	Jaw Opening	Jaw Depth	Wt. (Lbs.)
3901-0184	4"	4"	1.5"	9.5
3901-0186	6"	6"	2.0"	35

Pre-Series QUICK SLIDE DRILL PRESS VISES

- Made of high grade strong stress relieved iron casting.
- The 4&6" have 1/2" lugs on each side for mounting.
- The 3" features 1/2" slots for mounting.
- Precision ground.



3900-0183 Shown

3900-0186 Shown

Item#	Jaw Width	Jaw Opening	Jaw Depth	A	B	H	(mm) W	h	l
3900-0183	3"	3	1	140	104	72	183	14	60
3900-0184	4"	4	1-1/2	152	126	90	308	14	--
3900-0186	6"	6	1-7/8	230	192	109	368	18	--

VISE JAWS

MAGNETIC VISE JAWS

- Designed to protect both the vise jaws and the workpiece from marring and distortion during any clamping application.
- Constructed from a hardened aluminum alloy with two built-in circular permanent magnets on the backside which holds the workpiece securely to the vise.
- Different face material to ensure tight holding of different shapes and material of workpiece.

SOLD BY PAIR

SOFT FACE
Aluminum alloy design includes straight grooves to compensate for the unevenness of the workpiece.

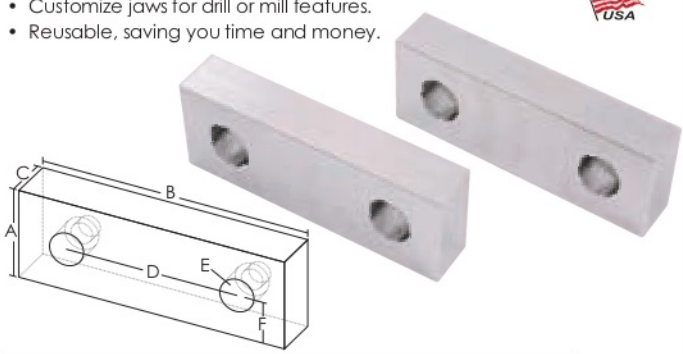
PRISM FACE
Jaw construction includes a 120° horizontal V-groove and a vertical V-groove for marking out and center punching. Ideal for light tapping and thread cutting applications.

RUBBER FACE
Aluminum alloy with synthetic rubber cover , Jaw cap conforms to workpiece and grips firmly without slipping while protecting work surface.

Jaw Width	Jaw Height	Soft Face Item#	Prism Face Item#	Rubber Face Item#
3"	1-1/8"	3900-2143	3900-2261	3900-2271
4"	1-1/8"	3900-2145	3900-2263	----------
5"	1-1/8"	3900-2147	3900-2265	3900-2275
6"	1-1/8"	3900-2149	----------	3900-2277
8"	1-1/8"	3900-2152	----------	3900-2279

ALUMINUM VISE JAWS

- Fits ***Kurt Anglock***™ & similar precision milling machine vises.
- Perfect for easy and quick set-ups,reducing down time.
- Customize jaws for drill or mill features.
- Reusable, saving you time and money.

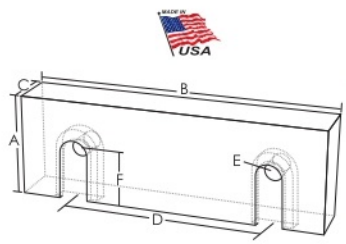


Item#	Vise Size	Height A	Length B	Hole Space D	Screw Size E	Hole Dist. F	Width C
3900-2180	4"	1-3/4	4	2-1/2	3/8	.687	3/4
3900-2184	4"	2	5	2-1/2	3/8	.687	1
3900-2187	6"	2	6	No Hole	---	---	1
3900-2188*	6"	2	6	3-7/8	1/2	.937	1

* Top/Bottom REVERSIBLE

ALUMINUM QUICK LOCK VISE JAWS

- Fits ***Kurt Anglock***™ & similar precision milling machine vises.
- Easy and quick set-ups.
- Machinable vise jaws for drill or mill features.
- Price is for set of 2 jaws.



Item#	Vise Size	Height A	Length B	Hole Space D	Screw Size E	Hole Dist F	Width C
3900-2191	4"	2	4	2-1/2	3/8	.687	1
3900-2193	6"	2	6	3-7/8	1/2	.937	1
3900-2194	6"	3	6	3-7/8	1/2	.937	1
3900-2195*	6"	3	6	3-7/8	1/2	.937	2

*Limited Supply

Pro-Series PRISMA VISE JAWS

- Multi-function V-shape jaw can hold round and square workpiece.
- Made of high grade tool steel hardened and precision ground.
- Squareness and Parallelism: 0.0002".

Limited Supply!

FOR "Vertex" K-TYPE VISES

Item#	Fit Vise	Height	Length	Width	Screw Size	Hole Space
3900-2169	VK-5	1.50"	5.2"	.38"	M8	3.15"
3900-2170	VK-6	1.69"	6.0"	.38"	M10	3.55"
3900-2171	VK-8	2.48"	8.0"	.49"	M10	4.72"

Pro-Series PRISMA VISE JAWS

- Multi-function V-shape jaw can hold round and square workpiece.
- Made of high grade tool steel hardened and precision ground.
- Squareness and Parallelism: 0.0002".
- Fits "Kurt" vises & American standard milling machine vises.

Limited Supply!

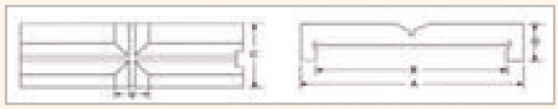
For Kurt Vise

Item#	Fit Vise	Height	(Inch) Length	Screw Size	Hole Space
3900-2175	4	1.42	4.1	3/8	2.500
3900-2176	5	1.50	5.2	3/8	2.500

UNIVERSAL VISE JAWS WITH WORK STOP

- Multi-function V-shape jaw can hold workpiece at horizontal and vertical position.
- Made of high grade tool steel hardened and precision ground.
- Squareness and Parallelism: 0.0002".
- Will fit vise jaw with same or similar width.
- Two set screws are attached to vise and one long set screw used as work stop.

MADE IN TAIWAN



Item#	Fits Vise	Dimension (mm) A	B	C	D	V	Wt. (lbs)
3900-2164	4"	145	110	49	38	32	3.5
3900-2165	5"	175	140	49	39	32	4.0
3900-2166	6"	190	160	53	40	32	4.8
3900-2167	8"	245	210	76	42	32	9.0

MILL VISE STOP - Fits 3 & 4"

- Fits the most popular machine vises.
- Bolt-on design, requires no modification to vise.
- Will work in left or right hand location.

MILL VISE STOP - Fits 5 & 6"

- Fits the most popular machine vises.
- Bolt-on design, requires no modification to vise.
- Will work in left or right hand location.

UNIVERSAL WORK STOP

- Serves as a rigid stop for milling set-up.
- Made of hardened tool steel.
- Use with vises, angle plates, jigs, etc.
- Column: 5/8 x 6-1/4".
- Base: 5/8 x 2 x 4-3/8".
- Rod: 3/8 x 10".

QUICK CLAMP WORK STOP

- Fits mill vises with 1/2-1" jaws
- steel body 1" wide x .38" height
- Very handy for small parts that do not require the full length
- Clamps quickly & easily to the top of existing hard jaws or soft jaws

VISE WORK STOP

- To fit angle lock type vises.
- Single thumb screw tightens clamp to vise jaw.
- Two ground pins on both sides of clamp.
- Easily mounts to the top of most vise jaws.
- 7/8" capacity.

Pro-Series MULTI AXIS WORK STOP -5/8" TABLE SLOTS

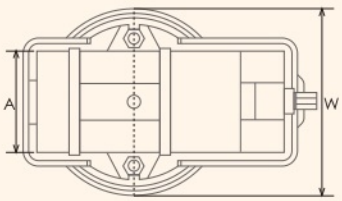
- For use with repetitive jobs that require exact placement in the vise.
- 5 Axis Adjustment, 1/4" diameter x 6" length stop rod, locking lever can be positioned at 360 degrees.
- T nut fits 5/8" table slots.
- Height 8", Length 8"
- Capacity-approximately 700 lbs.

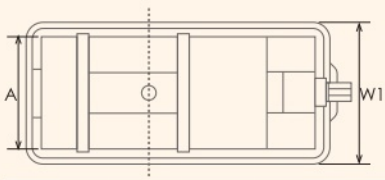
Pro-Series HEAVY DUTY MILLING VISES

- Precision ground to accuracy.
- Full 360° swivel base with graduation included.
- Used in milling, shaping and drilling machines.
- Lock down design secures the movable jaw, preventing it from lifting upwards.
- Angle-Tight Positive-Lock style-jaws are interchangeable with American Standard vises.

Jaw Dimensions

Jaw Width	(mm) A	B	C	D	E	F
3"	80	24	45	12.5	7	9.5
4"	100	32	63.5	16	9	12
5"	125	40	76	18	9	14
6"	160	45	98.4	23.9	13	19
8"	200	50	120.6	31	13	19





Jaw Width A	Jaw Openning B	Jaw Height C	(Inch) OAL L	Width of Swiv Base W	Width of Vise Base W1	Vise Height H	Height with Base F	Wt. (LBS.)	VISE ONLY Item#	VISE W/SWIV. BASE Item#
3	3.74	0.940	10.60	6.70	4.7	2.76	3.74	15/22	3900-2223	3900-2104
4	5.12	1.181	12.80	8.70	6.3	3.54	4.72	25/40	3900-2224	3900-2102
5	5.71	1.575	14.80	8.70	7.0	3.94	5.12	48	----------	3900-2101
6	8.00	1.932	18.70	11.0	8.9	4.53	5.98	68/86	3900-2226	3900-2103
8	9.25	1.969	20.90	16.1	–	4.92	7.87	130	----------	3900-2106

VISE JAWS-Replacement

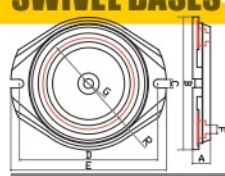
Set of 2

Item#	Fit Vise
3900-2133	3"
3900-2134	4"
3900-2136	6"

JAW BLOCKS-Replacement

Item#	Fit Vise
3900-2140	3"
3900-2141	4"
3900-2142	6"

SWIVEL BASES-Optional



Item#	Fit Vise	(mm) A	B	C	D	E	F	G	R
3900-2233	3"	25	168	12	160	187	10	14	98
3900-2234	4"	30	216	14	217	244	12	20	132
3900-2236	6"	37	285	18	284	322	18	20	190

QUICKIE VISE HANDLES

- Fits all vises with 3/4" hex
- Speed up opening and closing of machine vises.
- Provides faster and more efficient production.
- Short turning radius for clamping of more delicate parts.
- Machined anodized aluminum.

REPLACEMENT VISE HANDLES

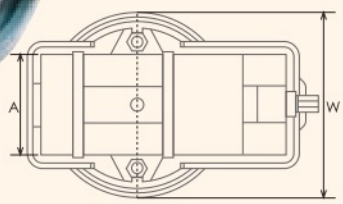
VISE SPEED HANDLE

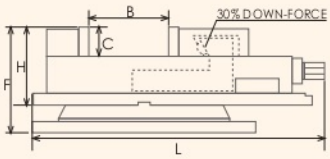
- Designed for 6" milling vise.
- Speed up the clamping force of vise.
- Fits most milling vises.

3/4" Hex Hub

Ultra-Series ANGLE-TIGHT POSITIVE-LOCK MILLING VISES

- Super precision ground to accuracy. High quality.
- Totally enclosed heat treated screw.
- Smooth operation, high repeatability.
- Angle-Tight Positive-lock style-lock down type jaws.
- Jaws interchangeable with American standard vises.



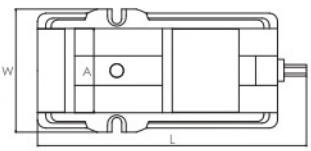


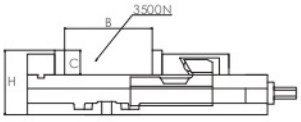
SHOWN WITH OPTIONAL SWIVEL BASE

Item#	Jaw Width A	Jaw Opening B	Jaw Depth C	(Inch) OAL L	Vise Height H	Height with Base F	W	Jaw Hole Space O	With Swivel Base	Weight (lbs.)
3900-2203	3	3	1.00	11.00	3-5/32	4-9/32	7-9/32	1.772"	Yes	28
3900-2204	4	4	1.20	13.50	3-37/64	5-1/32	9-7/32	2.500"	Yes	52
3900-2205	5	5	1.50	17.30	4-1/16	5-9/16	9-49/64	2.992"	Yes	71
3900-2206	6	7.5	1.95	21.00	4-27/32	----	---	3.874"	No	86

Pro-Series 6" PRECISION MILLING VISE -With 8.6" Jaw Opening

- Precision ground to accuracy to .0004" on parallelism and .0008" on squareness.
- Lock down design secures the movable jaw, preventing it from lifting upwards.
- Angle-Tight Positive-Lock style-jaws are interchangeable with American Standard vises.

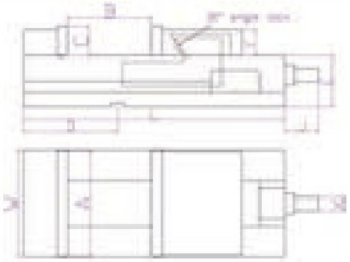




Item#	Jaw Width	Jaw Opening	Weight (LBS.)	A	B	C	(Inch) L	W	H	Jaw Hole Space O
3900-2246	6"	8.6"	75	6	8.6	1.77	19.5	9.2	4.65	3.874"

SUPER-LOCK VISE FOR NC/CNC MACHINES

- Lock down type.
- Ideal for all types of milling, grinding, drilling and tapping application in multiple vise set-ups.
- **Flatness of all sides to .001" guaranteed.**
- Mounting in 3 modes: upright, left and right side.
- **Both sides parallel to each other to .0005" per 4".**
- Up to 3000 N clamping force.



Item#	Jaw Width (inch/mm)	A	B	C	D	(Inch) E	F	J	K	L	Base W	Jaw Hole Space O	Weight Lbs.
3900-0170	3.15/80	3.15	3.15	0.94	3.15	1.97	0.87	1.22	0.44	8.27	3.18	1.77	18
3900-1719	3.94/100	3.94	4.15	1.26	4.05	2.36	1.14	1.34	1.44	10.43	3.97	2.50	23
3900-0171	4.92/125	4.92	5.10	1.57	3.93	2.52	1.47	1.42	0.55	11.85	4.96	2.99	40
3900-0172	6.30/160	6.30	7.32	1.73	5.51	3.03	1.65	1.93	0.75	15.39	6.33	3.88	64

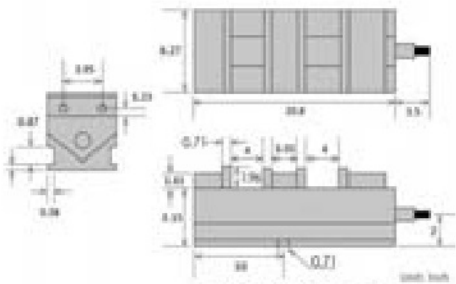
MILLING VISES

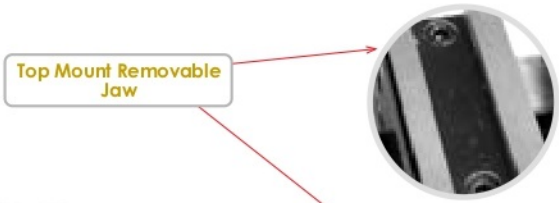
TWIN - LOCK PRECISION CNC MILLING VISES -Self Centering

- Precision clamping force per jaw set.
- Precision ground on all sides, can be mounted vertically or horizontally.
- Bed hardened to RC 45 or higher to resist wear.
- Reversible hardened jaw plates for standard or, stepped part holding.
- Reduces the tool changes per job by 50%.
- Uses the same machine space as conventional vises limited to half the part holding capacity.
- Top mounted center block can be removed easily for larger parts application.

Data Without Center Jaw

Item#	Jaw Width	(Inch) A	B	Wt. Lbs.
3900-1722	3.94/100mm	3.94	7.87	36
3900-0173	6.30/160mm	6.30	10.43	95





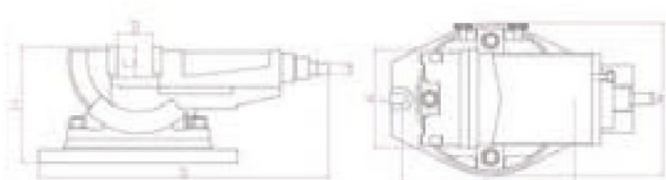
2PC QUICK CLAMP MILL VISES

- Work locates directly on bed for rigidity
- Mechanical type, actuated by Acme screw riding in bronze nut and guided by two H&G pins
- Quarter-turn handle clamps work firm enough for heaviest cuts
- Vise handle included

Item#	Jaw Width	Depth of Jaws	Key Slot Width	Min. T-Slot	Clamp	Weight
3900-1726	6"	3"	11/16"	2-1/4~2-3/4"	3/8"	32 lbs
3900-1728	8"	4"	13/16"	2-3/4~3-3/4"	1/2"	58 lbs

2-WAY SWIVEL MOVEMENT ANGLE VISES

- Positive locking to withstand heavy loads.
- Horizontal swivel movement 360°.
- Vertical swivel movement 90°.
- Totally enclosed acme thread screw.
- Hardened and ground jaws.
- Vises supplied with plain jaws.
- Base T-slot width: 0.71"
- Vise handle included.



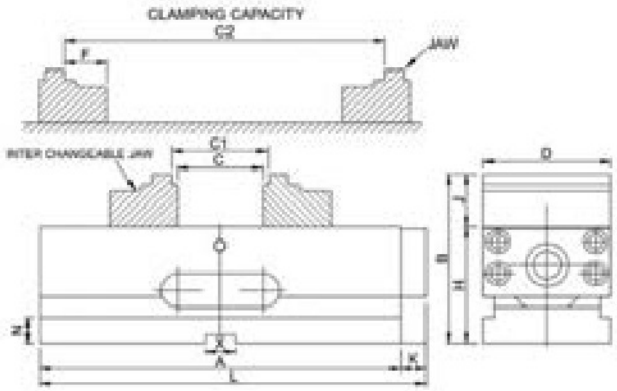
*Limited Supply

Item#	Jaw Width	A	B	C	(Inch) D	E	F	J	W	H	Jaw Hole O	Weight Lbs.
3900-0018	3.94/100mm	3.94	3.15	1.69	15.55	0.55	8.78	0.55	7.24	6.18	**2.36**	54
3900-0015*	4.92/125mm	4.92	3.94	1.81	18.89	0.55	9.96	0.67	8.78	6.73	**3.15**	61
3900-0019	6.30/160mm	6.30	4.92	1.97	21.85	0.71	11.34	0.67	10.04	7.48	**2.76**	89

Pro-Series 3.98" SELF CENTERING CNC VISE

- Reversible Jaw: remove 4 screws to re-install jaws.
- Suitable for 4/5 axis CNC machines
- Repeat clamping tolerance +/- 0.0004"/ 0.01mm
- Material: FCD 60, high tension cast iron slide way has hardness of HRC 45.
- Interchangeable jaw heat treated to HRC 50.
- Lock down design to keep work piece from lifting.

MADE IN TAIWAN



SELF-CENTERING

Jaw Width D	Jaw Depth J	Jaw Open C	Vise Height B	OAL L	Wt.	Max. Clamping C1	Clamping Range For C2	Max. Clamping Force	Torque For Clamping	A	F	H	K	N	X
3.98"	1.57"	5.20"	4.72"	10.24"	41 lbs	5.51"	2.44~7.56"	400 kgf	2.6m/kgf	9.45"	1.18"	3.15"	0.63"	0.83"	0.79"

Pro-Series 2.36" SELF CENTERING CNC VISE - With Swivel Base

- Suitable for 4/5 axis CNC machines
- Repeat clamping tolerance +/- 0.0004"/0.01mm
- Material: FCD 60, high tension cast iron slide way has hardness of HRC 450
- Interchangeable jaw heat treatment to HRC 55°.
- Lock down force to keep work piece from lifting.
- Swivel base 8" diameter x 22mm thickness
- Clamping Capacity: 1.77~5.51"

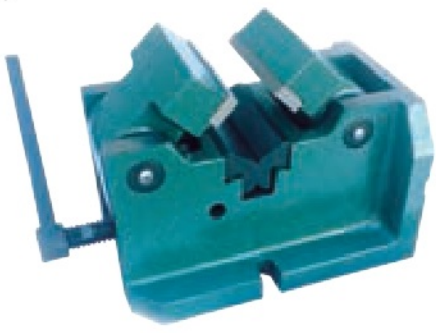
MADE IN TAIWAN

SWIVEL BASE INCLUDED

Item#	Jaw Width	Jaw Depth	Jaw Openning	Vise Height	OAL
3900-2220	2.36"	0.95"	3.94"	3.15 (w/o base)	7.3"

HORIZONTAL/VERTICLE MACHINE VISE - for Holding Shafts and Round Parts

- 4" wide hardened steel replaceable jaws.
- Capacity 3/8" to 2-1/2" round parts.
- Work rests on V-block made of hardened and ground tool steel.
- Adjustable sliding rod to set work in proper position.
- Vise ends are ground so that it can be used vertically or horizontally.



Pro-Series MACHINIST'S STEEL VISE

- 360° swivel base or double lock down to keep stationary in any position.
- Self-centering, hardened steel pipe jaws, holds up to 6" pipe safely and securely.
- Straight line pull guaranteeing a lifetime spindle and nut.
- Cast steel body.

MADE IN TAIWAN

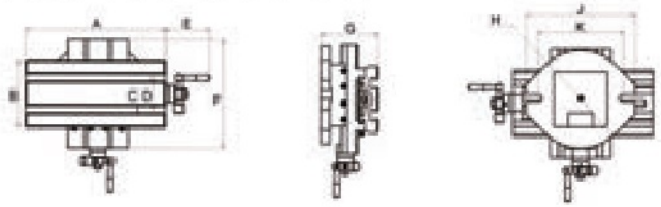
Item#	Jaw Width B	Jaw Opening A	(Inch) Height H	Min. OAL L	S	h	Weight (Lbs.)
3900-2511	6	5.9	7.2	16.5	9	3.1	31
3900-2513*	8	7.8	8.0	19.7	9.4	3.4	40

*Limited Supply

COMPOUND TABLES

5-1/2 X 12" COMPOUND SLIDE TABLE

- A heavy, rugged slide used in positioning, milling, drilling, microscope viewing and staging.
- Adjustable bases for heavy loads, small jig boring, precision cut-off.
- T-slot Width: 5/8"

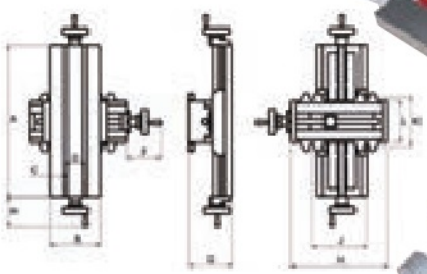


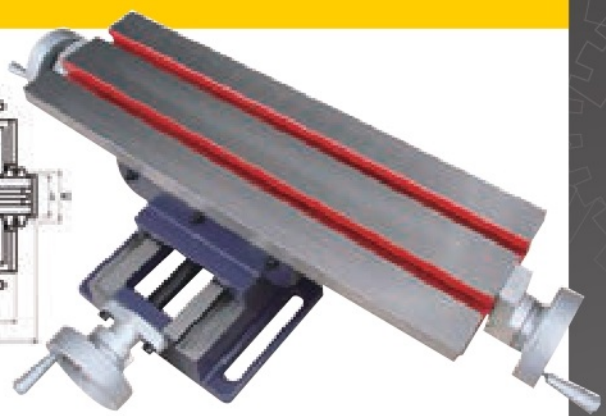
Unit: Inch

A	B	C	D	E	F	G	H	J	K	X Travel	Y Travel	Weight
12	5.5	5/8	2.5	3	9	4.5	8	9	7.6	8	5	40 Lbs.

6 x 18-1/2" COMPOUND MILLING TABLE

- Solid cast iron construction.
- Features 12" of longitudinal travel and 7-1/2" of transverse travel, adjustable gibs, dovetailed ways, dependable Acme screws, vernier scales and 9/16" T-slots.



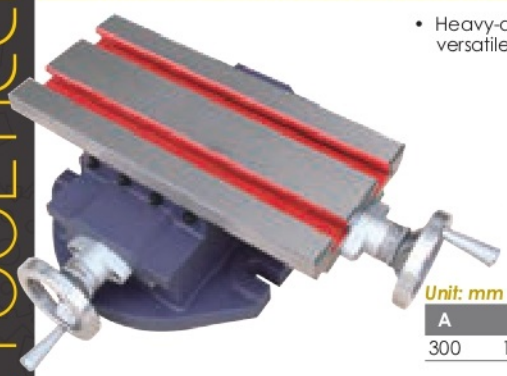


SPECIFICATIONS	
Table Size	18-1/2 x 6"
Table Height	5-1/4"
Footprint	8 x 10-1/2"
T-Slot	9/16"
Mounting Slot	1/2"(2-1/4" on center)
Wt (lbs)	58

Unit: mm

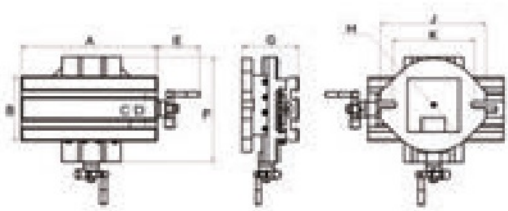
A	B	C	D	E	F	G	H	J	K	L	X Travel	Y Travel
473	156	14	62.5	94	108	134	305	170	152	130	270	120

5-1/2 x 12" COMPOUND SLIDE TABLE



- Heavy-duty compound slide table features 8" of longitudinal and 5" of transverse travel for versatile milling and drilling. Features 5-1/2" x 12" table, 5/8" slots, and adjustable gibs.

SPECIFICATIONS	
Table Size	12x5-1/2"
Table Height	5"
T-Slot	5/8"
Wt (lbs)	38



Unit: mm

A	B	C	D	E	F	G	H	J	K	X Travel	Y Travel	Weight
300	140	16	65	300	232	123	208	234	182	180	100	18kg

VERTICAL SLIDING MILLING/DRILLING TABLE

- 80mm up down travel distance.
- Solid cast iron construction.
- Table Size: 125 x 100mm/4.92 x 3.94"
- No. of T-slot: 3
- T-Slot Width: T- Slots is 9.8mm/0.386" wide at the top of the Tee , 16.5mm/0.65" wide at the bottom of the Tee.
- Easy to bolt on a mill table with 2 bolt holes (9mm/0.354" diameter).
- Weight: 11 lbs.

SWIVEL ANGLE PLATES

- Adjustable range 0-90°.
- High grade casting with rugged construction.
- Machined 'T' slots.
- 2-screw lock setting.
- Working surfaces are hardened and ground.

Item#	Size	Height	T-Slot	Wt. (Lbs)
3501-0014	6 x 8"	5"	1/2"	29
3501-0016*	8 x 10"	6"	9/16"	45
3501-0018*	10 x 12"	7"	5/8"	80

*Limited Supply

HEAVY DUTY TILTING TABLES

- Supplied complete with crank handle.
- Range 0-80° (40° each side).
- Has 2 screws for locked settings.
- Graduated in degrees for quick setting purposes.
- Heavy duty casting and precision ground with three T-slots.
- Set at any angle with indexer.
- Convex movement.

Item#	Size	Height	T-Slot	Wt. (Lbs)
3501-0001	7x5"	3-3/4"	1/2"	21
3501-0002*	10x7"	5"	1/2"	50
3501-0003*	15x10"	6-1/2"	1/2"	130

*Limited Supply

4" HORIZONTAL/VERTICAL ROTARY TABLE & DIVIDING PLATE

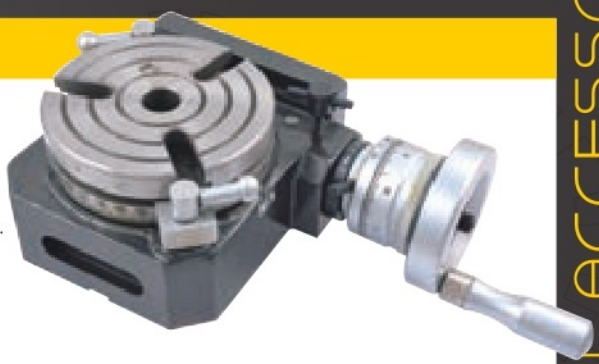
- 10 second vernier reading.
- One rotation of handle equals 4° on collar.
- Center height: 2.75"
- Gear ratio 72:1.
- Center Hole: 2MT
- Number of T-slot: 4

SPECIFICATIONS	
Vernier Reading	10 seconds
Squareness	0.0008"
Base Parallelism (face to face)	0.0004"
Taper(MT2) center bore Concentricity	0.0008"
Clamping surface flatness	0.0006"

- This set consists of one plate with a set of 10 holes. This allows you to divide a circle into 1/2 degree increments. You can divide a circle into the following number of divisions 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 16, 18, 20, 24, 30, 36, 40, 45, 48, 60, 72, 80, 90, 120, 144, 180, 240, 360, 720.

4" HORIZONTAL/VERTICAL ROTARY TABLE

- Table Diameter: 110mm/4-3/8".
- Horizontal Overall Height: 80mm/3-1/8"
- Vertical Overall Height: 152mm
- Overall Length (with handle): 280mm
- Center height: 86mm
- Gear ratio 90:1.
- Center Hole: 2MT
- T-Slot Width: 11mm/7/16"
- Number of T-slot: 3
- 10 second vernier reading.
- Graduated 360 degrees
- One rotation of handle equals 4° on collar.
- Worm gear is easily disengaged for free rotation.



100MM STEEL VISE - For 4" HORIZONTAL/VERTICAL ROTARY TABLE

- Made from tool steel
- Hardened and ground
- Low profile
- 4 mounting holes for easy attachment to rotary table.
- 4 mounting T-nut and cap screw included.
- V-groove for holding round parts.

SPECIFICATIONS	
T-nut Width	7.6mm
Jaw Width	80mm
Jaw Depth	20mm
Jaw Opening	40mm
Base Diameter	100mm

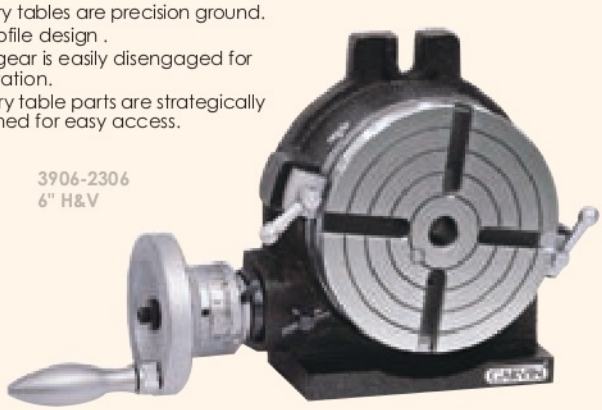
4" TILTING ROTARY TABLE

- Table Diameter: 100mm/3.94".
- Horizontal Overall Height: 70mm/2.76"
- Vertial Center Height: 70mm/2.76".
- Gear ratio 36:1.
- T-Slot Width: 7.95mm/5/16"
- Number of T-slot: 4
- 10 second vernier reading.
- One rotation of handle equals 10° on collar.
- Worm gear is easily disengaged for free rotation.
- Tilts 0~90°
- Base has two bolt holes: 9.8mm/0.386" diameter.

HORIZONTAL & VERTICAL PRECISION ROTARY TABLES

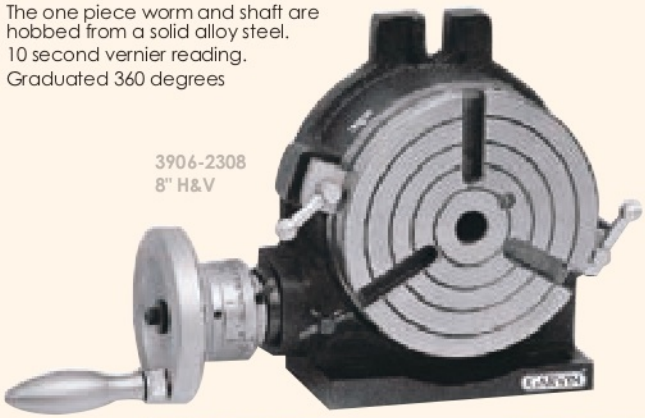
- All rotary tables are precision ground.
- Low profile design .
- Worm gear is easily disengaged for free rotation.
- All rotary table parts are strategically positioned for easy access.

3906-2306
6" H&V



- The one piece worm and shaft are hobbed from a solid alloy steel.
- 10 second vernier reading.
- Graduated 360 degrees

3906-2308
8" H&V



Item#	Table Size (Dia.)	Center Hole	(Inch) Center Height Vert	Horizontal Overall Height	Number of T-slots	T-slot Width	Weight (lbs.)
3906-2306	6"	2M.T.	4.02	3-1/4	4	0.63	31
3906-2308	8"	3M.T.	5.31	4-1/4	3	0.94	65

SPECIFICATIONS	VARIATION MAX.
CLAMPING SURFACE FLATNESS	0.0006"
CYLINDER CENTER BORE TIR	0.0008"
TAPER CENTER BORE TIR	0.0008"
SURFACE TO BASE PARALLELISM	0.0008"
SURFACE TO ANGLE FACE SQUARENESS	0.0004"
SURFACE TO CENTER SLOT SQUARENESS	0.0008"

DIVIDING PLATES - For 4~6" Rotary Tables

SET INCLUDES:

Plate A - 15,16,17,18,19,20
Plate B - 21,23,27,29,31,33
Plate C - 37,39,41,43,47,49
Washers,
Crank Handle & Screws

Fits Most of 4~6" Rotary Table

ADJUSTABLE TAILSTOCKS - For Rotary Tables

Item#	Fits Table	Adjustable Height (Min.~Max.)	Weight (lbs.)
3906-2406	4~6"	42~92mm/1.65~3.62"	6.2
3906-2407	6~8"	93~125mm/3.66~4.92"	22.5

Pro-Series HORIZONTAL/VERTICAL ROTARY TABLES

- 10 second vernier reading.
- Gear ratio 90:1.
- One rotation of handle equals 4° on collar.

MADE IN TAIWAN

Style for 6,8,10,12" Shown

3900-2314 Shown

Unit: Inch

Item#	Table Size D	Height-over-all H	Height-over-all A	Center Hole	Center Height C	Number of T-slots	T-Slot Size	N	B	Weight (lbs.)
3900-2314	4.3"	2.8	5.4	2M.T.	3.3	3	.43	2.3	4.7	17
3900-2316	6"	3.1	8.1	2M.T.	3.9	3	.43	3.1	6.4	28
3900-2328	8"	4.1	10.4	3M.T.	5.3	3	.55	3.9	8.6	60
3900-2330	10"	4.5	12.6	3M.T.	6.5	6	.55	4.2	10.9	83
3900-2332	12"	5.3	15.3	4M.T.	7.7	6	.63	4.8	13.0	134

Pro-Series DIVIDING PLATES

MADE IN TAIWAN

- Suitable for Pro-Series rotary tables.
- Set includes: index plates, crank handle, 3pc screw, sector & U washer.

Item#	Fits Rotary Table (Dia.)	Plate Include
3900-2390	4 & 6"	SET I
3900-2392	8"	SET II
3900-2394	10 & 12"	SET II
3900-2396	6 & 8" (Super Spacer)	SET II

SET II
Plate A - 26, 30, 34, 38, 41, 44, 47, 51, 57, 28, 32, 37, 39, 43, 46, 49, 53, 59
Plate B - 62, 67, 71, 77, 81, 87, 91, 97, 63, 69, 73, 83, 89, 93, 99

SET I
Plate A - 15, 16, 17, 18, 19, 20
Plate B - 21, 23, 27, 29, 31, 33
Plate C - 37, 39, 41, 43, 47, 49

ADJUSTABLE TAILSTOCKS

Item#	Fits Table	Origin	Center Height
3900-2406	4"	China	2.75"
3900-2407	4-6"	Taiwan	3.2-4.3"
3900-2409	6 & 8"	Taiwan	4.5~5.7"
3900-2402	8 & 10"	China	5.5~7.5"
3900-2411	8, 10 &12"	Taiwan	5.2~8.1"
3900-2403	12"	China	7.5~9.0"

3900-2406 Shown

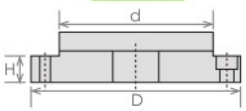
3900-2409 & 3900-2411 Shown

3900-2407 Shown

FLANGES

- For front mount.
- For adaptering a chuck to rotary table.
- Compatible with Pro-Series rotary tables, holes pattern may need to be modified for non Pro-Series.

MADE IN TAIWAN



Item#	Fit Chuck Size	Used For Table (Dia.)	(Inch) D	d	H
3900-2352	5	6 & 8	5.43	3.94	0.787
3900-2355	6	8 & 10	6.69	5.12	0.827
3900-2358*	7	10 &12	7.68	6.10	0.945
3900-2360	8	12	8.27	6.30	0.945

* Limited Supply

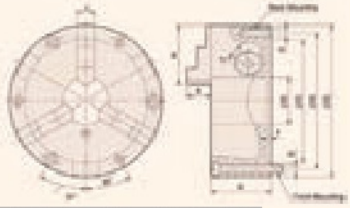
3-JAW FRONT-MOUNT SELF-CENTER CHUCKS FOR ROTARY TABLES

- Plain back.
- Made of high quality steel.
- Hardened and ground.
- Lathe chuck wrench supplied.

TOP JAWS REVERSIBLE

Front mount chucks are designed to be used with rotary tables and other devices where back mounting chucks can not be used.

SQUARE & PARALLEL .0002"



Item#	Chuck Size A	(Inch) D	C	B	Center Hole E	Mount Thread G Front	Back
3900-3430	6"	5.51	4.92	2.60	1.575	M8x70	M8x25
3900-3432	8"	6.93	6.30	3.00	2.559	M10x80	M10x30
3900-3434	10"	8.82	7.87	3.42	3.150	M12x85	M12x35
3900-3436	12"	11.26	10.24	3.86	3.937	M16x100	M16x40

ROTARY TABLES & INDEXERS

Pro-Series Low Profile HORIZONTAL & VERTICAL PRECISION ROTARY TABLES

- High precision bearing surfaces insure ultra-smooth rotation.
- Superior grade meehanite castings provide the ultimate rigidity.
- All rotary tables are precision ground to meet the most exacting requirements and are individually supplied with a certificate of inspection.
- The engraved graduations are both crisp and clear, eliminating erroneous readings.
- Low profile design minimizes machine capacity losses without sacrificing work load capacity.
- T-slots are machined within acceptable tolerances.
- Worm gear is is easily disengaged for free rotation.
- Long life and continued accuracy is assured by a convenient adjustment to compensate for wear.
- All rotary table parts are strategically positioned for easy access.
- The one piece worm and shaft are hobbed from a solid alloy steel.
- Extra deep coolant channel
- 10 second vernier reading
- Dual positive action locks
- Graduated 360 degrees
- Gear drive immersed in oil
- 90:1 gear ratio

3903-2310

3903-2308

Limited Supply!

DIVIDING PLATES INTERCHANGEABLE WITH Phase II

Item#	Table Size (Dia.)	Center Hole	Center Height Vert (In.)	Number of T-slots	T-slot Width (In.)	Weight (lbs.)
3903-2308	8"	3M.T.	5.98	4	0.465	70
3903-2310	10"	3M.T.	6.75	6	0.465	102

SPECIFICATIONS	VARIATION MAX.
CLAMPING SURFACE FLATNESS	0.0006"
CYLINDER CENTER BORE TIR	0.0008"
TAPER CENTER BORE TIR	0.0008"
SURFACE TO BASE PARALLELISM	0.0008"
SURFACE TO ANGLE FACE SQUARENESS	0.0004"
SURFACE TO CENTER SLOT SQUARENESS	0.0008"

4" SUPER RAPID INDEXER

- Simple and rapid operation
- 4" 3-jaw chuck give a big range clamping capacity
- 24 position index (15° increments)
- 1° table scale for angle indexing
- Center hole 1.18" dia.
- Horizontal and vertical operation
- 2 sets of jaws (Internal & External).

VERTEX 5 INCH 3-JAW FREE ANGLE ROTARY CHUCK

- Easy & quick setting at any angle
- Four hex head bolts lock & secure chuck.
- 3-Jaw self centering chuck.
- 360° rotation, 30° tilting.
- Load Capacity: 33 lbs.
- 2 sets of solid jaws included (ID & OD).

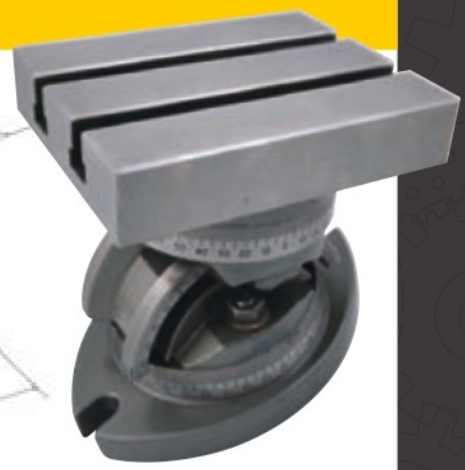
MADE IN TAIWAN

Locking With Hex Key (Included)

Chuck Jaw	O.D. Clamping Range	I.D. Clamping Range	A	B	C	D	E	F	G	H	Wt.
5"	0.12~4.33"	1.38~3.94"	5.51"	4.72"	0.79"	7.48"	2.83"	6.22"	0.67"	8.00"	38 lbs

PRECISION UNIVERSAL TILTING TABLE WITH SWIVEL BASE

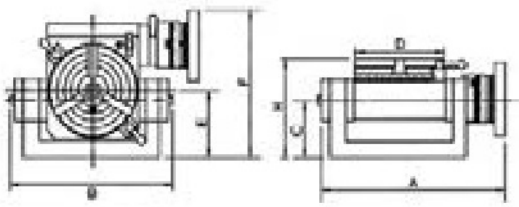
- Heavy and sturdy machined construction.
- Range 45 degree each way from vertical.
- Keyway slot at bottom of swivel base: 0.485" position.
- Swivel base graduation 360 degree.
- Can be locked into position with 2 clamping screws on each end.
- 2 Machined "T" slots that are 0.31" width and precise ground table surface.



Pro-Series UNIVERSAL TILTING ROTARY TABLES

- Highly rigid in the market
- Tilting 0-90° from horizontal to vertical position Lock setting with 2 screws
- 90:1 ratio worm is hardened and ground
- The work table is graduated a full 360° and micro collar is in steps of 2' min.

Tailstock and Dividing Plates are optional



MADE IN TAIWAN

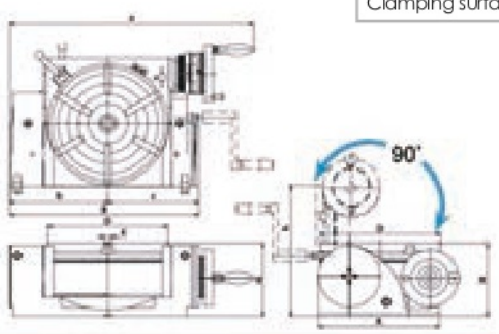
Unit: Inch

Item#	Table Size G	Height-Over-All H	Height-Over-All F	Center Hole	Center Height E	OAL A	OAL B	OAL C	Number of T-slots	T-Slot Size	Suitable Tailstock	Suitable Dividing Plage	Weight (lbs.)
3900-2338	4.3	4.61"	6.97"	2M.T.	3.15"	9.0	8.0	2.68	3	0.433	**3900-2407**	**3900-2390**	30
3900-2340	8	6.97"	11.14"	3M.T.	5.55"	16.9	17.0	4.37	3	0.551	**3900-2411**	**3900-2392**	110

TSK SERIES 10" TILTING ROTARY TABLE

- 10 second vernier reading.
- Gear ratio 90:1.
- Dual positive action locks
- Low profile
- gear drive immersed in oil
- maximum cumulative spacing error: 45 seconds

SPECIFICATIONS	
Squareness (surface to angle face)	0.0004"
Squareness (surface to center slot)	0.0008"
Parallelism (surface to base)	0.0008"
Cylindrical enter bore Concentricity	0.0008"
Taper center bore Concentricity	0.0008"
Clamping surface flatness	0.0006"



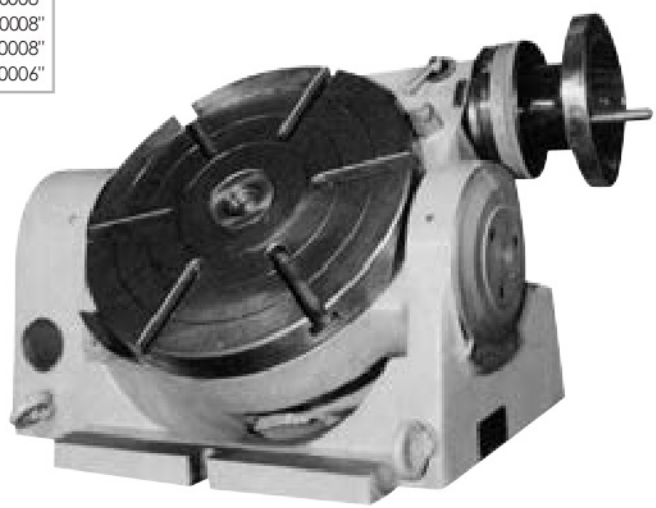


Table Dia.	Tilting Height	Range	Center Height	Hole	T-slot	Base
10"	8"	90°	5-1/2"	3MT	1/2"	10 x 12"

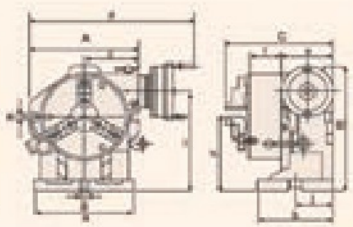
Pro-Series SUPER 6" & 8" ROTARY INDEXING FIXTURES

- Designed for milling, drilling, jig boring, and many other shop applications.
- Hardened and ground 24 position index plate (15° increments).
- 360° satin chrome graduated ring with 10 second adjustable vernier plate insures accurate readings.
- Each unit is equipped with 6 masking plates for fast and simple indexing of 2, 3, 4, 6, 8 and 12 divisions.
- Complete with 3-jaw chuck and faceplate.

FACE PLATE SHOWN

MADE IN TAIWAN

SPECIFICATIONS	
Max. Individual Spacing Error	25 seconds
Vernier Reading	10 seconds
Squareness (table base to chuck 90°)	0.0008"
Base Parallelism (face to face)	0.0004"
Mounting Flange Concentricity	0.0008"
Chuck Concentricity	0.0005"



Unit: Inch

Item#	Table Size	Face Plate	Chuck Center Hole	A	B	C	a	b	d	e	f	g	Center Height h	i	j	k	Number of T-slots	T-Slot Size	Weight (lbs.)
3900-2318	6	8	1-23/32	9.84	9.37	8.15	7.17	5.5	16	4.41	2.6	.63	4.8	7.52	3.15	.63	6	0.433	98
3900-2321	8	10	2-15/32	12.6	11.57	9.27	9.06	6.3	19	4.99	3.0	.63	6.1	9.24	3.74	.79	6	0.551	177

Pro-Series ADJUSTABLE TAILSTOCKS
-For 6&8" Rotary Indexing Fixture

MADE IN TAIWAN

Pro-Series REPLACEMENT PARTS
-FOR 8" INDEXING FIXTURE (Vertex Brand)

MADE IN TAIWAN

Pro-Series DIVIDING PLATES
-For 6&8" Rotary Indexing Fixture

- Suitable for Pro-Series rotary tables.
- Set includes: index plates, crank handle, 3pc screw, sector & U washer.

