

Leading the Way...

In CNC Tooling Technology in the 21st Century

We specialize in CNC tooling and workholding devices for horizontal and vertical machining and turning centers.

With two sales and distribution warehouses - in Buffalo, NY and Toronto, Ontario, Canada - our products are marketed through CNC equipment dealers and recognized industrial distributors throughout North America.

Our philosophy is to offer our customers quality, innovative tooling and accessories to increase the efficiency of their machining operation by reducing both set-up and cutting times.

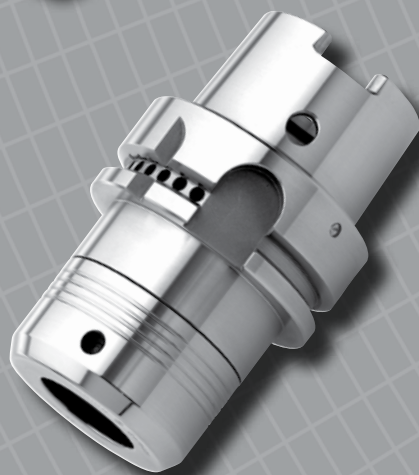
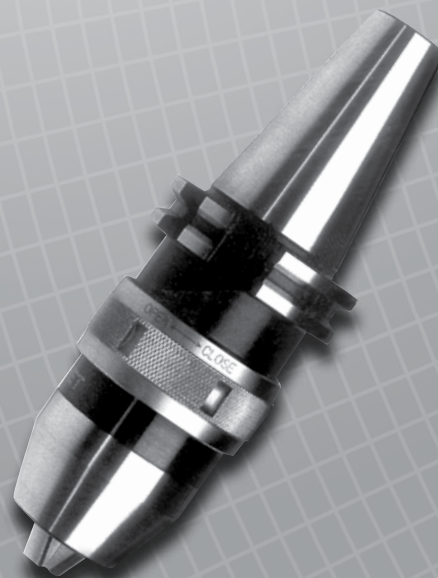
We also strive to provide high-quality product at highly competitive prices. Our policy is to maintain sufficient stock levels in order to offer quick deliveries of standard off-the-shelf items.

With our depth of knowledge in the CNC field we can provide assistance for your special CNC tooling applications.

Let us be of service to you!

SECTION 1

Toolholders & Auxiliary Products



Techleader BT & CT CNC Toolholding & Auxiliary Products

Techleader BT and CT Toolholders for CNC machining centers have become one of the premier toolholder lines in North America. They are being used not only by many of the largest corporations but also by small and medium-sized job machining shops. Many of these companies are longtime users and repeat customers.

This customer loyalty is based on three solid reasons...a standard of accuracy and finish second to none, very competitive pricing and fast delivery.

Manufactured to the exacting JIS/DIN standard, the toolholder are made from SCM-415 steel and case hardened to 52 degrees - 58 degrees HRC. Precision is 0.0002" TIR held at the mouth of the inside diameter against the taper shank of the toolholder. The toolholders also maintain an 85% toolholder taper contact against the inside taper of the machine spindle, which equates to AT3 tolerance or better.

Techleader continuously strives for perfection and steadily introduces new products to make its customers more competitive in today's economy. We have now developed precision, ultra high-speed collets and milling chucks guaranteed to be balanced to G 2.5.

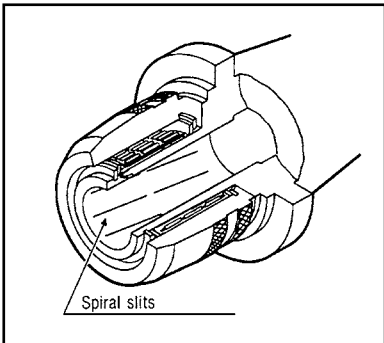
If you haven't tried Techleader CNC toolholders up to now give us a chance to prove why thousands of other companies always ask for us by name.

"Techleader, the best CNC toolholder money can buy".

ACE LOCK Milling Chucks



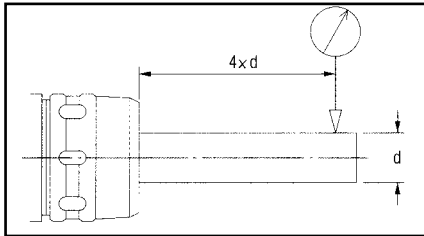
Milling Chucks



Spiral slits are precision-machined with a laser securely hold the cutter throughout the chucked length. Since these spiral slits can repel oil, the holding power is not affected and a minimum amount of oil, if any, will get on the cutter.



The retainer, cast in special precision mold, holds numerous rollers in a tight arrangement to reduce the face-pressure on the roller surface. This ensures both remarkable durability and outstanding chuck performance.



Run-out accuracy:

10 μm /0.0004" at the distance of 100 mm/4.00" from the end of the holder.

Achieve High Speed and Greater Accuracy with Kuroda ACE LOCK Milling Chucks from Techleader Tooling

To take advantage of the productivity gains offered by the latest CNC machining centers, your tool holding must be capable of handling faster cutter speeds and higher feed rates. Kuroda ACE LOCK Milling Chucks from Techleader Tooling are designed to give you the best of both worlds - speed and accuracy!

Greater Concentricity and Tighter Tolerances

CTR Series ACE LOCK Milling Chucks feature a simple yet unique design and quality construction to offer distinct performance advantages. The outside of the internal bore of the tool is precision-ground to a tapered surface. As the guided retaining cage turns, the roller bearing assembly tracks up this surface, forcing the bore down onto the tool shank. This provides uniform clamping pressure around the entire tool shank, keeping the centerline of the tool in exact alignment with the machine spindle.

Achieve Faster, Deeper Cuts without Tool Slippage

Strong stable clamping allows for faster, deeper cuts with minimal risk of tool pullout. This is achieved with minimal tightening torque.

Model	Clamping Torque
CTR - 3/4"	950N m (95kgf/m)
CTR - 1"	1500N m (155kgf/m)
CTR - 1- 1/4"	2900N m (295kgf/m)
CTR - 1- 1/2"	4900N m (500kgf/m)

Guaranteed Accuracy and Stronger Gripping Power

Machining accuracy for both heavy-duty and finish cutting is assured by means of the rigid nose design. When the tool is fitted and tightened, the ground surface on the back end of the locking collar comes into firm contact with the body of the milling chuck. The two pieces come together as a single, high-rigidity set-up to resist bending and torsion.

Variety of Rotating Speeds

CTR Series ACE LOCK Milling Chucks are available in four models to meet various rotating-speed requirements. (Note: achieving maximum rotation speed depends on the concentricity and symmetry of the tool.

Model	Maximum RPM
CTR - 3/4"	15,000
CTR - 1"	11,000
CTR - 1- 1/4"	7,000
CTR - 1- 1/2"	5,000

Less Waste Means More Productivity

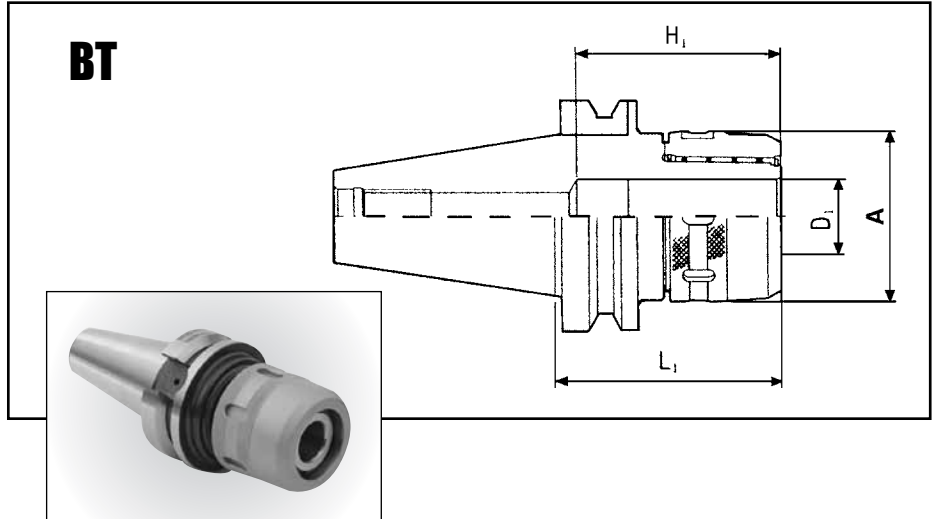
CTR Series ACE LOCK Milling Chucks hold closer tolerances, resulting in better surface finishes and the reduction or elimination of other finishing operations, thus saving costs. Reliable cutting accuracy assures part consistency while reducing defects, reworks and returns. Milling chucks are also highly versatile, as they can hold a greater variety of tools.

Longer Tool life

The roller retainer cage is cast in a special precision mold and holds the optimum number of rollers in tight alignment for stronger, equal gripping power all the way around the tool. The cutting force is distributed equally, preventing uneven wear on cutting edges.

Hardened by heat-treating to resist wear, the steel alloy body provides increased resistance to rolling fatigue, thus maintaining high accuracy and clamping power over time and repeated use.

ACE LOCK Milling Chucks



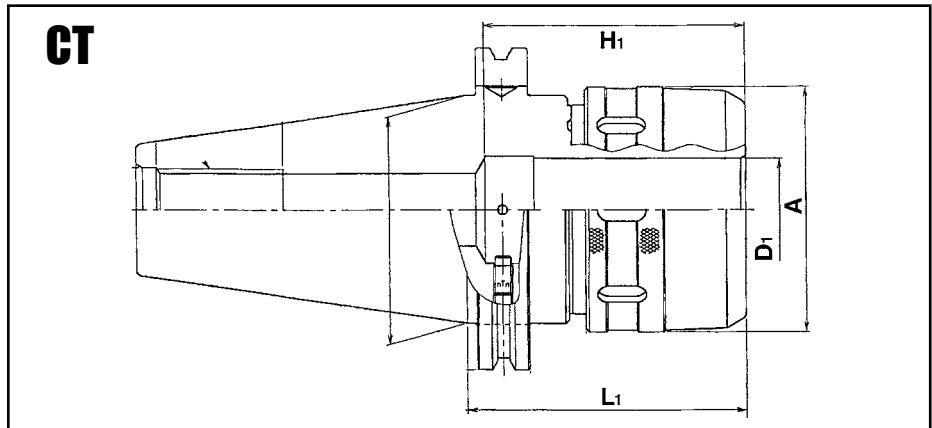
BT & CT Flange Tools

NOTE: Purchase collets separately. See page 1-3

Spanners not supplied with milling chucks. Purchase separately. See page 1-22

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)	H ₁ (in)
30	465-405	BT30 – CTR 3/4" – 80	0.750	3.14	2.05	2.95
40	465-095	BT40 – CTR 3/4" – 80	0.750	3.15	2.05	2.95
40	465-105	BT40 – CTR 1-1/4" – 105	1.250	4.13	2.95	3.75
50	465-305	BT50 – CTR 1-1/4" – 105	1.250	4.13	2.95	3.75
50	465-306*	BT50 – CTR 1-1/4" SS – 150	1.250	5.91	2.88	3.15

* While stock lasts Richmill Brand



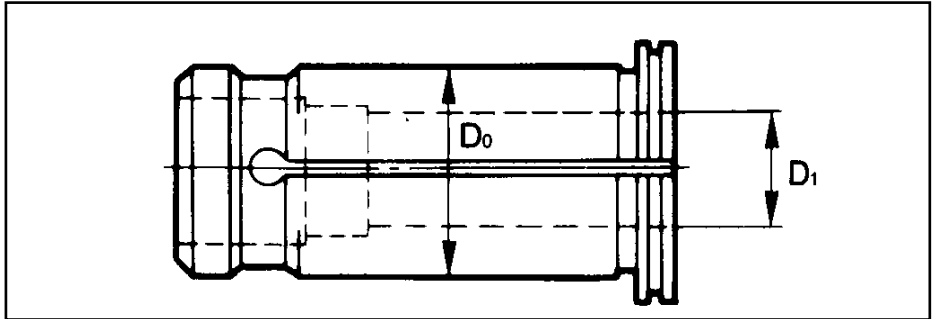
Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)	H ₁ (in)
40	466-095	CT40 – CTR 3/4" – 3.25	0.750	3.25	2.05	2.95
40	466-096	CT40 – CTR 3/4" – 5.00	0.750	5.00	1.97	2.36
40	466-100	CT40 – CTR 1" – 3.50	1.000	3.50	2.44	3.34
40	466-105	CT40 – CTR 1-1/4" – 4.00	1.250	4.00	2.95	3.74
40	466-106	CT40 – CTR 1-1/4" – 5.00	1.250	5.00	2.68	3.15
50	466-295	CT50 – CTR 3/4" – 3.50	0.750	3.50	2.05	2.95
50	466-305-S	CT50 – CTR 1-1/4" – 3.375	1.250	3.375	2.95	3.15
50	466-305	CT50 – CTR 1-1/4" – 4.50	1.250	4.50	2.95	3.74

* While stock lasts Richmill Brand

ACE LOCK Milling Chuck Collets



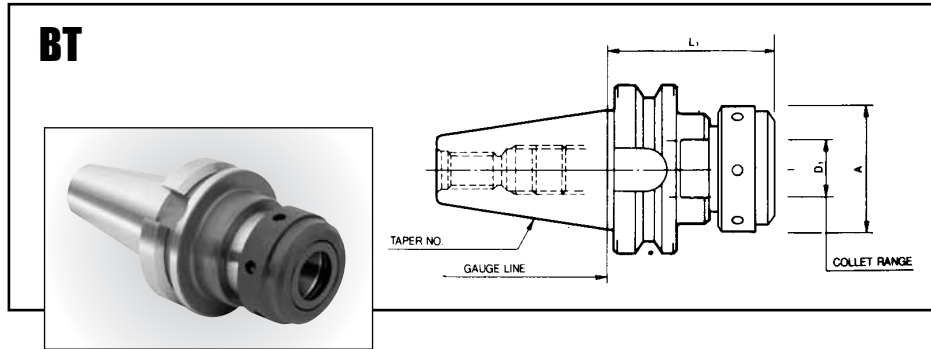
**Straight
Collets**
For Milling Chuck



Order No.	Device Type	D ₀ (in)	D ₁ (in)
467-005	3/4 C – S 3/16	0.750	0.1875
467-010	3/4 C – S 1/4	0.750	0.250
467-015	3/4 C – S 5/16	0.750	0.3125
467-020	3/4 C – S 3/8	0.750	0.375
467-030	3/4 C – S 1/2	0.750	0.500
467-040	3/4 C – S 5/8	0.750	0.625
467-105	1 C – S 3/16	1.000	0.1875
467-110	1 C – S 1/4	1.000	0.250
467-115	1 C – S 5/16	1.000	0.3125
467-120	1 C – S 3/8	1.000	0.375
467-130	1 C – S 1/2	1.000	0.500
467-140	1 C – S 5/8	1.000	0.625
467-150	1 C – S 3/4	1.000	0.750
467-160	1 C – S 7/8	1.000	0.875
467-205	1-1/4 C – S 3/16	1.250	0.1875
467-210	1-1/4 C – S 1/4	1.250	0.250
467-215	1-1/4 C – S 5/16	1.250	0.3125
467-220	1-1/4 C – S 3/8	1.250	0.375
467-230	1-1/4 C – S 1/2	1.250	0.500
467-240	1-1/4 C – S 5/8	1.250	0.625
467-250	1-1/4 C – S 3/4	1.250	0.750
467-270	1-1/4 C – S 1	1.250	1.000
467-310*	1-1/2 C – S 1/4	1.500	0.250
467-315*	1-1/2 C – S 5/16	1.500	0.3125
467-320*	1-1/2 C – S 3/8	1.500	0.375
467-330*	1-1/2 C – S 1/2	1.500	0.500
467-340*	1-1/2 C – S 5/8	1.500	0.625
467-350*	1-1/2 C – S 3/4	1.500	0.750
467-360*	1-1/2 C – S 7/8	1.500	0.875
467-370*	1-1/2 C – S 1	1.500	1.000
467-380*	1-1/2 C – S 1-1/4	1.500	1.250
467-470*	2 C – S 1	2.000	1.000
467-480*	2 C – S 1-1/4	2.000	1.250
467-490*	2 C – S 1-1/2	2.000	1.500

* While stock lasts Richmill Brand

TG Collet Chucks

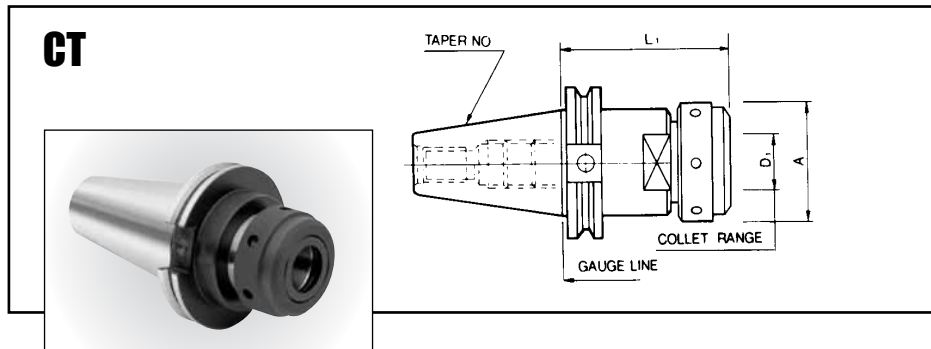


BT & CT Flange Tools

TG Collet Chucks

For use with TG style collets.
See pages 3-1 and 3-2 for
collet information

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	473-400	BT30 – TG75 – 63.5	0.046 – 0.750	2.50	1.875
30	473-405	BT30 – TG100 – 101.6	0.046 – 1.000	4.00	2.50
40	473-100	BT40 – TG75 – 76.2	0.046 – 0.750	3.00	1.875
40	473-105	BT40 – TG100 – 100	0.046 – 1.000	3.94	2.50
40	473-106	BT40 – TG100 – 133	0.046 – 1.000	5.25	2.50
40	473-107	BT40 – TG100 – 184	0.046 – 1.000	7.25	2.50
45	473-205*	BT45 – TG100 – 100	0.046 – 1.000	3.94	2.50
45	473-215*	BT45 – TG150 – 100	0.500 – 1.500	3.94	3.25
50	473-305	BT50 – TG100 – 100	0.046 – 1.000	3.94	2.50
50	473-306	BT50 – TG100 – 152	0.046 – 1.000	6.00	2.50
50	473-315*	BT50 – TG150 – 100	0.500 – 1.500	3.94	3.25



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
40	474-100	CT40 – TG75 – 3.00	0.046 – 0.750	3.00	1.875
40	474-105	CT40 – TG100 – 3.25	0.046 – 1.000	3.25	2.50
40	474-106	CT40 – TG100 – 5.25	0.046 – 1.000	5.25	2.50
40	474-107	CT40 – TG100 – 7.25	0.046 – 1.000	7.25	2.50
40	474-115*	CT40 – TG150 – 5.00	0.500 – 1.500	5.00	3.25
45	474-205*	CT45 – TG100 – 3.13	0.046 – 1.000	3.13	2.50
45	474-206*	CT45 – TG100 – 5.13	0.046 – 1.000	5.13	2.50
45	474-207*	CT45 – TG100 – 7.13	0.046 – 1.000	7.13	2.50
50	474-305	CT50 – TG100 – 3.13	0.046 – 1.000	3.13	2.50
50	474-306	CT50 – TG100 – 5.13	0.046 – 1.000	5.13	2.50
50	474-307	CT50 – TG100 – 7.13	0.046 – 1.000	7.13	2.50
50	474-315	CT50 – TG150 – 3.50	0.500 – 1.500	3.50	3.25

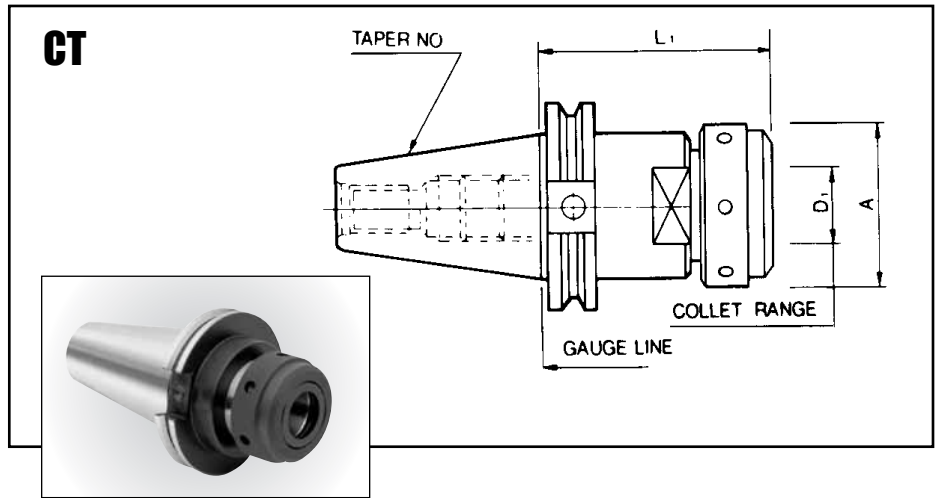
* While stock is still available.

TG Collet Chucks Balanced



BT & CT Flange Tools

For use with TG style collets.
See pages 3-1 and 3-2 for
collet information



BT Taper

Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM
30	473-000-B	BT30-TG75-63.5	TG75	0.046-0.750	2.50	1.875	15,000
30	473-005-B	BT30-TG100-100	TG100	0.063-1.000	3.94	2.50	15,000
40	473-200-B	BT40-TG75-76.2	TG75	0.046-0.750	3.00	1.875	15,000
40	473-205-B	BT40-TG100-100	TG100	0.063-1.000	3.94	2.50	15,000
40	473-206-B	BT40-TG100-133	TG100	0.063-1.000	5.25	2.50	15,000
40	473-207-B	BT40-TG100-184	TG100	0.063-1.000	7.25	2.50	10,000
50	473-405-B	BT50-TG100-100	TG100	0.063-1.000	3.94	2.50	12,000
50	473-406-B	BT50-TG100-152	TG100	0.063-1.000	6.00	2.50	10,000

CT Taper

Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM
40	474-200-B	CT40-TG75-3.00	TG75	0.046-0.750	3.00	1.875	15,000
40	474-205-B	CT40-TG100-3.25	TG100	0.063-1.000	3.25	2.50	15,000
40	474-206-B	CT40-TG100-5.25	TG100	0.063-1.000	5.25	2.50	15,000
40	474-207-B	CT40-TG100-7.25	TG100	0.063-1.000	7.25	2.50	10,000
50	474-400-B	CT50-TG75-3.50	TG75	0.046-0.750	3.50	1.875	12,000
50	474-405-B	CT50-TG100-3.13	TG100	0.063-1.000	3.13	2.50	12,000
50	474-406-B	CT50-TG100-5.13	TG100	0.063-1.000	5.13	2.50	10,000

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

TG Collet Chucks

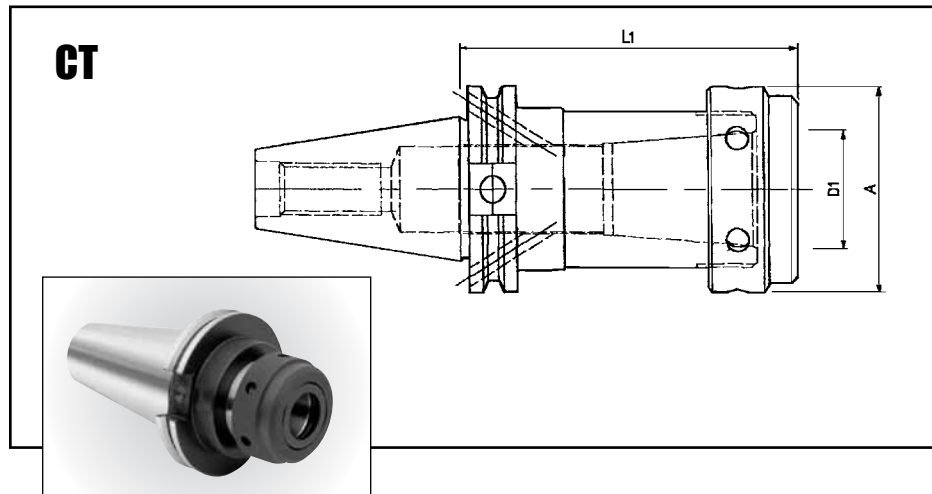
DIN 69871-Form B

Coolant Through The Flange



CT Flange Tools

For use with TG style coolant sealed collets.
See pages 3-3 for collet information

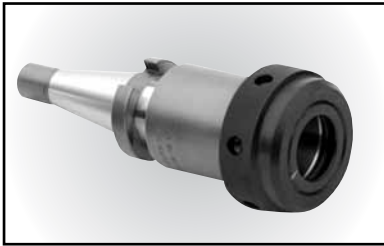


CT Taper

Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM
40	474-200-D	CT40D-TG75-3.00	TG75	0.046-0.750	3.00	1.875	15,000
40	474-205-D	CT40D-TG100-3.25	TG100	0.063-1.000	3.25	2.50	15,000
40	474-206-D	CT40D-TG100-5.25	TG100	0.063-1.000	5.25	2.50	15,000
40	474-207-D	CT40D-TG100-7.25	TG100	0.063-1.000	7.25	2.50	10,000
50	474-400-D	CT50D-TG75-3.50	TG75	0.046-0.750	3.50	1.875	15,000
50	474-405-D	CT50D-TG100-3.13	TG100	0.063-1.000	3.13	2.50	15,000
50	474-406-D	CT50D-TG100-5.13	TG100	0.063-1.000	5.13	2.50	10,000
50	474-407-D	CT50D-TG100-7.13	TG100	0.063-1.000	7.13	2.50	8,000

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

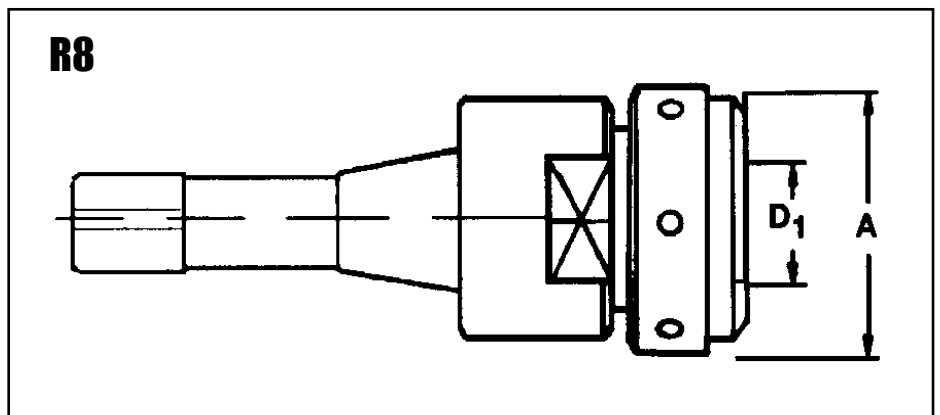
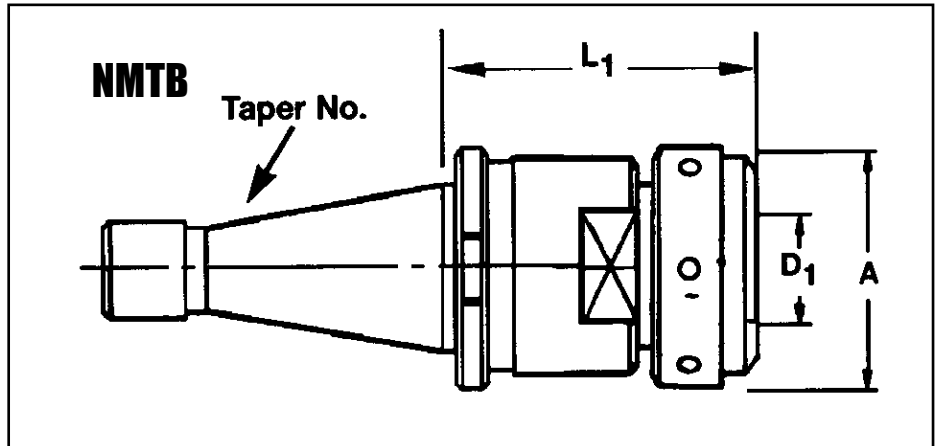
R8 & NMTB-QC, TG Collet Chucks



TG Collet Chucks

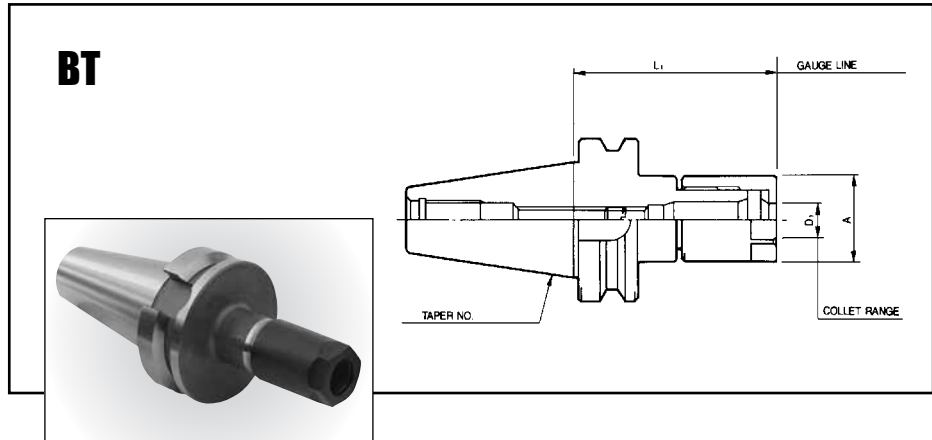
NMTB tool holders are qualified for use with Erickson QC spindles

For TG Collets, see pages 3-1 to 3-2



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	674-000	NMTB30QC - TG75-2.50	0.046 - 0.750	2.50	1.875
30	674-005	NMTB30QC - TG100-4.00	0.046 - 1.000	4.00	2.50
40	674-200	NMTB40QC - TG75-2.50	0.046 - 0.750	2.50	1.875
40	674-205	NMTB40QC - TG100-3.00	0.046 - 1.000	3.00	2.50
50	674-405	NMTB50QC - TG100-3.50	0.046 - 1.000	3.50	2.50
50	674-415	NMTB50QC - TG150-5.00	0.500 - 1.500	5.00	3.25
R8	674-805	R8-TG100	0.046 - 1.000	-	2.50

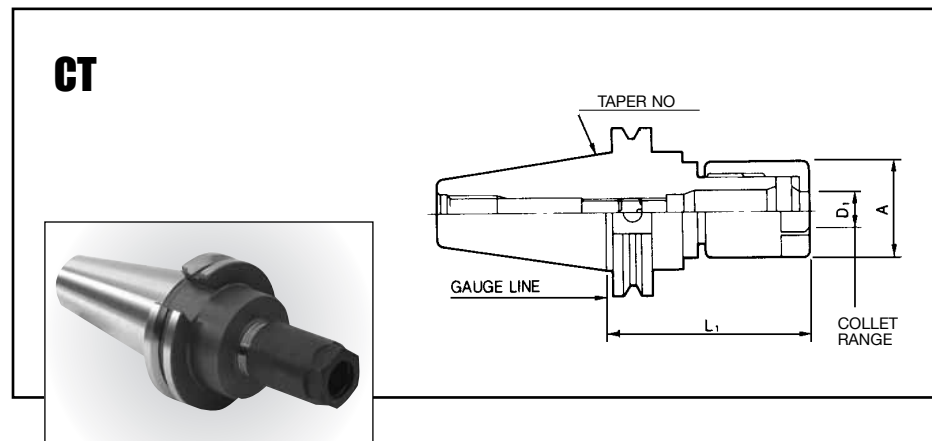
Double Angle Collet Chucks



BT & CT Flange Tools

For use with Double Angle
style collets.
See pages 3-5 and 3-6 for
collet information

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	475-430	BT30 - C300 - 60	0.031 - 0.250	2.36	0.8255
30	475-420	BT30 - C200 - 60	0.046 - 0.375	2.36	1.25
30	475-410	BT30 - C100 - 100	0.046 - 0.562	3.94	1.06
30	475-418	BT30 - C180 - 75	0.046 - 0.750	2.95	1.85
35	475-030*	BT35 - C300 - 60	0.031 - 0.250	2.36	0.8255
35	475-020*	BT35 - C200 - 60	0.046 - 0.375	2.36	1.25
35	475-010*	BT35 - C100 - 90	0.046 - 0.562	3.54	1.06
35	475-018*	BT35 - C180 - 75	0.046 - 0.750	2.95	1.85
40	475-130	BT40 - C300 - 65	0.031 - 0.250	2.55	0.8255
40	475-120	BT40 - C200 - 65	0.046 - 0.375	2.55	1.25
40	475-110	BT40 - C100 - 90	0.046 - 0.562	3.54	1.06
40	475-118	BT40 - C180 - 75	0.046 - 0.750	2.95	1.85



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
40	476-130	CT40 - C300 - 2.50	0.031 - 0.250	2.50	0.8255
40	476-120	CT40 - C200 - 2.50	0.046 - 0.375	2.50	1.25
40	476-110	CT40 - C100 - 3.25	0.046 - 0.562	3.25	1.06
40	476-118	CT40 - C180 - 3.00	0.046 - 0.750	3.00	1.85

* While stock is still available.



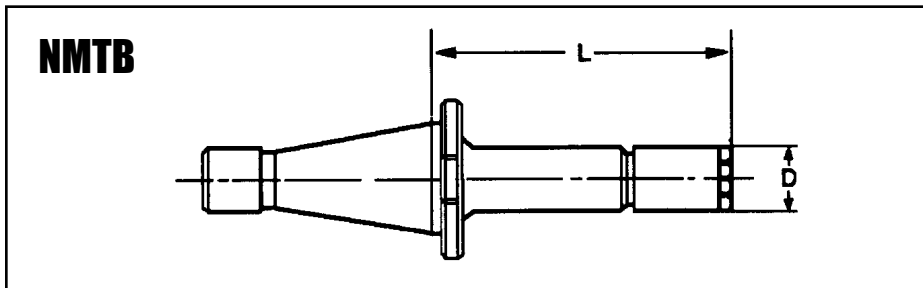
NMTB Double Angle Collet Chucks & Extensions



NMTB Flange Tools

NMTB tool holders are qualified for use with Erickson QC spindles

For Double Angle Collets, see pages 3-5 and 3-6



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	676-030	NMTB30QC - C300-2.50	0.031 - 0.250	2.50	0.825
30	676-020	NMTB30QC - C200-2.50	0.046 - 0.375	2.50	1.25
30	676-010	NMTB30QC - C100-2.75	0.046 - 0.562	2.75	1.06
30	676-018	NMTB30QC - C180-3.00	0.046 - 0.750	3.00	1.85
40	676-230	NMTB40QC - C300-2.50	0.031 - 0.250	2.50	0.825
40	676-220	NMTB40QC - C200-2.50	0.046 - 0.375	2.50	1.25
40	676-210	NMTB40QC - C100-2.75	0.046 - 0.562	2.75	1.06
40	676-218	NMTB40QC - C180-3.00	0.046 - 0.750	3.00	1.85
50	676-418	NMTB50QC - C180-3.50	0.046 - 0.750	3.50	1.85



Double Angle Collet Extensions

To ensure long life of accuracy and durability, the Techleader Double Angle Tool Extensions are manufactured utilizing the latest technology of heat treat and processing, combined with high quality carbon steel. The product is hardened and tempered with a high degree of accuracy outlasting our competitors and making us No. 1 in quality and precision.

EXTENSIONS					NUTS	
Order No.	Range D ₁ (in)	Collet	D (in)	L (in)	Order No.	
030-000	0.031 - 0.250	300DA	1/2	5-1/2	030-000-NI	
030-000S	0.031 - 0.250	300DA	1/2	3.60"	030-000-NI	
030-00IS	0.031 - 0.250	300DA	5/8	3.75"	030-000-NI	
020-000	0.047 - 0.375	200DA	3/4	5-1/2	020-000-NI	
020-000S	0.047 - 0.375	200DA	5/8	3.75"	020-000-NI	
020-00IS	0.047 - 0.375	200DA	3/4	3.80"	020-000-NI	
010-000	0.047 - 0.562	100DA	1	5-1/2	010-000-NI	
010-000S	0.047 - 0.562	100DA	1	4.00"	010-000-NI	
018-000	0.047 - 0.750	180DA	1-1/4	5-1/2	018-000-NI	
018-001	0.047 - 0.750	180DA	1	6.20"	018-000-NI	

HP plus

Increased Clamping Force

A new standard in collet chucks are the HP plus series. The innovative design, which uses a patented mechanical clamping wedge, has significantly increased clamping force compared to a conventional collet chuck. The collet chuck utilizes High Precision Plus collets and can help you increase cutting tool life - up to 4 times longer.



Precise

Constant concentricity and repeatable accuracy 3 µm at distance 3xD (max. 50 mm). Pure axial clamping of the collet by means of a clamping sleeve and clamping nut result in no torsion moments.

Simple

Clamping by means of a hexagon T-key – Opening by means of our patented ejection mechanism (no eccentric) permits a quick and easy tool and collet change on the machine spindle or in your hand. The collet is only shifted axially. There are no radial forces to have a negative influence on the concentricity.

Safe

Clamping forces of 300 Nm and more can be produced by hand.

Clamping torque

The transferable torque moments are shown in the diagram below and to the side.

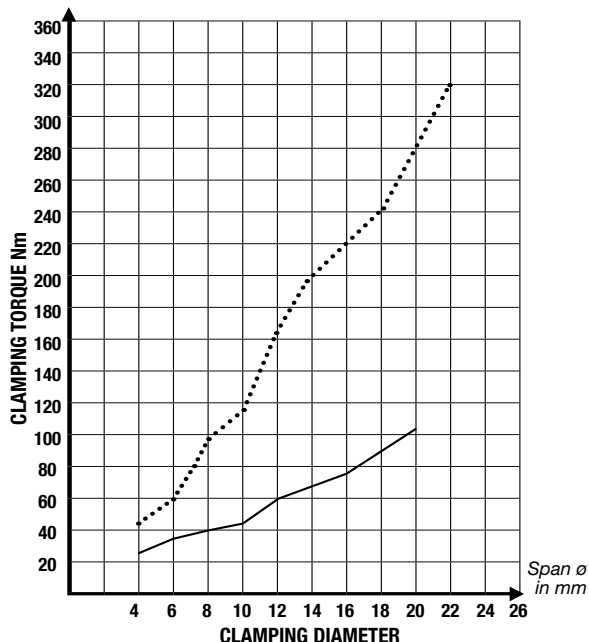
Test result with:

- no grease (collet and tool shank)
- with test master Rz=2,5

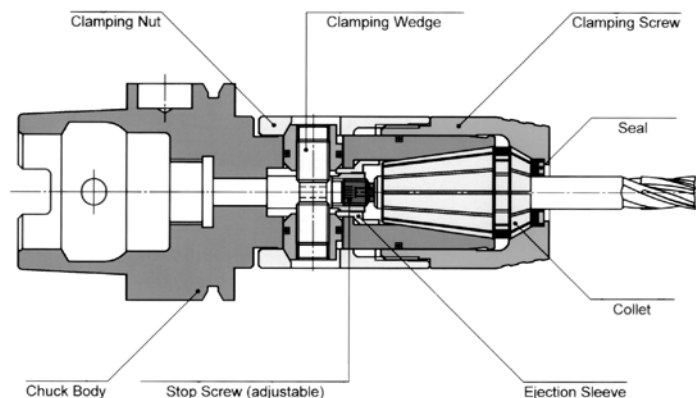
We recommend using a torque wrench to guarantee safe clamping.

Symmetrical

Symmetrical design ideal for HSC applications. Standard tool holders are fine balanced to G6.3.



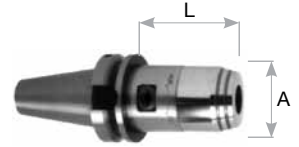
..... HP32 Moment curve of the HP32 chuck (25 Nm clamping torque at the clamping screw)
 ——— Moment curve conventional chuck ER 32 (105 Nm clamping torque at the clamping nut)



HP Plus-High Performance Chucks

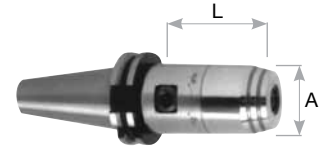
BT - HP PLUS

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
481-016-HP	BT30-HP16-70mm	ECX/ER16	0.020"-0.394"	70 mm	15,000	28 mm
481-216-HP	BT40-HP16-75mm	ECX/ER16	0.020"-0.394"	75 mm	15,000	28 mm
481-217-HP	BT40-HP16-160mm	ECX/ER16	0.020"-0.394"	160 mm	15,000	28 mm
481-032-HP	BT30-HP32-105mm	ECX/ER32	0.080"-0.787"	105 mm	15,000	48 mm
481-232-HP	BT40-HP32-105mm	ECX/ER32	0.080"-0.787"	105 mm	15,000	48 mm
481-233-HP	BT40-HP32-160mm	ECX/ER32	0.080"-0.787"	160 mm	15,000	48 mm



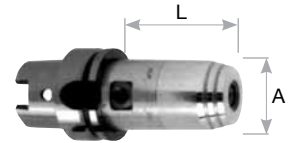
CT - HP PLUS

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
482-232-HP	CT40-HP32-116 mm	ECX/ER32	0.080"-0.787"	116 mm	15,000	48 mm
481-432-HP	CT50-HP32-116 mm	ECX/ER32	0.080"-0.787"	116 mm	12,000	48 mm



HSK-A HP PLUS

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
586-316-AHP	HSK40A-HP16-70mm	ECX/ER16	0.020"-0.394"	70 mm	25,000	28 mm
586-516-AHP	HSK63A-HP16-80mm	ECX/ER16	0.020"-0.394"	80 mm	30,000	28 mm
586-517-AHP	HSK63A-HP16-160mm	ECX/ER16	0.020"-0.394"	160 mm	30,000	28 mm
586-532-AHP	HSK63A-HP32-105mm	ECX/ER32	0.080"-0.787"	105 mm	20,000	48 mm
586-533-AHP	HSK63A-HP32-160mm	ECX/ER32	0.080"-0.787"	160 mm	15,000	48 mm



HSK-E/F HP PLUS

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
587-316-EHP	HSK40E-HP16-70mm	ECX/ER16	0.020"-0.394"	70 mm	30,000	28 mm
588-316-FHP	HSK40F-HP16-100mm	ECX/ER16	0.020"-0.394"	100 mm	30,000	28 mm
587-416-EHP	HSK50E-HP16-75mm	ECX/ER16	0.020"-0.394"	75 mm	30,000	28 mm
587-516-EHP	HSK63E-HP16-80mm	ECX/ER16	0.020"-0.394"	80 mm	25,000	28 mm
588-516-FHP	HSK63F-HP16-80mm	ECX/ER16	0.020"-0.394"	80 mm	30,000	28 mm
587-532-EHP	HSK63E-HP32-105mm	ECX/ER16	0.020"-0.394"	105 mm	28,000	48 mm
588-532-FHP	HSK63F-HP32-105mm	ECX/ER32	0.080"-0.787"	160 mm	28,000	48 mm

ECX/ER16 3 µm/0.00012" HP+ SUPER ULTRA PRECISION COLLETS & COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
016-040 HPP	1.0 mm	016-004 HPP	1/16"
016-060 HPP	1.5 mm	016-008 HPP	1/8"
016-080 HPP	2.0 mm	016-012 HPP	3/16"
016-120 HPP	3.0 mm	016-016 HPP	1/4"
016-160 HPP	4.0 mm	016-020 HPP	5/16"
016-200 HPP	5.0 mm	016-024 HPP	3/8"
016-240 HPP	6.0 mm	-	-
016-280 HPP	7.0 mm	-	-
016-320 HPP	8.0 mm	-	-
016-360 HPP	9.0 mm	-	-
016-400 HPP	10.0 mm	-	-

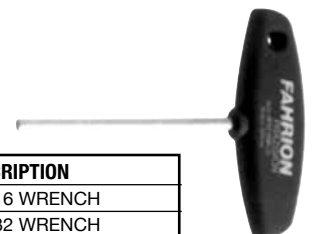
ECX/ER32 3 µm/0.00012" HP+ SUPER ULTRA PRECISION COLLETS & COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
032-080 HPP	2 mm	032-008 HPP	1/8"
032-120 HPP	3 mm	032-012 HPP	3/16"
032-160 HPP	4 mm	032-016 HPP	1/4"
032-200 HPP	5 mm	032-020 HPP	5/16"
032-240 HPP	6 mm	032-024 HPP	3/8"
032-280 HPP	7 mm	032-028 HPP	7/16"
032-320 HPP	8 mm	032-032 HPP	1/2"
032-360 HPP	9 mm	032-036 HPP	9/16"
032-400 HPP	10 mm	032-040 HPP	5/8"
032-440 HPP	11 mm	032-048 HPP	3/4"
032-480 HPP	12 mm	-	-
032-520 HPP	13 mm	-	-
032-560 HPP	14 mm	-	-
032-600 HPP	15 mm	-	-
032-640 HPP	16 mm	-	-
032-680 HPP	17 mm	-	-
032-720 HPP	18 mm	-	-
032-760 HPP	19 mm	-	-
032-800 HPP	20 mm	-	-



HP PLUS WRENCH

ORDER NO.	DESCRIPTION
016-000-WHP	HP+16 WRENCH
032-000-WHP	HP+32 WRENCH

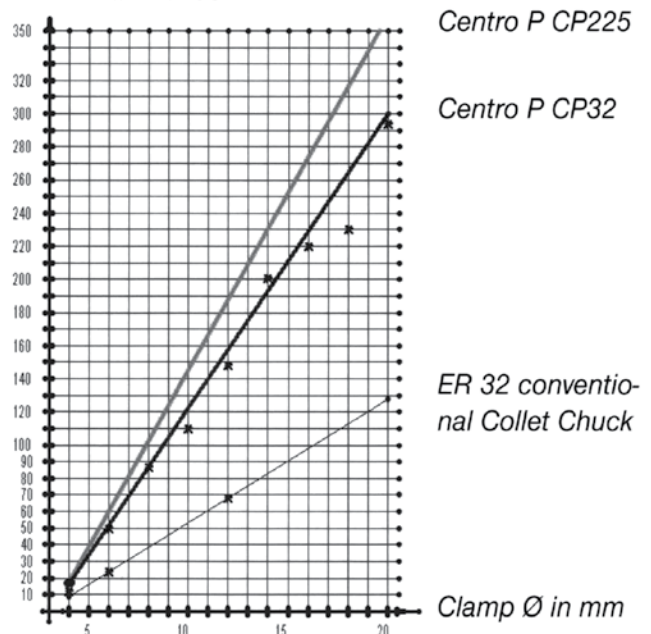


CENTRO P

The best the market has to offer.

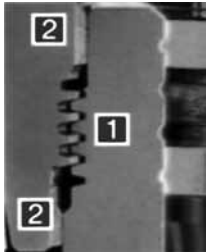
No more experimenting with collet chucks, when it comes to clamping cutting tools, collet technology cannot be beaten in terms of reliability, profitability and efficiency. And when top quality and high precision are required, there is no alternative to Techleader.

Clamping torque (static) in Nm* at the tool



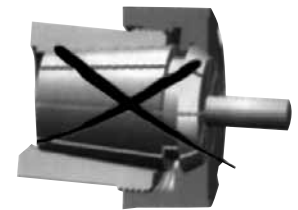
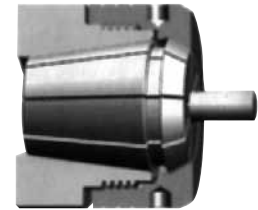
* Clamping torque of the clamping nut 105 Nm, tool shank hardened, ground (Rz 2.5) and free of grease

CENTRO P



Precise

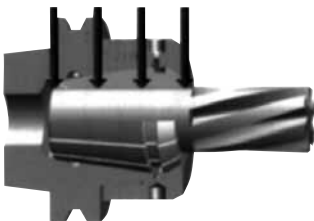
New: 30° trapezoidal thread (1) with ground, extra long double-length guide (2). The ground trapezoidal thread reduces friction and, together with the extra long, double-length guide, ensures perfect centering of the clamping nut on the chuck, thus achieving perfect distribution of load and minimal imbalance. The result: extreme high concentricity and repeatability.



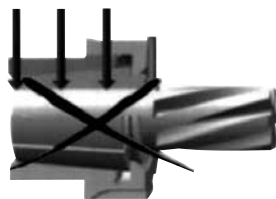
Previously: 60° vee form thread without guiding. Tightening requires very high starting torque. Often expansion levers or hammers are used. The result: damage and loss of precision. The clamping nut can also tilt (skew) on the 60° thread surfaces. This leads to side loads on the Collet and loss of concentricity and repeatability of the system.

Stable

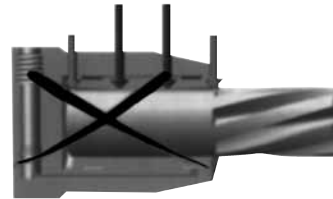
Centro P provides evenly distributed clamping forces over the gripping area of the cutting tool shank. Reduced radial forces result in perfect milling surfaces.



TECHLEADER
Centro P



Collet Chuck system
with flat shoulder



Hydraulic Chuck

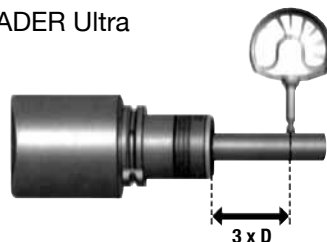
■ **Perfect clamping**
(Recommended for HPC)

■ **Reduced clamping force**

Accurate

Constant system accuracy with TECHLEADER Ultra Precision Collets at $\leq 5 \mu\text{m}/0.0002''$ or with the TECHLEADER HP+ Collets at $\leq 3 \mu\text{m}/0.00012''$.

*Checked at the cutting tool at a distance of $3 \times D$ (max. 50mm)

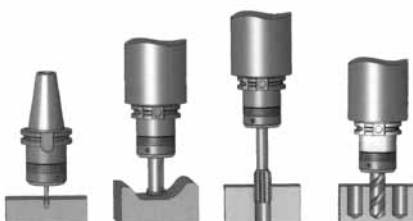


Unmistakable

Due to the unique design of the TECHLEADER HPC Clamping Nut with trapezoidal thread and double-length guide Centro P is ideal for High Performance Cutting.

Universal

Ideal for drilling, milling, reaming and tapping.



Drilling/
Counter-
Sinking

Hard Metal
Milling

Precision
Reaming

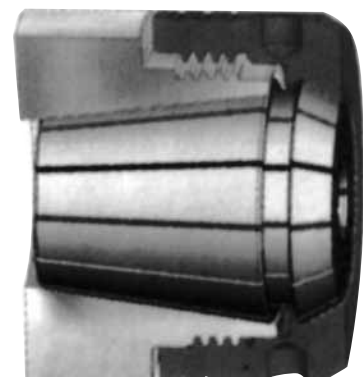
Wood
working



Extra long tool holders
for difficult to reach
machining areas



HSC milling in the
tool and mold-
making industries

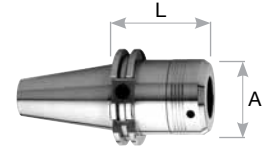




CENTRO P - The best the market has to offer.