MADE IN TAIWAN

SET INCLUDES:

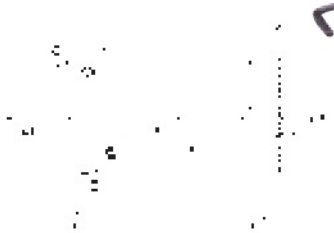
Plate A - 26, 30, 34, 38, 41, 44, 47, 51, 57, 28, 32, 37, 39, 43, 46, 49, 53, 59

Plate B - 62, 67, 71, 77, 81, 87, 91, 97, 63, 69, 73, 83, 89, 93, 99

Pro-Series 8" 4 JAW ROTARY CHUCK-SELF CENTERING

MADE IN TAIWAN

- 360 degrees vernier scale: smooth swivel motion and easy locking by screws
- 2 sets of jaws



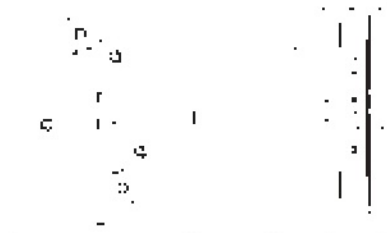
Unit: mm

A	A1	B	B1	D	E	F	H	I	J	K	M	Wt.
305	270	159	125	200	65	20	86	3-M10	75	34	18	67 lbs

Pro-Series 6" 3 JAW ROTARY CHUCK-SELF CENTERING

MADE IN TAIWAN

- 360 degrees vernier scale: smooth swivel motion and easy locking by screws
- 2 sets of jaws



Unit: mm

A	A1	B	B1	D	E	F	H	I	J	K	M	Wt.
245	233	139	110	160	45	15	70	3-M8	69	29	14	40 lbs

Pro-Series SEMI - UNIVERSAL DIVIDING HEAD SETS

- Provides high accuracy with little backlash for a smooth rotation.
- Features easy indexing of divisions from 2 to 50 and most numbers up to 380.
- 3 dividing plates enable you to use different sizes (included).
- Adjustable tailstock allows you to work on various size workpieces (included).
- Ruggedly constructed of hardened and ground worm gear.
- Set also includes head, center and backplate for mounting 3-jaw chuck.

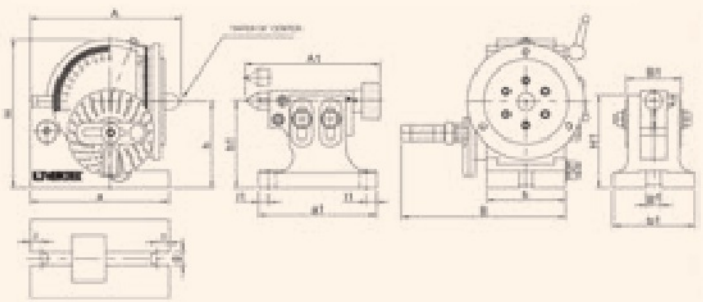
DIVIDING PLATE A B C

Numbers of Hole	Plate A	15	16	17	18	19	20
	Plate B	21	23	27	29	31	33
	Plate C	37	39	41	43	47	49

HHIP PRO-SERIES

OPTIONAL FRONT-MOUNT 3-JAW CHUCKS

Chuck Size	Item#
4"	3800-5820
5"	3800-5821
6"	3800-5822



SPECIFICATIONS	ITEM 3800-5810	ITEM 3800-5812
Swing:	7-1/2"	10"
Center Height(h):	3-15/16"	5-3/64"
Hole Through Spindle(dia.):	0.709"	0.787"
Spindle Taper:	2MT	3MT
A/B/H	7.44"/5.52"/6.30"	11.34"/6.14"/8.66"
a/b	6.30"/3.58"	8.16"/4.48"
Optional 3-Jaw Chuck:	4"/5"	5"/6"
Tailstock Dimension: (A1xb1xH1)	6.6"x3.3"x4.3"	7.5"x4.3"x5.4"
a1/B1	5.13"/3.16"	5.91"/3.16"
g=g1	33/64"	5/8"

Pro-Series UNIVERSAL DIVIDING HEAD SET

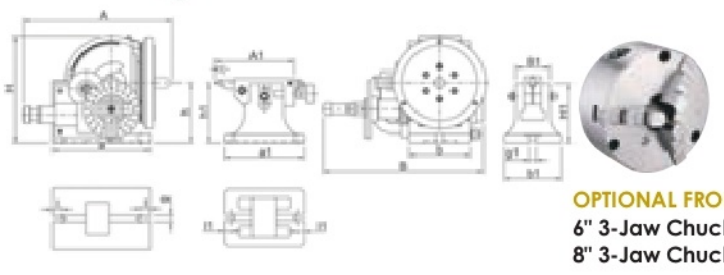
HHIP PRO-SERIES

- Ideal for easy indexing of divisions from 2 to 50 and most numbers from 52 to 380.
- Designed for all types of gear cutting.
- Worm and spindle are hardened and ground.
- Features spiral machining capability.
- Allows you to divide in any angle by the direct, indirect or differential methods with unique dividing head.
- Ratio between worm and worm gear: 40:1
- Features threaded spindle nose and 24 hole dividing plates with easy conversion to fast, direct indexing on numbers 2, 3, 4, 6, 8, 12, and 24.
- Complete set includes Dividing Head, Adjustable Tailstock, 3 Dividing Plates, 12 gears with 2 arms for differential indexing or transmitting machine table feed to worm shaft for spiral cutting.

MADE IN TAIWAN

DIVIDING PLATE A B C

Numbers of Hole	Plate A	15	16	17	18	19	20
	Plate B	21	23	27	29	31	33
	Plate C	37	39	41	43	47	49



MAX. VARIATION

True Running Center:.....0.0006"
True Running of Inside Taper of Dividing Spindle Measured at Spindle Nose:.....0.0006"
Alignment of Dividing Head & Tailstock Vertical & Horizontal Plane:.....0.0008"

SPECIFICATIONS

Swing:.....10-1/2"
Center Height (h):.....5.22'
Hole Through Spindle (dia.):....0.945'
Spindle Taper:.....4MT
A/B/H.....14.37" /10.71" /9.29'
a/b.....8.39' /5.28'
Optional 3-Jaw Chuck:.....6"/8"
Tailstock Dimension (A1xb1xH1):.....10.0" x 4.9" x 5.5"
a1.....6.89"
g=g1.....0.63"

OPTIONAL FRONT MOUNT CHUCKS

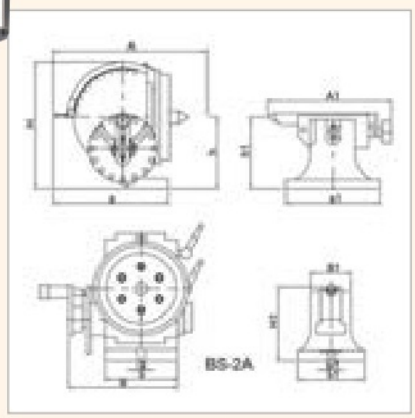
6" 3-Jaw Chuck (Item #3800-5822)
8" 3-Jaw Chuck (Item #3800-5823)

Pro-Series 10-1/2" SEMI-UNIVERSAL DIVIDING HEAD SET -WITHOUT CHANGING GEAR

HHIP PRO-SERIES

MADE IN TAIWAN

- **Set Includes:**
  A tail stock, a set of dividing plates, set of carrier clamps, 3-Jaw plate and center.



- Vertex BS-2A 10-1/2" Semi-Universal Dividing Head Set.
- Hole through the spindle is 0.945"
- Spindle Taper is MT4
- Dividing head can divide in any angle by the direct, indirect or other methods.
- Feature easy indexing of divisions from 2 to 50 and most numbers up to 380
- Hardened and ground spindle is rigidly held in a taper roller bearing.
- Ruggedly constructed hardened and ground worm gear
- The swivel head can be locked at any angle from 10 degrees below horizontal to 90 degrees vertical allowing for a precision fit to the base assuring smooth ratation
- Provides high accuracy with little backlash for a smooth ratation
- The included adjustable tailstock allows you to work on various size workpieces
- Threaded spindle nose and 24 hole dividing plate provides easy conversion to fast direct indexing on numbers 2, 3, 4, 6, 8, 12 and 24
- The included dividing plates enable you to use different sizes
- Set also includes head, center, dog and backplate for mounting a 3-jaw chuck
- Optional front mount 3-jaw chucks that are available include a 6" #3800-5822 and a 8" 3800-5823

MAX. VARIATION	
True Running Center:	0.0006"
True Running of Inside Taper of Dividing Spindle Measured at Spindle Nose:	0.0006"
Alignment of Dividing Head & Tailstock Vertical & Horizontal Plane:	0.0008"

SPECIFICATIONS	
Swing:	10-1/2"
Center Height (h):	5.22"
Hole Through Spindle (dia.):	0.945"
Spindle Taper:	MT4
A/B/H	11.22" /7.95" /9.33"
a/b	8.39" /5.28"
Optional 3-Jaw Chuck:	6"/8"
Tailstock Dimension (A1xb1xH1):	8.6" x 4.8" x 5.5"
a1	6.89"
g=g1	0.63"

OPTIONAL FRONT MOUNT CHUCKS

6" 3-Jaw Chuck (Item #3800-5822)
Machine To Adapter Plate To Fit.

8" 3-Jaw Chuck (Item #3800-5823)
Fits on Dividing Head-No Machining Required.

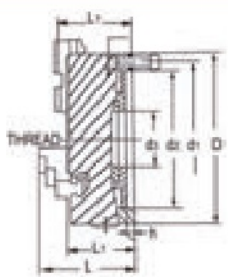
DIVIDING PLATE A B C

Numbers of Hole							
	Plate A	15	16	17	18	19	20
	Plate B	21	23	27	29	31	33
	Plate C	37	39	41	43	47	49

Pro-Series 3-JAW FRONT-MOUNT SELF-CENTER CHUCKS, PLAIN BACK

- Easily mount on table, dividing head, fixture, or indexer.
- Lathe chuck wrench supplied.

MADE IN TAIWAN



Front mount chucks are designed to be used with rotary tables dividing head and other devices where back mounting chucks can not be used.

Includes One Set of External Jaws & Internal Jaws

Item#	Chuck Size D (Inch/mm)	d1	(Inch) d2	Center Hole d3	L	L1	h	Thread Z-d	Gripping Range O.D. (mm)	I.D.(mm)
3800-5819	3/80	2.60	2.17	0.63	2.6	2.0	0.138	3-M6	2~70	24~64
3800-5820	4/100	3.31	2.83	0.87	2.9	2.2	0.138	3-M8	3~90	32~84
3800-5821	5/130	4.53	3.94	1.18	3.1	2.2	0.138	3-M8	3~110	35~100
3800-5822	6/160	5.59	5.12	1.77	3.7	2.6	0.197	3-M10	3~160	48~150
3800-5823	8/200	7.09	6.50	2.75	4.3	3.0	0.197	3-M12	4~180	56~170
3800-5824	10/250	8.86	8.11	3.15	4.7	3.2	0.197	3-M12	6~220	70~250

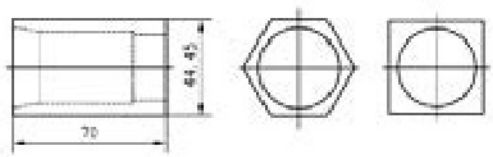
HEX / SQUARE ER COLLET BLOCKS

- Block Dimension: 1-3/4 x 1-3/4 x Height.
- For fast set-ups on CNC machines.
- For parallel, square or hex shapes as well as for cross hole drilling at 60°, 90° or 120°.
- Made of tool steel hardened and ground to .0005" flatness, squareness and parallelism.
- Through hole allows for long parts to be machined.
- May be used standing upright.
- Uses standard ER collets.
- ER nut included.

Item#	Shape	ER Collet	Block Height
3900-5123	Square	ER-25	2.7
3900-5124	Square	ER-32	2.8
3900-5125	Square	ER-40	3.2
3900-5127	Hex	ER-25	2.7
3900-5128	Hex	ER-32	2.8
3900-5129	Hex	ER-40	3.2

HEX & SQUARE COLLET BLOCK SET

- Capacity for standard 5C collets: 1/16" ~1-1/16".
- Overall Dimensions: 1-3/4" x 1-3/4" x 3-1/4".
- For fast set-ups on milling machines, lathes, surface grinders & drill presses.
- For parallel, square or hex shapes as well as for cross hole drilling at 60°, 90° or 120°.
- Made of tool steel hardened and ground to .0005" flatness, squareness and parallelism.



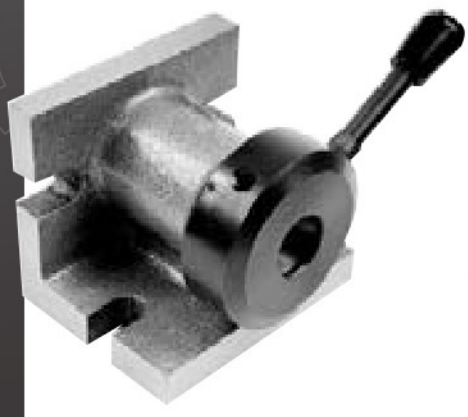
5 PC INCLUDES:
Square, Hex, Quick Acting Rings & Lever collet closer cam operated.

5C H/V ANGLE COLLET FIXTURE

- For any standard 5C collet
- Horizontal or vertical position.
- Lever movement to open or close collet.
- Base Size (horizontal): 5 x 4"
- Base Size (vertical): 5 x 3-5/8"
- Height (H/V): 3-5/8" /4"

5C COLLET NOT INCLUDED

5C H/V COLLET FIXTURE



- For any standard 5C collet up to 1-1/8".
- Can be used in either horizontal or vertical position.
- Lever movement to open or close collet.
- Base Size: 4-1/4" x 4-1/4".
- Height: 4-1/4".
- Weight: 12 lbs

ANGLE END MILL GRINDING FIXTURE

- This fixture takes 5C round collets for grinding end mills 1/16" ~ 1-1/8" .
- Shell mills can easily be held with straight shank arbors.
- Solid negative ball stops with 15° spacing fast & easy set-ups.
- Can be used for grinding 2-3-4-6-8 and 12 flute end mills.
- Clearance & relief angels are built into the base.
- Solid 2-1/2" X 4-1/2" base bottom ground for sure contact.
- Black oxide finish.
- 5C collet not included.

5C COLLET NOT INCLUDED

COLLET INDEX FIXTURES

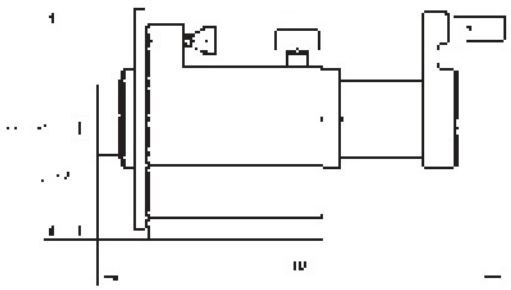
ER-32 PRECISION INDEXING SPIN JIG

- **Indexing and Grinding Fixture.**
- Uses ER-32 collets (range 1/16~13/16") for better gripping and accuracy.
- Extends the capabilities of Drill Presses, Suface Grinders, Gear Cutters and Milling Machines.
- Spindle hardened and ground with .0005" (T.I.R.) run-out.
- 10 vernier holes for 1° indexing.
- 2" spindle travel for flute grinding.
- 5" diameter index plate has 36 hole circle and graduated by 0 to 35 for direct indexing in 10° steps and is marked in 5° increments.
- Spindle lock for tightening collet.
- Base Footprint: 4.5x4" ground parallel to spindle.
- Weight: 14 lbs.

CENTER HEIGHT: 2.75"

NEW DESIGN USES ER-32 COLLETS

WRENCH INCLUDED



ER COLLET NOT INCLUDED

OPTIONAL TAILSTOCK

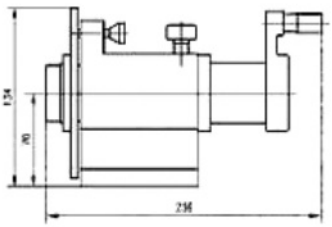
OPTIONAL ER32 COLLET SETS

HIGH PRECISION 5C INDEXING SPIN JIG

- Uses 5C Collets, 1 1/8" max. capacity. Extends the capabilities of Drill Presses, Surface Grinders, and Milling Machines. Vernier reads to 10 minute accuracy, .0004" ground lapped; 2" travel for flute grinding. Simple 1° indexing. Hardened and ground spindle. Index plate has 36 hole circle. Spindle run out within .0005"(T.I.R). Spindle lock & hole for tightening collet. Plate graduated by 10 to 360.
- Index plate with 36 holes for direct indexing in 10° steps and is marked in 5° increments.
- Base size: 5x5"
- Weight: 20 lbs.

CENTER HEIGHT: 2.76"

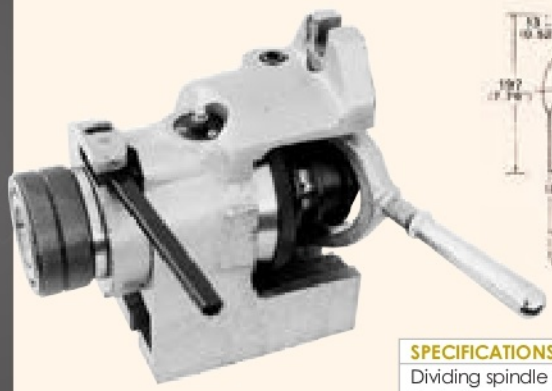
Optional Tailstock:
3900-2406

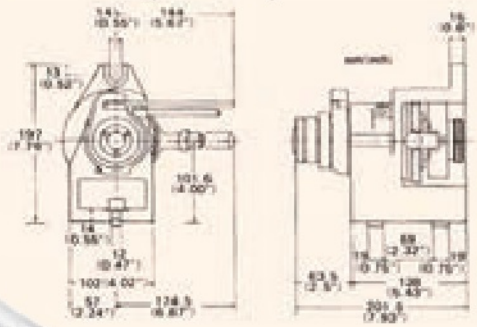


HIGH PRECISION 5C COLLET INDEXERS-Horizontal & Vertical

- Utilizes 5C collets.
- Spindle is manutactured with tapered seat in body frame.
- Lever operated collet closer with 100:1 leverage ratio.
- Front mounted ratchet control for rapid indexing.
- Index plate has 24 index locations (15° increments) that may be masked off for greater variety in applications).
- Single lever design.

DIVIDING SPINDLE CONCENTRICITY: MAX. VARIATION .0002"





Threaded spindle is hardened and ground (2-1/4"~8 TPI)

Optional Tailstock (adjustable 4-6"):
3900-2407...$188.20(E)

SPECIFICATIONS	VARIATION MAX.
Dividing spindle concentricity	0.0002"
Cylindrical center bore (per 1") concentricity	0.0008"
Spindle center line parallelism	0 .0008'
Base to face squareness	0.0008"
Center slot to dividing spindle concentricity	0.0008"
Lateral offset of center slot to dividing spindle	0.0008"

Pro-Series PARTS ARE INTERCHANGEABLE WITH PHASE II

5C EXPANDING COLLETS & SET

- Size Range: 0.250" - 1.937".
- Fits any standard 5-C spindle.
- Concentricity within .0005".
- Shoulder widths within .001".
- Effective expansion up to .006".
- Head : 1" length.
- Machinable.

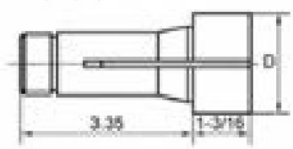
EASILY MACHINED

INDIVIDUALS

Item#	Size
3900-1627	.250~.468" (#1)
3900-1628	.437~.800" (#2)
3900-1629	.750~1.437" (#3)
3900-1630	.750~1.937" (#4)

5C CLUTCH COLLETS-STEP

- One-piece construction
- Spring-tempered to allow easy workpiece loading and removal
- Easily machined
- Fits all 5C closers and fixtures
- 1-3/16" head thickness



Item#	Size D
3900-1632	2"
3900-1633	3"
3900-1634	4"
3900-1635	5"
3900-1636*	6"

*Limited Supply

5C COLLETS & ACCESSORIES

30PC 5C COLLET RACK

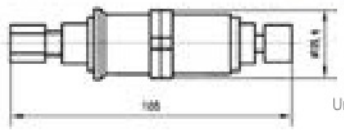
- Baked enamel paint finish.
- Hangs on wall or machine, or sets on a shelf or work bench.

HOLDS 30PC 5C COLLETS

FOOTPRINT: 12x9"

5C COLLET STOP WITH TIPS-UNIVERSAL

- Speeding up repeat machining cycle.
- Includes: 5C Collet Stop, 2 Spring Ejector Tips & 2 Static tips.
- Tips size under 1/4" & 5/8" diameter.



Unit: mm

5C ADJUSTABLE COLLET STOP

- Fully threaded adjustment screw.
- Thread size: 3/8" - 24.
- Fits collets with internal threads.

Unit: mm

5C COLLET WRENCH

- Simplifies insertion and removal of collets on the spindle noses of CNC turning machines.
- Steel head with comfort handle

5C ER-32 COLLET CHUCK

- 5C-ER32 collet chuck Milling Chuck Holder.
- Made with DIN6499B (0.0005") Run-Out Tolerance.
- Holds all ER32 collets.
- Drawbar : 5C collet standard.
- Hardened and precision ground.
- Half-moon Spanner included.

8PC COLLET RACK

- Holds 8 collets 5C, ER32 or others.
- Made from durable ABS material, heavy duty.
- Supplied with mounting hardware.
- 4 mounting holes: 3.5" and 5.5" apart.

COLLETS NOT INCLUDED

HARLINGEN® HIGH PRECISION 5C COLLETS

- Clamping nose HRC55, body HRC40 and thread HRC25.
- Roughness Ra 0.4
- Internal and external thread machining after heat treatment reduces deformation, burns and provides you with smooth threaded engagement.
- "STEP" Hardened and Ground Surface throughout protects the connection with spindle, also guarantees high accuracy, durability and long tool life.

Run-out accuracy
≤ 0.0006 INCHES at 3xD

MADE OF HIGH GRADE TOOL STEEL

Item#	Size
9742-3007	1/8"
9742-3008	9/64"
9742-3009	5/32"
9742-3010	11/64"
9742-3011	3/16"
9742-3012	13/64"
9742-3013	7/32"
9742-3014	15/64"
9742-3015	1/4"
9742-3016	17/64"
9742-3017	9/32"
9742-3018	19/64"
9742-3019	5/16"
9742-3020	21/64"
9742-3021	11/32"
9742-3022	23/64"
9742-3023	3/8"
9742-3024	25/64"
9742-3025	13/32"
9742-3026	27/64"
9742-3027	7/16"
9742-3028	29/64"
9742-3029	15/32"
9742-3030	31/64"

Item#	Size
9742-3031	1/2"
9742-3032	33/64"
9742-3033	17/32"
9742-3034	35/64"
9742-3035	9/16"
9742-3036	37/64"
9742-3037	19/32"
9742-3038	39/64"
9742-3039	5/8"
9742-3040	41/64"
9742-3041	21/32"
9742-3042	43/64"
9742-3043	11/16"
9742-3044	45/64"
9742-3045	23/32"
9742-3046	47/64"
9742-3047	3/4"
9742-3048	49/64"
9742-3049	25/32"
9742-3050	51/64"
9742-3051	13/16"
9742-3052	53/64"
9742-3053	27/32"
9742-3054	55/64"

5C ROUND COLLETS & SETS

- Made of high grade tool steel.
- Internal and external threaded.
- Hardened and precision ground.

Item#	Size (Inch)
3900-0011	1/16
3900-1101	5/64
3900-1102	3/32
3900-1103	7/64
3900-1104	1/8
3900-1105	9/64
3900-1106	5/32
3900-1107	11/64
3900-1108	3/16
3900-1109	13/64
3900-1110	7/32
3900-1111	15/64
3900-1113	1/4
3900-1114	17/64
3900-1115	9/32
3900-1116	19/64
3900-1117	5/16
3900-1118	21/64
3900-1119	11/32
3900-1120	23/64
3900-1121	3/8
3900-1122	25/64
3900-1123	13/32
3900-1124	27/64
3900-1125	7/16
3900-1126	29/64
3900-1127	15/32
3900-1128	31/64
3900-1129	1/2
3900-1130	33/64
3900-1131	17/32
3900-1132	35/64
3900-1133	9/16
3900-1134	37/64
3900-1135	19/32

Item#	Size(Inch)
3900-1136	39/64
3900-1137	5/8
3900-1138	41/64
3900-1139	21/32
3900-1140	43/64
3900-1141	11/16
3900-1142	45/64
3900-1143	23/32
3900-1144	47/64
3900-1145	3/4
3900-1146	49/64
3900-1147	25/32
3900-1148	51/64
3900-1149	13/16
3900-1150	53/64
3900-1151	27/32
3900-1152	55/64
3900-1153	7/8
3900-1154	57/64
3900-1155	29/32
3900-1156	59/64
3900-1157	15/16
3900-1158	61/64
3900-1159	31/32
3900-1160	63/64
3900-1161	1
3900-1162	1-1/64
3900-1163	1-1/32
3900-1164	1-3/64
3900-1165	1-1/16
3900-1166	1-5/64
3900-1167	1-3/32
3900-1168	1-7/64
3900-1169	1-1/8

Pro-Series 5C ROUND COLLET SET

- **Guaranteed T.I.R: <0.0005".**
- Made of high grade tool steel.
- Hardened and precision ground.
- Internal and external threaded.

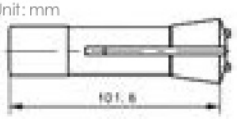
HHIP PRO-SERIES

5C EMERGENCY COLLETS

1/16"

- Used for holding soft or delicate work pieces without marring surfaces.
- Internal and external threaded.

Unit: mm



Item#	Material
3900-1611	Steel
3900-1612	Brass
3900-1613	Nylon

5C PRECISION SQUARE COLLETS

SQUARE

- Made of high grade tool steel.
- Hardened and precision ground.
- Internal and external threaded.

Item#	Size (Inch)
3900-1564	1/8
3900-1566	3/16
3900-1568	1/4
3900-1570	5/16
3900-1572	3/8
3900-1574	7/16
3900-1576	1/2
3900-1578	9/16
3900-1580	5/8
3900-1582	11/16
3900-1584	3/4

5C PRECISION HEX COLLETS

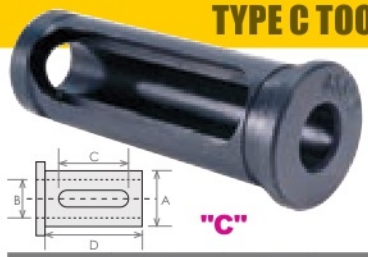
- Made of high grade tool steel.
- Hardened and precision ground.
- Internal and external threaded.

HEX

Item#	Size (Inch)
3900-1517	1/8
3900-1518	3/16
3900-1520	1/4
3900-1522	5/16
3900-1524	3/8
3900-1526	7/16
3900-1528	1/2
3900-1530	9/16
3900-1532	5/8
3900-1534	11/16
3900-1536	3/4
3900-1538	13/16
3900-1540	7/8

TOOL HOLDER BUSHINGS

TYPE C TOOL HOLDER BUSHINGS



"C"

- Made of high quality tool steel.
- Tool Holder Bushing for universal use on all CNC turning machines to adapt a wide variety of boring bars, drills, reamers and shank type tools.
- Hardened and precision ground to highest concentricity.

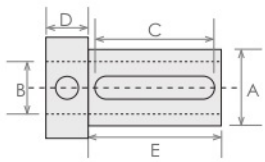
Item#	A O.D.	B I.D.	C Slot Length	D
3900-1911	3/4"	1/4	1-7/8"	2-1/4"
3900-1912		5/16		
3900-1913		3/8		
3900-1914		1/2		
3900-1915	1"	1/4	2-3/8"	2-3/4"
3900-1916		5/16		
3900-1917		3/8		
3900-1918		1/2		
3900-1919		5/8		
3900-2910		3/4		
3900-2911	1-1/4"	3/8	2-7/8"	3-1/4"
3900-2912		1/2		
3900-2913		5/8		
3900-2914		3/4		
3900-2915		7/8		
3900-2916		1		
3900-2917	1-1/2"	3/8	3"	3-3/8"
3900-2918		1/2		
3900-2919		5/8		
3900-2920		3/4		
3900-2921		7/8		
3900-2922		1		
3900-2923		1-1/4		
3900-2924	1-3/4"	1/2	3-1/8"	3-1/2"
3900-2925		5/8		
3900-2926		3/4		
3900-2927		7/8		
3900-2928		1		
3900-2929		1-1/4		
3900-2930		1-1/2		
3900-2931	2"	1/2	3-5/8"	4"
3900-2932		5/8		
3900-2933		3/4		
3900-2938		7/8		
3900-2934		1		
3900-2935		1-1/4		
3900-2936		1-1/2		
3900-2937		1-3/4		

TYPE Z TOOL HOLDER BUSHINGS

- Made of high quality tool steel
- Tool Holder Bushing for all type of N/C-CNC turning centers, turret lathes and chucks
- The elongated slots give the user a complete interchangeability with all brands of equipment
- Hardened and precision ground to highest concentricity.

Limited Supply!

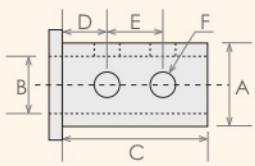
"Z"



Item#	A O.D.	B I.D.	C Slot Length	E	D
3900-3913	1-1/4"	5/8	2-5/8"	3"	5/8"
3900-3915		7/8			
3900-3921	1-1/2"	7/8	2-7/8"	3-1/4"	3/4"
3900-3924	1-3/4"	1/2	3-1/8"	3-1/2"	3/4"
3900-3925		5/8			
3900-3926		3/4			
3900-3927		7/8			
3900-3928		1			
3900-3929		1-1/4			
3900-3930		1-1/2			
3900-3931	2"	1/2	3-3/8"	3-3/4"	3/4"
3900-3932		5/8			
3900-3934		7/8			
3900-3935		1			
3900-3936		1-1/4			
3900-3938		1-3/4			

TYPE J TOOL HOLDER BUSHINGS

"J"



2- Holes
4- Holes

- Made of high quality tool steel Tool Holder.
- Hardened and precision ground to highest concentricity.
- Bushing has clearance holes so that you can clamp directly on the tool with set screws for positive alignment of the cutting edge of the tool.

Limited Supply!

Item#	A O.D.	B I.D.	C	E	D	F
3900-1902	3/4"	5/16	1-1/2"	13/16"	3/8"	3/8"
3900-1905	1"	3/8	1-3/4"	7/8"	7/16"	5/8"
3900-1909	1-1/4"	3/8	2-1/8"	1"	5/8"	5/8"
3900-1910		1/2				
3900-4911		5/8				
3900-4913		7/8				
3900-4917	1-1/2"	3/8	2-1/2"	1-1/8"	11/16"	7/8"
3900-4918		1/2				
3900-4919		5/8				
3900-4921		7/8				

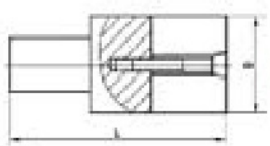
Item#	A O.D.	B I.D.	C	E	D	F
3900-4924	1-3/4"	1/2	3"	1-1/4"	3/4"	7/8"
3900-4925		5/8				
3900-4926		3/4				
3900-4927		7/8				
3900-4928		1				
3900-4929		1-1/4				
3900-4930		1-1/2				
3900-4932	2"	5/8	3-1/2"	1-1/2"	3/4"	1"
3900-4933		3/4				
3900-4934		7/8				
3900-4936		1-1/4				
3900-4938		1-3/4				

EXPANDING ARBORS & SET

OPERATON:

- Chuck arbor in machine to be used.
- Tighten expanding screw so that arbor expands .005".
- Machine arbor to length and size required.
- Loosen expanding screw.
- Position part on arbor and tighten expanding screw.

IMPROVED QUALITY



SET INCLUDES:

- (8) Sizes 1/4 to 1-1/4" arbors with alloy wrenches in a handy wooden stand.

INDIVIDUAL ARBORS

Item#	Size, D	Length, L
3902-4016	1/4"	3"
3902-4018	3/8"	3"
3902-4020	1/2"	3"
3902-4022	5/8"	3"
3902-4024	3/4"	4"
3902-4026	7/8"	4"
3902-4028	1"	4"
3902-4030	1-1/4"	4"

LATHE AND OD GRINDER MANDRELS

Designed For Setting-Up Accurately Bored Or Reamed Blanks And Castings

- Standard taper: .0005" per 1".
- Sizes under 1" are .0005" undersize on smaller end.
- Sizes 1-1/16" to 3" are .001" undersized on smaller end.
- Made of tool steel hardened and ground.

Unit: Inch

* Limited Supply

Dia. D	OAL L	Item#
1/8	2-1/2	3902-2008
5/32	3	3902-2010
3/16	3	3902-2012
7/32	3-3/4	3902-2014
1/4	3-3/4	3902-2016
9/32	4	3902-2018
5/16	4	3902-2020
11/32	4-1/4	3902-2022
3/8	4-1/4	3902-2024
13/32	4-1/4	3902-2026
7/16	4-1/4	3902-2028
15/32	5	3902-2030
1/2	5	3902-2032
17/32	5-1/4	3902-2034
9/16	5-1/4	3902-2036

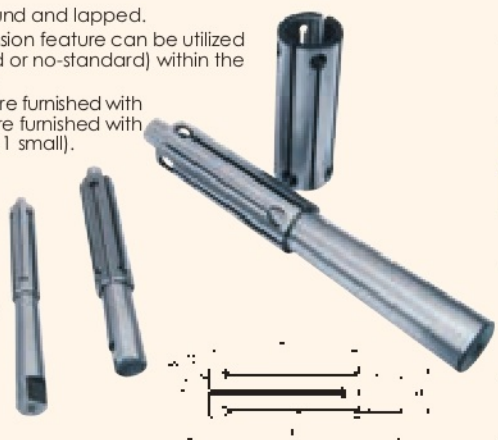
Dia. D	OAL L	Item#
19/32	5-1/2	3902-2038
5/8	5-1/2	3902-2040
21/32	5-3/4	3902-2042
11/16	5-3/4	3902-2044
23/32	6	3902-2046
3/4	6	3902-2048
25/32	6-1/4	3902-2050
13/16	6-1/4	3902-2052
27/32	6-1/2	3902-2054
7/8	6-1/2	3902-2056
29/32	6-3/4	3902-2058
15/16	6-3/4	3902-2060
31/32	7	3902-2062
1	7	3902-2100
1-1/32	7-1/4	3902-2102

Dia. D	OAL L	Item#
1-1/16	7-1/4	3902-2104
1-3/32	7-1/2	3902-2106
1-1/8	7-1/2	3902-2108
1-5/32	7-3/4	3902-2110
1-3/16	7-3/4	3902-2112
1-7/32	8	3902-2114
1-1/4	8	3902-2116
1-9/32	8-1/4	3902-2118
1-5/16	8-1/4	3902-2120
1-11/32	8-3/4	3902-2122
1-3/8	8-1/2	3902-2124
1-7/16	8-3/4	3902-2128
1-15/32	9	3902-2130
1-1/2	9	3902-2132
1-9/16	9-1/4	3902-2136

Dia. D	OAL L	Item#
1-5/8	9-1/2	3902-2140
1-11/16	9-3/4	3902-2144
1-3/4	10	3902-2148
1-13/16	10-1/4	3902-2152
1-7/8	10-1/2	3902-2156
1-15/16	10-3/4	3902-2160
2	11	3902-2200
2-1/8	11-1/2	3902-2208
2-1/4	12	3902-2216
2-3/8	12	3902-2224
2-1/2	12-1/2	3902-2232
2-5/8	12-1/2	3902-2240*
2-3/4	13	3902-2248
2-7/8	13	3902-2256
3	13	3902-2300

EXPANDING MANDRELS & SETS

- Made of high grade tool steel
- Precision ground and heat treated for maximum concentricity and holding power.
- Center holes are ground and lapped.
- The automatic expansion feature can be utilized on any bore (standard or no-standard) within the range of the mandrel.
- Sizes up t 1" capacity are furnished with 1 sleeve: larger sizes are furnished with 2 sleeves (1 large and 1 small).
- Arbors are tapered , sleeves are flexible and size is obtained by moving sleeve along arbor.
- A range from 1/2" thru 2" by .0001" can be covered by a total of 8 mandrels.



REPLACEMENT SLEEVES AVAILABLE !

EXPANDING MANDREL SETS

Item#	Size Range (D)	No. of Mandrels
3902-3070	1/2 ~ 1"	5
3902-3072	1 ~ 2"	3
3902-3074	1/2 ~ 2"	8
3902-3076	2~2-3/4"	3
3902-3078	2-3/4~3-3/4"	3

INDIVIDUAL EXPANDING MANDRELS

Item#	Size Range D	Length of Arbor (L)	Length of Sleeve (H)	Sleeves Furnished
3902-3050	1/2~9/16"	5"	2-1/2"	1
3902-3052	9/16~21/32"	6"	2-3/4"	1
3902-3054	21/32~3/4"	7"	2-3/4"	1
3902-3056	3/4~7/8"	7"	3-1/4"	1
3902-3058	7/8~1"	7"	3-1/4"	1
3902-3060	1~1-1/4"	9"	4"	2
3902-3062	1-1/4~1-1/2"	9"	4"	2
3902-3064	1-1/2~2"	11-1/2"	5"	2

SPECIFICATIONS & LATHE CHUCK MOUNTING DIMENSIONS

LATHE CHUCK MOUNTING TYPES

American Standard "A" Series Spindle

- X Dimension refers to outside diameter of spindle nose.

Spindle	**A5**	**A6**	**A7**
X=	3-1/4	4-3/16	5-1/2
Spindle	**A11**	**A15**	**A20**
X=	7-3/4	11-1/4	16-1/4

Camlock "D"Series Spindle

- X Dimension refers to outside diameter of spindle nose.

Spindle	**D1-3**	**D1-4**	**D1-5**
X=	3-5/8	4-5/8	5-3/4
Spindle	**D1-6**	**D1-8**	**D1-11**
X=	7-1/8	8-7/8	11-3/4

Long Taper Key Drive "L" Series Spindle

- X Dimension refers to largest portion of taper.

Spindle	**L00**	**L0**	**L1**
X=	2-3/4	3-1/4	4-1/8
Spindle	**L2**	**L3**	
X=	5-1/4	6-1/2	

Threaded Series Spindle

- X Dimension refers to major diameter of thread.

X= **Dia.(inch) - Pitch**		
3/4~16	1~10	2-1/4~8
1/2~24	1-1/2~8	2-3/8~6
1/2~20	1-3/4~8	2-3/4~8
1~8		

BACK PLATE MOUNTING INSTRUCTIONS

Chuck Mounting Information: Using Semi-Finished Plates - For Standard Flat Back Lathe Chucks:

NOT for "Adjustable Run-Out" models (see separate instructions). When using a Chuck Adapter Plate to mount a flat back lathe chuck:

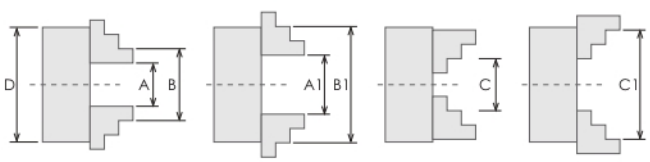
1. The lathe must be levelled with a precision level, this assures machining accuracy.
2. Adapter plate or chuck plate is to be mounted on lathe spindle.
3. A skim facing cut across the full face of the adaptor must be made. This assures that the face is at 90*to the centerline of the lathe spindle.
4. The chuck plate has a boss onto which the recess in back of the chuck must mount. Turn the boss to fit tightly into the chuck body. The accuracy of this operation is directly relative to best results.
5. Turn the O.D. of chuck plate to match the chuck - not always the same size of the chuck body, especially with 4 jaw independent chucks.
6. In most cases the chuck has threaded holes in the chuck body, to accept mounting bolts, or the chuck plate has threaded holes, for chucks having through holes in the body for front insertion. In some instances it may be necessary to transfer hole locations and drill clearance holes.
7. "A" type adaptors come in two versions: A-1 has two bolt circles(inner & outer), A-2 has a single outer bolt circle of tapped holes. The chuck adaptor is fastened to spindle separately, then the chuck is fastened to the plate.
8. Lathes having threaded spindle noses follow similar procedures 1 thru 6.

Chuck Mounting Information: Using Zero-Set Mounting Plates:

This type of chuck is designed so that the chuck body can be moved by utilizing adjusting screws. A ground pin is held firmly in the chuck mounted on the lathe. The pin is trammed with a test indicator and the adjusting screws used to correct the run-out. The design of the chuck adaptor permits the chuck adjusting screws to contact an extended boss on the plate, facilitating adjustment. These adaptors are to be "zeroed in" prior to actually mounting the chuck by taking a skim facing cut across the flange. All other dimensions should be compared to the back of the specific chuck and machined accordingly, if necessary. Once the mounted chuck has been "zeroed-in" in all respects, the chuck must be "locked" into the adjusted position. Double check with ground pin and test indicator.

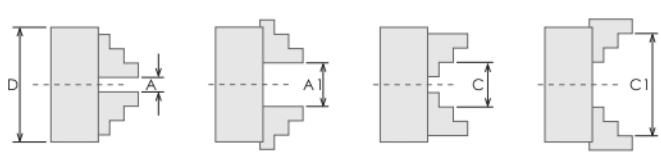
LATHE CHUCK CLAMPING RANGE

Self-Centering Chucks



Chuck Size Inch/MM	Internal Jaw Clamping Range A-A1 (MM)	Internal Jaw Jamming Range B-B1 (MM)	External Jaw Clamping Range C-C1 (MM)
3/80	2-22	25-70	22-63
4/100	2-30	30-90	30-80
5/125	2.5-40	38-125	38-110
6/160	3-55	50-160	55-145
8/200	4-85	65-200	65-200
10/250	6-110	80-250	90-250
12/315	10-140	95-315	100-315
15/400	15-210	120-400	120-400
20/500	25-280	150-500	150-500

Independent Chucks



Chuck Size Inch/MM	Internal Jaw Clamping Range A-A1 (MM)	External Jaw Clamping Range C-C1 (MM)
3/80	5-35	35-80
4/100	6-45	40-100
5/125	7-57	48-125
6/160	8-80	50-160
8/200	10-100	63-200
10/250	15-130	80-250
12/315	20-170	100-315
15/400	25-250	118-400
20/500	35-300	120-500

HARLINGEN® PREMIUM LATHE CHUCKS - ADVANTAGES

Radial Runout
≤ 0.002 inches

• CHUCK BODY

Body is entirely made of wear-resisting semi-steel No.40/No.45 (ASTM) providing a higher hardness at HB190-220 compared to other brands using HT250 cast iron with hardness of HB180-220.

• COVER PLATE

High quality No.35 (ASTM) is used to achieve a higher accuracy, strength and extended tool life. Competitors use HT150 cast iron or engineering plastics as a substitute.

• SOLID JAWS

Jaws are made of carbon 1045 (ASTM) steel and hardened. Pressed individually to ensure precise fit, powerful clamping performance and each jaw is interchangeable while maintaining accuracy.

• H-GROOVE

Specific machine and fixtures have been adopted to process H-Groove simultaneously so the clamping accuracy is guaranteed.

• PINIONS

Made of 20CrMnTi, quenching procedure to enhance wear-resistance and strength.

• SCROLL PLATE

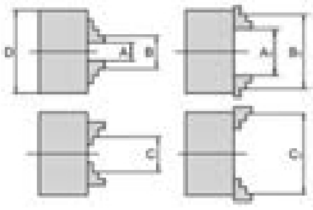
Made of 5140 (ASTM) to enhance wear resistance and strength. Hardened and precision machined. Scroll face threads are processed with high accuracy CNC machining which improves self-centering performance.

• INSPECTION REPORT

Each chuck body has its own ID and 100% inspected with trackable data.

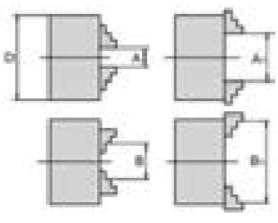
Clamping Range For Self-Centering Chucks

Size	Internal Jaws		External Jaws
	Clamping Range A-A1	Jamming Range B-B1	Clamping Range C-C1
3"	0.08"-0.87"	0.98"-2.76"	0.87"-2.48"
4"	0.08"-1.18"	1.18"-3.54"	1.18"-3.15"
5"	0.1"-1.57"	1.5"-4.92"	1.5"-4.33"
6"	0.12"-2.17"	1.97"-6.3"	2.17"-5.71"
8"	0.16"-3.35"	2.56"-7.87"	2.56"-7.87"



Clamping Range For Independent Chucks

Size	Internal Jaws	External Jaws
	Clamping Range A-A1	Clamping Range B-B1
3"	0.2"-1.38"	1.38"-3.15"
4"	0.24"-1.77"	1.57"-3.94"
5"	0.28"-2.24"	1.89"-4.92"
6"	0.31"-3.15"	1.97"-6.3"
8"	0.39"-3.94"	2.48"-7.87"



3-JAW PLAIN BACK LATHE CHUCKS

3-JAW SELF-CENTERING LATHE CHUCKS -PLAIN BACK

- Body made of high quality semi-steel.
- Hardened and ground.
- Lathe chuck wrench supplied.

PLAIN BACK

2 SETS OF HARD JAWS (INTERNAL AND EXTERNAL)
1 SET OF MOUNTING SCREWS INCLUDED

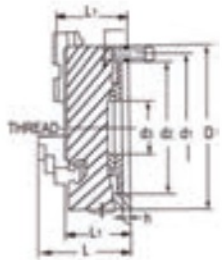
Item#	Size D	(Inch) D1	D2	h	H	Z-d	Center Hole	Max. RPM	T.I.R
3900-0031	3"	2.17	2.6	0.14	1.97	3-M6	0.630	4000	.003
3900-0032	4"	2.83	3.3	0.14	2.36	3-M8	0.866	3500	.003
3900-0033	5"	3.94	4.17	0.14	2.36	3-M8	1.181	3000	.003
3900-0035	6"	5.15	5.6	0.20	2.56	3-M8	1.575	2500	.003
3900-0037	8"	6.50	7.1	0.20	2.95	3-M10	2.559	2000	.004
3900-0038	10"	8.11	8.9	0.20	3.15	3-M12	2.756	1600	.004
3900-0040	12"	10.71	11.65	0.48	3.54	3-M16	3.937	1200	.005
3900-0039	15"	12.80	13.75	0.24	6.13	3-M16	5.709	1200	.005

Pro-Series 3-JAW FRONT-MOUNT SELF-CENTER CHUCKS -PLAIN BACK

- Easily mount on table, dividing head, fixture, or indexer.
- Lathe chuck wrench supplied.

HHIP PRO-SERIES

MADE IN TAIWAN



Brand: VERTEX

Front mount chucks are designed to be used with rotary tables dividing head and other devices where back mounting chucks can not be used.

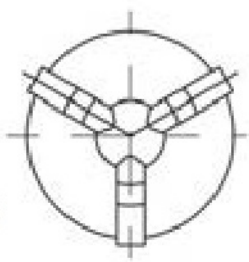
With One Set of External Jaws & Internal Jaws

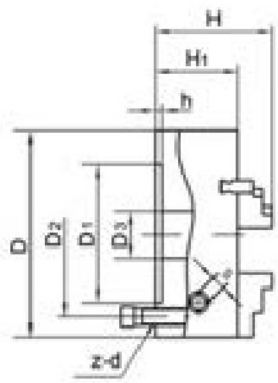
Item#	Chuck Size D (Inch/mm)	(Inch) d1	d2	Center Hole d3	L	L1	h	Thread Z-d	Gripping Range O.D. (mm)	I.D.(mm)
3800-5819	3/80	2.60	2.17	0.63	2.6	2.0	0.138	3-M6	2~70	24~64
3800-5820	4/100	3.31	2.83	0.87	2.9	2.2	0.138	3-M8	3~90	32~84
3800-5821	5/130	4.53	3.94	1.18	3.1	2.2	0.138	3-M8	3~110	35~100
3800-5822	6/160	5.59	5.12	1.77	3.7	2.6	0.197	3-M10	3~160	48~150
3800-5823	8/200	7.09	6.50	2.75	4.3	3.0	0.197	3-M12	4~180	56~170
3800-5824	10/250	8.86	8.11	3.15	4.7	3.2	0.197	3-M12	6~220	70~250

HARLINGEN® 3-JAW SELF-CENTERING LATHE CHUCKS -PLAIN BACK

- 2 sets of jaws
  Lathe chuck wrench and
  1 set of mounting screws included

See page 284 for Advantages!





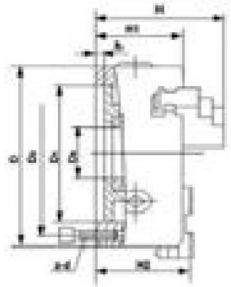
Item#	D	D1	D2	D3	H	H1	h	Wrench S	Screw	Max. Input Torque Nm	Max. Speed r/min	Weight (Lbs.)
9712-1105	3"	2.17"	2.6"	0.63"	2.6"	1.97"	0.14"	0.31"	3-M6	40	4000	4.2
9712-1106	4"	2.83"	3.3"	0.87"	2.93"	2.17"	0.14"	0.31"	3-M8	60	3500	7.1
9712-1107	5"	3.74"	4.25"	1.18"	3.3"	2.28"	0.16"	0.39"	3-M8	100	3000	11
9712-1108	6"	5.12"	5.6"	1.57"	3.74"	2.6"	0.2"	0.39"	3-M8	160	2500	19.4
9712-1109	8"	6.5"	7.09"	2.56"	4.29"	2.95	0.2"	0.47"	3-M10	160	2000	34.2

3-JAW (TOP REVERSIBLE JAWS) SELF-CENTERING CHUCKS -PLAIN BACK

See page 289 & 290 for back plates

- Made of high quality steel.
- Hardened and ground.
- Lathe chuck wrench supplied.

TOP JAWS REVERSIBLE



Item#	Size D	D1	D2	(Inch) h	A	Z-d	Center Hole	Max. RPM	T.I.R.
3900-3401	6"	5.12	5.60	0.20	2.5	3-M8	1.575	2500	.003
3900-3402	8"	6.50	7.09	0.20	3.0	3-M10	2.559	2000	.004
3900-3403	10"	8.10	8.90	0.20	3.3	3-M12	3.150	1600	.004
3900-3412	12"	10.70	11.66	0.24	4.2	3-M16	3.937	1200	.005
3900-3415	15"	12.80	13.78	0.24	4.3	3-M16	5.320	1000	.005
3900-3420	20"	17.32	18.31	0.24	5.0	6-M16	8.268	800	.006

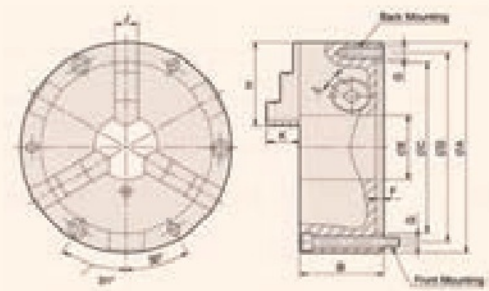
3-JAW FRONT-MOUNT (TOP REVERSABLE JAWS) SELF-CENTERING CHUCKS -PLAIN BACK

- Easily mount on table, fixture, or indexer.
- Made of high quality steel.
- Hardened and ground.
- Lathe chuck wrench supplied.

SQUARE & PARALLEL .0002"

TOP JAWS REVERSIBLE

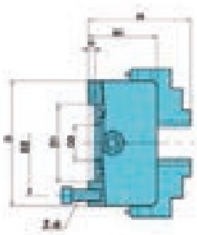
Front mount chucks are designed to be used with rotary tables and other devices where back mounting chucks can not be used.



Item#	Chuck Size A	D	(Inch) C	B	Center Hole,E	G	Max. RPM	T.I.R.
3900-3430	6"	5.51	5.12	2.60	1.575	3-M8	2500	.003
3900-3432	8"	6.93	6.30	3.00	2.559	3-M10	2000	.004
3900-3434	10"	8.82	7.87	3.42	3.150	3-M12	1600	.004
3900-3436	12"	11.26	10.24	3.86	3.937	3-M16	1200	.005

6-JAW SELF-CENTERING LATHE CHUCKS -PLAIN BACK

- Excellent for holding and machining thin walled workpieces.
- Made of high grade semi-steel.
- Self centering jaws, hardened and precision ground.
- 1 set of mounting screws included.
- Adjusting wrench supplied.
- .003" T.I.R
- One set of internal solid jaws.



PLAIN BACK

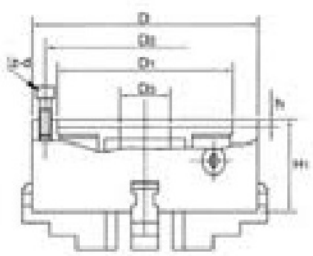
*Limited Supply

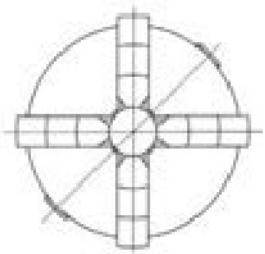
Item#	Chuck Size	(INCH) D	D1	D2	h	H1	H	Z-d	Center Hole D3	Max. RPM	CLAMPING RANGE Internal Jaws	External Jaws
3900-4550	4	4.4	3.15	3.74	0.14	2.30	4.1	3-M8	1.26	3500	2.0-30mm	30-80mm
3900-4552	5	5.1	3.94	4.53	0.14	2.40	3.4	3-M8	1.38	3000	4-40mm	40-130mm
3900-4555*	6	6.3	5.12	5.60	0.20	2.60	3.7	3-M8	1.77	2500	5-55mm	50-160mm
3900-4558*	8	7.9	6.50	7.09	0.20	3.00	4.3	3-M10	2.56	2000	6-85mm	65-200mm
3900-4559*	10	9.8	8.11	8.96	0.20	3.00	4.7	3-M12	3.15	1600	7.5-110mm	80-250mm

SELF CENTERING LATHE CHUCKS

4-JAW SELF-CENTERING SCROLL CHUCKS - PLAIN BACK

- Made of high grade tool steel.
- Universal scroll chucks.
- 2 sets of solid jaws included (ID &OD).
- Chuck wrench included.





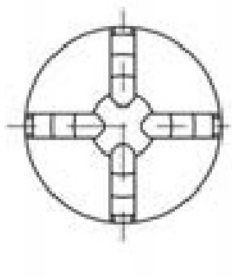
PLAIN BACK

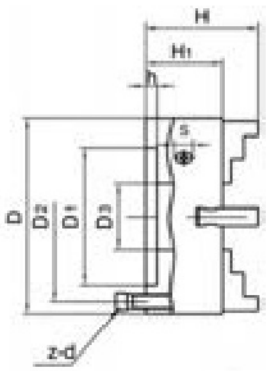
Item#	Chuck Size D	D1	D2	(Inch) h	H1	H	Z-d	Center Hole D3	Max. RPM	T.I.R.
3900-0423	3	2.165	2.598	.14	1.97	2.6	3-M6	0.630	4000	.003
3900-0424	4	2.835	3.307	.14	2.17	3.0	3-M8	0.866	3500	.003
3900-0425	5	3.740	4.252	.16	2.28	3.3	3-M8	1.181	3000	.003
3900-0426	6	5.118	5.591	.20	2.56	3.8	3-M8	1.772	3000	.003
3900-0428	8	6.495	7.087	.20	2.95	4.5	3-M10	2.559	2000	.004
3900-0430	10	8.110	8.898	.20	3.54	4.9	3-M12	3.150	1600	.005
3900-0432	12	10.236	11.220	.24	3.74	5.6	3-M16	3.937	1200	.005

HARLINGEN® 4-JAW SELF-CENTERING LATHE CHUCKS -PLAIN BACK

- 2 SETS OF JAWS (ID & OD)
- LATHE CHUCK WRENCH AND 1 SET OF MOUNTING SCREWS INCLUDED

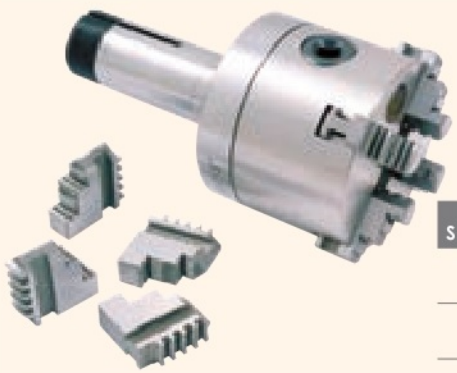
See page 284 for Advantages!





Item#	D	D1	D2	D3	H	H1	h	Wrench S	Screw	Weight (Lbs.)
9713-2110	3"	2.17"	2.6"	0.63"	2.6"	1.97"	0.14"	0.31"	3-M6	4.4
9713-2101	4"	2.83"	3.31"	0.87"	2.87"	2.11"	0.14"	0.31"	3-M8	6.6
9713-2102	5"	3.74"	4.25"	1.18"	3.31"	2.28"	0.16"	0.39"	3-M8	11
9713-2103	6"	5.12"	5.59"	1.57"	3.74"	2.56"	0.20"	0.39"	3-M8	19.4

5C MOUNT SELF-CENTERING 3 & 4-JAW LATHE CHUCKS



- Quick set up in fixtures and 5C spindles.
- Supplied with chuck wrench.
- T.I.R. 0.0006".
- Chuck jaws are self centering, scroll type.
- 5C adapter with standard internal and external threads.

Item#	Chuck Size	Jaw
3900-4701	3"	3-Jaw
3900-4710	3"	4-Jaw
3900-4702	4"	3-Jaw
3900-4711	4"	4-Jaw

2 SETS OF SOLID STEEL JAWS (INTERNAL AND EXTERNAL)

SPECIFICATION	Chuck Size	Outside Diameter (Clamp Range)	Inside Diameter (Jam Range)	Hole thru. 5C Adapter	Hole throu. Chuck
3-JAW	3"	0.079~2.480"	0.964~2.756"	0.75"	0.630"
	4"	0.079~3.150"	1.181~3.543"	0.75"	0.866"
4-JAW	3"	.062~2.50"	.700~2.50"	0.75"	0.800"
	4"	.062~3.00"	.900~3.50"	0.75"	0.950"

4-JAW INDEPENDENT LATHE CHUCKS -PLAIN BACK

- Body made of high quality semi-steel.
- Hardened and ground.
- 1 set of mounting screws included.
- Reversible individual adjusting jaws.
- Adjusting wrench supplied.

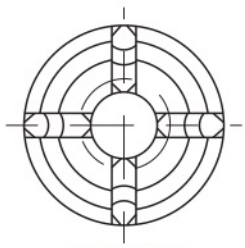
PLAIN BACK

Designed to grip round or odd shaped work.

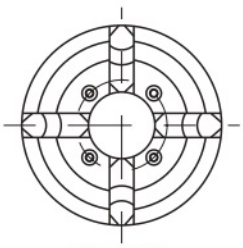
Item#	Size D	D1	D2	(Inch) h	H	Z-d	Center Hole
3900-0413	3"	2.17	2.60	0.12	1.65	3-M6	0.630
3900-0414	4"	2.83	3.30	0.14	2.13	4-M8	0.866
3900-0415	5"	3.74	4.25	0.18	2.21	4-M8	1.180
3900-0041	6"	2.56	3.74	0.20	2.56	4-M10	1.772
3900-0042	8"	3.15	4.41	0.24	2.95	4-M10	2.205
3900-0043	10"	4.33	5.12	0.24	3.15	4-M12	3.150
3900-0046	12"	5.51	6.50	0.24	3.54	4-M16	3.543
3900-0048	16"	7.87	8.94	0.39	4.13	4-M16	3.937

HARLINGEN® 4-JAW INDEPENDENT LATHE CHUCKS -PLAIN BACK

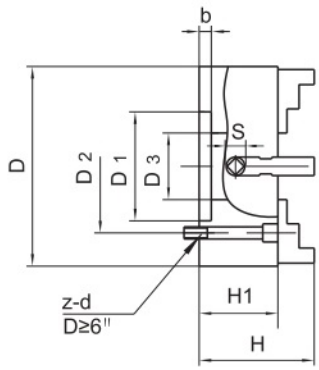
6 & 8" SHOWN



D=3,4&5"



D=6&8"



- Reversible jaws
- Lathe chuck wrench and 1 Set of mounting screws included

See page 284 for Advantages!

6&8" chucks are provided with thru-hole for easily mounting on table, dividing head, fixture, or indexer.

Item#	D	D1	D2	D3	H	H1	h	Wrench S	Screw	Max. Input Torque Nm	Max. Speed r/min	Weight (Lbs.)
9713-1101	3"	2.17"	2.6"	0.87"	2.2"	1.65"	0.14"	0.31"	4-M6	25	4000	5.5
9713-1102	4"	2.83"	3.30"	0.98"	2.13"	2.91"	0.14"	0.31"	4-M8	30	3500	6.6
9713-1103	5"	3.74"	4.25"	1.18"	3.07"	2.2"	0.18"	0.39"	4-M8	50	3000	11
9713-1104	6"	2.56"	3.74"	1.77"	3.66"	2.56"	0.2"	0.39"	4-M10	70	2500	19.8
9713-1105	8"	3.15"	4.41"	2.2"	4.21"	2.95"	0.24"	0.47"	4-M10	100	2000	33

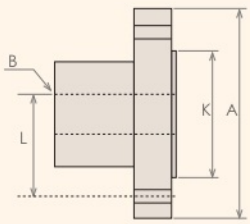
5C 4-JAW INDEPENDENT LATHE CHUCKS

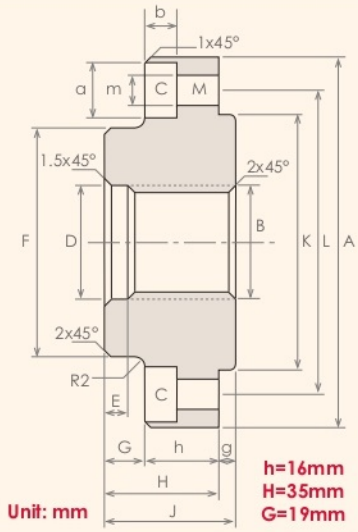
- Quick set up in fixtures and 5C spindles.
- Supplied with 1 set of reversible jaws.
- T.I.R. 0.0006".
- 5C adapter with standard internal and external threads.
- Supplied with chuck wrench.

Chuck Size	Outside Diameter (Clamp Range)	Inside Diameter (Jam Range)	Hole thru. 5C Adapter	Hole throu. Chuck
3"	.062~2.50"	.700~2.50"	0.75"	0.63"
4"	.062~3.00"	.900~3.50"	0.75"	0.86"

THREADED BACKPLATES FOR LATHE CHUCKS -With Bolt HOLE

- Fits most plain back chucks.
- Made of high grade casting steel.
- Assembly instructions included.





h=16mm
H=35mm
G=19mm

Unit: mm

THREADED MOUNT

For 3-Jaw Chucks

Item#	Chuck Size D
3900-3107	3
3900-3108	3
3900-3109	3
3900-3110	3
3900-3111	3
3900-3112	3
3900-3210	4
3900-3211	4
3900-3212	4
3900-3215	4

For 4-Jaw Chucks

Item#	Chuck Size D
3900-4129	3
3900-4130	3
3900-4131	3
3900-4132	3
3900-4133	3
3900-4141	4
3900-4142	4
3900-4143	4

Item#	Chuck Size	Body Diameter A	Thread B	Bolt Hole C	Reg Dia D	Reg Len E	Hub Dia F	Boss Len g	All Len J (g+H)	Boss Dia K(mm/Inch)	Bolt Cir L (mm/Inch)	Bolt M	a	b	m
3900-3107	3"	80	3/4"~16	3	3/4"	4	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3108	3"	80	1/2"~24	3	1/2"	4	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3109	3"	80	1/2"~20	3	1/2"	4	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3110	3"	80	1"~8	3	1"	5	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3111	3"	80	1"~10	3	1"	5	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3112	3"	80	1-1/2"~8	3	1-1/2"	6	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-4129	3"	80	1/2"~20	4	1/2"	4	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-4130	3"	80	3/4"~16	4	3/4"	4	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-4131	3"	80	1"~8	4	1"	5	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-4132	3"	80	1"~10	4	1"	5	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-4133	3"	80	1-1/2"~8	4	1-1/2"	6	50	3	38	55.5/2.2	66/2.6	M6	12	8	6.5
3900-3210	4"	100	1"~8	3	1"	5	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-3211	4"	100	1"~10	3	1"	5	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-3212	4"	100	1-1/2"~8	3	1-1/2"	6	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-4141	4"	100	1"~8	4	1"	5	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-4142	4"	100	1"~10	4	1"	5	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-4143	4"	100	1-1/2"~8	4	1-1/2"	6	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5
3900-3215	4"	100	M39x4	3	1-1/2"	5	66	3.5	38.5	72.5/2.9	84/3.3	M8	14	9	8.5

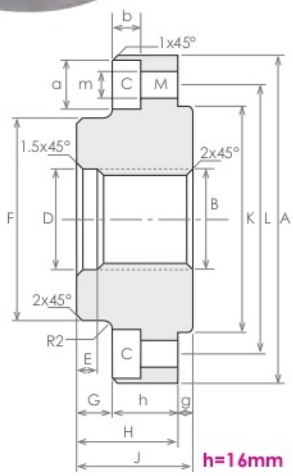
THREADED & BLANK BACKPLATES FOR LATHE CHUCKS -NO BOLT HOLE

- Made of high grade casting steel.

NO BOLT HOLE BACKPLATES MACHINING REQUIRED BEFORE MOUNTING TO ENSURE CONCENTRICITY

For 3&4-Jaw Chucks

Item#	Chuck Size D	Thread Z-d	Body Diameter A	Thread B	Reg Dia D	Reg Len E	Hub Dia F	(mm) Hub Len G	Boss Len g	Face Len H (G+h)	All Len J (g+H)	Boss Dia K
3900-3304	4"	1"~8	100	1"-8	1"	5	56	10	3	26	29	72
3900-3306	4"	M39x4	100	M39x4	40mm	10	56	24	3	40	43	72
3900-3305	4"	None	100	None	10mm	10	56	24	3	40	43	72
3900-3308	5"	1"~8	130	1"~8	1"	5	56	10	4	26	30	100
3900-3309	5"	1"~10	130	1"~10	1"	6.35	56	10	4	26	30	100
3900-3311	6"	1"~8	160	1"~8	1"	10	56	10	4	26	30	130
3900-3312	6"	1"~10	160	1"~10	1"	NONE	56	10	4	26	30	130
3900-3313	6"	None	160	UNTHREADED	NONE	10	75	24	4	40	44	130
3900-3315	6"	1-1/2"~8	160	1-1/2"~8	1-1/2"	10	56	14	4	30	34	130
3900-3322	6"	2-1/4"~8	160	2-1/4"~8	2-1/4"	10	75	16	4	32	36	130
3900-3339	6"	M39 x 4	160	M39X4	40mm	10	56	24	4	40	44	130
3900-3324	8"	1-1/2"~8	200	1-1/2"~8	1-1/2"	10	56	24	6.35	40	46.35	124.46
3900-3326	8"	2-1/4"~8	200	2-1/4"~8	2-1/4"	10	75	24	6.35	40	46.35	124.46
3900-3340	8"	None	200	NONE	NONE	10	75	24	6.35	40	46.35	124.46

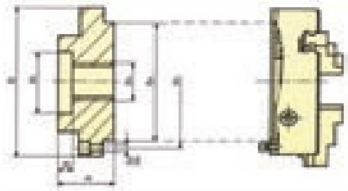


h=16mm

6" 3-JAW SELF-CENTERING LATHE CHUCKS
- THREADED DIRECT MOUNT

- Made of high quality semi-steel.
- Hardened and precision ground.
- Wrench is included.

2 SETS OF HARD JAWS (INTERNAL AND EXTERNAL) & 1 SET OF MOUNTING SCREWS INCLUDED



Item#	Size D	Back Plate Thread D3	(Inch) D1	D2	D4	H	H1	z-d	Chuck Center Hole	Max. RPM	T.I.R
3900-4722	6"	1-1/2"-8	1.55	5.6	130	40	13	3x9mm(Dia.)	1.575	2500	.003
3900-4724	6"	2-1/4"-8	2.34	5.6	130	40	17.5	3x9mm(Dia.)	1.575	2500	.003

STEEL HARD INTERNAL & EXTERNAL JAW SETS-For K11 Lathe Chucks

- **Set includes 3pcs**
- Fits most of 3-jaw self-centering lathe chucks with replaceable **internal & external** jaws.

FOR 3-JAW CHUCKS

External Jaws Shown

EXTERNAL SET

Item#	Fits Chuck Size
3900-4730	3"
3900-4732	4"
3900-4734	5'
3900-4736	6"
3900-4738	8"

INTERNAL SET

Item#	Fits Chuck Size
3900-4740	3"
3900-4742	4"
3900-4744	5'
3900-4746	6"
3900-4748	8"

Internal Jaws Shown

2MT MORSE TAPER SHANK 3 & 4-JAW SELF-CENTERING CHUCKS

- Steel body-hardened and ground scroll and pinions
- Hardened and ground MT spindle
- Supplied with chuck wrench.
- 3/8-16 threaded drawbar.
- 2 MT shank.
- T.I.R. 0.0006".

2 SETS OF SOLID STEEL JAWS (INTERNAL AND EXTERNAL)

3900-4706 SHOWN

5C MOUNTS FOR 3&4 JAW LATHE CHUCKS
-5C Adapter with Standard Internal & External Threads

- 5C adapter body.
- 3 hole chuck mounting pattern is pre-drilled.
- Hardened and ground.

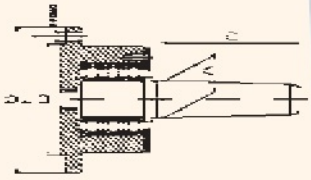
REVOLVING TAILSTOCK BACK PLATES

- Used for calibration or support workpiece during processing.
- Three ball bearings for heavy duty load and relatively high speed.
- 3 hole chuck mounting pattern is pre-drilled.

*Limited Supply

Item#	Shank Taper	A	Fits Lathe Chuck	B	(mm) C	D	E	Max Load (lbs)	T.I.R. (Inch)	Speed RPM
3900-6022	MT2	17.78	3"	80	64	55	66	1100	.0002	4000
3900-6021*	MT2	17.78	4"	100	64	72	84	1100	.0002	2500
3900-6023	MT3	23.83	3"	80	81	55	66	1760	.0002	4000
3900-6026	MT3	23.83	4"	100	81	72	84	1760	.0002	2500
3900-6024	MT4	31.27	4"	100	103	72	84	2200	.0002	2500
3900-6025*	MT5	44.40	5"	125	130	95	108	3300	.0004	2000
3900-6030	MT4	31.27	5"	125	103	95	108	2200	.0004	2000
3900-6031	MT5	44.40	6"	160	130	130	142	3300	.0004	1500

LATHE CHUCK OPTIONAL

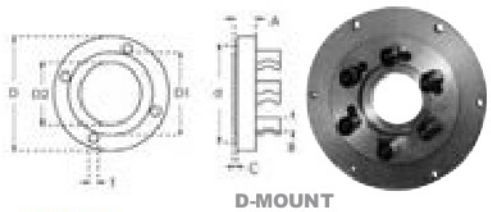


CHUCK ADAPTERS

A , D & L MOUNT SEMI-MACHINED CHUCK ADAPTERS - BACK PLATES

- Back plates for universal chucks
- Plain-back chucks require the adapter plate to be machined before mounting to ensure concentricity

A-MOUNT



D-MOUNT

MADE OF HIGH GRADE CASTING STEEL

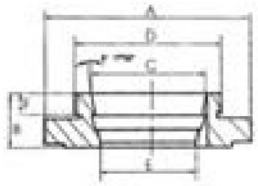
L-MOUNT

A-MOUNT

Item#	Chuck Size	Spindle	D1
3900-4841	8-1/4"	A1-5	6.555"
3900-4843	10"	A1-6	6.555"
3900-4844	10"	A1-8	8.189"
3900-4845	12"	A1-6	10.315"

D-MOUNT

Item#	Chuck Size,D	Spindle	Recess D1
3900-4822	6"	D-3	2.125"
3900-4823	6"	D-4	2.501"
3900-4826	8"	D-3	2.125"
3900-4827	8"	D-4	2.501"
3900-4898	8"	D-5	3.251"
3900-4829	8"	D-6	4.188"
3900-4835	10"	D-6	4.188"
3900-4837	10"	D-8	5.501"
3900-4891	12"	D-6	4.188"
3900-4892	12"	D-8	5.501"
3900-4895	15"	D-11	7.751"



L-MOUNT

Item#	Chuck Size A	Spindle	Thread T-UNS3 D	B
3900-4847	6"	L-00	3-3/4~6	2.13"
3900-4849	8-1/4"	L-00	3-3/4~6	2.13"

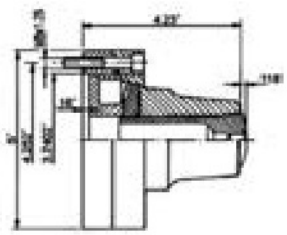
5C 5" COLLET CHUCKS

- Designed for use with 5C collets
- Used for turning, facing, boring, grinding and milling on center lathes and grinding machines
- Key-operated scroll provides a uniform distortion-free clamping of workpieces and low collet exchange times
- Chuck wrench included

T.I.R <0.0006"

D1-4 SHOWN

Item#	Spindle	Bolt Circle	Studs Included	Dis. of Studs
3900-4714	Plain Back	4.252"	–	---
3900-4715	D1-4	3.252"	3	5/8
3900-4717	D1-5	3.252"	6	3/4
3900-4716	D1-6	5.252"	6	7/8
3900-4718	D1-8	6.748"	6	1

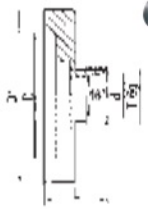


SPECIFICATIONS

Chuck Size.....5"
Collet capacity.....1/16-1/8"
Weight.....Approx. 13 lbs
Max. RPM.....6,000

ER-40 COLLET CHUCK FIXTURE - Direct Mount

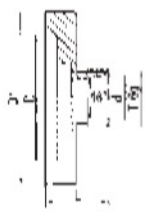
- Concentricity .0008"
- 5" diameter.
- Easily mount to lathe with D1 spindle.
- Accepts ER-40 collets.



Item#	Mount	No. of Stud	Dia. of Stud	D1 (mm)	D (mm)	L (mm)
3901-5041	D1-3	3	9/16"	125	54	42
3901-5042	D1-4	3	5/8"	125	64	42

ER COLLET FIXTURES

- Mount to your choice of backplate for using on a lathe or could be used as a fixture on a milling table.
- Concentricity .0016"



Item#	Type	No. of Bolt Hole	Bolt Hole Circle (mm)	Bolt Hole Size	D1 (mm)	D (mm)	L (mm)
3901-5016	ER-16	4	35	5mm	45	22	25
3901-5025	ER-25	3	75	M10	102	52	36
3901-5032	ER-32	3	66	M6	80	55	42
3901-5033	ER-32	3	84	M8	100	72	42
3901-5034	ER-32	3	125	M8	130	100	42
3901-5035	ER-32	3	125	M8	160	130	42
3901-5036	ER-40	3	84	M8	100	72	42
3901-5038	ER-40	3	115	M10	132	100	42

3 & 6-JAW ZERO-SET SELF-CENTERING LATHE CHUCKS - Plain Back

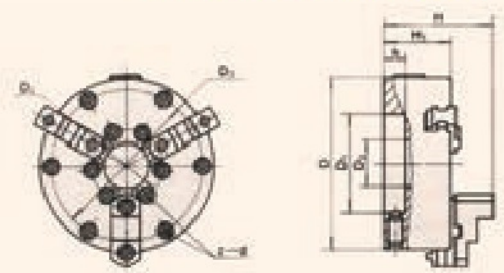
- Semi-Steel
- Run true "0" set.
- Made of high grade cast steel.
- Hardened and ground to the highest T.I.R. 0.0005" repeatability.
- Two piece top & master jaws are American standard tongue & groove.
- 2pc top Jaws can be reversed for clamping and jamming.
- 6-jaw models provide increased gripping force with less jaw distortion

T.I.R. <0.0005"

OPPOSING ADJUSTING SCREWS FOR "DEAD TRUE" ACCURACY

.0005" REPEATABILITY ON DUPLICATE PARTS

FINE ADJUSTMENT • PLAIN BACK



3-Jaw

Item#	Chuck Dia. D	D1	D2	(Inch) Center Hole D3	H	H1	h	z-d	Max. RPM	Wt. (lbs)
3900-4576	6	3.125	5.343	1.535	3.88	2.32	0.689	1/4-20	3,400	19
3900-4578	8.27	4.750	7.500	2.264	5.21	3.12	0.752	3/8-16	3,100	50
3900-4580	10	6.374	4.375	2.835	6.06	3.49	0.803	7/16-14	2,700	70
3900-4582*	12	7.905	5.250	3.268	6.57	3.98	0.803	1/2-13	2,200	116

*Limited Supply

6-Jaw

Item#	Chuck Dia. D	D1	D2	(Inch) Center Hole D3	H	H1	h	z-d	Max. RPM	Wt. (lbs)
3900-4560*	6	3.125	5.343	1.535	3.88	2.32	0.689	1/4-20	2,500	19
3900-4563*	12	7.905	5.250	3.268	6.57	3.98	0.803	1/2-13	1,500	140

WORKINGHOLDING CAPACITIES

Chuck Dia.	OD Min.	OD Max.	ID Min.	ID Max.
6	0.125	6.00	1.875	5.75
8.27	0.200	8.25	2.125	6.75
10	0.500	9.36	2.937	8.72
12	0.500	11.31	3.281	10.13

Chuck Dia.	OD Min.	OD Max.	ID Min.	ID Max.
6	0.200	6.00	1.875	5.75
8.27	0.425	8.25	2.125	6.75
10	0.625	9.36	2.937	8.72
12	0.775	11.31	3.281	10.13

ZERO-SET MOUNTING PLATES, A-Mount

FOR ZERO-SET 3&6 JAW CHUCKS

- Designed for easy installation.
- Zero-set recessed design minimizes overhang.
- All Zero-set mountings are interchangeable on the same size chuck.

A-MOUNT- American Standard Flange Nose.

Item#	Chuck Size	Spindle
3900-4900	6	A-5
3900-4901*	6"	A-6
3900-4902	8"	A-5
3900-4903*	8"	A-6
3900-4905	10"	A-5
3900-4906*	10"	A-6
3900-4907*	10"	A-8

*Limited Supply

ZERO-SET MOUNTING PLATES, D-Mount

FOR ZERO-SET 3&6 JAW CHUCKS

- Designed for easy installation.
- Zero-set recessed design minimizes overhang.
- All Zero-set mountings are interchangeable on the same size chuck.

D-MOUNT-Camlock

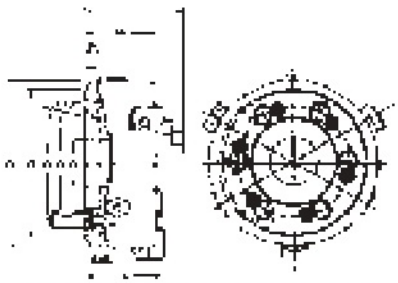
Item#	Chuck Size	Spindle
3900-5606	6"	D-4
3900-5607	8"	D-4
3900-5608	8"	D-6
3900-5610	10"	D-5
3900-5611	10"	D-6
3900-5612	10"	D-8
3900-5618	12"	D-8
3900-5619	12"	D-6
3900-5621	12"	D-11

3-JAW SELF-CENTERING LATHE CHUCKS

3-JAW D1 SELF-CENTERING SCROLL CHUCKS - DIRECT MOUNT

- Direct Mounting chuck with Camlock Nose.
- Body made of high grade semi-steel.
- Top jaws are reversible.
- Self centering jaws, hardened and precision ground.
- Lathe chuck wrench supplied.

D-MOUNT



SPINDLE NOSE DIMENSIONS

Spindle Nose	D-3	D-4	D-6	D-8	D-11
Dia.	2.13"	2.50"	4.19"	5.50"	7.75"

2PC TOP REVERSIBLE HARD JAWS

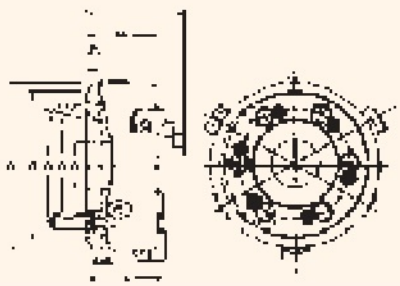
Item#	Chuck Dia. D5	To Fit Spindle	Max. RPM	T.I.R.	Studs B.C. D2	Studs Included	Dia. of Stud	Center Hole D3	D1	H	H1	h	Z-d	Weight (Lbs)
3900-4605	6"	D1-3	2500	.003	2.780	3	9/16	1.575	2.130	4.5	3.0	0.512	M10x1	23
3900-4606	6"	D1-4	2500	.003	3.252	3	5/8	1.575	2.130	4.5	3.0	0.512	M10x1	23
3900-4607	8"	D1-4	2000	.004	3.252	3	5/8	2.362	2.500	5.3	3.4	0.630	M10x1	45
3900-4609	8"	D1-5	2000	.004	3.252	6	3/4	2.560	2.500	5.3	3.4	0.630	M10x1	45
3900-4608	8"	D1-6	2000	.004	5.252	6	7/8	2.362	4.188	5.3	3.4	0.630	M16x1.5	45
3900-4630	10"	D1-5	1600	.004	3.252	6	3/4	3.145	4.188	6.0	3.9	0.709	M10x1	75
3900-4631	10"	D1-6	1600	.004	5.252	6	7/8	3.145	4.188	6.0	3.9	0.709	M20x1.5	75
3900-4610	10"	D1-8	1600	.004	6.748	6	1	2.750	5.500	6.0	3.9	0.709	M20x1.5	75
3900-4615	12"	D1-6	1200	.005	5.252	6	7/8	3.937	4.188	6.7	4.2	0.709	M20x1.5	130
3900-4612	12"	D1-8	1200	.005	6.748	6	1	3.937	5.500	6.7	4.2	0.709	M20x1.5	130
3900-4616	15"	D1-11	1100	.005	9.252	6	1-3/16	5.315	5.500	6.7	4.6	0.709	M22x1.5	225

Larger sizes available

Pro-Series 3-JAW D1 SELF-CENTERING SCROLL CHUCKS - DIRECT MOUNT

- Semi-steel body.
- Direct mount self-centering scroll chucks.
- American standard two piece top reversible tongue & groove Jaws.
- All guide ways & bearing surfaces are precisely ground.
- Pinions are hardened & ground
- Scroll plate is dropped forged of fine alloy steel and case fully hardened. Thread flanks are ground on both sides for smooth operation.

2PC TOP REVERSIBLE HARD JAWS

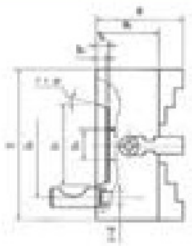


AMERICAN STANDARD

Item#	Chuck Dia. D5	To Fit Spindle	Max. RPM	T.I.R.	Studs B.C. D2	Studs Included	(Inch) Dia. of Stud	Center Hole D3	D1	H	H1	h	Z-d	Weight (Lbs)
3900-8005	5"	D1-4	3200	.003	3.252	3	5/8	1.260	2.501	4.33	2.76	0.512	M10x1	11
3900-8008	6"	D1-3	3000	.003	2.780	3	9/16	1.654	2.125	4.90	3.21	0.512	M10x1	20
3900-8009	6"	D1-4	3000	.003	3.252	3	5/8	1.654	2.501	4.90	3.21	0.512	M10x1	20
3900-8013	8"	D1-3	2500	.003	2.780	3	9/16	2.028	2.125	5.35	3.58	0.512	M10x1	42
3900-8014	8"	D1-4	2500	.003	3.252	3	5/8	2.165	2.501	5.35	3.58	0.512	M10x1	42
3900-8015	8"	D1-5	2500	.003	4.126	6	3/4	2.165	3.251	5.35	3.58	0.563	M12x1	42
3900-8016	8"	D1-6	2500	.003	5.252	6	7/8	2.165	4.188	5.35	3.58	0.563	M16x1.5	42
3900-8020	10"	D1-5	2000	.003	4.126	6	3/4	2.992	3.251	6.16	4.08	0.563	M12x1	71
3900-8021	10"	D1-6	2000	.003	5.252	6	7/8	2.992	4.188	6.16	4.08	0.630	M16x1.5	71
3900-8022	10"	D1-8	2000	.003	6.748	6	1	2.992	5.501	6.16	4.08	0.709	M20x1.5	71
3900-8024	12"	D1-6	1500	.0035	5.252	6	7/8	4.055	4.188	6.88	4.64	0.630	M16x1.5	112
3900-8025	12"	D1-8	1500	.0035	6.748	6	1	5.354	5.501	6.88	4.64	0.709	M20x1.5	112
3900-8028	15"	D1-8	1000	.004	6.748	6	1	5.354	5.501	7.70	5.06	0.709	M20x1.5	223
3900-8030	15"	D1-11	1000	.004	9.252	6	1-3/16	5.906	7.751	7.70	5.06	0.787	M22x1.5	223

4 - JAW CAMLOCK SPINDLES "D-1" LATHE CHUCKS - Direct Mount

- Direct Mounting chuck with Camlock Nose.
- Body made of high grade semi-steel.
- Jaws are individually adjustable, allowing firm gripping of odd shaped work.
- Hardened and precision ground reversible jaws.
- With T-wrench.



D-MOUNT

SPINDLE NOSE DIMENSIONS

Spindle Nose Dia.	D-3 2.13"	D-4 2.50"	D-6 4.19"	D-8 5.50"

Item#	Chuck Dia. D	To Fit Spindle	Studs B.C. D2	Studs Included	Dia. of Stud	(Inch) Center Hole D3	D1	H	H1	h	Z-d	Weight (Lbs)
3900-4808	8"	D1-4	3.346	3	5/8	2.165	2.500	4.2	3.0	0.518	M10x1	37
3900-4810	10"	D1-6	5.252	6	7/8	2.953	4.190	4.7	3.2	0.630	M16x1.5	52
3900-4809	12"	D1-6	5.252	6	7/8	3.740	4.188	5.3	3.6	0.630	M16x1.5	100
3900-4878	16"	D1-8	6.748	6	1	4.921	5.500	5.6	3.7	0.709	M20x1.5	140

Pro-Series 4-JAW INDEPENDENT "D-1" LATHE CHUCKS - DIRECT MOUNT

STANDARD ACCESSORIES
- 1 set of American Standard reversible jaws.
- 1 T-wrench
- 2 Hex keys
- 2 eye bolts for chucks 10" & up
- 1 set of mounting bolts.

- Semi-steel body.
- Hard solid reversible jaws.

10" & Up Include T-slot

AMERICAN STANDARD

DESIGNED TO GRIP ROUND OR ODD SHAPED WORK

3900-8110 Shown

Item#	Chuck Dia. D	To Fit Spindle	Studs B.C. D2	Studs Included	Dia. of Stud	(Inch) Center Hole D3	D1	H	H1	h	Z-d
3900-8110	8"	D1-4	3.252	3	5/8	2.205	2.501	4.33	2.95	0.512	M10x1
3900-8111	8"	D1-5	4.126	6	3/4	2.205	3.251	4.33	2.95	0.590	M12X1
3900-8113	10"	D1-5	4.126	6	3/4	2.953	4.188	4.70	3.35	0.630	M16x1.5
3900-8114	10"	D1-6	5.252	6	7/8	2.953	4.188	4.70	3.35	0.630	M16x1.5
3900-8118	12"	D1-6	5.252	6	7/8	2.953	4.188	5.70	3.74	0.630	M16x1.5
3900-8122	12"	D1-8	6.748	6	1	3.740	5.501	5.70	3.74	0.709	M20x1.5
3900-8126	16"	D1-8	6.748	6	1	4.921	5.501	6.10	4.13	0.709	M20x1.5
3900-8130	20"	D1-11	9.252	6	1-3/16	4.921	7.751	7.07	4.72	0.787	M22X1.5

Larger sizes available

CHUCK WRENCHES/KEYS

- Made of high quality tool steel.
- Hardened & tempered.
- Heavy duty construction.

STANDARD

SELF-EJECT

Square Head Size	Standard Item#	Self-Eject Item#
15/64"(6mm)	3900-4862	----------
9/32"(7.15mm)	3900-4863	----------
15/32"(12mm)	3900-4864	----------
1/4"(6.35mm)	3900-4865	----------
5/16"(8mm)	3900-4866	3900-4857
3/8"(9.5mm)	3900-4867	3900-4853*
7/16"(11.2mm)	3900-4868	----------
1/2"(12.7mm)	3900-4869	3900-4855
9/16"(14.3mm)	3900-4870	----------
5/8"(16mm)	3900-4871	----------
11/16"(17.5mm)	3900-4872	----------
3/4"(19mm)	3900-4873	----------

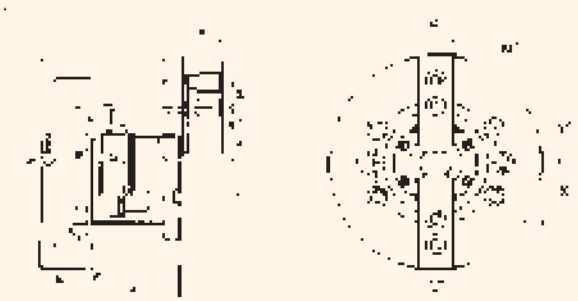
*Limited Supply

HIGH SPEED POWER CHUCKS

TaiKi 2-JAW CNC POWER CHUCKS - Direct Mount

Interchangeable with Kitagawa BT200 series chucks • Chuck adaptor suit to spindle nose A2 • Serrations Pitch 1.5mm X 60°

- Optmum for gripping irregular shaped works.
- Approx. 20% higher speed, gripping force and larger bore when compared to conventional chucks.
- Made from high grade alloy steel. All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.
- **Standard Equipment:** Chuck comes fitted with chuck adaptor and includes mounting bolts, T-nuts and jaw mounting bolts. Also included blank drawnut and mounting wrench.



Limited Supply!

MADE IN TAIWAN

Item#	Chuck Size	Chuck Dia. (mm)	Thru-hole Dia.	Plunger Strok (mm)	Jaw Strok Diameter (mm)	Max. Draw Bar Pull Force (kgf)	Max. Gripping Force (kgf)	Max. Speed RPM	Max. Hydraulic Pressure (kgf/cm²)	Mount Spindle	Cross to Kitagawa
3900-4597	5"	135	1.299"	10	5.4	1050	2960	7000	24.3	A2-4	BT-205
3900-4599	8"	210	2.047"	16	7.4	2250	5600	4800	18.4	A2-6	BT-208

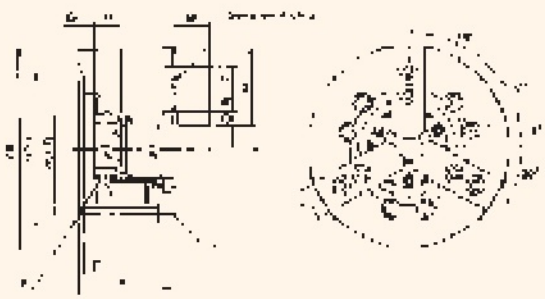
DIMENSIONS (mm)

Chuck Size	A	B	C (H6)	F	H	J	K	L	M	N Max.	N Min.	O Max.	O Min.	P Max.	P Min.	Q	R	S	T	U
5"	65	135	110	4	82.55	33	4-M10	14	14	26.5	23.80	19.5	6.0	1.0	-9.0	23	10	15.0	26	M40x1.5
8"	91	210	170	5	133.35	52	6-M12	20	25	38.7	35.00	30.0	10.5	14.5	-1.5	35	14	16.5	37	M60x2.0

TaiKi 3-JAW CNC POWER CHUCKS - Direct Mount

Interchangeable with Kitagawa B200 series chucks • Chuck adaptor suit to spindle nose A2 • Serrations Pitch 1.5mm X 60°

- Approx. 20% higher speed, gripping force and larger bore when compared to conventional chucks.
- Made from high grade alloy steel. All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.
- **Standard Equipment:** Chuck comes fitted with chuck adaptor and includes mounting bolts, T-nuts and jaw mounting bolts.



Limited Supply!

MADE IN TAIWAN

Item#	Chuck Size	Chuck Dia. (mm)	Thru-hole Dia.	Plunger Strok (mm)	Jaw Strok Diameter (mm)	Max. Draw Bar Pull Force (kgf)	Max. Gripping Force (kgf)	Max. Speed RPM	Max. Hydraulic Pressure (kgf/cm²)	Mount Spindle	Cross to Kitagawa
3900-4585	5"	135	1.299"	10	5.4	1750	3600	7000	29	A2-4	B-205A4
3900-4588	8"	210	2.047"	16	7.4	3400	8500	4800	26	A2-6	B-208A6
3900-4592	12"	304	3.583"	23	10.6	5500	14400	3000	27	A2-8	B-212A8

DIMENSIONS (mm)

Chuck Size	A	B	C	D	E	F	G Max.	G Min.	H	J	K	L	M	N	P	Q Max.	Q Min.	R Max.	R Min.	T
5"	65	135	110	82.55	4	33	1.0	-9.0	20	12	M40x1.5	3-M10	26	54	14	26.5	23.80	19.5	6.0	23
8"	91	210	170	133.35	5	52	14.5	-1.5	20.5	30	M60x2.0	6-M12	37	95	25	38.7	35.00	30.0	10.5	35
12"	123	304	220	171.45	5	91	8.0	-15.0	28	50	M100x2.0	6-M16	48	129	30	61.3	56.00	46.5	12.0	48

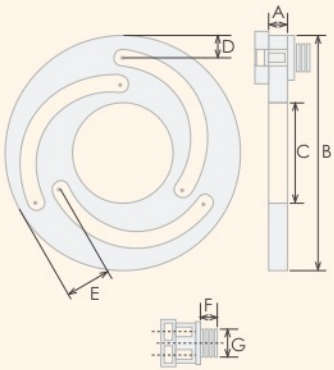
TaiKi JAW BORING RINGS - For Boring Soft & Round Jaws

How to install:

1. Place the jaw boring ring over our chuck and locate the bring ring pins in the counterbore of your chuck jaws
2. Turn the jaw boring ring until snug
3. Activate your jaws
   - The jaw boring ring will apply equal pressure on all jaws, allowing for a consistent bore.

- Since no discs or bungs are used to clamp jaws, through boring of jaws is possible.
- Attaches to front of jaws without tools, compensating for "jaw lift".
- Suitable for CNC lathe.
- Ideal for machining soft jaws.
- Applies equal pressure on all jaws.