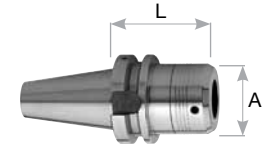
BT CENTRO P ECX/ER ULTRA PRECISION COLLET CHUCK WITHOUT NUT

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
481-216-CP	BT40-CP16-70mm	ECX/ER16	0.020"-0.394"	70 mm	15,000	28 mm
481-217-CP	BT40-CP16-100mm	ECX/ER16	0.020"-0.394"	100 mm	15,000	28 mm
481-232-CP	BT40-CP32-70mm	ECX/ER32	0.080"-0.787"	70 mm	15,000	48 mm
481-233-CP	BT40-CP32-100mm	ECX/ER32	0.080"-0.787"	100 mm	15,000	48 mm



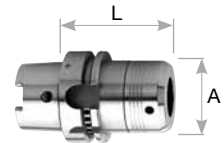
CT CENTRO P ECX/ER ULTRA PRECISION COLLET CHUCK WITHOUT NUT

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
482-216-CP	CT40-CP16-2.50"	ECX/ER16	0.020"-0.394"	2.50"	15,000	28 mm
482-217-CP	CT40-CP16-4.00"	ECX/ER16	0.020"-0.394"	4.00"	15,000	28 mm
482-232-CP	CT40-CP32-3.00"	ECX/ER32	0.080"-0.787"	3.00"	15,000	48 mm
482-233-CP	CT40-CP32-5.00"	ECX/ER32	0.080"-0.787"	5.00"	15,000	48 mm
482-432-CP	CT50-CP32-3.50"	ECX/ER32	0.080"-0.787"	3.50"	12,000	48 mm



HSK-A CENTRO P ECX/ER ULTRA PRECISION COLLET CHUCK WITHOUT NUT

ORDER NO.	DESCRIPTION	COLLET STYLE	COLLET RANGE	L	RPM	A
586-516ACP	HSK63A-CP16-100mm	ECX/ER16	0.020"-0.394"	100 mm	20,000	28 mm
586-517ACP	HSK63A-CP16-160mm	ECX/ER16	0.020"-0.394"	160 mm	20,000	28 mm
586-532ACP	HSK63A-CP32-70mm	ECX/ER32	0.080"-0.787"	70 mm	20,000	48 mm
586-533ACP	HSK63A-CP32-100mm	ECX/ER32	0.080"-0.787"	100 mm	20,000	48 mm
586-534ACP	HSK63A-CP32-160mm	ECX/ER32	0.080"-0.787"	160 mm	20,000	48 mm



ECX/ER16 5 µm/0.0002" ULTRA PRECISION COLLETS WITHOUT COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
016-040	1.0 mm - 0.5 mm	016-004-I	1/16"
016-060	1.5 mm - 1.0 mm	016-008-I	1/8"
016-080	2.0 mm - 1.5 mm	016-012-I	3/16"
016-120	3.0 mm - 2.0 mm	016-016-I	1/4"
016-160	4.0 mm - 3.0 mm	016-020-I	5/16"
016-200	5.0 mm - 4.0 mm	016-024-I	3/8"
016-240	6.0 mm - 5.0 mm	-	-
016-280	7.0 mm - 6.0 mm	-	-
016-320	8.0 mm - 7.0 mm	-	-
016-360	9.0 mm - 8.0 mm	-	-
016-400	10.0 mm - 9.0 mm	-	-

ECX/ER16 3 µm/0.00012" HP+ SUPER ULTRA PRECISION COLLETS & COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
016-040 HPP	1.0 mm	016-004 HPP	1/16"
016-060 HPP	1.5 mm	016-008 HPP	1/8"
016-080 HPP	2.0 mm	016-012 HPP	3/16"
016-120 HPP	3.0 mm	016-016 HPP	1/4"
016-160 HPP	4.0 mm	016-020 HPP	5/16"
016-200 HPP	5.0 mm	016-024 HPP	3/8"
016-240 HPP	6.0 mm	-	-
016-280 HPP	7.0 mm	-	-
016-320 HPP	8.0 mm	-	-
016-360 HPP	9.0 mm	-	-
016-400 HPP	10.0 mm	-	-



ECX/ER32 5 µm/0.0002" ULTRA PRECISION COLLETS WITHOUT COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
032-120	3 mm - 2 mm	032-008-I	1/8"
032-160	4 mm - 3 mm	032-012-I	3/16"
032-200	5 mm - 4 mm	032-016-I	1/4"
032-240	6 mm - 5 mm	032-020-I	5/16"
032-280	7 mm - 6 mm	032-024-I	3/8"
032-320	8 mm - 7 mm	032-028-I	7/16"
032-360	9 mm - 8 mm	032-032-I	1/2"
032-400	10 mm - 9 mm	032-036-I	9/16"
032-440	11 mm - 10 mm	032-040-I	5/8"
032-480	12 mm - 11 mm	032-048-I	3/4"
032-520	13 mm - 12 mm	-	-
032-560	14 mm - 13 mm	-	-
032-600	15 mm - 14 mm	-	-
032-640	16 mm - 15 mm	-	-
032-680	17 mm - 16 mm	-	-
032-720	18 mm - 17 mm	-	-
032-760	19 mm - 18 mm	-	-
032-800	20 mm - 19 mm	-	-

ECX/ER32 3 µm/0.00012" HP+ SUPER ULTRA PRECISION COLLETS & COOLANT SEAL DISC

ORDER NO.	CLAMPING SIZE	ORDER NO.	CLAMPING SIZE
032-080 HPP	2 mm	032-008 HPP	1/8"
032-120 HPP	3 mm	032-012 HPP	3/16"
032-160 HPP	4 mm	032-016 HPP	1/4"
032-200 HPP	5 mm	032-020 HPP	5/16"
032-240 HPP	6 mm	032-024 HPP	3/8"
032-280 HPP	7 mm	032-028 HPP	7/16"
032-320 HPP	8 mm	032-032 HPP	1/2"
032-360 HPP	9 mm	032-036 HPP	9/16"
032-400 HPP	10 mm	032-040 HPP	5/8"
032-440 HPP	11 mm	032-048 HPP	3/4"
032-480 HPP	12 mm	-	-
032-520 HPP	13 mm	-	-
032-560 HPP	14 mm	-	-
032-600 HPP	15 mm	-	-
032-640 HPP	16 mm	-	-
032-680 HPP	17 mm	-	-
032-720 HPP	18 mm	-	-
032-760 HPP	19 mm	-	-
032-800 HPP	20 mm	-	-



NOTE: CP COLLET CHUCKS ONLY CLAMP AT THE HIGH RANGE OF THE COLLET.

CENTRO P CLAMPING NUTS - STANDARD

ORDER NO.	DESCRIPTION
016-000NCP	HPC16
032-000NCP	HPC32



CENTRO P CLAMPING NUTS FOR COOLANT SEAL DISC

ORDER NO.	DESCRIPTION
016-001NCP	HPC16D1
032-001NCP	HPC32D1

CENTRO P WRENCHES

ORDER NO.	DESCRIPTION
016-000WCP	SCHLGR24 x 3BCP16 PIN WRENCH
016-001WCP	R030 ROLLER BEARING WRENCH
032-000WCP	SCHLGR50 x 5BCP32 PIN WRENCH
032-001WCP	R050 ROLLER BEARING WRENCH



ECX (ER) Superflex Precision Collet Chucks Balanced



BT Flange Tools

For use with ECX style collets
See pages 3-7 to 3-11
for collet information

Ask about our new ETS
High-Precision Self-Centering
collets to obtain the optimum
accuracy from your
ECX Collet Chucks

Our ECX collet chucks &
extensions accept the
following competitors collets:
DR, ER, ESX, RD

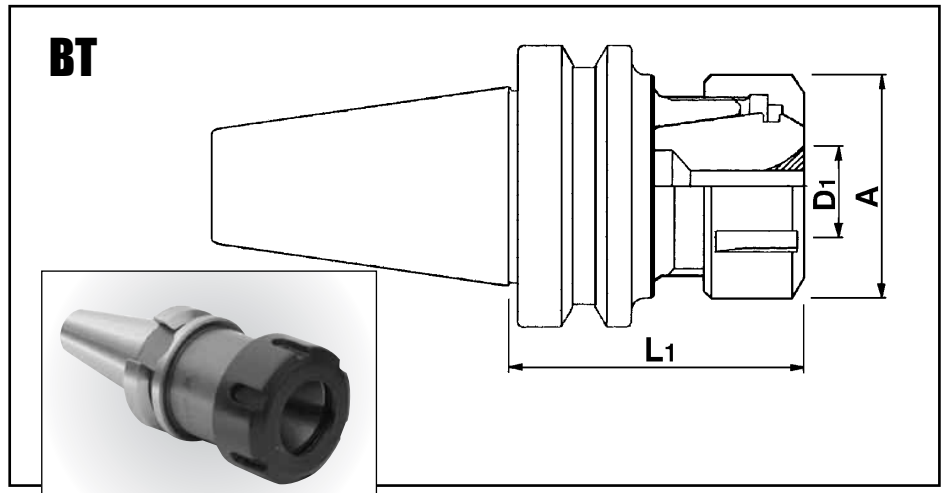
For collet nuts and
wrenches see pages 1-21 to
1-22 and 3-16 to 3-18

NUT STYLES

C = CASTALLETION
H = HEXAGON
M = MINI CASTALLETION

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.



Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM	Nut Style
15	483-616*	BT15 - ECX16 - 2.36	ECX 16	0.020 - 0.394	2.36	1.10	-	H
30	483-416	BT30 - ECX16 - 2.50	ECX 16	0.020 - 0.394	2.50	1.10	30,000	H
30	483-417	BT30 - ECX16 - 4.00	ECX 16	0.020 - 0.394	4.00	1.10	25,000	H
30	483-420	BT30 - ECX20 - 2.50	ECX 20	0.020 - 0.512	2.50	1.25	25,000	C
30	483-425	BT30 - ECX25 - 2.00	ECX 25	0.020 - 0.629	2.00	1.654	25,000	C
30	483-432	BT30 - ECX32 - 3.00	ECX 32	0.080 - 0.787	3.00	1.97	20,000	C
40	483-111	BT40 - ECX11 - 2.50	ECX 11	0.020 - 0.276	2.50	0.629	20,000	M
40	483-112	BT40 - ECX11 - 4.00	ECX 11	0.020 - 0.276	4.00	0.629	20,000	M
40	483-116	BT40 - ECX16 - 2.50	ECX 16	0.020 - 0.394	2.50	1.10	20,000	H
40	483-117	BT40 - ECX16 - 4.00	ECX 16	0.020 - 0.394	4.00	1.10	15,000	H
40	483-118	BT40 - ECX16 - 6.00	ECX 16	0.020 - 0.394	6.00	1.10	15,000	H
40	483-120	BT40 - ECX20 - 3.00	ECX 20	0.020 - 0.512	3.00	1.25	20,000	H
40	483-121	BT40 - ECX20 - 5.00	ECX 20	0.020 - 0.512	5.00	1.25	15,000	H
40	483-122	BT40 - ECX20 - 6.00	ECX 20	0.020 - 0.512	6.00	1.25	15,000	H
40	483-125	BT40 - ECX25 - 3.00	ECX 25	0.020 - 0.629	3.00	1.654	20,000	C
40	483-126	BT40 - ECX25 - 5.00	ECX 25	0.020 - 0.629	5.00	1.654	15,000	C
40	483-127	BT40 - ECX25 - 6.00	ECX 25	0.020 - 0.629	6.00	1.654	15,000	C
40	483-132	BT40 - ECX32 - 3.00	ECX 32	0.080 - 0.787	3.00	1.97	20,000	C
40	483-133	BT40 - ECX32 - 5.00	ECX 32	0.080 - 0.787	5.00	1.97	15,000	C
40	483-140	BT40 - ECX40 - 3.50	ECX 40	0.118 - 1.023	3.50	2.48	15,000	C
50	483-316	BT50 - ECX16 - 4.00	ECX 16	0.020 - 0.394	4.00	1.10	-	H
50	483-317	BT50 - ECX16 - 6.00	ECX 16	0.020 - 0.394	6.00	1.10	-	H
50	483-320	BT50 - ECX20 - 4.00	ECX 20	0.020 - 0.512	4.00	1.25	-	H
50	483-321	BT50 - ECX20 - 6.00	ECX 20	0.020 - 0.512	6.00	1.25	-	H
50	483-332	BT50 - ECX32 - 4.00	ECX 32	0.080 - 0.787	4.00	1.97	-	C
50	483-333	BT50 - ECX32 - 6.00	ECX 32	0.080 - 0.787	6.00	1.97	-	C
50	483-340	BT50 - ECX40 - 4.00	ECX 40	0.118 - 1.023	4.00	2.48	-	C
50	483-341	BT50 - ECX40 - 6.00	ECX 40	0.118 - 1.023	6.00	2.48	-	C

* While stock lasts

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

ECX (ER) Superflex Precision Collet Chucks Balanced



CT Flange Tools

For use with ECX style collet
See pages 3-7 to 3-11
for collet information

Ask about our new ETS
High-Precision Self-Centering
collets to obtain the optimum
accuracy from your
ECX Collet Chucks

Our ECX collet chucks &
extensions accept the
following competitors collets:
DR, ER, ESX, RD

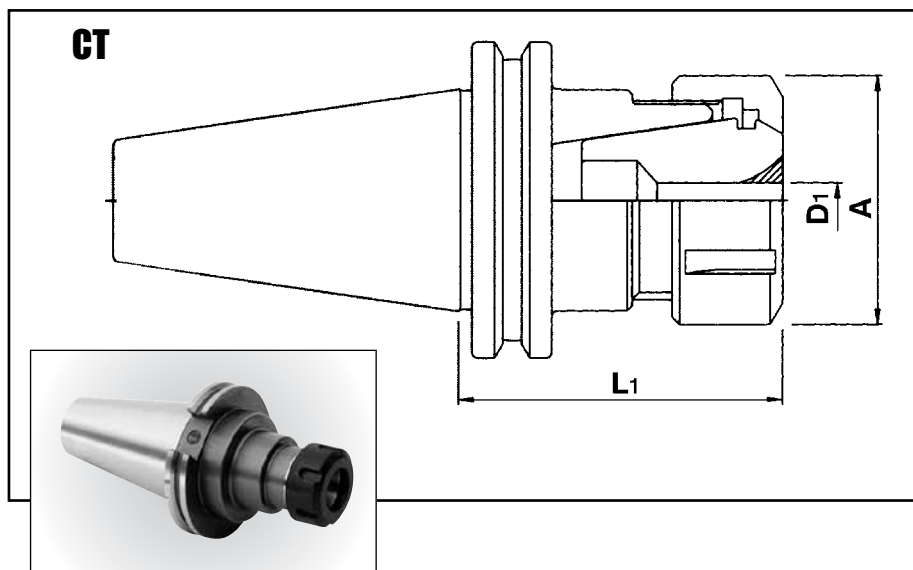
For collet nuts and wrench-
es see pages 1-21 to 1-22
and 3-16 to 3-18

NUT STYLES

C = CASTALLETION
H = HEXAGON
M = MINI CASTALLETION

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.



Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM	Nut Style
40	484-111	CT40 - ECX11 - 2.50	ECX 11	0.020 - 0.276	2.50	0.629	20,000	M
40	484-112	CT40 - ECX11 - 4.00	ECX 11	0.020 - 0.276	4.00	0.629	20,000	M
40	484-116	CT40 - ECX16 - 2.50	ECX 16	0.020 - 0.394	2.50	1.10	20,000	H
40	484-117	CT40 - ECX16 - 4.00	ECX 16	0.020 - 0.394	4.00	1.10	15,000	H
40	484-118	CT40 - ECX16 - 6.00	ECX 16	0.020 - 0.394	6.00	1.10	15,000	H
40	484-119	CT40 - ECX16 - 8.00	ECX 16	0.020 - 0.394	8.00	1.10	12,000	H
40	484-120	CT40 - ECX20 - 3.00	ECX 20	0.020 - 0.512	3.00	1.25	20,000	H
40	484-121	CT40 - ECX20 - 5.00	ECX 20	0.020 - 0.512	5.00	1.25	15,000	H
40	484-122	CT40 - ECX20 - 6.00	ECX 20	0.020 - 0.512	6.00	1.25	15,000	H
40	484-125	CT40 - ECX25 - 3.00	ECX 25	0.020 - 0.629	3.00	1.654	20,000	C
40	484-126	CT40 - ECX25 - 5.00	ECX 25	0.020 - 0.629	5.00	1.654	15,000	C
40	484-127	CT40 - ECX25 - 6.00	ECX 25	0.020 - 0.629	6.00	1.654	15,000	C
40	484-132	CT40 - ECX32 - 3.00	ECX 32	0.080 - 0.787	3.00	1.97	20,000	C
40	484-133	CT40 - ECX32 - 5.00	ECX 32	0.080 - 0.787	5.00	1.97	12,000	C
40	484-140	CT40 - ECX40 - 3.50	ECX 40	0.118 - 1.023	3.50	2.48	12,000	C
50	484-316	CT50 - ECX16 - 4.00	ECX 16	0.020 - 0.394	4.00	1.10	12,000	H
50	484-317	CT50 - ECX16 - 6.00	ECX 16	0.020 - 0.394	6.00	1.10	12,000	H
50	484-318	CT50 - ECX16 - 8.00	ECX 16	0.020 - 0.394	8.00	1.10	12,000	H
50	484-320	CT50 - ECX20 - 4.00	ECX 20	0.020 - 0.512	4.00	1.25	12,000	H
50	484-321	CT50 - ECX20 - 6.00	ECX 20	0.020 - 0.512	6.00	1.25	12,000	H
50	484-322	CT50 - ECX20 - 8.00	ECX 20	0.020 - 0.512	8.00	1.25	12,000	H
50	484-325	CT50 - ECX25 - 4.00	ECX 25	0.020 - 0.629	4.00	1.654	12,000	C
50	484-326	CT50 - ECX25 - 6.00	ECX 25	0.020 - 0.629	6.00	1.654	12,000	C
50	484-332	CT50 - ECX32 - 4.00	ECX 32	0.080 - 0.787	4.00	1.97	12,000	C
50	484-333	CT50 - ECX32 - 6.00	ECX 32	0.080 - 0.787	6.00	1.97	12,000	C
50	484-334	CT50 - ECX32 - 8.00	ECX 32	0.080 - 0.787	8.00	1.97	12,000	C
50	484-340	CT50 - ECX40 - 4.00	ECX 40	0.118 - 1.023	4.00	2.48	12,000	C
50	484-341	CT50 - ECX40 - 6.00	ECX 40	0.118 - 1.023	6.00	2.48	10,000	C

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

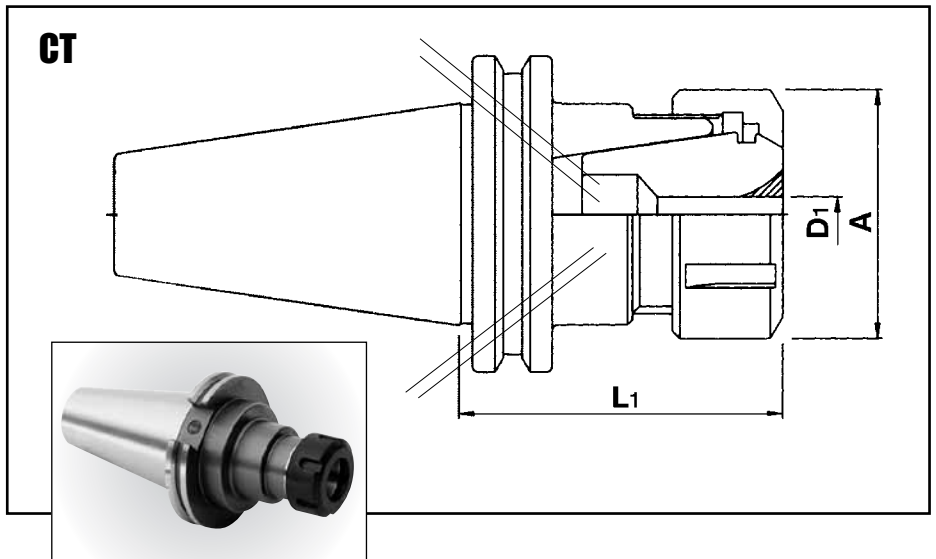
ECX (ER) Superflex Precision Collet Chucks

DIN 69871-Form B - Coolant Through The Flange



CT Flange Tools

For use with ECX style collet
See pages 3-13 to 3-15
for collet information



CT Taper

Taper	Order No.	Device Type	Collet Style	D ₁ Collet Range (in)	L ₁ (in)	A (in)	Max RPM	Nut Style
40	484-216-D	CT40D-ECX16-2.50	ECX 16	0.020 -0-394	2.50	1.10	20,000	H
40	484-217-D	CT40D-ECX16-4.00	ECX 16	0.020 -0-394	4.00	1.10	15,000	H
40	484-218-D	CT40D-ECX16-6.00	ECX 16	0.020 -0-394	6.00	1.10	15,000	H
40	484-220-D	CT40D-ECX20-3.00	ECX 20	0.020 -0-512	3.00	1.25	20,000	H
40	484-221-D	CT40D-ECX20-5.00	ECX 20	0.020-0-512	5.00	1.25	15,000	H
40	484-225-D	CT40D-ECX25-3.00	ECX 25	0.020-0-629	3.00	1.654	20,000	C
40	484-226-D	CT40D-ECX25-5.00	ECX 25	0.020-0-629	5.00	1.654	15,000	C
40	484-232-D	CT40D-ECX32-3.00	ECX 32	0.080-0-787	3.00	1.97	20,000	C
40	484-233-D	CT40D-ECX32-5.00	ECX 32	0.080-0-787	5.00	1.97	15,000	C
40	484-240-D	CT40D-ECX40-3.50	ECX 40	0.118-1.023	3.50	2.48	15,000	C
50	484-416-D	CT50D-ECX16-4.00	ECX 16	0.020-0-394	4.00	1.10	12,000	H
50	484-417-D	CT50D-ECX16-6.00	ECX 16	0.020-0-394	6.00	1.10	12,000	H
50	484-420-D	CT50D-ECX20-4.00	ECX 20	0.020-0-512	4.00	1.25	12,000	H
50	484-421-D	CT50D-ECX20-6.00	ECX 20	0.020-0-512	6.00	1.25	12,000	H
50	484-425-D	CT50D-ECX25-4.00	ECX 25	0.020-0-625	4.00	1.654	12,000	C
50	484-426-D	CT50D-ECX25-6.00	ECX 25	0.020-0-625	6.00	1.654	12,000	C
50	484-432-D	CT50D-ECX32-4.00	ECX 32	0.080-0-787	4.00	1.97	12,000	C
50	484-433-D	CT50D-ECX32-6.00	ECX 32	0.080-0-787	6.00	1.97	12,000	C
50	484-440-D	CT50D-ECX40-4.00	ECX 40	0.118-1.023	4.00	2.48	12,000	C
50	484-441-D	CT50D-ECX40-6.00	ECX 40	0.118-1.023	6.00	2.48	12,000	C

NUT STYLES

C = CASTALLETION
H = HEXAGON
M = MINI CASTALLETION

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

NMTB - ECX (ER) Superflex Precision Collet Chucks



NMTB Flange Tools

NMTB chuck flanges are qualified for use with Erickson QC spindles

Our ECX collet chucks & extensions accept the following competitors collets:

DR, ER, ESX, RD For use with ECX style collet See pages 3-7 to 3-11 for collet information

For collet nuts and wrenches see pages 1-21 to 1-22 and 3-16 to 3-18

NUT STYLES

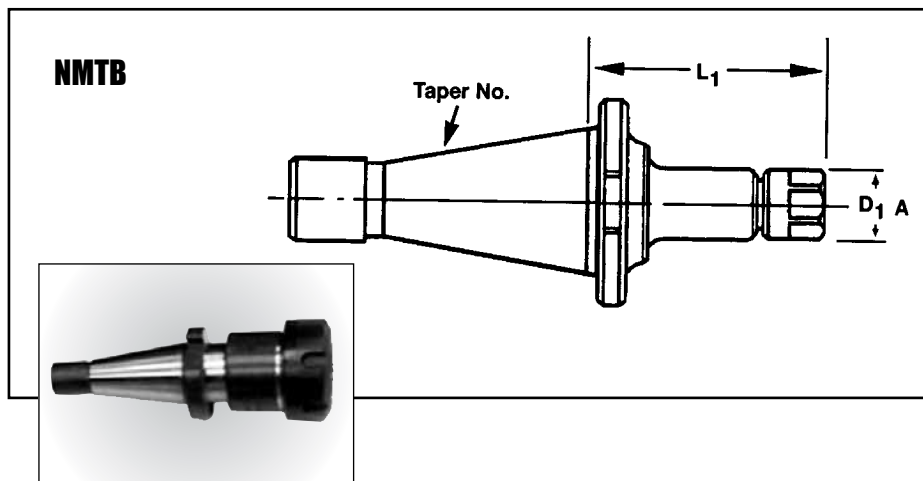
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M = MINI CASTALLETION



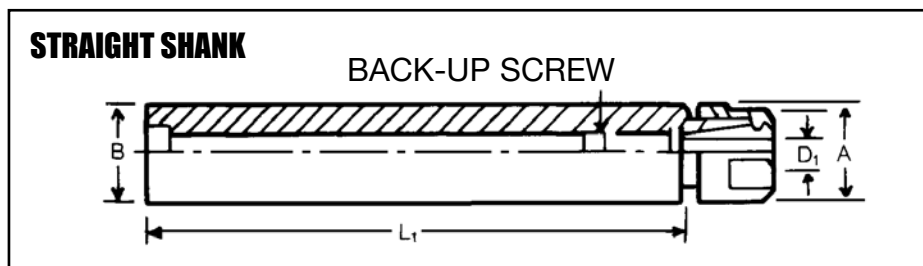
ECX (ER) Superflex Precision Extensions

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)	Nut Style
30	684-016	NMTB30QC - ECX 16-1.75	0.020 - 0.394	1.75	1.10	H
30	684-017	NMTB30QC - ECX 16-4.00	0.020 - 0.394	4.00	1.10	H
30	684-020	NMTB30QC - ECX 20-2.50	0.020 - 0.512	2.50	1.25	H
30	684-032	NMTB30QC - ECX 32-3.00	0.080 - 0.787	3.00	1.97	C
40	684-216	NMTB40QC - ECX 16-1.75	0.020 - 0.394	1.75	1.10	C
40	684-217	NMTB40QC - ECX 16-4.00	0.020 - 0.394	4.00	1.10	C
40	684-220	NMTB40QC - ECX 20-3.00	0.020 - 0.512	3.00	1.25	C
40	684-232	NMTB40QC - ECX 32-3.00	0.080 - 0.787	3.00	1.97	C
40	684-240	NMTB40QC - ECX 40-3.00	0.118 - 1.023	3.00	2.48	C
50	684-416	NMTB50QC - ECX 16-4.00	0.020 - 0.394	4.00	1.10	C
50	684-432	NMTB50QC - ECX 32-4.00	0.080 - 0.787	4.00	1.97	C
50	684-440	NMTB50QC - ECX 40-4.00	0.118 - 1.023	4.00	2.48	C



Order No.	Device Type	B (in)	L ₁ (in)	Collet Range D ₁ (in)	A (in)	Nut Style
011-000	ECX11 EXTENSION	0.500	6.555	0.020-0.275	0.629	M
016-000	ECX16 EXTENSION	0.750	5.500	0.020-0.394	1.100	H
016-005	ECX16 EXTENSION	0.750	7.000	0.020-0.394	0.866	M
021-000	ECX20 EXTENSION	1.000	5.510	0.020-0.512	1.250	H
021-001	ECX20 EXTENSION	1.000	7.200	0.020-0.512	1.102	M
025-000	ECX25 EXTENSION	1.000	5.700	0.020-0.630	1.654	C
032-000	ECX32 EXTENSION	1.250	5.700	0.079-0.787	1.969	C
040-000	ECX40 EXTENSION	1.000	1.970	0.118-1.023	2.480	C
040-001	ECX40 EXTENSION	1.250	2.375	0.118-1.023	2.480	C
040-002	ECX40 EXTENSION	1.500	5.510	0.118-1.023	2.480	C

ECX (ER) Superflex Collet Chucks



HSK-A Flange Tools

For use with ECX style collet
See pages 3-7 to 3-11
for collet information

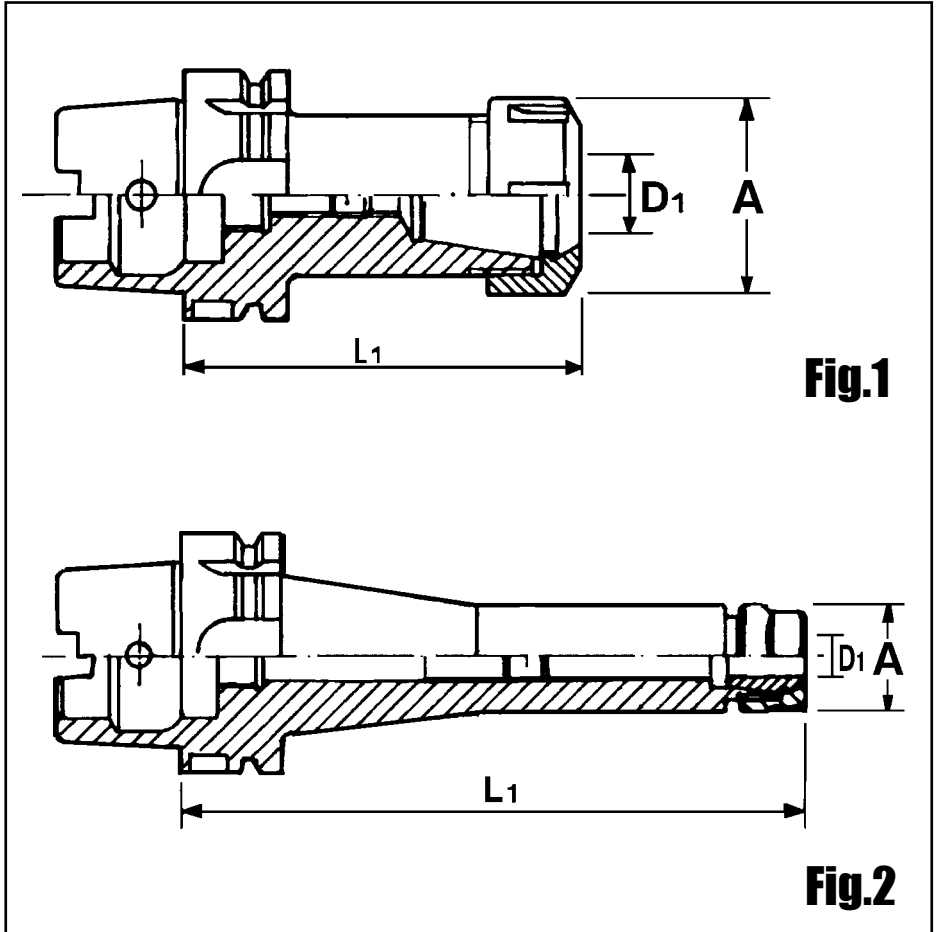
For collet nuts and
wrenches see pages 1-21 to
1-22 and 3-16 to 3-18

NUT STYLES

C = CASTALLETION
H = HEXAGON
M = MINI CASTALLETION

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.



Taper	Order No.	Device Type	Fig #	Collet Style	D, Collet Range (in)	L ₁ (in)	A (in)	Max RPM	Nut Style
63	584-516A	HSK63A-ECX16-3.00	1	ECX16	0.020-0.394	3.00	1.100	20,000	H
63	584-517A	HSK63A-ECX16-5.00	2	ECX16	0.020-0.394	5.00	1.100	15,000	H
63	584-520A	HSK63A-ECX20-3.00	1	ECX20	0.020-0.512	3.00	1.250	20,000	H
63	584-521A	HSK63A-ECX20-5.00	2	ECX20	0.020-0.512	5.00	1.250	15,000	H
63	584-525A	HSK63A-ECX25-3.00	1	ECX25	0.020-0.629	3.00	1.654	20,000	C
63	584-526A	HSK63A-ECX25-5.00	2	ECX25	0.020-0.629	5.00	1.654	15,000	C
63	584-532A	HSK63A-ECX32-4.00	1	ECX32	0.080-0.787	4.00	1.970	15,000	C
63	584-533A	HSK63A-ECX32-6.00	1	ECX32	0.080-0.787	6.00	1.100	12,000	C
63	584-540A	HSK63A-ECX40-4.00	1	ECX40	0.118-1.023	4.00	2.480	15,000	C
63	584-541A	HSK63A-ECX40-6.00	1	ECX40	0.118-1.023	6.00	2.480	12,000	C

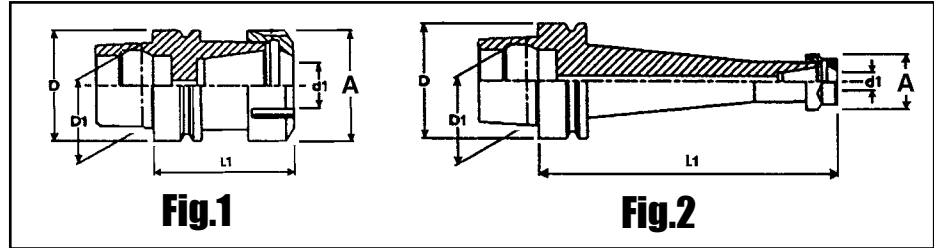
NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

ECX (ER) Superflex Collet Chucks



HSK-E Flange Tools

For use with ECX style collet.
See pages 3-7 to 3-11 for collet information
For collet nuts and wrenches see pages
1-21 to 1-22 and 3-16 to 3-18



Taper	Order No.	Device Type	Fig #	Collet Style	D, Collet Range (in)	L ₁ (in)	A (in)	Max RPM	Nut Style
40E	584-311E	HSK40E-ECX11-100	2	ECX(ER)11	0.020 -0.275	3.940	0.748	30,000	M
40E	584-316E	HSK40E-ECX16-100	2	ECX(ER)16	0.020 -0.394	3.940	1.250	30,000	C
40E	584-325E	HSK40E-ECX25-50	1	ECX(ER)25	0.020 -0.629	1.970	1.654	25,000	C
40E	584-326E	HSK40E-ECX25-75	1	ECX(ER)25	0.020 -0.629	2.950	1.654	25,000	C
40E	584-327E	HSK40E-ECX25-100	1	ECX(ER)25	0.020 -0.629	3.940	1.654	25,000	C
50E	584-411E	HSK50E-ECX11-100	2	ECX(ER)11	0.020 -0.275	3.940	0.748	30,000	M
50E	584-412E	HSK50E-ECX11-160	2	ECX(ER)11	0.020 -0.275	6.299	0.748	20,000	M
50E	584-416E	HSK50E-ECX16-75	1	ECX(ER)16	0.020 -0.394	2.950	1.250	30,000	C
50E	584-417E	HSK50E-ECX16-100	2	ECX(ER)16	0.020 -0.394	3.940	1.250	30,000	C
50E	584-418E	HSK50E-ECX16-160	2	ECX(ER)16	0.020 -0.394	6.299	1.250	20,000	C
50E	584-420E	HSK50E-ECX20-75	1	ECX(ER)20	0.020 -0.512	2.950	1.378	30,000	C
50E	584-421E	HSK50E-ECX20-100	2	ECX(ER)20	0.020 -0.512	3.940	1.378	20,000	C
50E	584-425E	HSK50E-ECX25-75	1	ECX(ER)25	0.020 -0.629	2.950	1.654	25,000	C
50E	584-432E	HSK50E-ECX32-75	1	ECX(ER)32	0.080 -0.787	2.950	1.969	25,000	C
50E	584-433E	HSK50E-ECX32-100	1	ECX(ER)32	0.080 -0.787	3.940	1.969	25,000	C

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

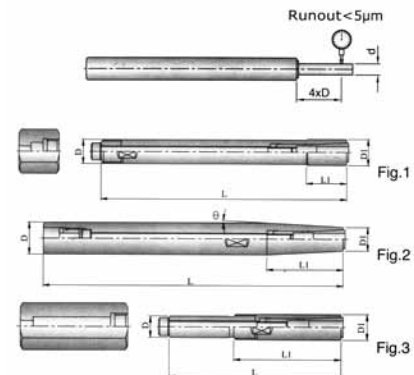
NUT STYLES

C = CASTALLETION
H = HEXAGON
M = MINI CASTALLETION

THEORETICAL MAX Tightening Torque for ECX nuts

ECX 16	110 FT/lbs.
ECX 20	110 FT/lbs.
ECX 25	150 FT/lbs.
ECX 32	340 FT/lbs.
ECX 40	600 FT/lbs.

DC Slim Cylindrical Shank Extensions & Collets (for End Mills)

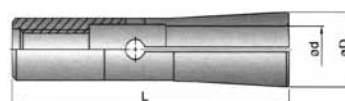


Order No.	Device Type	Fig.	d	L	L1	D	D1	O	Collet	Spanner
460-062	ST10-DC6-80	3	2 - 6	80	50	10	13	-	DC6	30194-642 (M4)
460-063	ST12-DC6-120	1		120	20	12	13	-		30194-642 (M4)
460-064	ST16-DC6-150	2		150	38	16	13	3"		30194-642 (M4)
460-065	ST20-DC6-200	2		200	70	20	13	3"		30194-642 (M4)

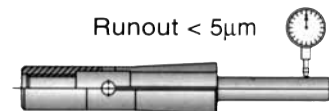
DC Collets for End Mills



The design of DC-E Collets is emphasized on increase the clamping force of end mills

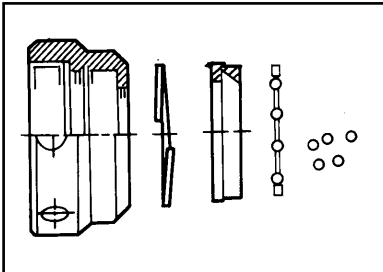


	L	ϕD
DC-4	31	7
DC-6	36	9.6
DC-8	45	15
DC-10	52	19.1
DC-12	60	22



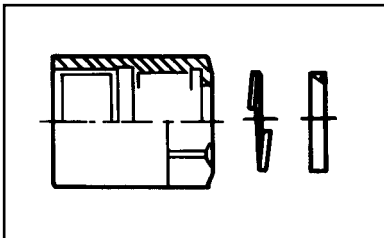
Order No.	Device Type	d
460-105	DC6-3E	3 mm
460-106	DC6-3.175E	1/8"
460-107	DC6-4E	4 mm
460-108	DC6-6E	6 mm
460-109	DC6-6.35E	1/4"

Nuts For TG, Double Angle & ECX Collet Chucks



TG

Chuck Type	Order No.	Description
TG75	499-TG75N	COMPLETE NUT ASSEMBLY
TG75	499TG75NB	BALANCED NUT ASSEMBLY FOR BALANCE HOLDERS
TG75	499TG75NO	NUT ONLY
TG75	499TG75SR	SNAP RING
TG75	499TG75TR	THRUST RING
TG75	499-TG75B	SET OF STEEL BALLS
TG100	499-TG100N	COMPLETE NUT ASSEMBLY
TG100	499TG100NB	BALANCED NUT ASSEMBLY FOR BALANCE HOLDERS
TG100	499TG100NO	NUT ONLY OLD STYLE
TG100	499TG100SR	SNAP RING OLD STYLE
TG100	499TG101SR	SNAP RING NEW STYLE
TG100	499TG101NO	NUT ONLY NEW STYLE
TG100	499TG100TR	THRUST RING
TG100	499-TG100B	SET OF STEEL BALLS
TG150	499-TG150N	COMPLETE NUT ASSEMBLY
TG150	499TG150NO	NUT ONLY
TG150	499TG150SR	SNAP RING
TG150	499TG150TR	THRUST RING
TG150	499-TG150B	SET OF STEEL BALLS



Double Angle

Chuck Type	Order No.	Description
C100	499-C100N	COMPLETE NUT ASSEMBLY
C100	499-C100NO	NUT ONLY
C100	499-C100SR	SNAP RING
C100	499-C100TR	THRUST RING
C180	499-C180N	COMPLETE NUT ASSEMBLY
C180	499-C180NO	NUT ONLY
C180	499-C180SR	SNAP RING
C180	499-C180TR	THRUST RING
C200	499-C200N	COMPLETE NUT ASSEMBLY
C200	499-C200NO	NUT ONLY
C200	499-C200SR	SNAP RING
C200	499-C200TR	THRUST RING
C300	499-C300N	COMPLETE NUT ASSEMBLY
C300	499-C300NO	NUT ONLY
C300	499-C300SR	SNAP RING
C300	499-C300TR	THRUST RING

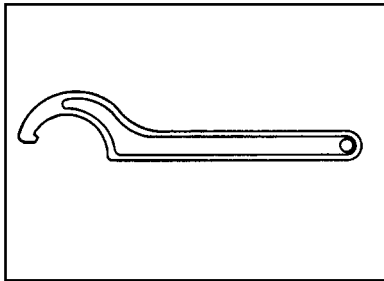


ECX

Chuck Type	Order No.	Description
ECX11	011-000-NM	COMPLETE NUT (M)
ECX16	016-000-NH	COMPLETE NUT (H)
ECX16	016-000-NHC	COMPLETE NUT (H)
ECX20	021-000-NC	COMPLETE NUT (C)
ECX20	021-000-NH	COMPLETE NUT (H)
ECX20	021-000-NHC	COMPLETE NUT (H)
ECX25	025-000-NC	COMPLETE NUT (C)
ECX25	025-000-NCC	COMPLETE NUT (C)
ECX32	032-000-NC	COMPLETE NUT (C)
ECX32	032-000-NCC	COMPLETE NUT (C)
ECX40	040-000-NC	COMPLETE NUT (C)
ECX40	040-000-NCC	COMPLETE NUT (C)

C = Castalletion, H = Hexagon, M = Mini Castalletion

Spanners & Parts for TG, Double Angle & ECX Collet Chucks



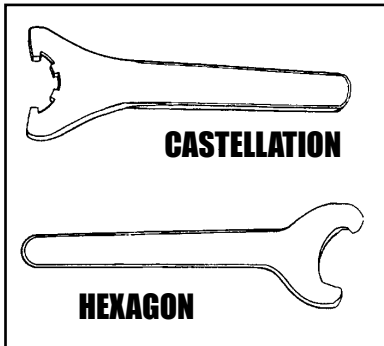
Spanners for CTR ACE LOCK Milling Chucks

CHUCK SIZE	ORDER NO.
3/4"	499-FS55
1"	499-FS62
1-1/4"	499-FS75

BAL = Balanced Nut

Spanners for TG Collet Chucks

CHUCK SIZE	ORDER NO.
TG75	499-TG75S
TG100 (STD)	499-TG100S
TG100 (BAL)	040-000-WC
TG150	499-TG150S



Spanners for ECX Collet Chucks

CHUCK SIZE	ORDER NO.	DESCRIPTION
ECX16	016-000-WH	SPANNER (H)
ECX16	016-000-WC	SPANNER (C)
ECX16HS	016-000-HSW	SPANNER (HS)
ECX 20	021-000-WC	SPANNER (C)
ECX 20	021-000-WH	SPANNER (H)
ECX 25	025-000-W	SPANNER (C)
ECX 32	032-000-W	SPANNER (C)
ECX 40	040-000-W	SPANNER (C)

C = Castellation
H = Hexagon
HS = High Speed



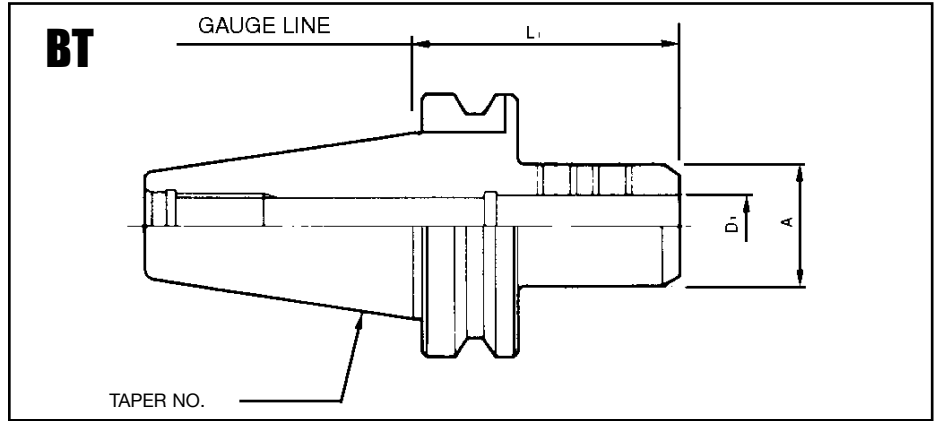
Sealed Back Up Screws for ECX Collet Chucks

CHUCK SIZE	ORDER NO.	DESCRIPTION
ECX 16	499-SBS 16	M10 x 1.5 PLH
ECX 20	499-SBS 20	M12 x 1.5 PLH
ECX 32	499-SBS 32	M22 x 1.5 PLH
ECX 40	499-SBS 40	M28 x 1.5 PLH

End Mill Holders - Inch



BT Flange Tools



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	477-400	BT30-SL 1/8-60	0.125	2.36	0.75
30	477-401	BT30-SL 1/8-105	0.125	4.13	0.75
30	477-405	BT30-SL 3/16-60	0.1875	2.36	0.75
30	477-406	BT30-SL 3/16-105	0.1875	4.13	0.75
30	477-410	BT30-SL 1/4-60	0.250	2.36	0.81
30	477-411	BT30-SL 1/4-105	0.250	4.13	0.81
30	477-415	BT30-SL 5/16-60	0.3125	2.36	1.00
30	477-416	BT30-SL 5/16-105	0.3125	4.13	1.00
30	477-420	BT30-SL 3/8-60	0.375	2.36	1.00
30	477-421	BT30-SL 3/8-105	0.375	4.13	1.00
30	477-425	BT30-SL 1/2-60	0.500	2.36	1.25
30	477-426	BT30-SL 1/2-105	0.500	4.13	1.25
30	477-430	BT30-SL 5/8-60	0.625	2.36	1.50
30	477-431	BT30-SL 5/8-105	0.625	4.13	1.50
30	477-435	BT30-SL 3/4-60	0.750	2.36	1.75
30	477-436	BT30-SL 3/4-105	0.750	4.13	1.75
40	477-100	BT40-SL 1/8-65	0.125	2.55	0.75
40	477-101	BT40-SL 1/8-101.6	0.125	4.00	0.75
40	477-105	BT40-SL 3/16-65	0.1875	2.55	0.75
40	477-106	BT40-SL 3/16-101.6	0.1875	4.00	0.75
40	477-110	BT40-SL 1/4-65	0.250	2.55	0.81
40	477-111	BT40-SL 1/4-101.6	0.250	4.00	0.81
40	477-115	BT40-SL 5/16-65	0.3125	2.55	1.00
40	477-116	BT40-SL 5/16-101.6	0.3125	4.00	1.00
40	477-120	BT40-SL 3/8-65	0.375	2.55	1.00
40	477-121	BT40-SL 3/8-101.6	0.375	4.00	1.00
40	477-123	BT40-SL 7/16-65	0.4375	2.55	1.15
40	477-125-S	BT40-SL 1/2-44.45	0.500	1.75	1.25
40	477-125	BT40-SL 1/2-65	0.500	2.55	1.25
40	477-126	BT40-SL 1/2-101.6	0.500	4.00	1.25
40	477-130-S	BT40-SL 5/8-44.45	0.625	1.75	1.50
40	477-130	BT40-SL 5/8-65	0.625	2.55	1.50

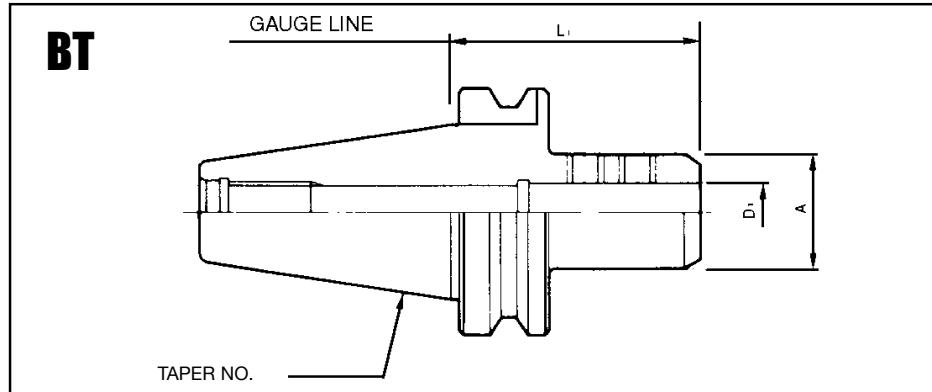
Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
40	477-131	BT40-SL 5/8-101.6	0.625	4.00	1.50
40	477-135-S	BT40-SL 3/4-44.45	0.750	1.75	1.75
40	477-135	BT40-SL 3/4-65	0.750	2.55	1.75
40	477-136	BT40-SL 3/4-101.6	0.750	4.00	1.75
40	477-140	BT40-SL 7/8-85	0.875	3.35	2.00
40	477-141	BT40-SL 7/8-101.6	0.875	4.00	2.00
40	477-145-S	BT40-SL 1-44.45	1.000	1.75	2.25
40	477-145	BT40-SL 1-95	1.000	3.74	2.25
40	477-146	BT40-SL 1-127	1.000	5.00	2.25
40	477-150-S	BT40-SL 1-1/4-50.8	1.250	2.00	2.50
40	477-150	BT40-SL 1-1/4-85	1.250	3.35	2.50
40	477-151	BT40-SL 1-1/4-127	1.250	5.00	2.50
40	477-155	BT40-SL 1-1/2-110	1.500	4.33	2.75
45	477-220*	BT45-SL 3/8-75	0.375	2.95	1.00
45	477-255*	BT45-SL 1-1/2-110	1.500	4.33	2.75
45	477-260*	BT45-SL 2-145	2.000	5.71	3.75
50	477-310	BT50-SL 1/4-75	0.250	2.95	0.81
50	477-320	BT50-SL 3/8-75	0.375	2.95	1.00
50	477-321	BT50-SL 3/8-152.4	0.375	6.00	1.00
50	477-325	BT50-SL 1/2-75	0.500	2.95	1.25
50	477-326	BT50-SL 1/2-152.4	0.500	6.00	1.25
50	477-330	BT50-SL 5/8-75	0.625	2.95	1.50
50	477-331	BT50-SL 5/8-152.4	0.625	6.00	1.50
50	477-335	BT50-SL 3/4-75	0.750	2.95	1.75
50	477-336	BT50-SL 3/4-152.4	0.750	6.00	1.75
50	477-340	BT50-SL 7/8-90	0.875	3.54	2.00
50	477-341	BT50-SL 7/8-152.4	0.875	6.00	2.00
50	477-345	BT50-SL 1-105	1.000	4.13	2.25
50	477-346	BT50-SL 1-152.4	1.000	6.00	2.25
50	477-350	BT50-SL 1-1/4-105	1.250	4.13	2.50
50	477-351	BT50-SL 1-1/4-152.4	1.250	6.00	2.50
50	477-355	BT50-SL 1-1/2-105	1.500	4.13	2.75
50	477-356	BT50-SL 1-1/2-152.4	1.500	6.00	2.75
50	477-360**	BT50-SL 2-135	2.000	5.31	3.75
50	477-361**	BT50-SL 2-152.4	2.000	6.00	3.75

* While stock is still available. ** Not Balanced.