MADE IN TAIWAN



Item#	Chuck Size	Dimensions (Inch) A	B	C	D	E	F	G
3900-4649	4"	.47	4.5	1.34	.47	1.10	.35	.51
3900-4650	5"	.47	5.5	2.36	.47	1.10	.35	.51
3900-4651	6"	.47	6.6	3.15	.47	1.26	.35	.65
3900-4654	8"	.47	8.6	4.53	.59	1.42	.35	.73
3900-4656	10"	.47	10.2	5.91	.67	1.57	.35	.73
3900-4658	12"	.59	12.4	7.40	.83	1.97	.35	.96
3900-4660	15"	.79	15.0	9.06	.91	2.05	.63	1.22

TaiKi TL-JAW BORING RINGS - For Boring Soft & Round Jaws

- Suitable for CNC lathe.
- Ideal for machining soft jaws.
- Attaches to front of jaws without tools, compensating for "jaw lift".
- Applies equal pressure on all jaws.
- Since no discs or bungs are used to clamp jaws, through boring of jaws is possible.

1. Set the jaws for the required job. The diameter of the jaws must be set smaller than the part diameter.

2. adjust the Boring Rings to fit into the bolt holes of the soft jaws. Then, rotate the body of the Boring Rings until sung, pulling the jaws rigid in the opposite direction of the clamping force(away from the part to be held).

3. Lock the chuck. Jaws must be locked in the direction of the part to be held. The soft jaws will then be held rigidly by the Boring Rings as if holding the part.

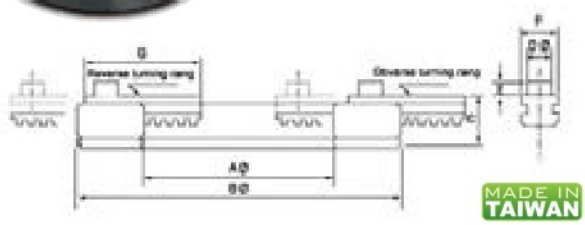
4. Machine the diameter desired. The bore diameter must be precise with the diameter of the part to be held.

5. Remove the Boring Rings. Unlock the chuck opposite th the locking direction.

6. Chuck the part. If these steps are followed correctly, the part will be true within . 0002" T.I.R.

How to install:

1. Place the jaw boring ring over our chuck and locate the bring ring pins in the counterbore of your chuck jaws
2. Turn the jaw boring ring until snug
3. Activate your jaws
   - The jaw boring ring will apply equal pressure on all jaws, allowing for a consistent bore.

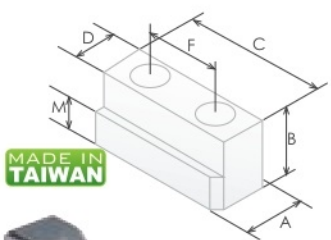


MADE IN TAIWAN

Item#	Chuck Size	Dimensions (Inch) A	B	C	D(dia)-E	F-G	Jaw Stroke (ea.)	Max. Speed (RPM)
3900-4666	5,6,8"	3.94	6.7	1.02	.512~.28	.748~2.4	7.4	800
3900-4668	6,8,10"	4.92	7.9	1.02	.642~.32	.748~2.4	7.4	700
3900-4669	8,10,12"	6.30	9.8	1.22	.720~.32	.945~3.2	8.5	600

TaiKi JAW NUTS & SCREWS

FOR USE ON: Kitagawa, Samchully, Strong, MMK, SMW Autoblok, Howa & Hitachi-Seiki Chucks



MADE IN TAIWAN

Chuck Size Inch	CRITICAL DIMENSIONS Heel Height M	Groove Width D	Screw Size	Hole Space F	Nut Height B	Nut Width A	Nut Length C	*Jaw Nut* (set of 3) Item#	*Screw* Item#
5	0.197	0.393 (10mm)	M8x20	0.551	0.571	0.551	0.965	3900-4780	3900-4796
6	0.295	0.472 (12mm)	M10x25	0.787	0.728	0.689	1.417	3900-4781	3900-4797
6	0.276	0.472 (12mm)	M10x25	0.787	0.866	0.689	1.437	3900-4788	3900-4797
8	0.335	0.551 (14mm)	M12x30	0.984	0.807	0.807	1.831	3900-4782	3900-4798
8	0.394	0.551 (14mm)	M12x30	0.984	1.024	0.807	1.890	3900-4789	3900-4798
8	0.394	0.629 (16MM)	M12X30	1.181	0.807	0.807	1.890	3900-4782	3900-4798
10	0.335	0.629 (16mm)	M12x30	1.181	0.846	0.886	2.008	3900-4783	3900-4798
10	0.394	0.629 (16mm)	M12x30	1.181	1.024	0.886	2.165	3900-4790	3900-4798
10	0.394	0.629 (16mm)	M12x30	0.984	0.846	0.886	2.008	3900-4786	3900-4798
12	0.453	0.827 (21mm)	M16x40	1.181	1.102	1.102	2.185	3900-4784	3900-4799
12	0.531	0.709 (18mm)	M14x40	1.181	1.319	1.043	2.185	3900-4791	3900-4800
15	0.650	0.866 (22mm)	M20x60	1.693	1.791	1.319	3.150	3900-4786	3900-4801
15	0.748	1.004 (25.5mm)	M20x55	1.693	1.535	1.378	3.150	3900-4793	3900-4802
15	0.654	0.945 (24mm)	M16x40	1.181	1.719	1.280	2.363	3900-4795	3900-4799

TaiKi SOFT JAWS - 1.5 mm x 60 Degree Serrations

- Supplies maximum concentricity on finish turning operations
- Can be bored or turned to fit workpiece
- Jaws can be hardened
- Set includes 3 pcs

MADE IN TAIWAN

FOR USE ON: Kitagawa, Samchully, Strong, MMK, SMW Autoblok, Howa & Hitachi-Seiki Chucks

Chuck Size	CRITICAL DIMENSIONS Groove Width D	Screw Size E	Hole Space F	Hole to Front H	Width Inch C	Length Inch A	Height Inch B	STEEL (set of 3) Item #	ALUMINUM (set of 3) Item #
4	0.394 (10mm)	5/16 (M8)	0.551 (14mm)	1-1/16	0.91	2.00	0.91	3900-4684	3900-4764*
6	0.472 (12mm)	3/8 (M10)	0.787 (20mm)	1-1/2	1.22	2.87	1.18	3900-4686	3900-4766
8	0.551 (14mm)	1/2 (M12)	0.984 (25mm)	1.811	1.38	3.74	1.46	3900-4688	3900-4768
10	0.630 (16mm)	1/2 (M12)	1.181 (30mm)	1.969	1.57	4.33	1.65	3900-4690	3900-4770
12	0.710 (18mm)	0.55 (M14)	1.181 (30mm)	2.362	1.89	5.08	1.89	3900-4692	3900-4772
12	0.827 (21mm)	0.63 (M16)	1.181 (30mm)	2.362	1.89	5.08	1.89	3900-4693	3900-4773
15	0.866 (22mm)	0.787 (M20)	1.690 (43mm)	3.346	2.44	6.50	2.44	3900-4695	3900-4775
15	1.003 (25.5mm)	0.787 (M20)	1.690 (43mm)	3.346	2.44	6.50	2.44	3900-4696	3900-4776

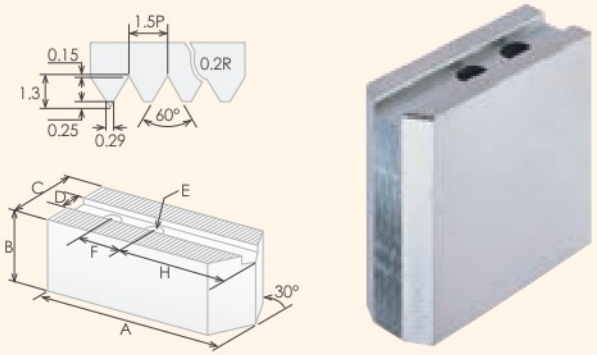
* Limited Supply

TaiKi SOFT STEEL JAWS EXTRA HEIGHT - 1.5mm x 60 Deg Serrations

FOR USE ON: Kitagawa, Samchully, Strong, MMK, SMW Autoblok, Howa & Hitachi-Seiki Chucks

- Extra-height jaws are suitable for longer workpiece, such as 4" length workpiece will need jaws with over 3" height which will increase the acuracy and stability of production process.
- Supplies maximum concentricity on finish turning operations.
- Price is for a set of 3 jaws.
- Jaws can be hardened.
- Can be bored or turned to fit workpiece.

MADE IN TAIWAN

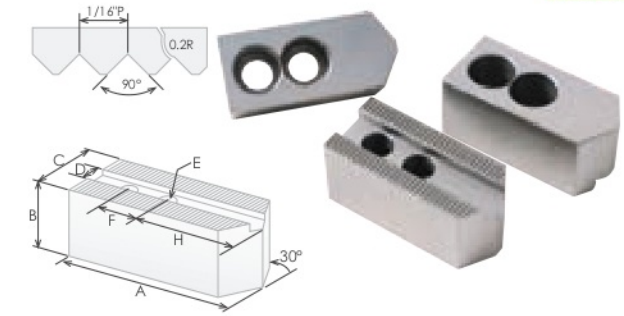


Chuck Size	CRITICAL DIMENSIONS Groove Width D	Screw Size E	Hole Space F	Hole to Front H	Jaw Width C	Jaw Length A	Jaw Height B	(set of 3) Item #
6	0.472 (12mm)	3/8 (M10)	0.787 (20mm)	1-1/2	1.22	2.87	2.36 (60mm)	3900-5656
6	0.472 (12mm)	3/8 (M10)	0.781 (20mm)	1-1/2	1.22	2.87	3.15 (80mm)	3900-5658
8	0.551 (14mm)	1/2 (M12)	0.984 (25mm)	1.811	1.38	3.74	2.36 (60mm)	3900-5660
8	0.551 (14mm)	1/2 (M12)	0.984 (25mm)	1.811	1.38	3.74	3.15 (80mm)	3900-5662
8	0.551 (14mm)	1/2 (M12)	0.984 (25mm)	1.811	1.38	3.74	3.94 (100mm)	3900-5663
10	0.630 (16mm)	1/2 (M12)	1.181 (30mm)	1.969	1.57	4.33	2.36 (60mm)	3900-5665
10	0.630 (16mm)	1/2 (M12)	1.181 (30mm)	1.969	1.57	4.33	3.15 (80mm)	3900-5667
10	0.630 (16mm)	1/2 (M12)	1.181 (30mm)	1.969	1.57	4.33	3.94 (100mm)	3900-5668
12	0.710 (18mm)	0.55 (M14)	1.181 (30mm)	2.362	1.89	5.08	3.15 (80mm)	3900-5670
12	0.710 (18mm)	0.55 (M14)	1.181 (30mm)	2.362	1.89	5.08	3.94 (100mm)	3900-5672

TaiKi SOFT STEEL JAWS - 1/16" x 90 Degree Serrations

- Supplies maximum concentricity on finish turning operations
- Can be bored or turned to fit workpiece
- Jaws can be hardened, steel material SAE1045
- Set includes 3 pcs

MADE IN TAIWAN



FOR USE ON: SMW Autoblok, Rohm, Pratt Burnerd & Other Chucks

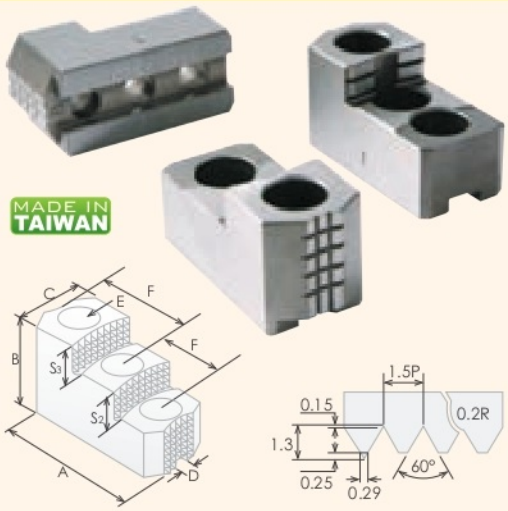
Chuck Size	CRITICAL DIMENSIONS Groove Width D	Screw Size E	Hole Space F	Hole to Front H	Width Inch C	Length Inch A	Height Inch B	(set of 3) Item #
6	0.669 (17mm)	12mm	0.875 (22mm)	1.417	1.22	2.87	1.18	3900-4642
8	0.669 (17mm)	12mm	0.875 (22mm)	1.929	1.38	3.74	1.46	3900-4644
10	0.669 (17mm)	12mm	0.875 (22mm)	2.283	1.57	4.33	1.65	3900-4646
12	0.827 (21mm)	16mm	1.102 (28mm)	2.520	1.89	5.08	1.89	3900-4648

TaiKi BEST-GRIP HARD STEEL JAWS - 1.5 mm x 60 Degree Serrations

FOR USE ON: Kitagawa, Samchully, Strong, MMK, SMW Autoblok, Howa & Hitachi-Seiki Chucks

- Supplies maximum concentricity on finish turning operations
- Set includes 3 pcs

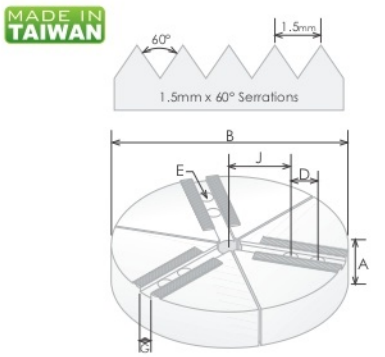
Chuck Size	CRITICAL DIMENSIONS Groove Width D	Screw Size E	Hole Space F	No. of Holes	No. of Steps	Step Height S2	Step Height S3	Width Inch C	Length Inch A	Height Inch B	(set of 3) Item#
6	0.472 (12mm)	M10	0.787 (20mm)	3	1	0	0.47	1.22	2.64	1.42	3900-4671
8	0.551 (14mm)	M12	0.984 (25mm)	3	2	0.47	0.47	1.38	3.39	2.01	3900-4673
10	0.630 (16mm)	M12	1.181 (30mm)	3	2	0.55	0.55	1.57	3.94	2.13	3900-4675
12	0.709 (18MM)	M14	1.181 (30mm)	3	1	0	0.79	1.97	4.45	2.05	3900-4677
12	0.827 (21mm)	M16	1.181 (30mm)	3	1	0	0.79	1.97	4.45	2.05	3900-4678
15	0.866 (22MM)	M20	1.693 (43mm)	3	2	0.73	0.73	2.44	5.63	3.39	3900-4680
15	1.005 (25.5MM)	M20	1.693 (43mm)	3	2	0.73	0.73	2.44	5.63	3.39	3900-4681



TaiKi SOFT ROUND/PIE JAWS - 1.5mm x 60 Deg Serrations

FOR USE ON: Kitagawa, Samchully, Strong, MMK, SMW Autoblok, Howa & Hitachi-Seiki Chucks

- Round jaws allow for complete gripping of workpiece.
- Can be machined to fit workpiece.
- Set includes 3 pcs
- Ideal for thin-walled or irregular shaped workpieces.
- Stee jaws can be hardened.



STEEL JAWS

Chuck Size	CRITICAL DIMENSIONS Groove Width G	Screw Size E	Hole Space D	Hole to Front J	Pie Dia. B	Thru Hole	Jaw Height A	(set of 3) Item #
6-5/8"	0.472 (12mm)	M10	0.787 (20mm)	1.949	6.65	0.948	1.58	3900-5686
8"	0.551 (14mm)	M12	0.984 (25mm)	2.008	7.87	0.948	1.97	3900-5688
10"	0.63 (16mm)	M16	1.181 (30mm)	2.559	9.84	0.948	1.97	3900-5690
12"	0.827 (21mm)	M16	1.181 (30mm)	3.189	11.81	0.948	1.97	3900-5692

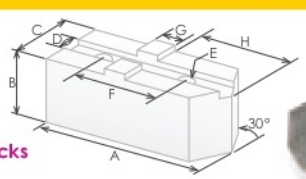
ALUMINUM JAWS

Chuck Size	CRITICAL DIMENSIONS Groove Width G	Screw Size E	Hole Space D	Hole to Front J	Pie Dia. B	Thru Hole	Jaw Height A	(set of 3) Item #
6-5/8"	0.472 (12mm)	M10	0.787 (20mm)	1.949	6.65	0.948	1.58	3900-5695
8"	0.551 (14mm)	M12	0.984 (25mm)	2.008	7.87	0.948	1.97	3900-5697
10"	0.63 (16mm)	M16	1.181 (30mm)	2.559	9.84	0.948	1.97	3900-5700
12"	0.827 (21mm)	M16	1.181 (30mm)	3.189	11.81	0.948	1.97	3900-5702

TaiKi 3PC SET SOFT STEEL JAWS - AMERICAN STANDARD TONGUE & GROOVE

- Supplies maximum concentricity on finish turning operations
- Can be bored or turned to fit workpiece
- Jaws can be hardened
- Set includes 3 pcs

FOR USE ON: Buck, Bison, Cushman, Huron, PBA, Yuasa & Rohm Chucks



Chuck Size	CRITICAL DIMENSIONS Groove Width D	Tongue Width G	Screw Size E	Hole Space F	Tongue to Front H	Tongue Position C	Width Inch A	Length Inch B	Height Inch	Item #
6	0.313	1/2	5/16	1.500	0.866	Offset	1-1/4	2-7/8	1-1/4	3900-4756
8	0.313	1/2	3/8	1.750	1.329	Offset	1-1/4	3-3/4	1-1/4	3900-4758
10	0.500	3/4	1/2	2.125	1.220	Offset	1-1/4	4-1/8	1-1/4	3900-4760
12	0.500	3/4	1/2	2.500	1.398	Offset	1-9/16	4-15/16	2-1/8	3900-4762

KDK STYLE QUICK CHANGE TOOLS

KDK STYLE 6PC TOOL POST & HOLDERS SETS

- Interchangeable with KDK same series.
- All working parts hardened and ground.

- **Lathe Swing:**
  8-12" (0 Series)
  12~16"(100 Series),
  15~18" (150 Series),
  18~24"(200 Series)

- **Lock Down Bolt Diameter:**
  7/16"(0 & 100 Series) ,
  5/8" (150 Series),
  3/4" (200 Series)

- **Center Height:**
  .750" & Up (0 Series)
  1.000" & Up (100 Series)
  1.250" & Up (150 Series)
  1.500" & Up (200 Series)

6PC/SET INCLUDES
Holders:
No. 1 - Turning & Facing
No. 2 - Threading & Facing
No. 3 - Extension Turning Bar
No. 4 - Parting Bar
No. 5 - Master Bar For Boring Bars
Tool Post: KDK Body

T-slot nut & mounting bolt not included.

KDK STYLE 0, 100, 150, 200 TOOL POSTS

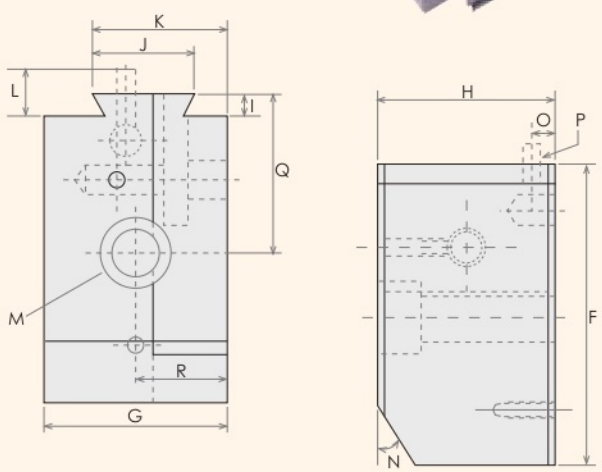
- Interchangeable with KDK same series.
- All working parts hardened and ground.

- **Lathe Swing:**
  8-12" (0 Series), 12~16"(100 Series),
  15~18" (150 Series), 18~24"(200 Series)

- **Lock Down Bolt Diameter:**
  7/16"(0 & 100 Series), 5/8" (150 Series),
  3/4" (200 Series)

- **Center Height:**
  .750" & Up (0 Series)
  1.000" & Up (100 Series)
  1.250" & Up (150 Series)
  1.500" & Up (200 Series)

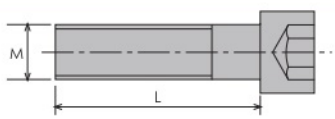
T-slot nut & mounting bolt not included.

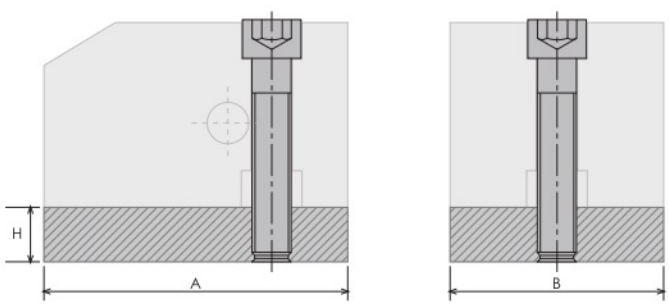


Body No.	(Inch) F	G	H	I	J	K	L	M	N	O	P	Q	R
0	3.00	2.25	1.62	.312	1.750	1.875	.687	7/16	30°	.312	1/4	.687	1.343
100	3.50	2.50	2.25	.312	1.750	2.215	.687	7/16	30°	.331	1/4	.875	1.375
150	4.37	2.50	2.25	.312	1.750	2.215	.687	5/8	30°	.331	5/16	2.312	1.250
200	5.00	2.87	3.00	.312	1.750	2.215	.687	3/4	30°	.331	5/16	2.562	1.437

T-NUT BLANKS AND SCREW BOLTS FOR KDK STYLE TOOL POSTS

- T-nut blank can be machined to fit.





Item#	Fits Post No.	Blank Dimensions (Thick. H x B x A)	Bolt Thread M x L
3900-5436	100	1/2 x 1-1/2 x 2-1/4"	7/16-20UNF x 2.17"
3900-5437	100	5/8 x 2-1/4 x 2-3/4"	7/16-20UNF x 2.32"
3900-5438	100	3/4 x 2-1/2 x 3"	7/16-20UNF x 2.44"
3900-5439	150	5/8 x 2-1/4 x 2-3/4"	5/8-18UNF x 2.09"
3900-5440	150	3/4 x 2-1/2 x 3"	5/8-18UNF x 2.17"
3900-5441	150	7/8 x 2-1/2 x 3-1/2"	5/8-18UNF x 2.36"
3900-5442	150	1 x 3 x 4-1/2"	5/8-18UNF x 2.36"
3900-5443	200	7/8 x 2-1/2 x 3-1/2"	3/4-16UNF x 2.95"
3900-5444	200	1 x 3 x 4-1/2"	3/4-16UNF x 2.95"
3900-5445	200	1-1/2 x 4 x 5"	3/4-16UNF x 3.54"

5C COLLET BAR KDK STYLE 119 TOOL HOLDER

- No. 119 holder is for KDK-100, 150 & 200 quick change tool post.
- Assures the simplicity of preset quick change tools to all 5 C collet jobs.
- For lathes having 1" Center Height or more.
- Spanner Wrench and Lock Ring included.
- All working parts hardened and ground.

Replaement Ring Nut & Wrench (Item#3900-5420)

TURNING AND FACING BAR COMBINATION KDK STYLE 01, 101, 151, 201 TOOL HOLDERS

ALL BARS INTERCHANGEABLE ON 01, 100, 150 & 200 BODY

- Interchangeable with KDK same series tool holders.
- All working parts hardened and ground.

Item#	Holder No.	Wt. (lbs.)	Tool Bit Capacity	Lathe Swing
3900-5410	01	1.0	3/8"	8~12"
3900-5411	101	1.8	1/2"	12~16"
3900-5451	151	3.3	5/8"	15~18"
3900-5431	201	4.5	3/4"	18~24"
3900-5448	201-1	4.1	1"	18~24"

THREADING AND FACING BAR COMBINATION KDK STYLE 01, 102, 152, 202 TOOL HOLDERS

ALL BARS INTERCHANGEABLE ON 01, 100, 150 & 200 BODY

- Interchangeable with KDK same series tool holders.
- All working parts hardened and ground.

Item#	Holder No.	Wt. (lbs.)	Tool Bit Capacity	Lathe Swing
3900-5402	02	1.0	3/8"	8~12"
3900-5412	102	2.0	1/2"	12~16"
3900-5452	152	4.0	5/8"	15~18"
3900-5432	202	4.8	3/4"	18~24"
3900-5449	202-1	4.4	1"	18~24"

EXTENSION TURNING BAR COMBINATION KDK STYLE 03, 103, 153, 203 TOOL HOLDERS

- Interchangeable with KDK same series tool holders.
- All working parts hardened and ground.

Item#	Holder No.	Wt. (lbs.)	Tool Bit Capacity	Lathe Swing
3900-5403	03	1.0	3/8"	8~12"
3900-5413	103	1.8	1/2"	12~16"
3900-5453	153	3.3	5/8"	15~18"
3900-5433	203	4.5	3/4"	18~24"
3900-5450	203-1	4.0	1"	18~24"

ALL BARS INTERCHANGEABLE ON 01, 100, 150 & 200 BODY

PARTING BAR COMBINATION KDK STYLE 04, 104, 154, 204 TOOL HOLDERS

ALL BARS INTERCHANGEABLE ON 01, 100, 150 & 200 BODY

- Interchangeable with KDK same series tool holders.
- All working parts hardened and ground.

Item#	Holder No.	Wt. (lbs.)	Tool Bit Capacity (Thick. x Width)	Lathe Swing
3900-5404	04	1.5	3/32x1/2"	8~12"
3900-5414	104	2.3	1/8X11/16"	12~16"
3900-5454	154	4.3	1/8X7/8"	15~18"
3900-5434	204	5.0	1/8X1-1/8"	18~24"

MASTER BAR FOR BORING BARS KDK STYLE 05, 105, 155, 205 TOOL HOLDERS

- Interchangeable with KDK same series tool holders.
- All working parts hardened and ground.

Item#	Holder No.	Wt. (lbs.)	Boring Bar Capacity	Lathe Swing
3900-5405	05	1.3	3/4" Hole	8~12"
3900-5415	105	1.5	1" Hole	12~16"
3900-5455	155	3.8	1-1/4" Hole	15~18"
3900-5435	205	5.3	1-1/2" Hole	18~24"
3900-5429	205-1-3/4	8.1	1-3/4" Hole	18~24"
3900-5430	205-2	7.8	2" Hole	18~24"

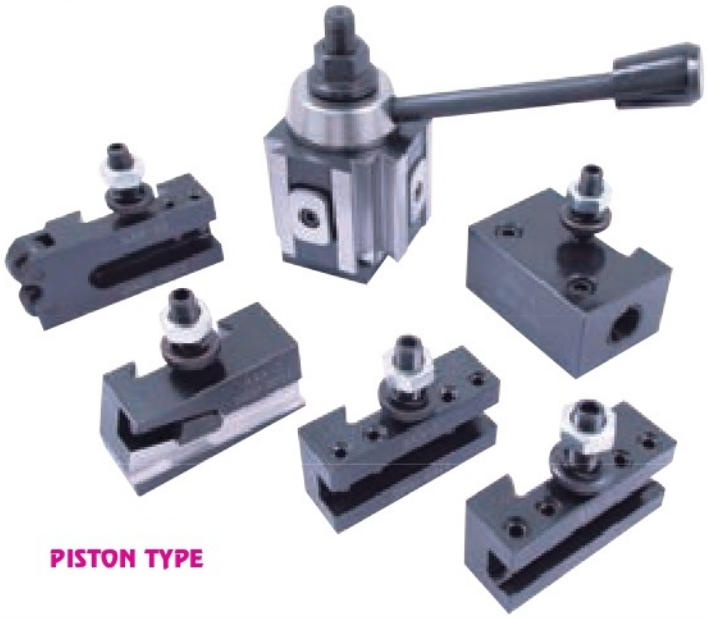
ALL BARS INTERCHANGEABLE ON 01, 100, 150 & 200 BODY

QUICK-CHANGE TOOL SETS

6PC QUICK-CHANGE TOOL POST SETS - Piston Type

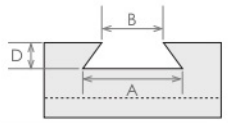
- Interchangeable with Aloris® and DORIAN® same series tool holders.
- All working parts hardened and ground.
- Completely sealed for maintenance-free operation.
- Increases productivity of all lathe operations.
- T-nut can be machined to fit.

HHIP PRO-SERIES



PISTON TYPE

Interchangeable with *Aloris®* and *DORIAN®* same series



Dimension of Dovetails

6PC SET INCLUDES

Holders:
- No. 1 - Turning & Facing;
- No. 2 - Boring, Turning & Facing
- No. 4 - Boring, Heavy Duty;
- No. 7 - Universal parting blade
- No.10 - Knurling, Facing & Turning

Tool Post: Piston Type

Series	Item#	A	B	D	Swing Capacity
AXA	3900-5910	1.64"	1.37"	0.383"	up to 12"
BXA	3900-5920	1.65"	1.41"	0.411"	10~15"
CXA	3900-5230	2.16"	1.68"	0.565"	13~18"
CA	3900-5260	2.62"	2.21"	0.493"	14~20"

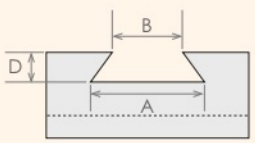
6PC QUICK-CHANGE TOOL POST SETS - Wedge Type

- Interchangeable with Aloris® and DORIAN® same series tool holders.
- All working parts hardened and ground.
- Completely sealed for maintenance-free operation.
- Increases productivity of all lathe operations.
- Precision design to assure repetitive accuracy.
- T-nut can be machined to fit.

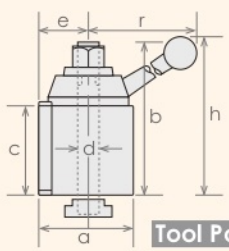
HHIP PRO-SERIES

Interchangeable with *Aloris®* and *DORIAN®* same series

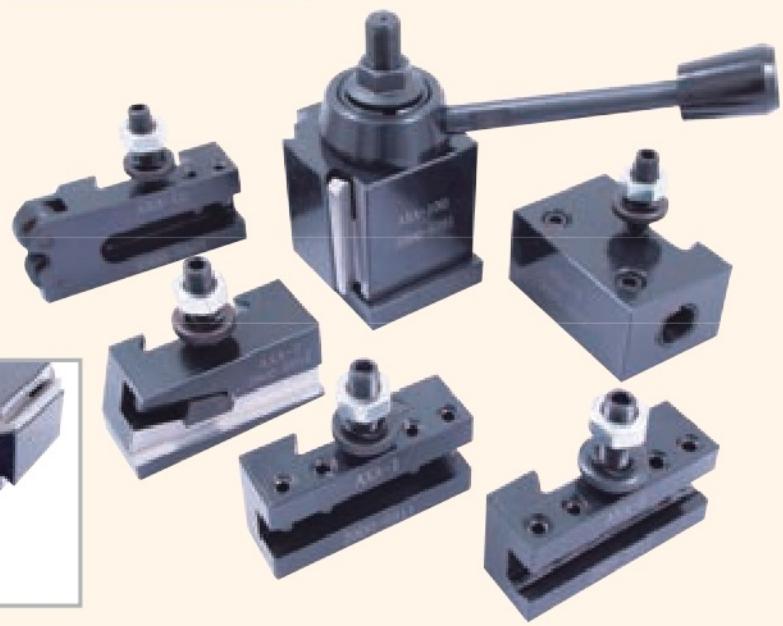
WEDGE TYPE



Dimension of Dovetails



Tool Post



6PC SET INCLUDES

Holders:
- No. 1 - Turning & Facing;
- No. 2 - Boring, Turning & Facing
- No. 4 - Boring, Heavy Duty;
- No. 7 - Universal parting blade(4°)
- No.10 - Knurling, Facing & Turning

Tool Post: Wedge Type

Series	Item#	A	B	D	a	b	c	d	e	h	r	Swing Capacity
0XA	3900-5100	1.10"	0.92"	.257"	1-3/4	2-3/4	1-9/16	3/8	7/8	3-1/4	3-7/8	up to 8"
AXA	3900-5105	1.64"	1.37"	.383"	2-1/2	3-7/8	2-1/4	9/16	1-3/8	4-11/16	5-3/4	up to 12"
BXA	3900-5120	1.65"	1.41"	.411"	3	4-5/8	2-3/4	5/8	1-5/8	5-9/16	7-5/16	10~15"
CXA	3900-5130	2.16"	1.68"	.565"	3-1/2	5-1/8	3	3/4	1-7/8	6-1/8	7-7/8	13~18"
CA	3900-5140	2.62"	2.21"	.493"	4	6-1/4	3-5/8	7/8	2-1/8	7	9	14~20"
DA	3900-5160	3.25"	2.72"	.600"	5	7-5/8	4-5/8	7/8	2-11/16	8-1/4	10-7/8	17~48"

6PC OXA MINI QUICK-CHANGE TOOL POST & HOLDER SETS - With Two No 1 Holders

- This true wedge type tool post set has maximum rigidity and provide chatter free performance.
- All working parts are hardened and ground. It is completely sealed for maintenance-free operation.
- Quick change tool post set for lathes with up to 9" swing. It requires 3/4" from the top of the compound rest to the center of the lathe.
- 60% of AXA, or series 100 size wedge type QCTP.
- It will hold turning tools with shanks from 1/4" to 1/2". The boring bar holder will hold 3/8" and 1/2" boring bars. It will hold 1/2" tall cut-off blades.
- This tool post mounts with an M10 stud that is included. It also includes a piece of steel from which you can make a T-slot nut to fit your lathe.
- All steel construction
- T-nut can be machined to fit.

KIT INCLUDES - 4° Parting Tool

Tool post,
2-#1turning & facing tool holders,
1- #2 boring,
turning & facing tool holder,
1-#4 heavy duty boring tool holder,
1-#7 4° universal parting tool holder

KIT INCLUDES - 0° Parting Tool

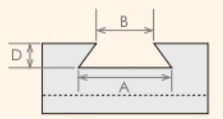
Tool post,
2-#1turning & facing tool holders,
1-#2 boring,
turning & facing tool holder,
1-#4 heavy duty boring tool holder,
1-#7T 0° Universal parting tool holder

QUICK-CHANGE TOOL POSTS - Wedge Type

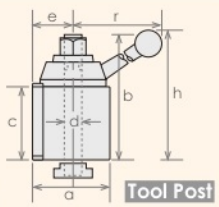
- All working parts hardened and ground.
- Completely sealed for maintenance-free operation

HHIP PRO-SERIES

Interchangeable with ***Aloris***® and ***DORIAN***® same series



Dimension of Dovetails



Tool Post

WEDGE TYPE

Series	Item#	A	B	D	a	b	c	d	e	h	r	Swing Capacity
0XA	**3900-5460**	1.10"	0.92"	.257"	1-11/16	2-19/32	1-1/2	3/8	15/16	3-9/64	3-27/32	**up to 9"**
AXA	**3900-5161**	1.64"	1.37"	.383"	2-1/2	3-7/8	2-1/4	9/16	1-3/8	4-11/16	5-3/4	**up to 12"**
BXA	**3900-5121**	1.65"	1.41"	.411"	3	4-5/8	2-3/4	5/8	1-5/8	5-9/16	7-5/16	**10~15"**
CXA	**3900-5131**	2.16"	1.68"	.565"	3-1/2	5-1/8	3	3/4	1-7/8	6-1/8	7-7/8	**13~18"**
CA	**3900-5141**	2.62"	2.21"	.493"	4	6-1/4	3-5/8	7/8	2-1/8	7	9	**14~20"**
DA	**3900-5162**	3.25"	2.72"	.600"	5	7-5/8	4-5/8	7/8	2-11/16	8-1/4	10-7/8	**17~48"**

Replacement Screws
-For Aloris Type Turning & Facing Holders

- Replace worn or lost hold down screws.

FITS TURNING&FACING HOLDERS

Item#	Series	Size
3900-5472	0XA	M6X16
3900-5919	AXA	M8X20
3900-5476	BXA	M8X30
3900-5478	CXA	M10X28
3900-5480	CA	M12X32
3900-5482	DA	M12X32

FITS #7 HOLDERS

Item#	Series	Size
3900-5473	0XA	M6X48
3900-5474	0XA-T	M6X48
3900-5475	AXA	M8X70
3900-5477	BXA	M8X82
3900-5479	CXA	M10X93
3900-5481	CA	M10X104
3900-5483	DA	M10X134

STUD FITS #7 HOLDERS

Item#	Series	Size
3900-5913	AXA	M8X70mm

NO. 16E - INDEXABLE THREADING & FACING HOLDERS

- Unique design allows you to use both sides for threading cut.
- Supplied with fully adjustable carbide chip breaker and carbide shims.
- Two triangular carbide inserts included.

Interchangeable with ***Aloris***® and ***DORIAN***® same series

Item#	Series	Description
3900-5259	AXA	Holder with TCMT-32.51inserts
3900-5925	BXA	Holder with TCMT-32.51 inserts
6004-9031		TCMT-32.51 TiN Carbide Insert

QUICK-CHANGE TOOL HOLDERS

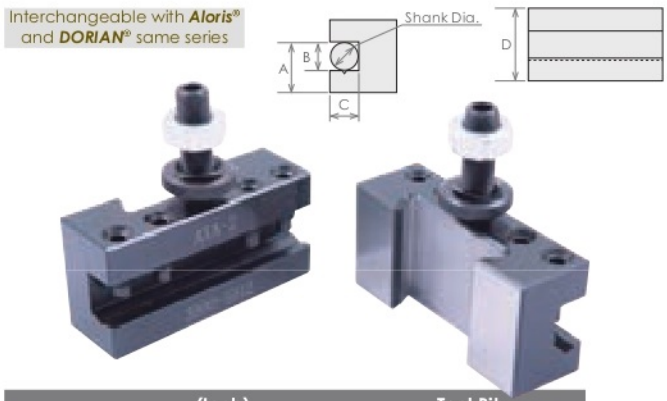
NO. 1 - TURNING & FACING HOLDERS

Interchangeable with ***Aloris***® and ***DORIAN***® same series

Item#	Series	(Inch) A	B	C	D	Tool Bit Capacity
3900-5461	0XA	5/8	1/2	5/16	1	Up to 1/2
3900-5911	AXA	15/16	1/2	7/16	1-1/2	3/16~1/2
3900-5931	AXA-1S	1-3/64	5/8	9/16	1-1/2	1/4~5/8
3900-5261	BXA	1-1/8	5/8	1/2	1-3/4	1/4~5/8
3900-5934	BXA-1S	1-13/64	3/4	5/8	1-3/4	1/2~3/4
3900-5231	CXA	1-7/16	3/4	5/8	2-1/8	1/2~3/4
3900-5941	CA	1-11/16	1	3/4	2-1/2	1/2~1
3900-6001	DA	3-3/16	1-1/4	1	3-1/8	3/4~1-1/4

NO. 2 - BORING, TURNING & FACING HOLDERS

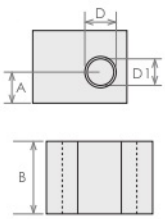
Interchangeable with ***Aloris***® and ***DORIAN***® same series



Item#	Series	(Inch) A	B	C	D	Tool Bit Capacity	Shank
3900-5462	0XA	5/8	1/2	5/16	1	Up to 1/2	7/24
3900-5912	AXA	15/16	1/2	7/16	1-1/2	3/16~1/2	7/16
3900-5932	AXA-2S	1-1/32	5/8	9/16	1-1/2	1/4~5/8	1/2
3900-5262	BXA	1-1/8	5/8	1/2	1-3/4	1/4~5/8	1/2
3900-5935	BXA-2S	1-7/32	3/4	5/8	1-3/4	1/2~3/4	3/4
3900-5232	CXA	1-7/16	3/4	5/8	2-1/8	1/2~3/4	3/4
3900-5942	CA	1-11/16	1	3/4	2-1/2	1/2~1	13/16
3900-6002	DA	3-3/16	1-1/4	1	3-1/8	3/4~1-1/4	1

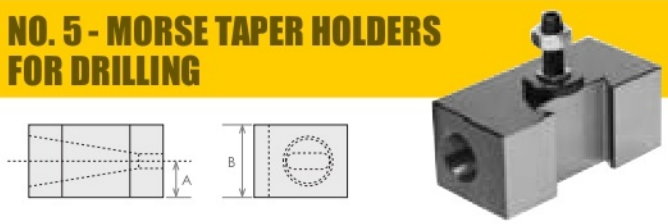
NO. 4 - HEAVY DUTY BORING HOLDERS

Interchangeable with ***Aloris***® and ***DORIAN***® same series



Item#	Series	Inside A	B	D	D1
3900-5464	0XA	1/2	1	1/2	5/12
3900-5203	AXA	3/4	1-1/2	3/4	5/8
3900-5204	BXA	1	2	1	3/4
3900-5233	CXA	1	2	1	3/4
3900-5206	CA	1-3/8	2-3/4	1-1/4	1
3900-6004	DA	1-9/16	3-1/8	1-1/2	1-1/4

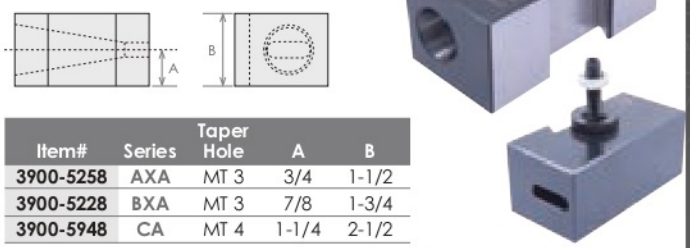
NO. 5 - MORSE TAPER HOLDERS FOR DRILLING



Item#	Series	Taper Hole	A	B
3900-5226	0XA	MT2	1/2	1-1/4
3900-5917*	AXA	MT 2	3/4	1-1/2
3900-5227*	BXA	MT 2	7/8	1-3/4
3900-5237*	CXA	MT 3	1	2
3900-5947*	CA	MT 3	1-1/4	2-1/2

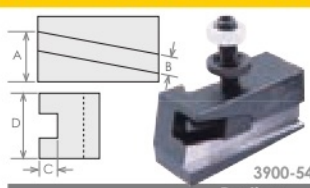
*Limited Supply

NO. 53, 54, 55 - MORSE TAPER HOLDERS FOR DRILLING



Item#	Series	Taper Hole	A	B
3900-5258	AXA	MT 3	3/4	1-1/2
3900-5228	BXA	MT 3	7/8	1-3/4
3900-5948	CA	MT 4	1-1/4	2-1/2

NO. 7 - UNIVERSAL PARTING BLADE HOLDERS



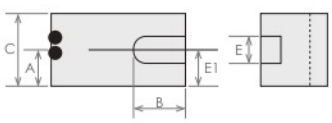
3900-5467 Shown

3900-5468 Shown

Item#	Series	Parting Angle	A	B	C	D
3900-5467	0XA	4°	13/16	1/2	1/8	1
3900-5468	0XA	0°	5/8	1/2	1/8	1
3900-5914	AXA	4°	13/16	1/2	3/16	1-1/2
3900-5264	BXA	4°	1	11/16	3/16	1-3/4
3900-5234	CXA	4°	1-3/16	3/4	3/16	2
3900-5944	CA	4°	1-7/16	7/8	1/4	2-1/2
3900-6007	DA	4°	1-3/4	1-1/8	1/4	2-3/4

See page 304 for parting blades

NO. 10 - KNURLING, TURNING AND FACING HOLDERS



Item#	Series	A	B	(Inch) C	E	E1	Capacity Tool Bit
3900-5470	0XA	1/2	1-3/4	1-1/8	7/16	3/8	Up to 1/2
3900-5915	AXA	7/8	2-1/2	1-9/16	1/2	3/8	3/16~1/2
3900-5225	BXA	1	2-5/8	1-3/4	5/8	1/2	1/4~5/8
3900-5236	CXA	1-3/16	3-1/8	2	3/4	5/8	1/2~3/4
3900-5946	CA	1-7/16	3-3/4	2-1/2	1	3/4	1/2~1
3900-6010	DA	1-7/8	4-1/2	3-1/8	1-1/4	1	1/2~1-1/4

5PC MINI QUICK-CHANGE TOOL POST & HOLDER KIT

- Fits 7x10, 7x12 and 7x14 mini lathes
- No tools required to change tools
- Made of aluminum

ACCEPT
- **Turning Holder: 1/4-3/8" Shank**
- **Boring Holder: 3/8" Shank**
- **Cut-off Blade Holder: 1/2"**

Limited Supply!

KIT INCLUDES
Tool post, Mounting hardware, Two turning tool holders, a boring tool holder and a cut-off blade holder

RETROFIT GTN CUT-OFF AND GROOVING BLADES

- Used on Aloris and DORAIN Type Quick-Change Tool Holders
- High performance rates. No more re-grinding. Insert indexability.
- Also can use GTL, GTR inserts.

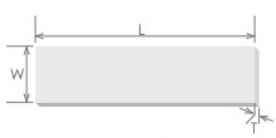
FOR GROOVING, PARTING-OFF AND CHAMFERING

INSERT IS NOT INCLUDED

Item#	Fits Holder	HSS Blade Reference	Blade Height	Cutting Width	Overall Length	Use Insert
3900-5971	AXA-7	P2	1/2	.087&.093"	4-11/32	GTN/R/L 2
3900-5973	BXA-7	P3N	11/16	.087&.093"	4-11/32	GTN/R/L 2
3900-5975	BXA-7	P3, T3	11/16	.120"	4-11/32	GTN/R/L 3
3900-5977	CXA-7	P3W	3/4	.120"	4-11/32	GTN/R/L 3
3900-5979	CA-7	P5X	7/8	.120"	5-29/32	GTN/R/L 3
3900-5981	CA-7	P5N	7/8	.160"	5-29/32	GTN/R/L 4

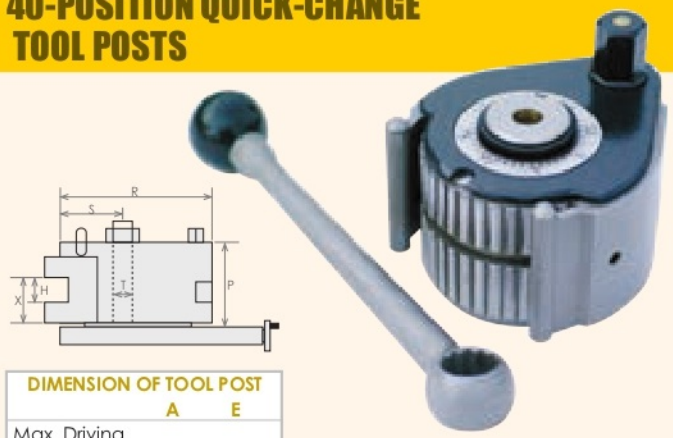
See page 139 for inserts

CUT-OFF BLADES, BEVELED



(Inch) Size(TxWxL)	HSS Item#	5% COBALT Item#
3/32 x 1/2 x 4-1/2	**2000-1002**	**2000-1102**
3/32 x 5/8 x 5	**2000-1003**	**2000-1106**
1/8 x 1/2 x 4-1/2	**2000-1000**	**2000-1110**
1/8 x 3/4 x 5	**2000-1004**	**2000-1114**
1/8 x 7/8 x 6	**2000-1005**	**2000-1118**

40-POSITION QUICK-CHANGE TOOL POSTS



DIMENSION OF TOOL POST	A	E
Max. Driving Power (HP)	3	6
R Maximum	4.13"	5.14"
S Maximum	2.07"	2.57"
P	1.83"	2.30"
T	0.79"	0.79"
H	0.83"	0.94"
X Minimum	1.18"	1.37"
X Maximum	1.61"	2.04"

All Holders Are Interchangeable With Most of 40-Position Tool Post A, E & B

Item#	Series	Swing
3900-5310	A	6~13"
3900-5320	E	10~18"

40-POSITION QUICK-CHANGE TOOL HOLDERS

All Holders Are Interchangeable With Most of 40-Position Tool Post A, E & B

HOLDER A

HOLDER A - Cut-off			
Fit Post	Item#	Fits Blade Width	Holder Length
A	**3900-5391**	0.41"	3.16"
E	**3900-5327**	0.63"	4.00"
B	**3900-5332**	0.63"	4.75"

HOLDER B

HOLDER B - Boring, Turning & Facing			
Fit Post	Item#	Max. Holding Dia.	Holder Length
A	**3900-5304**	0.75"	3.54"
E	**3900-5321**	1.00"	4.00"
B	**3900-5331**	1.00"	5.00"

HOLDER D

HOLDER D - Turing & Facing			
Fit Post	Item#	Max Holding Height	Holder Length
A	**3900-5305**	0.75"	3.54"
E	**3900-5322**	0.75"	4.00"
B	**3900-5335***	1.25"	5.50"

*Limited Supply

HOLDER S

HOLDER S - Heavy-Duty Boring & Drilling			
Fit Post	Item#	Holder Hole Dia.	Holder Length
E	**3900-5323**	1-5/8"	4.00"
B	**3900-5336**	1-5/8"	4.75"

BUSHINGS For Holder S			
Fit Post	Item#	Taper	Holder Hole Dia.
A	**3900-5307***	MT1	1-3/16"
A	**3900-5308***	MT2	1-3/16"
E	**3900-5326**	MT2	1-3/16"
E	**3900-5324**	MT3	1-5/8"
B	**3900-5338***	MT3	1-5/8"
B	**3900-5339***	MT4	1-5/8"

*Limited Supply

KNURLING TOOLS & KNURLS

3K REVOLVING HEAD KNURLING TOOLS

- Machined ground steel in shiny black finish.
- Knurls are hob cut from high speed steel and heat treated.
- Provided with one pair each of fine, medium and coaraw knurls.
- Replacement knurts are offered as a complete spare set for knurling tools.