End Mill Holders - Inch Balanced - G2.5



BT Flange Tools



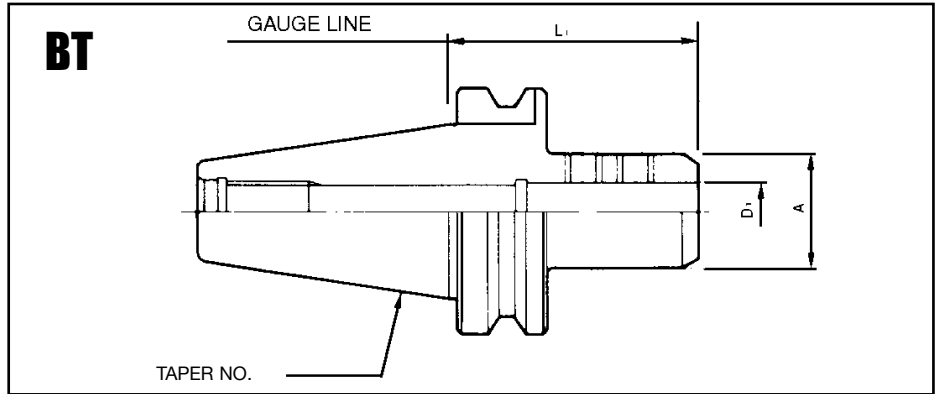
Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)	Max RPM
30	477-000-B	BT30B-SL 1/8 - 60	0.125	2.36	0.75	20,000
30	477-005-B	BT30B-SL 3/16 - 60	0.1875	2.36	0.75	20,000
30	477-010-B	BT30B-SL 1/4 - 60	0.250	2.36	0.81	20,000
30	477-015-B	BT30B-SL 5/16 - 60	0.3175	2.36	1.00	20,000
30	477-020-B	BT30B-SL 3/8 - 60	0.375	2.36	1.00	20,000
30	477-025-B	BT30B-SL 1/2 - 60	0.500	2.36	1.25	15,000
30	477-030-B	BT30B-SL 5/8 - 60	0.625	2.36	1.50	15,000
30	477-040-B	BT30B-SL 3/4 - 60	0.750	2.36	1.75	15,000
40	477-200-B	BT40B-SL 1/8 - 65	0.125	2.55	0.75	20,000
40	477-201-B	BT40B-SL 1/8 - 101.6	0.125	4.00	0.75	15,000
40	477-205-B	BT40B-SL 3/16 - 65	0.1875	2.55	0.75	20,000
40	477-206-B	BT40B-SL 3/16 - 101.6	0.1875	4.00	0.75	15,000
40	477-210-B	BT40B-SL 1/4 - 65	0.250	2.55	0.81	20,000
40	477-211-B	BT40B-SL 1/4 - 101.6	0.250	4.00	0.81	15,000
40	477-215-B	BT40B-SL 5/16 - 65	0.3125	2.55	1.00	20,000
40	477-216-B	BT40B-SL 5/16 - 101.6	0.3125	4.00	1.00	15,000
40	477-220-B	BT40B-SL 3/8 - 65	0.375	2.55	1.00	20,000
40	477-221-B	BT40B-SL 3/8 - 101.6	0.375	4.00	1.00	15,000
40	477-225-B	BT40B-SL 1/2 - 44.45	0.500	1.75	1.25	20,000
40	477-226-B	BT40B-SL 1/2 - 65	0.500	2.55	1.25	15,000
40	477-227-B	BT40B-SL 1/2 - 101.6	0.500	4.00	1.25	15,000
40	477-230-B	BT40B-SL 5/8 - 44.45	0.625	1.75	1.50	20,000
40	477-231-B	BT40B-SL 5/8 - 65	0.625	2.55	1.50	15,000
40	477-232-B	BT40B-SL 5/8 - 101.6	0.625	4.00	1.50	15,000
40	477-235-B	BT40B-SL 3/4 - 44.45	0.750	1.75	1.75	15,000
40	477-236-B	BT40B-SL 3/4 - 65	0.750	2.55	1.75	12,000
40	477-237-B	BT40B-SL 3/4 - 101.6	0.750	4.00	1.75	12,000
40	477-240-B	BT40B-SL 7/8 - 85	0.875	3.35	2.00	12,000
40	477-241-B	BT40B-SL 7/8 - 101.6	0.875	4.00	2.00	12,000
40	477-245-B	BT40B-SL 1 - 44.45	1.000	1.75	2.25	15,000
40	477-246-B	BT40B-SL 1 - 95	1.000	3.74	2.25	12,000
40	477-247-B	BT40B-SL 1 - 127	1.000	5.00	2.25	12,000
40	477-250-B	BT40B-SL 1-1/4 - 50.8	1.250	2.00	2.50	10,000
40	477-251-B	BT40B-SL 1-1/4 - 85	1.250	3.35	2.50	10,000
40	477-252-B	BT40B-SL 1-1/4 - 127	1.250	5.00	2.50	8,000

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

End Mill Holders - Metric



BT Flange Tools



Taper	Order No.	Device Type	D ₁ (mm)	L ₁ (mm)	A (mm)
30	477-406-M	BT30-SL 6-60	6	60	25
30	477-408-M	BT30-SL 8-60	8	60	28
30	477-410-M	BT30-SL 10-60	10	60	35
30	477-412-M	BT30-SL 12-60	12	60	42
30	477-416-M	BT30-SL 16-60	16	60	48
30	477-420-M	BT30-SL 20-75	20	75	52
40	477-106-M	BT40-SL 6-75	6	75	25
40	477-108-M	BT40-SL 8-75	8	75	28
40	477-110-M	BT40-SL 10-75	10	75	35
40	477-112-M	BT40-SL 12-75	12	75	42
40	477-116-M	BT40-SL 16-75	16	75	48
40	477-120-M	BT40-SL 20-75	20	75	52
40	477-125-M	BT40-SL 25-90	25	90	64
40	477-132-M	BT40-SL 32-90	32	90	64
50	477-306-M	BT50-SL 6-75	6	75	25
50	477-308-M	BT50-SL 8-75	8	75	28
50	477-310-M	BT50-SL 10-75	10	75	35
50	477-312-M	BT50-SL 12-75	12	75	42
50	477-316-M	BT50-SL 16-90	16	90	48
50	477-320-M	BT50-SL 20-90	20	90	52
50	477-325-M	BT50-SL 25-105	25	105	64
50	477-332-M	BT50-SL 32-105	32	105	72
50	477-340-M	BT50-SL 40-120	40	120	80
50	477-342-M	BT50-SL 42-120	42	120	80

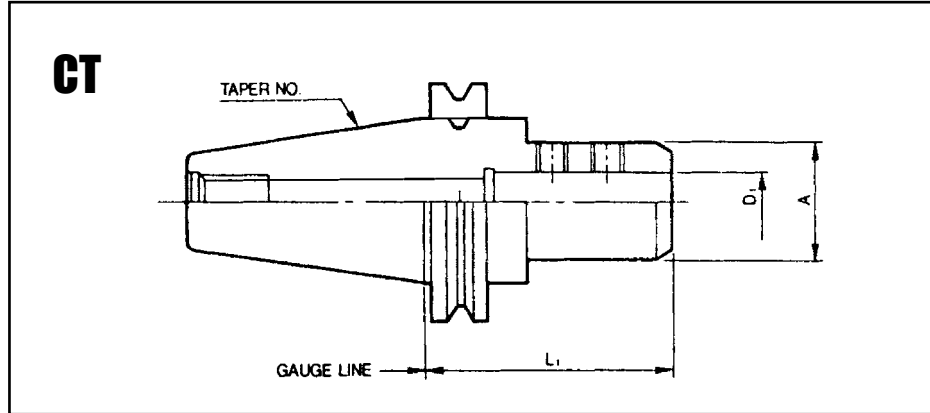
End Mill Holders - Inch



CT Flange Tools

**** These short stubby End Mill Holders may not work on all CNC machining centers with automatic tool changer.**

Please consult our order desk for details



Taper	Order No.	Device Type	D1 (in)	L1 (in)	A (in)
40	478-100	CT40-SL 1/8-2.50	0.125	2.50	0.75
40	478-101	CT40-SL 1/8-4.00	0.125	4.00	0.75
40	478-105	CT40-SL 3/16-2.50	0.1875	2.50	0.75
40	478-106	CT40-SL 3/16-4.00	0.1875	4.00	0.75
40	478-110	CT40-SL 1/4-2.50	0.250	2.50	0.81
40	478-111	CT40-SL 1/4-4.00	0.250	4.00	0.81
40	478-115	CT40-SL 5/16-2.50	0.3125	2.50	1.00
40	478-116	CT40-SL 5/16-4.00	0.3125	4.00	1.00
40	478-120	CT40-SL 3/8-2.50	0.375	2.50	1.00
40	478-121	CT40-SL 3/8-4.00	0.375	4.00	1.00
40	478-123	CT40-SL 7/16-2.50	0.4375	2.50	1.15
40	478-125-S	CT40-SL 1/2-1.75	0.500	1.75	1.25
40	478-125	CT40-SL 1/2-2.50	0.500	2.50	1.25
40	478-126	CT40-SL 1/2-4.00	0.500	4.00	1.25
40	478-130-S	CT40-SL 5/8-1.75	0.625	1.75	1.75
40	478-130	CT40-SL 5/8-3.00	0.625	3.00	1.50
40	478-131	CT40-SL 5/8-5.00	0.625	5.00	1.50
40	478-135-S	CT40-SL 3/4-1.75	0.750	1.75	1.75
40	478-135	CT40-SL 3/4-3.50	0.750	3.50	1.75
40	478-136	CT40-SL 3/4-5.00	0.750	5.00	1.75
40	478-140	CT40-SL 7/8-3.50	0.875	3.50	2.00
40	478-141	CT40-SL 7/8-5.50	0.875	5.00	2.00
40	**478-145-S	CT40-SL 1-1.75	1.000	1.75	1.75
40	478-145	CT40-SL 1-4.00	1.000	4.00	2.25
40	478-146	CT40-SL 1-6.00	1.000	6.00	2.25
40	**478-150-S	CT40-SL 1-1/4-2.00	1.250	2.00	2.25
40	478-150	CT40-SL 1-1/4-4.00	1.250	4.00	2.50
40	478-151	CT40-SL 1-1/4-6.00	1.250	6.00	2.50
40	478-155	CT40-SL 1-1/2-4.75	1.500	4.75	2.75
45	*478-225	CT45-SL 1/2-2.50	0.500	2.50	1.25
45	*478-230	CT45-SL 5/8-3.00	0.625	3.00	1.50
45	*478-235	CT45-SL 3/4-4.00	0.750	4.00	1.75
45	*478-256	CT45-SL 1-1/2-6.00	1.500	6.00	2.75
45	*478-260	CT45-SL 2-5.50	2.000	5.50	3.75
45	*478-261	CT45-SL 2-7.50	2.000	7.50	3.75

* While stock is still available

End Mill Holders - Inch



FIG. 1

CT Flange Tools

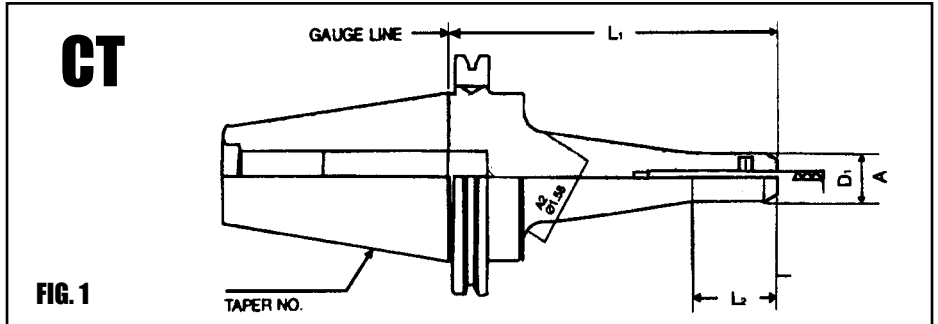


FIG. 1

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	L ₂ (in)	A (in)	A ₂ (in)
50	478-310	CT50-SL 1/4-2.50	0.250	2.50	1.58	0.81	1.58 tapered
50	478-311	CT50-SL 1/4-4.50	0.250	4.50	1.58	0.81	1.58 tapered
50	478-312	CT50-SL 1/4-6.00	0.250	6.00	1.58	0.81	1.58 tapered
50	478-313	CT50-SL 1/4-8.00	0.250	8.00	1.58	0.81	1.58 tapered

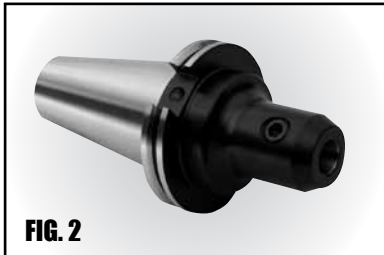


FIG. 2

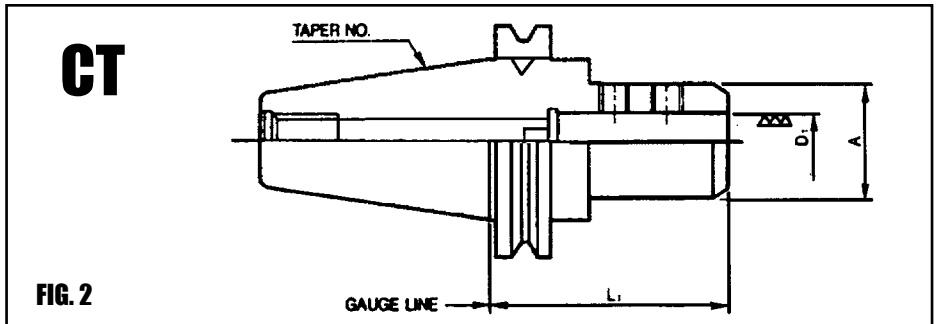


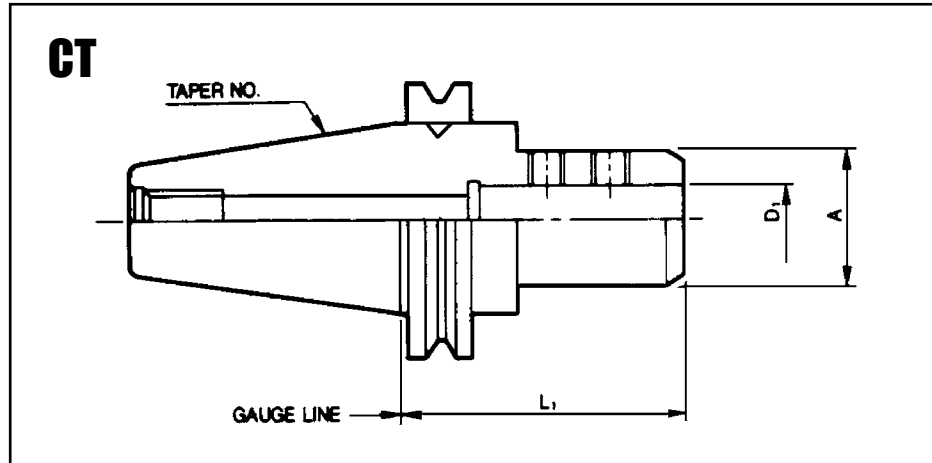
FIG. 2

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
50	478-320	CT50-SL 3/8-2.50	0.375	2.50	1.00
50	478-321	CT50-SL 3/8-4.50	0.375	4.50	1.25
50	478-322	CT50-SL 3/8-6.00	0.375	6.00	1.50
50	478-323	CT50-SL 3/8-8.00	0.375	8.00	1.50
50	478-325	CT50-SL 1/2-2.63	0.500	2.63	1.25
50	478-326	CT50-SL 1/2-4.63	0.500	4.63	1.25
50	478-327	CT50-SL 1/2-6.00	0.500	6.00	1.50
50	478-328	CT50-SL 1/2-8.00	0.500	8.00	1.50
50	478-330	CT50-SL 5/8-3.75	0.625	3.75	1.50
50	478-331	CT50-SL 5/8-5.75	0.625	5.75	1.50
50	478-332	CT50-SL 5/8-8.00	0.625	8.00	1.65
50	478-335	CT50-SL 3/4-3.75	0.750	3.75	1.75
50	478-336	CT50-SL 3/4-5.75	0.750	5.75	1.75
50	478-337	CT50-SL 3/4-8.00	0.750	8.00	1.75
50	478-340	CT50-SL 7/8-3.75	0.875	3.75	2.00
50	478-341	CT50-SL 7/8-5.75	0.875	5.75	2.00
50	478-342	CT50-SL 7/8-8.00	0.875	8.00	2.00
50	478-345	CT50-SL 1-4.00	1.000	4.00	2.25
50	478-346	CT50-SL 1-6.00	1.000	6.00	2.25
50	478-347	CT50-SL 1-8.00	1.000	8.00	2.25
50	478-350	CT50-SL 1-1/4-4.00	1.250	4.00	2.50
50	478-351	CT50-SL 1-1/4-6.00	1.250	6.00	2.50
50	478-352	CT50-SL 1-1/4-8.00	1.250	8.00	2.50
50	478-355	CT50-SL 1-1/2-4.00	1.500	4.00	2.75
50	478-356	CT50-SL 1-1/2-6.00	1.500	6.00	2.75
50	478-357	CT50-SL 1-1/2-8.00	1.500	8.00	2.75
50	478-360	CT50-SL 2-6.00	2.000	6.00	3.75
50	478-361	CT50-SL 2-8.00	2.000	8.00	3.75

End Mill Holders - Inch Balanced - G2.5



CT Flange Tools



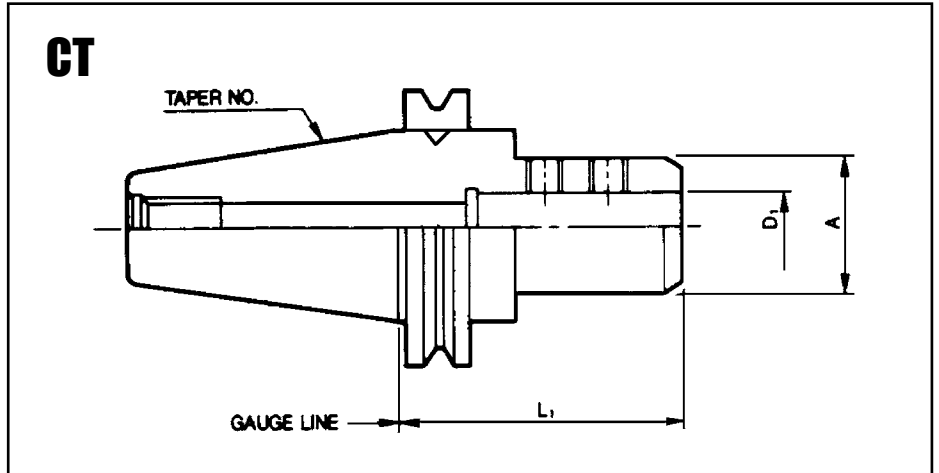
Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)	Max RPM
40	478-200-B	CT40B-SL 1/8" - 2.50	0.125	2.50	0.75	20,000
40	478-201-B	CT40B-SL 1/8 - 4.00	0.125	4.00	0.75	15,000
40	478-205-B	CT40B-SL 3/16 - 2.50	0.1875	2.50	0.75	20,000
40	478-206-B	CT40B-SL 3/16 - 4.00	0.1875	4.00	0.75	15,000
40	478-210-B	CT40B-SL 1/4 - 2.50	0.250	2.50	0.81	20,000
40	478-211-B	CT40B-SL 1/4 - 4.00	0.250	4.00	0.81	15,000
40	478-215-B	CT40B-SL 5/16 - 2.50	0.3125	2.50	1.00	20,000
40	478-216-B	CT40B-SL 5/16 - 4.00	0.3125	4.00	1.00	15,000
40	478-220-B	CT40B-SL 3/8 - 2.50	0.375	2.50	1.00	20,000
40	478-221-B	CT40B-SL 3/8 - 4.00	0.375	4.00	1.00	15,000
40	478-225-B	CT40B-SL 1/2 - 1.75	0.500	1.75	1.75	20,000
40	478-226-B	CT40B-SL 1/2 - 2.50	0.500	2.50	1.25	15,000
40	478-227-B	CT40B-SL 1/2 - 4.00	0.500	4.00	1.25	15,000
40	478-230-B	CT40B-SL 5/8 - 1.75	0.625	1.75	1.75	20,000
40	478-231-B	CT40B-SL 5/8 - 3.00	0.625	3.00	1.50	15,000
40	478-232-B	CT40B-SL 5/8 - 5.00	0.625	5.00	1.50	15,000
40	478-235-B	CT40B-SL 3/4 - 1.75	0.750	1.75	1.75	15,000
40	478-236-B	CT40B-SL 3/4 - 3.50	0.750	3.50	1.75	12,000
40	478-237-B	CT40B-SL 3/4 - 5.00	0.750	5.00	1.75	12,000
40	478-240-B	CT40B-SL 7/8 - 3.50	0.875	3.50	2.00	12,000
40	478-241-B	CT40B-SL 7/8 - 5.50	0.875	5.50	2.00	12,000
40	478-245-B	CT40B-SL 1 - 1.75	1.000	1.75	1.75	15,000
40	478-246-B	CT40B-SL 1 - 4.00	1.000	4.00	2.25	12,000
40	478-247-B	CT40B-SL 1 - 6.00	1.000	6.00	2.25	12,000
40	478-250-B	CT40B-SL 1-1/4 - 2.00	1.250	2.00	2.25	10,000
40	478-251-B	CT40B-SL 1-1/4 - 4.00	1.250	4.00	2.50	8,000
40	478-252-B	CT40B-SL 1-1/4 - 6.00	1.250	6.00	2.50	8,000

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

End Mill Holders - Metric



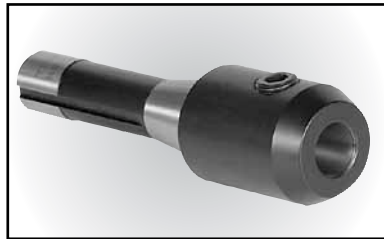
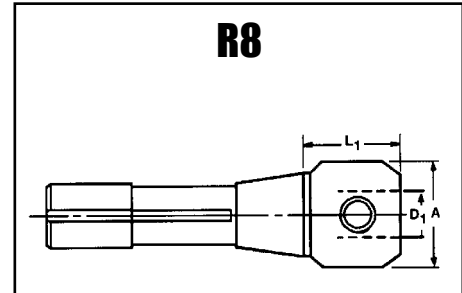
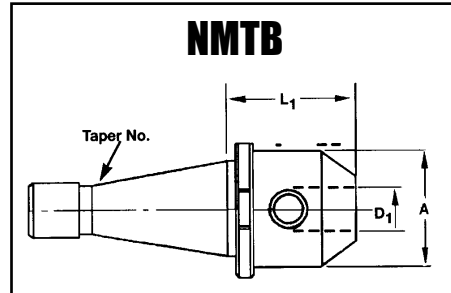
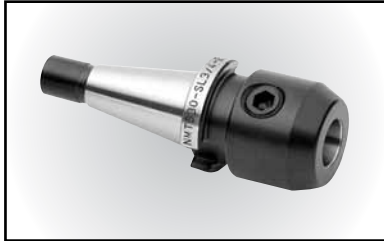
**CT Flange
Tools**



Taper	Order No.	Device Type	D ₁ (mm)	L ₁ (in)	A (mm)
40	478-106-M	CT40-SL 6-2.50	6	2.50	25
40	478-107-M	CT40-SL 6-4.00	6	4.00	25
40	478-108-M	CT40-SL 8-2.50	8	2.50	28
40	478-109-M	CT40-SL 8-4.00	8	4.00	28
40	478-110-M	CT40-SL 10-2.50	10	2.50	35
40	478-111-M	CT40-SL 10-4.00	10	4.00	35
40	478-112-M	CT40-SL 12-2.50	12	2.50	42
40	478-113-M	CT40-SL 12-4.00	12	4.00	42
40	478-114-M	CT40-SL 14-3.00	14	3.00	42
40	478-116-M	CT40-SL 16-3.00	16	3.00	48
40	478-117-M	CT40-SL 16-5.00	16	5.00	48
40	478-120-M	CT40-SL 20-3.00	20	3.00	52
40	478-121-M	CT40-SL 20-5.00	20	5.00	52
40	478-125-M	CT40-SL 25-4.00	25	4.00	64
40	478-126-M	CT40-SL 25-6.00	25	6.00	64
40	478-132-M	CT40-SL 32-4.00	32	4.00	64
40	478-133-M	CT40-SL 32-6.00	32	6.00	64
50	478-306-M	CT50-SL 6-2.50	6	2.50	25
50	478-307-M	CT50-SL 6-4.50	6	4.50	25
50	478-308-M	CT50-SL 8-2.50	8	2.50	28
50	478-309-M	CT50-SL 8-4.50	8	4.50	28
50	478-310-M	CT50-SL 10-2.50	10	2.50	35
50	478-311-M	CT50-SL 10-4.50	10	4.50	35
50	478-312-M	CT50-SL 12-2.50	12	2.50	42
50	478-313-M	CT50-SL 12-4.50	12	4.50	42
50	478-314-M	CT50-SL 14-3.75	14	3.75	42
50	478-315-M	CT50-SL 14-5.75	14	5.75	42
50	478-316-M	CT50-SL 16-3.75	16	3.75	48
50	478-317-M	CT50-SL 16-5.75	16	5.75	48
50	478-320-M	CT50-SL 20-3.75	20	3.75	52
50	478-321-M	CT50-SL 20-5.75	20	5.75	52
50	478-325-M	CT50-SL 25-4.00	25	4.00	64
50	478-326-M	CT50-SL 25-6.00	25	6.00	64
50	478-332-M	CT50-SL 32-4.00	32	4.00	72
50	478-333-M	CT50-SL 32-6.00	32	6.00	72
50	478-340-M	CT50-SL 40-4.00	40	4.00	80
50	478-341-M	CT50-SL 40-6.00	40	6.00	80
50	478-342-M	CT50-SL 42-4.00	42	4.00	80
50	478-343-M	CT50-SL 42-6.00	42	6.00	80
50	478-350-M**	CT50-SL 50-6.00	50	6.00	100

** Not Balanced.

End Mill Holders



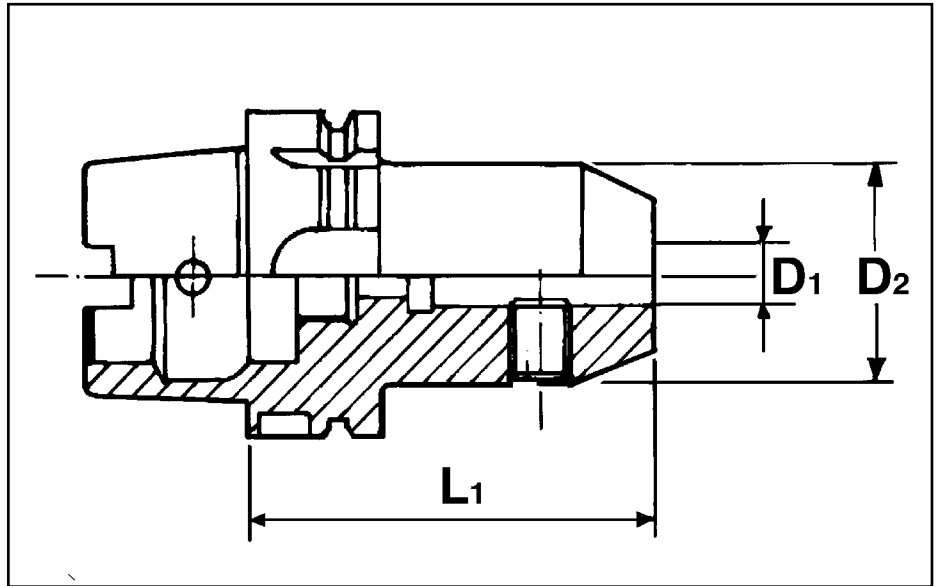
R8 & NMTB-QC Flange Tools

**NMTB Tool Holders are
qualified for use with
Erickson QC spindles**

Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	A (in)
30	678-000	NMTB30QC-SL 1/8-1.75	0.125	1.75	0.75
30	678-005	NMTB30QC-SL 3/16-1.75	0.1875	1.75	0.75
30	678-010	NMTB30QC-SL 1/4-1.75	0.250	1.75	0.81
30	678-015	NMTB30QC-SL 5/16-1.75	0.3125	1.75	1.00
30	678-020	NMTB30QC-SL 3/8-1.75	0.375	1.75	1.00
30	678-025	NMTB30QC-SL 1/2-1.75	0.500	1.75	1.25
30	678-030	NMTB30QC-SL 5/8-1.75	0.625	1.75	1.50
30	678-035	NMTB30QC-SL 3/4-2.25	0.750	2.25	1.75
30	678-040	NMTB30QC-SL 7/8-2.25	0.875	2.25	2.00
30	678-045	NMTB30QC-SL 1-2.6875	1.000	2.6875	2.25
40	678-200	NMTB40QC-SL 1/8-2.3125	0.125	2.3125	0.75
40	678-205	NMTB40QC-SL 3/16-2.3125	0.1875	2.3125	0.75
40	678-210	NMTB40QC-SL 1/4-2.3125	0.250	2.3125	0.81
40	678-215	NMTB40QC-SL 5/16-2.3125	0.3125	2.3125	1.00
40	678-220	NMTB40QC-SL 3/8-2.3125	0.375	2.3125	1.00
40	678-225	NMTB40QC-SL 1/2-2.3125	0.500	2.3125	1.25
40	678-230	NMTB40QC-SL 5/8-2.3125	0.625	2.3125	1.50
40	678-235	NMTB40QC-SL 3/4-2.3125	0.750	2.3125	1.75
40	678-240	NMTB40QC-SL 7/8-2.9375	0.875	2.9375	2.00
40	678-245	NMTB40QC-SL 1-3.375	1.000	3.375	2.25
40	678-250	NMTB40QC-SL 1-1/4-3.6875	1.250	3.6875	2.50
40	678-255	NMTB40QC-SL 1-1/2-3.9375	1.500	3.9375	2.75
50	678-420	NMTB50QC-SL 3/8-2.75	0.375	2.75	1.00
50	678-425	NMTB50QC-SL 1/2-2.75	0.500	2.75	1.25
50	678-430	NMTB50QC-SL 5/8-2.75	0.625	2.75	1.50
50	678-435	NMTB50QC-SL 3/4-2.875	0.750	2.875	1.75
50	678-440	NMTB50QC-SL 7/8-2.875	0.875	2.875	2.00
50	678-445	NMTB50QC-SL 1-3.50	1.000	3.50	2.25
50	678-450	NMTB50QC-SL 1-1/4-3.50	1.250	3.50	2.50
50	678-455	NMTB50QC-SL 1-1/2-4.00	1.500	4.00	2.75
50	678-460	NMTB50QC-SL 2-4.6875	2.000	4.6875	3.75
R8	678-805	R8-SL 3/16	0.1875	1.3125	0.75
R8	678-810	R8-SL 1/4	0.250	1.3125	0.8125
R8	678-820	R8-SL 3/8	0.375	1.3125	1.00
R8	678-825	R8-SL 1/2	0.500	1.3125	1.375
R8	678-830	R8-SL 5/8	0.625	1.500	1.625
R8	678-835	R8-SL 3/4	0.750	2.375	1.875
R8	678-840	R8-SL 7/8	0.875	2.750	2.00
R8	678-845	R8-SL 1	1.000	3.250	2.375
R8	678-850	R8-SL 1-1/4	1.250	3.250	2.50
R8	678-855	R8-SL 1-1/2	1.500	3.750	3.00

End Mill Holders - Inch

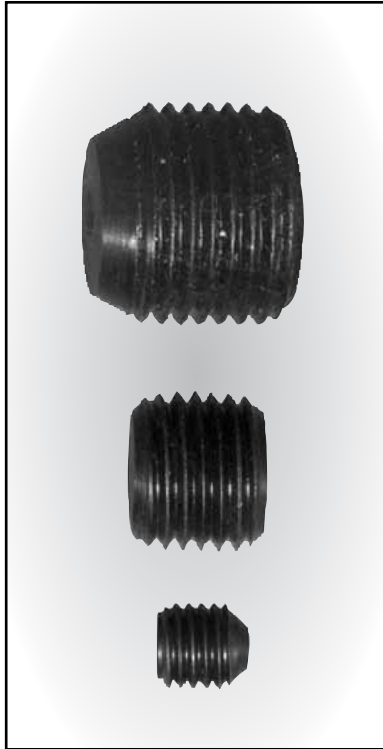
HSK A



Taper	Order No.	Device Type	D1 (in)	L1 (in)	D2 (in)	Max RPM
63	578-505A	HSK63A-SL 3/16"-3.00	0.1875	3.00	0.75	20,000
63	578-506A	HSK63A-SL 3/16"-5.00	0.1875	5.00	0.75	15,000
63	578-510A	HSK63A-SL 1/4"-3.00	0.250	3.00	0.81	20,000
63	578-511A	HSK63A-SL 1/4"-5.00	0.250	5.00	0.81	15,000
63	578-515A	HSK63A-SL 5/16"-3.00	0.3125	3.00	1.00	20,000
63	578-516A	HSK63A-SL 5/16"-5.00	0.3125	5.00	1.00	15,000
63	578-520A	HSK63A-SL 3/8"-3.00	0.375	3.00	1.00	20,000
63	578-521A	HSK63A-SL 3/8"-5.00	0.375	5.00	1.00	15,000
63	578-525A	HSK63A-SL 1/2"-4.00	0.500	4.00	1.25	15,000
63	578-526A	HSK63A-SL 1/2"-5.00	0.500	5.00	1.25	15,000
63	578-530A	HSK63A-SL 5/8"-4.00	0.625	4.00	1.50	15,000
63	578-531A	HSK63A-SL 5/8"-5.00	0.625	5.00	1.50	15,000
63	578-535A	HSK63A-SL 3/4"-4.50	0.750	4.50	1.75	12,000
63	578-536A	HSK63A-SL 3/4"-6.00	0.750	6.00	1.75	12,000
63	578-545A	HSK63A-SL 1"-4.50	1.000	4.50	2.25	12,000
63	578-546A	HSK63A-SL 1"-6.00	1.000	6.00	2.25	12,000
63	578-550A	HSK63A-SL 1-1/4"-4.50	1.250	4.50	2.25	8,000
63	578-551A	HSK63A-SL 1-1/4"-6.00	1.250	4.50	2.25	8,000

NOTE: Achieving maximum rotation speed depends on the concentricity and symmetry of the cutting tool and the complete tool assembly.

Set Screws for End Mill Holders



End Mill Holder Size	Order No.	Set Screw Size
1/8"	30116-501	No. 8 - 32UNC x 1/4"
3/16"	30116-502	No. 10 - 32UNF x 1/4"
1/4"	30116-503	1/4" - 28UNF x 1/4"
5/16"	30116-503	1/4" - 28UNF x 1/4"
3/8"	30116-504	3/8" - 24UNF x 8MM
1/2"	30116-505	7/16" - 20UNF x 3/8"
1/2" (478-125-S)	30116-941	3/8" - 24UNF x 8MM
5/8"	30116-506	9/16" - 18UNF x 12MM
5/8" (478-130-S)	30116-961	9/16" - 18UNF x 12MM
3/4"	30116-507	5/8" - 18UNF x 1/2"
3/4" (478-135-S)	30116-972	5/8" - 18UNF x 7/16"
7/8"	30116-507	5/8" - 18UNF x 1/2"
1"	30116-508	3/4" - 16UNF x 11/16"
1" (478-145-S)	30116-982	3/4" - 16UNF x 3/8"
1-1/4"	30116-508	3/4" - 16UNF x 11/16"
1-1/4" (478-150-S)	30116-982	3/4" - 16UNF x 3/8"
1-1/2"	30116-508	3/4" - 16UNF x 11/16"
2"	30116-509	1" - 14UNF x 7/8"

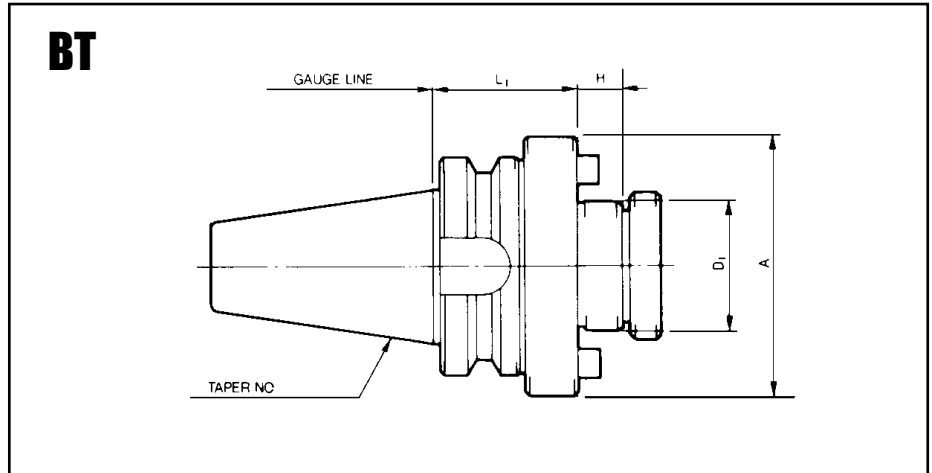
End Mill Holder Size	Order No.	Set Screw Size
6MM	30116-061	M6 x 1P
8MM	30116-081	M8 x 1.25P
10MM	30116-101	M10 x 1.5P
12MM	30116-121	M12 x 1.75P
14MM	30116-121	M12 x 1.75P
16MM	30116-141	M14 x 2.0P
18MM	30116-141	M14 x 2.0P
20MM	30116-161	M16 x 2.0P
25MM	30116-181	M18 x 2.0P
32MM	30116-201	M20 x 2.0P
40MM	30116-201	M20 x 2.0P
42MM	30116-201	M20 x 2.0P

Shell Mill Holders

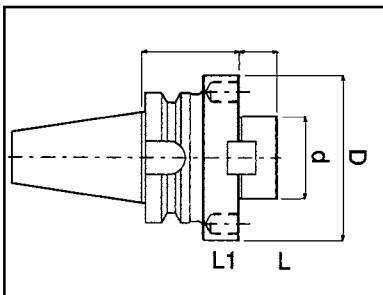
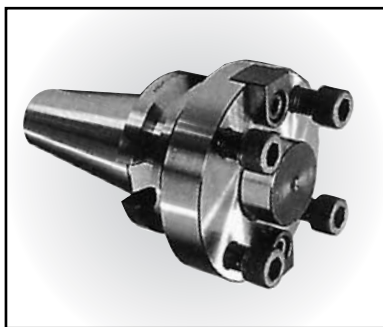


BT Flange Tools

For Parts, see page 1-32



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	H (in)	A (in)
30	479-435	BT30 – SM 3/4 – 30	0.750	1.18	0.69	1.75
30	479-445	BT30 – SM 1 – 45	1.000	1.77	0.69	2.25
35	479-025*	BT35 – SM 1/2 – 30	0.500	1.18	0.55	1.49
35	479-050*	BT35 – SM 1-1/4 – 45	1.250	1.77	0.69	2.75
40	479-135	BT40 – SM 3/4 – 60	0.750	2.36	0.69	1.75
40	479-136	BT40 – SM 3/4 – 101.6	0.750	4.00	0.69	1.75
40	479-145	BT40 – SM 1 – 45	1.000	1.77	0.69	2.25
40	479-146	BT40 – SM 1 – 101.6	1.000	4.00	0.69	2.25
40	479-150	BT40 – SM 1-1/4 – 60	1.250	2.36	0.69	2.75
40	479-155	BT40 – SM 1-1/2 – 60	1.500	2.36	0.94	3.82
45	479-235*	BT45 – SM 3/4 – 45	0.750	1.77	0.69	1.75
45	479-255*	BT45 – SM 1-1/2 – 60	1.500	2.36	0.94	3.82
50	479-335	BT50 – SM 3/4 – 60	0.750	2.36	0.69	1.75
50	479-345	BT50 – SM 1 – 60	1.000	2.36	0.69	2.25
50	479-350	BT50 – SM 1-1/4 – 45	1.250	1.77	0.69	2.75
50	479-355	BT50 – SM 1-1/2 – 45	1.500	1.77	0.94	3.82
50	479-360	BT50 – SM 2 – 60	2.000	2.36	0.94	4.13
50	479-365**	BT50 – FM 2-1/2 – 75	2.500	2.95	1.10	5.06

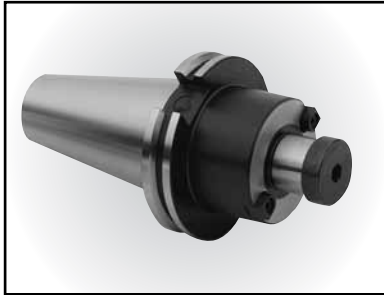


**Face Mill Holders

* While stock is still available

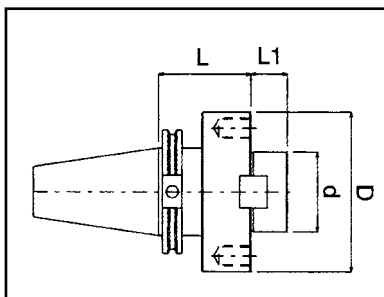
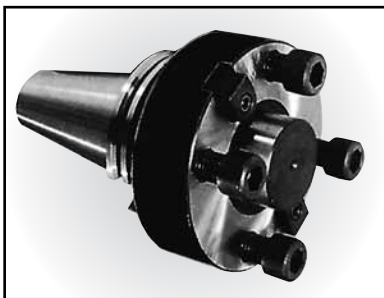
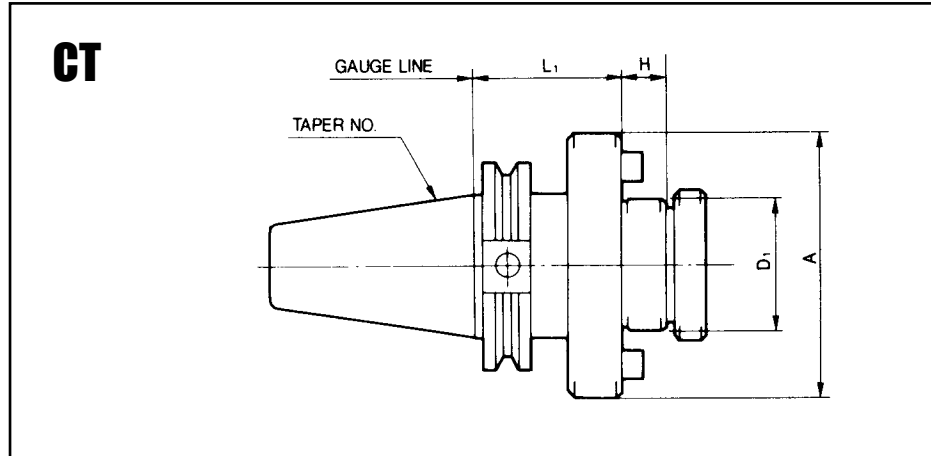
** Includes 4 tapped holes 5/8" - 11UNC on a 4" Bolt Circle

Shell Mill Holders



CT Flange Tools

For Parts, see page 1-32



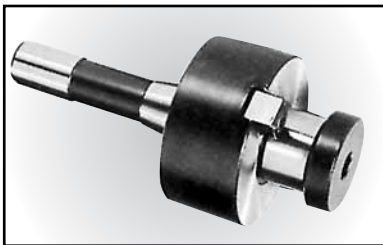
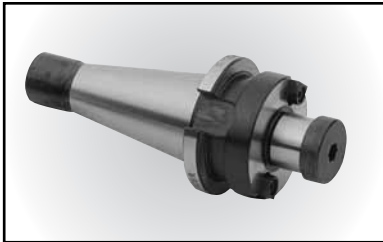
Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	H (in)	A (in)
40	480-135	CT40 - SM 3/4 - 1.75	0.750	1.75	0.69	1.75
40	480-136	CT40 - SM 3/4 - 4.00	0.750	4.00	0.69	1.75
40	480-137	CT40 - SM 3/4 - 6.00	0.750	6.00	0.69	1.75
40	480-145	CT40 - SM 1 - 2.50	1.000	2.50	0.69	2.25
40	480-146	CT40 - SM 1 - 4.00	1.000	4.00	0.69	2.25
40	480-147	CT40 - SM 1 - 6.00	1.000	6.00	0.69	2.25
40	480-150	CT40 - SM 1-1/4 - 2.50	1.250	2.50	0.69	2.75
40	480-151	CT40 - SM 1-1/4 - 4.50	1.250	4.50	0.69	2.75
40	480-155	CT40 - SM 1-1/2 - 2.50	1.500	2.50	0.94	3.82
40	480-156	CT40 - SM 1-1/2 - 4.00	1.500	4.00	0.94	3.82
45	480-245*	CT45 - SM 1 - 2.00	1.000	2.00	0.69	2.25
45	480-250*	CT45 - SM 1-1/4 - 2.50	1.250	2.50	0.69	2.75
45	480-255*	CT45 - SM 1-1/2 - 2.40	1.500	2.40	0.94	3.82
45	480-260*	CT45 - SM 2 - 2.40	2.000	2.40	0.94	4.13
45	**480-265*	CT45 - FM 2-1/2 - 2.40	2.500	2.40	1.13	5.06
50	480-335	CT50 - SM 3/4 - 1.50	0.750	1.50	0.69	1.75
50	480-336	CT50 - SM 3/4 - 3.50	0.750	3.50	0.69	1.75
50	480-337	CT50 - SM 3/4 - 5.50	0.750	5.50	0.69	1.75
50	480-345	CT50 - SM 1 - 2.00	1.000	2.00	0.69	2.25
50	480-346	CT50 - SM 1 - 4.00	1.000	4.00	0.69	2.25
50	480-347	CT50 - SM 1 - 6.00	1.000	6.00	0.69	2.25
50	480-350	CT50 - SM 1-1/4 - 1.50	1.250	1.50	0.69	2.75
50	480-351	CT50 - SM 1-1/4 - 3.50	1.250	3.50	0.69	2.75
50	480-352	CT50 - SM 1-1/4 - 5.50	1.250	5.50	0.69	2.75
50	480-355	CT50 - SM 1-1/2 - 2.40	1.500	2.40	0.94	3.82
50	480-356	CT50 - SM 1-1/2 - 4.00	1.500	4.00	0.94	3.82
50	480-357	CT50 - SM 1-1/2 - 6.00	1.500	6.00	0.94	3.82
50	480-360	CT50 - SM 2 - 2.40	2.000	2.40	0.94	4.13
50	480-361	CT50 - SM 2 - 4.00	2.000	4.00	0.94	4.13
50	480-362	CT50 - SM 2 - 6.00	2.000	6.00	0.94	4.13
50	**480-365	CT50 - FM 2-1/2 - 2.40	2.500	2.40	1.13	5.06
50	**480-366	CT50 - FM 2-1/2 - 4.00	2.500	4.00	1.13	5.06
50	**480-367	CT50 - FM 2-1/2 - 6.00	2.500	6.00	1.13	5.06

* While stock is still available

** Includes 4 tapped holes 5/8" - 11UNC on a 4" Bolt Circle

**Face Mill Holders

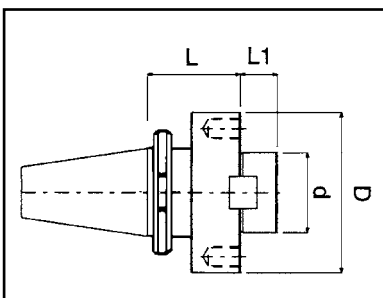
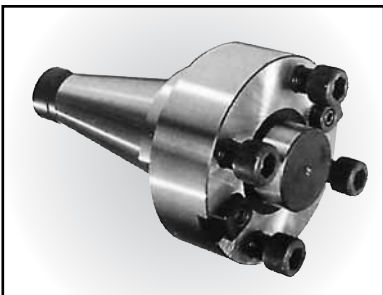
Shell Mill Holders



R8 & NMTB-QC Flange Tools

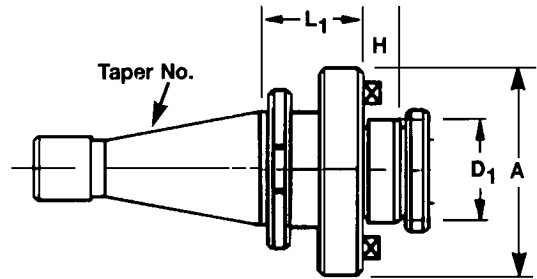
NMTB tool holders are qualified for use with Erickson QC spindles

For Parts, see page 1-32

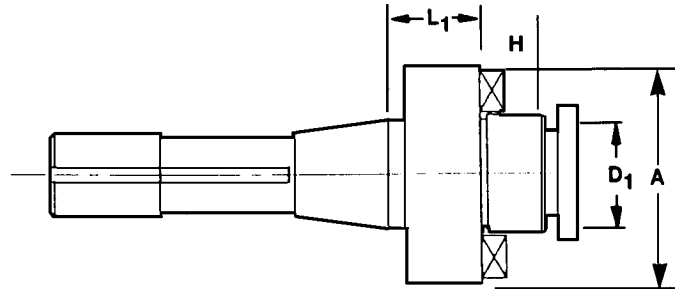


****Face Mill Holders**

NMTB



R8

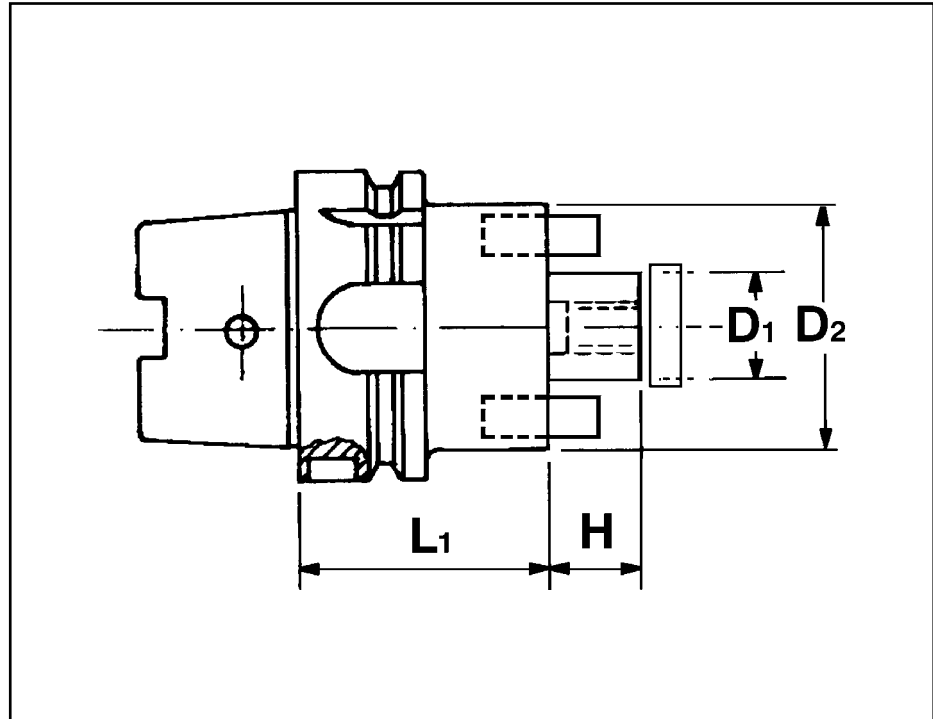


Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	H (in)	A (in)
30	680-035	NMTB30QC-SM 3/4-1.312	0.750	1.312	0.69	1.75
30	680-045	NMTB30QC-SM 1-1.312	1.000	1.312	0.69	2.25
40	680-235	NMTB40QC-SM 3/4-0.875	0.750	0.875	0.69	1.75
40	680-245	NMTB40QC-SM 1- 1.3125	1.000	1.3125	0.69	2.25
40	680-250	NMTB40QC-SM 1-1/4-1.500	1.250	1.500	0.69	2.75
40	680-255	NMTB40QC-SM 1-1/2-1.625	1.500	1.625	0.94	3.82
50	680-435	NMTB50QC-SM 3/4-1.250	0.750	1.250	0.69	1.75
50	680-445	NMTB50QC-SM 1-1.875	1.000	1.875	0.69	2.25
50	680-450	NMTB50QC-SM 1-1/4-1.875	1.250	1.875	0.69	2.75
50	680-455	NMTB50QC-SM 1-1/2-1.875	1.500	1.875	0.94	3.82
50	680-460	NMTB50QC-SM 2-1.875	2.000	1.875	0.94	4.13
50	**680-465	NMTB50QC-FM 2-1/2- 2.50	2-1/2	2.50	1.13	5.06
R8	680-835	R8-SM 3/4	0.750	1.00	0.69	1.75
R8	680-845	R8-SM 1	1.000	1.00	0.69	2.25
R8	680-850	R8-SM 1-1/4	1.250	1.00	0.69	2.75
R8	680-855	R8-SM 1-1/2	1.500	1.75	0.94	3.82

** Includes 4 tapped holes 5/8" - 11UNC on a 4" Bolt Circle

Shell Mill Holders

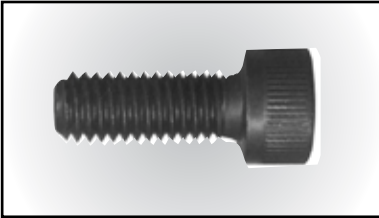
HSK-A Flange Tools



Taper	Order No.	Device Type	D ₁ (in)	L ₁ (in)	H (in)	K _{er} S _z (in)	Max RPM
63A	580-535A	HSK63A-SM 3/4"-3.00	0.750	3.00	0.69"	0.3125"	10,000
63A	580-536A	HSK63A-SM 3/4"-5.00	0.750	5.00	0.69"	0.3125"	8,000
63A	580-545A	HSK63A-SM 1"-3.00	1.000	3.00	0.69"	0.375"	10,000
63A	580-546A	HSK63A-SM 1"-5.00	1.000	5.00	0.69"	0.375"	8,000
63A	580-550A	HSK63A-SM 1-1/4"-3.00	1.250	3.00	0.69"	0.500"	8,000
63A	580-551A	HSK63A-SM 1-1/4"-5.00	1.250	5.00	0.69"	0.500"	6,000

Parts for Techleader Shell Mill Holders

DRIVE KEY SCREWS



Holder Size	Order No.	Drive Key Screws
1/2"	30130-303	M3 x 0.5P x 10MM
3/4"	30130-303	M3 x 0.5P x 10MM
1"	30130-304	M4 x 0.7P x 10MM
1-1/4"	30130-305	M5 x 0.8P x 12MM
1-1/2"	30130-306	M6 x 1.0P x 15MM
2"	30130-308	M8 x 1.25P x 20MM
2-1/2"	30130-308	M8 x 1.25P x 20MM

DRIVE KEY



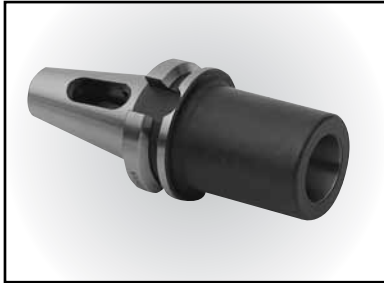
Holder Size	Order No.	Drive Keys
1/2"	30130-111	6.2MM x 8MM
3/4"	30130-112	7.8MM x 8MM
1"	30130-102	9.4MM x 10MM
1-1/4"	30130-106	12.6MM x 12MM
1-1/2"	30130-108	15.8MM x 20MM
2"	30130-109	18.9MM x 22MM
2-1/2"	30130-110	25.3MM x 20MM

ARBOR SCREWS

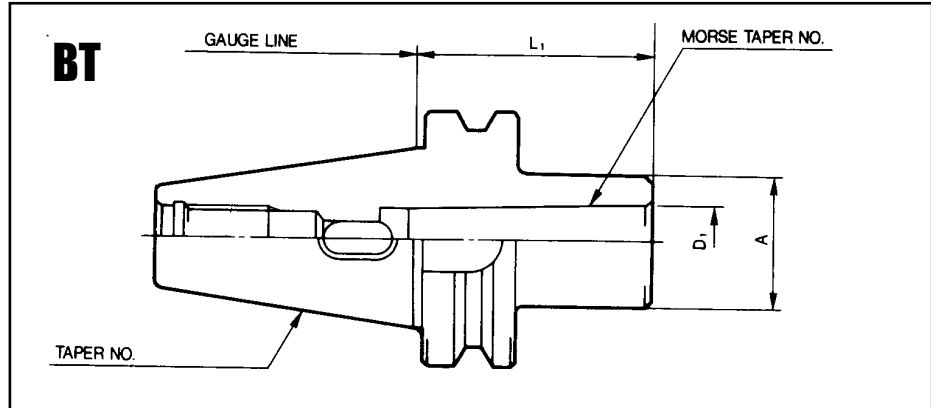


Holder Size	Order No.	Arbor Screw Size
1/2"	30130-207	1/4" - 28UNF
3/4"	30130-208	3/8" - 24UNF
1"	30130-209	1/2" - 20UNF
1-1/4"	30130-210	5/8" - 18UNF
1-1/2"	30130-211	3/4" - 16UNF
2"	30130-212	1" - 14UNF

Morse Taper Holders & Reduction Sleeves



BT Flange Tools



Taper	Order No.	Device Type	M.T. No.	L ₁ (in)	D ₁ (in)	A (in)
30	491-400	BT30 – MTA 1 – 45	1	1.77	.475	0.98
30	491-405	BT30 – MTA 2 – 60	2	2.36	.700	1.26
35	491-000*	BT35 – MTA 1 – 45	1	1.77	.475	0.98
35	491-005*	BT35 – MTA 2 – 60	2	2.36	.700	1.26
35	491-010*	BT35 – MTA 3 – 75	3	2.95	.938	1.58
40	491-100	BT40 – MTA 1 – 45	1	1.77	.475	0.98
40	491-105	BT40 – MTA 2 – 60	2	2.36	.700	1.26
40	491-110	BT40 – MTA 3 – 75	3	2.95	.938	1.58
40	491-115	BT40 – MTA 4 – 90	4	3.54	1.301	1.97
50	491-300	BT50 – MTA 1 – 45	1	1.77	.475	0.98
50	491-305	BT50 – MTA 2 – 45	2	1.77	.700	1.26
50	491-310	BT50 – MTA 3 – 45	3	1.77	.938	1.58
50	491-315	BT50 – MTA 4 – 75	4	2.95	1.301	1.97
50	491-320	BT50 – MTA 5 – 105	5	4.13	1.748	2.76

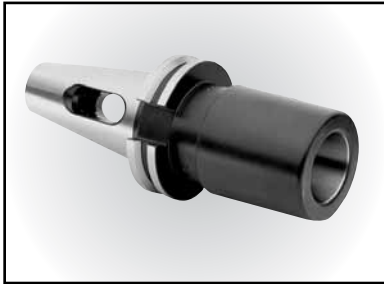
*While stock is still available.



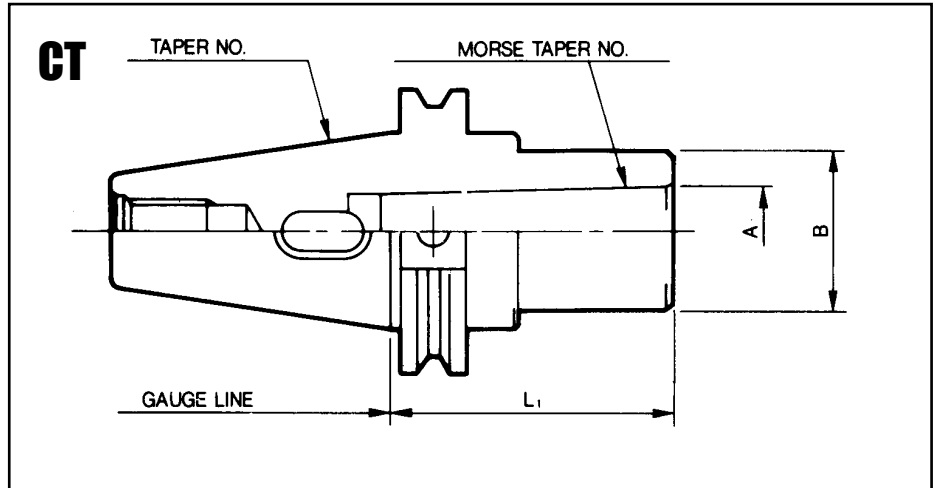
Reduction Sleeve

Order No.	Morse Taper		Overall Length	
	OUTSIDE	INSIDE	MM	INCHES
807-201	2	1	92	3.625
807-301	3	1	99	3.875
807-302	3	2	112	4.375
807-401	4	1	124	4.875
807-402	4	2	124	4.875
807-403	4	3	140	5.500
807-501	5	1	156	6.125
807-502	5	2	156	6.125
807-503	5	3	156	6.125
807-504	5	4	171	6.750

Morse Taper Holders & Reduction Sleeves



CT Flange Tools



Taper	Order No.	Device Type	M.T. No.	L ₁ (in)	A (in)	B (in)
40	492-100	CT40 – MT 1 – 1.50	1	1.50	0.475	1.00
40	492-105	CT40 – MT 2 – 2.00	2	2.00	0.700	1.25
40	492-110	CT40 – MT 3 – 3.00	3	3.00	0.938	1.62
40	492-115	CT40 – MT 4 – 3.50	4	3.50	1.231	2.00
45	492-220*	CT45 – MT 5 – 4.69	5	4.69	1.748	2.75
50	492-300	CT50 – MT 1 – 1.50	1	1.50	0.475	1.00
50	492-305	CT50 – MT 2 – 2.00	2	2.00	0.700	1.25
50	492-310	CT50 – MT 3 – 2.50	3	2.50	0.938	1.62
50	492-315	CT50 – MT 4 – 3.38	4	3.38	1.231	2.00
50	492-320	CT50 – MT 5 – 4.00	5	4.00	1.748	2.75

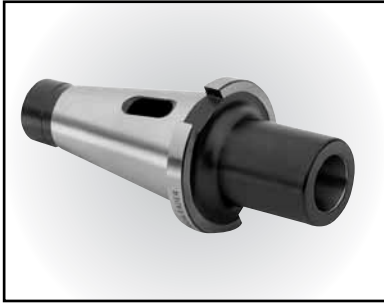
*While stock is still available.



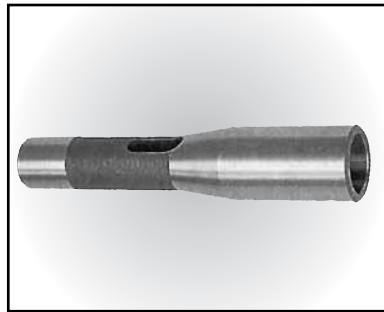
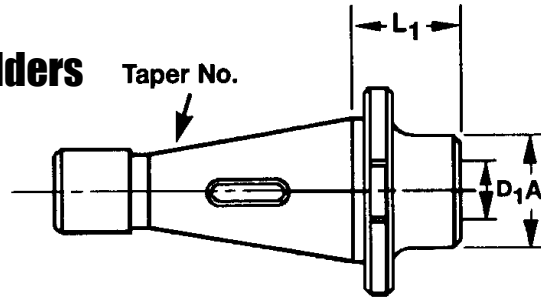
Reduction Sleeve

Order No.	Morse Taper		Overall Length	
	OUTSIDE	INSIDE	MM	INCHES
807-201	2	1	92	3.625
807-301	3	1	99	3.875
807-302	3	2	112	4.375
807-401	4	1	124	4.875
807-402	4	2	124	4.875
807-403	4	3	140	5.500
807-501	5	1	156	6.125
807-502	5	2	156	6.125
807-503	5	3	156	6.125
807-504	5	4	171	6.750

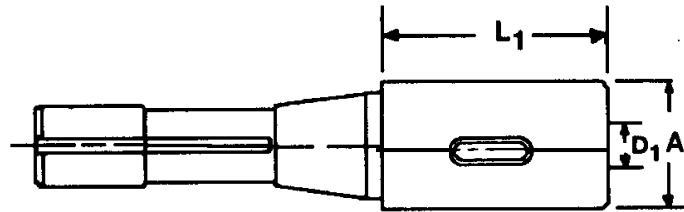
Morse Taper Holders



NMTB Taper to Morse Taper Holders



R8 to Morse Taper Holders

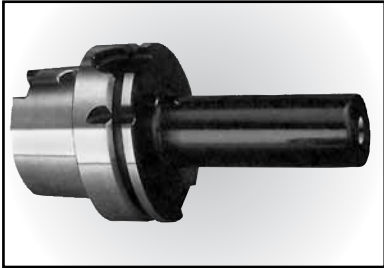


R8 & NMTB-QC Flange Tools

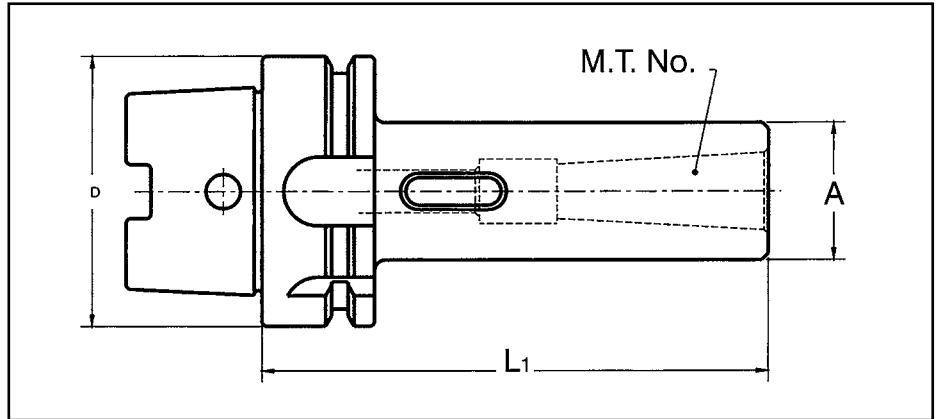
NMTB tool holders are qualified for use with Erickson QC spindles

Taper	Order No.	Device Type	L ₁ (in)	D ₁ (in)	A (in)
30	692-000	NMTB30QC-MT 1-1.00	1.00	0.475	0.98
30	692-005	NMTB30QC-MT 2-2.125	2.125	0.700	1.26
30	692-010	NMTB30QC-MT 3-2.8125	2.8125	0.938	1.58
40	692-200	NMTB40QC-MT 1-0.9375	0.9375	0.475	0.98
40	692-205	NMTB40QC-MT 2-1.750	1.750	0.700	1.26
40	692-210	NMTB40QC-MT 3-2.250	2.250	0.938	1.58
40	692-215	NMTB40QC-MT 4-3.00	3.00	1.301	1.97
50	692-405	NMTB50QC-MT 2-1.875	1.875	0.700	1.26
50	692-410	NMTB50QC-MT 3-2.375	2.375	0.938	1.58
50	692-415	NMTB50QC-MT 4-3.250	3.250	1.301	1.97
50	692-420	NMTB50QC-MT 5-4.625	4.625	1.748	2.76
R8	692-800	R8-MT 1	—	0.475	0.98
R8	692-805	R8-MT 2	—	0.700	1.26
R8	692-810	R8-MT 3	—	0.938	1.58

Morse Taper Holders



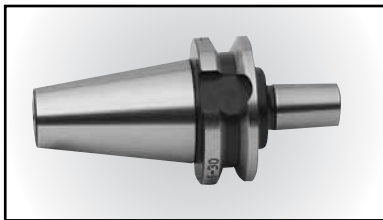
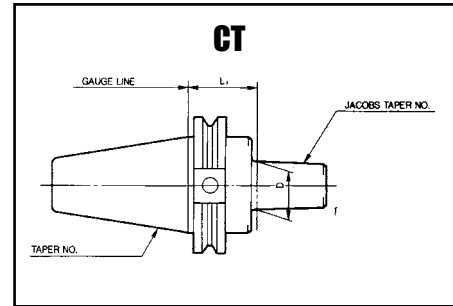
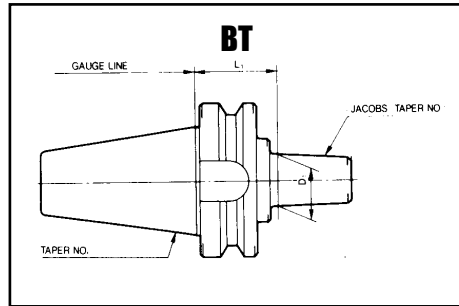
**HSK-A
Flange Tools**



Taper	Order No.	Device Type	M.T. No.	L ₁ (in)	A (in)
63	592-500A	HSK63A-MT1-100	1	3.94	0.984
63	592-505A	HSK63A-MT2-120	2	4.72	1.26
63	592-510A	HSK63A-MT3-140	3	5.51	1.57
63	592-515A	HSK63A-MT4-160	4	6.30	1.89
100	592-705A	HSK100A-MT2-120	2	4.72	1.26
100	592-710A	HSK100A-MT3-150	3	5.90	1.57
100	592-715A	HSK100A-MT4-170	4	6.69	1.89
100	592-720A	HSK100A-MT5-200	5	7.87	2.48

Jacobs Taper Holders

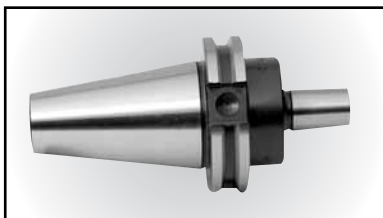
BT & CT Flange Tools



BT Flange Tool

See pages 1-44 to 1-53
for drill chuck
information

Taper	Order No.	Device Type	J.T. No.	L ₁ (in)	D ₁ (in)
30	489-400	BT30 – JTA1 – 30	1	1.18	0.384
30	489-405	BT30 – JTA2 – 30	2	1.18	0.559
30	489-415	BT30 – JTA3 – 30	3	1.18	0.811
30	489-430	BT30 – JTA6 – 30	6	1.18	0.676
30	489-435	BT30 – JTA33 – 30	33	1.18	0.624
35	489-000*	BT35 – JTA1 – 30	1	1.18	0.384
35	489-015*	BT35 – JTA3 – 30	3	1.18	0.811
40	489-100	BT40 – JTA1 – 45	1	1.77	0.384
40	489-105	BT40 – JTA2 – 45	2	1.77	0.559
40	489-115	BT40 – JTA3 – 45	3	1.77	0.811
40	489-130	BT40 – JTA6 – 45	6	1.77	0.676
40	489-135	BT40 – JTA33 – 45	33	1.77	0.624
45	489-205*	BT45 – JTA2 – 45	2	1.77	0.559
45	489-215*	BT45 – JTA3 – 45	3	1.77	0.811
45	489-230*	BT45 – JTA6 – 45	6	1.77	0.676
50	489-300	BT50 – JTA1 – 45	1	1.77	0.384
50	489-305	BT50 – JTA2 – 45	2	1.77	0.559
50	489-315	BT50 – JTA3 – 45	3	1.77	0.811
50	489-330	BT50 – JTA6 – 45	6	1.77	0.676
50	489-335	BT50 – JTA33 – 45	33	1.77	0.624



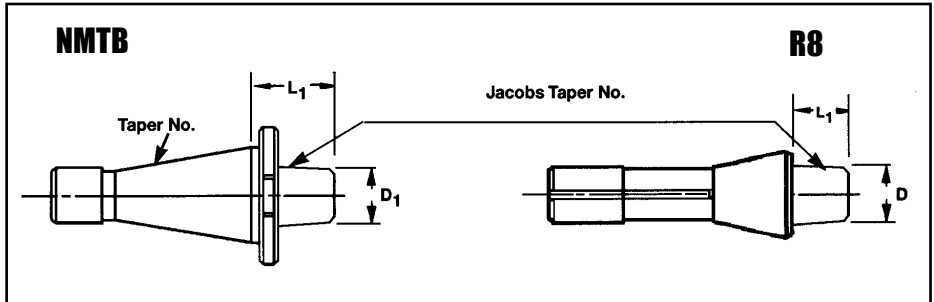
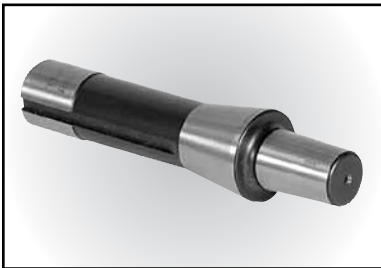
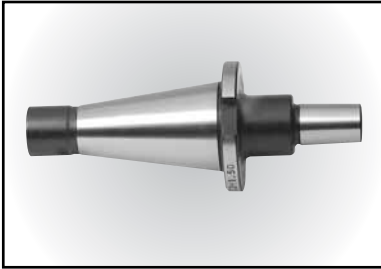
CT Flange Tool

See pages 1-44 to 1-53
for drill chuck
information

Taper	Order No.	Device Type	J.T. No.	L ₁ (in)	D (in)
40	490-100	CT40 – JT1 – 1.50	1	1.50	0.559
40	490-105	CT40 – JT2 – 1.50	2	1.50	0.559
40	490-115	CT40 – JT3 – 1.50	3	1.50	0.811
40	490-120	CT40 – JT4 – 1.50	4	1.50	1.124
40	490-130	CT40 – JT6 – 1.50	6	1.50	0.676
40	490-135	CT40 – JT33 – 1.50	33	1.50	0.624
45	490-205*	CT45 – JT2 – 1.50	2	1.50	0.559
45	490-215*	CT45 – JT3 – 1.50	3	1.50	0.811
45	490-235*	CT45 – JT33 – 1.50	33	1.50	0.624
50	490-305	CT50 – JT2 – 1.50	2	1.50	0.559
50	490-315	CT50 – JT3 – 1.50	3	1.50	0.811
50	490-320	CT50 – JT4 – 1.50	4	1.50	1.124
50	490-330	CT50 – JT6 – 1.50	6	1.50	0.676
50	490-335	CT50 – JT33 – 1.50	33	1.50	0.624

* While stock is still available.

Jacobs Taper Holders



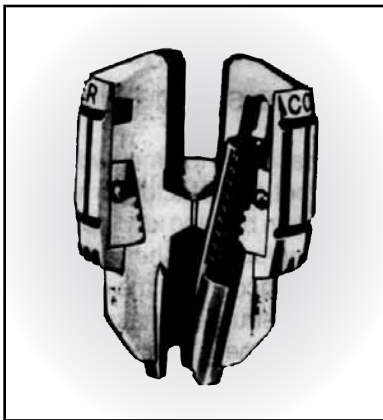
R8 & NMTB-QC Flange Tools

**NMTB chuck flanges are
qualified for use with
Erickson QC spindles**

**See pages 1-44 to 1-53
for drill chuck information**

Taper	Order No.	Device Type	J.T. No.	L ₁
30	690-000	NMTB30QC – JT1-1.50	1	1.50
30	690-005	NMTB30QC – JT2-1.50	2	1.50
30	690-015	NMTB30QC – JT3-1.50	3	1.50
30	690-030	NMTB30QC – JT6-1.50	6	1.50
30	690-035	NMTB30QC – JT33-1.50	33	1.50
40	690-200	NMTB40QC – JT1-1.50	1	1.50
40	690-205	NMTB40QC – JT2-1.50	2	1.50
40	690-215	NMTB40QC – JT3-1.50	3	1.50
40	690-230	NMTB40QC – JT6-1.50	6	1.50
40	690-235	NMTB40QC – JT33-1.50	33	1.50
50	690-405	NMTB50QC – JT2-2.00	2	2.00
50	690-415	NMTB50QC – JT3-2.00	3	2.00
50	690-420	NMTB50QC – JT4-2.00	4	2.00
50	690-425	NMTB50QC – JT5-2.00	5	2.00
50	690-430	NMTB50QC – JT6-2.00	6	2.00
50	690-435	NMTB50QC – JT33-2.00	33	2.00
R8	690-800	R8 – JT1	1	
R8	690-805	R8 – JT2	2	
R8	690-815	R8 – JT3	3	
R8	690-830	R8 – JT6	6	
R8	690-835	R8 – JT33	33	

Drill Chucks Ball Bearing



Extra accuracy, extra gripping power, for extra heavy duty work

The ball bearing super chuck is especially designed for EXTRA HEAVY DUTY drilling applications on production drilling machines, jig borers, milling machines, lathes and radials. The ideal choice for those jobs that require close tolerance drilling. The ball thrust bearing reduces friction in the chuck's closing mechanism, so the operator can apply more gripping power on the twist drill shank.

Ball Bearing Super Drill Chucks

Order No.	Chuck Model	Capacity	Tapered Mount	Uses
610-001	8-1/2N	0-1/4	2SJT	K30
610-002	11N	0-3/8	2JT	K32
610-003	14N	0-1/2	3JT	K3
610-004	16N	1/8-5/8	3JT	K4
610-005	18N	1/8-3/4	4JT	K4
610-006	20N	3/8-1	5JT	K5

Parts for Ball Bearing Key Type Super Chucks (Older Models)



JAWS & NUTS UNITS		SLEEVE		THRUST RACE/BALLS	
Order No.	Part No.	Order No.	Part No.	Order No.	Part No.
610-208	U8-1/2N	610-308	S8-1/2N	610-408	T8-1/2
610-211	U11-N	610-311	S-11N	610-411	T-11
610-214	U14-N	610-314	S-14N	610-414	T-14
610-216	U16-N	610-316	S-16N	610-416	T-16
610-218	U18-N	610-318	S-18N	610-418	T-18
610-220	U20-N	610-320	S-20N	610-420	T-20

Jacobs Ball Bearing Super Drill Chucks

Service Kits (Newer Models)

Order No.	Part No.
610-30343	SC 8-1/2 N
610-30344	SC 11 N
610-30345	SC 14 N
610-30346	SC 16 N
610-30347	SC 18 N
610-30348	SC 20 N

Service kits includes:

Jaws & nuts unit, caged bearing and thrust washer.

These service kits are for new Jacobs super chuck ball bearing chuck. On these new chucks they have a service kit number on the chuck nose.

Drill Chucks Plain Bearing



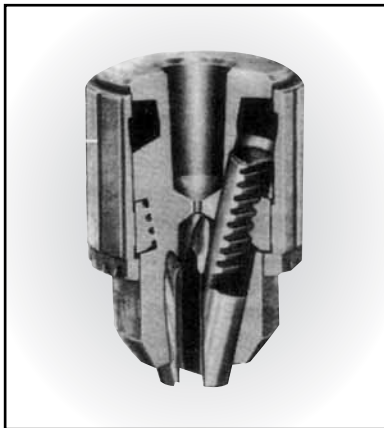
The Standard in the Power Tool Industry.

Jacobs is the most widely used drill chuck in the world. Power tool manufacturers worldwide have settled on the Jacobs plain bearing key type drill chucks as the standard for original equipment. The reason is simple: no other drill chuck offers the accuracy, the grip and the strength that Jacobs' internal construction makes possible. This fine chuck is offered for both medium duty or heavy duty portable, bench or floor type power tools in a wide range of capacities for either threaded or taper mounted spindles.

Medium Duty Models

* Equipped with a threaded locking collar which has a 1-1/16-20 thd.

Order No.	Chuck Model	Capacity	Tapered Mount	Uses Key
612-002*	0	0-5/32	0 JT	K0
612-009*	1A	0-1/4	1 JT	K1
612-035	2A	0-3/8	2 JT	K2
613-030	31-01	0-3/8	1 JT	K30
613-031	31-02	0-3/8	2 JT	K30
612-050	33	5/64-1/2	33 JT	K32
612-052	3326A	5/64-1/2	5/8 STR	K32
612-054	33KD	5/64-1/2	33 JT	K32



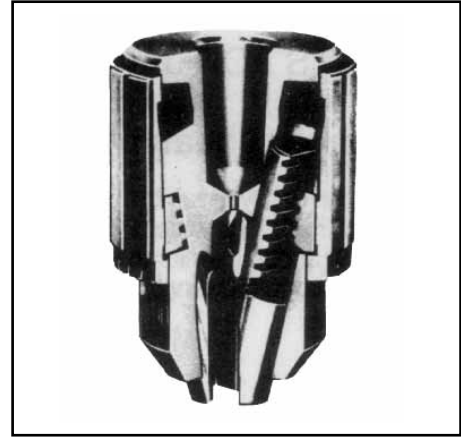
Taper Mounted Industrial Chucks

Heavy Duty Models

Order No.	Chuck Model	Capacity	Tapered Mount	Uses Key
612-065	34-02	0-1/2	2 JT	K3
612-067	34-33	0-1/2	33 JT	K3
612-068*	34-33C	0-1/2	33 JT	K3
613-075	34-06	0-1/2	6 JT	K3
613-086	3A	1/8-5/8	3 JT	K3
613-100	36	.180-.800	3 JT	K4
613-088	3KD	1/8-5/8	3 JT	K3
613-089	3PD	1/8-5/8	3 JT	K3
613-105	36KD	.180-.800	3 JT	K4
613-106	36PD	.180-.800	3 JT	K4

Drill Chucks Plain Bearing

Thread Mounted Industrial Chucks



Medium Duty Models

* Equipped with a threaded locking collar which has a 1-1/16-20 thd.

Order No.	Chuck Model	Capacity	Threaded Mount	Uses Key
612-003*	OB5/16	0-5/32	5/16-24	K0
612-006*	1B3/8	0-1/4	3/8-24	K1
612-030	41BA3/8	0-3/8	3/8-24	K30
612-031*	41BA3/8S	0-3/8	3/8-24	K30
612-032	41BA1/2	0-3/8	1/2-20	K30
612-036	2BA3/8	0-3/8	3/8-24	K2
612-056	33BA3/8	5/64-1/2	3/8-24	K32
612-059	33BA1/2	5/64-1/2	1/2-20	K32
612-060	33BA5/8	5/64-1/2	5/8-16	K32



Heavy Duty Models

Order No.	Chuck Model	Capacity	Threaded Mount	Uses Key
613-017	7BA3/8	0-1/4	3/8-24	K7
613-041	32BA1/2	0-3/8	1/2-20	K32
613-091	3B5/8	0.25-5/8	5/8-16	K3
613-101	36B5/8	.188-.800	5/8-16	K4
613-102	36B3/4	.188-.800	3/4-16	K4




Chuck Keys & Spare Parts

Parts for Jacobs Chuck Keys and Spare Parts

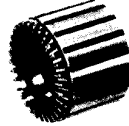
Interchangeable sleeves, jaws, nuts

You can easily repair the Jacobs plain bearing type chuck if you buy the necessary parts from your Jacobs distributor. We exercise careful control in the manufacture of Jacob chucks to guarantee the complete inter-changeability of parts. Instructions for servicing Jacobs chucks are shown on page 1-28.



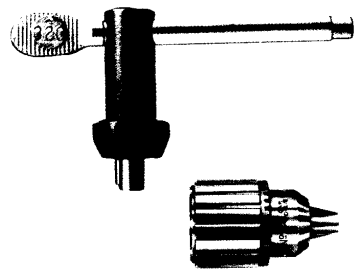
* Small Sleeve

Order No.	*Jaws & Nut Unit
610-203	U3
610-233	U33
610-234	U34
610-236	U36

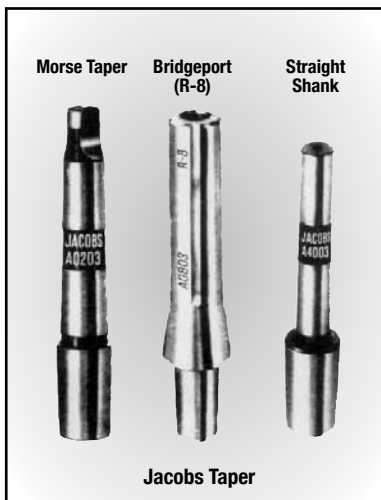


Order No.	Sleeve
610-303	S3
610-333	S33
610-334	S34
610-336	S36

Jacobs Chuck Keys



Order No.	Key No.	Chuck Models
610-100	K0	0 Series
610-100M	K0M	0 Series Stainless
610-101	K1	1 Series
610-101M	K1M	1 Series Stainless
610-102	K2	2 Series
610-103	K3	3, 6 Series & 14N
610-103C	K3C	633C & 633D
610-104	K4	36, 37 Series & 16N, 18N
610-105	K5	20N
610-107	K7	7 Series
610-130	K30	30, 31 Series & 8-1/2N
610-132	K32	32, 33 Series & 11N



Drill Chuck Arbors

Taper Shank Arbors

* Techleader brand arbors

Shank Taper	Jacobs Taper						
	1	2	3	4	5	6	33
*#1 MORSE	620-101	620-102	N/A	N/A	N/A	620-106	620-133
*#2 MORSE	620-201	620-202	620-203	620-204	N/A	620-206	620-233
*#3 MORSE	620-301	620-302	620-303	620-304	620-305	620-306	620-333
*#4 MORSE	N/A	620-402	620-403	620-404	620-405	620-406	620-433
*#5 MORSE	N/A	N/A	620-503	620-504	620-505	N/A	N/A
*R8 (BRIDGEPORT)	690-800	690-805	690-815	N/A	N/A	690-830	690-835
*NMTB30QC	690-000	690-005	690-015	N/A	N/A	690-030	690-035
*NMTB40QC	690-200	690-205	690-215	N/A	N/A	690-230	690-235
*NMTB50QC	N/A	690-405	690-415	690-420	690-425	690-430	690-435

Straight Shank Arbors

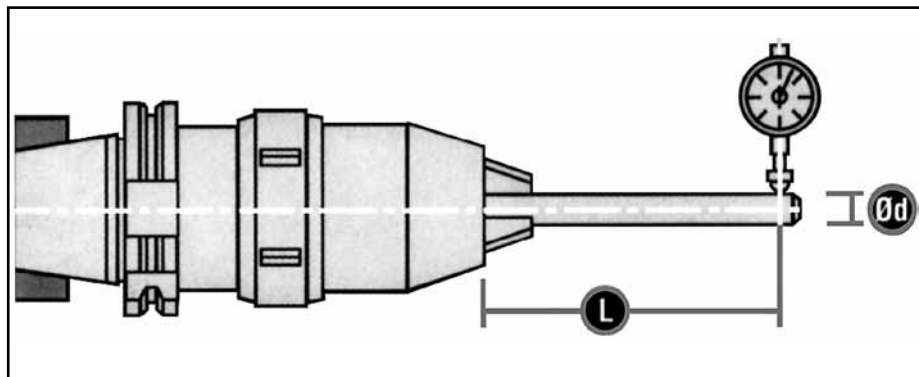
Shank Diameter & Length	Jacobs Taper					
	0	1	2	3	6	33
1/2 x 2-1/2	624-000	624-001	624-002	624-003	624-006	624-033
5/8 x 2-1/2	N/A	624-101	624-102	624-103	624-106	624-133
3/4 x 3	N/A	N/A	624-202	624-203	624-206	624-233
1 x 3	N/A	N/A	N/A	624-303	624-306	N/A

Always specify Techleader/Jacobs arbors to secure the finest performance from Jacobs drill and tap chucks. They are precision ground to our master gauges and guarantee the finest possible accuracy and fit.

CNC High Performance NPU-Planet Precision Keyless Drill Chucks



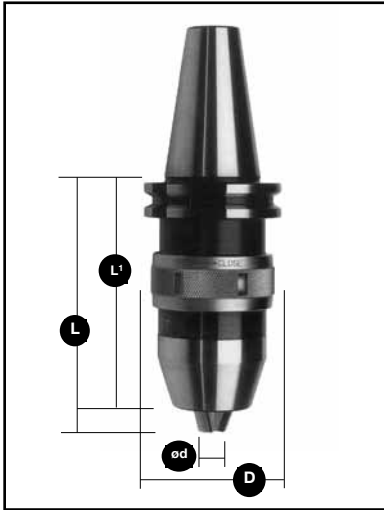
- Innovative "Monoblock" (one piece) design – patented.
- No self tightening system, allowing right hand and left hand rotations. Spanner wrench is supplied for final tightening to avoid loosening of tool.
- Gripping torque of 110 Newton/meter or more.
- Internal coolant supply forms B and AD in same piece. Allow maximum coolant pressure of 50 bar.
- Maximum total integrated run-out of 0.03mm/0.0012" guaranteed.
- Pre-balanced until 8,000 rpm. Optional balance service until 20,000 rpm related to G6.3 balance degree.
- Shanks available: CT, BT, HSK & DIN-69871 A/B/AD. Other shank types available on request.



Rule for run-out evaluation

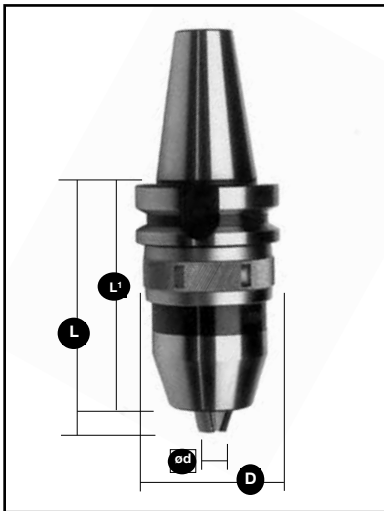
Model	Capacity mm	Capacity inches	Ød mm	Ød inches	L mm	L inches	Maximum Runout mm	Maximum Runout inches
PS-13	1-13	0.031-0.500	5	0.197	55	2.17	0.030 mm	0.0012"
PS-13			10	0.394	55	2.17		
PS-13			13	0.512	75	2.95		
PS-16	3-16	0.125-0.625	5	0.197	55	2.17	0.030 mm	0.0012"
PS-16			10	0.394	55	2.17		
PS-16			16	0.630	80	3.15		

CNC High Performance NPU-Planet Precision Keyless Drill Chucks



CT-FLANGE

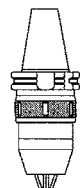
Taper	Order No.	Device Type	Capacity Range ød				Dimensions					
			Minimum		Maximum		Closed (L)		Open L ₁		Sleeve dia (D)	
			inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
40	486-208	CT40-PS08A	0.000	0	0.3125	8	3.90	99	3.62	92	1.57	40
40	486-209	CT40-PS08AD	0.000	0	0.3125	8	3.90	99	3.62	92	1.57	40
40	486-210	CT40-PS08B	0.000	0	0.3125	8	3.90	99	3.62	92	1.57	40
40	486-213	CT40-PS13A	0.031	1	0.500	13	4.92	125	4.45	113	2.25	57
40	486-214	CT40-PS13AD	0.031	1	0.500	13	4.92	125	4.45	113	2.25	57
40	486-215	CT40-PS13B	0.031	1	0.500	13	4.92	125	4.45	113	2.25	57
40	486-216	CT40-PS16A	0.125	3	0.625	16	5.00	127	4.53	115	2.25	57
40	486-217	CT40-PS16AD	0.125	3	0.625	16	5.00	127	4.53	115	2.25	57
40	486-218	CT40-PS16B	0.125	3	0.625	16	5.00	127	4.53	115	2.25	57
50	486-413	CT50-PS13A	0.031	1	0.500	13	4.13	105	3.66	93	2.25	57
50	486-414	CT50-PS13AD	0.031	1	0.500	13	4.13	105	3.66	93	2.25	57
50	486-415	CT50-PS13B	0.031	1	0.500	13	4.13	105	3.66	93	2.25	57
50	486-416	CT50-PS16A	0.125	3	0.625	16	4.21	107	3.78	96	2.25	57
50	486-417	CT50-PS16AD	0.125	3	0.625	16	4.21	107	3.78	96	2.25	57
50	486-418	CT50-PS16B	0.125	3	0.625	16	4.21	107	3.78	96	2.25	57



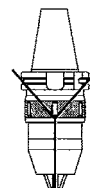
BT-FLANGE

Taper	Order No.	Device Type	Capacity Range ød				Dimensions					
			Minimum		Maximum		Closed (L)		Open L ₁		Sleeve dia (D)	
			inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
40	485-208	BT40-PS08A	0.000	0	0.3125	8	3.23	82	2.95	75	1.57	40
40	485-209	BT40-PS08AD	0.000	0	0.3125	8	3.23	82	2.95	75	1.57	40
40	485-210	BT40-PS08B	0.000	0	0.3125	8	3.23	82	2.95	75	1.57	40
40	485-213	BT40-PS13A	0.031	1	0.500	13	4.33	110	3.90	99	2.25	57
40	485-214	BT40-PS13AD	0.031	1	0.500	13	4.33	110	3.90	99	2.25	57
40	485-215	BT40-PS13B	0.031	1	0.500	13	4.33	110	3.90	99	2.25	57
40	485-216	BT40-PS16A	0.125	3	0.625	16	4.41	112	3.98	101	2.25	57
40	485-217	BT40-PS16AD	0.125	3	0.625	16	4.41	112	3.98	101	2.25	57
40	485-218	BT40-PS16B	0.125	3	0.625	16	4.41	112	3.98	101	2.25	57
50	485-413	BT50-PS13A	0.031	1	0.500	13	4.80	122	4.33	110	2.25	57
50	485-414	BT50-PS13AD	0.031	1	0.500	13	4.80	122	4.33	110	2.25	57
50	485-415	BT50-PS13B	0.031	1	0.500	13	4.80	122	4.33	110	2.25	57
50	485-416	BT50-PS16A	0.125	3	0.625	16	4.76	121	4.33	110	2.25	57
50	485-417	BT50-PS16AD	0.125	3	0.625	16	4.76	121	4.33	110	2.25	57
50	485-418	BT50-PS16B	0.125	3	0.625	16	4.76	121	4.33	110	2.25	57

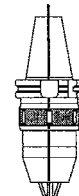
INTERNAL COOLING STYLES



A: NONE



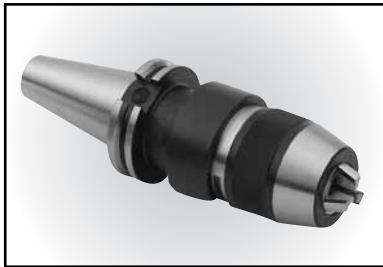
B: LATERAL



AD: CENTRAL

DIN 69871-B

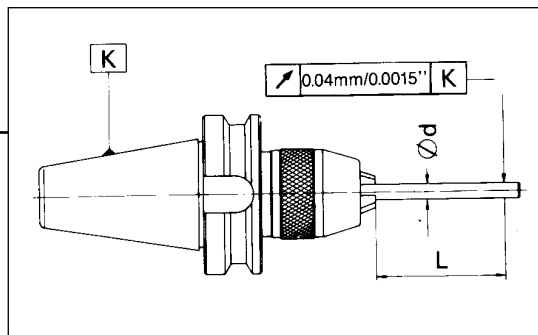
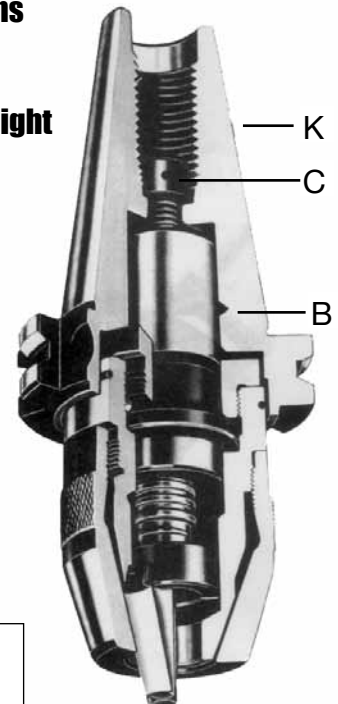
NPU CNC Precision Keyless Drill Chucks



- Supplementary Gripping Torque
- Self Tightening

By light key tightening, Techleader obtains 2.5 to 3 times increased gripping torque compared to tightening by hand

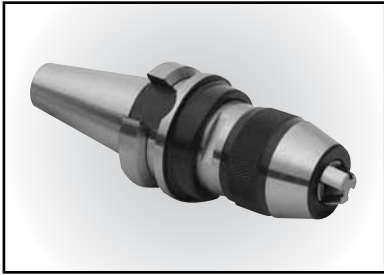
- Use in high speed CNC machines with right hand rotation and instant spindle stop.
- Use on boring, drilling, milling, counterboring, etc. operations with heavy penetration.



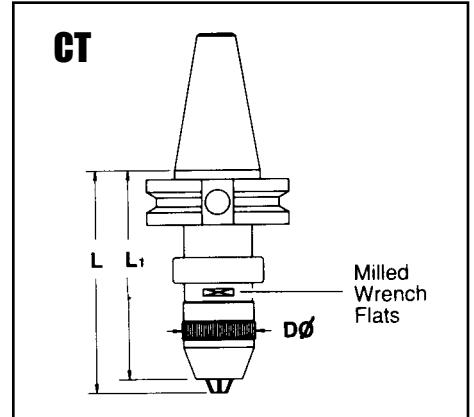
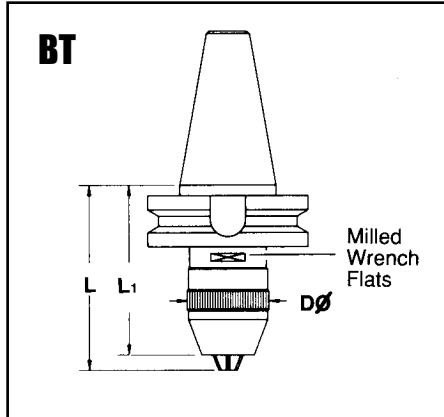
HIGH CONCENTRICITY

Model	Ø d mm	L mm	Maximum Runout	
			mm	inches
NPU₀₈	3	35	0.040 mm	0.0016"
	6			
	8	50		
NPU₁₃	5	55	0.040 mm	0.0016"
	10			
	13	75		
NPU₁₆	5	55	0.040 mm	0.0016"
	10			
	16	80		

NPU CNC Precision Keyless Drill Chucks



BT Flange



Taper	Order No.	Device Type	Capacity Range				Dimensions					
			Minimum		Maximum		Closed (L)		Open L ₁		Sleeve dia (D)	
			inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30	487-008	BT30-NPU-08	0	0	0.315	8	3.11	79	2.87	73	1.46	37
30	487-010	BT30-NPU-10	0	0	0.394	10	3.50	89	3.82	97	1.69	43
40	487-208	BT40-NPU-08	0	0	0.315	8	3.31	84	3.07	78	1.46	37
40	487-209	BT40-NPU-08L	0	0	0.315	8	4.49	114	4.25	108	1.46	37
40	487-210	BT40-NPU-10	0	0	0.394	10	3.11	79	3.42	87	1.69	43
40	487-211	BT40-NPU-10L	0	0	0.394	10	4.29	109	4.60	117	1.69	43
40	487-213	BT40-NPU-13	0.039	1	0.512	13	3.82	97	3.39	86	1.89	48
40	487-214	BT40-NPU-13L	0.039	1	0.512	13	5.79	147	5.35	136	1.89	48
40	487-216	BT40-NPU-16	0.118	3	0.630	16	4.57	116	4.13	105	2.17	55
45	487-313	BT45-NPU-13	0.039	1	0.512	13	4.06	103	3.62	92	1.89	48
50	487-413	BT50-NPU-13	0.039	1	0.512	13	4.25	108	3.82	97	1.89	48
50	487-416	BT50-NPU-16	0.118	3	0.630	16	4.17	106	3.74	95	2.17	55
50	487-417	BT50-NPU-16L	0.118	3	0.630	16	6.14	156	5.71	145	2.17	55



CT Flange

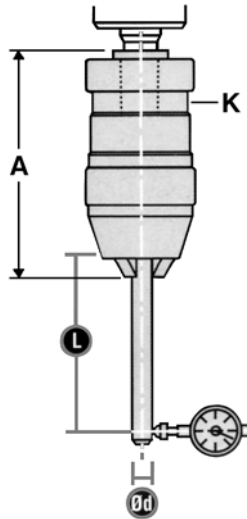
Taper	Order No.	Device Type	Capacity Range				Dimensions					
			Minimum		Maximum		Closed (L)		Open L ₁		Sleeve dia (D)	
			inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30	488-008	CT30-NPU-08	0	0	0.315	8	4.21	107	3.98	101	1.46	37
40	488-208	CT40-NPU-08	0	0	0.315	8	3.46	88	3.23	82	1.46	37
40	488-213	CT40-NPU-13	0.039	1	0.512	13	4.96	126	4.53	115	1.89	48
40	488-216	CT40-NPU-16	0.118	1	0.630	16	4.21	107	3.78	96	1.89	48
45	488-313	CT45-NPU-13	0.118	3	0.630	16	5.16	131	4.72	120	2.17	55
50	488-413	CT50-NPU-13	0.039	1	0.512	13	4.21	107	3.78	96	1.89	48
50	488-416	CT50-NPU-16	0.118	3	0.630	16	4.13	105	3.70	94	2.17	55

SP Precision Keyless Drill Chucks



- Self tightening feature automatically increases gripping force proportional to increased torque to prevent tool shank slippage. For right hand rotation applications only (left hand rotation available on request).
- Permits use on high accuracy drill presses, jig borers, milling machines and production drilling equipment.
- All components exposed to wear are completely hardened to maintain accuracy and extend chuck life.
- 100% of SP drill chucks are individually controlled to not exceed a maximum total integrated run-out of 0.04 mm/0.0015".
- Holding capacities up to 16 mm. diameter bits.
- Mounts available: DIN-238 tapers, Jacobs tapers, UNF threads.