Item#	Holder size W x H x L	Knurl Dimensions Dia. x Thickness x Hole
2220-0008	1/2 x 1-1/8 x 6-1/2"	3/4 x 3/8 x 1/4"
2220-0010	5/8 x 1-3/8 x 7-1/2"	3/4 x 3/8 x 1/4"

HSS KNURLING WHEELS

- High speed steel.
- Dimension: 3/4 (O.D.)x3/8 (Width)x1/4" (Hole)

SOLD AND SUPPLIED IN PAIRS

Pitch	Lines (Inch)	Diamond Item#	Straight Item#
Coarse	14	2220-0014	2220-0214
Medium	21	2220-0016	2220-0216
Fine	33	2220-0018	2220-0218

QUICK ACTING KNURLING TOOLS

NEW

- Fast set up knurling tool.
- Minimizes pressure on lathes
- Depth of knurling impression can be preset for production work.
- Finished with one set of medium diamond pattern knurts 3/4" x 3/8" x 1/4" (19 x 9.5 x 6.35)

Item#	Length	Shank H x W	Knurl Dimensions	Capacity
2220-0022	6"	1/2 x 5/8"	3/4x3/8x1/4"	1/16-2-1/4"
2220-0024	8-1/4"	5/8 x 3/4"	3/4x3/8x1/4"	1-1/2-4-1/2"

PIVOT HEAD KNURLING TOOL - Diamond

- Self-adjusting pivot head.
- Holder shank size: 4-1/2x1/2x1/2"
- Knurls Dimension: 3/4(Diameter)x3/8(Thickness)x1/4" (Hole).
- Produces medium diamond pattern.

SINGLE KNURLING TOOL

Features:

- Supplied with medium cut high speed steel knurl.
- Each holder includes one medium pitch.
- Holder size 4 x 5/8 x 5/8.
- Straight (AA) pattern knurl.

HSS KNURLING WHEEL 4 PAIR KIT

- High speed steel.
- Wheel Dimension: 3/4 (Diameter)x3/8 (Thickness)x1/4" (Hole)
- **Kit Includes:**

1 Pair of Diamond Coarse (14 lines/Inch), Diamond Medium (21 Lines/Inch), Diamond Fine (33 Lines/Inch) & Straight Medium (21 Lines/Inch)

SELF ADJUSTING KNURLING TOOLS

NEW

- Machined ground steel in shiny black finish.
- Knurls are hob cut from high speed steel and heat treated.
- Provided with one pair of medium knurls.
- Replacement knurls are offered as a complete spare set for knurling tools.

Item#	Holder size W x H x L	Knurl Dimensions Dia. x Thickness x Hole
2220-0027	1/2 x 1-1/8 x 6-1/2"	3/4 x 3/8 x 1/4"
2220-0029	5/8 x 1-3/8 x 7-1/2"	3/4 x 3/8 x 1/4"

MORSE TAPER TAILSTOCK TURRETS

- Taper: Morse Taper.
- Fill tool socket with 5/8" diameter.
- Head Diameter: 2-1/2".
- Will save time quick change machining operation within seconds.

Item#	Taper	Drawbar End
3900-4910	MT 2	3/8"~16
3900-4909	MT 3	3/8"~16

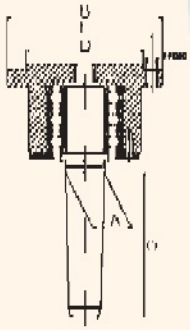
MT TO JT REVOLVING TAILSTOCK ARBORS/ADAPTERS

- This is a "live" drill chuck adapter with smooth, sealed bearing for the tailstock.
- Use it to mate with a JT drill chuck and support small diameter work where a live center is not practical.
- The shank is 2 or 3 Morse taper.

Item#	Taper	Drawbar Thread
3906-4922	MT 2 x JT2	M10
3906-4925	MT2 x JT3	M10
3901-4910	MT2 x JT33	M10
3906-4928	MT3 x JT2	M12
3906-4932	MT3 x JT3	M12

REVOLVING TAILSTOCK BACKPLATES
For Lathe Chucks

- Used for calibrate or support workpiece during processing.
- Three ball bearings for heavy duty load and relativly high speed.
- 3 hole chuck mounting pattern is pre-drilled.



LATHE CHUCK OPTIONAL

Item#	Shank Taper	(mm) A	B	C	D	E	Max Load (lbs)	T.I.R. (Inch)	Speed RPM
3900-6022	MT2	17.78	80	64	55	66	1100	.0002	4000
3900-6021	MT2	17.78	100	64	72	84	1100	.0002	2500
3900-6023	MT3	23.83	80	81	55	66	1760	.0002	4000
3900-6026	MT3	23.83	100	81	72	84	1760	.0002	2500
3900-6024	MT4	31.27	100	103	72	84	2200	.0002	4000
3900-6025	MT5	44.40	125	130	95	108	3300	.0004	3500
3900-6030	MT4	31.27	125	103	95	108	2200	.0004	4000
3900-6031	MT5	44.40	160	130	130	142	3300	.0004	3500

2MT MORSE TAPER SHANK
3 & 4-JAW SELF-CENTERING CHUCKS

- Steel body-hardened and ground scroll and pinions
- Hardened and ground MT spindle
- Supplied with chuck wrench.
- 3/8-16 threaded drawbar.
- 2 MT shank.
- T.I.R. 0.0006".

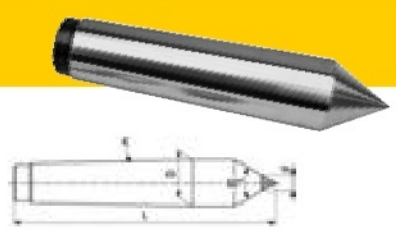
2 SETS OF SOLID STEEL JAWS
(INTERNAL AND EXTERNAL)

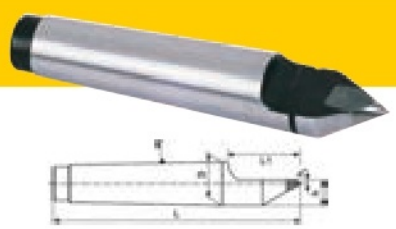
3900-4706 SHOWN

DEAD CENTERS
-Full, Half, Steel Or With Carbide Tip

- Made of tool steel, hardened and ground.
- +/- .0002" TIR

Carbide Tip Shown



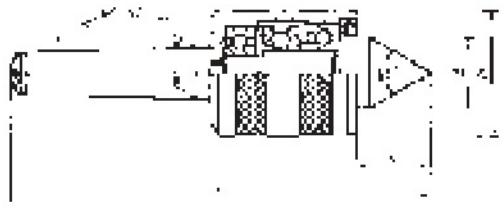


Morse Taper	(mm) h1	h	d	D	L1	L	Accuracy	Full Point Steel Item#	Full Point Carbide Tipped Item#	Half Point Steel Item#	Half Point Carbide Tipped Item#
1 MT	1.5	5.5	8	12.065	35	80	0.01	3900-5051	3900-5056	3900-6051	3900-6056
2 MT	2	6	8	17.78	43	100	0.01	3900-5062	3900-5057	3900-6052	3900-6057
3 MT	3	9	12	23.825	57	125	0.01	3900-5063	3900-5058	3900-6053	3900-6058
4 MT	5	12.5	15	31.267	70	160	0.01	3900-5064	3900-5059	3900-6054	3900-6059
5 MT	7	16	18	44.399	90	200	0.01	3900-5065	3900-5060	3900-6055	3900-6060

LIVE CENTERS

ECONOMY LIVE CENTERS

- Central spindle is made of hardened alloy steel and ground for high accuracy.
- Precision high quality bearings, combination of ball bearing and thrust bearing.
- Dustproof seal on the front end.

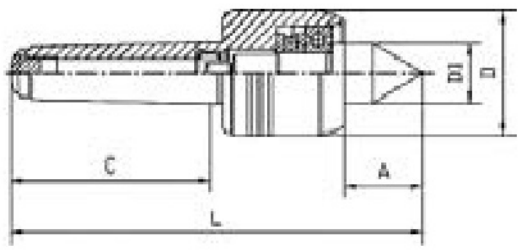


Item#	Morse Taper	(Inch) d	D	D1	L1	OAL	Accuracy Load	Radial Load (N)	Max. RPM
3900-5001	1	.71	1.3	.475	.79	4.33	.0004	900	4000
3900-5002	2	.98	1.8	.700	1.02	5.71	.0004	1500	3500
3900-5003	3	1.10	2.1	.938	1.18	6.69	.0004	2000	3000
3900-5004	4	1.26	2.4	1.231	1.37	8.10	.0004	3200	2500
3900-5005	5	1.77	3.0	1.748	1.77	10.0	.0006	6300	2000
3900-5006	6	2.95	4.9	2.494	2.70	14.25	.0006	10000	1200

MEDIUM DUTY LIVE CENTERS

- With 60° included angle.
- Made of hardened steel and ground to high accuracy.
- The central spindle lengthened to reduce vibration.
- Two special designed high-quality ball bearing and thrust bearings.
- Complete protection of bearings from the ingress of coolant, dirt or swart.
- Slim body design.

CONCENTRICITY WITHIN .0002"

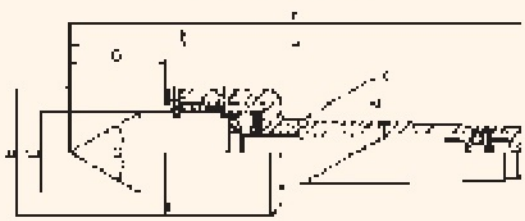


Item#	Morse Taper	(Inch) d1	D	A	C	L	Load Rate lbs.	Max. RPM
3900-5029	2	0.86	1.65	1.12	4.58	5.70	330	3500
3900-5030	3	0.90	1.86	1.12	5.73	6.85	660	3000
3900-5040	4	1.02	2.17	1.25	6.95	8.20	990	2500
3900-5041	5	1.38	2.70	1.90	8.60	10.50	1760	2000

SUPER DUTY HIGH PERFORMANCE LIVE CENTERS

- Combination of needle roller, thrust ball and deep groove ball bearings.
- Central spindle is made of hardened alloy steel and ground.
- Oil filler in the head for maintain the internal bearings to extend the life time.

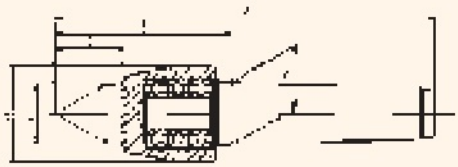
CONCENTRICITY WITHIN .0002"



Item#	Morse Taper	(mm) A	B	C	D	E	F	Load Rate lbs.	Max. RPM
3900-6074	2	17.78	36	22	26	68.5	126	660	5500
3900-6075	3	23.83	47	30	35	93.0	166	880	4500
3900-6076	4	31.27	55	35	40	104.0	197	2640	4000
3900-6078	5	44.40	70	45	51	134.5	246	4400	3000

SMALL HEAD LIVE CENTERS - REVOLVING BODY STYLE

- Revolving body turn vs common head turns.
- The center adopts the combinatin of deep groove ball bearings.
- Small head can be used in different processing demands.
- Applicable to medium high speed light load applications.
- The head is made of alloy steel and hardened to HRC 58~62
- Dustproof sealed.



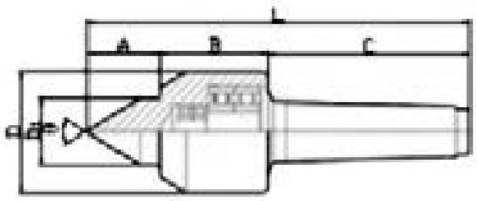
CONCENTRICITY WITHIN .0002"

Item#	Morse Taper	(mm) A	B	C	D	E	F	Radial Load (lbs.)	Max. RPM
3900-6101	1	12.07	32	16	21	54.5	108	88	4000
3900-6102	2	17.78	40	22	26	68	132	264	3500
3900-6103	3	23.83	45	26	32	83	164	550	3000
3900-6104	4	31.27	48	30	34	93.5	188	770	2500
3900-6105	5	44.40	68	45	50	118.5	248	1100	2000

LIVE CENTERS - REVOLVING BODY STYLE

- One piece central spindle and revolving body is made of hardened alloy steel and ground for high accuracy.
- Precision high quality bearings, combination of ball bearing and thrust bearing.
- Dustproof sealed.

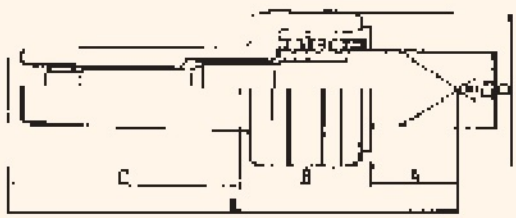
CONCENTRICITY WITHIN .0002"



Item#	Morse Taper	(mm) A	B	C	D	D1	L	Accuracy Load	Radial Load (lbs.)	Max. RPM
3900-6093	3	33	56	88	53	28	177	.0002"	700	6000
3900-6094	4	40	60	108	63	35	211	.0002"	1200	5000
3900-6095	5	50	62	138	73	45	250	.0003"	1800	3000

ULTRA PRECISION HEAVY DUTY LIVE CENTERS

- Triple bearing design.
- Machined from one piece of forging, hardened and precisely ground.
- Accuracy: less or equal .0002" TIR.
- Ultra precision radial bearing reduces run out to minimum after much use.



CONCENTRICITY WITHIN .0002"

Item#	Morse Taper	(mm) A	B	C	D	D1	L	Load Rate lbs.	Max. RPM
3900-6082	2	**31**	48	69	46	20	147	770	6300
3900-6083	3	**39**	55	86	53	30	180	1200	5000
3900-6084	4	**42**	62	108	63	32	208	1760	3800
3900-6085	5	**49**	71	136	83	40	256	4400	3000

LIVE CENTERS

7PC MULTI-SHAPE LIVE CENTER SETS

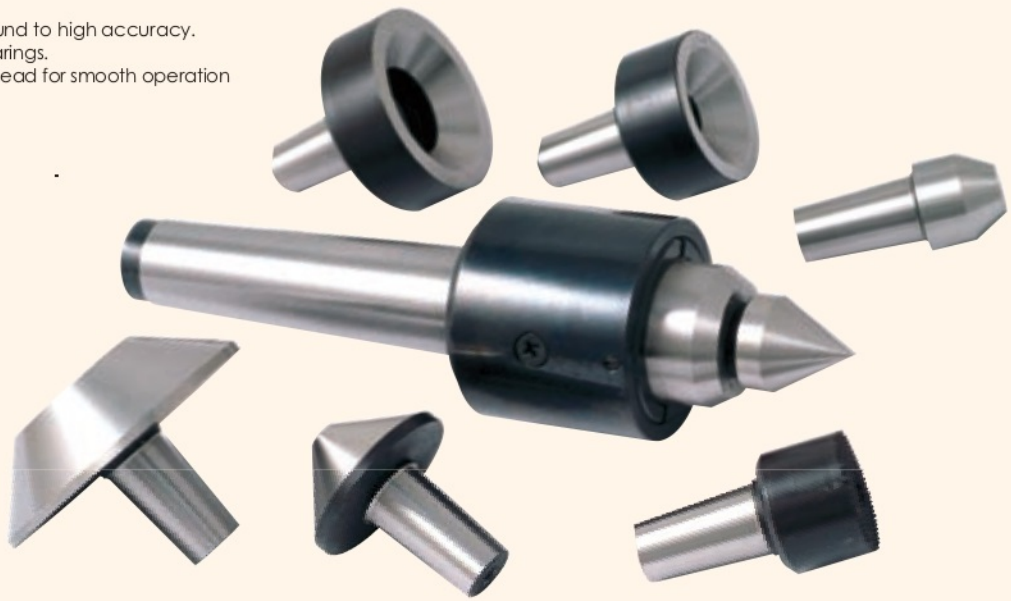
- Made of high grade tool steel hardened and ground.
- Precision needle bearings used for high accuracy with long life.
- Accuracy guaranteed to 0.0012~0.0039" at center head.
- Less heat is generated due to spring plate used.
- Complete with fitted case.

Item#	Morse Taper	Thrust Load lbs.	Origin
3906-5019	MT1	330	India
3906-5020	MT2	330	India
3900-5021	MT3	900	China
3900-5022	MT4	1200	China
3900-5023	MT5	1600	China

SET INCLUDES:
MORSE TAPER LIVE CENTER,
7 INTERCHANGEABLE TIPS, WRENCH

INTERCHANGEABLE POINT LIVE CENTER KITS

- Used for CNC machines.
- Fine adjustment for better grip.
- Made of hardened tool steel and ground to high accuracy.
- Two special designed high-quality bearings.
- Can be lubricated through a hole on head for smooth operation and longer bearings life.
- Heat treated to HRC 60.



KIT INCLUDES
- Live Center Body
- 3 of Bull Nose Point
- 2 of Cone Shape Point
- 1 Serrated Point
- 1 Wrench Tool

Item#	Morse Taper	(mm) A	B	C	D	E	F	G	Load Rate kg	RPM	Accuracy
3900-5052	2	17.780	36	22	10.5	68.5	110	10	300	5500	0.01
3900-5053	3	23.825	47	30	15	93	145	15	400	4500	0.01
3900-5054	4	31.267	55	35	16	104	172	20	1200	4000	0.01
3900-5055	5	44.399	70	45	20	134.5	216	25	2000	3000	0.02

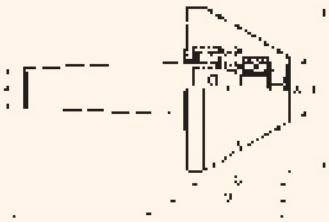
POINT DIMENSIONS:

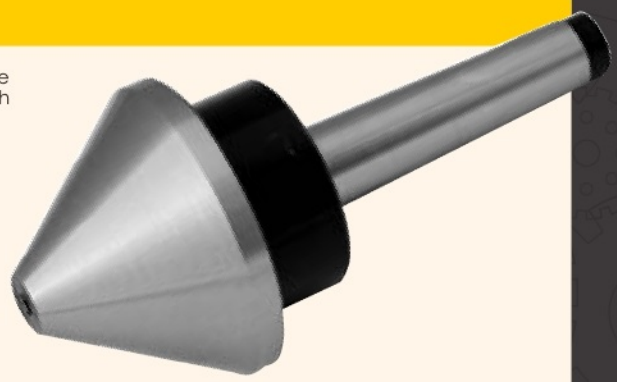
Unit: Inch

Morse Taper	d	l	A D	A D1	A L	B D	B D1	B L	C D	C D1	C L	D D	D D1	D D2	D L	E D	E D1	E D2	E L	F D	F D1	F L	G D	G L
2	.380	.630	.60	--	1.51	1.13	.201	1.38	1.73	0.80	1.40	1.12	0.77	.22	1.40	1.52	1.10	.55	1.39	.59	.06	1.38	.88	1.38
3	.590	.984	.79	.019	1.97	1.42	.236	1.77	2.48	1.30	1.77	1.42	1.10	.47	1.77	1.77	1.50	.87	1.77	.79	.10	1.77	.98	1.77
4	.784	1.181	.98	.019	2.36	1.77	.393	2.09	2.76	1.38	2.09	1.77	1.46	.67	2.09	2.48	2.09	1.18	2.09	.98	.20	2.09	1.26	2.09
5	.984	1.496	1.26	.039	2.87	2.20	.551	2.56	3.15	1.50	2.56	2.20	1.73	.79	2.56	2.78	2.36	1.42	2.56	1.26	.20	2.56	1.77	2.56

HEAVY DUTY BULL NOSE LIVE CENTERS

- Bull nose live centers are typically used in applications where the center hole is a large bore or when the application calls for the machining of pipe or other cylindrical components such as hydraulic cylinders. manufacturers of power generation components, and pipe manufacturers.
- Bull nose live centers are constructed with larger bearings to carry these heavy loads.
- The strength and alignment of the fully supported bull nose head provides longer center life.
- The rigidity of this live center helps dampen vibration and resist chatter.



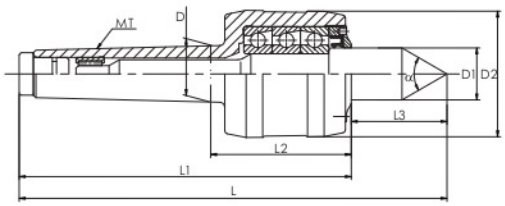


Item#	Morse Taper	(Inch) A	D	B	α	L	Load Rate Lbs.	Drawbar Threads
3900-5010	MT2	0.50	2.49	1.42	70°	5.37	440	3/8~16
3900-5011	MT3	0.75	3.10	1.66	70°	6.75	440	3/8~16
3900-5015	MT3	1.25	4.00	2.06	75°	7.15	880	3/8~16
3900-5008	MT3	1.25	5.00	2.40	75°	7.65	880	3/8~16
3900-5009*	MT3	1.38	6.00	4.06	75°	7.24	1320	3/8~16
3900-5014	MT4	1.25	4.00	2.06	75°	8.11	1760	5/8~11
3900-5012	MT4	1.37	5.05	2.45	75°	7.60	1760	5/8~11
3900-4998	MT4	1.38	6.00	4.11	75°	8.15	1760	5/8~11
3900-4999	MT4	1.57	8.00	4.82	75°	8.86	3520	5/8~11
3900-5016	MT5	1.26	4.75	2.40	75°	9.09	3000	3/4~16
3900-5013	MT5	1.38	6.00	3.20	75°	8.75	3000	3/4~16
3900-5017	MT5	1.57	8.00	4.84	75°	9.92	3000	3/4~16
3900-5018	MT5	2.24	10.00	5.96	75°	10.00	2640	3/4~16
3900-5019	MT6	1.57	8.00	4.25	75°	12.60	3500	1~8

*Limited Supply

Pro-Series HIGH SPEED CNC LIVE CENTERS

- With 60° included angle.
- Designed for high speed on N/C lathe
- Point is high-carbon alloy steel and heat treated.
- Bearings permanently lubricated
- Body is hardened for extra strength and extra rigidity



Limited Supply!

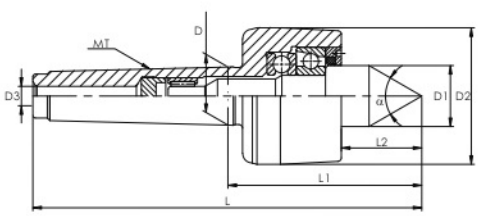
8,000RPM
≤ .0002" TIR

Item#	Morse Taper	(Inch) D	D1	D2	α	L	L1	L2	L3	Max. RPM	Weight lbs
3901-7002	2	0.700	0.71	1.7	60°	5.5	4.5	1.91	0.96	8000	1.9
3901-7003	3	0.938	0.87	2.1	60°	7.1	5.5	2.34	1.59	8000	2.9

HHIP PRO-SERIES

Pro-Series MEDIUM-DUTY CNC LIVE CENTERS

- With 60° included angle.
- Designed for long life, medium duty on N/C lathe.
- Point is high-carbon alloy steel and heat treated.
- Bearings permanently lubricated.
- Body is hardened for extra strength and extra rigidity.



Limited Supply!

Item#	Morse Taper	(mm) D	D1	D2	α	L	L1	L2	Max. RPM	Load Rate Lbs.	Weight Lbs.
3901-7013	3	23.83	24.8	56	60°	171	91	45	4000	660	2.2
3901-7015	5	44.40	40.7	83	60°	265	135	73	2500	3300	8.8

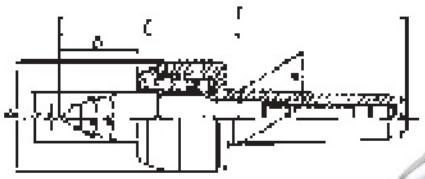
≤ .0003" TIR

HHIP PRO-SERIES

LIVE CENTERS

PRECISION EXTENDED POINT LIVE CENTERS

- Suitable for medium/high speed application
- Ball bearing construction
- Made of alloy steel and hardened to 58-62 RC
- Dustproof seal on the front end to prevent the entry of cutting fluid and dust



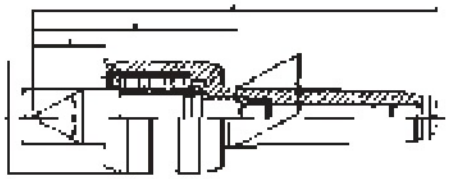
≤ .0002" TIR

Item#	Morse Taper	Nose Length	OAL	Max. RPM	Load Rate (Lbs)
3900-5024	2	1.16"	6.14"	5000	260
3900-5025	3	1.25"	7.25"	4000	660
3900-5026	4	1.44"	8.45"	3500	1100
3900-5027	5	1.78"	10.35"	2500	2200

HIGH SPEED CNC LIVE CENTERS

- With 60° included angle.
- Made of hardened tool steel and precision ground.
- Two special designed high-quality bearings.
- Complete protection of bearings from the ingress of coolant, dirt or swarf.
- Spindle heat treated to HRC 60.

≤ .0002" TIR



Type A

Type B

Morse Taper	Max. RPM	Load Rate Lbs.	Type A Item#	Type A Nose Length	Type A OAL	Type B Item#	Type B Nose Length	Type B OAL
3	6000	550	3900-5037	1.16"	6.5"	3900-5047	1.75"	7.3"
4	5000	880	3900-5038	1.48"	8.2"	3900-5048	2.00"	9.0"
5	4000	1760	3900-5039	1.81"	10.0"	3900-5049	2.50"	10.8"

Pro-Series HIGH SPEED CNC LIVE CENTERS

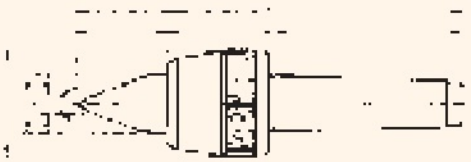
- With 60° included angle.
- Designed for long life, high speed on N/C lathe
- Point is high-carbon alloy steel and heat treated.
- Bearings permanently lubricated
- Body is hardened for extra strength and extra rigidity

≤ .0002" TIR

Type A

HHIP PRO-SERIES

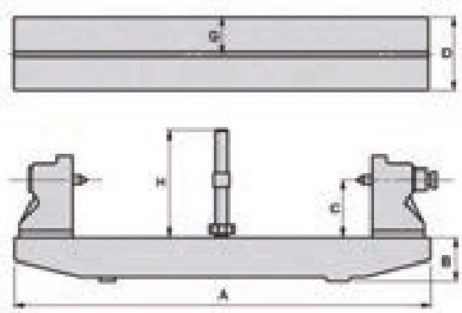
Type B



MADE IN TAIWAN

Item#	Morse Taper	Type	A	B	C	D	(Inch) D1	b	OAL	d1	Load Rate lbs.	Max. RPM	Weight lbs
3900-5033	3	A	1.54	2.17	3.39	2.09	1.18	--	7.09	0.47	200	4000	2.8
3900-5034	4	A	1.65	2.44	4.25	2.48	1.26	--	8.35	0.47	360	3000	4.8
3900-5035	5	A	2.24	2.80	5.35	3.27	1.57	--	10.40	0.71	800	2500	9.5
3900-5043	3	B	1.77	2.17	3.39	2.09	1.18	0.393	7.32	0.47	200	4000	2.8
3900-5044	4	B	2.05	2.44	4.25	2.48	1.26	0.472	8.74	0.47	360	3000	4.8
3900-5045	5	B	2.64	2.80	5.35	3.27	1.57	0.551	10.79	0.71	800	2500	9.7

HEAVY-DUTY PRECISION BENCH CENTERS



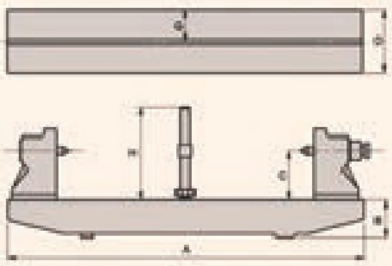
- Centers are hardened and precision ground.
- Quick-release centers.
- Hand scraped ways, adjustable gibs.
- MT2 dead center.
- Heavy duty adjustable indicator holder included and accepts most of AGD indicators.
- Head stock can be adjusted lengthwise and locked securely with special lever type handle.

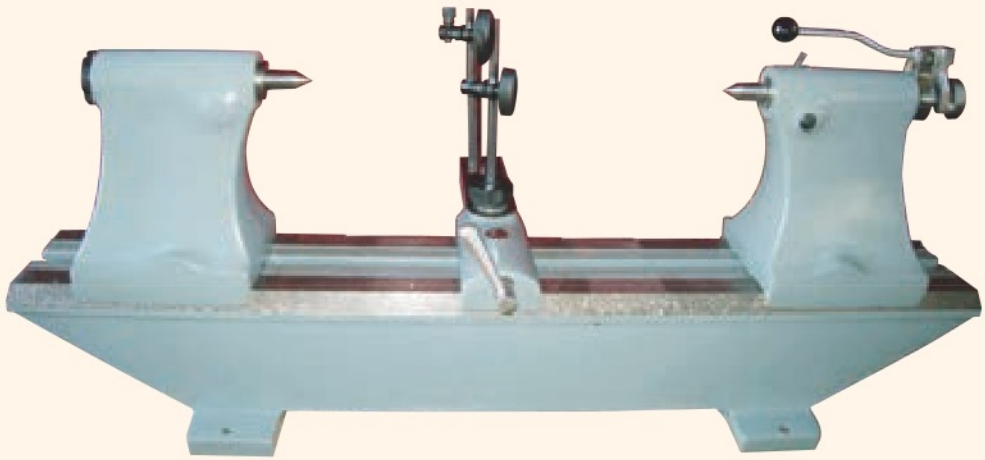
Limited Supply!

Item#	OAL A	Center to Center	Max. Swing C	B	D	G	H	Accuracy Run-out	Weight (Lbs.)
4401-0069	21	7.78"	3.9"	4.33"	4.33"	2.16	8.7"	0.0002"	78
4401-0072	29	11.8"	6.7"	6.1"	5.51"	2.80"	8.7"	0.0002"	125

HEAVY-DUTY PRECISION BENCH CENTERS

- Centers are hardened and precision ground.
- Quick-release centers.
- Hand scraped ways, adjustable gibes.
- MT2 live center.
- Heavy duty adjustable indicator holder included.
- Indicator holder included and accepts most of AGD indicators.
- Head stock can be adjusted lengthwise and locked securely with special lever type handle.





Item#	OAL A	Center to Center	Max. Swing C	B	D	G	H	Accuracy Run-out	Weight (Lbs.)
4401-0023	36"	19"	5.25"	6.3"	5.5"	2.76"	7.9"	0.00015"	240
4401-0024	40"	23.5"	5.25"	6.3"	5.5"	2.76"	7.9"	0.00015"	440
4401-0025	56"	39"	8.50"	6.3"	5.5"	2.76"	7.9"	0.00018"	620

CONCENTRICITY CHECKERS

Pro-Series PRECISION CONCENTRICITY CHECKER

- Suitable for measuring concentricity, roundness and deviation with high accuracy.
- Metal base can be easily attached a magnetic base
- Measuring Range: 0.059~0.980"/1.5~25 mm diameter.
- Device Dimension: 10.5 L x4.5 W x 5" H.
- Accuracy: 0.00008"/ 0.002mm.
- Max. length to hold a parts: 4"

MADE IN TAIWAN

MINI UNIVERSAL MAG BASE W/FINE ADJUSTMENT

Accuracy: 0.00008"/ 0.002mm.

.0005 GRADUATION
0-0.03" RANGE TEST INDICATOR

SHOWN WITH OPTIONAL KIT

LARGER CAPACITY UNIVERSAL CONCENTRICITY GAGE/CHECKER

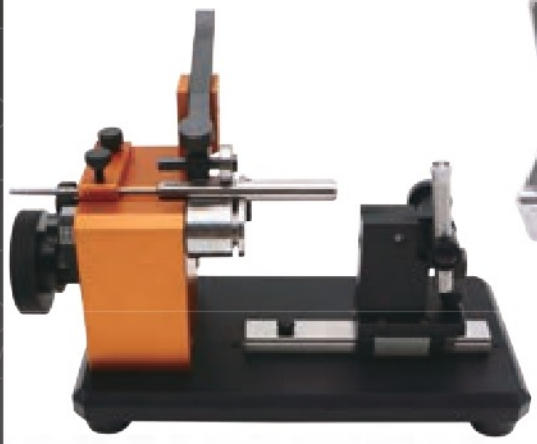
NEW

- Concentricity Gage allows you to measure the runout of parts internal and external.
- Diameter Capacity: 0.394~1.969"(10~50 mm)
- Length Capacity: 6"
- Device Dimension: 360 (length) X150 (width) X 151mm (height)
- Accuracy: 0.00012"/ 0.003mm.
- Directional Drive Hand Wheel pushes the parts into the stop for accurate repeatable readings with equal pressure.
- Two position wheels made from solid steel
- Precision Drive Wheel has a perfect ratio to push the parts down.
- Ultra high precision ball bearings provide friction free movement.
- Heavy duty base mounted fine adjustable sliding test indicator holder. Will accept test indicator with dovetail slot.
- Adjustable mechanical arm stop holds the arm up for one handed operation.
- Two master setting pins included: 10 & 50mm diameter

Accuracy: 0.00012"/ 0.003mm

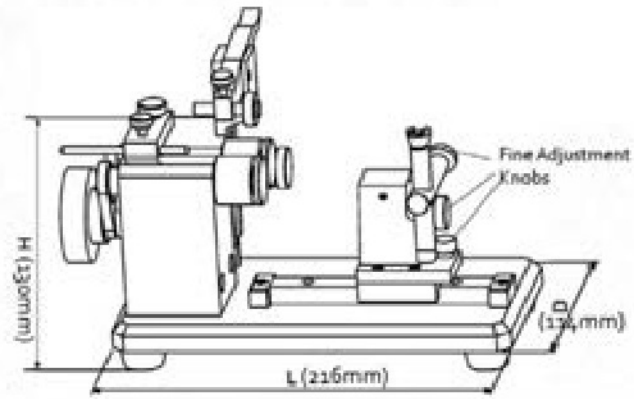
UNIVERSAL CONCENTRICITY GAGE/CHECKERS

SINGLE INDICATOR HOLDER



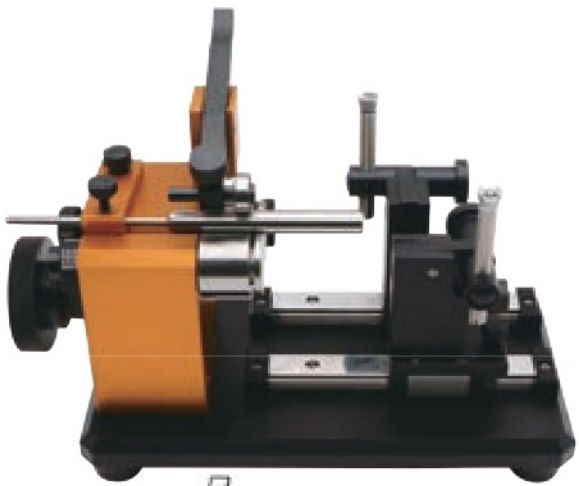
- Concentricity Gage allows you to measure the runout of parts internal and external.
- Diameter Capacity: 0.157~0.980"(4~25 mm)
- Length Capacity: 4"
- Device Dimension: 216 (length) X114 (width) X 130mm (height)
- Weight: 10.90 lbs.
- Accuracy: 0.00012"/ 0.003mm.
- Directional Drive Hand Wheel pushes the parts into the stop for accurate repeatable readings with equal pressure.
- Two position wheels made from solid steel
- Precision Drive Wheel has a perfect ratio to push the parts down.
- Ultra high precision ball bearings provide friction free movement.
- Heavy duty base mounted fine adjustable sliding test indicator holder. Will accept test indicator with dovetail slot.
- Adjustable mechanical arm stop holds the arm up for one handed operation.
- Two master setting pins included: 4 & 10mm diameter

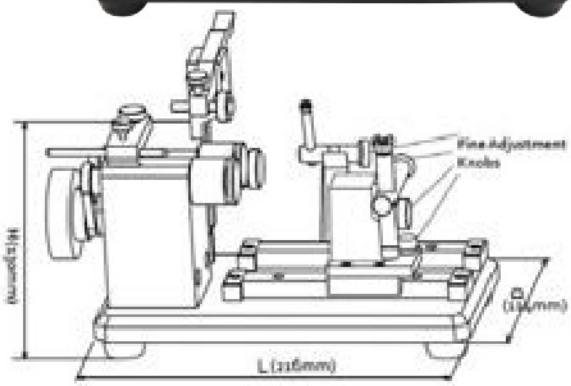
Accuracy: 0.00012"/ 0.003mm.



SHOWN WITH OPTIONAL INDICATOR(not included)

DOUBLE INDICATOR HOLDER





PUNCH FORMERS & GRINDERS

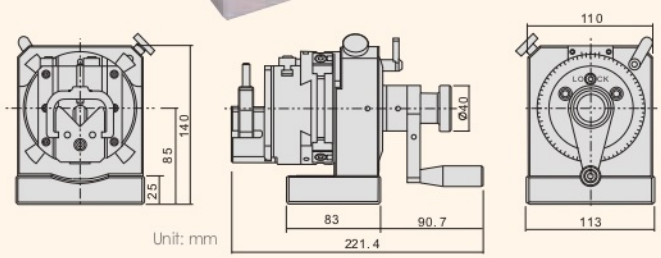
Pro-Series 2-WAY ULTRA PRECISION PUNCH FORMER

- FINE-TUNING function punch former has stronger compact structure for longer durability.
- Vertical & horizontal adjustment function is particularly suitable for oval punch grinding.
- V-block clamping can accurately stabilize workpiece and vertial fine-tuning can make setting center easy
- High precsion double bearings help achieve higher accuracy, rigidity and stability
- Stopper design in position slot allows for easy & precisely stabilizationfor polygonal punches
- Dust-proof and water resistance

Punch Forming Applications

MADE IN TAIWAN

HHIP PRO-SERIES



SPECIFICATIONS	
Center Height	3.35 +/- 0.02", 85 +/- 0.5mm
Clamping Dia. Range of V-block	0.12~1.18"/ 3~ 30mm
Travel of V-block	1.77"/ 45mm
Slide plae horiztonal Movement	+/- 0.71"/18mm
Indexer Number of tooth & Accuracy	24, 15 deg. +/-10"
Clamping Accuracy (50mm)	0.0002"/ 0.005mm

ER COLLET PUNCH FORMER

- Clamps workpiece quickly and steadily when processing.
- Clamping diameter: .0787~.787".
- Utilized with ER32 spring collet.

INCLUDES: 7PC ER-32 COLLET SET: 1/8, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4

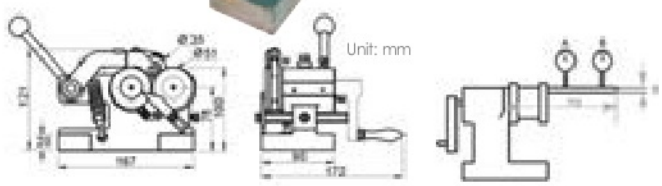
Pro-Series PRECISION PUNCH GRINDER

- Can be used on the surface of grinding machine for round punches (0.12" ~ 1.18" dia.).
- Punches can be ground by putting among three rollers of punch grinder without checking the center.
- Accuracy of Roller (Turning Right or Left): 0.0002"
- Accuracy of Point A (Turning): 0.000197"
- Accuracy of Point B (Turing): 0.00031"

HHIP PRO-SERIES

MADE IN TAIWAN

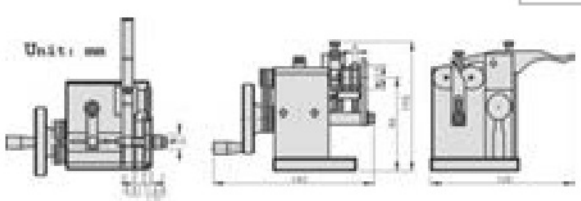
0.12~1.18" DIA. CAPACITY



Pro-Series PRECISION SMALL PUNCH GRINDER

- Punch grinder can be placed on the bed of surface grinder for automatic precision cylindrical grinding.
- Punch grinder rollers are used to adjust the workpiece before grinding.
- Workpiece is turned with a crank handle.

SPECIFICATIONS	
Accuracy of the rollers:	within 0.0002"
Diameter of punches can be ground:	0.020~0.236"/0.5~6.0mm
Net Weight:	6 lbs.



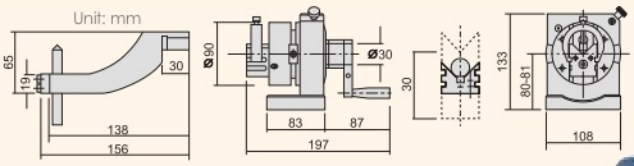
0.020~0.236" DIA. CAPACITY

HHIP PRO-SERIES

MADE IN TAIWAN

Pro-Series PUNCH FORMER & RADIUS DRESSER

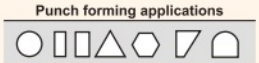
- For concave and convex radius.
- Hardened tool steel construction.



HHIP PRO-SERIES

SPECIFICATIONS	
Max. dia. workpiece	1-1/4"
V-block	1-3/16"
Tangential travel (either side of center)	25/32"
V-block adjusting system	rack & pinion
Center height	3-1/2"
Indexing div	24 every 15L ±10 seconds
Roundness	0.0001"
Parallelism	within .0001" in 4"
Squareness	within .0002" in 4"
Graduation	360°
Max. Convex/Concave	1.89/3.94"
Min. Convex/Concave	0.012

Punch forming applications



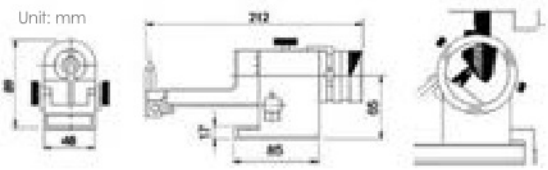
Grinding wheel dressing application

MADE IN TAIWAN

REPLACEMENT DIAMOND ON PAGE 319

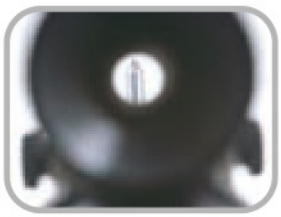
Pro-Series VISI - DRESS RADIUS AND ANGLE DRESSER

- 1° Vernier markings for dressing angles.
- Magnification through hole in the spindle, makes it possible to see how to dress the form on the grinding wheel.
- Dresser is tested and guaranteed for accuracy.



HHIP PRO-SERIES

SPECIFICATIONS	
Overall Height	4"
Length	8-1/4"
Swing Arm	180°
Max. Size Grinding Wheel	8"
Max. Outside Radius (on wheel approx..)	5/8"
Max. Inside Radius (on wheel approx..)	1"
Spindle	1" O.D.
Weight	11 lbs



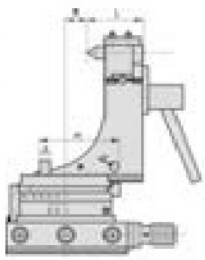
MADE IN TAIWAN

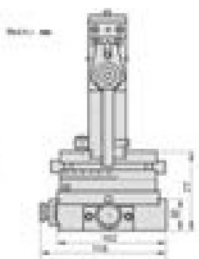
REPLACEMENT DIAMOND ON PAGE 319

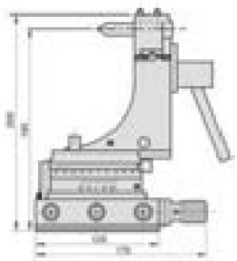
Pro-Series UNIVERSAL WHEEL DRESSER

GRINDING WHEEL APPLICATIONS

- Adaptable on surface grinding machine and universal tool grinder for dressing grinding wheels into various shapes.
- Extremely accurate.







MADE IN TAIWAN

HHIP PRO-SERIES

HOW TO CALCULATE

H = L = "0" R
H - Distance between two locating pins (as picture shows)
R - Radius of arc surface to be dressed
L - Distance from tip of diamond to base plate

To dress convex arc surface: H=L+R
To dress concave arc surface: H=L-R

SPECIFICATIONS	
Center Height:	7.68"/195mm
Pin Diameter:	0.394"/10mm
Max. Swing Distance of Diamond Dresser:	±0.55"/14mm
Max. Wheel Diameter:	7.87"/200mm
Reading Accuracy of Turret Index:	5'
Max. Translation of Feed:	0.98"/25mm
Feed Graduations of Handle Scale:	0.0003"/0.01mm

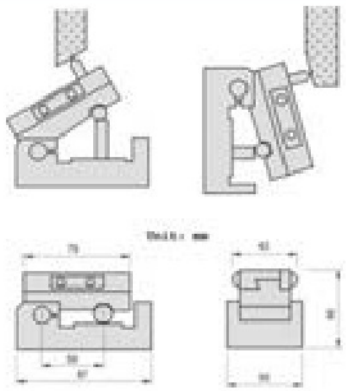
REPLACEMENT DIAMOND ON PAGE 319

RADIUS & ANGLE DRESSERS

Pro-Series PRECISION SINE DRESSER

- Combination sine system and crossfeed for dressing grinding wheels at precise angles.

HHIP PRO-SERIES



SPECIFICATIONS	
Range of Angles:	0~60°
Distance of Rolls Center to Center:	2"
Accuracy:	within 0.0002"
Net Weight:	3.5 lbs.