SP - High Precision Model

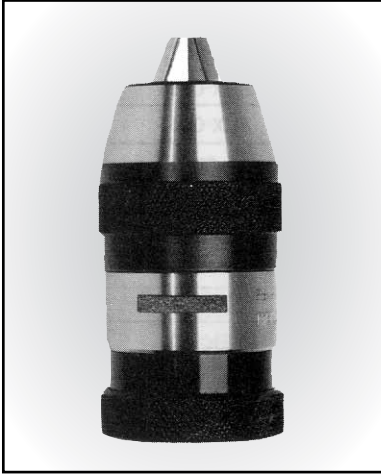


Rule for run-out evaluation

Model	Capacity mm	Ød mm	L mm	Maximum Runout
SP-06	0-6.5	3 6	35 35	0.040 mm
0.0015" SP-08	0-8	3 6 8	35 35 50	0.040 mm 0.0015"
SP-10	0-10	3 6 10	35 35 60	0.040 mm 0.0015"
SP-13	0-13	5 10 13	55 55 75	0.040 mm 0.0015"
SP-16	0-16	5 10 16	55 55 80	0.040 mm

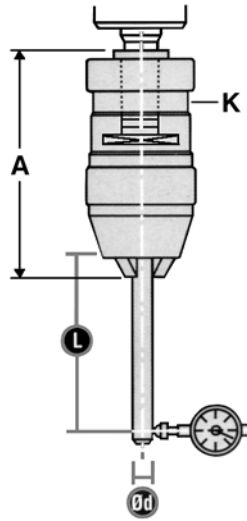
Order No.	Device Type	Capacity Range				Dimensions			
		Minimum		Maximum		Taper Mount K	Dia MM D	A	
		inches	mm	inches	mm			Min. MM	Max. MM
616-506	SP03J0	0	0	0.118	3	JT0	24.5	44	47.5
616-507	SP03J1	0	0	0.118	3	JT1	24.5	44	47.5
616-515	SPO6J1	0	0	0.236	6	JT1	31	62	70
616-524	SPO8J1	0	0	0.315	8	JT1	37	67	74
616-525	SP08J25	0	0	0.315	8	J2S	37	67	74
616-530	SP10J33	0	0	0.394	10	JT33	41	81	89
616-531	SP10J2	0	0	0.394	10	JT2	41	81	89
616-540	SP13J33	0.039	1	0.512	13	JT33	46	88	99
616-541	SP13J2	0.039	1	0.512	13	JT2	46	88	99
616-542	SP13J6	0.039	1	0.512	13	JT6	46	88	99
616-550	SP16J6	0.118	3	0.630	16	JT6	55	95	107

SPX Precision Keyless Drill Chucks - High Torque



- Self tightening feature automatically increases gripping force proportional to increased torque to prevent tool shank slippage. For right hand rotation applications only (left hand rotation available on request).
- For use on CNC machining centers in drilling, boring, counter-boring and milling operations requiring heavy penetration.
- Furnished with milled wrench flats and spanner wrench to allow application of supplementary gripping torque. Light tightening increases gripping torque up to 3 times higher than hand tightening.
- Resist tool loosening on high speed machines with instant spindle stop.
- 100% of SPX drill chucks are individually controlled to not exceed a maximum total integrated run-out of 0.04 mm/0.0015".
- Holding capacities up to 16 mm. diameter bits.
- Mounts available: DIN-238 tapers, Jacobs tapers.

SPX - High Torque & Precision Model



Rule for run-out evaluation

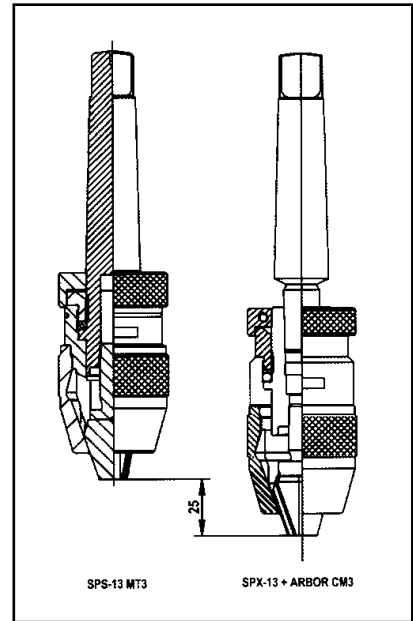
Model	Capacity mm	Ød mm	L mm	Maximum Runout
SPX-06	0-6.5	3	35	0.040 mm 0.0015"
		6	35	
SPX-08	0-8	3	35	0.040 mm 0.0015"
		6	35	
		8	50	
SPX-10	0-10	3	35	0.040 mm 0.0015"
		6	35	
		10	60	
SPX-13	0-13	5	55	0.040 mm 0.0015"
		10	55	
		13	75	
SPX-16	0-16	5	55	0.040 mm 0.0015"
		10	55	
		16	80	

Order No.	Device Type	Capacity Range				Dimensions			
		Minimum		Maximum		Taper Mount K	Dia MM D	A	
		inches	mm	inches	mm			Min. MM	Max. MM
617-515	SPX06J1	0	0	0.236	6	JT1	31	62	70
617-524	SPX08J1	0	0	0.315	8	J1	37	67	74
617-525	SPX08J2S	0	0	0.315	8	JT2S	37	67	74
617-530	SPX10J33	0	0	0.394	10	JT33	43	81.5	90
617-531	SPX10J2	0	0	0.394	10	JT2	43	81.5	90
617-540	SPX13J33	0.039	1	0.512	13	JT33	46	88	99
617-542	SPX13J6	0.039	1	0.512	13	JT6	46	88	99
617-550	SPX16J6	0.118	3	0.630	16	JT6	55	95	107

SPS Keyless Drill Chucks



- The SPS-SOLID is a high precision keyless drill chuck, with the advantage that the arbor is integrated into the internal socket of the drill chuck.
- This integrated design makes it impossible for the arbor and the drill chuck to become accidentally separated, providing a unit of greater solidity and precision with, as a result of its compact design, accumulated run-out reduced to a minimum.
- Self-Tightening feature automatically increases gripping force proportional in increased torque to prevent tool shank slippage. For right hand rotation applications only.
- Furnished with milled wrench flats and spanner wrench to allow application of supplementary gripping torque. Light tightening increases gripping torque up to 3 times higher than hand tightening. Resist tool loosening on high speed machines with instant spindle stop.
- 100% of SPS-SOLID drill chucks are individually controlled to not exceed a maximum total integrated run-out of 0.04 mm/0.0016".



Model SPS-SOLID with INTEGRAL SHANKS MORSE TAPER

Taper _c	Order No.	Device Type	CAPACITY RANGE ød				DIMENSIONS				SLEEVE Dia (D)	
			minimum		maximum		closed (L)		open L _c		Inches	mm
			Inches	mm	Inches	mm	Inches	mm	Inches	mm		
MT2	618-082	SPS08-MT2	0	0	0.3125"	8	2.83"	72	2.56"	65	1.44"	36.5
MT2	618-102	SPS10-MT2	0	0	0.375"	10	3.23"	82	2.87"	73	1.69"	43
MT2	618-132	SPS13-MT2	0.031"	1	0.500"	13	3.62"	92	3.15"	80	1.91"	48.5
MT3	618-133	SPS13-MT3	0.031"	1	0.500"	13	3.62"	92	3.15"	80	1.91"	48.5
MT4	618-134	SPS13-MT4	0.031"	1	0.500"	13	3.62"	92	3.15"	80	1.91"	48.5
MT2	618-162	SPS16-MT2	0.125"	3	0.625"	16	3.78"	96	3.35"	85	2.15"	54.5
MT3	618-163	SPS16-MT3	0.125"	3	0.625"	16	3.78"	96	3.35"	85	2.15"	54.5
MT4	618-164	SPS16-MT4	0.125"	3	0.625"	16	3.78"	96	3.35"	85	2.15"	54.5



R8 TAPER

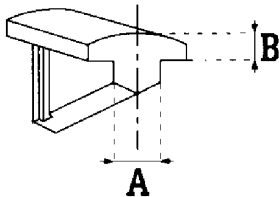
Taper _c	Order No.	Device Type	CAPACITY RANGE ød				DIMENSIONS				SLEEVE Dia (D)	
			minimum		maximum		closed (L)		open L _c		Inches	mm
			Inches	mm	Inches	mm	Inches	mm	Inches	mm		
R8	618-138	SPS13-R8	0.031"	1	0.500"	13	3.23"	82	3.54"	90	1.91"	48.5
R8	618-168	SPS16-R8	0.125"	3	0.625"	16	3.43"	87	3.86"	98	2.15"	54

R8 TAPER

Spare Parts

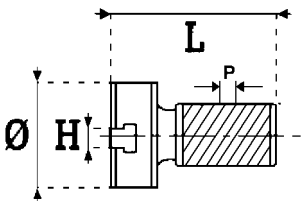
For SP, SPX, NPU, SPS & Planet Drill Chucks

Jaws - set of 3

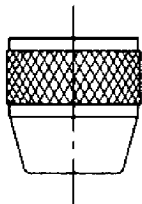


A

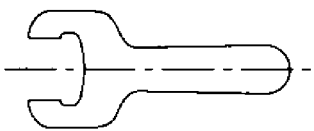
Screw



Hood



Wrench



JAWS

Drill Chuck Model	Sizes A x B (mm)	Order No.
SP-03	2.5 X 1.5	SP-03061
SP-06 / SPX-06	3.75 X 1.5	SP-06061
SP-08 / SPX-08 NPU-08/SPS-08	4.4 x 1.5 4.4 x 2.5	SP-08061 SP-08062
SP-10 / SPX-10 NPU-10/SPS-10	4.4 x 1.5 4.4 x 2.5	SP-10060 SP-10061
SP-13 / SPX-13 NPU-13/SPS-13	5 x 1.5 5 x 2.5	SP-13061 SP-13062
SP-16 / SPX-16 NPU-16/SPS-16	5 x 2.5	SP-16062

SCREW, HOOD & WRENCH

Drill Chuck Model	Screw* Order No.	Hood Order No.	Wrench Order No.
SP-03	SP-0305	SP-0304	—
SP-06	SP-0605	SP-0604	—
SP-08	SP-0805	SP-0804	—
SP-10	SP-1005	SP-1004	—
SP-13	SP-1305	SP-1304	—
SP-16	SP-1605	SP-1604	—
SPX-06	SP-0605	SP-0604	SPX-0612
SPX-08	SP-0805	SP-0804	SPX-0812
SPX-10	SP-1005	SP-1004	SPX-1012
SPX-13	SP-1305	SP-1304	SPX-1312
SPX-16	SP-1605	SP-1604	SPX-1612
NPU-08	NPU-0805	SP-0804	SPX-0812
NPU-10	SP-1005	SP-1004	SPX-1012
NPU-13**	SP-13051**	—	—
NPU-13*	NPU-1305*	SP-1304	SPX-1312
NPU-16	NPU-1605	SP-1604	SPX-1612
SPS-08	NPU-0805	SP-0804	SPX-0812
SPS-10	SP-1005	SP-1004	SPX-1012
SPS-13	SP-1305*	SP-1304	SPX-1312
SPS-16	NPU-1605	SP-1604	SPX-1612

Sizes "H", "L" and Ø should be indicated when ordering for Screws

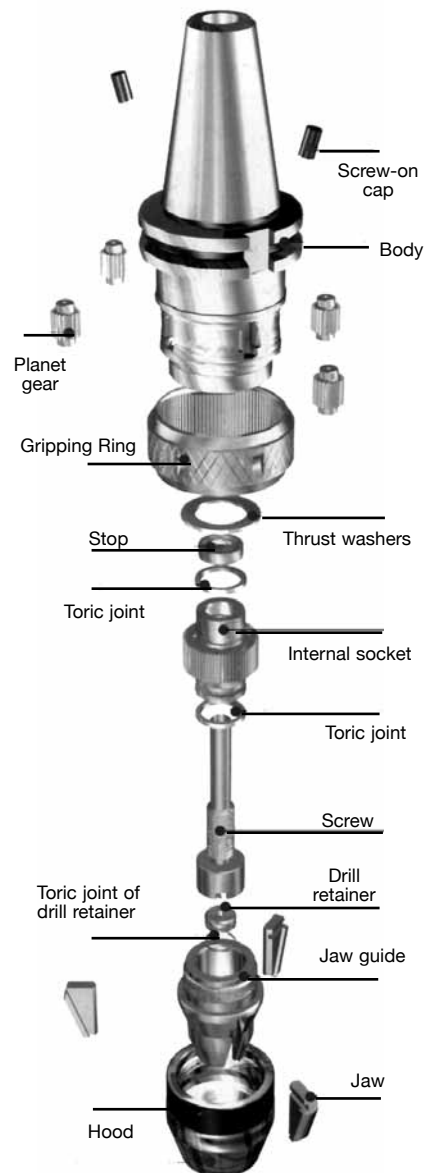
* P = 3mm

** P = 2.25mm (for model NPU13 from May 2000)

Spare Parts for NPU-Planet Drill Chucks

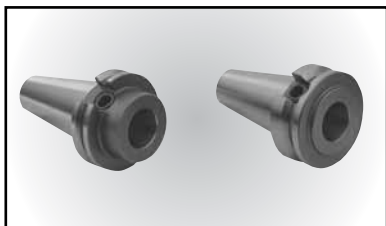
Spare Part	For Model PS13 cap.1/13mm	For Model PS16 cap.1/16mm
Jaws (set of 3)	SP-13062	SP-16062
Screw	PS-1305	PS-1605
Screw (through coolant)	PS-1305-R	PS-1605-R
Hood	PS-1304	PS-1604
Key	PS-1312	PS-1612
Gripping ring	PS-1303	PS-1603
Set of Planet gears (4)	PS-1307	PS-1607
Set of joints (3)		
(17x1.5 - 17x2 - 11x1.5)	PS-1314	PS-1614
Drill retainer (8x16x7)	PS-1316	PS-1616

NPU Planet Drill Chuck Parts Diagram



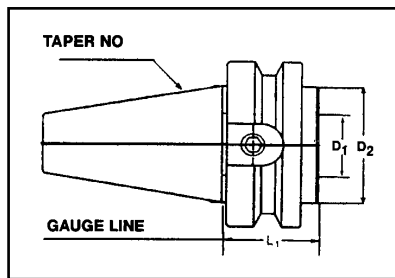
Modular Tappers

Rigid and Tension & Compression



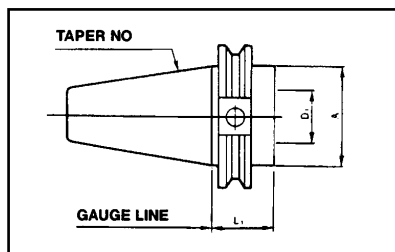
BT & CT Flange Tools

Tap Collets
See Page 3-37, 3-38



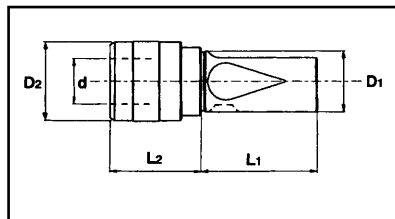
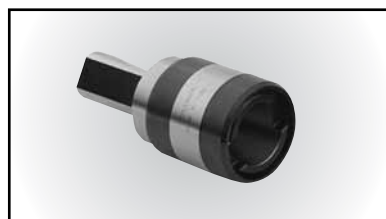
BT Shanks

Taper	Order No.	Device	L ₁	D ₁	D ₂
30	493-B3010	BT30-1	2.205	1	2.125
35	493-B3510	BT35-1	2.047	1	2.125
40	493-B4010	BT40-1	1.181	1	1.732
40	493-B4015	BT40-1-1/2	3.937	1-1/2	2.442
50	493-B5010	BT50-1	1.574	1	2.755
50	493-B5015	BT50-1-1/2	1.968	1-1/2	2.755



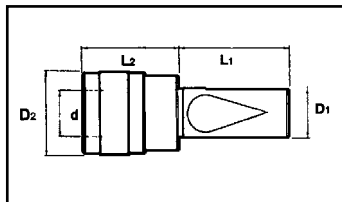
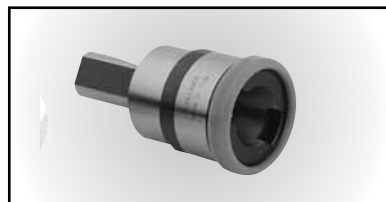
CT Shanks

Taper	Order No.	Device	L ₁	D ₁	D ₂
40	494-C4010	CT40-1	1.378	1	1.75
40	494-C4015	CT40-1-1/2	3.937	1-1/2	2.442
45	494-C4510	CT45-1	1.378	1	2.25
50	494-C5010	CT50-1	1.378	1	2.75
50	494-C5015	CT50-1-1/2	1.614	1-1/2	2.75



**Rigid Tap Holders
Straight Shank**

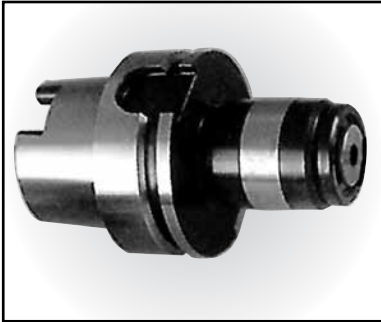
Order No.	D ₁ (⁺)	L ₁ (⁺)	L ₂ (⁺)	D ₂ (⁺)	Tap Capacity d
494-000-F	1	2.00	1.575	1.291	#0-9/16" M3-M12 1/8" NPT
494-010-F	1	2.00	2.480	1.976	5/16"-7/8" M6-M20 1/4"-1/2" NPT
494-030-F	1-1/2	3.50	3.425	2.834	13/16"-1-3/8" M14-M36 1/2"-1" NPT



**Tension &
Compression Tap
Holders
Straight Shank**

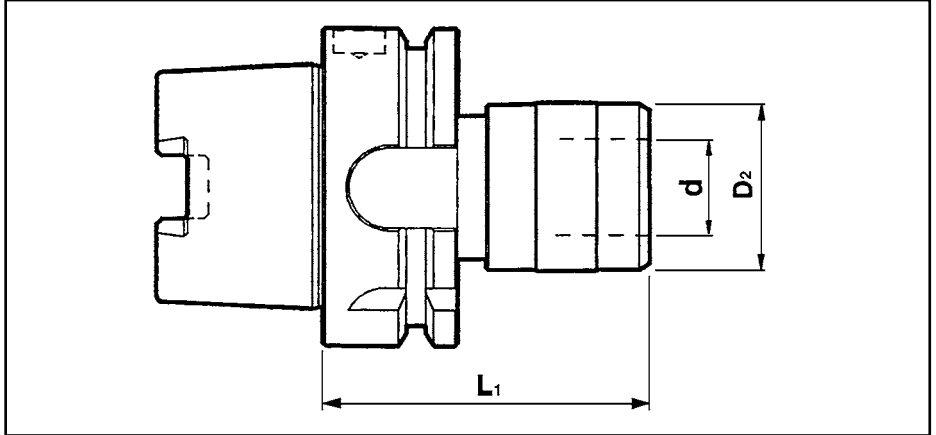
Order No.	D ₁ (⁺)	L ₁ (⁺)	L ₂ (⁺)	D ₂ (⁺)	COMPRN.		Tap Capacity d
					Return	Extension	
494-000	1	2.205	1.614	1.496	0.354	0.354	#0-9/16" M3-M12 1/8" NPT
494-010	1	2.205	2.480	2.165	0.590	0.590	5/16"-7/8" M6-M20 1/4"-1/2" NPT
494-030	1-1/2	3.50	3.80	3.115	0.945	0.945	13/16"-1-3/8" M14-M36 1/2"-1" NPT
494-040	1-1/2	3.50	4.307	3.858	1.02	1.02	1-1/8"-1-7/8" M22-M48 1-1/4"-1-1/2" NPT

Rigid Tap Holder



HSK-A

Tap Collets
See Page 3-37, 3-38



TAPPING PROBLEMS?

CONTACT US FOR
UNIQUE TAPPING
SOLUTIONS.

USE HIGH
PERFORMANCE TAPS
FROM



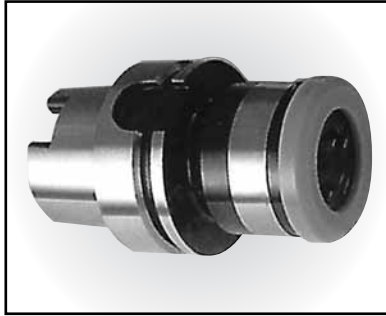
**THREADING
TECHNOLOGY**

SWISS MADE



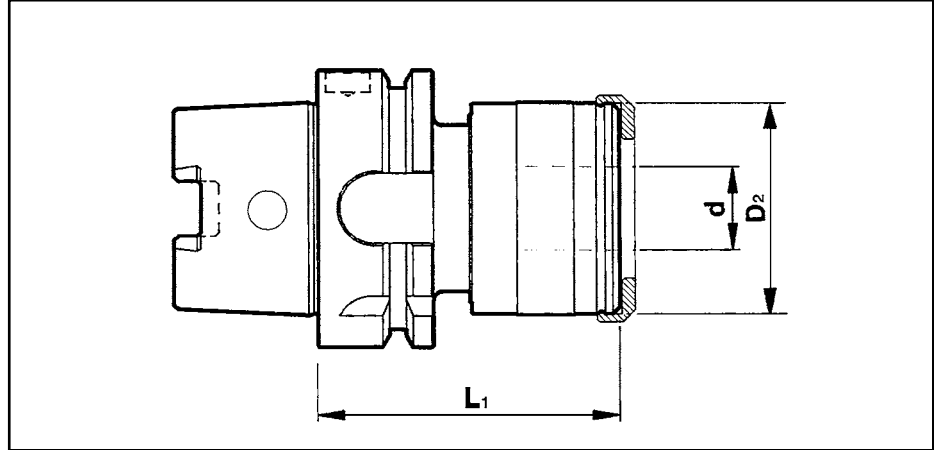
Taper	Order No.	Device Type	L ₁ (in)	D ₂ (in)	dØ inch Tap Capacity
63	594-500AF	HSK 63A-RT-1	2.48	1.30	0.748" Ø 0-9/16" M1-M12 1/8"-NPT
63	594-505AF	HSK 63A-RT-2	3.75	1.97	1.22" Ø 5/16"-7/8" M6-M20 1/4" - 1/2" NPT
100	594-700AF	HSK 100A-RT-1	2.75	1.30	0.748" Ø 0 - 9/16" M1-M12 1/8" NPT
100	594-705AF	HSK 100A-RT-2	3.54	1.97	1.22" Ø 5/16" - 7/8" M6 - M20 1/4"-1/2" NPT
100	594-710AF	HSK 100A-RT-3	4.57	32.83	1.89" Ø 13/16" - 1-3/8" M14 - M36 3/4"-1" NPT

Floating Tap Holder



HSK-A

Tap Collets
See Page 3-37, 3-38



**TAPPING
PROBLEMS?**

**CONTACT US FOR
UNIQUE TAPPING
SOLUTIONS.**

**USE HIGH
PERFORMANCE TAPS
FROM**



**THREADING
TECHNOLOGY**

SWISS MADE



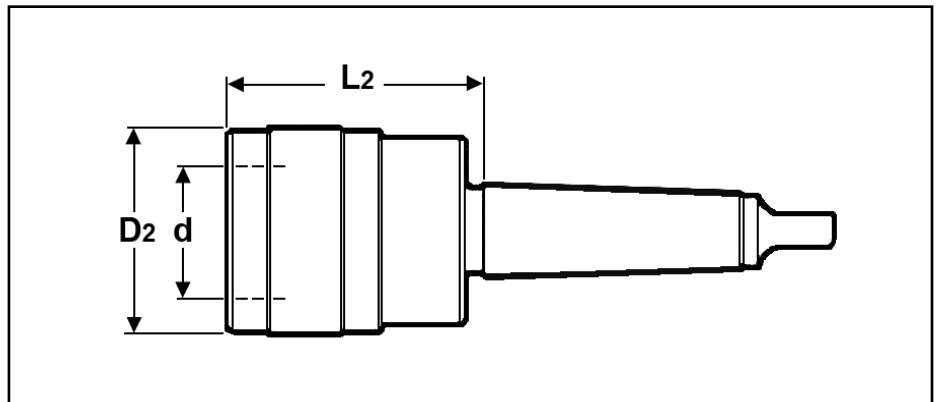
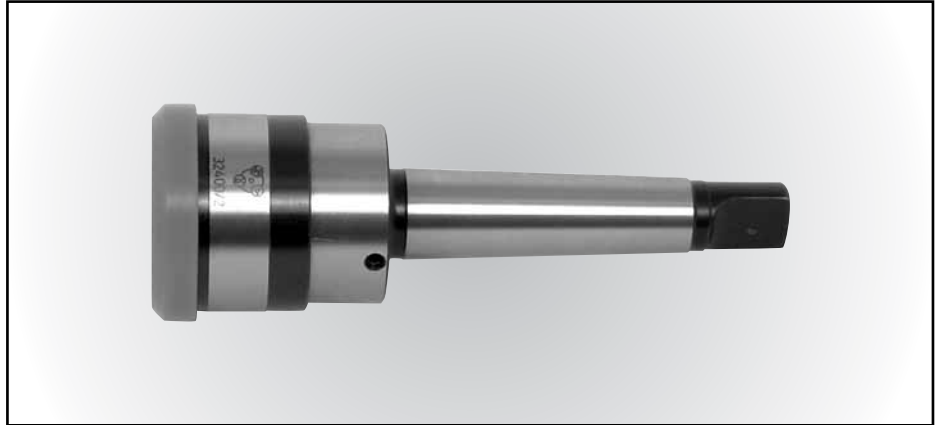
Taper	Order No.	Device Type	L ₁ (in)	D ₂ (in)	COMPEN		dØ inch Tap Capacity
					RETURN	EXTENSION	
63	594-500A	HSK 63A-FT-1	2.63	1.89	0.295	0.295	0.748" Ø 0-9/16" M1-M12 1/8"-NPT
63	594-505A	HSK 63A-FT-2	4.21	2.36	0.492	0.492	1.22" Ø 5/16"-7/8" M6-M20 1/4"-1/2" NPT
100	594-700A	HSK 100A-FT-1	5.11	1.89	0.295	0.295	0.748" Ø 0 - 9/16" M1-M12 1/8" NPT
100	594-705A	HSK 100A-FT-2	6.02	2.36	0.492	0.492	1.22" Ø 5/16" - 7/8" M6 - M20 1/4"-1/2" NPT
100	594-710A	HSK 100A-FT-3	8.46	3.07	0.787	0.787	1.89" Ø 13/16" - 1-3/8" M14 - M36 3/4"-1" NPT

Morse Tapers Tappers

Tension & Compression

**Tapping Chuck with
Morse Cone
DIN 228-B
with axial tension
compression**

**Tap Collets
See Page 3-37, 3-38**



**TAPPING
PROBLEMS?**

**CONTACT US FOR
UNIQUE TAPPING
SOLUTIONS.**

**USE HIGH
PERFORMANCE TAPS
FROM**



**THREADING
TECHNOLOGY**

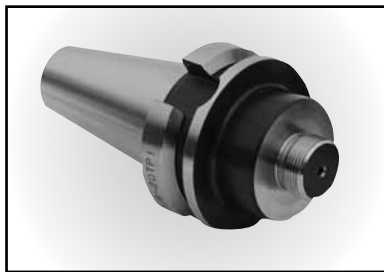
SWISS MADE



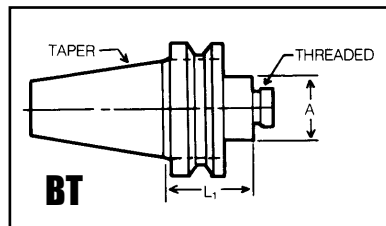
Order No.	Devise Type	Morse Taper	L ₂ (mm)	D ₂ (mm)	COMPRESSION		Tap Capacity d
					RETURN (mm)	EXTENSION (mm)	
495-102 495-103	32400/2 32400/3	2 3	46 46	38 38	9	9	#0-9/16" M3-M12 1/8" NPT
495-203 495-204	32600/3 32600/4	3 4	69 70	55 55	15	15	5/16"-7/8" M6-M20 1/4"-1/2" NPT
495-304 495-305	32800/4 32800/5	4 5	108 103	79 79	24	24	13/16"-1-3/8" M14-M36 1/2"-1" NPT
495-405	32900/5	5	116	98	26	26	1-1/8"-1-7/8" M22-M48 1-1/4"-1-1/2" NPT

Boring Head Adapters & Boring Bar Blanks

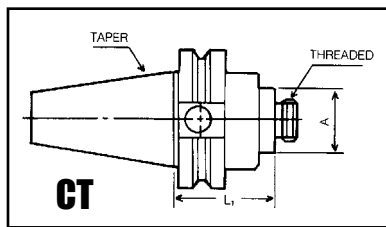
Boring Head Adapters



**BT & CT
Flange Tools**



Taper	Order No.	Device Type	Thread	L ₁ (in)	A (in)
40	497-110	BT40 - 7/8-20	7/8-20	1.75	1.75
40	497-115	BT40 - 1-1/2-18	1-1/2-18	1.75	1.75
50	497-310	BT50 - 7/8-20	7/8-20	1.75	1.75
50	497-315	BT50 - 1-1/2-18	1-1/2-18	1.75	1.75

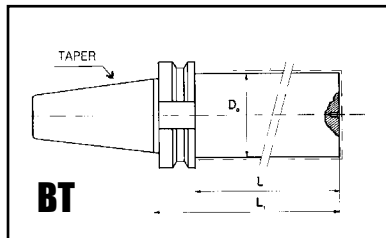


Taper	Order No.	Device Type	Thread	L ₁ (in)	A (in)
40	498-110	CT40 - 7/8-20	7/8-20	1.75	1.75
40	498-115	CT40 - 1-1/2-18	1-1/2-18	1.75	1.75
50	498-310	CT50 - 7/8-20	7/8-20	1.75	1.75
50	498-315	CT50 - 1-1/2-18	1-1/2-18	1.75	1.75

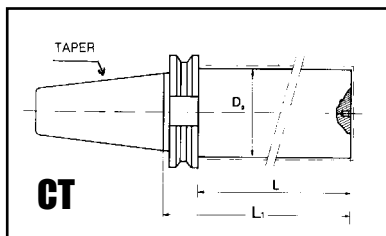
Boring Bar Blanks



**BT & CT
Flange Tools**



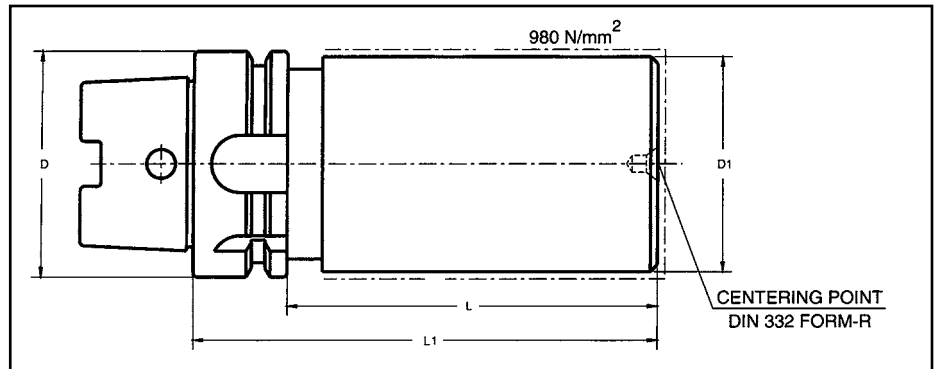
Taper	Order No.	Device Type	D ₀	L (in)	L ₁ (in)
40	507-899	BT40 - BBB-6225	2.50	11.875	13.00
50	507-991	BT50 - BBB-9025	4.00	11.570	13.00



Taper	Order No.	Device Type	D ₀	L (in)	L ₁ (in)
40	509-899	CT40 - BBB-6225	2.50	12.00	13.00
50	509-991	CT50 - BBB-9025	4.00	11.570	13.00

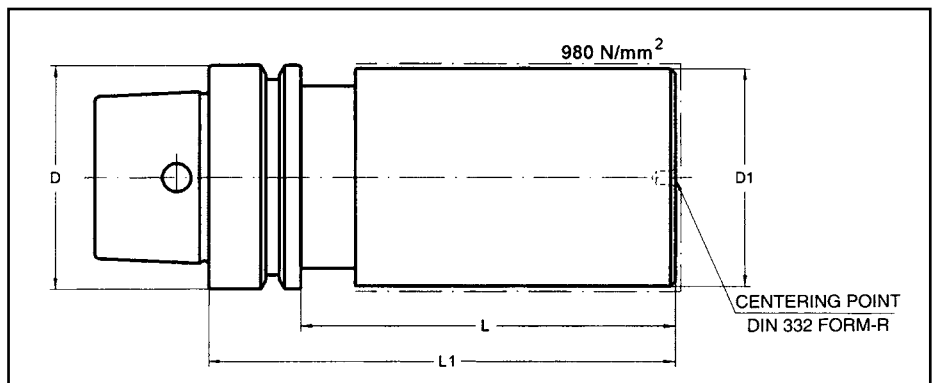
Toolholder Blanks

HSK-A Flange Tools



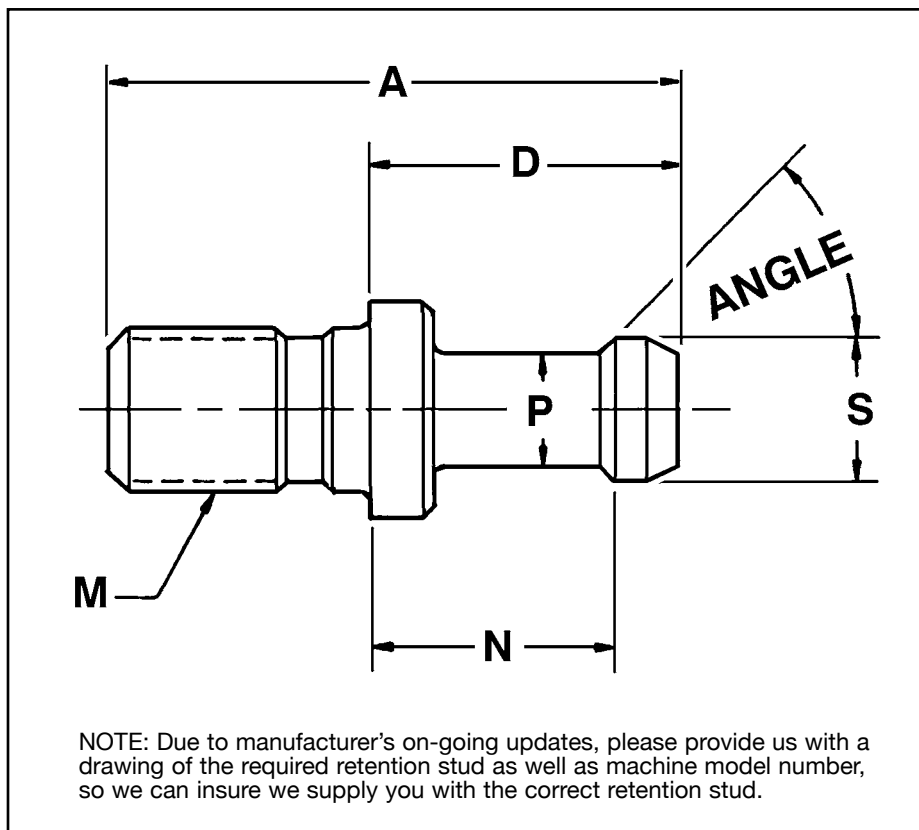
Taper	Order No.	Device Type	D ₁ (mm)	L (mm)	L ₁ (mm)
40	599-300A	HSK40A-THB4010	40	80	100
50	599-400A	HSK50A-THB5010	50	74	100
50	599-405A	HSK50A-THB6316	63	134	160
63	599-500A	HSK63A-THB6310	63	74	100
63	599-505A	HSK63A-THB8016	80	134	160
63	599-510A	HSK63A-THB8025	80	224	250
80	599-600A	HSK80A-THB8016	80	134	160
100	599-700A	HSK100A-THB10016	100	131	160

HSK-E Flange Tools



Taper	Order No.	Device Type	D ₁ (mm)	L (mm)	L ₁ (mm)
25	599-100E	HSK25E-THB2510	25	80	100
32	599-200E	HSK32E-THB3210	32	80	100
40	599-300E	HSK40E-THB4010	40	80	100
50	599-400E	HSK50E-THB5010	50	74	100
63	599-500E	HSK63E-THB6310	63	74	100

BT & CT Retention Studs



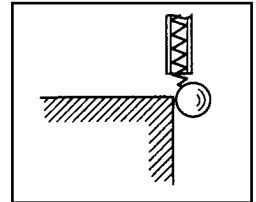
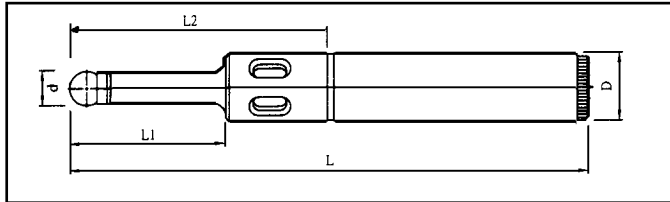
Order No.	Description
499-B1560	BT15-TYPE II
499-B3045	BT30-TYPE I
499-B3060	BT30-TYPE II
499-B4045	BT40-TYPE I*
499-B4060	BT40-TYPE II*
499-B4090	BT40-TYPE III*
499-B5045	BT50-TYPE I*
499-B5060	BT50-TYPE II*
499-B5090	BT50-TYPE III*
329-13	BT40-J1S6339

* Retention Studs are available with hole for coolant through option. Add 'H' to the end of order number.

Order No.	Description
499-C40US	CT40-US STD with hole
499-C40USN	CT40-US STD no hole
499-C40USS	CT40-US STD with shoulder & hole
499-C45US	CT45-US STD with hole
499-C50US	CT50-US STD with hole
499-C50USN	CT50-US STD no hole
499-C4045	CT40-TYPE I*
499-C4060	CT40-TYPE II*
499-C4090	CT40-TYPE III*
499-C5045	CT50-TYPE I*
499-C5060	CT50-TYPE II*
499-C5090	CT50-TYPE III*
171-22	CT40-CINCINNATI SABRE
126-22	CT40-HURCO
499-612	CT50-MAZAK with washer fit
499-405	CT40-MISTUI SEIKI
499-605	CT50-MISTUI SEIKI
499-406	CT40-OKK



Electronic Edge Finder



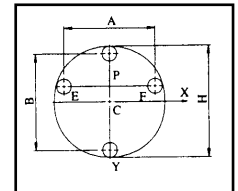
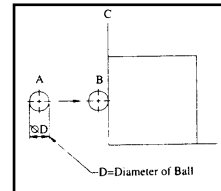
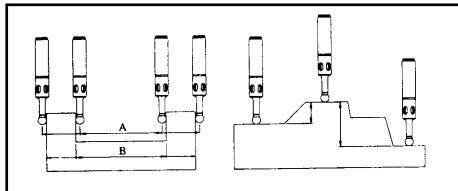
Order No.	Type	D	d	L	L ₁	L ₂	Version
460-045	KCF-3404	3/4"	0.400"	6.00"	1.80"	3.00"	INCH

Battery: 1 x 12V

Electronic Edge Finder with beeper

Description and Operation Manual For Electronic Edge Finder

- Main Features:**
- Accuracy of ball: $\pm 0.002 \text{ mm}/0.00008''$
 - Concentricity of ball-probe and shank: $0.005 \text{ mm}/0.0002''$
 - Spring loaded ball-probe for preventing damage of probe



1. Remove the cap and load the batteries
2. Make contact between the shank and the ball to check that the diode-lamp lights.
3. Assemble the gauge to the machines spindle (A) with the use of a chuck.
4. Feed the machine table (manually) toward the workpiece. When the ball touches the surface (edge) where the measurement shall start the LED lights (Red).
5. The digital read out device or the machine scales shall be read off or set to zero.
6. Feed the machine table to the next measuring point. When the ball touches the workpiece the LED lights.
7. Read off the moved distance on the digital readout device/machine scales.

INSIDE/OUTSIDE MEASURING: HEIGHT/DEPTH MEASURING:

B = distance to measurement
 A = moved distance
 D = ball diameter
 Inside measurement
 Value: $B = A + D$
 Outside measurement
 Value: $B = A - D$

The moved distance between the measuring points is the actual measured value.

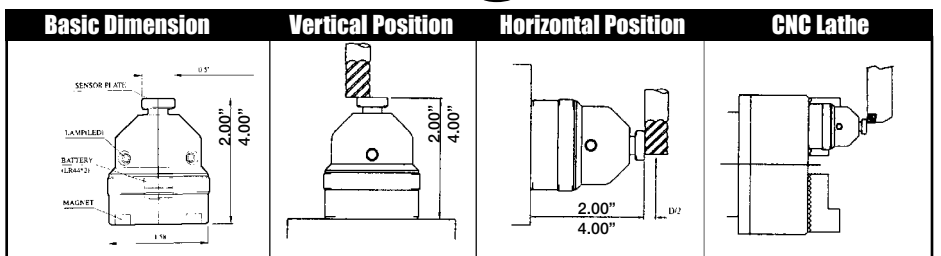
CENTERING/MEASURING OF HOLES:

1. Move the electronic edge finder to any position inside the hole
2. Touch the hole walls (E/F). Moved distance (A) Divided by 2 gives the centerline (Y).
3. Moved distance (B) between the hole moving across the Y-axis centerline + D = hole diameter (H).
4. The hole center (C) - hole diameter (H) divided by 2.

Electronic Tool Length Setter



Electronic Tool Length Setter



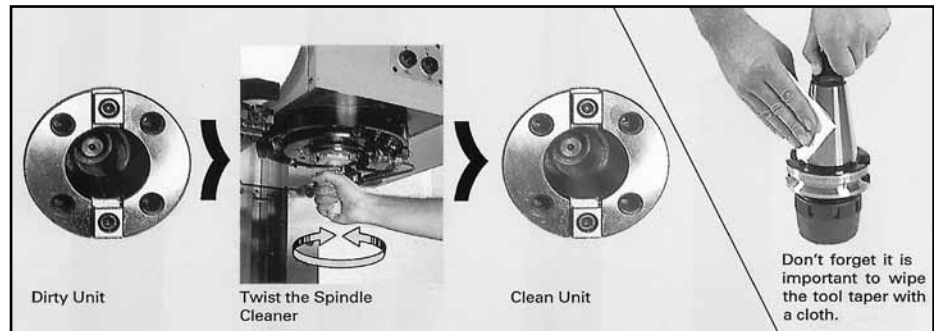
- Accuracy 2.000" Tolerance: $+0/+0.005 \text{ mm}/0.0002''$
- Accuracy 4.000" Tolerance: $+0/+0.005 \text{ mm}/0.0002''$
- Thanks to the power magnet inserted at the bottom of the base, this setter can be used in horizontal and vertical position.
- Can be applied on machining Center and CNC Lathe.

* **Ordering Code: 460-055** 2" Height
 * **Ordering Code: 460-056** 4" Height

Spindle Cleaners For HSK & ISO (CT & BT) TAPERS

The unbeatable tool to ensure efficient cleaning of HSK & Tapered Spindles

Maintain the precision and prolong the life of your high-quality tools and machine tools



- Sturdy construction with high oil and grease resistance.
- Plastic injection molded core with fluted location strips ensures accurate sizing and cleaning efficiency.
- Due to inset location, cleaning strips will maintain adhesion to the taper core even under scrubbing action.
- Well spaced cleaning strips will remove even large particles.
- A quality controlled product



HSK Series

HSK 25	HSK 32	HSK 40	HSK 50	HSK 63	HSK 80	HSK 100
506-970	506-972	506-974	506-976	506-978	506-980	506-982



ISO Series

ISO 20	ISO 30	ISO 40	ISO 45	ISO 50	ISO 60*
506-920	506-930	506-940	506-945	506-950	506-960

* Wooden Core
Can be used in NMTB, BT & CT Tapers

Tool Holder Locking Fixtures

Provides the CNC Industry a Rigid Clamping Fixture that allows quick and simple clamping and changing of tools.



Horizontal Tool Lock

- Easy compression nut tightening.
- Access to retention knob
- No contact with holder taper, keeping it free from dirt and chips.
- Can be set up for right or left hand operators.
- Allows spindle to run while setting up or replacing tool.

Order No.	Taper
460-30TL	BT/CT 30
460-40TL	BT/CT 40
460-50TL	BT/CT 50

Quick Change Tool Holder Locking Fixture



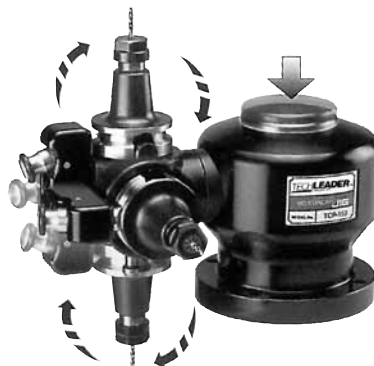
Tool Holder Socket is Changeable

Easy to assemble and disassemble tool holder socket from and main body by just pressing the red button on the right hand side of the main body.



Tool Holder Socket is Adjustable up to 360°

Easy to adjust tool holder for up to 360° (45° for each adjustment) while pressing down the large red button on the top of tool holder main body.



4 pcs of M10x40mm bolt will be fastened from the top of base plate of tool holder socket or 4 pcs of M12 bolt to be fastened from the bottom of the base plate of the tool holder main body.

Main Body



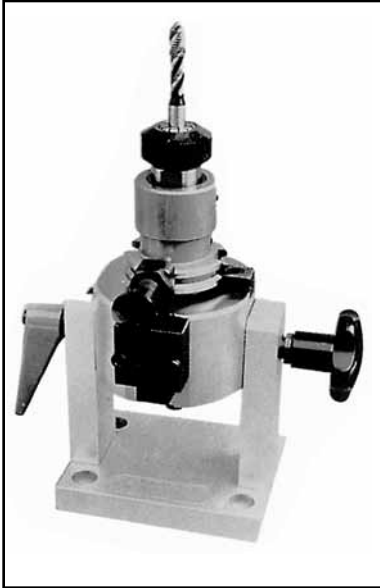
ORDER NO.	MODEL NO.
425-TCP150	TCP-150

Tool Holder Sockets

ORDER NO.	MODEL NO.
425-B30	BT30
425-B40	BT40
425-B50	BT50
425-C40	CT40
425-C50	CT50
425-H40	HSK40A
425-H63	HSK63A
425-H80	HSK80A
425-H100	HSK100A
425-H25E	HSK25E
425-H32E	HSK32E
425-H40E	HSK40E
425-H50E	HSK50E
425-H63F	HSK63F



Tool Block



TOOL MOUNTING DEVICE TILTING BETWEEN 0 AND 90 DEGREES

Rapid, simple and robust, the TOOL-BLOCK has been developed from experience for the assembly and disassembly of cutting tools into tool holders. Tool holders are expensive and damage to shanks and flanges can effect machine spindles.

The TOOL-BLOCK allows tools to be inclined from 0 degrees to 90 degrees facilitating access to both ends of the toolholder in one operation. Toolholders are secured in position in the sleeve by a spring plunger or clamp for complete security. Indispensable by the machine and in tool presetting areas, the cost of TOOL-BLOCK will soon be recovered.



ISO

ISO tool pots interchangeable from ISO25 to ISO50. Machined to a high standard with a safety spring plunger adjustable in length and diameter for all types of flanges, conventional or C.N.C.

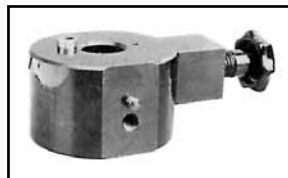


VDI 3425/2

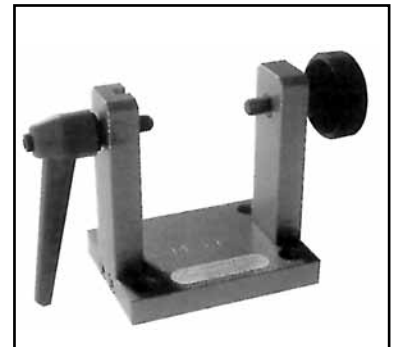
Tool pots interchangeable for VDI3425/2 from diameter 20mm to 50mm. A replication of tool turret serrations clamps the toolholder in position.



ISO	ORDER NO.
50	460-TB50
45	460-TB45
40	460-TB40
35	460-TB35
30	460-TB30
25	460-TB25
20	460-TB20
10	460-TB10



VDI	ORDER NO.
50	460-TB50V
40	460-TB40V
30	460-TB30V
20	460-TB20V



Made in Switzerland.

ON REQUEST:
HSK available

Mounting frame stove enameled steel of a very rigid construction, four holes for cap screws M10. Includes hand lever and hardened rotational pin.

ORDER NO.
460-TBS100

Tool Block 1D Presetters



**Digital measurement
of the tool length
1 AXIS MEASUREMENT**

DESCRIPTION

The standard TOOL-BLOCK can be fitted with a 'TBM' accessory for use with a PAV digital readout, converting the TOOL-BLOCK into a simple one axis presetter used beside the machine or in a preset area. After measuring, the length can be introduced into the tool correction memory of the CNC, without having to measure it on the machine. It is also possible to adjust, after a tool breakage the new tool to the same length avoiding this way changes of tool corrections on the CNC. Built into the digital readout is an RS232C interface for printing labels or keeping records. Please ask us for further information.

USE

The TBM attachment can be retrofitted to existing TOOL-BLOCK and the digital readout simply removed when not in use. The digital readout is clamped into a sleeve within the TBM, which can swivel to allow measurement for varying diameters of tools. The reset button on the digital display allows a simple reference zero off the top of tool pot.

Interchangeable support TBM

Type	Order No.
From ISO 25 to 50	460-TBM-N
VDI 3425 / 2	460-TBMVDI

PAV digital depth gauge

Type	Order No.
Length 200 mm	460-TBP200
Length 400 mm	460-TBP400

1/100mm Dial Indicator for the accurate length axis measurement includes fine adjustment.

Type	Order No.
OCL-1D	
460-OCL1D	

Made in Switzerland.

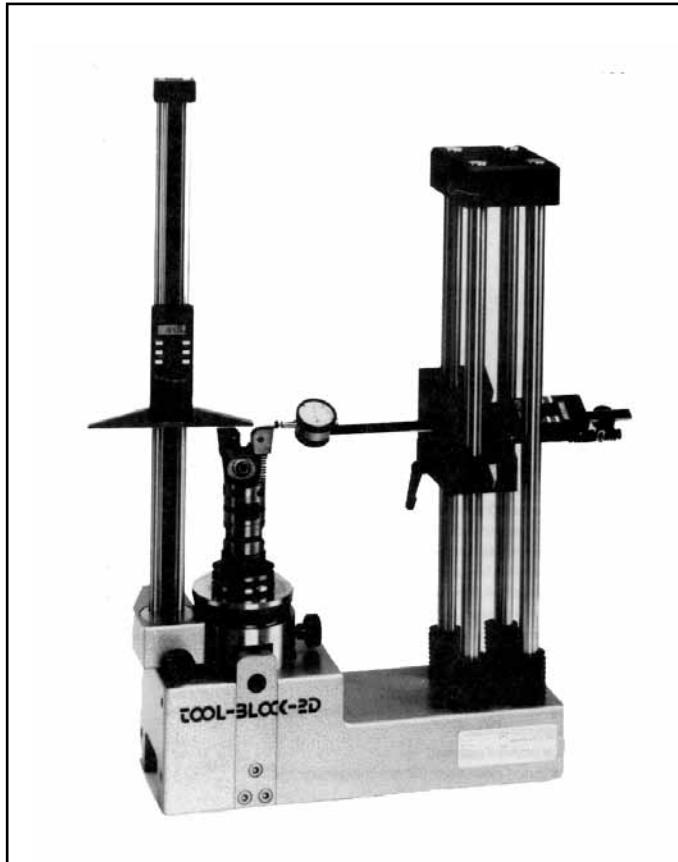
DIAL INDICATOR SUPPORT ADAPTABLE ON ALL TBM, COMPLETE WITHOUT INDICATOR



Order No: 460-DO-TK

Tool Block 2D Presetters

**A low cost
easy-to-handle
tool presetter**
2 AXIS MEASUREMENT



SPECIFICATIONS:

Diameter:
250 mm std / 370 mm
optional

Length max:
350 mm

Dimensions:
630 x 400 x 160 mm

Weight: 38 kg.