USE 3/8" DIAMOND DRESSER (not included)

REPLACEMENT DIAMOND ON PAGE 319

Pro-Series RADIUS AND ANGLE DRESSER

GRINDING WHEEL APPLICATIONS

MADE IN TAIWAN

REPLACEMENT DIAMOND ON PAGE 319

- Positive setting of the diamond to absolute center with the special gauge included with the dresser.
- Simple, fast, accurate redius setting; no height gauge or other set-up aids required. Radius is set on the grinder by measuring over the two pins or by inserting a gauge block, as shown, for direct reading. Inside or outside radius is determined simply by sliding the dowel pin to the right for concave and to the left for convex.
- 4x90° graduation in full 360° circle. 6 minute vernier reading.
- One push-pull type knob for radius and angle control and for safer and faster operations.
- ACCURACY, extremely close tolerances are held in the manufacturing of this tool, assured by hardening and precision grinding of all critical parts. Ways are chrome hardened.
- ECONOMY, set-up & dressing time reduced to a bare minimum due to simplicy.

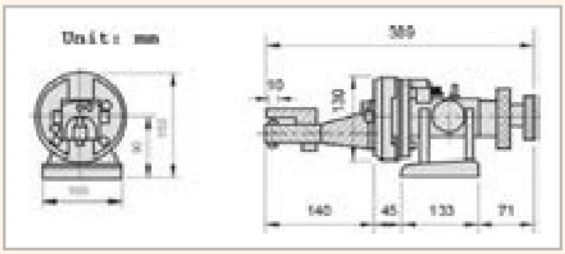
SPECIFICATIONS	
Max. Diameter of Wheel:	10"
Convex Range:	0.8R~40R
Concave Range:	0~40R
Max. Wheel Extending Diameter:	14.8"
Overall Length:	13"
Overall Height:	6.3"
Net Weight (lbs.):	26

Pro-Series RADIUS AND ANGLE DRESSER

- Perfect for outside, inside diameter and surface grinding operations.
- Extreme accuracy and versatility is assured with dual purpose knob for radii and angular movements.
- Unique design features a fast, easy and accurate radius setting with included setting gauge.
- Stop feature available for concave and convex radii.
- Lapped moving parts and adjustable gibs take up future wear.

GRINDING WHEEL APPLICATIONS

MADE IN TAIWAN



SPECIFICATIONS	
Max. Diameter of Wheel:	12"
Convex Radii:	0~2.36"
Concave Radii:	0~5.90"
Tangent Travel Either Side of Center:	1.95"
Center Line of Dresser:	3.40"
Resolution of Vernier Reading:	6'
Overall Length:	15.30"
Overall Height:	5.90"
Net Weight (lbs.):	27

REPLACEMENT DIAMOND ON PAGE 319

MAX. VARIATION	
Face Plate to Dresser Arm Squareness (per 2"):	0.0005"
Face Plate to Base Squareness:	0.0006"
Center Runout of Dovetail Groove to Wheel Center:	0.0006"

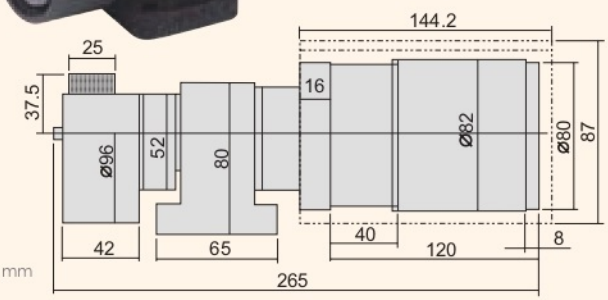
Pro-Series MOTORIZED BRAKE TRUING DRESSER

How To:

- Mount the device with it's wheel spindle parallel to the spindle of the straight wheel being trued. For cylinder or cup wheels, mount perpendicular to their spindle. The correct wheel specification is determined by the grit size and bond type of the diamond wheel being trued.
- Bring the diamond wheel and the truing wheel together until they almost touch. Turn on the diamond wheel (at normal grinding speed). At the point of contact, bring the two wheels together until they just touch. Be sure that the truing wheel is turning in the same direction as the diamond wheel. Switch on the Power Dresser.
- The Power Dresser device is always used dry. Traverse the Power Dresser back and forth at 30 to 60 inches per minute. Downfeed .0005" to .001" at the end of each traverse. The truing wheel should run off the diamond wheel after each traverse to avoid chipping the edges of the diamond wheel. During the last few passes, reduce the downfeed to .00025" per pass.
- When using the Power Dresser truing device, the only movement between the two wheels is traverse. Do not operate the work table on a rotary or reciprocating table traverse surface grinder.
- When the truing operation has been completed, there will be a smooth, continuous contact and firing throughout each traverse stroke. Visual inspection of the diamond section will show an even appearance around the wheel. A reading with a dial indicator will show no runout.

- **THIS MOTORIZED POWER DRESSER IS DESIGNED FOR THE USE OF TRUING THE PERIPHERY AND THE FACE OF LARGER DIAMOND, CBN AND SUPERABRASIVE WHEELS. IT CAN BE MOUNTED ON ALMOST ANY GRINDING MACHINE USING EITHER A MAGNETIC CHUCK TABLE OR MOUNTED WITH SCREWS TO A FIXTURING DEVICE. CONSTRUCTED OF CAST IRON AND STEEL, IT IS VERY RUGGED AND DURABLE.**
- For exceptionally good finishes,
- THIS DEVICE OPERATES AT 120 RPM
- Power Supply: 110V/60Hz/ I Phase
- Dimensions: 105" x 5"x 3.5"
- Net Weight: 13 lbs

MADE IN TAIWAN



Unit: mm

MAGNETIC CHUCK CONTROLLER

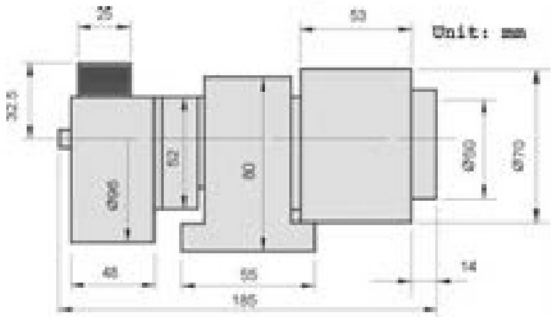
- Suitable for standard type of electric magnetic chucks
- Precisely adjust the magnetic force of electric magnetic chucks
- **Current capacity up to 5A**
- Demagnetizing Time: 6-15 seconds.
- Dimension: 8 Lx5.4 Wx 5" H
- **Input: AC 110V/I phase**
- **Output: DC 0-100V**
- Weight: 8 lbs.

Pro-Series DIAMOND WHEEL BRAKE TRUING DRESSER

- For truing diamond and CBN wheels.
- Provides continuous contact between diamond wheel and workpieces.
- Designed for truing cup and peripheral wheels on machines with a horizontal and vertical spindle.
- Rigid structure with durable life.

MADE IN TAIWAN

HHIP PRO-SERIES

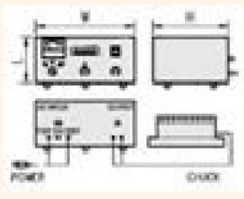


Replacement Grinding Wheel(3x1x1/2")(Item #3800-5252)

MAGNETIC CHUCK CURRENT ADJUSTER

- Made for super powerful type of big electric magnetic chucks and could control two chucks at the same time.
- With current capacity of 20A, demagnetizing time is 8-15 seconds.
- Precisely adjust the magnetic force with indicate LED voltage and current.
- Built-in fan for radiating heat.
- Suitable for any kind of electric magnetic chucks.

Limited Supply!



Item #	Input Voltage (Single Phase)	Output Voltage	W	L	H	Weight (Lbs.)
3012-5484	220V AC	0-120V DC	15"	7.6"	11.5"	70

DIAMOND DRESSERS

SINGLE POINT DIAMOND DRESSERS - 3" Shank

- For straight dressing and dressing grinding wheels with simple profiles.
- 3" Long
- Single point

Carat (Approx.)	3/8x3" Item#	7/16x3" Item#	1/2x3" Item#
1/4	3903-0032	3903-0042	3903-0092
1/3	3903-0033	3903-0043	3903-0093
1/2	3903-0034	3903-0044	3903-0094
3/4	3903-0035	3903-0045	3903-0095
1	3903-0039	3903-0050	3903-0099

SINGLE POINT DIAMOND DRESSERS - 3" Shank

Carat (Approx.)	3/8x3" Item#	7/16x3" Item#
1/4	3900-0072	3900-0082
1/3	3900-0073	3900-0083
1/2	3900-0074	3900-0084
3/4	3900-0075	3900-0085
1	3900-0079	3900-0090

SINGLE POINT DIAMOND DRESSERS - 2" Shank

NEW

Carat (Approx.)	3/8x2" Item#	7/16x2" Item#
1/4	3903-0071	3903-0081
1/3	3903-0072	3903-0082
1/2	3903-0073	3903-0083
3/4	3903-0074	3903-0084
1	3903-0078	3903-0088

CONVEX RADIUS DIAMOND DRESSERS

Item#	Radius
3900-0077	.125-.250"
3900-0078	.250" & Up

3/8 X 2" SHANK OCTO STYLE

GRINDING WHEEL DRESSER

- For dressing, truing, sharpening and removing glaze from solid abrasive wheels.
- Use on grinding wheels up to 1" Width
- Four Star-toothed Hardened Steel Cutters and Two Spacers Structure.
- Supplied with L-wrench.

Wheel Diameter: 1-1/4"
Face Width: 0.45"
Overall Length: 8-1/2"

CONCAVE RADIUS DIAMOND DRESSERS

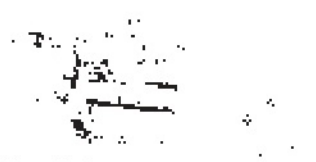
3/8 X 2" SHANK GN STYLE

Item#	Radius
3900-0086	.010"
3900-0087	.015"
3900-0088	.020"

GRINDING DRIVING CARRIERS

- Suitable for grinding of shafts
- Easy attach and detach.
- Precision Steel Castings.

Limited Supply!



Item#	Capacity Diameter
2420-0014	.24~ .55"
2420-0024	.51~ .91"
2420-0033	.79~ 1.30"
2420-0042	1.22~ 1.65"

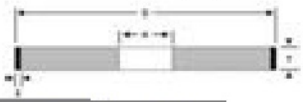
VM CONVEX RADIUS DIAMOND DRESSERS

- Concentric radius tools
- Special octahedron diamonds for fine work

3/8 X 2" SHANK

D1A1 STRAIGHT STYLE DIAMOND & CBN WHEELS

- 100% concentration.
- Arbor Hole: 1-1/4" (H)



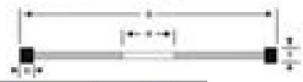
Wheel Diameter D	Wheel Thickness T	Diamond Depth X	Diamond (150 Grit) Item#	CBN (120 Grit) Item#
4"	1/16"	1/8"	2400-4062	2400-4063
4"	1/8"	1/8"	2400-4125	2400-4126*
4"	1/4"	1/8"	2400-4250	2400-4251
5"	1/8"	1/8"	2400-5125*	2400-5126*
5"	1/4"	1/8"	2400-5250*	2400-5251*
6"	1/16"	1/8"	2400-6062	2400-6063
6"	1/8"	1/8"	2400-6125	2400-6126
6"	1/4"	1/8"	2400-6250	2400-6251*
6"	3/8"	1/8"	2400-6375	2400-6376
6"	1/2"	1/8"	2400-6500	2400-6501
7"	1/4"	1/8"	2400-7250	2400-7251
7"	3/8"	1/8"	2400-7375	2400-7376*
7"	1/2"	1/8"	2400-7500	2400-7501*

*Limited Supply

D1A1R DIAMOND & CBN CUT-OFF WHEELS

- Arbor hole: 1-1/4" (H)

STYLE D1A1R



Wheel Diameter D	Thickness T	Diamond (150 Grit) Item#	CBN (120 Grit) Item#
4"	.035"	2401-4035	----------
5"	.035"	----------	2401-5036*
6"	.035"	2401-6035	2401-6036
6"	.045"	2401-6045	2401-6046*
8"	.045"	2401-8045	----------

*Limited Supply

6A2C DIAMOND & CBN PLAIN CUT WHEELS

- With countersunk bolt holes
- Mount on popular 6" carbide grinders
- Use for off-hand grinding on brazed tipped carbide single point turning tools.
- Back Thickness: 7/16"
- Arbor Hole : 1-1/4"(H)

STYLE 6A2C

75% CONCENTRATION

Wheel Diameter D	Wheel Thickness T	Diamond Width W	Diamond Depth X	Diamonc (150 Grit) Item#	CBN (120 Grit) Item#
6"	3/4	1/2	1/16	2403-6502	----------
6"	3/4	3/4	1/16	2403-6752	----------
6"	3/4	1	1/16	2403-6998	2403-6999

*Limited Supply

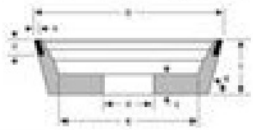
100% CONCENTRATION

Wheel Diameter D	Wheel Thickness T	Diamond Width W	Diamond Depth X	Diamond (150 Grit) Item#	CBN (120 Grit) Item#
6"	3/4	3/4	1/8	2403-6500*	----------
6"	3/4	1	1/16	2403-6750	2403-6751*

D11V9 FLARING CUP DIAMOND & CBN WHEELS

- 100% concentration.
- Arbor Hole: 1-1/4" (H)
- For tool and cutter applications including sharpening of end mills, reamers, milling cutters and broaches.

STYLE D11V9

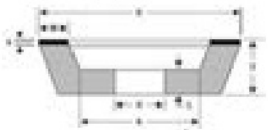


Wheel Diameter D	Wheel Thickness T	Diamond Depth X	Back Thick E	B	Diamond (150 Grit) Item#	CBN (120Grit) Item#
3-3/4"	1-1/2	1/8	3/8	70°	2404-4125	2404-4126
5"	1-3/4	1/16	1/2	70°	2404-5062	2404-5063
5"	1-3/4	1/8	1/2	70°	2404-5125	2404-5126

D11A2 FLARING CUP DIAMOND & CBN WHEELS

- 100% concentration.
- Arbor Hole: 1-1/4" (H)

STYLE D11A2



Wheel Diameter D	Wheel Thickness T	Diamond Depth X	Rim Width W	Back Thick E	Diamond (150 Grit) Item#	CBN (120 Grit) Item#
3"	7/8	1/8	3/8	3/8	2405-3875	2405-3876
4"	1-1/4	1/8	1/2	1/2	2405-4250	2405-4251
5"	1-3/4	1/8	3/8	1/2	2405-5275	2405-5276

D12V9 DIAMOND DISH WHEELS

- 75% concentration
- Arbor hole: 1-1/4" (H)
- Diamond Grit: 150

STYLE D12V9

Wheel Diameter D	Wheel Thickness T	Diamond Depth X	Insert Length U	Back Thick E	B	Item#
4"	1/2	1/16	1/4	1/4	75°	2402-4062
4"	1/2	1/8	1/4	1/4	75°	2402-4125
6"	3/4	1/8	7/16	7/16	75°	2402-6125

D12A2 DISH DIAMOND & CBN WHEELS

- 100% concentration.
- Arbor Hole: 1-1/4" (H)

STYLE D12A2

Wheel Diameter D	Wheel Thickness T	Diamond Depth X	Rim Width W	E	B	Diamond (150 Grit) Item#	CBN (120 Grit) Item#
6"	1	1/8	3/16	1/2	30°	2406-6187	2406-6188*
6"	1	1/8	1/4	1/2	30°	2406-6250*	2406-6251*
6"	1	1/8	3/8	1/2	30°	2406-6375*	----------

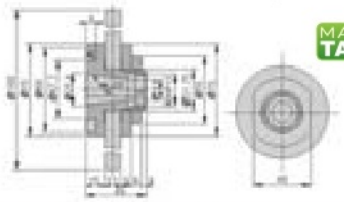
*Limited Supply

GRINDING WHEEL ADAPTERS

F350 GRINDING WHEEL ADAPTER

- Hardened and ground
- For 1-1/4" I.D. Wheels
- Balance adjustable
- Wheel width capacity: 1/4 to 3/4"
- 1" diameter at large end of taper hole 1-1/4"-16 thread (left hand)
- Heat treated and precison ground
- Heat treated nuts
- Adapter O.D.: 3"

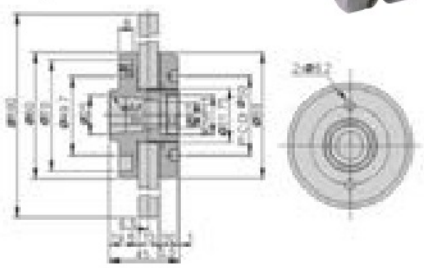
MADE IN TAIWAN



F450 GRINDING WHEEL ADAPTER

- F450 is used in cylinder of US standard grinding machines
- Hardened and ground.
- For 1-1/4" I.D. grinding wheels.
- Wheel width capacity: 1/4 to 3/4"
- 1" diameter at large end of taper hole

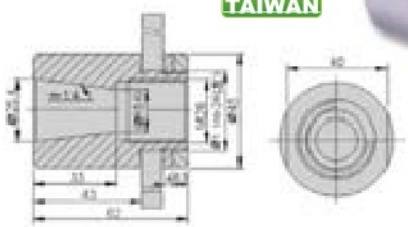
MADE IN TAIWAN



F300 GRINDING WHEEL ADAPTER/FLANGE

- F300 is applied to US standard 614, 618 surface grinding machines.
- Hardened and ground
- For 1-1/4" I.D. Wheels

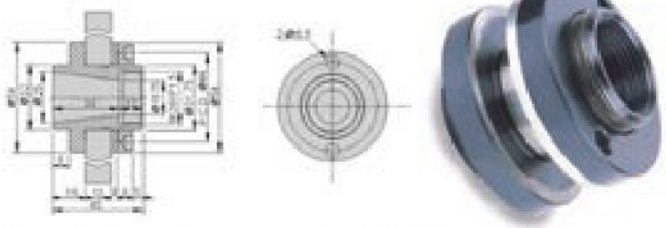
MADE IN TAIWAN



F320 GRINDING WHEEL ADAPTER/FLANGE

- F320 is used for US standard cylinder of tool grinder.
- Similar to sopko 1"
- Hardened and ground
- For 1-1/4" I.D. Wheels

MADE IN TAIWAN



F520 GRINDING WHEEL ADAPTER/FLANGE

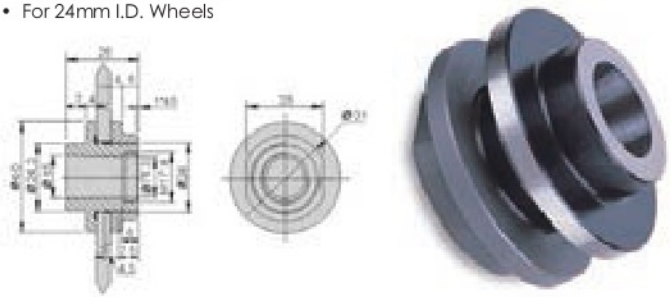
- F520 is suitable for OKAMOTO 52DX cylinder of tool grinder.
- Hardened and ground
- For 1-1/4" I.D. Wheels

MADE IN TAIWAN

W20 GRINDING WHEEL ADAPTER/FLANGE

- W20 is used for WAIDA optical profile grinder.
- Hardened and ground
- For 24mm I.D. Wheels

MADE IN TAIWAN



W40 GRINDING WHEEL ADAPTER/FLANGE

- W40 is used for WAIDA optical profile grinder.
- Hardened and ground
- For 24mm I.D. Wheels

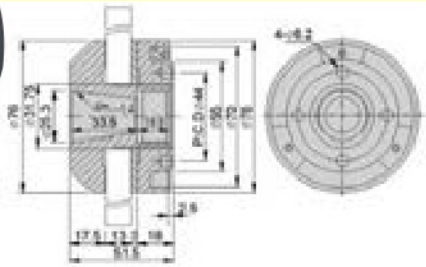
MADE IN TAIWAN

P60 GRINDING WHEEL ADAPTER/FLANGE

- P60 is used for Petewe optical profile grinder.
- Hardened and ground
- For 22mm I.D. Wheels

MADE IN TAIWAN

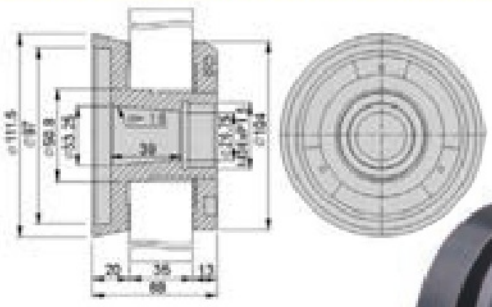
FC110 WASINO GRINDING WHEEL ADAPTER/FLANGE



- FC110 is suitable for WASINO grinders.
- Hardened and ground

MADE IN TAIWAN

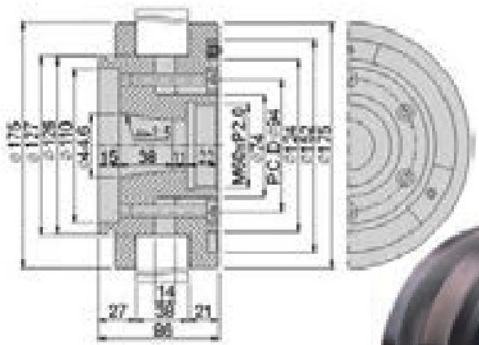
FC520 GRINDING WHEEL ADAPTER/FLANGE



- FC520 is suitable for OKAMOTO ACC-52DX grinders.
- Hardened and ground
- Heat treated nuts

MADE IN TAIWAN

FC630 GRINDING WHEEL ADAPTER/FLANGE



- F630 is suitable for OKAMOTO ACC-63DX, TATUNG PSG-64 grinders.
- Hardened and ground

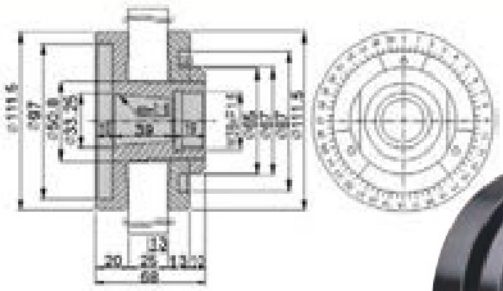
MADE IN TAIWAN

FEB10 TATUNG GRINDING WHEEL ADAPTER/FLANGE

- FEB10 is suitable for TATUNG EN350 grinders.
- Hardened and ground

MADE IN TAIWAN

FEB18 TATUNG/OKAMOTO GRINDING WHEEL ADAPTER/FLANGE

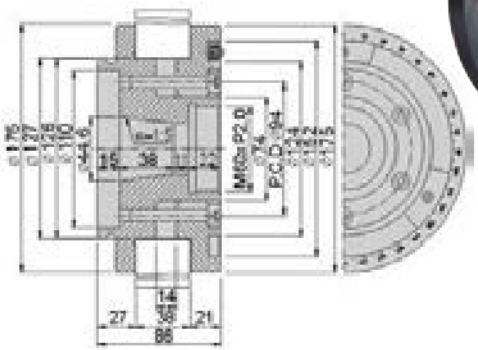


- FEB18 is suitable for TATUNG , OKAMOTO ACC-52DX grinders.
- Hardened and ground

MADE IN TAIWAN

FEB22 TATUNG/OKAMOTO GRINDING WHEEL ADAPTER/FLANGE

- FEB22 is suitable for OKAMOTO ACC-63DX, TATUNG PSG-64 grinders.
- Hardened and ground

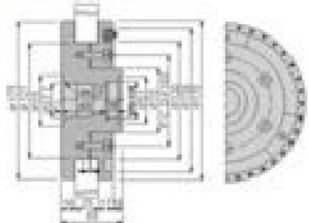


MADE IN TAIWAN

FEB20 KENT GRINDING WHEEL ADAPTER/FLANGE

- FEB20 is suitable for KENT 410 grinders.
- Hardened and ground
- Laser mark graduation reading on plates.

MADE IN TAIWAN



PERMANENT MAGNETIC CHUCKS

PERMANENT MAGNETIC CHUCKS -Standard Pole

- Can be used for processing various magnetic conduction work pieces.
- For surface grinder, tool grinder, EDM and other applications.
- Chucks are sealed and lubricated to be maintenance free.
- Magnetic force ON/OFF switch.
- Ceramic dense magnets for superior holding power.
- Removable handle.

Item#	Table Size	Table Length L (mm)	Table Width B (mm)	Table Height H (mm)	T (mm)	P	Weight (lbs)
3402-0838	8 x 18"	450	200	53	22	1+3	87
3402-0839	8 x 20"	500	200	53	22	1+3	92
3402-0840*	8 x 24"	600	200	53	22	1+3	110
3402-0844	10 x 16"	400	250	58	23	1+3	100
3402-0848	10 x 18"	450	250	58	23	1+3	113
3402-0850*	10 x 24"	500	250	58	23	1+3	125
3402-0852*	10 x 24"	600	250	58	23	1+3	150
3402-0858*	12 x 24"	500	300	58	23	1+3	150
3402-0860*	12 x 24"	600	300	58	23	1+3	169

*Limited Supply

STANDARD POLE

Pro-Series PERMANENT MAGNETIC CHUCKS -Standard Pole

- Can be used for processing various magnetic conduction work pieces.
- For surface grinder, tool grinder, EDM and other applications.
- Chucks are sealed and lubricated to be maintenance free.
- Magnetic force ON/OFF switch.
- Ceramic dense magnets for superior holding power.
- Removable handle.

SIDE MAGNETIC FORCE 18KG, PLATE CENTER 26KG

SUIT FOR WORK PIECE THINCKNESS > 3MM LENGTH > 25MM

STANDARD POLE

Item#	Table Size	A	B	(mm) C	D	Pole P	G	E	F	H	Weight (lbs)
3402-1801	4 x 7"	100	175	146	20	8(2+6)	8	187	15	50	16
3402-1802	5 x 10"	125	250	206	20	8(2+6)	8	262	15	50	33
3402-1803	6 x 12"	150	300	256	20	8(2+6)	8	318	15	50	41
3402-1808	6 x 18"	150	450	406	20	8(2+6)	8	468	15	50	61

PERMANENT MAGNETIC CHUCKS -Fine Pole

- Can be used for processing various magnetic conduction work pieces.
- For surface grinder, tool grinder, EDM and other applications.
- Chucks are sealed and lubricated to be maintenance free.
- Ceramic dense magnets for superior holding power.
- Removable handle.

FINE POLE

Item#	Table Size W x L	Pole Height	Table Height	Pole Spacing	Weight (lbs)
3402-0801	4 x 7"	0.70"	1.60"	1/16 x 1/32"	19
3402-0802	5 x 10"	0.70"	1.60"	1/16 x 1/32"	35
3402-0803	6 x 12"	0.70"	1.60"	1/16 x 1/32"	47
3402-0804	6 x 18"	0.70"	1.60"	1/16 x 1/32"	65
3402-0806*	8 x 18"	0.87"	1.97"	1/16 x 1/32"	130
3402-0807*	8 x 20"	0.87"	1.97"	1/16 x 1/32"	140
3402-0805*	8 x 22"	0.87"	1.97"	1/16 x 1/32"	150

*Limited Supply

MAGNETIC SINE PLATE-Fine Pole

FINE POLE

- Ceramic dense permanent magnets plate provide extreme power up to 100 lbs.
- Fine pole spacing works for both thick and thin parts.
- Rigid angles lock strap capacity 0~60° (Accuracy 5" /per 15°).
- Hardened side and back rolls included.
- Made of high grade steel hardened to 55~62 RC and ground.
- Removable On/Off handle included.
- Gross Weight: 35 lbs.

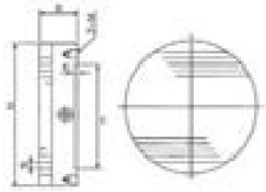
Size AxBxC	Rolls Center F	Pole Spacing	Square & Parallel	D	E
6 x 6 x 4"	100mm	1/16 x 1/32"	.0003"	8"	6"

ROUND MAGNETIC CHUCKS-STANDARD POLE

- Chucks are sealed and lubricated to be maintenance free.
- Ceramic permanent magnets for superior holding power.
- Bottom surface has tapped holes with counterbores for convenient mounting.
- Handle is removable for turning on/off magnet.

BOTTOM VIEW

STANDARD POLE



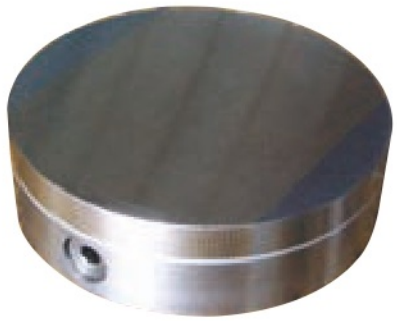
Item#	Size D	Height H	(MM) K	C	Z-M	Pole Spacing P	Wt. (lbs.)
3402-0821*	150mm(6")	48	3	100	M6x1.0	1+3	15
3402-0823	200mm(8")	52	4	120	M8x1.25	1+3	28
3402-0827*	300mm(12")	58	4	220	M8x1.25	1+3	70

*Limited Supply

ROUND MAGNETIC CHUCKS-FINE POLE

- Chucks are sealed and lubricated to be maintenance free.
- Ceramic permanent magnets for superior holding power.
- Bottom surface with tapped holes with counterbores for convenient mounting.
- Handle is removable for turning on/off magnet.

FINE POLE



Item#	Size	Height	Pole Spacing	Wt. (lbs.)
3402-0822	6"	2-15/16	1/16 x 1/32"	18
3402-0824	8"	3-1/8	1/16 x 1/32"	29
3402-0828	12"	3-5/16	1/16 x 1/32"	65

Pro-Series PERMANENT MAGNETIC SINE BAR

SPECIFICATIONS	
Base Magnetic Power:	8 lbs.
Parallelism:	within 0.0001"
Squareness:	within 0.0002"
Distance between Roll Centers:	2"
Rolls Accuracy:	+ 0.00008"
Overall Length:	3"

- Designed for any machine on angular testing.
- Magnetic base with permanent power pull
- Hardened and precision ground HRC 56~68.

HHIP PRO-SERIES

MADE IN TAIWAN

MAGNETIC V-BLOCKS & PARALLELS

- Universal-holds in any direction on the magnetic chuck.
- Aluminum cast.
- Ground all over.
- Blocks transmit magnetism, they are not magnetic.

USE ON MAGNETIC CHUCK

V-BLOCKS:

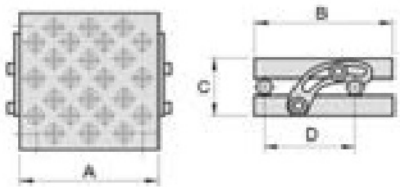
- 90° Vee Capacity: Small Vee-1/2" , Large Vee-2"

Item#	Description	Length	Width	Height
3402-0007	SINGLE 90° V-BLOCK	4-3/8"	2-3/8"	1-7/8"
3402-0006	MATCHED PAIR 90° V-BLOCK	2"	2-3/8"	1-7/8"
3402-0009	MATCHED PAIR PARALLELS	4"	2"	1"

6x6 ULTRA PRECISION SINE PLATES

HHIP PRO-SERIES

- Made of high grade tool steel hardened and precision ground HRC 55~58.
- Two hardened side rails and one locking strap included.



SPECIFICATIONS	
Capacity:	0~60°
Squareness:	within 0.0002"
Parallelism:	within 0.0002"
Center Distance of Rolls Accuracy:	within 0.0002"
Minute Angle Step on Gage Block Roll:	0.200"
Tapped holes:	1/4"-20 UNC
Size (B x A)	6" x 6"
Height (C)	2.36
Center Distance of Rolls (D)	5"
No. of Tapped Hole	24
Wt. (lbs.)	18

TOOLMAKER'S VISES

1" TOOLMAKER'S VISE

- Hardened and precision ground,
- The "no-rise" jaw construction exerts a continual downward pressure to the jaw, eliminating tilting & lifting
- Jaw can be opened and closed without unbolting from work surface.
- **With step jaws.**

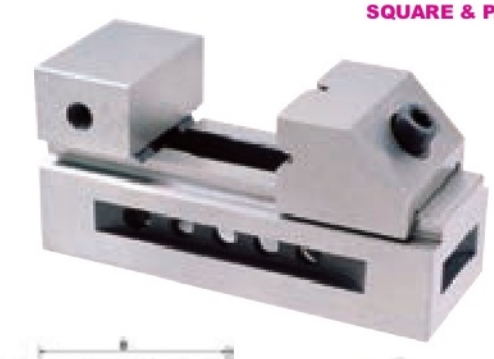
SQUARE & PARALLEL .0002"

Item#	Jaw Width	Jaw Depth	Jaw Opening	OAL
3900-0124	1"	0.5"	1"	2.6"

38mm TOOLMAKER'S VISE

- Hardened and precision ground,
- The "no-rise" jaw construction exerts a continual downward pressure to the jaw, eliminating tilting & lifting
- Jaw can be opened and closed without unbolting from work surface.
- **No step jaws.**
- **1.5" jaw width.**

SQUARE & PARALLEL .0002"

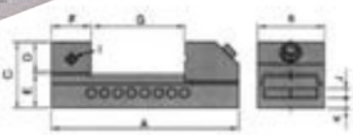


Item#	Jaw Width A	Jaw Depth E	Jaw Opening D	Vise Ht. C	OAL B
3900-0125	38mm	20mm	40mm	48mm	100mm

TOOLMAKER'S VISES-Without Slot

- Hardened and precision ground.
- No clamping slot.
- Ground "V" way in sliding jaw.

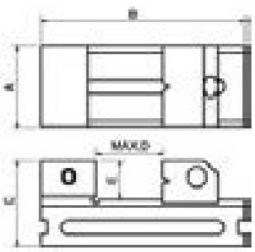
SQUARE & PARALLEL .0002"



Item#	Jaw Width B	Jaw Depth D	Jaw Opening G	A	C	Weight Lbs.
3900-0122	2"	1.00"	2.4"	5.3"	2"	4.0
3900-0123	3"	1.38"	3.8"	7.3"	3"	9.5

PRECISION SCREWLESS VISES

- With V-Groove
- Oil hardened.
- Precision ground.
- Rapid positioning notches.
- .00025" square and parallel.

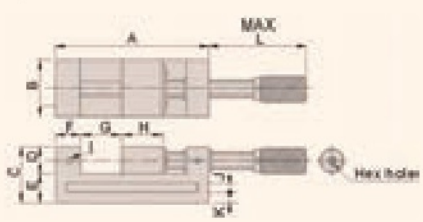


Item#	Jaw Width A	Jaw Depth E	Jaw Opening D	Vise Ht. C	OAL B
3900-0020	1"	3/8"	1"	1.2"	2-5/8"
3900-0022*	2"	1-1/4"	2.25"	2.0"	6"
3900-0024*	3"	1-5/8"	4"	3.2"	7-5/8"

*Limited Supply

PRECISION TOOLMAKER'S VISES-Screw Type

- All surfaces are hardened (52~58 HRC)and precision ground square and parallel to accuracy of +/- .0002".
- Clamping slots are provided and jaws are easily replaced.
- Ground "V" way.

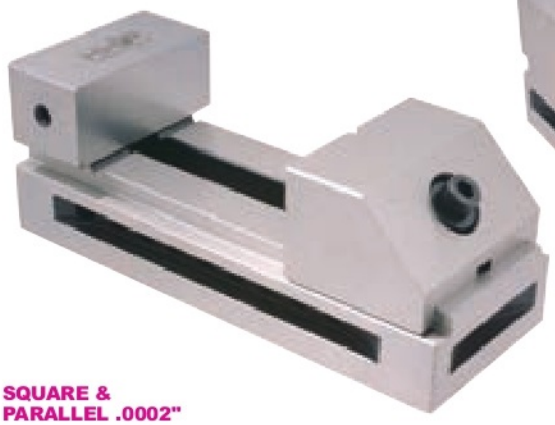


Unit: mm

Item#	Jaw Width	A	B	C	D	E	F	G	H	I	J	L	Weight
3900-0067	2"	156	48	52	25	27	25	0-63	34	M6	8	125	5.1 lbs
3900-0251	3"	190	73	73	35	38	35	0-76	45	M6	10	151	12.1 lbs
3900-0068	4"	255	98	82	40	42	40	0-120	50	M8	12	196	24.2 lbs

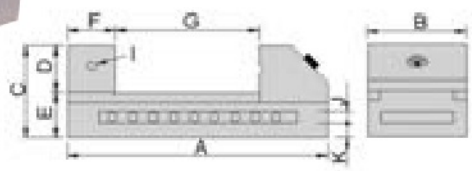
ULTRA PRECISION TOOLMAKER'S VISES

- Hardened and precision ground, HRC55~60°.
- The "no-rise" jaw construction exerts a continual downward pressure to the jaw, eliminating tilting & lifting.
- Jaw can be opened and closed without unbolting from work surface.
- Torlerance within .00012"(Parallelism), .0002" (Squareness).



SQUARE & PARALLEL .0002"

HHIP PRO-SERIES



Item#	Jaw Width B	A	C	D	E	F	G	I	J	K
	(mm)									
3900-2012	50	150	53	25	28	30	0-80	M6	8	8
3900-2013	73	190	70	35	35	35	0-100	M6	10	12
3900-2003	88	235	80	40	40	40	0-130	M8	12	14
3900-2014	100	245	90	45	45	45	0-130	M8	12	16
3900-2015	125	285	100	50	50	45	0-160	M8	14	18

PRECISION SINE VISES

- Hardened and precision ground. provides a tolerance of .0004" for both parallelism and squareness.
- Sine range: 6~60°.
- Jaw can be opened or closed without unbolting from work surface.

Item#	Jaw Width	Jaw Depth	Jaw Opening	Center to Center	Base Size
3900-2603	2"	1"	2-5/8"	4.00"	5-3/8"x2"
3900-2605	3"	1-1/4"	4"	4.00"	7-5/8"x3"

MINI PRECISION TILT/SWIVEL VISE

- Hardened and precision ground tool steel.
- Horizontal swivel movement 360°.
- Vertical swivel movement 90° graduation in degrees for quick setting.
- Base has slots for clamping on the mill table.

Limited Supply!

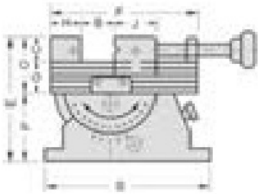
Jaw Width	Jaw Height	Jaw Opening	OAL Height	Footprint
2-1/4"	25/32"	17/32"	3.7"	4.65x2.60"

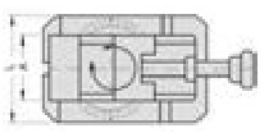
Pro-Series UNIVERSAL MOVEMENT VISE

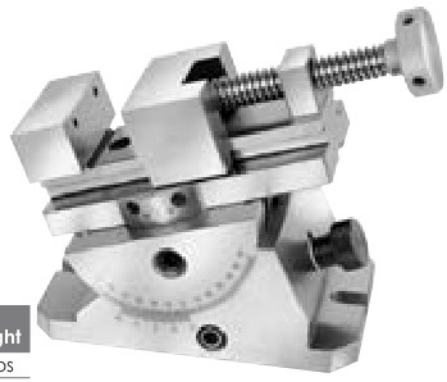
- This fixture is composed of two parts: namely a precision vise and a swivel angle plate base.
- Vise is capable of revolving 360° horizontally with 3' graduation engraved and ±45° vertical with 3' graduation engraved.
- L-wrench included for locking vise horizontal at any position.
- Vertical angle can be adjusted with fine adjustable knob.
- Hardened and precision ground. Provides a tolerance of 0.0004" Parallelism and Squareness.
- Unique universal movement for precision grinding, machining,boring and various applications.

HHIP PRO-SERIES

MADE IN TAIWAN







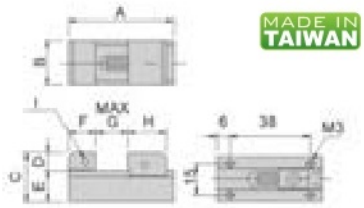
Jaw Width	Jaw Depth	Jaw Opening	A	B	C	E	(Inch) F	G	H	J	L	P	S	Weight
2-3/4	1.18	3.15	3.75	3.15	1.18	5.39	6.3	1.3	1.3	1.8	4.33	2.95	7.09	31 lbs

Pro-Series STAINLESS STEEL VISES

STAINLESS STEEL VISE - 21MM Jaw Width

- A delicate vise suitable for clamping precision workpieces.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL .00012"



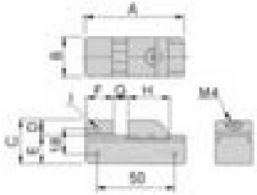
MADE IN TAIWAN

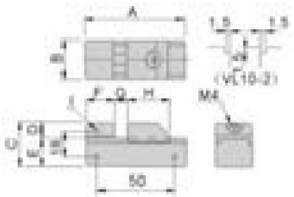
Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	Threaded Hole I	Wt. (Lbs)
21mm	8.5mm	15mm	23.5mm	50mm	15mm	13mm	18mm	M3	0.4

STAINLESS STEEL VISES - 25MM Jaw Width

- A compact precision vise suitable for small precision workpieces, apply by wrench.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

3901-2725 Shown





3901-2728 Shown

MADE IN TAIWAN

SQUARE & PARALLEL .00012"

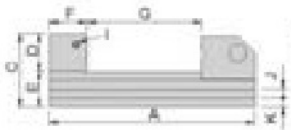
Unit: mm

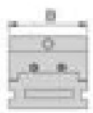
Item #	Step Jaws	Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	Threaded Hole I	Wt. (Lbs)
3901-2725	No	25	12	20	32	65	20	20	25	M4	0.6
3901-2728	Yes	25	12	20	32	65	20	20	25	M4	0.6

STAINLESS STEEL TOOLMAKERS VISE - 73MM Jaw Width

- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARENESS < 0.0002"
PARALLELISM < 0.00012"





MADE IN TAIWAN

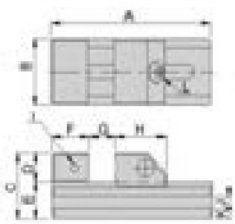
Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	P	Wt. (Lbs)
73mm	35mm	100mm	70mm	190mm	35mm	50mm	9.5

STAINLESS STEEL TOOLMAKER'S & EDM VISE - 50mm or 72mm Jaw Width

- Suitable for high precision grinding, milling and EDM.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL .00012"

MADE IN TAIWAN

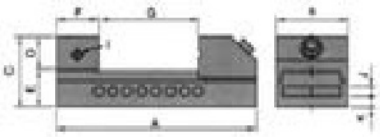


Unit: mm

Item #	Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	Threaded Hole I	Slot J	K	Wt. (Lbs)
3901-2732	50	25	75	53	140	28	25	40	M6	6 W x 5 D	8.5	3.3
3901-2734	72	30	100	62	180	32	35	45	M6	8 W x 7 D	9.0	6.6

STAINLESS STEEL VISE - Screwless Type

- Hardened and precision ground.
- Made of stainless steel specially for EDM, grinding and other application which is sensitive to rust.



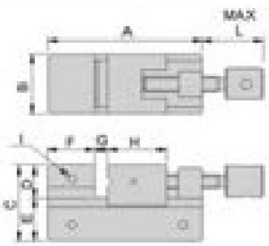
SQUARE & PARALLEL .0002"

Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	Weight (Lbs)
2.87"	1.38"	3.94"	2.68"	7.48"	1.3"	1.38"	9.8

STAINLESS STEEL VISE WITH HANDLE - 25MM Jaw Width

- Screw rod design allows you to easily tighten the jaws on tight workpieces.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL .00012"

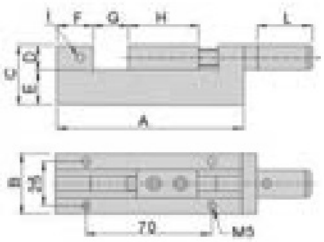


Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	Max. L	E	F	H	Threaded Hole I	Wt. (Lbs)
25mm	14mm	25mm	32mm	70mm	43mm	18mm	20mm	25mm	M4	1.1

STAINLESS STEEL VISE WITH HANDLE - 35MM Jaw Width

- New structure design with higher repeatability and stability.
- Compact screw rod design for easy tightening.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL .00012"

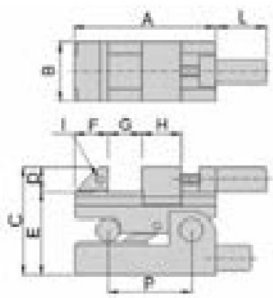


Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	Threaded Hole I	Wt. (Lbs)
35mm	15mm	30mm	35mm	105mm	20mm	20mm	40mm	M5	2.5

STAINLESS STEEL SINE VISE - For EDM/Toolmakers

- Screw rod design allows you to easily tighten the jaws on tight workpieces.
- Precision sine vise suitable for precision and small workpieces.
- Screw rod design for easy tightening.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL 0.00012"

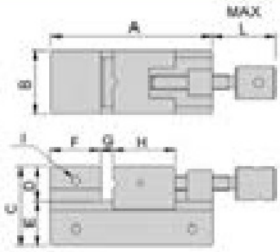


Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	L	E	F	H	Threaded Hole I	P	Wt. (Lbs)
35mm	15mm	30mm	65mm	85mm	37mm	50mm	20mm	24mm	M4	50mm	2.2

Pro-Series STAINLESS STEEL VISES

STAINLESS STEEL VISE WITH HANDLE - 36MM Jaw Width

- Screw rod design for easy tightening.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°



MADE IN TAIWAN

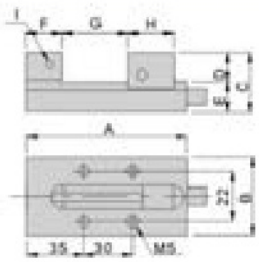
SQUARE & PARALLEL .00012"

Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	Max. L	E	F	H	Threaded Hole I	Wt. (Lbs)
36mm	16.5mm	50mm	35mm	100mm	76.5mm	18.5mm	20mm	30mm	M5	2.2

STAINLESS STEEL COMPACT VISE WITH HANDLE - 40MM Jaw Width

- Compact structure vise with a special design to prevent any floating of workpiece when clamped.
- Compact screw rod design for easy tightening.
- Made of stainless steel SUS440 classified as corrosion & heat resistant for EDM, grinding and other applications which is sensitive to rust.
- Hardened and precision ground.
- Hardness: HRC 48~55°

SQUARE & PARALLEL .00012"



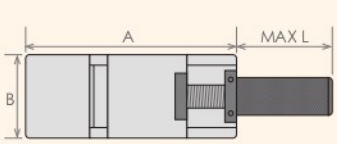
MADE IN TAIWAN

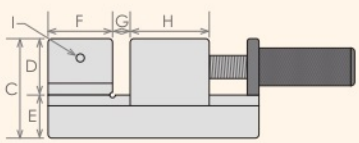
Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	Threaded Hole I	Wt. (Lbs)
40mm	15mm	40mm	40mm	100mm	25mm	25mm	25mm	M5	2.2

STAINLESS STEEL TOOLMAKERS VISE - 1-3/4" Jaw Width

- Hardened and ground.
- Made of stainless steel specially for EDM, grinding and other application which is sensitive to rust.
- Hardness: 48~55°

SQUARE & PARALLEL: .00012"





MADE IN TAIWAN

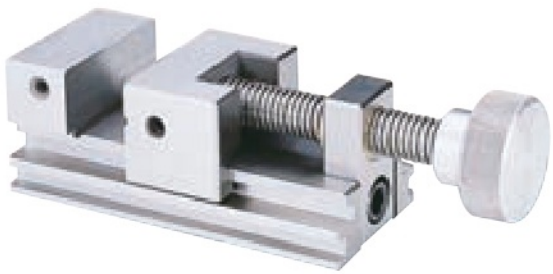
Item#	Jaw Width B	Jaw Depth D	Jaw Openning G	Vise Height C	Vise Length A	E	F	H	I	Weight (Lbs)
3900-2004	1-3/4"	0.79"	0~1.97"	1.77	4.33"	0.98"	0.98"	0.94"	M5	3.8

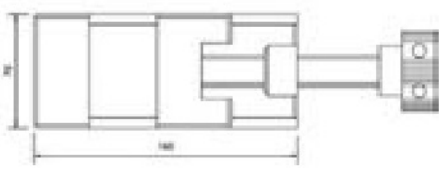
SCREW ROD DESIGN LOCKS TIGHT TO HOLD SMALL WORKPIECE.