Specifications are subject
to change without notice.

SUMMARY

Why invest money in a high precision, very high cost device when this is not essential for manufacturing. Knowing perfectly these problems, and on the request of many TOOL-BLOCK customers, we decided to market this simple low cost tool presetter.

DESCRIPTION

Derived from the patented tool dismounting device TOOL-BLOCK. It allows quick, easy diameter and length setting of boring bars, milling cutters, drills, etc., as well as lathe tooling. Most of the tools used on machining centers (approx. 90%) don't require a setting accuracy of more than 0.05 mm. Yet they require setting off the machine for profitability and programming needs. With a repeating precision of ± 0.01 mm the TOOL-BLOCK 2D has been developed for this market. For the occasional high accuracy tools a comparator with fine adjustment is mounted as standard to the digital readout on the diameter axis. A hardened and grinded base sleeve accepts interchangeable sleeves of a very high accuracy. Utilizing the same PAV digital readout as the 1D the RS 232C interface allows connection to a label printer or micro computer.

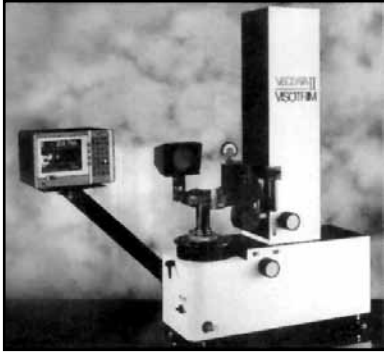
Order No: 460-TB-2DN

Made in Switzerland.

Reception sleeves

Type	Order No.
ISO 50	460-TB-2D-50
ISO 45	460-TB-2D-45
ISO 40	460-TB-2D-40
ISO 30	460-TB-2D-30
VDI 20	460-TB-2D-20-VDI
VDI 30	460-TB-2D-30-VDI
VDI 40	460-TB-2D-40-VDI
VDI 50	460-TB-2D-50-VDI
Others	460-On request ISO20/HSK/WDX

Visodata/Visotrim II



Presetting and measuring instrument

- Precise
- Simple to use
- Guided operations by screen
- Expandable
- For any kind of tool
- Special probe for diameter and length measurement

MAIN SPECIFICATIONS

- Max tool diameter: 520 mm 20.47 in
- Max tool length: 600 mm 23.62 in
- Rotating cone holder on high precision bearings for ISO 50 cone with reference lock
- Manual lock of cone holder rotation (on request)
- Cone reductions for ISO 30-35-40-45 and VDI
- Digital Read-out system: VISODATA VIDEO with graphic CRT screen
- Dial indicator: both for diameter and length, ris. 0.001 mm
- Precision probe: built in hard and wear-resistant metal with 3 contact points
- Body: fusion in stabilized aluminum alloy
- Preloaded guides with rollers
- Fast movements: simultaneous of the two axis through a single control knob with locking and releasing button
- Fine adjustment without range limitations, on all the axis' length
- Carriages locking: pneumatic
- Tool clamping: with mechanical holdup by special adapters for any kind of collet
- Tool un-clamping: pneumatic
- Profile's optical projector (optional)
 - Standard: Screen dimensions: 100 mm Enlargement: 15x
 - Different features on request
 - Lighting: 12V lamp
- Power supply: 110 Vac 60 Hz
- Overall dimensions 650 x 1200 h=1170
- Weight: 150 Kg (approx.)

OPTIONS

- VT-BRA = support for profile's projector
- VT-SPOT = profile's projector standard (100-15x)

VISTORIM-2

VISTORIM-2 is a tool presetting and measuring instrument from the latest generation of VISODATA products. VISODATA has become synonymous in Italy and abroad for QUALITY PRODUCTS, PROFESSIONAL INSTALLATION and CUSTOMER SERVICE.

VISOTRIM-2 measures, presets & checks your tools in a very simple & precise way. Connected to a computer with our VT-TOOL programme, you'll be able to manage the stock movement of the tools & their component parts. The original mechanical & electronic solutions make VISOTRIM-2 an excl., advanced product. Ex. the sensor probe, which is made of shock-resistant & hard wearing metal, has three excl. contact points which allows you to measure complex tools such as disk-type milling cutters, easily & quickly.

The axis' movement is fast and smooth and is controlled by a single knob which allows you to stop and free both the axis by a single pneumatic command.

Fine adjustments and very precise movement are made through frontal rotating knobs which have no stroke limits!

The rotating cone holder is mounted on high precision bearings. The most commonly used standard ISO cones or VDI shanks are

supported by special reduction sleeves. The pneumatic collet accepts any kind of shank by special adapters and reproduces the same tool clamping conditions of the machine tool. Consequently you can also clamp the most modern tools which have internal cooling systems.

VISOTRIM-2 communicates with you through its DIGITAL ELECTRONIC READ-OUT SYSTEM, a special version of the VISODATA VIDEO model. All operations are guided and the screen will show you clearly the measurements you made. Also, with a small external printer, you can print labels and reports of the measured and stored tools, sorted by machine tool.

The Analogic Optical Scale with the A.C.M.E. effect, the straightness tables, the functions graphic representation, etc. are all features which you can only fully appreciate by using them directly.

The optional projector can show you the enlarged profile of the cutting side on a graduated screen with a mobile goniometric index. In this way, in addition to diameters and lengths, you will be able to measure angles, beveled parts and radius and to verify the geometric profile of the cutting side.

**CLOSE OUT
SPECIAL
CALL FOR
SPECIAL NET
PRICE.**

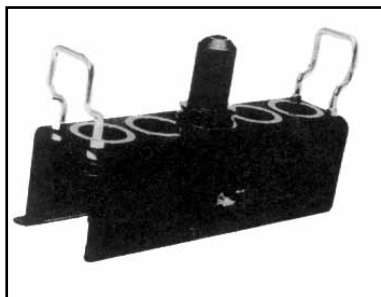
**ONE UNIT
LEFT!**



**BIG BEAR
ENTERPRISES**

Tool Holders/Collet Racks

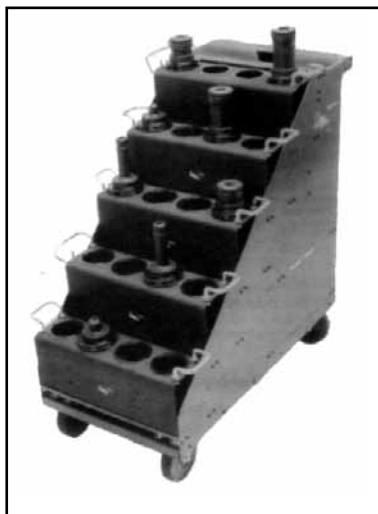
Tool Holder Racks use with Trolley-Kart™



Our heavy gauge steel tool holder racks come complete with plastic inserts to prevent damage to the taper of tooling. In addition, we offer optional handles for easy portability and removal from our Trolley – Kart, plus an optional anti-tip feature to protect extended tools during transport.

Order No.	Description
105-9-0	NC Tool Holder Rack for use with 40 CAT-V or BT Tooling
105-9-1	Anti-Tip Shelf for use with 40 CAT-V or BT Tool Holder Rack
105-9-2	2 Handles for use with 40 CAT-V or BT Tool Holder Rack
105-10-0	NC Tool Holder Rack for use with 50 CAT-V or BT Tooling
105-10-1	Anti-Tip Shelf for use with 45/50 CAT-V or BT Tool Holder Rack
105-10-2	2 Handles for use with 45/50 CAT-V or BT Tool Holder Rack
105-10-45	NC Tool Holder Rack for use with 45 CAT-V or BT Tooling
105-11-0	NC Tool Holder Rack for use with 30 & 35 CAT-V or BT Tooling
105-11-2	Anti-Tip Shelf for use with 30 & 35 CAT-V or BT Tool Holder Rack
105-11-3	2 Handles for use with 30 & 35 CAT-V or BT Tool Holder Rack

Trolley-Kart™

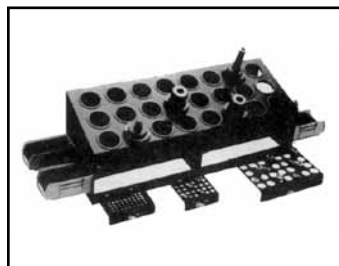


This is our premier tool cart with more features than anything else on the market. It is American made with uncompromising quality from the heavy gauge steel panels to the 5" swivel casters and the self-locking aircraft nuts. The versatility of our TROLLEY-KART™ allows you to customize with optional Tool Holder Racks and Collet Racks to various shank sizes plus there is ample collet and parts storage in the back of the cart. In one simple cart you have a complete system to keep you organized and your tools stored properly.

Shown with tool holder racks with handles configured for your needs. Shipped KD-UPS

Order No.	Description
105-15-0	NC Trolley-Kart™ Made of heavy-gauge steel, comes standard with: 1 base, 2 side panels, 2-5" swivel casters, 2-5" rigid casters, assembly hardware, cross brackets to hold Tool Holder Racks, 6 plastic bins.

Kounter-Kaddy™



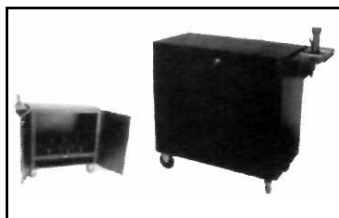
The Kounter-Kaddy is a compact and practical storage system that fits easily on your counter, workbench or tool cart and keeps a convenient

number of tools readily available. Plastic inserts give your tools added protection while being stored and plastic side bins keep small parts organized and at your fingertips.

Part No.	Description
105-17-1	30 CAT-V/BT 35 BT
105-17-2	40 CAT-V/BT
105-17-3-45	45 CAT-V/BT
105-17-3	50 CAT-V/BT

Big Bear Collet Racks sold separately. CNC Tools shown not included

New – Econo-Cabinet™



A standard Econo-Kart with enhanced features including lockable front doors, side and back panels, and top shelf with a protective rubber adhesive mat that provides additional workspace.

Part No.	Description
105-3021	NEW – Econo-Kabinet™ with center cat 30 shelf, KD
105-3022	NEW – Econo-Kabinet™ with center cat 40 shelf, KD
105-3023	NEW – Econo-Kabinet™ with center cat 50 shelf, KD



**BIG BEAR
ENTERPRISES**

Tool Holders/Collet Racks

Econo Kart™



Shown with optional 2nd shelf and tool tightening fixture. Shipped KD - UPS



Shown with new optional drawer and tool tightening fixture. Shipped KD-UPS

Collet Racks



Our racks are quality made of heavy gauge steel and can be mounted in our Trolley-Kart or utilized on a bench top for convenient accessibility. Collet protection, size identification and storage are all handled easily with a Big Bear Collet Rack System.

The Big Bear Econo-Kart is a simple, convenient & economical way to organize your tools & work area. This cart features heavy gauge steel construction & its top shelf can hold up to 50 tools. There is plenty of storage room on the base rack & an optional second tool shelf may be added to give Econo-Kart a 100 tool capacity. Other Econo-Kart options include a bin rack & tool tightening fixture & optional drawer.

Order No.	Description
105-3001	Econo-Kart™ CAT 40V/BT (50 holes)
105-3007	Econo-Kart™ CAT 50V/BT tooling (32 holes)
105-3002	Optional 2nd shelf for CAT 40V/BT Tooling (50 holes)
105-3008	Optional 2nd shelf for CAT 50V/BT Tooling (32 holes)
105-3003	Optional Tool-Tightening Fixture for CAT 40V/BT Tooling
105-3009	Optional Tool-Tightening Fixture for CAT 50V/BT Tooling
105-3010	Econo-Kart™ (2) Organizer Racks plus (14) plastic Bins
105-3011	Flat Shelf
105-3012	Optional Drawer Made of heavy gauge steel comes standard with one rubber mat, one brass plated handle, hardware, slider and side bracket. Assembly required. 110 lbs.

Part No.	Description
105-1	100 Series Double Angle Collets (holds 36 pc.)
105-2	200 Series Double Angle Collets (holds 27 pc.) 300 Series Double Angle Collets (holds 18 pc.)
105-3	160 Series Micro Precision (holds 9 pc.) 150 Series Tapered & Ground Collets (holds 25 pc.) #3 Quick Change Collet Tap Head (holds 25 pc.) 16-Collets & 3-J Collets (holds 25 pc.)
105-4	100 Series Tapered & Ground Collets (holds 35 pc.) #2 Quick Change Collet Tap Head (holds 35 pc.)
105-4-1	Multi-Purpose Rack: Series 11 Metric Collets ECX/ER/DR/RD (holds 16pc.) Series 16 Metric Collets ECX/ER/DR/RD (holds 16pc.) Series 20 Metric Collets ECX/ER/DR/RD (holds 15pc.) Series 32 Metric Collets ECX/ER/DR/RD (holds 21pc.)
105-5	075 Series Tapered & Ground Collets (holds 45 pc.) 180 Series Double Angle Collets (holds 45 pc.) #1 Quick Change Collet Tap Head (holds 45 pc.)
105-2011	11 Series Metric Collets ECX/ER/DR/RD (holds 36 pc.)
105-2016	16 Series Metric Collets ECX/ER/DR/RD (holds 36 pc.)
105-2020	20 Series Metric Collets ECX/ER/DR/RD (holds 36 pc.) C-4 Sandvik Collets (holds 36 pc.)
105-2025	25 Series Metric Collets ECX/ER/DR/RD (holds 30 pc.)
105-2032	32 Series Metric Collets ECX/ER/DR/RD (holds 30 pc.)
105-2040	40 Series Metric Collets ECX/ER/DR/RD (holds 24 pc.) C-8 Sandvik Collets (holds 24 pc.)
105-12	R8 Collets (holds 32 pc.)
105-13	5-C Collets (holds 35 pc.)

NC Tool Shelves

Create your Own WORK STATION with Big Bear!

A combination of Big Bear Tool Shelves, Encloser Cabinet and accessories can create a custom work space to increase efficiency and quality.

Big Bear's NC Tool Shelf Storage system can solve all your shop's tool storage requirements economically & with quality shelving that is virtually indestructible. Each NC Tool Shelf Storage System can function as a stand alone unit, or a series may be bolted together to form an entire tool crib. Sturdy construction heavy ten gauge formed steel legs include floor-bolt down tabs. Shelves have steel cross bracing. Shelving is 7" high x 36" wide x 8" deep. Plastic inserts in shelves protect tooling.

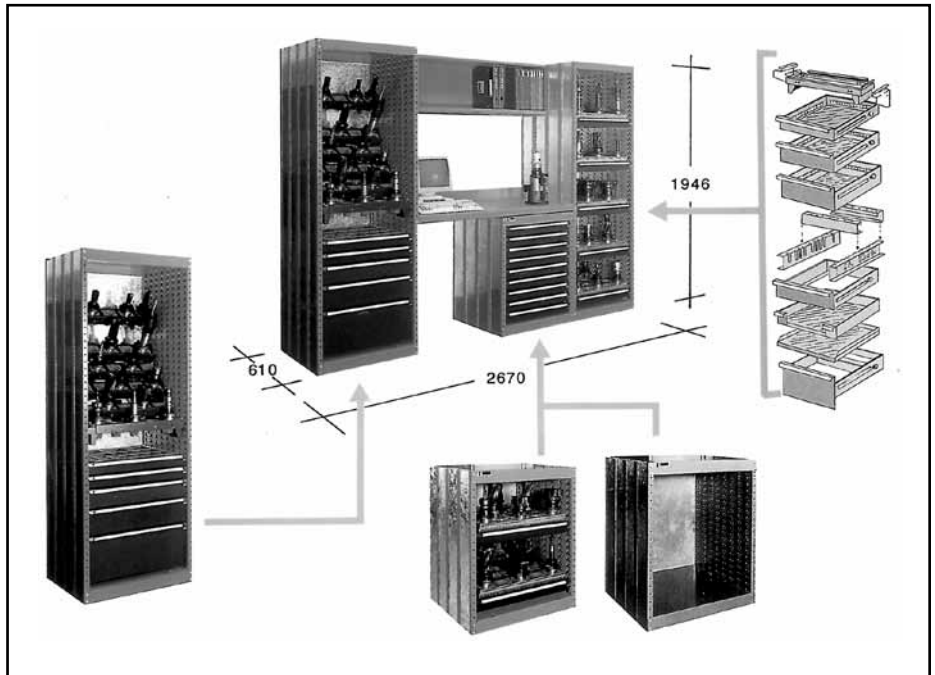


DIMENSIONS: Corner Legs: 7 high Shelves: 36" wide, 18" deep – Shown with NEW optional drawer

Part No.	Description	Part No.	Description
105-16-0	NC Tool Shelf Storage system Legs (only)	105-16-6	NEW- Optional Cabinet Encloser. Comes with standard flat top with protective rubber adhesive mat base. Side, back, and front door panels with lock and key.
105-16-1	Shelf for use with 30 & 35 CAT-V or BT Tooling	105-16-7	Organizer Racks- 2 pieces; include assembly hardware and 14 plastic bins
105-16-2	Shelf for use with 40 CAT-V or BT Tooling		
105-16-345	Shelf for use with 45 CAT-V or BT Tooling		
105-16-3	Shelf for use with 50 CAT-V or BT Tooling		
105-16-4	Plain Shelf		
105-16-5	Optional Drawer Made of heavy gauge steel comes standard with one rubber mat, one brass plated handle, hardware, slider and side bracket. Assembly required. 110 lbs.		

Storage Cabinets & Trolleys

Ministore is the ideal storage system for tool rooms, machining centers, inspection area, workstation and tool crib.



Whether you need to store 100 or 1,000 tools, the Ministore can be adapted to solve your storage problems, to reduce space and increase productivity.

The SUSTA Ministore comprises of 2 SMS 4 Combiracks which are equipped with selected drawers and cradles. A robust work top and overhead document shelf connects the two Combiracks and a half size SMS 675 is placed underneath the worktop in either left or right-hand position.

The Ministore can be expanded as your storage needs grow by simply adding additional shelving modules to both ends.

The 1-3/4" laminated maple work table is available in 24" x 53" and 24" x 79" sizes. It is treated and sealed for long term service in industrial applications. The work table is the ideal location for in-shop computer terminals, gauging devices and presetting fixtures. Plastic-covered and steel work tables are available on request.

The SUSTA Ministore is a system that grows with your needs. Its standard modular drawers and internal components can be installed or moved without the need of any tools and additional Combiracks can be added as needed. The system is completely expandable and interchangeable.

Security

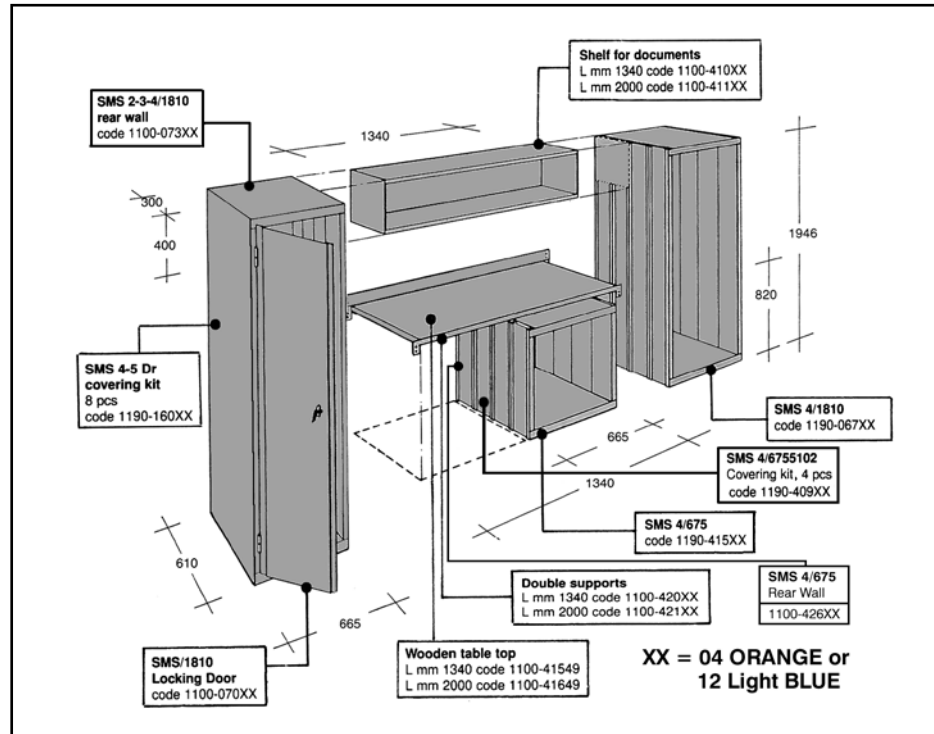
Combiracks can be supplied with lockable doors that open either left or right handed for user convenience and component security.

Document Shelf

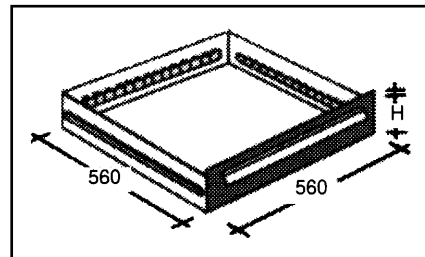
Each Ministore is assembled with an upper document shelf which can be divided to accommodate books, files, etc.

Storage Cabinets & Trolleys

Ministore is the system that grows with your needs. Standard modular drawers can be added without need of nuts or bolts and additional Combracks added as needed providing complete inter-changeability



SMS/4 Drawers



Model	h front	h useful	Capacity kg.	Code
75 T	75	65	125	1100-27001
110 T	110	100	125	1100-27101
150 T	150	140	125	1100-27201
210/150 T	210	200	125	1100-27401
225/150 T	225	215	125	1100-27301
KIT Frame	75	65	125	1100-31401

NB: Every drawer is equipped with locking device.

Sockets



Model	Qty x unit	Code
ISO 30	9	1100-05918
ISO 35	9	1100-06718
ISO 40	8	1100-05118
ISO 45	6	1100-05218
ISO 50	5	1100-05318
ISO Multisize		1100-05518
HSK 40A	11	1100-22118
HSK 50A	6	1100-22318
HSK 63A	6	1100-22418
HSK 80A	6	1100-22518
HSK 100A	5	1100-22618
VDI 30	7	1100-06318
VDI 40	6	1100-06418
VDI 50	5	1100-06518
VDI 60	4	1100-06618

Sockets Available

HSK-A
Kennametal KM

Komet ABS
Sandvik Capto
Toolholders

Storage Cabinets & Trolleys



Ministores

Standard Ministores can be chosen as shown. Letters indicate internal configuration as shown on opposite page. The last two numbers indicate taper of holders.

The Ministore price is inclusive of all internal parts as shown. Each module's price includes all internal components as shown. They can either be specified as an integral part of a new Ministore or added later, as your storage needs grow.

Standard colors in special epoxy polymerized paint are:

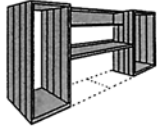
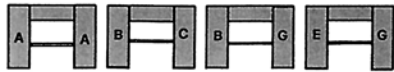
- Combiracks - Lobster Red
- Drawers - Slate Gray
- Back/side panels, int. frames - Zinc Plated Steel.

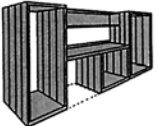
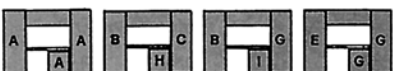
A compact tool wash machine designed to fit under the tabletop is a perfect compliment to the work station. It is completely self contained and is recommended for the proper protection of stored tooling.

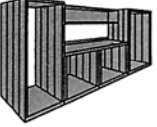
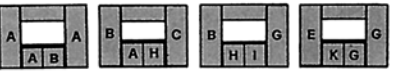
Contact your SUSTA Sales Engineer for additional information.

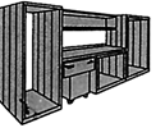
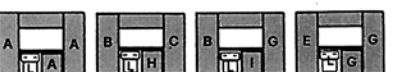
Many years of experience in storage has enabled SUSTA to develop the ultimate storage system for tool rooms, metrology labs, turning and machining centers, inspection and workstations.

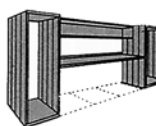
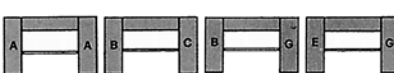
Assembly - All Ministores and Combiracks are easily assembled and are delivered in kit form with easy-to-follow instructions. Drawers may be added or repositioned in seconds without nuts and bolts.

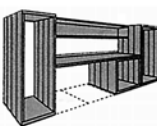

		<p>ministore 20 Empty shelving code 1190-18504</p>
	<p>MS20AA40 MS20BC40 MS20BG40 MS20EG40 MS20AA45 MS20BC45 MS20BG45 MS20EG45 MS20AA50 MS20BC50 MS20BG50 MS20EG50</p>	

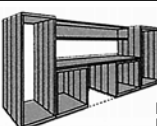
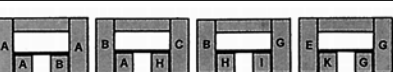
		<p>ministore 21 Empty shelving code 1190-18604</p>
	<p>MS21AAA40 MS21BCH40 MS21BGI40 MS21EGG40 MS21AAA45 MS21BCH45 MS21BGI45 MS21EGG45 MS21AAA50 MS21BCH50 MS21BGI50 MS21EGG50</p>	

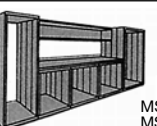
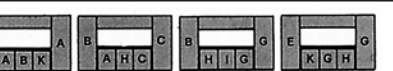
		<p>ministore 22 Empty shelving code 1190-18704</p>
	<p>MS22AAB40 MS22BCAH40 MS22BGI40 MS22EGKG40 MS22AAB45 MS22BCAH45 MS22BGI45 MS22EGKG45 MS22AAB50 MS22BCAH50 MS22BGI50 MS22EGKG50</p>	

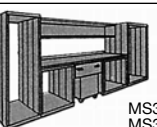
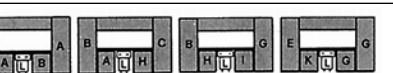
		<p>ministore 21L Empty shelving code 1190-18804</p>
	<p>MS21LAA40 MS21LBC40 MS21LBGI40 MS21LEGG40 MS21LAA45 MS21LBC45 MS21LBGI45 MS21LEGG45 MS21LAA50 MS21LBC50 MS21LBGI50 MS21LEGG50</p>	

		<p>ministore 30 Empty shelving code 1190-18904</p>
	<p>MS30AA40 MS30BC40 MS30BG40 MS30EG40 MS30AA45 MS30BC45 MS30BG45 MS30EG45 MS30AA50 MS30BC50 MS30BG50 MS30EG50</p>	

		<p>ministore 31 Empty shelving code 1190-19004</p>
	<p>MS31AAA40 MS31BCH40 MS31BGI40 MS31EGG40 MS31AAA45 MS31BCH45 MS31BGI45 MS31EGG45 MS31AAA50 MS31BCH50 MS31BGI50 MS31EGG50</p>	

		<p>ministore 32 Empty shelving code 1190-19104</p>
	<p>MS32AAB40 MS32BCAH40 MS32BGI40 MS32EGKG40 MS32AAB45 MS32BCAH45 MS32BGI45 MS32EGKG45 MS32AAB50 MS32BCAH50 MS32BGI50 MS32EGKG50</p>	

		<p>ministore 33 Empty shelving code 1190-19204</p>
	<p>MS33AABK40 MS33BCAHC40 MS33BGHIG40 MS33EGKG40 MS33AABK45 MS33BCAHC45 MS33BGHIG45 MS33EGKG45 MS33AABK50 MS33BCAHC50 MS33BGHIG50 MS33EGKG50</p>	

		<p>ministore 32L Empty shelving code 1190-19304</p>
	<p>MS32LAA40 MS32LBC40 MS32LBGI40 MS32LEGG40 MS32LAA45 MS32LBC45 MS32LBGI45 MS32LEGG45 MS32LAA50 MS32LBC45 MS32LBGI50 MS32LEGG50</p>	

Storage Cabinets & Trolleys

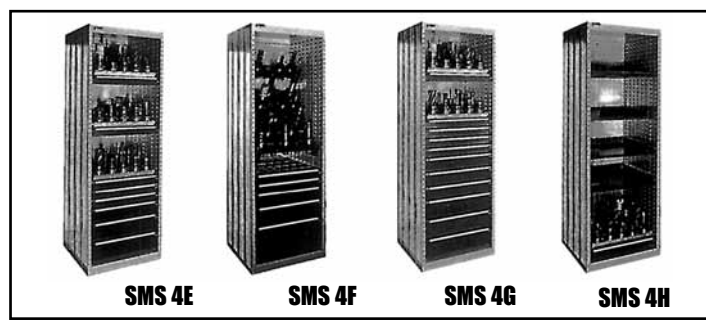


SMS 4A
ISO40 64 1190-16104
ISO45 48 1190-16204
ISO50 40 1190-16304

SMS 4B
ISO40 2001190-16404
ISO45 150 1190-16504
ISO50 125 1190-16604
TR28 275 1190-16704
TR36 175 1190-16804

SMS 4C
ISO40 184 1190-16904
ISO45 138 1190-17004
ISO50 115 1190-17104

SMS 4D
CODE 1190-17204



SMS 4E
ISO40 120 1190-17304
ISO45 90 1190-17404
ISO50 75 1190-17504

SMS 4F
ISO40 48 1190-17604
ISO45 36 1190-17704
ISO50 30 1190-17804

SMS 4G
ISO40 80 1190-17904
ISO45 60 1190-18004
ISO50 50 1190-18104

SMS 4H
ISO40 40 1190-18204
ISO45 30 1190-18304
ISO50 25 1190-18404

Ministore

The Ministore system combines the advantages of maximized storage density with a user-oriented workstation in an area as little as 17 square feet of floor space.

Ministores can be custom-tailored to provide the best solution to your storage needs by using the components shown on pages 1-68 and 1-76. Each fully-telescoping frame and drawer has a full length handle with identification label for properly organizing its' contents. In drawers with the 'Kit 5' socket frame, each row is designated to accept the max. number of tools per shelf.

Drawers are provided with internal dividing slots that accept the numerous standard configurations shown on page 6. Drawer dividers must be ordered separately. The number after ISOxx represents the number of sockets supplied.



SMS 4/675 A
CODE 1190-41704

SMS 4/675 B
CODE 1190-41804

SMS 4/675 C
CODE 1190-41904



SMS 4/675 D
CODE 1190-42004

SMS 4/675 E
CODE 1190-42104

SMS 4/675 F
CODE 1190-42204



SMS 4/675 G
CODE 1190-42304

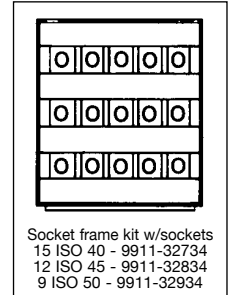
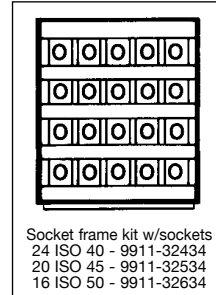
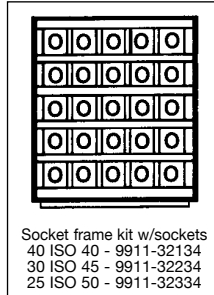
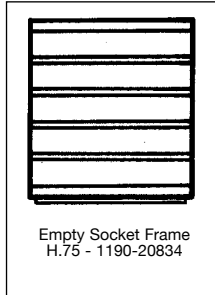
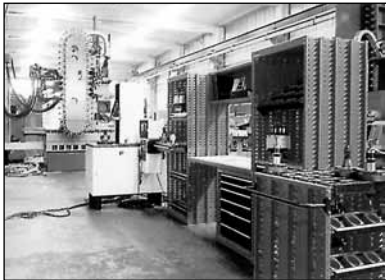
SMS 4/675 H
CODE 1190-42404



SMS 4/675 I
ISO40 120 1190-42504
ISO45 90 1190-42604
ISO50 75 1190-42704
TR28 165 1190-42804

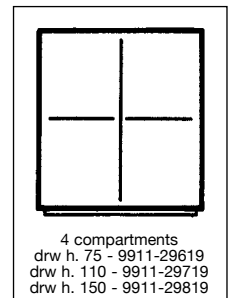
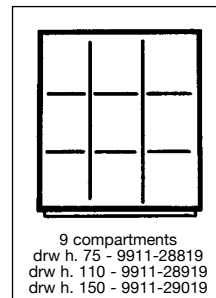
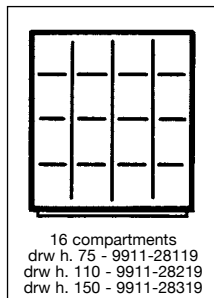
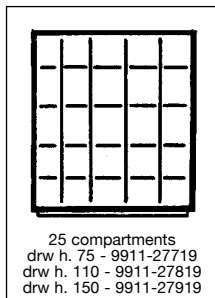
SMS 4/675 K
ISO40 80 1190-42904
ISO45 60 1190-43004
ISO50 50 1190-43104
TR28 110 1190-43204

Storage Cabinets & Trolleys



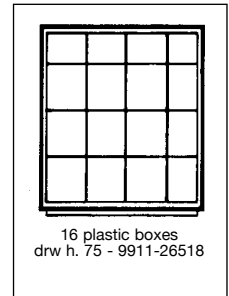
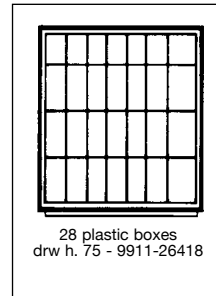
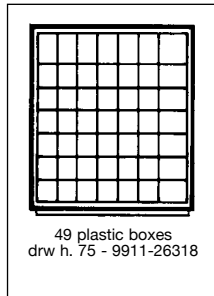
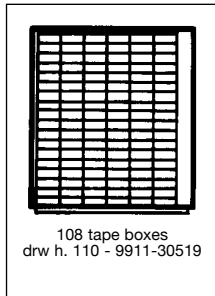
Ministore

Ministore provides efficient storage allowing quick selection to tools. The label holder, incorporated into the handle, provides identification of internally stored tools



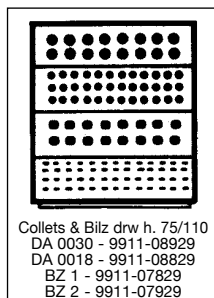
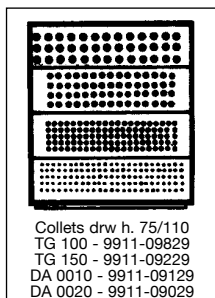
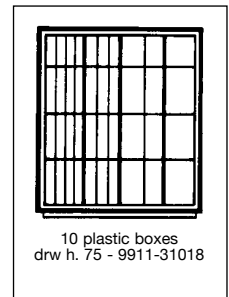
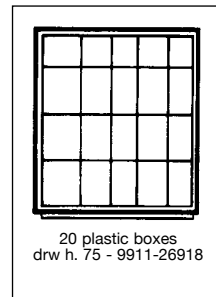
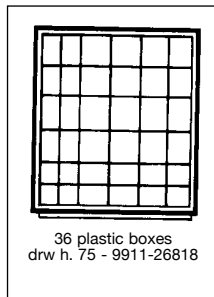
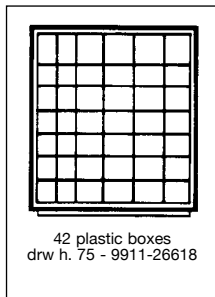
Control

Tool management within the Ministore creates additional time for other work. The Ministore permits better control of tools and each drawer has 100% extension of opening which allows the operator to have a complete view of all stored components. This eliminates tool loss, understocking, and duplication.



Productivity

Due to the fact that the Ministore can be located next to the machine, the retrieval time is reduced which increases productivity.



Drawers can be divided internally with standard dividers in various combinations. All components are standard stock items and identified as a complete set for easier selection. Complete sets are shown, each with its' own code number.

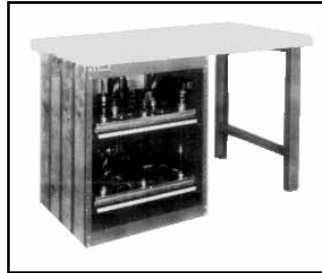
Storage Cabinets & Trolleys



Ministore

The Ministore modules can be utilized as individual work benches which can be selected either from standard configurations, as shown, or customized to suit customer needs. By incorporating the Ministore with standard SMS Tool Carts, almost all possible storage problems can be solved

The Ministore provides the ideal 'start-up' storage system which can be expanded as needs increase, making it the most flexible, dense and efficient storage system available



Assembly station STM1

Dim. 1500 x 600 x 875

Empty Shelving code 1190-19504

A	B	C	F
STM1A09CASS	STM1B05CASS	STM1C06CASS	STM1F05CASS
G	H	K	I
STM1G07CASS	STM1H06CASS	STM1KISO40 STM1KISO45 STM1KISO50	STM1IISO40 STM1IISO45 STM1IISO50



Assembly station STM2

Empty Shelving code 1190-19604

Dim. 1500 x 600 x 875

A	B	A	C	F	G	G	H
STM2AB09CAS	STM2AC15CAS	STM2FG12CAS	STM2GH11CAS				
A	I	G	I	G	K	H	I
STM2AIISO40 STM2AIISO45 STM2AIISO50	STM2GIISO40 STM2GIISO45 STM2GIISO50	STM2GKISO40 STM2GKISO45 STM2GKISO50	STM2HIISO40 STM2HIISO45 STM2HIISO50				

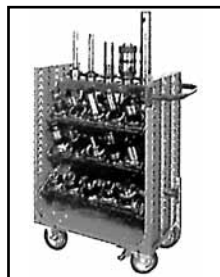


Assembly station STM3

Empty Shelving code 1190-19704

Dim. 2000 x 600 x 875

A	B	A	C	F	G
STM3AB09CAS	STM3AC15CAS	STM3FG12CAS			
A	I	G	I	G	K
STM3AIISO40 STM3AIISO45 STM3AIISO50	STM3GIISO40 STM3GIISO45 STM3GIISO50	STM3GKISO40 STM3GKISO45 STM3GKISO50	STM3HIISO40 STM3HIISO45 STM3HIISO50		
G	H	H	I		
STM3GH11CAS					



SMS3 Trolley

7 units, SIV and sockets for:

56 ISO40 code 1190-02104
42 ISO45 code 1190-02204
35 ISO50 code 1190-02304

Dim. 790 x 460 x 970



SMS4 Trolley

10 units, SIV and sockets for:

80 ISO40 code 1190-02404
60 ISO45 code 1190-02504
50 ISO50 code 1190-02604

Dim. 790 x 616 x 979

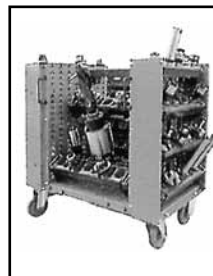


SMS5 Trolley

13 units, SIV and sockets for:

104 ISO40 code 1190-02704
78 ISO45 code 1190-02804
65 ISO50 code 1190-02904

Dim. 948 x 675 x 1016



SMS6 Trolley

16 units, SIV and sockets for:

128 ISO40 code 1190-03004
96 ISO45 code 1190-03104
80 ISO50 code 1190-03204

Dim. 981 x 950 x 1016

Tool Trolleys & Accessories

Tool Trolleys



1190-009xx SMS 3 tool trolley holds seven tool trays. Comes with four 6" casters and end handle. Assembly required. 31"L x 18" W x 39" H. Wt. Cap. 1000 lbs.



1190-004xx SMS 4 tool trolley moves tools to the job. Add brackets and up to ten tool trays to hold tools. Comes with four 6" casters and end handle. Assembly req'd. 31"L x 24" W x 40" H. Wt. Cap. 2200 lbs.

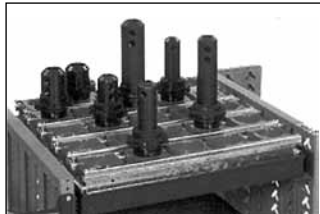
Accessories



1100-107xx kit comes with additional panels and hardware to turn basic model 1190-004xx into SMS 5 tool trolley. Two 1100-107xx kits turn model SMS 4 into SMS 6. Holds three trays or one row of arbor holders. 26.5" W x 6" D x 32.5" H.



Steel shelf provides additional work space. Comes with rubber mat. Shelf No. 1100-005xx fits on trolley 1190-009xx. 18" W x 12" D x 1.5" H. Shelf No. 1100-004xx fits trolley 1190-004xx. 24" W x 12" D x 1.5" H.



1100-63701 fixed frame requires adjustable tool holder kit 76208. Holds up to five rows of tools. Fits trolley 1190-004xx



Shelves for trolleys have ribbed rubber mats, 3/4" high shelf edge. Brackets attach to inside trolley walls. Wt. Cap. 200 lbs.

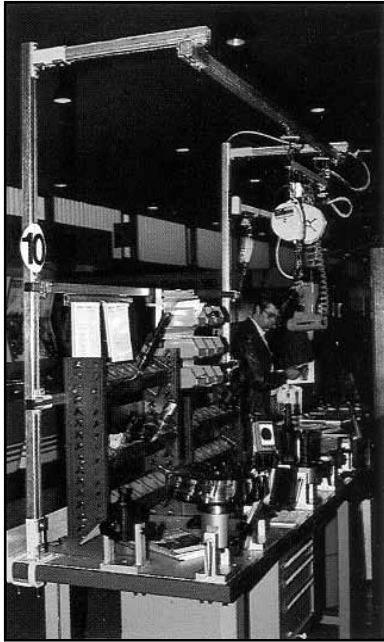
Model 1100-00801
23.75" W x 22.6" D x 1.75" H
Model 1100-00901
23.75" W x 16.5" D x 1.75" H
Model 1100-01001
23.75" W x 10.25" D x 1.75" H



1100-02001 carryall box holds lubricant cans, tools and supplies. Bolts to end of trolley 1190-004xx

xx = 04 LOBSTER ORANGE
12 LIGHT BLUE

Work Bench Assemblies



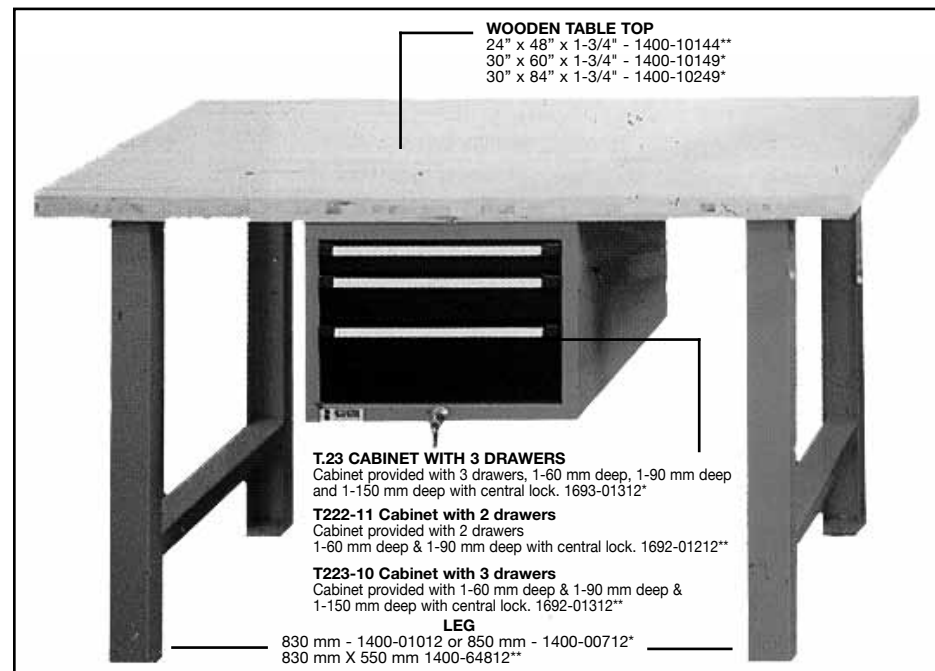
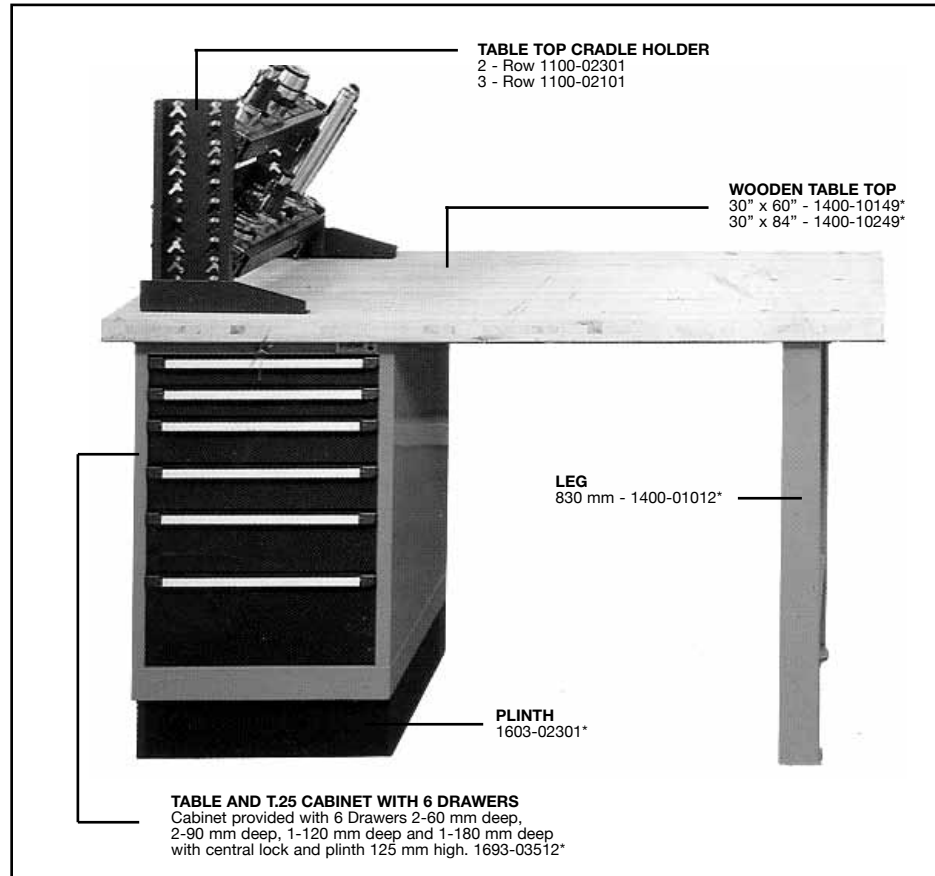
Work benches for assembly and adjustment of tools

Ideal work station for assembly, adjustment and maintenance of N/C tools and equipment.

The assembly station in the Tool Room has to be provided with all the necessary equipment to assemble, disassemble and adjust both the tools and the racking if downtime on the machines is to be reduced considerably. The work bench top is 1-3/4" wood welded maple. The lower cabinet is provided with sliding drawers on ball bearings. A central closing system locks all the drawers.

* Items marked with this symbol can only be used together.

** Items marked with this symbol can only be used together.



Machine Tool Cabinets



Drawer with Simple Runner

Front Height	Usable Height	Depth	Storage Capacity KG	Order No.
45/45	30	28	60	1000-001xx
60/60	45	40	60	1000-002xx
75/75	60	51	80	1000-003xx
90/90	75	65	100	1000-004xx
105/90	90	65	100	1000-005xx
120/120	105	95	100	1000-006xx
150/150	135	125	100	1000-008xx

A wide diversification of storage shelves to accommodate your individual needs



Drawer with Telescopic Runner

Front Height	Usable Height	Depth	Storage Capacity KG	Order No.
75/75	55	51	200	1000-020xx
90/90	70	65	200	1000-021xx
105/90	85	65	200	1000-022xx
120/120	100	95	200	1000-023xx
150/150	130	125	200	1000-025xx
180/150	105	125	200	1000-027xx
210/210	135	185	200	1000-029xx

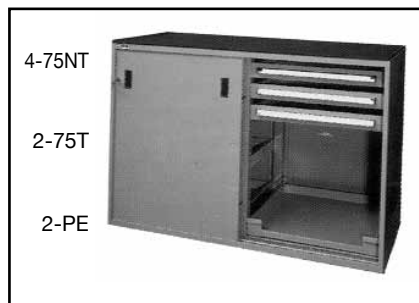
These cabinets, which have sliding doors, offer extra storage capacity in a smaller space.



PE Open Front Drawer with Telescopic Runner

L1 1000-120xx

The extractable shelf provides a safe storing platform for heavy equipment. One benefit of the full shelf extension is that deposit and retrieval of heavy items is made much easier. Dimensions: 1450 mm wide x 795 mm deep x 1022 mm high. Steel top has raised retaining edges on three sides and is fitted with a rubber mat. Height of top 22m



A063AS-02

6 drawers, 2 open-front drawers
1090-387xx

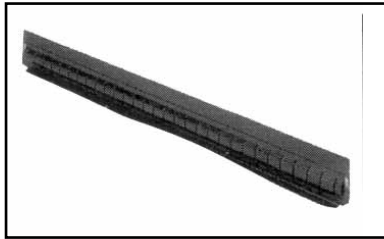
4-75NT

2-75T

2-PE

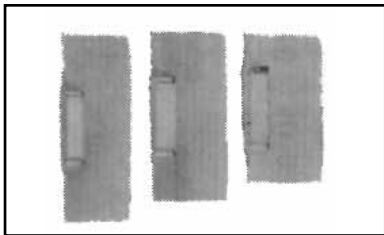
xx = 03 GREEN
04 LOBSTER ORANGE
12 LIGHT BLUE

Drawer Accessories



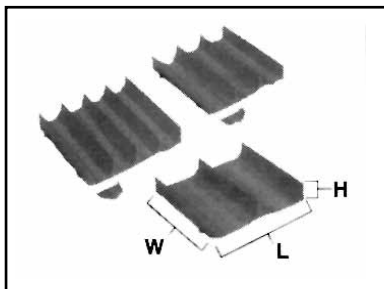
Moveable Slotted Walls

Front Height		Useful Height		AO	SMS 3	SMS 4
AO	SMS	AO	SMS			
45	-	27	-	9910-00134	-	-
60	-	38	-	9910-00234	-	-
75	75	49	60	9910-00334	9900-00101	9916-00101
90-105	110	64	90	9910-00434	9900-00201	9916-00201
120-135	-	94	-	9910-00634	-	-
150-195	150	123	130	9910-00834	9900-00401	9916-00401
210-285	-	183	-	9910-01234	-	-
300-450	-	273	-	9910-01834	-	-



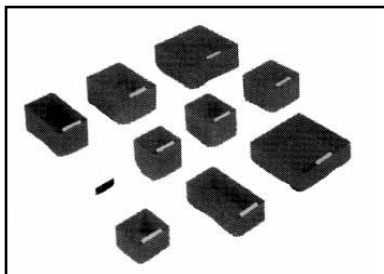
Dividers

Front Height mm	Plate Height mm	Length mm	Position		4	5	6	7	8	9	10	11
			76	96	116	136	156	176	196	216		
45	22	cod.	0004-50419	0004-50519	0004-50619	0004-50719	0004-50819	0004-50919	0004-51019	0004-51119		
60	37	cod.	0006-00419	0006-00519	0006-00619	0006-00719	0006-00819	0006-00919	0006-01019	0006-01119		
75	45	cod.	0007-50419	0007-50519	0007-50619	0007-50719	0007-50819	0007-50919	0007-51019	0007-51119		
90-105	60	cod.	0009-00419	0009-00519	0009-00619	0009-00719	0009-00819	0009-00919	0009-01019	0009-01119		0009-01119
120	90	cod.	0012-00419	0012-00519	0012-00619	0012-00719	0012-00819	0012-00919	0012-01019	0012-01119		0012-01119
150-180	120	cod.	0015-00419	0015-00519	0015-00619	0015-00719	0015-00819	0015-00919	0015-01019	0015-01119		0015-01119
210-270	180	cod.	-	0021-00519	0021-00619	0021-00719	0021-00819	0021-00919	0021-01019	0021-01119		0021-01119
300-450	270	cod.	-	0030-00519	0030-00619	0030-00719	0030-00819	0030-00919	0030-01019	0030-01119		0030-01119



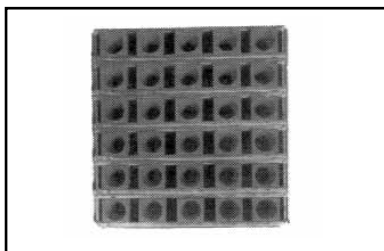
Plastic Groove Trays

Size of Trays	2 Rows	3 Rows	4 Rows
Width mm	71 mm	46 mm	34 mm
Ø Max mm	70 mm	45 mm	33 mm
L W H			
150 x 75 x 28 mm	9900-19718	9900-19818	9900-19918
150 x 100 x 28 mm	9900-18918	9900-19018	9900-19118
150 x 150 x 28 mm	9900-20118	9900-20218	9900-20318
100 x 100 x 28 mm	-	9900-19318	-
100 x 150 x 28 mm	-	9900-19218	-
75 x 100 x 28 mm	9900-19418	-	9900-20018
75 x 150 x 28 mm	9900-19618	-	9900-19918
Dividers	9900-20418	9900-20518	9900-20618



Plastic Boxes

Model	Drawer	Length	Width	Height	Order No.
Art 41	60/75	75	75	40	9900-00818
Art 42	60/75	75	150	40	9900-00918
Art 43	60/75	150	150	40	9900-01018
Art 61	90	75	75	60	9900-01118
Art 62	90	75	150	60	9900-01218
Art 63	90	150	150	60	9900-01318
Art 64	90	100	75	60	9900-07318
Art 65	90	100	100	60	9900-07418
Art 66	90	100	150	60	9900-07518
Label Holder	-	-	-	-	9900-01617



Adjustable Kits for Toolholders in Drawers

AO - Cabinets

Model	Length	Width	Height	Order No.
KIT 4 FILE	618	618	150	1090-48834
KIT 5 FILE	618	618	150	1090-48934
KIT 6 FILE	618	618	150	1090-49034

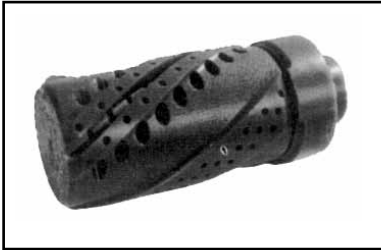
To be used in 1000-025xx - 150T Drawer

SMS - Cabinets

SMS 4/3	560	560	100	1190-20634
SMS 4/4	560	560	100	1190-20734
SMS 4/5	560	560	100	1190-20834

To be used in 1100-31401 SMS4 Empty Frame Drawer

Machinable Wax



Computervision Corp., leading manufacturer of CAD/CAM systems software used MACHINABLE WAX to produce the drilling tool prototype for the purpose of proving out its 2-axis and 4-axis simultaneous machining software. The resulting prototype was then submitted to their customer for evaluation

To Reduce Your Costs, Time & Risk Factors When...

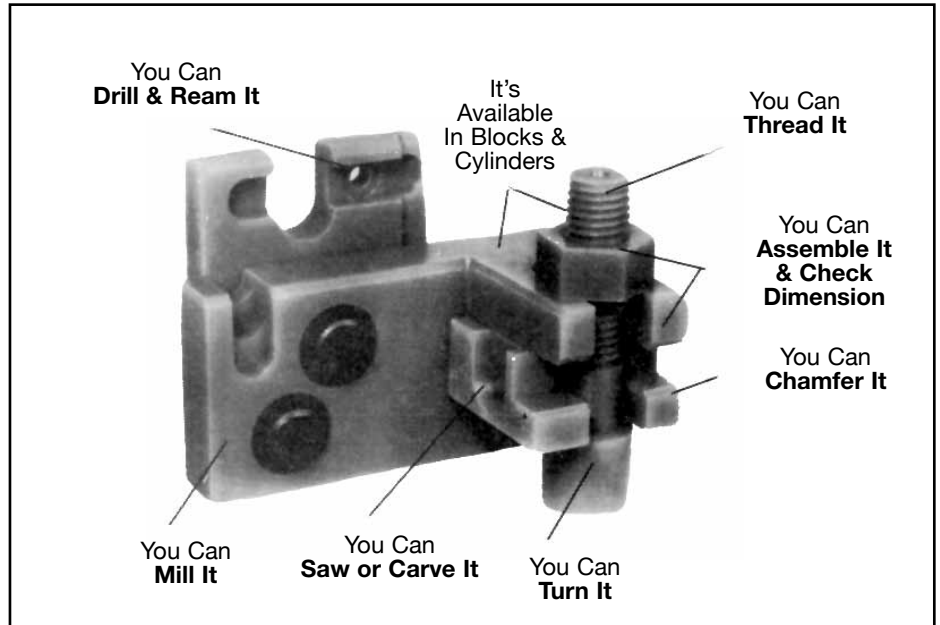
- Proofing CNC Programs
- Training CNC Operators & Programmers
- Producing Prototypes
- Installing & Demonstrating CNC Machinery & Systems

A State-of-the-Art Material

Computer controlled machining and design methods have revolutionized manufacturing worldwide. Although CNC technology has made it possible to produce accurately finished parts faster, more consistently and economically, the fact remains that most CNC tooling programs have to be proofed before release to production.

Of the many materials and methods used to proof CNC tooling programs, MACHINABLE WAX, since 1983, has repeatedly proven to be one of the most widely used because of its ease of machining within tolerance, its reclaimability, the high quality of surface finish it can produce, its versatility of application (even within the medical field) and its formulated properties that make it one of the safest materials to machine with negligible tool wear.

MACHINABLE WAX, unlike metal, plastic, wood and other materials, is a non-abrasive, petroleum-based product that is ideal for prototype, modeling and duplication applications because it is self-releasing. Once the wax is machined, molds and models can be made directly from MACHINABLE WAX using castable epoxies or polyurethanes – no time or labor intensive preparation is necessary.



Machines Faster & Accurately

MACHINABLE WAX, as shown by the Computervision, Inc. and Fluid Power Products 'case-in-point' examples, will produce economical, accurate, quality finish results within shorter time frames.

Computervision reported that for the 55 minutes it took to machine the prototype drilling tool in MACHINABLE WAX, it would have taken at least 8 hours to produce the same part in metal.

Fluid Power Products produced the model pump shown in one-sixth the time it would have taken machining it in metal - and, the parts were accurate enough to assemble the unit complete with metal shaft and gears for customer evaluation.



Fluid Power Products, Inc., of Kenner, LA is a manufacturer of low pressure high volume hydraulic pumps. Their use of MACHINABLE WAX to produce the prototype shown above was successful because of its ability to be machined within $\pm .001$ tolerances (on a Bridgeport CNC Milling Machine) @ 3,000 rpm and feed rates up to 100 / min. Other machining operations consisted of turning and boring on a Mazak Lathe @ 150 rpm and drilling / tapping by hand. In all operations, no coolant or cutting fluids were necessary.

Economical

Because Techleader Machinable Wax is recyclable and remachinable, it will provide you with a very cost-effective and profitable means of proofing, prototyping, modeling and for use in training applications.

Safe To Work With ... Non-Toxic

Techleader Machinable Wax is patented and formulated to be a safe material to work with. MACHINABLE WAX can be machined at any speed and will not produce sharp chips or hazardous dust particles. And, because of its 575 degrees Fahrenheit flash point, high speed machining will not have any adverse effect on it. Because MACHINABLE WAX is safe to work with, it makes an ideal material for training CNC programmers and operators.

Get The Facts On MACHINABLE WAX

Find out how Techleader Machinable Wax can help you address your CNC proofing and prototype problems.





Machinable Wax

Reduces Time and Material Costs for NC/CNC Tape Proofing

Ideal for NC/CNC Training Programs

BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-011	1.5	3	7
108-012	1.5	3	7*
108-021	3	3	7
108-022	3	3	7*
108-031	3	4.5	7
108-032	3	4.5	7*
108-051	3	5	10
108-052	3	5	10*
108-071	3	6	12
108-072	3	6	12*

* mounted

2" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-250	2	6	6
108-252	2	6	12
108-254	2	6	18
108-256	2	6	24
108-258	2	6	30
108-260	2	6	36
108-262	2	6	42
108-264	2	6	48
108-266	2	12	12
108-268	2	12	18
108-270	2	12	24
108-272	2	12	30
108-274	2	12	36
108-276	2	12	42
108-278	2	12	48
108-280	2	18	18
108-282	2	18	24
108-284	2	18	30
108-286	2	18	36
108-288	2	18	42
108-290	2	18	48
108-222	2	24	24
108-292	2	24	30
108-294	2	24	36
108-296	2	24	42
108-298	2	24	48

3" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-300	3	6	6
108-302	3	6	12
108-304	3	6	18
108-306	3	6	24
108-308	3	6	30
108-310	3	6	36
108-312	3	6	42
108-314	3	6	48
108-316	3	12	12
108-318	3	12	18
108-320	3	12	24
108-322	3	12	30
108-324	3	12	36
108-326	3	12	42
108-328	3	12	48
108-330	3	18	18
108-332	3	18	24
108-334	3	18	30
108-336	3	18	36
108-338	3	18	42
108-340	3	18	48
108-342	3	24	24
108-344	3	24	30
108-346	3	24	36
108-348	3	24	42
108-243	3	24	48

4" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-350	4	6	6
108-352	4	6	12
108-354	4	6	18
108-356	4	6	24
108-358	4	6	30
108-360	4	6	36
108-362	4	6	42
108-364	4	6	48
108-366	4	12	12
108-368	4	12	18
108-370	4	12	24
108-372	4	12	30
108-374	4	12	36
108-376	4	12	42
108-378	4	12	48
108-380	4	18	18
108-382	4	18	24
108-384	4	18	30
108-386	4	18	36
108-388	4	18	42
108-390	4	18	48
108-392	4	24	24
108-394	4	24	30
108-396	4	24	36
108-398	4	24	42
108-244	4	24	48

CYLINDERS			
Order No.	DIA Nominal	DIA Typical	STD Length
108-115	1.5	(1.56)	12
108-125	2	(2.01)	12
108-135	3	(2.99)	12
108-145	4	(3.91)	14
108-155	5	(4.91)	16
108-165	6	(5.88)	18
108-175	7	(6.90)	18
108-195	9	(6.64)	18

5" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-400	5	6	6
108-402	5	6	12
108-404	5	6	18
108-406	5	6	24
108-408	5	6	30
108-410	5	6	36
108-412	5	6	42
108-414	5	6	48
108-416	5	12	12
108-418	5	12	18
108-420	5	12	24
108-422	5	12	30
108-424	5	12	36
108-426	5	12	42
108-428	5	12	48
108-430	5	18	18
108-432	5	18	24
108-434	5	18	30
108-436	5	18	36
108-438	5	18	42
108-440	5	18	48
108-442	5	24	24
108-444	5	24	30
108-446	5	24	36
108-448	5	24	42
108-245	5	24	48

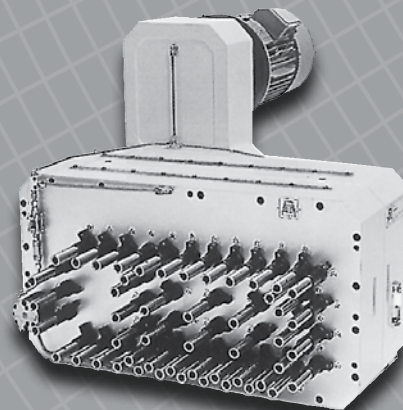
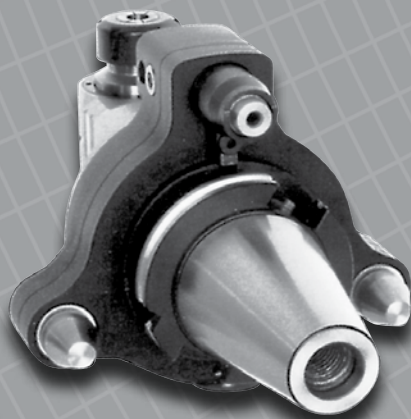
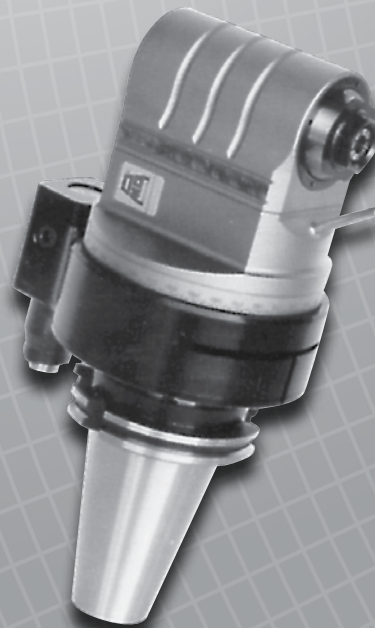
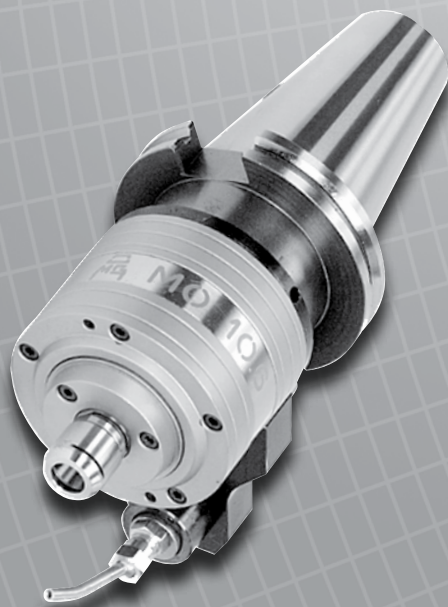
6" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-450	6	6	6
108-452	6	6	12
108-454	6	6	18
108-456	6	6	24
108-458	6	6	30
108-460	6	6	36
108-462	6	6	42
108-464	6	6	48
108-466	6	12	12
108-468	6	12	18
108-470	6	12	24
108-472	6	12	30
108-474	6	12	36
108-476	6	12	42
108-478	6	12	48
108-480	6	18	18
108-482	6	18	24
108-484	6	18	30
108-486	6	18	36
108-488	6	18	42
108-490	6	18	48
108-492	6	24	24
108-494	6	24	30
108-496	6	24	36
108-498	6	24	42
108-246	6	24	48

7" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-500	7	6	6
108-502	7	6	12
108-504	7	6	18
108-506	7	6	24
108-508	7	6	30
108-510	7	6	36
108-512	7	6	42
108-514	7	6	48
108-516	7	12	12
108-518	7	12	18
108-520	7	12	24
108-522	7	12	30
108-524	7	12	36
108-526	7	12	42
108-528	7	12	48
108-530	7	18	18
108-532	7	18	24
108-534	7	18	30
108-536	7	18	36
108-538	7	18	42
108-540	7	18	48
108-542	7	24	24
108-544	7	24	30
108-546	7	24	36
108-548	7	24	42
108-550	7	24	48

8" THICK BLOCKS			
Order No.	Height Inches	Width Inches	Length Inches
108-552	8	6	6
108-554	8	6	12
108-556	8	6	18
108-558	8	6	24
108-560	8	6	30
108-562	8	6	36
108-564	8	6	42
108-566	8	6	48
108-568	8	12	12
108-570	8	12	18
108-572	8	12	24
108-574	8	12	30
108-576	8	12	36
108-578	8	12	42
108-580	8	12	48
108-582	8	18	18
108-584	8	18	24
108-586	8	18	30
108-588	8	18	36
108-590	8	18	42
108-592	8	18	48
108-594	8	24	24
108-596	8	24	30
108-598	8	24	36
108-600	8	24	42
108-248	8	24	48

SECTION 2

Spindle Speeders & Angle Heads



Spindle Speeders



Each spindle speeder has its own test certificate which includes the technical characteristics, the serial number, the results of the tests made on our BP01 testing table, and the concentricity value between the shank and the collet. (max value 0.01 mm.) To verify the concentricity value it is necessary to have the spindle speeders stopping the pin and rotating the shank. The value on the metric comparator is the concentricity between the axis of the shank and the axis of the spindle.

The 'MO' spindle speeders series have been designed and developed to offer a product that ensures maximum reliability and precision in milling and drilling operations. From the design to the static and dynamic testing of the finished product, our spindle speeders series utilize the most advanced technical and technological know-how.

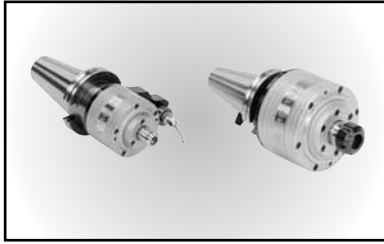
- Max. continuous rpm 18,000 (higher ratings on request)
- Used particularly in finishing operations
- Possibility of manual or automatic mounting
- Allows the machine to rotate at low rpm
- Possibility of using hard metal tools

The compact construction, the heat-treated steel part and the ground gears on the involute guarantee the transmission of high power ratings with amazingly low noise levels. The spindle is supported by a set of two and three preloaded precision ball bearings with oblique contact that ensure enhanced stiffness and rotation precision of 0.01 mm / 0.0004”.

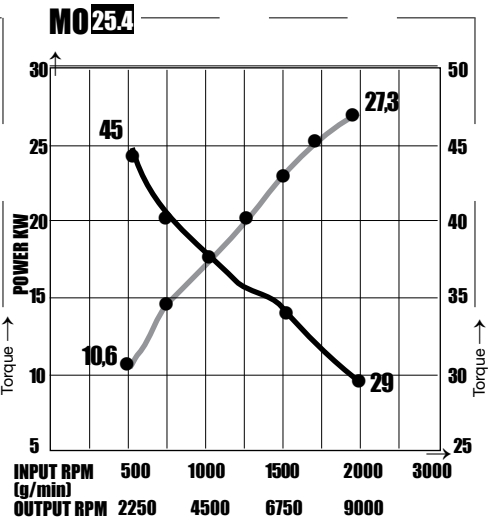
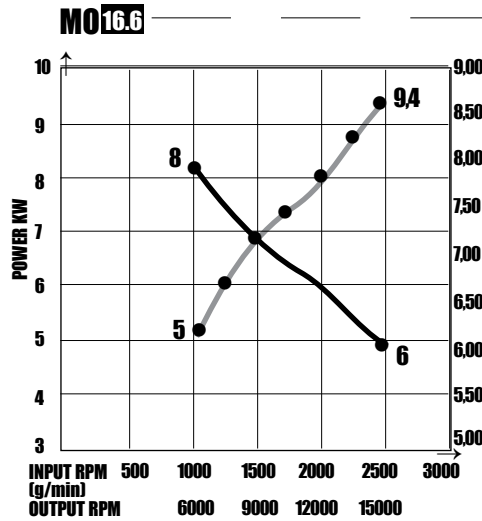
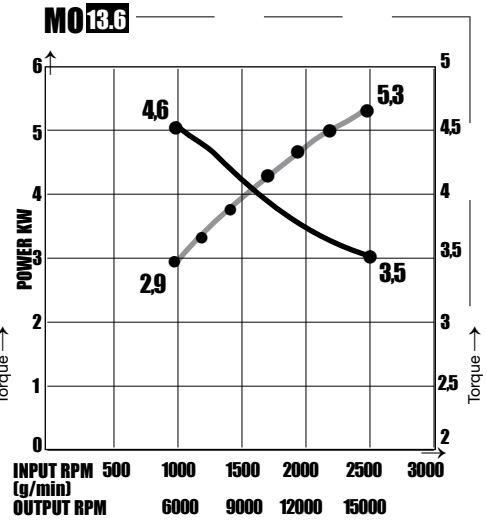
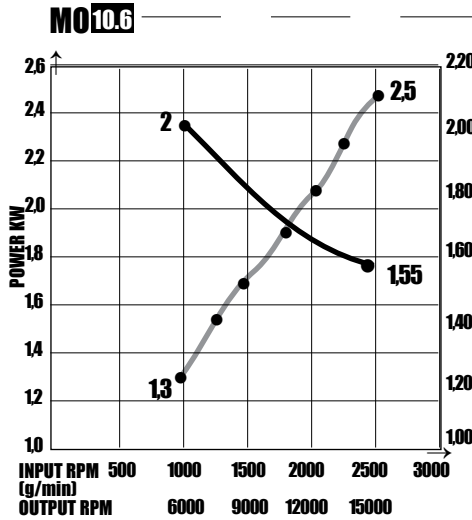
- Cone solidly connected with the spindle seat
- Two or three planetary gears for high transmission power ratings
- Special tool attachment, on request (Komet, DIN 1835, etc.)
- Liquid coolant fed through tool centre, on request
- Special machine attachment, on request (HSK, Morse Cone, DIN 69880, etc.)
- Interchangeable anti-rotation pin which can be customized by the buyer

The spindle speeders series can be mounted on traditional machines or machines with an automatic tool changer. In the latter case an anti-rotation unit will be supplied that can turn 360 degrees. The spindle speeders series is lubricated with a long-life synthetic grease that is practically maintenance free. The testing certificate attached to each spindle speeders series guarantees the quality of the product. Our spindle speeders have always been recognized for their strength, versatility, easy use and maintenance.

Spindle Speeders Performance Charts



Performances

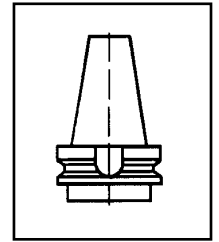
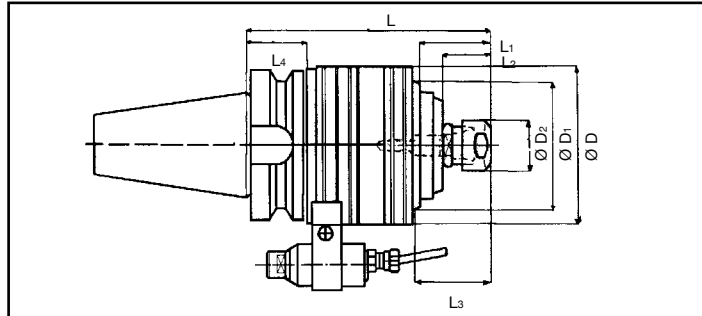


Max. Axial Thrust on the Spindle

Spindle speeder type	Axial thrust
MO 10.6	70
MO 13.6	110
MO 16.6	125
MO 25.4	300

Power
 Max. torque

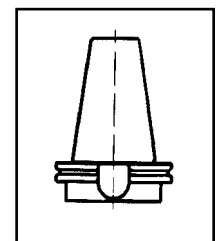
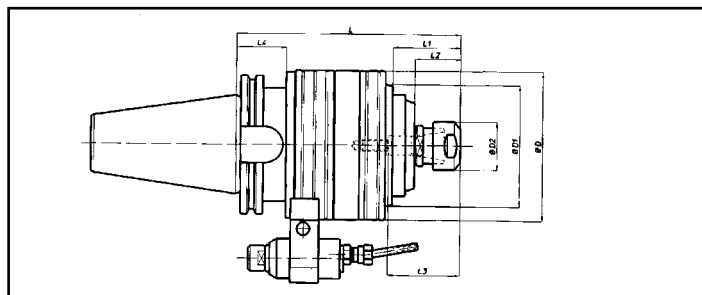
Spindle Speeders



With BT Shank MAS403BT

Type	MO 10.6			MO 13.6		MO 16.6	MO 25.4*
SHANK	30	40	50	40	50	50	50
ORDER NO.	MO106B30	MO106B40	MO106B50	MO136B40	MO136B50	MO166B50	MO254B50
RATIO	1-6			1-6		1-6	1-4,5
RPM**	22,000			15,000		12,000	10,000
WEIGHT KG	3,3	3,7	6,5	5,9	8	10	18,5
COLLET	ECX 16 max ø10			ECX 20 max ø13		ECX 25 max ø16	ECX 40 max ø26
D (mm)	84			105		123	169
D ₁ (mm)	55			72		85	120
D ₂ (mm)	24			35		42	63
L (mm)	136,5	134	145	152	163	170	202
L ₁ (mm)	42			47		44	67,5
L ₂ (mm)	30			31,5		32,5	40,5
L ₃ (mm)	40			50		52	64
L ₄ (mm)	32,5	30	41	30		41	41

With CT Shank



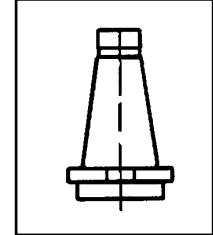
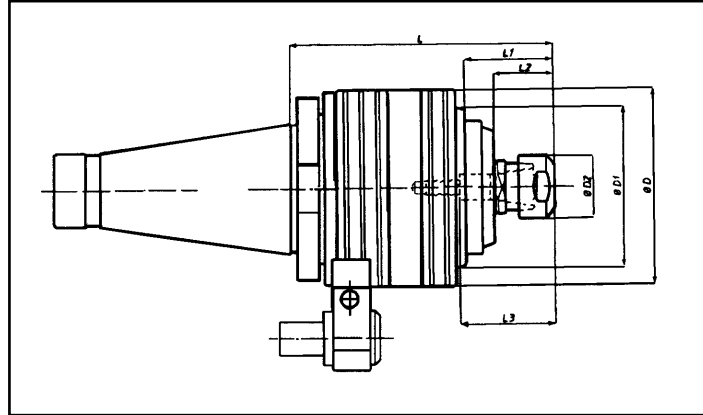
Type	MO 10.6			MO 13.6		MO 16.6	MO 25.4*
SHANK	30	40	50	40	50	50	50
ORDER NO.	MO106C30	MO106C40	MO106C50	MO136C40	MO136C50	MO166C50	MO254C50
RATIO	1-6			1-6		1-6	1-4,5
RPM**	22,000			15,000		12,000	10,000
WEIGHT KG	3,3	3,7	6,5	5,8	8	10	18,5
COLLET	ECX 16 max ø10			ECX 20 max ø13		ECX 25 max ø16	ECX 40 max ø26
D (mm)	84			105		123	169
D ₁ (mm)	55			72		85	120
D ₂ (mm)	24			35		42	63
L (mm)	139	139	139	163	157	164	196
L ₁ (mm)	42			47		44	67,5
L ₂ (mm)	30			31,5		32,5	40,5
L ₃ (mm)	40			50		52	64
L ₄ (mm)	35			35		35	35

* These units cannot be used with automatic tool change. It can only be put manually into the spindle.
** Speed @ 100% duty cycle.

Spindle Speeders



With NMTB Shank



Type	MO 10.6			MO 13.6		MO 16.6		MO 25.4*
SHANK	30	40	50	40	50	40	50	50
ORDER NO.	MO106N30	MO106N40	MO106N50	MO136N40	MO136N50	MO166N40	MO166N50	MO254N50
RATIO	1-6			1-6		1-6		1-4,5
RPM	22,000			15,000		12,000		10,000
WEIGHT KG	3	3	6,3	5	7,3	7,4	9,3	18,5
COLLET	ECX 16 max ø10			ECX 20 max ø13		ECX 25 max ø16		ECX 40 max ø26
D (mm)	84			105		123		169
D ₁ (mm)	55			72		85		120
D ₂ (mm)	24			35		42		63
L (mm)	126	119	122	136,5	140	147,5	147,5	184,5
L ₁ (mm)	42			47		44		67,5
L ₂ (mm)	30			31,5		32,5		40,5
L ₃ (mm)	40			50		52		64

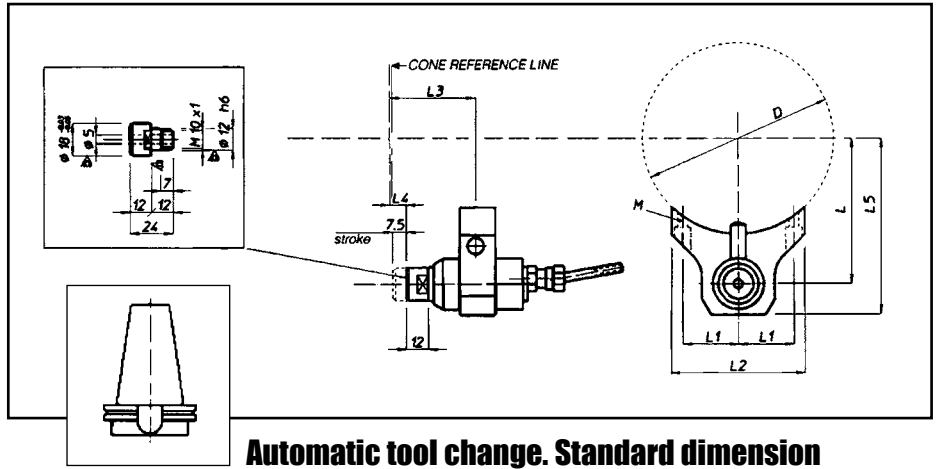
* These units cannot be used with automatic tool change. It can only be put manually into the spindle.

** Speed @ 100% duty cycle.

Spindle Speeders Torque Arm

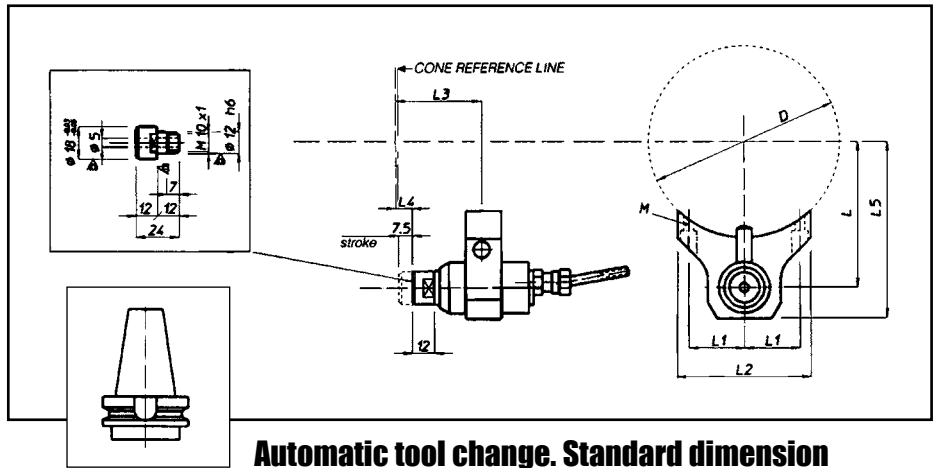


**Torque Arm For
CT Shank**



Type	L With Shank			L1	L2	L3 With Shank			L4 With Shank			M	D
	30	40	50			30	40	50	30	40	50		
MO 10.6	65	65	80	29,5	70	50	50	50	9	9	9	M5	84
MO 13.6	-	80	80	30,5	71,5	-	53,5	47,5	-	15	9	M5	105
MO 16.6	-	-	80	31	75	-	-	47,5	-	-	9	M6	123

**Torque Arm For
BT Shank**

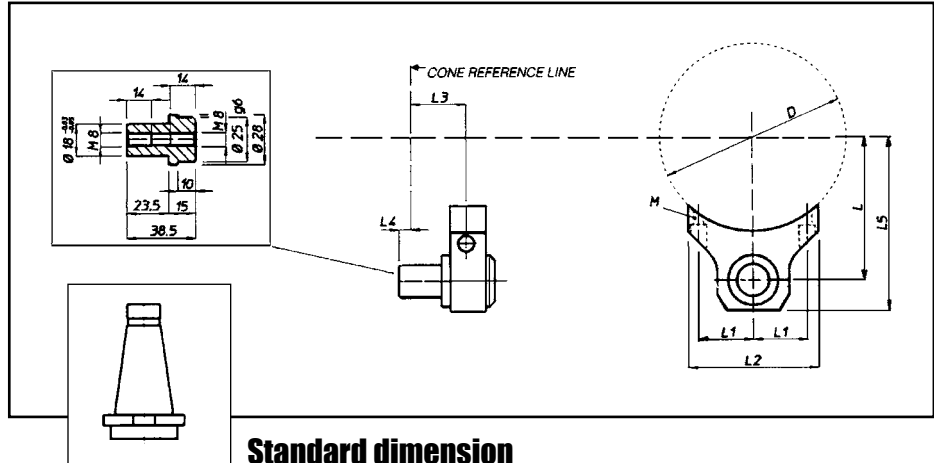


Type	L With Shank			L1	L2	L3 With Shank			L4 With Shank			M	D
	30	40	50			30	40	50	30	40	50		
MO 10.6	65	65	80	29,5	70	47,5	45	56	6,5	4	15	M5	84
MO 13.6	-	80	80	30,5	71,5	-	42,5	53,5	-	4	15	M5	105
MO 16.6	-	-	80	31	75	-	-	53,5	-	-	15	M6	123

Spindle Speeders Torque Arm & Stop Block

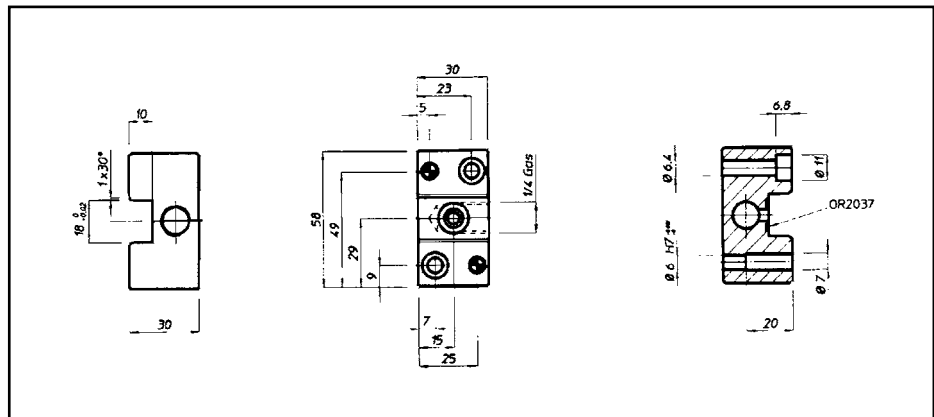


**Torque Arm For
NMTB**

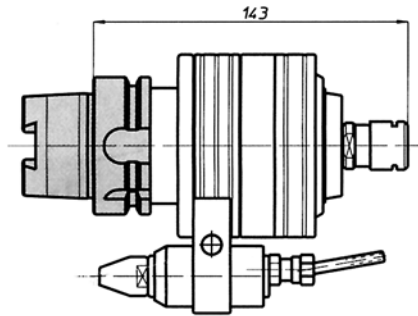


Type	L With Shank			L1	L2	L3 With Shank			L4 With Shank			M	D
	30	40	60			30	40	50	30	40	50		
MO 10.6	65	65	80	29,5	70	37,5	30	30	2,5	10	10	M5	84
MO 13.6	-	80	80	30,5	71,5	-	27	30,5	-	10,5	7	M5	105
MO 16.6	-	80	80	31	75	-	31	31	-	6,5	6,5	M6	123

Stop Block

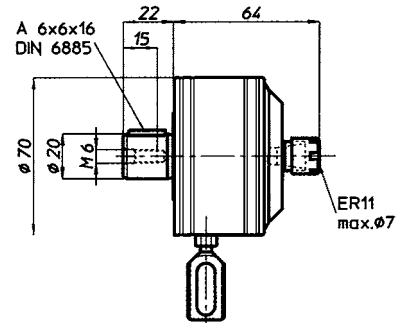


Spindle Speeders Special Execution Coolant Flow



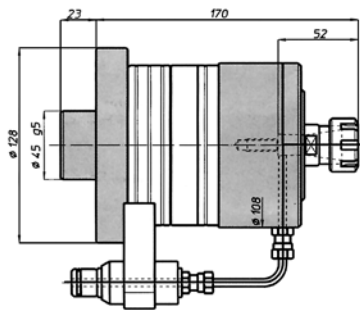
MO 10.6

WITH SHANK DIN 69893 HSK - A63
RPM MAX 30.000



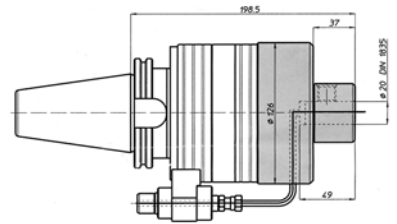
MO 7.5

RATIO 1-5
MAX RPM 8.000



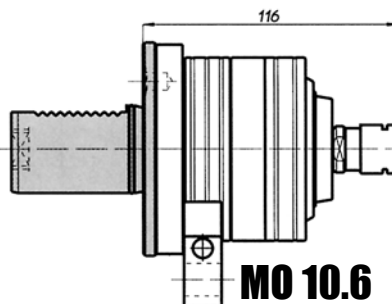
MO 13.6

WITH SPECIAL SHAFT
AND COOLANT THROUGH
THE OUTPUT SPINDLE



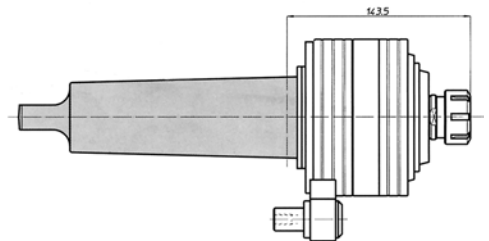
MO 16.6

WITH SHANK DIN 69871-50 CONNECTING
DIN 1835 Ø20 WITH COOLANT THROUGH
THE OUTPUT SPINDLE



MO 10.6

WITH SHANK VDI 40



MO 10.6

WITH SHANK MT 6 DIN 228

Angle Heads



Techleader/O.M.G. angle heads series TA have been manufactured to solve drilling, tapping and milling problems. The angle heads reach where horizontal or vertical machine tools do not permit a reduction in the cost and time of machining. Techleader/O.M.G. have a complete range of angle heads as follows:

TA: The inclination of the spindle is 90°

TA...2: 2 opposite spindles

TA...D: Single-spindle with internal coolant through output spindle

TAV: The angular position of the spindle is adjustable from +90° to -90°.

TAF: The angular position of the fix spindle is made according to customer requests.

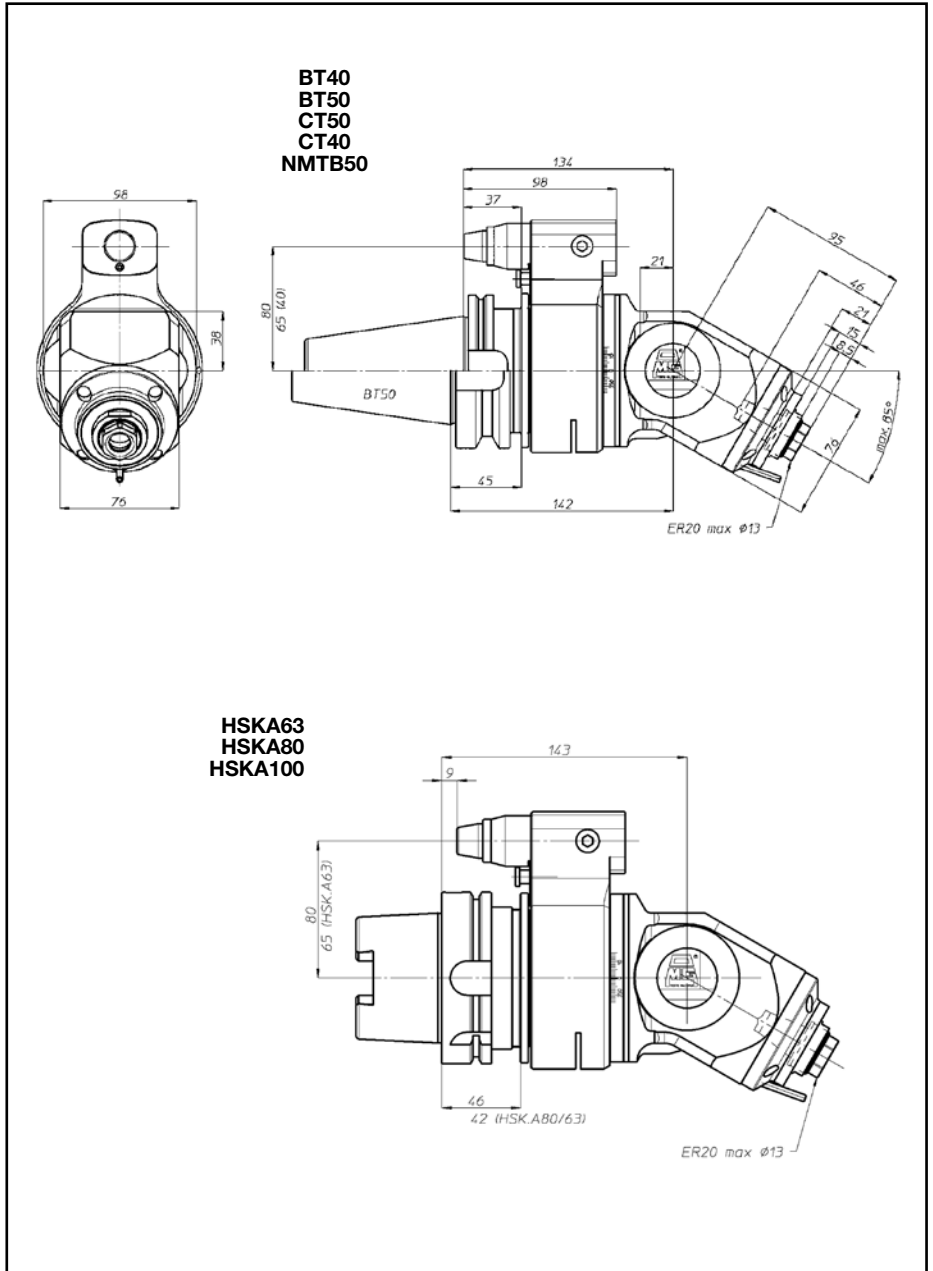
Special angle heads manufactured according to customer requests.

Techleader/O.M.G. angle heads can be used on conventional machine tools, on machining centers with automatic tool change and on turning centers with motorized turret. These heads are designed for high rigidity and precision. We achieve this by using Gleason precision spiral-bevel gears and high precision bearings. The standard anti-rotating system can be easily positioned. Where more rigidity in the application is required, we suggest using our TRIBLOCK system. Also our units can have the option to have coolant through the spindle via the anti rotating system and a distributor cap on the rear of the output spindle. Upon request, the angle heads can be customized and supplied with:

- ✓ Machine connection
(CT, BT, HSK, NMTB, DIN 69880, etc.)
- ✓ Internal coolant through the tool
- ✓ Special tool connection
(ABS, DIN 1835, etc.)

The angle head series TA has been studied and defined by computerized systems to add to the knowledge of Techleader/O.M.G.'s 40 years experience in the sector. This has allowed us to make innovative selections in the materials, in the thermal treatments and in the precision machining in order to maintain high precision, rigidity, hardness and top quality.