STAINLESS STEEL VISES - Screw Type

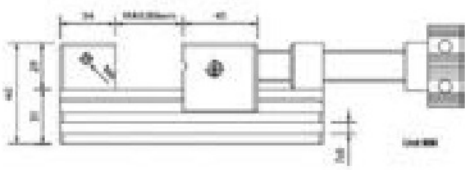
- Hardened and precision ground.
- Made of stainless steel specially for EDM, grinding and other application which is sensitive to rust.

MADE IN TAIWAN





SQUARE & PARALLEL .0002"

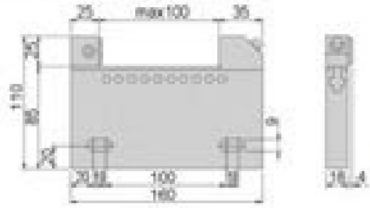


Pro-Series STAINLESS STEEL EDM VISE - 18MM Thickness

- Suitable for small and thin workpiece applications.
- With 45° lock down design, workpiece anti-floating when clamp.
- Used for EDM, grinding and other applications which are sensitive to rust.
- Made of stainless steel that is classified as corrosion-resistant.
- Hardened and precision ground.
- Hardness: HRC 45~55°
- Clamping Range: 0~100mm
- Weight: 6.2 lbs.

MADE IN TAIWAN

SQUARENESS < 0.0002"



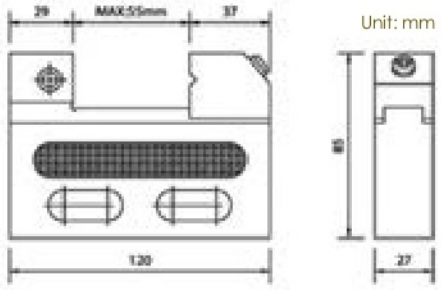
PARALLELISM < 0.00012"

Pro-Series EDM STAINLESS STEEL TOOL VISE - 1" Jaw Width

- Material: SUS 440.
- Hardness: HRC 52~56°
- Used for wire cutter with high erosion resistance.
- N.W. : 2.3 Lbs.

SQUARENESS & PARALLELISM < +/- 0.0001"/Per 4"

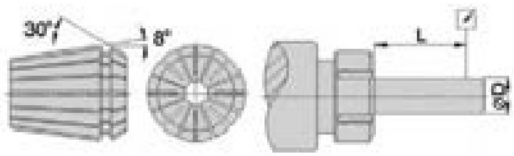
MADE IN TAIWAN



Pro-Series IP68 WIRE EDM STAINLESS STEEL DIVIDING FIXTURE - USE ER-32 COLLETS

- Made of high quality stainless steel (except ER collet and nut).
- Waterproof EDM dividing unit rated IP68.
- Heavy duty structure and rigid for long life.
- It can rapidly clamp the workpiece and achieve higher stability during processing, no need to adjust the center accuracy.
- High precision double bearings in the structure so it achieves higher accuracy, rigidity and stability.
- Collet clamping range diameter 2mm ~ 34mm with 1mm steps.
- ER-32 collects included: 4, 8, 12, 16 & 20mm
- Dust-proof and water resistant.

MADE IN TAIWAN



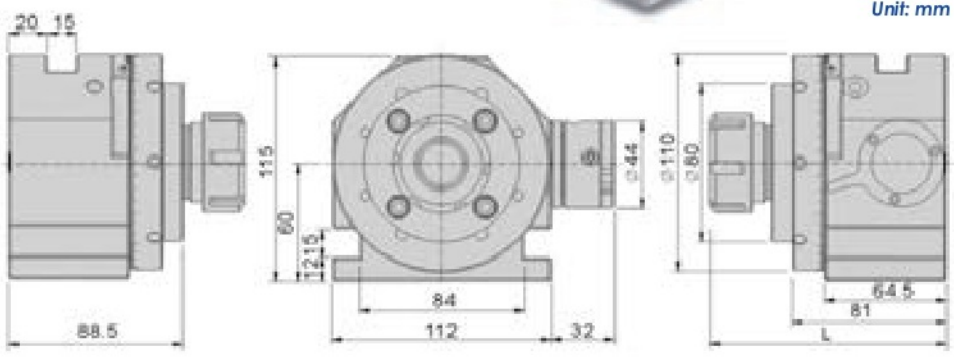
Unit: mm

L	D	ACCURACY
6	1.0-1.6	0.01
10	1.6-3.0	0.01
16	3.0-7.0	0.01
25	7.0-10.0	0.01
40	10.0-18.0	0.01
50	18.0-24.0	0.01
60	24.0-34.0	0.01

IP 68

WATER AND COOLANT RESISTANT!

Unit: mm



SPECIFICATIONS
Center Height ..... 60mm ±0.5mm
Indexer Tooth Quantity&Accuracy... 24, 15° ±5'
Through Hole Diamter..... 21mm
Rotational Accuracy.....0.003mm

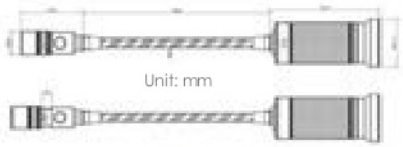
ER collets shown on page 227-230

WORK LIGHTS & MAGNIFIERS

FLEXABLE SHAFT WATERPROOF IP54 LED WORK LIGHT

- CREE XPG high performance LED light provides an excellent solution for heat sensitive environment.
- Small head (0.8" Diameter) with zoom ring for adjusting brightness
- IP54 dustproof and waterproof
- Strong magnetic base with 1.5" diameter grip can be handled as a flash light or stick on a metal surface.
- Battery Run Time: 8 hours high(200 LUMENS), 20 hours low(80 LUMENS)
- On/Off button
- 18" flexable shaft.
- Use 3xAA battery.

OVERALL LENGTH: 24"
BRIGHTNESS: 200 LUMENS



LAMP ON MAGNETIC BASE

- Powerful magnetic base with On/Off switch.
- Guaranteed power pull 130 lbs.
- Flexible arm for any position adjustment.
- 60 VA power rating.
- Power supply: 115V/ 60Hz/ 1 Phase.
- Uses regular screw-on bulb (not included).
- Base Dimension: 2-5/16" L x 2" W x 2" H

WORK LIGHT ON MAGNETIC BASE WITH FLEXIBLE ARM

- Powerful magnetic base with On/Off switch, holding power 180 lbs.
- Magnetic base dimension: 2-5/16 L x 2 W x 2" H
- Loc-line style flexible arm
- Use regular screw-on bulb(not included)
- Power Supply: 110V/1 Phase

MADE IN TAIWAN

8x LED LIGHT DESK TOP MAGNIFIER

- 8x powerful magnifier in diopters
- Flexible arm any desired position adjustable
- Diameter of Visible Area: 5"
- Adjustable LED light with 300 LUX brightness, 2.5Watt.
- Power Supply: 110V/1 phase
- Furnished with 60" cord.

BRIGHTNESS: 300 LUMENS

Replacement Bulb (8070-0004).

WATERPROOF LED WORKING LIGHTS-Small Head

- LED lights (1.1 Watt) provide an excellent solution for heat sensitive environment.
- Small head (1.2" Diameter) with high brightness
- 50,000 hours LED lifetime
- Arm Length: 21.50".
- Power Supply: 110V AC/ 1 phase.

BRIGHTNESS: 110 LUMENS

WATERPROOF LED WORKING LIGHTS

- LED lights provide an excellent solution for heat intensive environment.
- High Brightness with 330 Lumens
- Magnetic Base: 2 x2 " with 110 lbs power pull.
- 50,000 hours LED lifetime
- Arm Length: 20".
- Power Supply: 110V AC/ 1 phase.
- Bolt-On Mounting Plate: 2 x 2"

BRIGHTNESS: 330 LUMENS

22" LED WORKING LIGHT-Bolt On

- LED lights provide an excellent solution for heat intensive environment.
- 18" goose neck.
- Lasts 50 times longer than regular flashlights.
- 30 LED bulbs provides brighter and stronger natural light.
- Power Supply: 110V AC/ single phase.

BRIGHTNESS: 250 LUMENS

25" LED WORKING LIGHT -On Magnetic Base

BRIGHTNESS: 250 LUMENS

- 18.5" gooseneck.
- Magnetic Base: 2-1/2x2" with On/Off switch, 150 lbs power pull.
- LED lights provide an excellent solution for heat intensive environment.
- Lasts 50 times longer than regular flashlights.
- 30 LED bulbs provides brighter and stronger natural light.
- Power Supply: 110V AC/ single phase.

7W WATERPROOF LED WORK LIGHT

- LED lights (7 Watt) provide an excellent solution for heat sensitive environment.
- The head of light installed filter-able ultraviolet ray high temperature resisting glass and heat insulation structure
- Light head diameter: 4-3/8".
- Universal movement.
- 50,000 hours LED lifetime.
- Flux: 700Lm.
- Color temperature: 6500 K
- Power Supply: 110V AC/ 1 phase.
- Switch On/Off.

Bolt-On Mounting Plate: 2-3/8 x 2-3/8"

BRIGHTNESS: 700 LUMENS

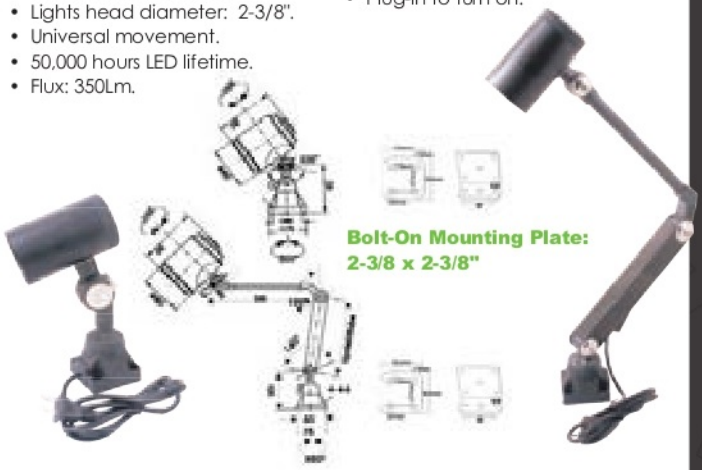
INDUSTRIAL GRADE LED LAMP MAGNIFIER

- Light source LED, 390 Lums brightness.
- Lens Size: 7.5x6.0".
- Lens frame: 12x9".
- Lens material: glass.
- 3 diopter lens provides 1.75x magnification.
- Swing arm with 32" reach.
- Max. 2-1/2" adjustable bench clamp.
- Power On/Off switch.
- Power Supply: 115V.

BRIGHTNESS: 390 LUMENS

5W WATERPROOF LED WORK LIGHTS

- LED lights (5 Watt) provide an excellent solution for heat sensitive environment.
- Lights head diameter: 2-3/8".
- Universal movement.
- 50,000 hours LED lifetime.
- Flux: 350Lm.
- Color temperature: 6500 K
- Power Supply: 110V AC/ 1 phase.
- Plug-in to turn on.



Bolt-On Mounting Plate: 2-3/8 x 2-3/8"

BRIGHTNESS: 350 LUMENS

HALOGEN WORK LIGHT - WATERPROOF

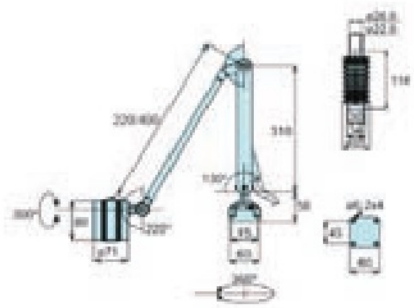
- Totally enclosed lighting head provides well prevention for dust, coolant and lubricants.
- Efficient quartz halogen bulb (50W), great light output, soft illuminationg.
- Coil transformer built in base for directly connect to AC 110 V power .
- Furnished with 6 ft cord with plug.
- Full reach: 36"

BRIGHTNESS: 370~600 LUMENS

WORK LIGHTS

CONCENTRATE LED WORK LIGHTS-Bolt On

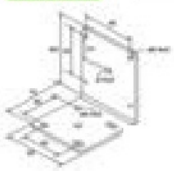
- Dust proof.
- Suitable for small CNC, engraving, sewing machine and heat sensitive environment.
- Flexible movement with folding arms.
- Built-in transformer
- Power consumption: 5.3W
- Input 110V AC, output 12V DC
- Sturdy rod-arm with special joint.



BRIGHTNESS: 330 LUMENS

MADE IN TAIWAN

Item #	Arm Length Lxl	Use Bulb	Weight Lbs.
8401-0481	220x310mm	6W	4.0
8401-0483	400x310mm	6W	4.5

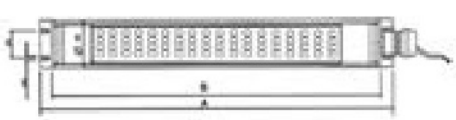


IP65 WATERPROOF LED MACHINE WORK LIGHTS

- LED lights provide an excellent solution for heat sensitive environment.
- Color temperature: 6500 K.
- 50,000 hours LED lifetime.
- 4 slots (2 of each side) for bolt-on.
- Hardwire direct to your machine.

IP 65

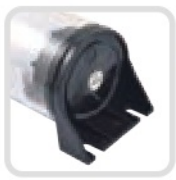
24V VOLTAGE



Item#	Input Voltage	Power	Length A/B(mm)	Flux Lm
8401-0470	24V	3.5 W	250/225	33
8401-0471	24V	7 W	360/335	660
8401-0472	24V	10.5 W	560535	990
8401-0473	24V	14 W	760/735	1320

Pro-Series IP67 WATERPROOF TUBE LED MACHINE WORK LIGHTS

- IP67 rated water/collant proof.
- LED lights provide an excellent solution for heat sensitive environment.
- Color temperature: 6000~6500 K.
- Uniform distribution of light, excellent lighting effects and no glare.
- Diffusion plate gives high light transmittance and comfortabel light for operators.
- 50,000 hours LED lifetime.
- Easy installation and low maintenance.
- High quality IP67 waterproof connector, aluminum PCB, Silicone rubber sealing ring and borosilicate glass tube(60mm Diameter).
- Abient working temperature: -13°F~131°F(-25°C ~+55°C).
- Hardwire direct to your machine.



IP 67

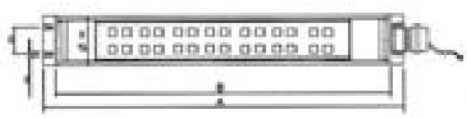
While Supply Last!

Item#	Power	Power Supply	(mm) Length L	(mm) Length L1	Flux Lm
8401-0491	13 W	110~270V/1 Phase	473	509	1300
8401-0492	17 W	24V AC/DC	528	564	1700
8401-0493	20 W	24V AC/DC	668	704	2000
8401-0494	24 W	24V AC/DC	773	809	2400

IP65 WATERPROOF HIGH FLUX LED MACHINE WORK LIGHTS

- Bright LED lights provide an excellent solution for heat sensitive environment.
- Color temperature: 6500 K.
- 50,000 hours LED lifetime.
- 4 slots (2 of each side) for bolt-on.
- Hardwire direct to your machine.

IP 65



Item#	Input Voltage	Power	Length A/B(mm)	Flux Lm
8401-0477	24V	7.2 W	360/335	720
8401-0478	24V	11.2 W	560/535	1120
8401-0479*	110V	16.8 W	760/735	1680

*Plug Included

SAFETY SHIELD W/DISC MAGNETIC BASE

- Protects eyes from cutting chips
- Universal movement.
- Positively locks all with unique locking mechanism.
- Shield Dimension: 12 x 8"
- Super power disc magnetic base: 2.6" dia. x 0.4" depth.

SAFETY SHIELD WITH UNIVERSAL ARM-Clamp On

- Protects eyes from cutting chips.
- Shield Dimension: 12 x 9".
- Maximum Reach: 21".
- Universal arm can be locked at any positions with 3 knobs.
- Clamp on a shaft or a round bar with 1" diameter or less.

SAFETY SHIELD WITH MAGNETIC BASE

- Protects eyes from cutting chips
- Shield Dimension: 12 x 10"
- Magnetic base: 2.5 x 2 x 2".
- Permanent magnet with strong power pull 180 lbs..

MAGNETIC SAFETY SHIELD WITH ADJUSTABLE ARM

- Shield Size: 6 x 8"
- Reach: 12"
- Loc-Line style 3/4" hose, adjustable arm

MULTI FUNCTION MIST COOLANT SYSTEMS

- Air adjustment valve.
- Fluid control allows for right mixture for every job.
- Flexable tube (18")puts mist right where it is needed.
- For boring, milling, grinding or drilling operations.
- Fits on a standard mag base's vertical post, supplied with set screw to hold location.

MIST COOLANT SPRAYER ON MAGNETIC BASE

- Air adjustment valve.
- Fluid control allows for right mixture for every job.
- Flexable Loc-Line style tube (17").
- For boring, milling, grinding or drilling operations.
- Magnetic base dimension: 2-5/16"L x 2"W x 2"H
- Magnetice Holding Power: 150 lbs

COOLANT HOSE ON MAGNETIC BASE

8401-0061 Shown

- Low profile magnetic base with 45 lbs power pull.
- Hose Length: 14" optimize coolant use and tool life.
- Shut off valve included.

Item #	Hose
8401-0060	Single
8401-0061	Dual

MAGNETIC BASE COOLANT HOSE ASSEMBLY

- 110 lbs magnetic pull.
- Two 1/4" dia. flexible coolant hoses.
- Either one can be shut off.
- On/ Off switchable magnetic base.

COOLANT SYSTEMS

SINGLE STEEL HOSE MAGNETIC BASE COOLANT ASSEMBLY

- Magnetic power pull: 150 lbs.
- Steel flexable hose with metal nozzle.
- Shut off valve.
- Hose length (from valve to tip of nozzle):12.5"
- On/Off switchable magnetic base.

MADE IN TAIWAN

COOLANT TESTER-REFRACTOMETERS

- Accurately measures coolant concentration.
- Includes instructions.
- Optimize coolant use and tool life.
- Just a few drops needed for test.

Item#	Typical Coolant	Solution Measuring Range
8010-0018	Water Sol. or Synthetics	0~20%
8010-0019	Synthetics	0~15%
8010-0020	Water Soluble	0~30%

VERTEX 3 GALLON COOLANT PUMP KIT

- Portable and easy to use coolant device.
- Can be used on drilling, milling machines, small lathes and other equipment that needs cooling.
- Power supply: 110V/1 phase, 1/8 HP.
- Dimension: 15.5 L x10.5 W x 13" H.
- Weight: 18 lbs

VERTEX Pro-Series 4.2 & 9-1/4 GALLON COOLANT PUMP KITS

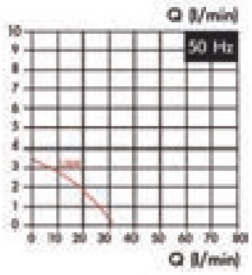
- Portable and easy to use coolant device.
- Can be used on drilling, milling machines, small lathes and other equipment that needs cooling.
- Power supply: 110v/ 1 phase, 1/4 HP.
- Dimension: 19.7 L x13.8 W x 7.9" H.
- Weight: 73 lbs
- **KIT INCLUDES:**
  - -Coolant Pump
  - -Coolant Tank
  - -Connecting Cable (with plug for 1 ph)
  - -Coolant Hose kit with Magnetic Base
  - -Flexible Conveying Hose
  - -Drain Hose
  - -Tool Kits
  - -ON/OFF switch (for 1 ph)

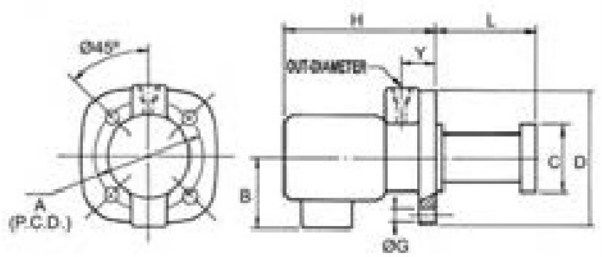
MADE IN TAIWAN

Item#	Coolant Pump (HP x Height)	Tank Size (L x W x H)	Volume of Coolant Tank	Connecting Cable	Coolant Hose Kit with Magnetic Base (O x L)	Flexible Conveying Hose (O x L)	Drain Hose (O x L)	Weight
3012-8115	1/8HP x 6"	15.75 x 9.85 x 7.25"	16 liters	7.87"	1/4 x 13"	3/8 x 6"	1 x 11.81"	23.8 lbs.
3012-8118	1/4HP x 7"	19.68 x 13.75 x 7.87"	35 liters	7.87"	3/8 x 14.17"	3/8 x 6"	1-1/4 x 15.74"	72.75 lbs.

VERTEX 1/8 HP UNDER WATER COOLANT PUMP

- This pump is high quality with anti-rust treatment, manufactured with high grade materials and inspected in five steps by a precision electronic device.

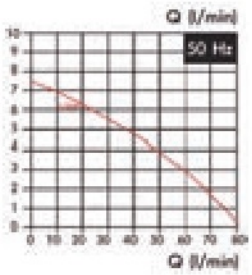


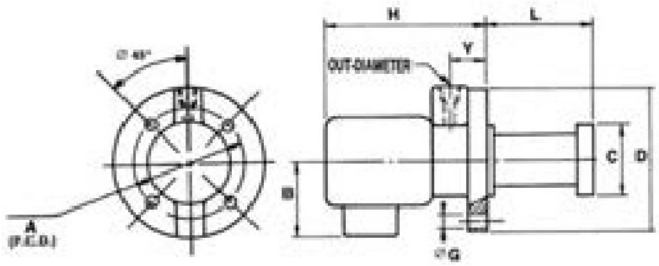


Power	Length (L)	Pumping Water 1mmin	Pumping Water 2mmin	A	B	C	D	G	H	Y	Out Diameter	Weight
1/8HP	150	27-28 L	25-26 L	128±0.2	105	Ø90	Ø150	Ø8	160	19	PT 3/8"	13 lbs.

VERTEX 1/4 HP UNDER WATER COOLANT PUMP

- This pump is high quality with anti-rust treatment, manufactured with high grade materials and inspected in five steps by a precision electronic device.

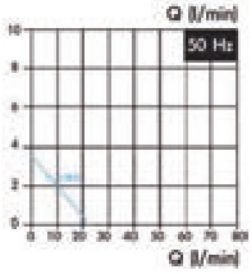


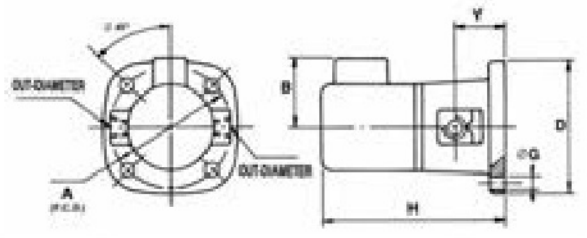


Power	Length (L)	Pumping Water 1mmin	Pumping Water 2mmin	A	B	C	D	G	H	Y	Out Diameter	Weight
1/4HP	200	74-76 L	71-72 L	158±0.2	125	Ø122	Ø180	Ø8	180	26	PT 1/2"	25 lbs.

VERTEX 1/8 HP SELF PRIMING COOLANT PUMP

- This pump is high quality with anti-rust treatment, manufactured with high grade materials and inspected in five steps by a precision electronic device.





Power	Pumping Water 1mmin	Pumping Water 2mmin	A	B	D	G	H	Y	In Diameter	Out Diameter	Weight
1/8HP	26-28 L	24-25 L	140±0.2	105	165	Ø8	195	50±0.5	PT 3/8"	PT 3/8"	13 lbs.

ADJUSTABLE COOLANT HOSE SYSTEM

ADJUSTABLE COOLANT HOSE SYSTEM -Loc - Line style - Interchangeable

*Limited Supply

Buy A Pack and Save !

1/4" MALE NPT VALVE KIT
5pc/pack

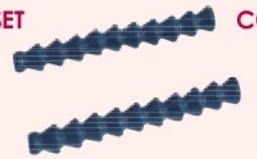
1/2" MALE NPT VALVE KIT
5pc/pack

1/4" IN-LINE VALVE KIT
5pc/pack

1/2" IN-LINE VALVE KIT
5pc/pack

6" LENGTH, 1/4 COOLANT HOSE SET
2pc/pack

6" LENGTH, 1/2 COOLANT HOSE KIT
5pc/pack



1/4" I.D. COOLANT HOSE KIT, 7PC

INCLUDES:
1/16, 1/8 & 1/4" Nozzle
and 1/8 & 1/4" NPT Connector
6" x 2pc Coolant Hose

1/2" I.D. COOLANT HOSE KIT, 7PC

INCLUDES:
1/4, 3/8 & 1/2" Nozzle
and 1/2 & 3/8" NPT Connector
6" x 2pc Coolant Hose

1/4" I.D. COOLANT HOSE KIT, 7PC

INCLUDES:
1/16, 1/8 & 1/4" Nozzle
1" Flare Nozzle and 3/8 SAE Flare Nut Adapter
6" x 2pc Coolant Hose

1/4" "Y" FITTING KIT
5pc/pack

1/2" "Y" FITTING KIT
5pc/pack

1/4" ELBOW FITTING KIT
5pc/pack

1/2" ELBOW FITTING KIT
5pc/pack

4PC 90° 1/4" NOZZLE KIT
(1/16,1/8,1/4" & Spray Bar)

4PC 90° 1/2" NOZZLE KIT
(1/16,1/8,1/4" & Spray Bar)

3PC (1/16,1/8 & 1/4") ROUND NOZZLE SET

3PC (1/4, 3/8 & 1/2") ROUND NOZZLE SET

NPT 1/4" CONNECTOR KIT
5pc/pack
For 1/4" hose

NPT 3/8" CONNECTOR KIT
5pc/pack
For 1/2" hose

NPT 1/8" CONNECTOR KIT
5pc/pack
For 1/4" hose

NPT 1/2" CONNECTOR KIT
5pc/pack
For 1/2" hose

50FT BULK COOLANT HOSE COILS -Loc - Line style - Interchangeable

COOLANT HOSE WRENCHES

- Use for easy assembly of coolant hoses.

5PC FLARING NOZZLE KITS

- Interchangeable with LocLine.
- For flexable hose system.

*Limited Supply

Pistol Type AIR DUSTER BLOW GUNS -Heavy Duty

Limited Supply!

- Body made of Alumium Casting for long lasting durability.
- Max. Working Pressure: 180 psi
- Comfort trigger design
- Quick coupling connector included

AIR BLOW GUN & SET

- **SET INCLUDES:**
  1 - Blow gun with rubber tip
  3 - Safety extension tubes
  1 - Male tip

360 DEG. PNEUMATIC HOSE FITTING & COUPLING

- Made of Alumium Alloy
- Swivel 360°
- Max. Working Pressure: 140 psi
- Thread: 1/4 NPT x 1/4 NPT (Male x Female)

Limited Supply!

5PC 1/4" QUICK - COUPLER SET

- **SET INCLUDES:**
  1 - NTP female quick connector
  1 - NPT female/male stud
  3 - Male/male stud

AIR SANDER - Orbital Jitterbug Type

- Constant orbital stroke for fine finishing.
- Dynamic counter weight for low vibration sanding.
- Automatic throttle release lever with positive stop action.
- Pad Size: 3-2/3" x 6-1/2".
- Speed: 8,000 RPM
- Air Inlet: 1/4" NPT.
- Hose Size: 3/8".
- Air Consumption: 5 CFM.
- Air Pressure: 90 PSI.

Replacement Pad (Item #7600-0119)

1/8" ECONOMY MINI AIR DIE GRINDER

SPECIFICATIONS	
Free Speed (RPM)	54,000
Air Inlet (NPT)	1/4"
Collet chuck	1/8"
Air pressure (PSI)	90
Length	5-1/4"
Weight	1/4 lbs

Pro-Series 1/8" MINI AIR DIE GRINDER

- Pen type is ideal for access to confined areas
- Operates at 54,000 RPM at 90 PSI
- Includes 1/8" collet, wrenches and quick connect coupler

MADE IN TAIWAN

SPECIFICATIONS	
Free Speed (RPM)	54,000
Air Inlet (NPT)	1/4"
Collet chuck	1/8"
Air pressure (PSI)	90
Length	5-1/4"
Weight	1/4 lbs

SUPPLIED WITH WATER/OIL SEPERATOR

Z-Limit ERGONOMIC LOW NOISE 1/4" AIR DIE GRINDER KIT

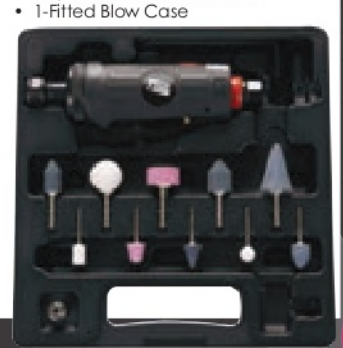
Z-Limit ULTRA-SERIES

- Rubber molded cushion grip
- Air regulator on top
- Safety throttle lever
- Rear exhaust with silencer
- 360 degree swivel air inlet
- Low noise 79 dB(A)
- Free Speed: 20,000 RPM
- Air Inlet: 1/4" NPT
- Hose Size: 3/8"
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 7-3/8"

Kit Includes:
- 1-Air Die Grinder
- 5-1/4" Shank Mounted Stone
- 5-1/8" Shank Mounted Stone
- 1-Fitted Blow Case

MADE IN TAIWAN

Limited Supply!



1/4" MINI AIR DIE GRINDER

- Light weight construction
- Ball bearing construction
- Variable speed throttle

SPECIFICATIONS	
Speed (RPM)	22,000
Air Inlet (NPT)	1/4"
Collet chuck	1/4"
Length	4"

1/4" ECONOMY AIR DIE GRINDER

SPECIFICATIONS	
Speed (RPM)	22,000
Collet chuck	1/4"
Air inlet (NPT)	1/4"
Hose size (ID)	3/8"
Air Consumption	4 CFM
Air-pressure (PSI)	90
Overall Length	7-3/8"

1/4" HEAVY DUTY AIR DIE GRINDER

HHIP PRO-SERIES

- Heavy Duty.
- Built in Safety Lever to meet OSHA requirements.
- Variable speed throttle for positive speed control.
- Ball bearing construction for long tool life.
- Rear exhaust.

SPECIFICATIONS	
Speed (RPM)	22,000
Collet chuck	1/4"
Air inlet (NPT)	1/4"
Hose size (ID)	3/8"
Air-pressure (PSI)	90

MADE IN TAIWAN

ABRASIVE CUT-OFF WHEEL MANDRELS

CAUTION: Never exceed maximum RPM rating. Always us a guard and comply with ANSI B7.1.

Item#	Arbor	Shank
3900-6250	1/4"	1/4"
3900-6375	3/8"	1/4"

Z-Limit ERGONOMIC LOW NOISE 1/4" MINI AIR DIE GRINDER

- Rubber molded cushion rip
- Air regulator on top
- safety throttle lever
- Rear exhaust with silencer
- Free speed: 25,000 RPM
- Low noise 79 dB
- Air inlet: 1/4 NPT
- Hose size: 3/8"
- Air Pressure: 90 PSI
- 360° swivel air inlet.
- Air Consumption: 4 CFM
- Overall Length: 6-1/4"
- Weight: 1 lbs.

Limited Supply!

Z-Limit ULTRA-SERIES

MADE IN TAIWAN

Z-Limit ERGONOMIC LOW NOISE 1/4" AIR DIE GRINDER

- Rubber molded cushion grip
- Air regulator on top
- Safety throttle lever
- Rear exhaust with silencer
- 360 degree swivel air inlet
- Low noise 79 dB(A)
- Free Speed: 20,000 RPM
- Air Inlet: 1/4" NPT
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 7-3/8"
- Hose Size: 3/8"
- Weight: 1.5 lbs

Z-Limit ULTRA-SERIES

MADE IN TAIWAN

Z-Limit ERGONOMIC LOW NOISE 1/4" ANGLE AIR DIE GRINDER

Z-Limit ULTRA-SERIES

- Rubber molded cushion grip
- Air regulator on top
- Safety throttle lever
- Rear exhaust with silencer
- 360 degree swivel air inlet
- Low noise 77 dB(A)
- Free Speed: 20,000 RPM
- Collet Size: 1/4"
- Air Inlet: 1/4" NPT
- Hose Size: 3/8"
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 6-11/16"
- Weight: 1.1 lbs

MADE IN TAIWAN

REPLACEMENT COLLETS

- Fits all air tools with same collet size

Item#	Chuck Size	Fits Air Tool
7600-1003	1/8"	1/8"
7600-1001	1/8"	1/4"

1/4" ECONOMY ANGLE AIR DIE GRINDER

- Collet size: 1/4".
- Air inlet: 1/4".
- I.D.air hose: 3/8".
- 90 PSI air pressure.
- 20,000 RPM speed.
- 4 CFM air consumption.
- Built in Safety Lever to meet OSHA requirements.

1/4" ANGLE AIR DIE GRINDER

HHIP PRO-SERIES

- Built in Safety Lever to meet OSHA requirements.
- Collet size: 1/4".
- Air inlet: 1/4".
- I.D.air hose: 3/8".
- 90 PSI air pressure.
- 20,000 RPM speed.
- 4 CFM air consumption.

MADE IN TAIWAN

Pro-Series 3/8" REVERSIBLE AIR DRILL

- Rubber molded cushion rip
- Rear exhaust with silencer
- Composite motor housing.
- Variable speed trigger
- Standard keyless chuck.
- Free speed: 2,000 RPM
- Chuck Size: 3/8"
- Spindle Thread: 3/8"-24
- Air Inlet: 1/4 NPT
- Hose Size (ID): 3/8"
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 7-5/8"
- Weight: 2.2 lbs.

Z-Limit ULTRA-SERIES

Limited Supply!

MADE IN TAIWAN

1/2" DRIVE AIR IMPACT WRENCH

- Bolt capacity.
- Maximum torque: 250ft/lbs.
- 90 PSI air pressure.
- 5 CFM air consumption.
- 7000 RPM speed.

3/8" AIR RATCHET WRENCH

- Maximum torque: 50ft/lbs.
- 150 RPM speed.
- Air inlet: 1/4".
- 90 PSI air pressure.
- 4 CFM air consumption.
- Overall length: 10".

Limited Supply!

Z-Limit 3/8" ERGONOMIC LOW NOISE AIR RATCHET WRENCH

Z-Limit ULTRA-SERIES

- Rubber molded cushion rip
- Rear exhaust with silencer
- Low noise 79 dB
- Free speed: 150 RPM
- Maximum torque: 60 ft/lbs
- Air inlet: 1/4 NPT
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 10-3/8"
- Weight: 2.8 lbs.

Limited Supply!

MADE IN TAIWAN

HEAVY DUTY 3/8" REVERSIBLE ANGLE AIR DRILL

- 90° angle head.
- Rear exhaust, low noise
- Forward and reverse knob.
- Variable speed lever.
- Standard keyed chuck.
- Free speed: 1,200 RPM
- Chuck Size: 3/8"
- Spindle Thread: 3/8"-24
- Air Inlet: 1/4 NPT
- Hose Size (ID): 3/8"
- Air Pressure: 90 PSI
- Air Consumption: 4 CFM
- Overall Length: 8"
- Weight: 2.5 lbs.

Limited Supply!

MADE IN TAIWAN

PUSH TO CONNECT FITTINGS

PUSH TO CONNECT MALE TUBE FITTINGS

- Max. Air Pressure: 0-10 kgf/cm²
- Metal body, nickel plated
- Pre applied teflon thread sealant
- Temprature: -5~60 ℃
- Push-in tube to connect

Limited Supply!

Item#	Tube OD	Pipe Thread	Overall Length (mm)
8401-0275	1/8	NPT 1/8	20
8401-0276	1/8	NPT 1/4	20
8401-0280	1/4	NPT 1/8	22
8401-0286	3/8	NPT 1/8	30
8401-0287	3/8	NPT 1/4	31
8401-0288	3/8	NPT 3/8	29

PUSH TO CONNECT MALE TUBE ELBOW FITTINGS

- Max. Air Pressure: 0-10 kgf/cm²
- Thermo plastic body, nickel plated metal thread side.
- Pre applied teflon thread sealant
- Temprature: -5~60 ℃
- Push-in tube to connect

Limited Supply!

Item#	Tube OD	Pipe Thread	Length A (mm)	Length C (mm)
8401-0294	1/8	NPT 1/8	24.9	18
8401-0295	1/8	NPT 1/4	26.9	18
8401-0298	1/4	NPT 1/8	27.3	20
8401-0299	1/4	NPT 1/4	29.3	20
8401-0300	1/4	NPT 3/8	30.3	20

NPT SINTERED BRONZE EXHAUST MUFFLERS

- Max. Air Pressure: 0-10 kgf/cm²
- Metal body, nickel plated
- Temprature: -20~70°C
- Decibel Rating: 75.000

Item#	NPT Thread	Hex Size (mm)	Overall length
8401-0320	1/8	12	0.94"
8401-0321	1/4	16	1.23"
8401-0322	3/8	18	1.47"
8401-0323	1/2	24	1.72"

NPT SINTERED BRONZE EXHAUST MUFFLERS

- Exhaust & Intake mufflers
- Metal body, nickel plated Breather Vent
- Temprature: -20~70°C

Item#	NPT Thread	Hex Size (mm)	Overall length
8401-0328	1/8	12	0.45"
8401-0329	1/4	16	0.55"

4 WAY HAND OPERATED VALVES-ROTARY DISC TYPE

- Body made of Alumium Alloy
- Max. Working Pressure: 150 psi
- Number of Positions: 3
- Actuator Type: Lever/Detent

Item#	Inlet Size (Inch)	CV Rating
8401-0255	3/8	1.83
8401-0256	1/2	1.83

5 WAY HAND OPERATED VALVES-LEVER TYPE

- Body made of Alumium Alloy
- Max. Working Pressure: 120 psi
- Number of Positions: 2
- Actuator Type: Lever/Detent

Limited Supply!

Item#	Inlet Size (Inch)	Outlet Size (Inch)	CV Rating
8401-0260	1/4 NPT	1/4 (2) & 1/8 (2)	0.67

3 WAY MANUAL MECHANICAL VALVE

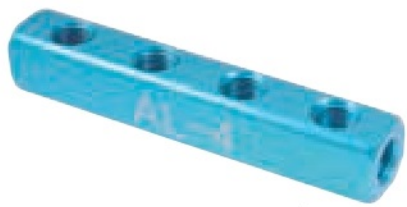
- Body made of Alumium Alloy
- Max. Air Working Pressure: 250 psi
- Number of Positions: 2

Limited Supply!

Item#	Inlet Size (Inch)	Outlet Size (Inch)	CV Rating
8401-0263	1/4 NPT	1/4 NPT	0.89

4&6 PORT STRAIGHT CONNECTION MANIFOLDS

- Body made of Alumium Alloy
- Max. Working Pressure: 120 psi
- Number of Positions: 2
- Inlet Size: 1/4 NPT
- Outlet Size: 1/4 NPT



Item#	Port	Width x Height	OAL
8401-0310	4	0.85 x 0.85"	5"
8401-0312	6	0.85 x 0.85"	7"

1 PC FILTER/REGULATOR UNIT WITH DRAIN

- Max. Working Pressure: 150 psi
- Max. tampreture: 70°C
- Manual drain type.
- Bowl Capacity: 25 ml (included)
- Pressure Gauge Included, 1/8 NPT mounting
- Dimensions: 2.5 x 3 x 7.4"

Heavy Duty! **Limited Supply!**

Item#	Inlet Size (Inch)	Outlet Size (Inch)
7600-1755	1/8 NPT	1/8 NPT
7600-1756	1/4 NPT	1/4 NPT

1 PC FILTER/REGULATOR UNIT WITH DRAIN

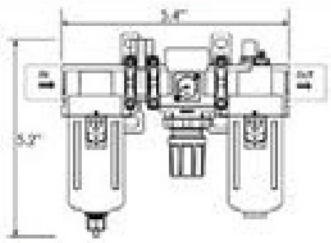
- Max. Working Pressure: 150 psi
- Max. tampreture: 70°C
- Manual drain type.
- Bowl Capacity: 25 ml (included)
- Pressure Gauge Included, 1/8 NPT mounting
- Dimensions: 2 x 3 x 6"

Limited Supply! **Clear Bowl**

Item#	Inlet Size (Inch)	Outlet Size (Inch)
7600-1760	1/8 NPT	1/8 NPT
7600-1761	1/4 NPT	1/4 NPT

3PC FILTER/REGULATOR/LUBRICATOR UNITS

- Max. Working Pressure: 150 psi
- Max. tampreture: 70°C
- Manual drain type.
- Dimensions: 5.4 x 3 x 5.2"
- Bowl Capacity: 15 ml & 25 ml (included)
- Pressure Gauge Included, 1/8 NPT mounting



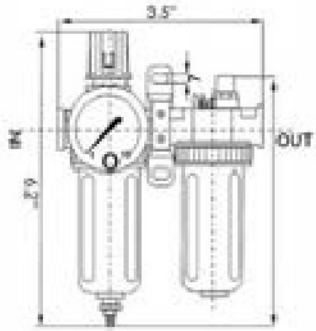
Limited Supply!

Item#	Inlet Size (Inch)	Outlet Size (Inch)
7600-1770	1/8 NPT	1/8 NPT
7600-1771	1/4 NPT	1/4 NPT

2PC FILTER/REGULATOR/LUBRICATOR UNIT

- Max. Working Pressure: 150 psi
- Max. tampreture: 70°C
- Manual drain type.
- Bowl Capacity: 25 ml (included)
- Pressure Gauge Included, 1/8 NPT mounts.
- Dimensions: 3.5 x 3 x 6.2"

Limited Supply!



Item#	Inlet Size (Inch)	Outlet Size (Inch)
7600-1765	1/8 NPT	1/8 NPT

ELECTRICAL (P.V.C.) TAPE

Limited Supply!

PRICED AND SOLD BY 10PC/PACK

TEFLON TAPE

PRICED AND SOLD BY 10PC/PACK

SHOP APRON

- 14 oz. heavy denim apron
- 1 side pocket & 1 two part big pocket

Markal PRO-LINE FINE TIP MARKERS

For Precision Marking

- Fine tip sizes (2mm) for precise, permanent paint marking.
- High-strength, lightweight barrel designed for industrial-grade use.
- Ideal for metal, also suitable for wood, glass, plastic, rubber and more.
- Xylene-Free for less odor.
- Self-storing cap with clip protects tip for longer life and stores easily in pocket.

Color	Item#
White	8030-9671
Yellow	8030-9672
Black	8030-9673
Red	8030-9674

Color	Item#
Blue	8030-9675
Green	8030-9676
Orange	8030-9677

ITW DYKEM BRITE-MARK MARKERS

- Makes permanent marks on metal, rubber, plastic, glass, concrete, leather, stone, wood, vinyl and more
- Valve action mechanism prevents paint in barrel from drying when cap is left off
- Heavy-duty aluminum barrel retains its shape
- Felt tips are replaceable to assure complete use of paint in each marker
- Drying time 25-35 seconds

For Marking On Any Surface!
REGULAR (Medium) LINE

Item#	Color	Case Qty
8030-8401	Blue	48
8030-8402	Black	48
8030-8403	White	48
8030-8404	Yellow	48
8030-8405	Orange	48
8030-8406	Red	48
8030-8407	Green	48
8030-8408	Silver	48
8030-8409	Gold	48

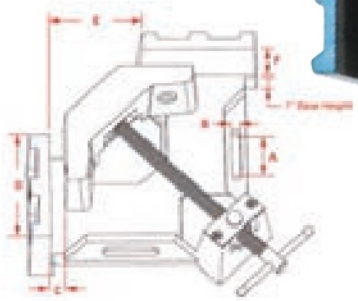
ITW DYKEM HI-SPOT BLUE

Hi-Spot is an intensely blue, soft uniform paste that spreads easily and evenly to show high spots on bearings, A thin coating may be left on the surface day in and day out, and will not dry. The film remains pliable and transferable and in condition for months.

- Non-drying
- Non-hardening
- Transfers from one surface to another

WELDER'S ANGLE VISES

- Brass lead screw & nut.
- One piece structure.
- 90° angle



Item#	Jaw Length D	Jaw Height F	Jaw Opening C	A	B	E
3900-1724*	4"	1-3/8	2-3/8	1.77"	0.51"	2.95"
3900-1725	5"	2-3/8	4	2.56"	0.59"	3.15"

*Limited Supply

7 WAY MIG WELDING PLIER

- Small serrated hole for mig tips.
- Flat surfaces for light hammering.
- Wire cutter for trimming mig wire.
- Spring loaded handle with heavy insulated grip for comfort.
- Needle nose grip wire for pulling
- Large serrated hole for nozzles.

ALNICO POT MAGNETS

- Tapped hole in the center
- Made in Taiwan
- Magnetic circuit design for strong holding

Limited Supply!

Item #	Size(mm) Dia. x H	Hold Power	Tapped Hole	Wt. Lbs
4401-0820	30 x 25	40 lbs.	M6 x 1.00	0.26
4401-0822	40 x 30	66 lbs.	M8 x 1.25	0.57
4401-0824	50 x 40	110 lbs.	M8 x 1.25	1.20

MAGNET HOLDER

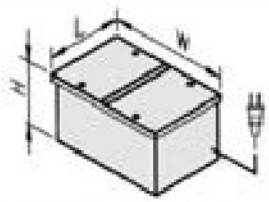
- Tapped hole in the center
- Made in Taiwan
- Strong holding power
- Useful

Limited Supply!

Item #	Size(mm) L x W x H	Hold Power	Tapped Hole	Wt. Lbs
4401-0816	26 x 60 x 25	44 lbs.	M6 x 1.0	0.70

HEAVY DUTY DEMAGNETIZER

- Demagnetizes tools such as dies, cutters and punches.
- Operates on 115V AC with on/off switch, 80 W.
- Table Size: 7.14" W x 5.00" L x 4.00 H



Pro-Series HEAVY DUTY DEMAGNETIZER

- Demagnetizes general parts, tools such as dies, cutters and punches.
- Operates on 115V AC , I Phase, 2A Current with on/off switch.
- **Automatic Temperature Protection: Power cuts off when reaches certain setting point. It will restart once it cools down (cycle time 10-20min).**
- Table Size: 7.1" W x 5.0" L x 3.5" H
- New Weight: 9 lbs.

MADE IN TAIWAN

17 PC POWER PUNCH KIT

- Complete with 7 sets of punches and dies.
- Common sizes: 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32".
- Punches and dies hardened to HRC 50~52.
- Pierces up to 16-gage metals. (steel, aluminum, brass, copper, plastic, etc.).
- Curved handles for a natural, balanced grip.
- Supplied with plastic carry case.

HEAVY DUTY TAPE MEASURE

- Made of heavy duty sheet metal steel.
- One inch wide blade.
- Hold up to 8' no break.
- Shows fraction by 8ths.
- Durable rubber outfit for easy grip

FRACTION SCALE

Dasqua® DIGITAL METRIC LASER TAPE MEASURES

- Measuring Accuracy: ±3mm
- Laser Class: 2
- Laser Type: 620-690nm, <lmW
- Operating Temperature: 0-40°C
- Storage Temperature: -20-70°C
- Display Type: OLED
- Multi-line Display: 2 lines
- Display Color: white on black
- Battery Life: 2000 measurements
- Battery Type: 3.7V Li-ion
- Laser Auto Off: After 30 seconds
- Power Auto Off: After 90 seconds
- 80.4mm x 46.4mm(with buckle)
- Tape width 2.5cm
- USB charging capability

3 in 1: tape measure, laser measure, digital display of tape
2 in 1: tape measure, laser measure

Item#	Measuring Range	Accuracy	Type
1804-1080	0.05-30m/5m	±3mm	3in1
1804-1055	0.05-30m/5m	±3mm	2in1

STAMPS & PUNCH SETS

STEEL STAMP COMBO SETS

- Hardened to RC 59-61 at tip and tempered to RC 40 Rockwell at striking end.
- Made from carbon steel.
- Character style designed to give sharp clear impressions.
- Packed in durable box.
- Easy selection and storage.

SET INCLUDES:
Numbers (0-9), Letters (A-Z)

Item#	Size of Impression
8016-0002	1/8"
8016-0003	3/16"
8016-0004	1/4"
8016-0005	3/8"

OPTICAL PUNCH SET

- This Optical Punch Set is indispensable when doing critical layout work. Just look down the magnifying lens and align the cross hairs with the mark on your workpiece. Replace the magnifier with the supplied punch and give it a tap.
- Punch set Includes 3 components a bull's eye and cross hair lens, a 120 degree made of tempered steel, a precisely manufactured of aluminum main body and a fitted case..

Lens Magnifier Power: 9x
Punch Size: 3/8"
Pin Length: 1.85"

OPTICAL PUNCH SET & 4PC CENTER DRILL SET COMBO KIT

- This Optical Punch Set is indispensable when doing critical layout work. Just look down the magnifying lens and align the cross hairs with the mark on your workpiece. Replace the magnifier with the supplied punch and give it a tap.
- Punch set Includes 3 components a bull's eye and cross hair lens, a 120 degree made of tempered steel, a precisely manufactured of aluminum main body and a fitted case.
- 4pc HSS combined drill & countersink set: #1-#4
- Made of high speed steel and ground.
- Plain style.
- Use for centering work ends, where the workpiece is to be revolved on machine centers, 60° countersink angle fits at standard centers.

Lens Magnifier Power: 9x
Punch Size: 3/8"
Pin Length: 1.85"

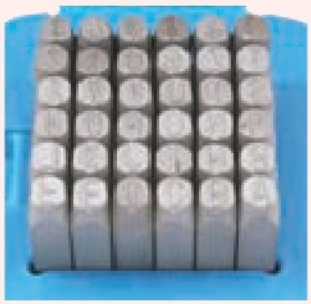
NEW

Specifications

Size	Body Dia	(Inch) Drill Dia	OAL
1	1/8	3/64	1-1/4
2	3/16	5/64	1-7/8
3	1/4	7/64	2
4	5/16	1/8	1-1/8

Pro-Series 36PC NUMBER/LETTER STEEL STAMP KITS

- Sand blasted surface finish.
- Kit consists of A-Z letters & 0-9 numbers.
- Made of high grade tool steel, each character is hardened and tempered to 60-62 HRC.
- Heavy duty plastic case.



Item#	Size of Impression
8016-0012	1/8"
8016-0013	3/16"
8016-0014	1/4"
8016-0015	3/8"

MACHINISTS' BENCH BLOCK

- Made from steel-hardened and ground
- A handy tool for holding work when driving pins, drilling, etc.
- The knurled side provides a good gripping surface
- V-groove across the face accommodates round and odd shaped stock
- Holes from 1/8 to 5/8 (3-16mm) diameter

3" Dia.x 1-1/2" H

DISC CUTTER SETS

- Punches are made of tool steel, case-hardened.
- The top and bottom plates are made of durable shock-resistant tool steel through hardened for long-wear.
- Round disc cutters let you cut perfectly round discs in up to 1mm(18 gauge) thick metal sheets.
- Slide metal between the plates and, with a mallet or heavy hammer of your choice, hit once for best results.

7PC INCLUDES DISC SIZES: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16 & 5/8"

Block Size: 2.44x2.42x0.98"
Punches Length: 1.50"

14PC INCLUDES DISC SIZES: 3.0, 4.5, 5.0, 6.0, 7.0, 7.5, 8.0, 8.5, 10.0, 11.0, 12.0, 13.0, 14.0 &16.0mm

Block Size: 4.20x1.93x0.93"
Punches Length: 1.55"

8PC DRIVE PIN PUNCH SET

- Manufactured from fine tool steel hardened and tempered.
- Knurled body.
- Complete with vinyl pouch.
- Overall length: 4"

SET INCLUDES:
1/16, 3/32,1/8,
5/32, 3/16, 7/32,
1/4 & 5/16"

8PC DRIVE PIN PUNCH SETS

- Tool steel heat treated, ground and polished.
- Knurled body.
- Complete with vinyl pouch.
- Overall length: 4"

8 PC SET INCLUDES:
1/16~1/4" by 32nds & 5/16"

13PC COMBINATION DRIVE PIN PUNCH SET

NEW

- Tool steel heat treated, ground and polished.
- Knurled body.
- Complete with vinyl pouch.

SET INCLUDES:
8 pc. 4" lengh 1/16~5/16" and
5 pc. 8" length 1/8, 3/16, 1/4,
5/16 & 3/8" in vinyl pouch.

METAL SCRIBER

- Tempered and heat treated steel all over body, handle, and sharp tips.
- Long length handy for hard to reach holes.
- Knurled body for tight grip.

OAL: 9.50"

SCRIBER WITH CLIP

- For marking or engraving on hard metal, glass, plastic, ceramic, jewelry, etc.
- Sharp tungsten steel tip.
- Convenient pocket clip and covered cap.
- Knurled body grip.

8PC BRASS DRIVE PIN PUNCH SET

- **Used in spark-free environments.**
- Made from brass hexagonal stock.
- Punch section centerless ground.
- Supplied in plastic pouch.
- 3-1/2" overall length.
- Punch tip diameters are undersized approximately 0.005" (0.127mm).
- Set Includes: 1/16(1.6mm), 3/32 (2.4mm), 1/8(3.2mm), 5/32(4.0mm), 3/16(4.8mm), 7/32(5.5mm), 1/4(6.4mm) & 5/16"(8.0mm)

8PC BRASS DRIVE PIN PUNCH SET

- Used in spark-free environments.
- Punch section centerless ground.
- Solid brass.
- Hexagonal body
- 4" length.
- Supplied in fitted case.

5PC EXTRA-LONG DRIVE PIN PUNCH SETS

- Black nitrate finish.
- Alloy steel hardened on both ends.
- Finger grip knurled body.
- Pin length: 3-1/2".
- Overall length: 8".
- Complete with vinyl pouch.

5 PC SET INCLUDES:
1/8, 3/16, 1/4, 5/16 & 3/8"

5" AUTO CENTER PUNCH

- No hammer required.
- Double spring loaded barrel.
- Special hardened alloy steel tip for instant marking.
- Knurled body.

TRANSFER SCREWS & DAPPING BLOCKS

25PC TRANSFER SCREW COMBO SETS

- Convinent & economic combination of four sizes often used together.
- More accurate than transfer punches. The fastest and most precise method of transferring threaded holes to mating parts. Great for tool and die work and in lay outs.
- Solid handle.
- Plastic storage case.

3601-0511 Shown

SET INCLUDES:
Handle & 24 Screws(6pc each size)

3601-0513 Shown

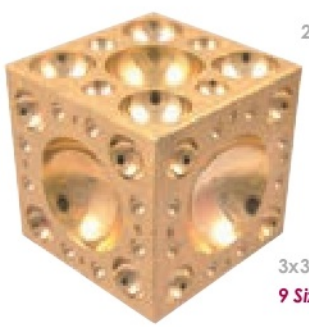
Item#	Set Thread
3601-0511	1/4-20, 5/16-18, 3/8-16, 7/16-14
3601-0513	1/2-13, 5/8-11, 3/4-10, 9/16-12
3601-0515	10-24, 8-32, 6-32, 4-40
3601-0517	M3x0.5, M4x0.7, M5x0.8, M6x1.0
3601-0519	M6x1.0, M8x1.25, M10x1.50, M12x1.75
3601-0521	M14x2.00, M16x2.00, M20x2.50, M24x3.00

DAPPING DIE BLOCKS - Steel & Brass

- 2x2" block has 18 half-sphere depressions from 4 - 40 mm in diameter.
- 3x3" block has 9 half-sphere depressions from 22 - 62.5 mm in diameter.
- Ideal for doming soft metals with the use of dapping punches or arbor presses and making beads and shaping metals.

Steel
2x2x2" Shown

18 Sizes: 4,5,6,7,8,9,10,11,12,13,14, 16,18,20,25,30,35,40mm



Brass
3x3x3" Shown

9 Sizes: 22,25,28,32,38,45,50,60 & 62.5mm

Block Size	Dapping Size	Steel Item#	Brass Item#
2" x 2"	4,5,6,7,8,9,10,11,12, 13,14,16,18,20,25,30, 35,40mm	8606-3400	8606-3410
3" x 3"	22,25,28,32,38,45, 50,60 & 62.5mm	8606-3402	8606-3412

7 PC TRANSFER SCREW SETS

- More accurate than transfer punches. The fastest and most precise method of transferring threaded holes to mating parts. Great for tool and die work and in lay outs.

SET INCLUDES: Handle & 6 Screws

Inch

Item#	Thread
3601-0004	4-40
3601-0006	6-32
3601-0008	8-32
3601-0010	10-24
3601-0011	10-32
3601-0012	12-24
3601-0250	1/4"-20
3601-0312	5/16-18
3601-0375	3/8"-16
3601-0376	3/8"-24
3601-0438	7/16"-14
3601-0500	1/2"-13
3601-0501	1/2"-20

MM

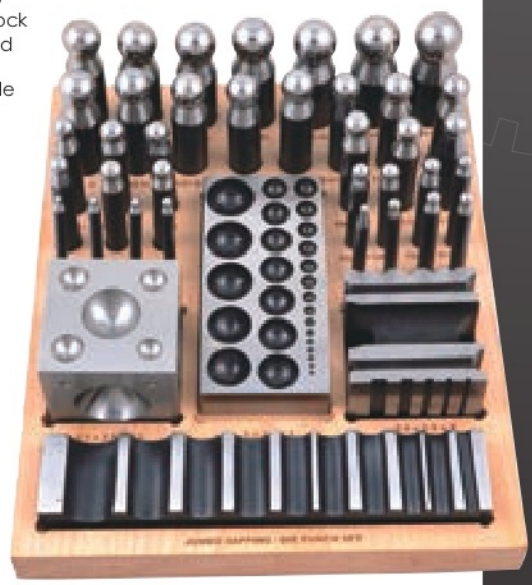
Item#	Thread
3601-1003	M3x0.5
3601-1004	M4x0.7
3601-1005	M5x0.8
3601-1006	M6x1.00
3601-1008	M8x1.25
3601-1010	M10x1.50
3601-1012	M12x1.75

40PC DAPPING DIE BLOCK & PUNCH SET

- Ideal for multi purpose formings.
- Made of hardened steel.
- Steel Dapping Block 2.5x2.5x2.5"(20 Depressions: 2.0, 3.2, 4.8, 6.4, 7.9, 9.5, 11.1, 12.7, 14.3, 15.9, 17.5, 19.1, 20.6, 22.2, 25.4, 27.0, 28.6, 31.8, 34.9, 44.5 & 50.8mm)
- Steel Flat Dapping Block: 5"x2.5"x1"(27 Depressions: 1.5, 2.0, 2.4, 2.8, 3.2, 3.6, 4.4, 4.8, 5.6, 6.4, 7.1, 7.9, 8.7, 9.5, 10.7, 11.1, 12.7, 14.3, 15.5, 15.9, 17.1, 17.5, 19.1, 20.6, 22.2, 23.8 & 25.4mm)
- Steel Forming Block: Half Round (18 Grooves 4-22mm).
- Forming block (60 x 60 x 50 mm): Constructed of hardened steel. It is with half-round, flat and right-angle grooves. It has different shaped grooves on all sides for shaping metals.
- 36pc Dapping Punches(3.5" Long): 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0, 13.5, 14.0, 14.7, 15.4, 16.2, 17.0, 17.8, 18.6, 19.4, 20.2, 21.0, 21.8, 22.6, 23.4, 24.2 & 25.0mm
- Wooden stand with index included.

SET INCLUDES:

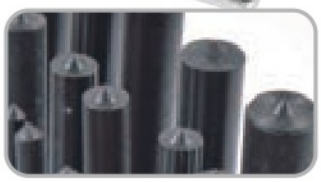
- 1pc Dapping Block,
- 1pc Flat Dapping Block
- 1pc Steel Half Round Forming Block
- 1pc Flat&Right Angle Forming Block
- 36pc Punches



TRANSFER PUNCH SETS

- Undersize .0025" .
- Heat treated tempered tool steel for longer life.
- Black oxide finish.
- Used for transferring of threaded, drilled and tapped holes.

Item#	No. of Pieces	Range
8600-0041	28	3/32-1/2" x 64ths & 17/32"
8600-0411	33	1/2-1" x 64ths
8600-0043	25	1-33mm x 0.5mm
8600-0044	26	A-Z
8600-0045	60	#1-60



REPLACEMENT RACKS FOR TRANSFER PUNCH SETS

- **Rack only.**
- Metal rack with sizes marked.

28PC Rack Shown

Item#	Description
8600-0041R	28PC Rack: 3/32-1/2" x 16ths
8600-0411R	33PC Rack: 1/2-1" x 64ths

61PC TRANSFER PUNCH COMBO SET

- Used for transferring threaded, drilled and tapped holes.
- Undersize .0025" .
- Heat treated tempered tool steel for longer life.
- Black oxide finish.
- 28pc Set Range: 3/32~1/2" by 64ths & 17/32"
- 33pc Set Range: 1/2~1" by 64ths

28PC & 33PC COMBO SET

BUY COMBO SET & SAVE!

24PC DAPPING DIE BLOCK & PUNCH SET

- Ideal for making beads and shaping metals.
- Dapping block(2x2") has 18 half-sphere depressions from 2.3 - 25 mm in diameter.
- 24pc Dapping Punches(3.5" long): 2.3, 3.5, 4.3, 5.1, 5.9, 6.7, 7.5, 8.3, 9.1, 9.9, 10.7, 11.5, 12.3, 13.0, 13.8, 14.6, 15.4, 16.2, 17.0, 18.6, 20.2, 21.8, 23.4 & 25.0mm.
- Hardned tool steel.
- Ideal for foming soft metals with the use of dapping punches or arbor presses.

SET INCLUDES:
Dapping Block, 24pc Punches
& Wood Stand with Index.

108 PC BLIND HOLE SPOTTER SET

- Fast, easy way to locate opposite centers. When holes do not extend through material(such as holes for dowel pins, perforating punches, etc.) Blind-hole spotters get the job done simply. Correct size spotter can be used in threaded, drilled or reamed holes.

INCLUDES:
1/8 to 21/32" by 32nds, 6pc each

HAMMERS & COUNTERS

Pro-Series PU-DEAD BLOW HAMMERS

MADE IN TAIWAN

- Advanced Polyurethane (PU) material will not mar surfaces or absorb liquids.
- Basic: Steel structure and include steel shot.
- Absorbs shock from impact reduces rebound and maximizes force due to steel shot filled canisters.
- Grip is synthetic rubber improving grip and comfort.

Item#	Size OZ	(mm) A	B	C	D
7080-0331	18	38	100	249	287
7080-0333	24	46	100	260	306
7080-0336	33	50	110	290	340
7080-0339	49	60	130	308	368

DEAD BLOW HAMMERS

- Shot loaded interior produces a powerful driving force.
- Tough, durable polypropylene casting.
- Resistant to industrial chemicals.
- Non-marring, non-sparking.

Item#	Size (lbs.)	Head Dia.(In)	Overall Length
7080-0291	1	1-3/4	12"
7080-0292	2	2	13-1/2"
7080-0293	3	2-1/2	14-1/2"
7080-0294	4	3-1/2	15"

BRASS HAMMERS FIBERGLASS HANDLE

- Industrial grade.
- Non-Marring, non-sparking.
- Polished high purity brass heads.

Item#	Size (lbs.)	Head Dia.(In)	Overall Length
7080-0036	1	1-1/8	11-1/2"
7080-0037	1-1/2	1-1/4	12-1/2"

RATCHET DIGITAL READOUT COUNTER

- Reset knob.
- 5 digits.
- Base: 2-1/8 x 1-3/4".
- Height: 1-1/4".

HANDHELD 4 DIGIT COUNTER

- Chrome plated
- 2" Height x 1-3/4" Width
- Finger ring for easy handling
- Supplied with steel base

NYLON FACE DEAD BLOW HAMMERS

- Shot loaded interior produces a powerful driving force.
- Nylon material strike faces.
- Resistant to industrial chemicals.
- Non-marring, non-sparking.

Replacement Tip

Item#	For Size (OZ.)
7080-0310	12
7080-0311	20

Item#	Size (OZ.)	Head Dia. A	Head Length B	Overall Length D
7080-0300	12	1.0"	4"	11"
7080-0301	20	1.5"	4"	11.5"

DEAD BLOW HAMMERS - UPE PLASTIC

- Shot loaded interior produces a powerful driving force.
- UPE material strike faces.
- Resistant to industrial chemicals.
- Non-marring, non-sparking.

Item#	Size (OZ.)	Head Dia.(In)	Overall Length
7080-0302	16	1.2	11"
7080-0305	29	1.6	11.8"
7080-0308*	46	2.2	12.6"

* Limited Supply

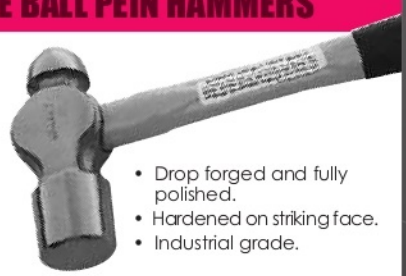
Replacement Tip

Item#	For Size (OZ.)
7080-0312	16
7080-0315	29
7080-0318*	46

FIBERGLASS HANDLE BALL PEIN HAMMERS

Limited Supply!

Item#	Size (oz.)
7080-0202	12
7080-0022	32
7080-0231	48



- Drop forged and fully polished.
- Hardened on striking face.
- Industrial grade.

HEAVY DUTY TIE DOWN

- Heavy duty ratchet tie down.
- Quick automatic release.
- Safe and secure type.

Limited Supply!

Item#	Size (W x L)	Capacity (lbs)
8010-0002	1" x 15 ft.	1,000
8010-0001	2" x 27 ft.	6,500

WINDOW DIRECT READOUT TORQUE WRENCH

- Meets or exceeds ISO 6789, US Fed. GGG-W-686D & ANSI B107.14M.
- Chrome-vanadium ratchet gear (32 teeth) and fully heat treated handle.
- Patented unique pull-push system, micro-click & reversible.
- Dimension: Width of Head 1.4", Depth of Head 1.23", OAL 19.5"
- Release accuracy ±3%
- Push locking.
- Window scale design for easy reading.
- With fitted case.

1/2" DRIVE

Item#	Drive	Torque Range	Graduation	Price (E)
7020-0151	1/2"	120~150 ft/lbs (30-210Nm)	10ft/lbs	145.68

MICROMETER TORQUE WRENCHES

- Dual scale torque wrench.
- Micrometer adjusting, reversible ratcheting.
- Complete with conversion table chart.
- Lock holds torque setting.
- Chrome plated alloy steel.

9PC T-HANDLE TORX KEY SET

- Industrial grade heat treated extrude S-2 alloy steel.
- PVC coated handles provide a non-slip grip.
- Arm reach: 7-1/2".
- Complete with vinyl pouch.

COMBINATION WRENCHES

- Polished heads and raised panel.
- Forged steel.
- Open end and 15° offset box opening.

Inch

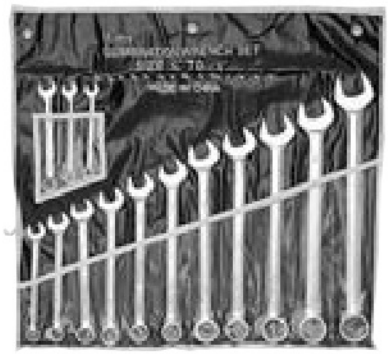
Item#	Size	OAL
7023-1001	1/4	4
7023-1002	5/16	4.6
7023-1003	3/8	4.8
7023-1004	7/16	4.5
7023-1005	1/2	5.9
7023-1006	9/16	6.3
7023-1008	5/8	6.7
7023-1009	11/16	7.5
7023-1010	3/4	8.2
7023-1011	7/8	10.6
7023-1012	15/16	11
7023-1017	1	10.7
7023-1018	1-1/16	13.6
7023-1019	1-1/8	13
7023-1191	1-3/16	15
7023-1020	1-1/4	13.4
7023-1021	1-5/16	16.8
7023-1022	1-3/8	17.5
7023-1023	1-7/16	18
7023-1024	1-1/2	18.7
7023-1025	1-5/8	19.6
7023-1026	1-11/16	20.2
7023-1027	1-3/4	21.2
7023-1028	1-13/16	22.7
7023-1029	1-7/8	22.4
7023-1030	2	23.5
7023-1031	2-1/8	24.2
7023-1032	2-1/4	25
7023-1033	2-3/8	26
7023-1034	2-1/2	26.7

MM

Item#	Size	OAL (Inch)
7023-2012	6	4.2
7023-2013	7	4.4
7023-2014	8	4.2
7023-2015	9	4.8
7023-2051	10	4.4
7023-2052	11	4.6
7023-2016	12	5.7
7023-2053	13	5.8
7023-2017	14	6.3
7023-2018	15	8
7023-2020	16	8
7023-2021	17	7.6
7023-2022	18	8.6
7023-2023	19	8.3
7023-2024	20	10
7023-2025	21	10
7023-2054	22	10.8
7023-2026	23	11.3
7023-2027	24	11.5
7023-2028	25	12.5
7023-2030	26	13.5
7023-2031	27	12.3
7023-2034	28	14.8
7023-2035	29	14.8
7023-2036	30	13.3
7023-2038	32	13.5
7023-2040	34	16.4
7023-2042	36	17

COMBINATION WRENCH SETS

- Forged chrome plated tool steel.
- All sets fully polished.
- With pouch.



HANDLES & KNOBS

ADJUSTABLE HAND LEVER WAND KNOBS -Hex Head

- Handle Material: Plastic (KT)

Item#	Female Thread	Hex (mm)	Handle Length L
8017-0048	M6X1.5	14	1.65"
8017-0051	M8X1.25	14	2.83"
8017-0053	M10x1.5	16	3.62"

LEVER WAND KNOBS-Push to Screw On

- Handle Material: Plastic (KT)

Item#	Thread x Lenght	Handle Length (mm)
8017-0060	M6x20mm	43
8017-0061*	M6x20mm	63
8017-0063	M6x30mm	43
8017-0064	M6x30mm	63
8017-0066	M6x45mm	43
8017-0070	M8x15mm	83
8017-0071	M8x30mm	63
8017-0073	M8x40mm	83
8017-0076	M10x20mm	83

*Limited Supply

ADJUSTABLE FACE SPANNER WRENCHES

NEW

- Ideal for adjusting collars, lock nut rings & bearings
- Black finish.

MADE IN TAIWAN

Item #	Pin Hole Dia. D	(mm) Length	Adj. Range Bewteen Pins
7016-0040	3.0	7.5	7-40
7016-0042	4.0	7.3	11-60

KNURLED KNOBS

NEW

- Ideal for adjusting collars, lock nut rings & bearings
- Black finish.

Item#	Thread	Base Dia.	Diameter
8017-0120	10-24NC	3/4"	5/8"
8017-0123	1/4"-20NC	1"	3/4"
8017-0125	3/8"-16NC	1-1/4"	1-1/8"

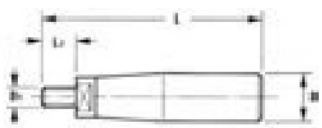
REVOLVING HANDLES

- Handle Material: Bakelite (KU)

Item#	Thread x Length	Handle Length (mm)	Handle Dia (mm)
8017-0080	M8x13mm	56	20
8017-0082	M8x13mm	76	22
8017-0085	M10x13mm	56	20
8017-0086	M10x13mm	76	22
8017-0087	M10x13mm	83	25

FLAT END HANDLES, REVOLVING

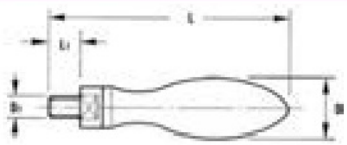
- Material: Steel
- Fits most movable handwheels



Item#	Thread D1	Dimensions (mm) D	L1	L
8017-0001	M10X1.5	23	16	100
8017-0002	3/8"-16	22	16	99

ELLIPSE END HANDLES, REVOLVING

- Material: Steel
- Fits most movable handwheels



Item#	Thread D1	Dimensions (mm) D	L1	L
8017-0010	M6x1.0	16	7	60
8017-0011	M8x1.25	20	9	80
8017-0012	M10x1.5	26	13	110
8017-0016	3/8"-16	25	13	99

KNOB HAND

- Material: KT plastic
- Thread: M8x1.25, 0.83" length
- Knob: 1.6" diameter, 2.6" Length.

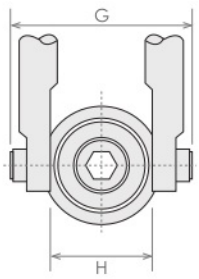
BALL KNOBS

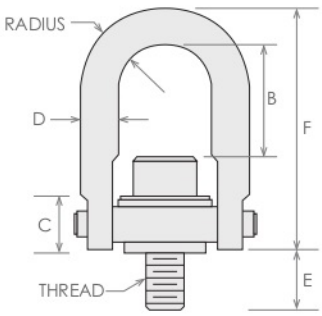
- Material: Bakelite (KU)

Item#	Diameter (mm)	Thread
8017-0030	25	M6
8017-0032	25	M8
8017-0033	38	M8
8017-0035	38	M10
8017-0037	38	M12
8017-0038	42	M12

SAFETY SWIVEL HOIST RINGS

200% PROOF-LOAD TESTED AND CERTIFIED WITH TRACEABLE SERIAL NUMBER





- Swivels 360° - pivots 180°
- Material: Alloy Steel
- Safety factor: 5:1
- Finishi: Black Oxide (Also available: Cadmium Plated, Electroless Nickel Plated, Zinc Plated)
- Magnetic partical inspected.
- Certified heat treatment.
- Rated at 100% from 0° to 90°
- Fatigue tested to 20,000 cycle at 1.5 times the rated load
- Thread: Longer Projection and Fine Threads Available.
- Comforms to CE.
- **Meets or exceeds the requirements of ASME B30.26**

INCH THREAD

Rated Loads(Lbs)	Thread Size	A	C	D	E	Standard U-Bar Item#	B	F	G	H	Torque Ft/#	Wt. (Lbs)
600	1/4~20	0.43	0.71	3/8	0.54	**8004-6100**	1.27	2.67	1.84	1.00	6	0.3
800	5/16~18	0.43	0.71	3/8	0.54	**8004-6104**	1.27	2.67	1.84	1.00	7	0.3
1,000	3/8~16	0.43	0.71	3/8	0.54	**8004-6106**	1.27	2.67	1.84	1.00	12	0.3
2,500	1/2~13	0.70	0.93	1/2	1.07	**8004-6602**	1.84	3.77	2.58	1.49	28	1.0
2,500	1/2~13	0.88	1.22	3/4	0.78	**8004-6008**	2.31	4.78	3.52	1.99	28	2.6
4,000	5/8~11	0.88	1.22	3/4	1.03	**8004-6004**	2.18	4.78	3.52	1.99	60	2.6
5,000	3/4~10	0.88	1.22	3/4	1.03	**8004-6014**	2.06	4.78	3.52	1.99	100	3.0
7,000	3/4~10	1.40	1.71	1	1.54	**8004-6206**	3.06	6.52	5.14	3.00	100	7.0
8,000	7/8~9	1.40	1.71	1	1.04	**8004-6202**	2.93	6.52	5.14	3.00	160	7.0
10,000	1~8	1.40	1.71	1	1.29	**8004-6210**	2.81	6.52	5.14	3.00	230	7.5
10,000	1-1/8~7	1.40	1.71	1	2.29	**8004-6216**	2.69	6.52	5.14	3.00	230	7.5
10,000	1-1/8~8	1.40	1.71	1	2.29	**8004-6217**	2.69	6.52	5.14	3.00	230	7.5
15,000	1-1/4~7	1.75	2.11	1-1/4	1.89	**8004-6802**	4.12	8.73	6.50	3.76	470	14.0
20,000	1-3/8~6	2.00	2.40	1-1/2	2.50	**8004-6702**	5.50	10.20	7.46	4.31	540	23.0
24,000	1-1/2~6	2.25	2.81	1-3/4	3.20	**8004-6404**	6.41	12.47	8.55	4.87	800	34.0
24,000	1-3/4~5	2.25	2.81	1-3/4	3.20	**8004-6408**	6.16	12.47	8.55	4.87	800	34.0
30,000	2~4-1/2	2.25	2.81	1-3/4	3.20	**8004-6400**	5.91	12.47	8.55	4.87	800	36.0
50,000	2-1/2~4	3.00	4.09	2-1/4	4.00	**8004-7006**	8.03	16.87	11.67	6.52	2100	88.0

STAINLESS STEEL AVAILABLE.

METRIC THREAD

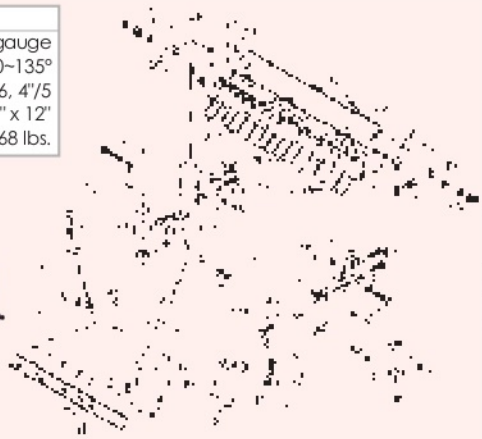
Rated Loads(Lbs)	Thread Size	A	C	D	E	Standard U-Bar Item#	B	F	G	H	Torque Ft/#	Wt. (Lbs)
400	M8x1.25	11	18	10	13	**8004-6912**	32	68	47	25	9	0.4
500	M10x1.50	11	18	10	18	**8004-6916**	30	68	47	25	16	0.4
1,050	M12x1.75	18	24	13	27	**8004-6608**	48	96	66	38	37	1.0
1,050	M12x1.75	22	30	19	19	**8004-6924**	60	121	89	51	37	2.5
1,050	M14x2.00	22	30	19	29	**8004-6928**	58	121	89	51	40	2.5
1,900	M16x2.00	22	30	19	29	**8004-6930**	56	121	89	51	80	2.7
2,150	M20x2.50	22	30	19	34	**8004-6936**	52	121	89	51	135	6.7
3,000	M20x2.50	36	43	25	32	**8004-6942**	78	166	131	76	135	7.0
4,200	M24x3.00	36	43	25	37	**8004-6948**	74	166	131	76	311	15.0
7,000	M30x3.50	45	54	32	42	**8004-6956**	106	222	165	95	637	15.0
7,000	M33x3.50	45	54	32	67	**8004-6960**	103	222	165	95	637	23.0
10,000	M33x3.50	50	62	38	58	**8004-6961**	140	259	189	109	637	35.0
11,000	M36x4.00	57	71	44	63	**8004-6966**	166	317	217	124	1085	36.0
12,500	M42x4.50	57	71	44	83	**8004-6968**	160	317	217	124	1085	38.0
13,500	M48x5.00	57	71	44	83	**8004-6970**	154	317	217	124	1085	38.0
13,500	M56x5.50	57	71	44	88	**8004-6973**	154	317	217	124	1085	38.0
22,300	M64x6.00	76	103	57	101	**8004-6972**	204	428	296	165	2847	86.0

STAINLESS STEEL AVAILABLE.

48" PAN & BOX BRAKE

- 48" width is suitable for many metal forming operations.
- Hardened steel box fingers are easily removed or repositioned.
- Left and right beam control levers for easy operation.
- Large contour balanced brake handle for brake past 90° to 135°.
- Ruggedly built.

SPECIFICATIONS	
Capacity (mild steel)	16 gauge
Brake range	0~135°
No. of finger	2"/5, 3"/6, 4"/5
Footprint	52" x 12"
Weight	368 lbs.



HEAVY DUTY BENCH GRINDERS

- Direct drive motor with no brushes or belts to adjust or replace
- Permanently lubricated motor bearings
- Adjustable shatter-resistant plastic eye shields
- Removable wheel covers for easier wheel changes
- Free speed: 3,500 RPM
- Adjustable tool rests
- Power: 110 V/ 1Phase
- 6' wire cord
- UL approved

COLOR MAY VARY

PEDESTAL STAND FOR BENCH GRINDERS

- For 6, 8 & 10" grinders
- Base for Grinder : 9-3/4 x 9-3/4"
- Overall height: 34"
- Weight: 22 Lbs.
- Coolant tank and adjustable tool tray.

HEAVY DUTY PEDESTAL BENCH GRINDER STAND

- Designed to accommodate 6", 7", 8", and 10" bench grinders and bench buffers, and 1", 2" and 4" belt grinders.
- Base and top are made of heavy-duty cast iron
- Top size: 10-5/8x10-5/8"
- Steel column is 3-1/2" diameter
- Adjustable height water pot provides quenching for work piece.
- Unique design allows mounting with 4 bolts, Mounting slots are 1/2" width & mounting holes are 1/2" diameter.
- Stand Height: 33"
- Pedestal leg length: 9.5"
- Weight: 58 lbs.

DELUXE HEAVY DUTY DIGITAL MULTIMETER

- 1" height digit LCD display.
- AC current 200mA/100µA, 20A/10 mA.
- AC voltage up to 750V/1 V.
- DC voltage up to 1000V/1V.
- DC current 200µA/100mA, 200mA/100µA, 20A/10mA.
- Data-held & diode test feature.
- LCD back light for dark places easy reading.
- Single standard 9-volt battery (not included).
- Resistance up to 200 mz
- Test leads.
- Logic test.
- Auto power off.

Limited Supply!

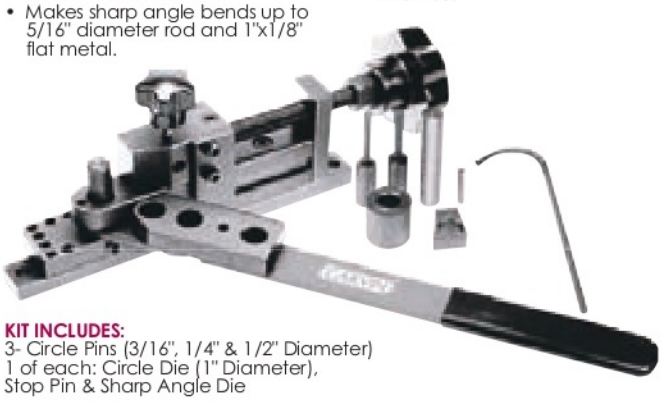
DIGITAL MULTIMETER

- Power: single standard 9V battery (not included).
- 200 mA range continuity indication.
- LCD display with max. 1999 reading.
- DC/AC voltage to 750V.

Limited Supply!

MINI UNIVERSAL BENDER-Forms Wire, Flat Metal & Tubing

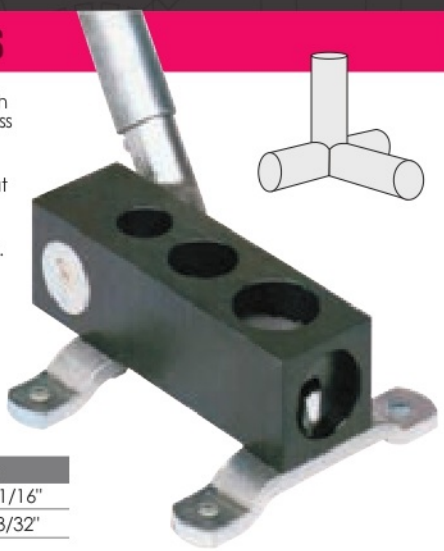
- Forms wire, flat metal and tubing into clamps, handles, brackets, hooks, coils and more.
- Makes sharp angle bends up to 5/16" diameter rod and 1"x1/8" flat metal.
- Made of hardened tool steel.
- Mounts on a work bench or held in a vise.



KIT INCLUDES:
3- Circle Pins (3/16", 1/4" & 1/2" Diameter)
1 of each: Circle Die (1" Diameter),
Stop Pin & Sharp Angle Die

TUBE NOTCHERS

- Operated on tubes with up to .118" wall thickness for steel.
- Advantage for joining and welding of tubes at a 90° angle.
- One device covers several tube diameters.
- Horizontal and vertical operation.
- Suitable for double-connections.



Item#	Range
8600-4046	1-1/16 ~1-11/16"
8600-4047	1-7/8 ~ 2-13/32"

8" BENCH METAL SHEAR

- Heavy duty structure.
- Can be used to cut sheet steel, steel bars and rods.
- Small and unique device for convenient site working.
- An adjustable hold-down clamp aids in securing material.

Limited Supply!

Item#	Blade Length	Capacity to Cut Round(Dia)	Plate	Wt. (lbs.)
8600-4005	8"	1/2"	1/4"	38

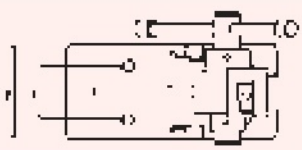
HEAVY DUTY ARBOR PRESSES

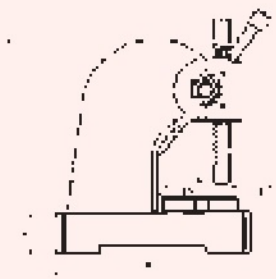
- Heavy duty frame.
- Precision made.
- 4 position steel anvil.
- Steel pinions.

Item#	Press (Ton)	Max. A	Press Ht. G	Base ExF	Capacity Over Table C	Capacity Over Anvil D	Ram	Wt. (lbs)
8600-0031	1/2	3.54"	10.24"	4.35 X 9.53"	4.33"	3.62"	3/4"	24
8600-0032	1	4.29"	13"	5.04 x 10.63"	5.63"	4.84"	1"	35
8600-0033	2	4.52"	17.72"	6.77 x 16.93"	8.44"	7.68"	1-1/4"	91
8600-0035	5	7.87"	33.67"	10.95x25.59"	18.76"	17.72"	2"	360

HHIP HEAVY DUTY ARBOR PRESSES

- Heavy duty frame.
- Precision made.
- 4 position steel anvil.
- Steel pinions.



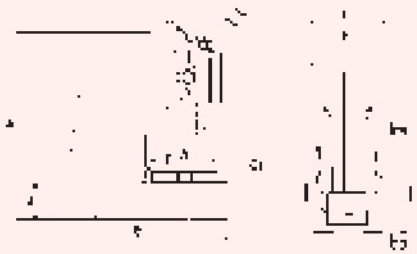


Item#	Press (Ton)	A	B	Capacity Over Anvil C	(Inch) Capacity Over Table	D	E	F	Anvil H	Wt. (lbs)
8600-1031	1/2	10.20	9.25	2.95	3.69	3.54	2.36	4.17	2.68	18
8600-1032	1	12.80	10.63	3.94	4.68	4.92	2.95	5.12	3.35	33
8600-1033	2	17.91	16.93	5.91	6.68	6.50	3.94	6.50	4.72	69

ARBOR PRESSES

Pro-Series ARBOR PRESSES- With 3PC Punch Set

- For riveting, squeezing, punching, bending, and other pressing applications.
- Base drilled for mounting on bench or pedestal.
- Sturdy, cast-iron construction.
- Removable machined steel anvil provides accurate work suppport in four slot positions.
- Rugged steel ram is driven by machined pinion.
- Punches or tools may be added to the end of the ram with the aid of a magnetic insert.



1 TON Shown

3 TON Shown

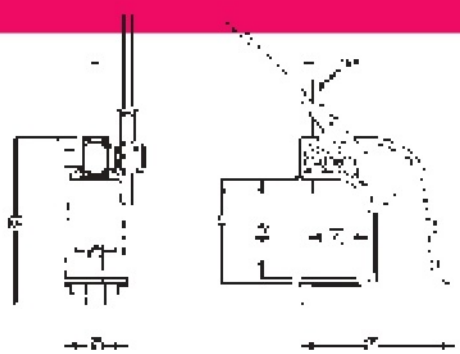
Item#	Press (Ton)	High Speed Wheel	Max. D	Press Ht. A	Capacity Over Anvil C	Anvil Dia. H	Ram	B	E	J	Weight (lbs)
8600-0130	1/2	No	3.3"	11"	4.6"	3-1/2	3/4"	9.5"	5	2	20
8600-0131	1	Yes	4"	14"	5.5"	4-1/2	1"	16"	8	2-1/8	33
8600-0132	2	No	6"	18"	8.52"	6-3/4	1-1/4"	18"	9-1/2	3-1/8	71
8600-0133	3	No	9"	36"	18"	6-3/4	1-1/2"	21"	10	4	105

Arbor Press Bit Set Included

RATCHET LEVER ARBOR PRESSES

- Ratchet device permits lever to be used in most convenient position.
- Heavy-duty casting frame.
- 4-position anvil.
- Hand wheel advances ram to work quickly.

RATCHET TYPE



Item#	Capacity (Ton)	Height of Press G	Max. A	Arbor	Ram	Capacity Over Anvil D	Base E x F	Weight (lbs)
8600-3301	2	18-1/2"	6"	1-7/8"	1/1/4"	8-1/2"	11.0x17.3"	86
8600-3401	3	21-1/2"	6"	1-3/4"	1-1/2"	12-5/8"	10.7x17.5"	132
8600-3501	5	35"	8.5"	2"	2"	15"	14.6x25.4"	440

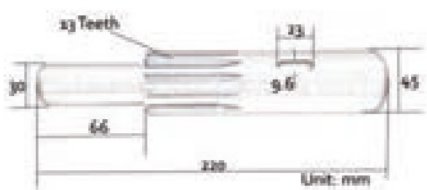
RATCHETING GEARS & REPLACEMENT RINGS FOR ARBOR PRESSES

- Original replacement parts.
- Ring & ratcheting gear sold seperatly.
- Fits HHIP brand ratcheting arbor presses.

For Arbor Press Type	Ratcheting Gear Item#	Retaining Ring Item#
2 Ton	8600-3302	8600-3303
3 Ton	8600-3402	8600-3403
5 Ton	8600-3502	8600-3503

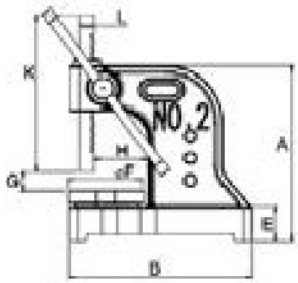
REPLACEMENT SPINDLE FOR 2 TON RATCHET ARBOR PRESS

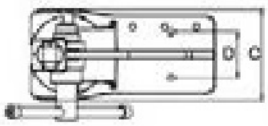
- Original replacement parts.
- Fits HHIP brand ratcheting arbor press.
- Fits arbor press item#8600-3301.



Pro-Series ARBOR PRESSES

- For riveting, squeezing, punching, bending, and other pressing applications.
- Base drilled for mounting on bench or pedestal.
- Sturdy, cast-iron construction.
- Removable machined steel anvil provides accurate work suppport in four slot positions.
- Rugged steel ram is driven by machined pinion.





8600-1132 Shown

Item#	Press (Ton)	A	B	C	(MM) D	E	Anvil Dia. F	Capacity Over Anvil G	H	K	Wt. (lbs)
8600-1130	1/2	235	235	135	60	45	85	100	75	200	17
8600-1131	1	280	270	155	60	45	110	125	90	250	31
8600-1132	2	390	405	200	100	80	170	170	115	330	60
8600-1133	3	540	456	240	100	100	170	280	130	455	117
8600-1135	5	796	624	290	120	118	250	450	210	648	269

RATCHET 3TON ARBOR PRESS - Large Capacity

RATCHET TYPE

- Ratcheted lever lowers the ram to provide up to 3 tons of force.
- Handwheel quickly advances the ram for initial positioning, and the ratcheted lever lowers the ram onto the object and can be set at a comfortable position for the user.
- Smooth action gears enable fine control over ram movement with the lever.
  - Counterweight repositions the lever to the top after a downstroke to reduce strain and quickly prepare for the next task.
  - Open base and slotted table plate provide support for solid objects as well as an outlet for arbors and similar items to pass through.

Ratchet leverage arbor press with handwheel and counterweight applies up to 3 tons of force to facilitate installation, removal, and pressing of items. The handwheel advances the ram for quick placement near the object being pressed. The ratcheted lever lowers the ram onto the object with more precision and control than the handwheel and can be set at a comfortable position for the user. The smooth action gears enable fine control over ram movement with the lever, and a counterweight repositions the lever to the top after a downstroke to reduce strain and quickly prepare for the next task.

The open base and slotted table plate provide support for solid objects as well as an outlet for arbors and shafts to pass through. The plate can be removed or rotated to one of its 5 openings of varying diameters depending on the requirements of the application. The ram cap can be adjusted using the included 0.008"- and 0.015"-thick shims to adjust the ram forwards and backwards and to compensate for wear. The set screw adjusts the ram sideways. Three 0.52"-dia. holes are located on the base to enable bench mounting. Mounting hardware is not included. Press is assembled.

Item#	Press (Ton)	Max. Working Dia.	Max. Working Ht.	Throat Depth	(Inch) Press Ht.	Base Width	Base Depth	Ram	Leverage Ratio	Wt. (lbs)
8600-3603	3	14	17	7	27	10	21	1-1/4	48:1	145

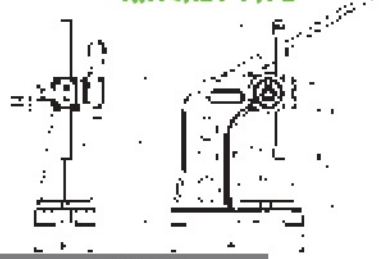
PEDESTAL FOR ARBOR PRESS

- This arbor press floor pedestal is used with the Dake Model1 or 1-1/2 (3 ton) arbor presses & our #8600-3603.
- Features slot to accomdate pieces that extend below the base.
- Anvil diameter word area 22-1/4".
- Weight: 70 lbs.
- Dimension(LxWxH): 12x21x36"

Pro-Series 3TON RATCHET LEVER ARBOR PRESS -LARGE CAPACITY

- 3 Ton capacity delivers the heavy force needed for riveting, squeezing, punching, bending, and other pressing applications.
- The Extra large clearance over the table allows for broaching or pressing larger items.
- It is counterweighted for a quick handle return and has a rapid ram feature that is advanced by using the press's convenient side-mounted handwheel.
- The rugged, reversible steel ram is driven by a machined piston, dimensions are 1-1/4 x 1-1/4 inches. Punches or tools may be added to the pre-drilled end of the ram with the aid of a magnetic insert. The three-bit set includes one-pointed bit, one round bit, and one square end bit along with a removable steel anvil
- The removable 4-slotted anvil has a diameter of 8 inches.
- The Sturdy cast-iron base is pre-drilled for mounting on either a bench or pedestal (HHIP #8600-3610), and it is also machined to hold the included three-bit punch set.
- All parts are interchangeable with PALMGREN RP30.

RATCHET TYPE



Item#	Capacity (Ton)	A	B	C	D	Ram E	Ram Punch Hole Dia.	G	Capacity Over Table H	Wt. (lbs)
8600-4401	3	21-1/4	9-7/8	27-3/4	7-13/16	1-1/4x1-1/4	1/2	6-7/8	17"	130

Celebrating 2022

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