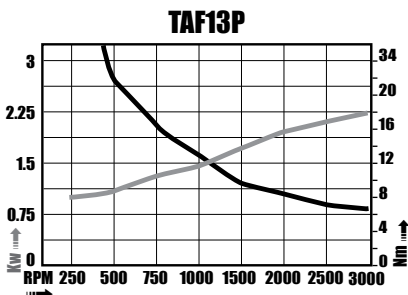
TAF13P - Fixed Angle Heads



TAF13P - CT40
TAF13P - MAS 403-BT40
TAF13P - CT50
TAF13P - MAS 403-BT50
TAF13P - NMTB-50

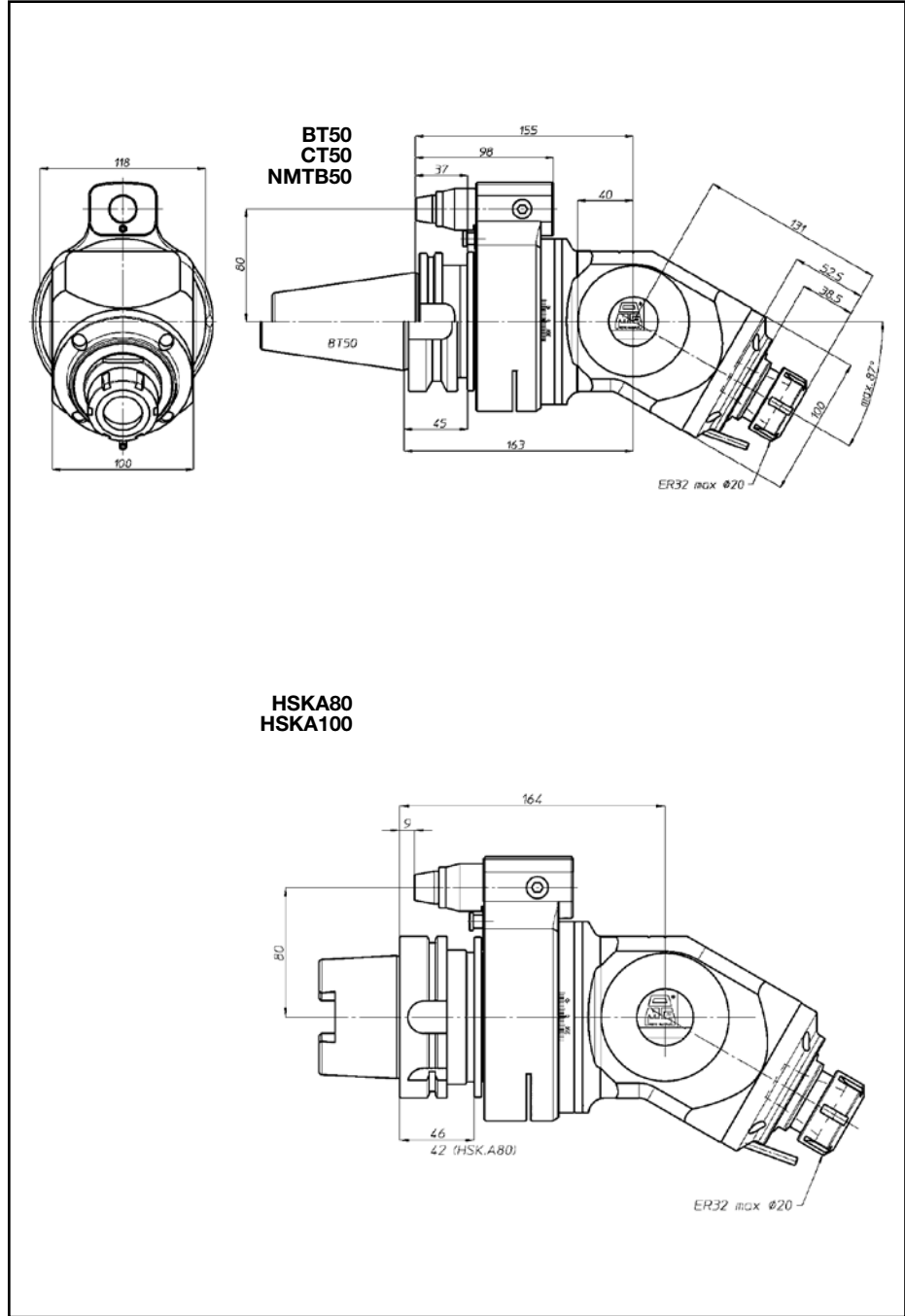
Ø13 1/2"	M10 3/8"	1-1	Rpm 4000	Kg 6.5-40 8.5-50

—— Power
—— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TAF13PB40	BT40 - TAF13P	ECX/ER20	13mm (1/2")
BT50	TAF13PB50	BT50 - TAF13P	ECX/ER20	13mm (1/2")
CT40	TAF13PC40	CT40 - TAF13P	ECX/ER20	13mm (1/2")
CT50	TAF13PC50	CT50 - TAF13P	ECX/ER20	13mm (1/2")
HSK63A	TAF13PH63	HSK63A - TAF13P	ECX/ER20	13mm (1/2")
HSK80A	TAF13PH80	HSK80A - TAF13P	ECX/ER20	13mm (1/2")
HSK100A	TAF13PH100	HSK100A - TAF13P	ECX/ER20	13mm (1/2")
NMTB50	TAF13PN50	NMTB50 - TAF13P	ECX/ER20	13mm (1/2")

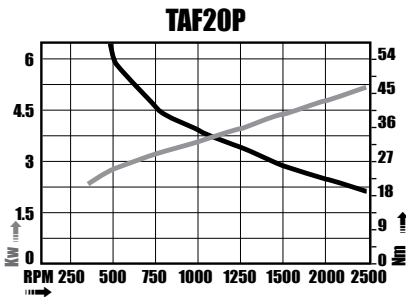
TAF20P - Fixed Angle Heads



TAF20P - CT50
TAF20P - MAS403-BT50
TAF20P - NMTB 50

Ø 20 3/4"	M16 5/8"	1-1	Rpm 3000	Kg 13.5 50

— Power
— Max. Torque



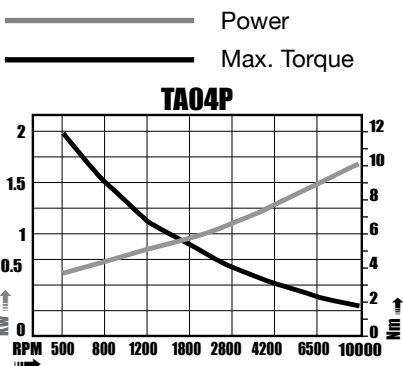
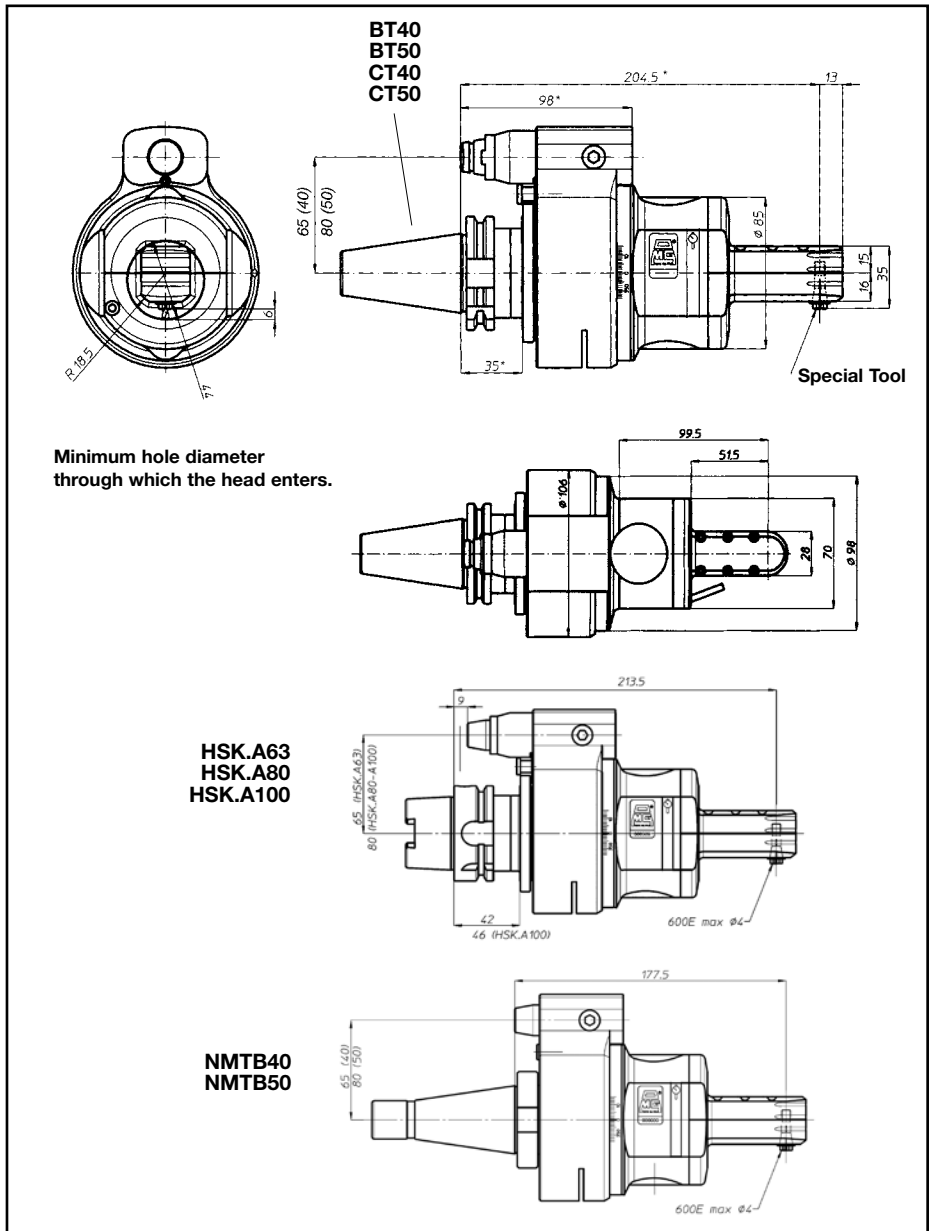
Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT50	TAF20PB50	BT50 - TAF20P	ECX/ER32	20mm(3/4")
CT50	TAF20PC50	CT50 - TAF20P	ECX/ER32	20mm(3/4")
HSK80A	TAF20PH80	HSK80A - TAF20P	ECX/ER32	20mm(3/4")
HSK100A	TAF20PH100	HSK100A - TAF20P	ECX/ER32	20mm(3/4")
NMTB50	TAF20PN50	NMTB50 - TAF20P	ECX/ER32	20mm(3/4")

TA04P - Right Angle Heads



TA04P-BT40 TA04P-BT50
TA04P-CT40 TA04P-CT50

Ø 4	M3	1-1	8000	5.5-40 7.5-50



Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA04PB40	BT40 - TA04P	600E	4.0 mm
BT50	TA04PB50	BT40 - TA04P	600E	4.0 mm
CT40	TA04PC40	CT40 - TA04P	600E	4.0 mm
CT50	TA04PC50	CT50 - TA04P	600E	4.0 mm
HSK63A	TA04PH63	HSK63 - TA04P	600E	4.0 mm
HSK80A	TA04PH80	HSK80 - TA04P	600E	4.0 mm
HSK100A	TA04PH100	HSK100 - TA04P	600E	4.0 mm
NMTB40	TA04PN40	NMTB40 - TA04P	600E	4.0 mm
NMTB50	TA04PN50	NMTB50 - TA04P	600E	4.0 mm

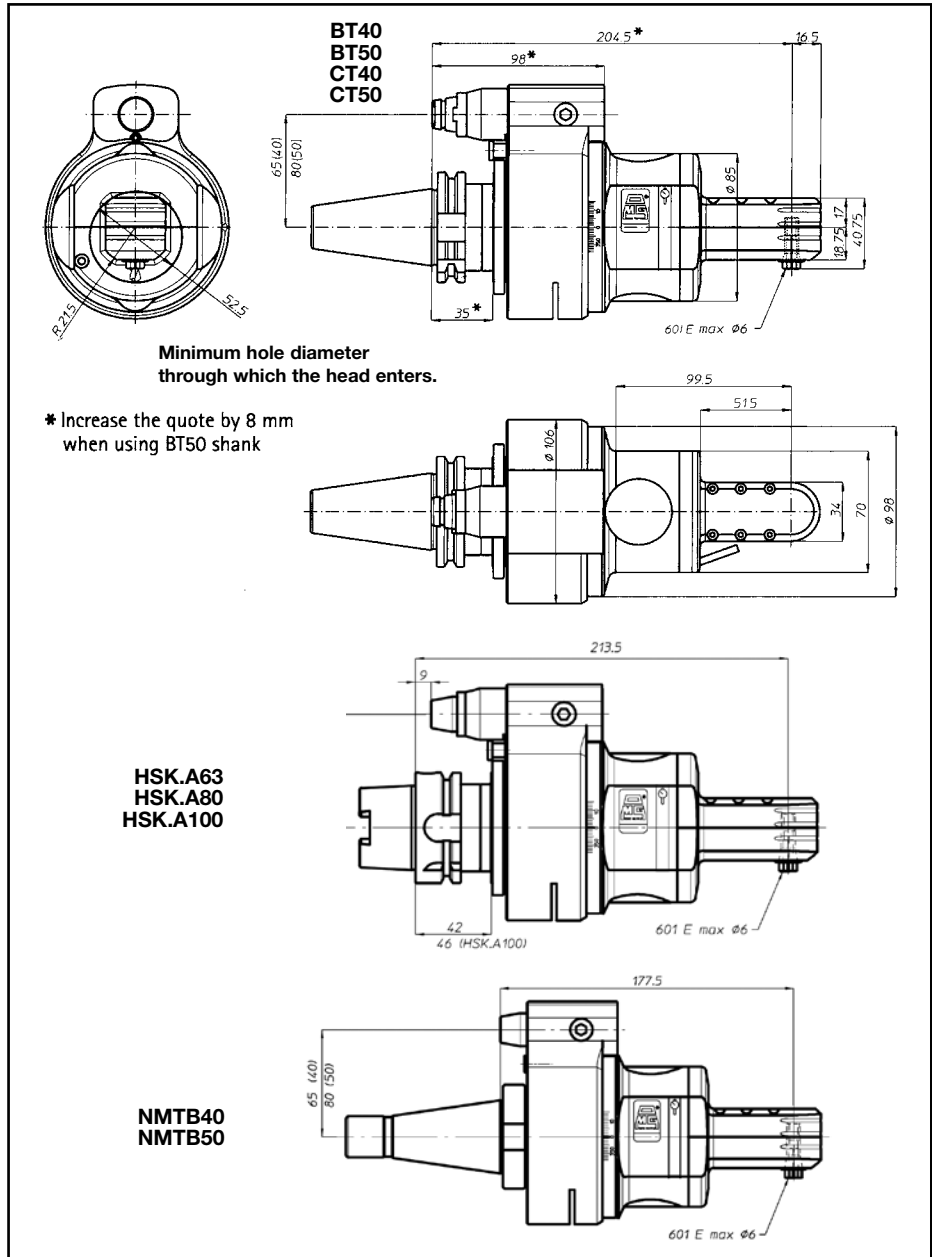
* Increase the quote by 8 mm when using BT50 shank.

TA06P - Right Angle Heads

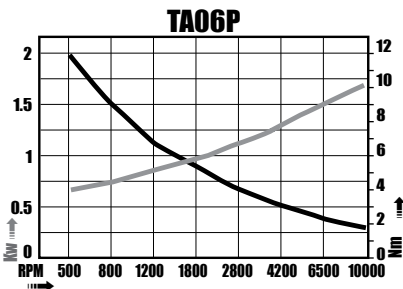


**TA06P-BT40, TA06P-BT50
TA06P-CT40, TA06P-CT50**

Ø 6 mm	M5	1-1	8000	5-40 7-50



Power
Max. Torque



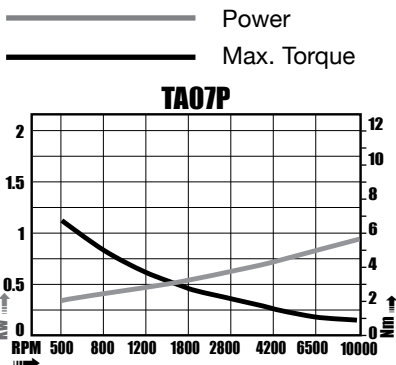
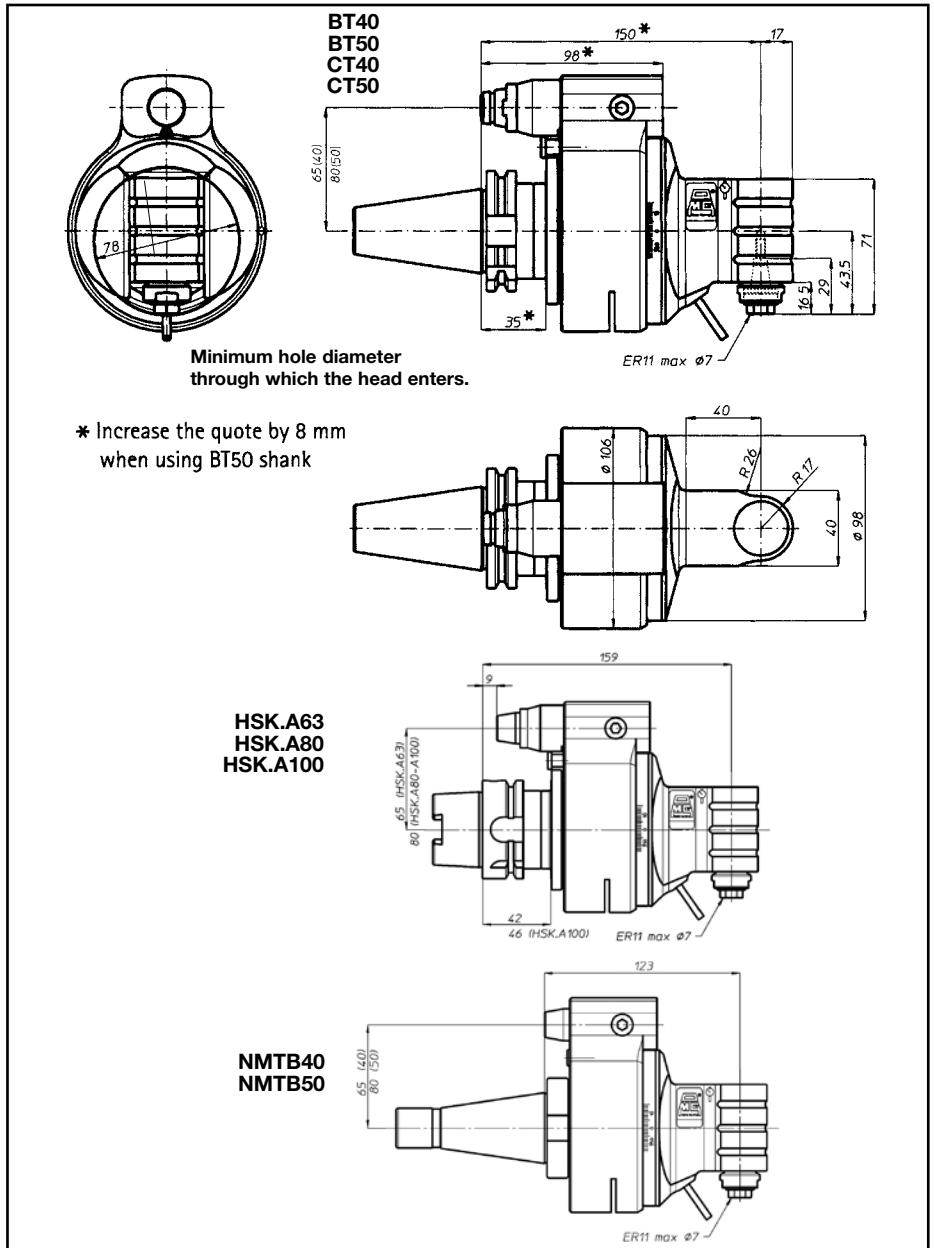
Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA06PB40	BT40-TA06P	601E	6 mm
BT50	TA06PB50	BT50-TA06P	601E	6 mm
CT40	TA06PC40	CT40-TA06P	601E	6 mm
CT50	TA06PC50	CT50-TA06P	601E	6 mm
HSK63A	TA06PH63	HSK63-TA06P	601E	6 mm
HSK80A	TA06PH80	HSK80-TA06P	601E	6 mm
HSK100A	TA06PH100	HSK100-TA06P	601E	6 mm
NMTB40	TA06PN40	NMTB40-TA06P	601E	6 mm
NMTB50	TA06PN50	NMTB50-TA06P	601E	6 mm

TA07P - Right Angle Heads



**TA07P-BT40, TA07P-BT50
TA07P-CT40, TA07P-CT50**

Ø 7 mm	M6	1-1	Rpm	Kg
			10000	5-40
				7-50



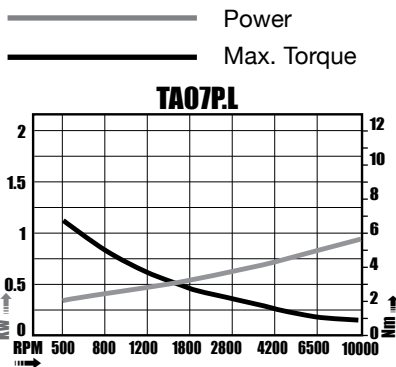
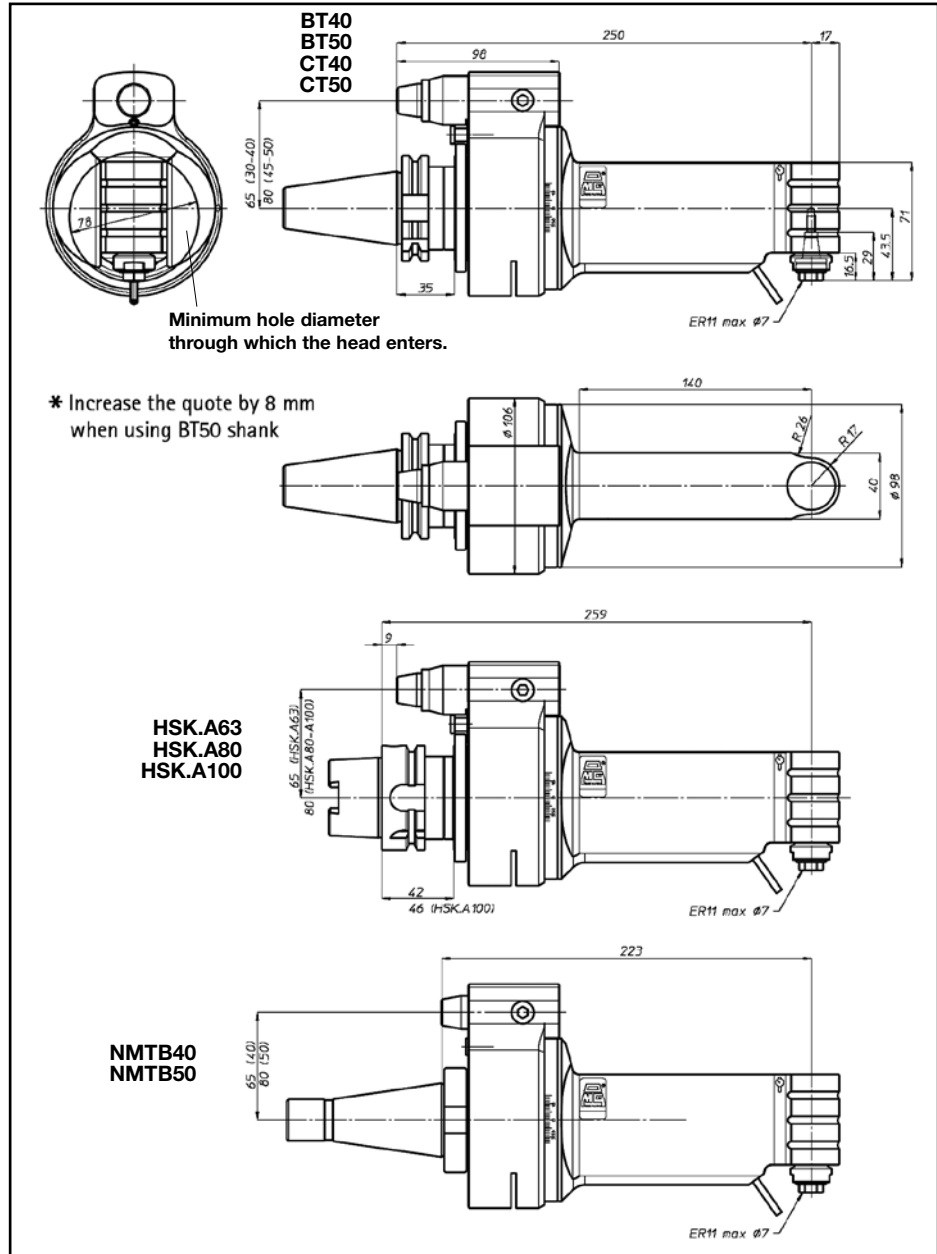
Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA07PB40	BT40 - TA07P	ECX/ER11	7 mm
BT50	TA07PB50	BT50 - TA07P	ECX/ER11	7 mm
CT40	TA07PC40	CT40 - TA07P	ECX/ER11	7 mm
CT50	TA07PC50	CT50 - TA07P	ECX/ER11	7 mm
HSK63A	TA07PH63	H63A - TA07P	ECX/ER11	7 mm
HSK80A	TA07PH80	H80A - TA07P	ECX/ER11	7 mm
HSK100A	TA07PH100	H100A - TA07P	ECX/ER11	7 mm
NMTB40	TA07PN40	NMTB40 - TA07P	ECX/ER11	7 mm
NMTB50	TA07PN50	NMTB50 - TA07P	ECX/ER11	7 mm

TA07P.L-Right Angle Heads



TA07P.L-BT40, TA07P.L-BT50
TA07P.L-CT40, TA07P.L-CT50

Ø7 mm	M6	1-1	Rpm 10000	Kg 7.5-40 9.5-50



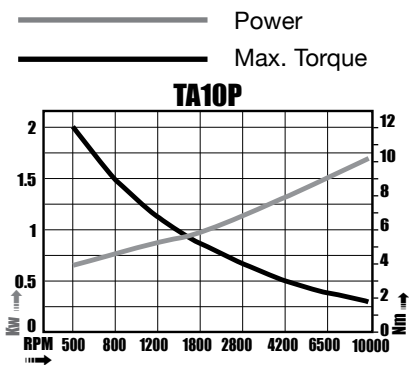
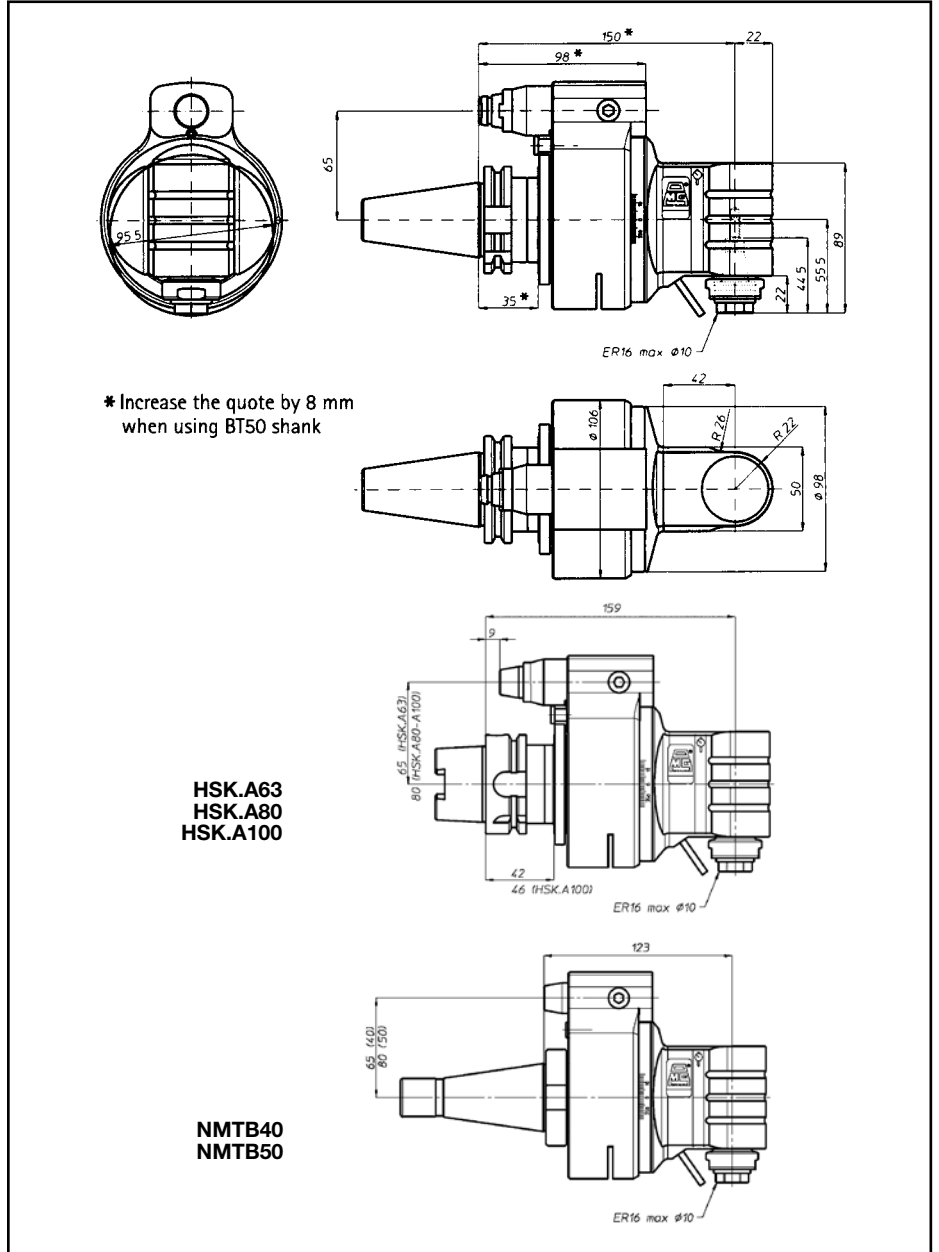
Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA07PLB40	BT40 - TA07PL	ECX/ER11	7 mm
BT50	TA07PLB50	BT50 - TA07PL	ECX/ER11	7 mm
CT40	TA07PLC40	CT40 - TA07PL	ECX/ER11	7 mm
CT50	TA07PLC50	CT50 - TA07PL	ECX/ER11	7 mm
HSK63A	TA07PLH63	H63A - TA07PL	ECX/ER11	7 mm
HSK80A	TA07PLH80	H80A - TA07PL	ECX/ER11	7 mm
HSK100A	TA07PLH100	H100A - TA07PL	ECX/ER11	7 mm
NMTB40	TA07PLN40	NMTB40 - TA07PL	ECX/ER11	7 mm
NMTB50	TA07PLN50	NMTB50 - TA07PL	ECX/ER11	7 mm

TA10P - Right Angle Heads



- TA10P-CT40**
- TA10P-MAS 403-BT40**
- TA10P-CT50**
- TA10P-MAS 403-BT50**
- TA10P - NMTB50**

Ø10 mm	M8 5/16"	1-1	Rpm 10000	Kg 5.3-40 7.5-50



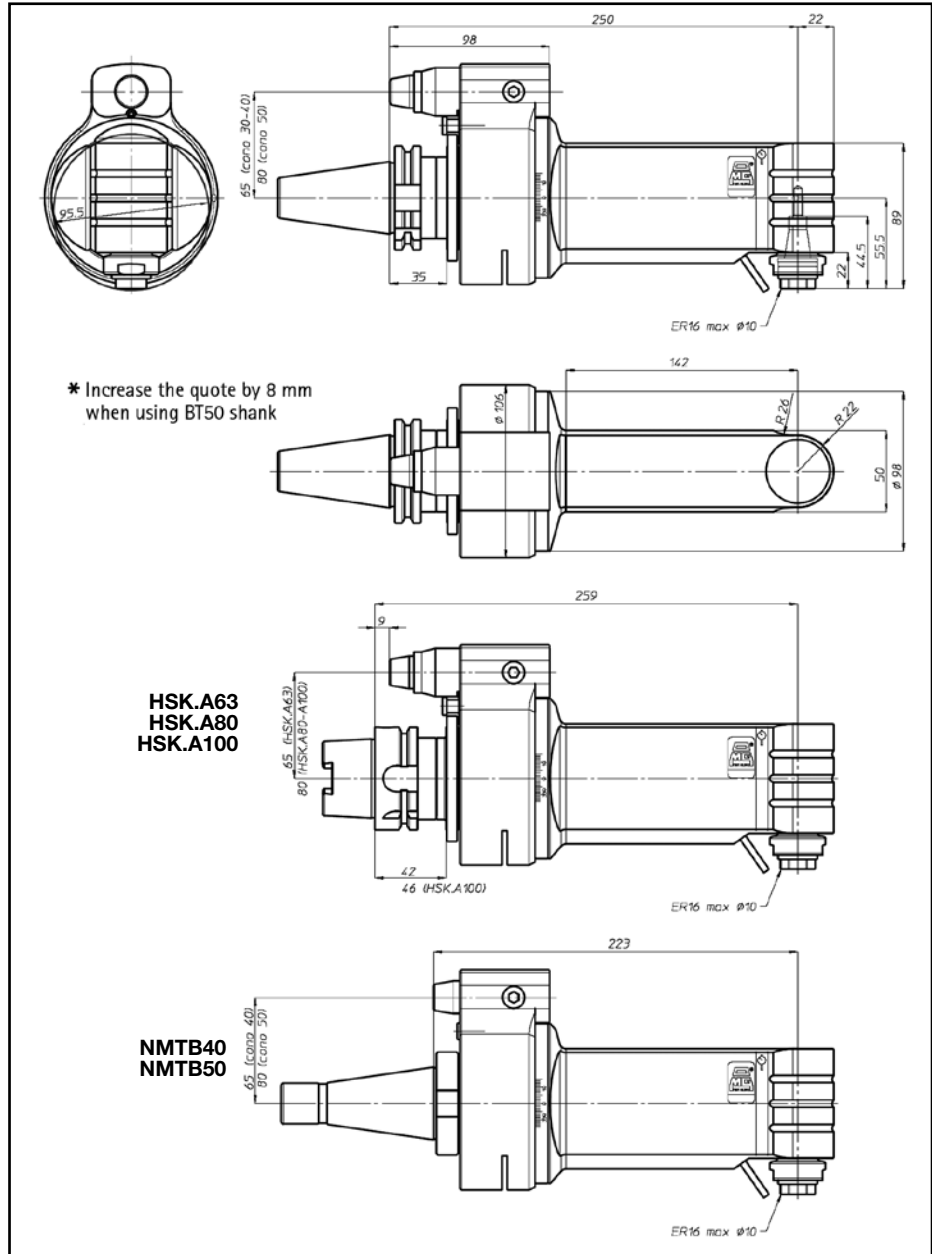
Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA10PB40	BT40 - TA10P	ECX/ER16	10mm (3/8")
BT50	TA10PB50	BT50 - TA10P	ECX/ER16	10mm (3/8")
CT40	TA10PC40	CT40 - TA10P	ECX/ER16	10mm (3/8")
CT50	TA10PC50	CT50 - TA10P	ECX/ER16	10mm (3/8")
HSK63A	TA10PH63	H63A - TA10P	ECX/ER16	10mm (3/8")
HSK80A	TA10PH80	H80A - TA10P	ECX/ER16	10mm (3/8")
HSK100A	TA10PH100	H100A - TA10P	ECX/ER16	10mm (3/8")
NMTB40	TA10PN40	NMTB40 - TA10P	ECX/ER16	10mm (3/8")
NMTB50	TA10PN50	NMTB50 - TA10P	ECX/ER16	10mm (3/8")

TA10PL-Right Angle Heads

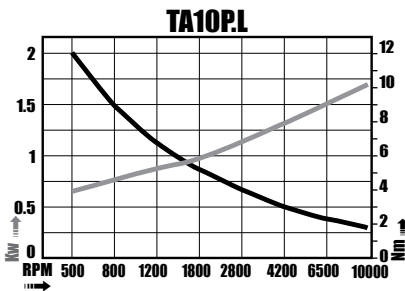


TA10PL-CT40
TA10PL-MAS 403-BT40
TA10PL-CT50
TA10PL-MAS 403-BT50
TA10PL - NMTB50

Ø10 mm	M8 5/16"	1-1	Rpm 10000	Kg 8.3-40 10.5-50



Power
Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA10PLB40	BT40 - TA10PL	ECX/ER16	10mm (3/8")
BT50	TA10PLB50	BT50 - TA10PL	ECX/ER16	10mm (3/8")
CT40	TA10PLC40	CT40 - TA10PL	ECX/ER16	10mm (3/8")
CT50	TA10PLC50	CT50 - TA10PL	ECX/ER16	10mm (3/8")
HSK63A	TA10PLH63	H63A - TA10PL	ECX/ER16	10mm (3/8")
HSK80A	TA10PLH80	H80A - TA10PL	ECX/ER16	10mm (3/8")
HSK100A	TA10PLH100	H100A - TA10PL	ECX/ER16	10mm (3/8")
NMTB40	TA10PLN40	NMTB40 - TA10PL	ECX/ER16	10mm (3/8")
NMTB50	TA10PLN50	NMTB50 - TA10PL	ECX/ER16	10mm (3/8")

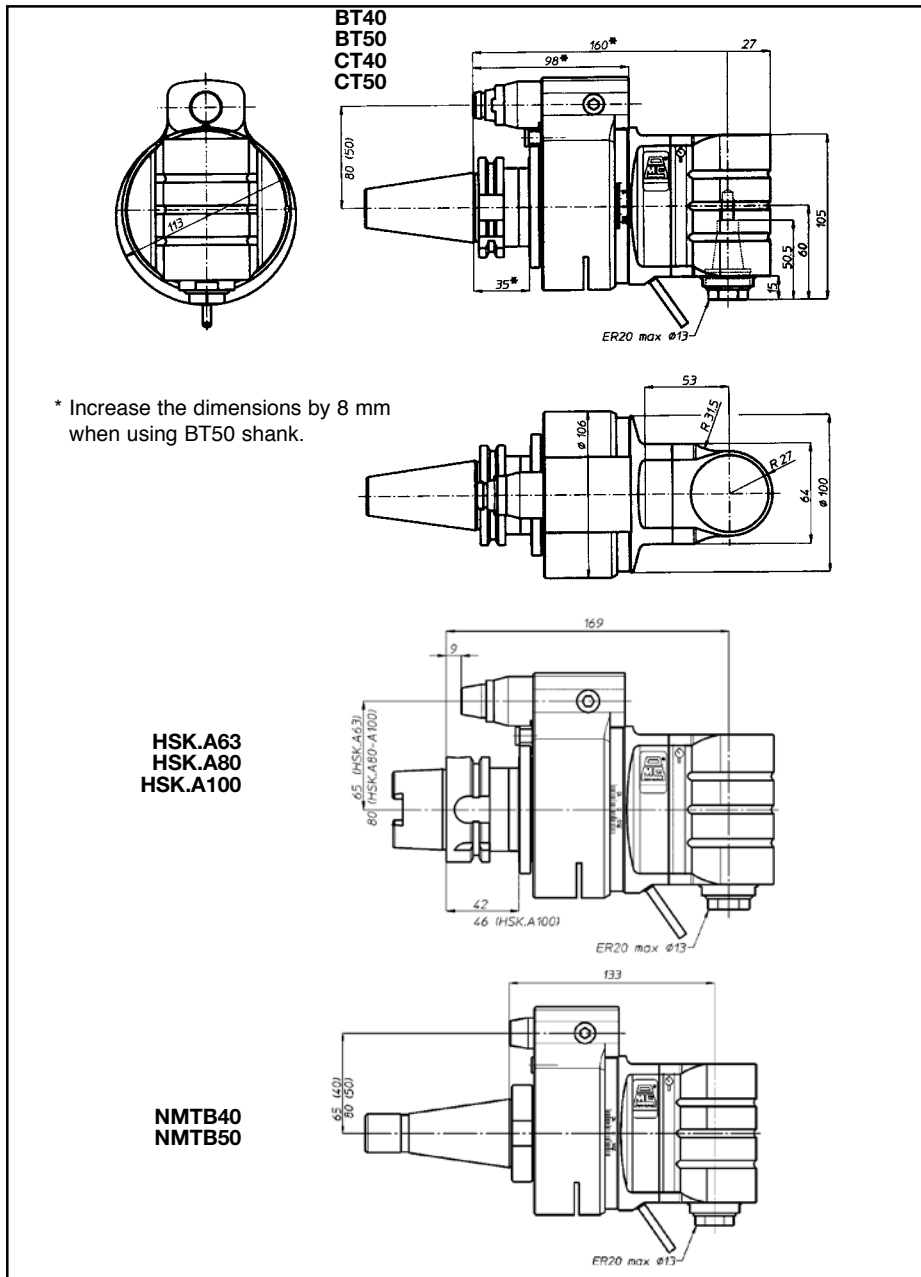
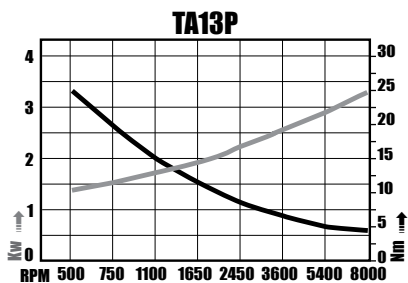
TA13P - Right Angle Heads



- TA13P - CT40**
- TA13P - MAS 403-BT40**
- TA13P-HSK-A63**
DIN69893
- TA13P-HSK-A80**
DIN69893
- TA13P-HSK-A100**
DIN69898
- TA13P - CT50**
- TA13P - MAS 403-BT50**
- TA13P - NMTB-50**

Ø13 mm 1/2"	M10 3/8"	1-1	8000	6.5-40 9-50

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA13PB40	BT40 - TA13P	ECX/ER20	13mm (1/2")
BT50	TA13PB50	BT50 - TA13P	ECX/ER20	13mm (1/2")
CT40	TA13PC40	CT40 - TA13P	ECX/ER20	13mm (1/2")
CT50	TA13PC50	CT50 - TA13P	ECX/ER20	13mm (1/2")
HSK63A	TA13H63	HSK63A-TA13P	ECX/ER20	13mm (1/2")
HSK80A	TA13H80	HSK80A-TA13P	ECX/ER20	13mm (1/2")
HSK100A	TA13PH100	HSK100A-TA13P	ECX/ER20	13mm (1/2")
NMTB40	TA13PN40	NMTB40 - TA13P	ECX/ER20	13mm (1/2")
NMTB50	TA13PN50	NMTB50 - TA13P	ECX/ER20	13mm (1/2")

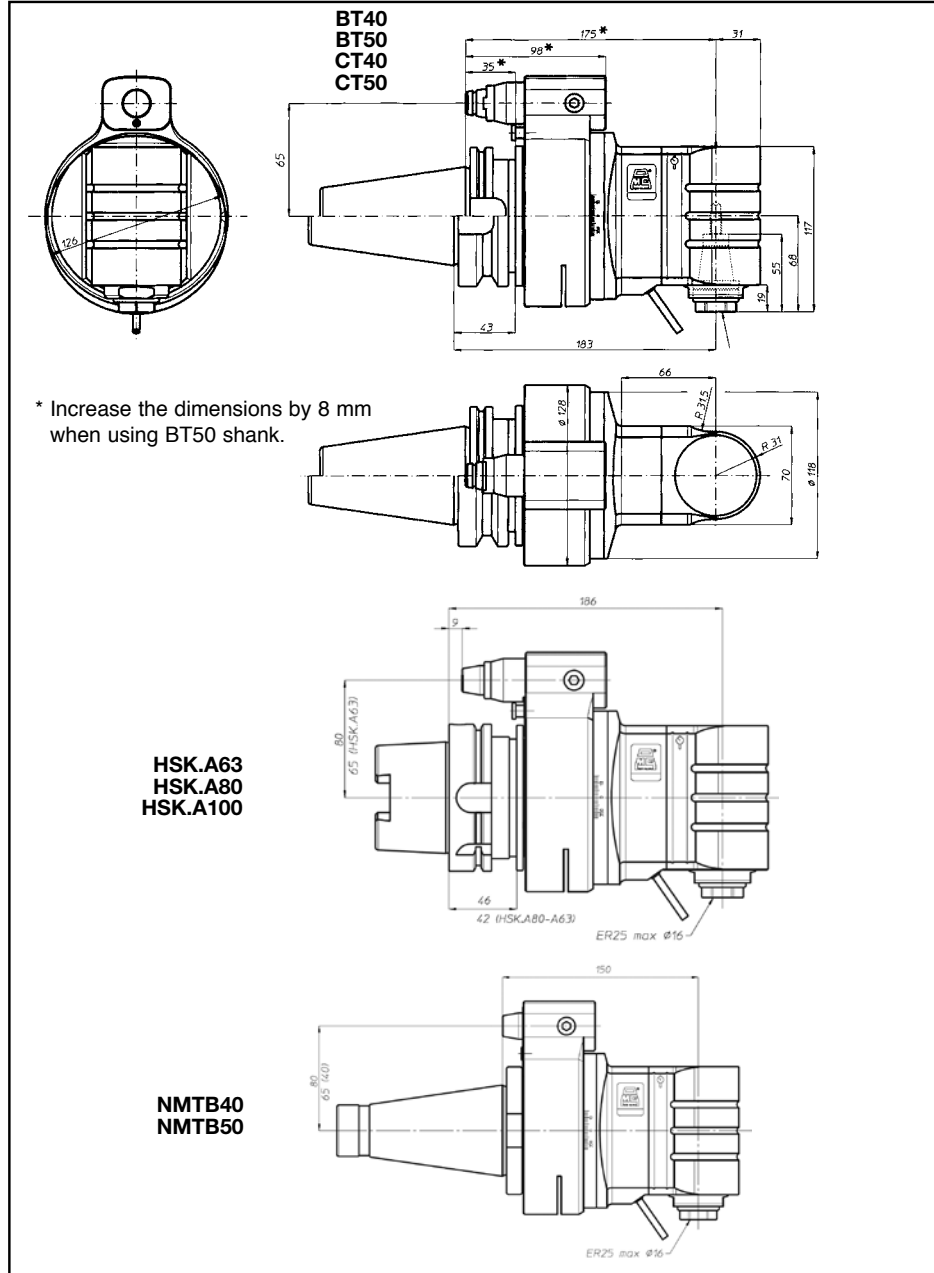
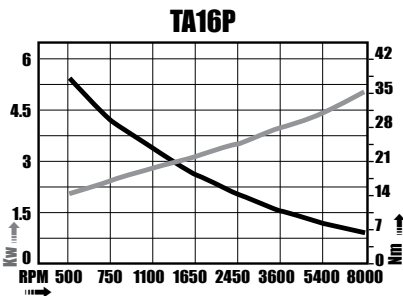
TA16P - Right Angle Heads



- TA16P - CT40**
- TA16P - MAS 403-BT40**
- TA16P - CT50**
- TA16P - MAS 403-BT50**
- TA16P-HSK-A63**
DIN69893
- TA16P-HSK-A80**
DIN69893
- TA16P - NMTB-50**

Ø16 mm 5/8"	M12 1/2"	1-1	Rpm 5000	Kg 7.7-40 11.7-50

———— Power
———— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max Capacity Ø
BT40	TA16PB40	BT40 - TA9016P	ECX/ER25	16mm (5/8")
BT50	TA16PB50	BT50 - TA9016P	ECX/ER25	16mm (5/8")
CT40	TA16PC40	CT40 - TA9016P	ECX/ER25	16mm (5/8")
CT50	TA16PC50	CT50 - TA9016P	ECX/ER25	16mm (5/8")
HSK63A	TA16PH63	HSK63A-TA16P	ECX/ER25	16mm (5/8")
HSK80A	TA16PH80	HSK80A-TA16P	ECX/ER25	16mm (5/8")
HSK100A	TA16PH100	HSK100A-TA16P	ECX/ER25	16mm (5/8")
NMTB40	TA16PN40	NMTB40 - TA9016P	ECX/ER25	16mm (5/8")
NMTB50	TA16PN50	NMTB50 - TA9016P	ECX/ER25	16mm (5/8")

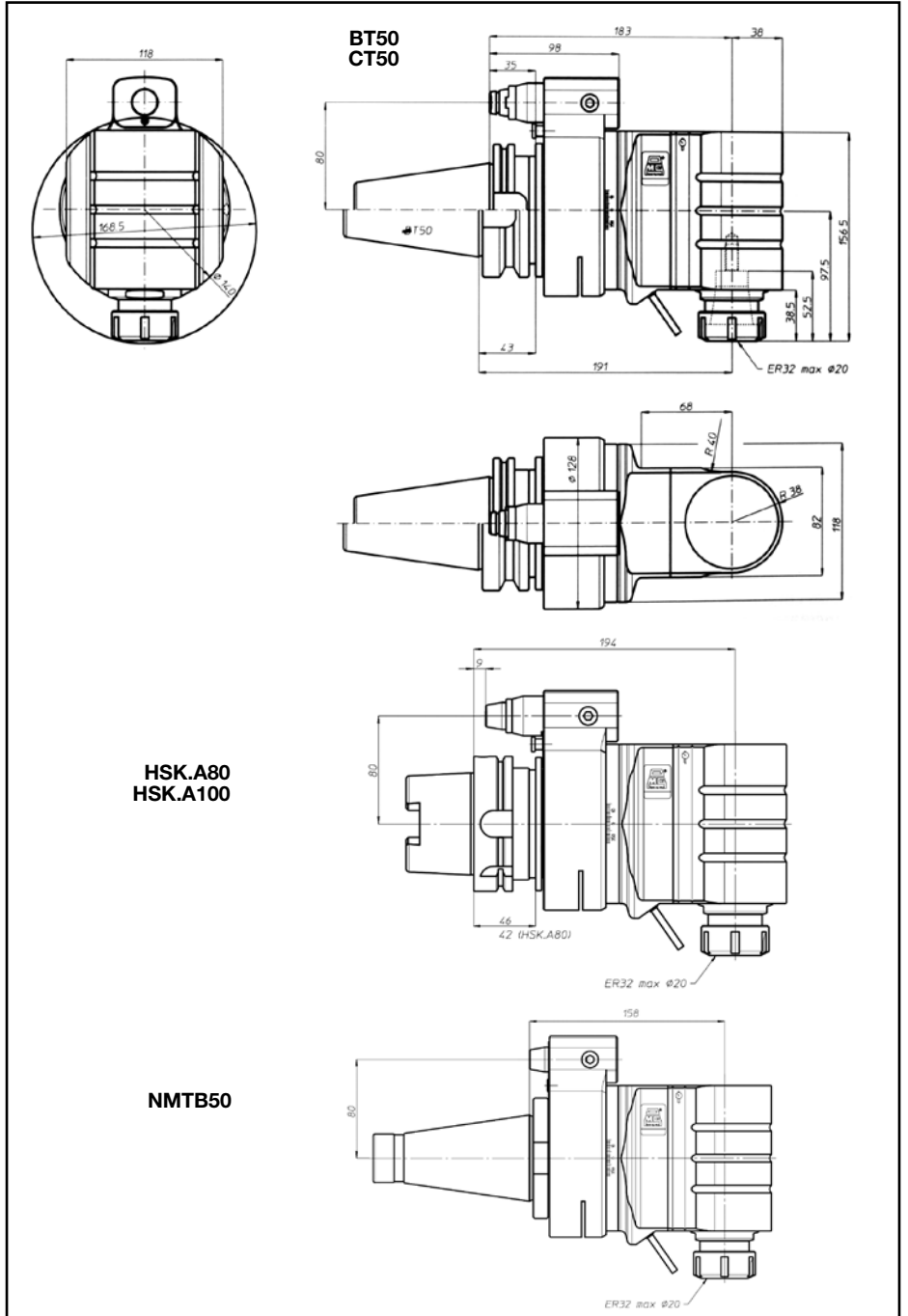
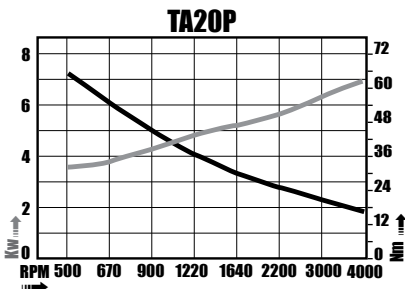
TA20P - Right Angle Heads



- TA20P - CT50**
- TA20P - MAS 403-BT50**
- TA20P-HSK-A80**
DIN69893
- TA20P-HSK-A100**
DIN69893
- TA20P- NMTB-50**

Ø20 mm	M14	1-1	3500	14

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity
BT50	TA20PB50	BT50 - TA20P	ECX/ER32	20mm (3/4")
CT50	TA20PC50	CT50 - TA20P	ECX/ER32	20mm (3/4")
HSK-80A	TA20PH80	HSK-80A-TA20P	ECX/ER32	20 mm (3/4")
HSK-100A	TA20PH100	HSK-100A-TA20P	ECX/ER32	20 mm (3/4")
NMTB50	TA20PN50	NMTB50 - TA20P	ECX/ER32	20mm (3/4")

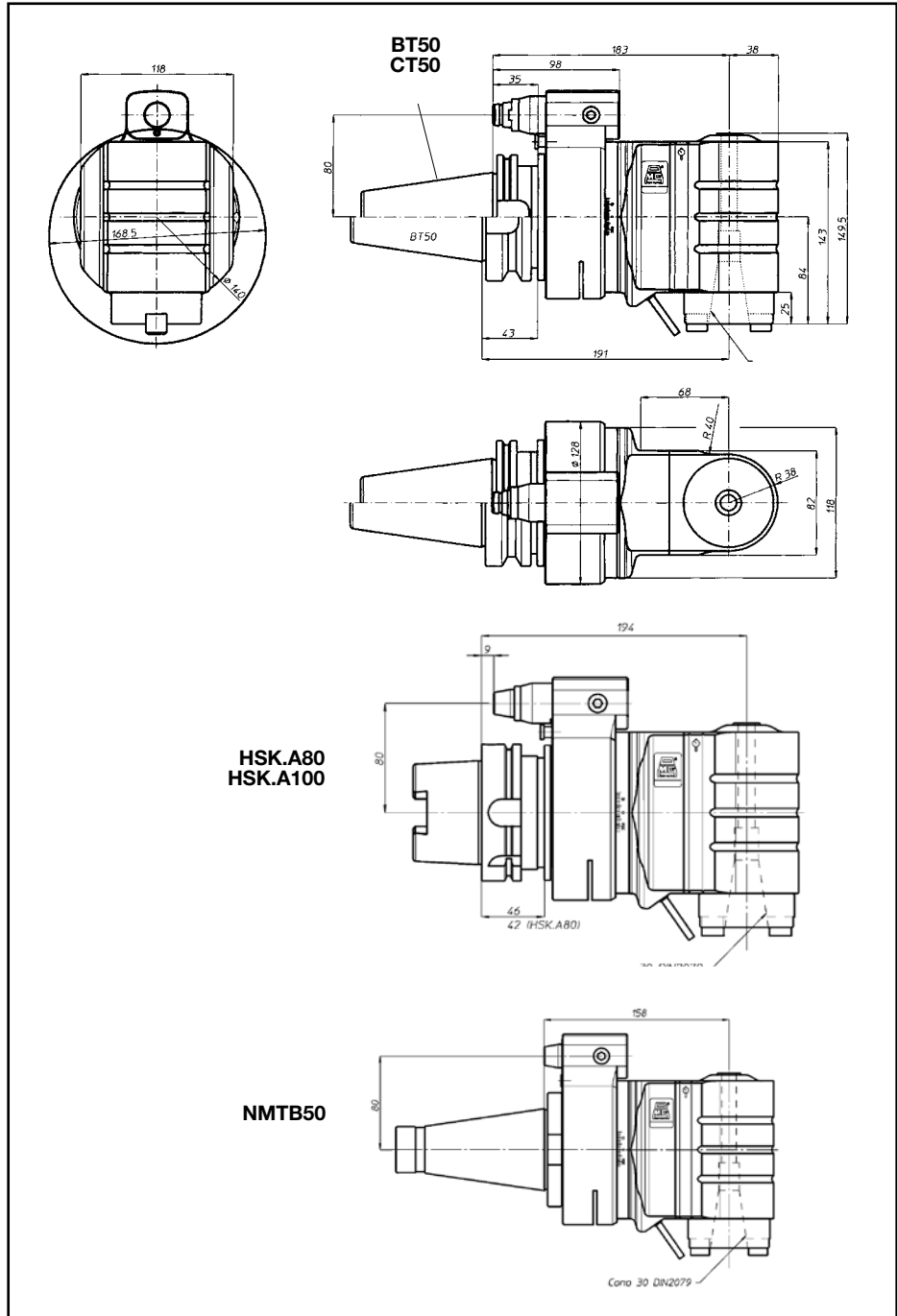
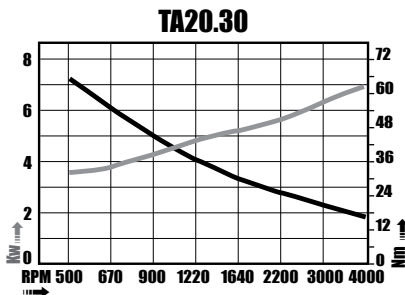
TA20.30P - Right Angle Heads



TA20.30 - CT50
TA20.30 - MAS 403-BT50
TA20.30 - NMTB-50

Ø20 mm	M14 5/8"	1-1	3500 Rpm	14 Kg

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Taper
BT50	TA2030B50	BT50 - TA20-30	NMTB30QC
CT50	TA2030C50	CT50 - TA20-30	NMTB30QC
HSK80A	TA203H80	HSK80A - TA20-30	NMTB30QC
HSK100A	TA203H100	HSK100A - TA20-30	NMTB30QC
NMTB50	TA2030N50	NMTB50 - TA20-30	NMTB30QC

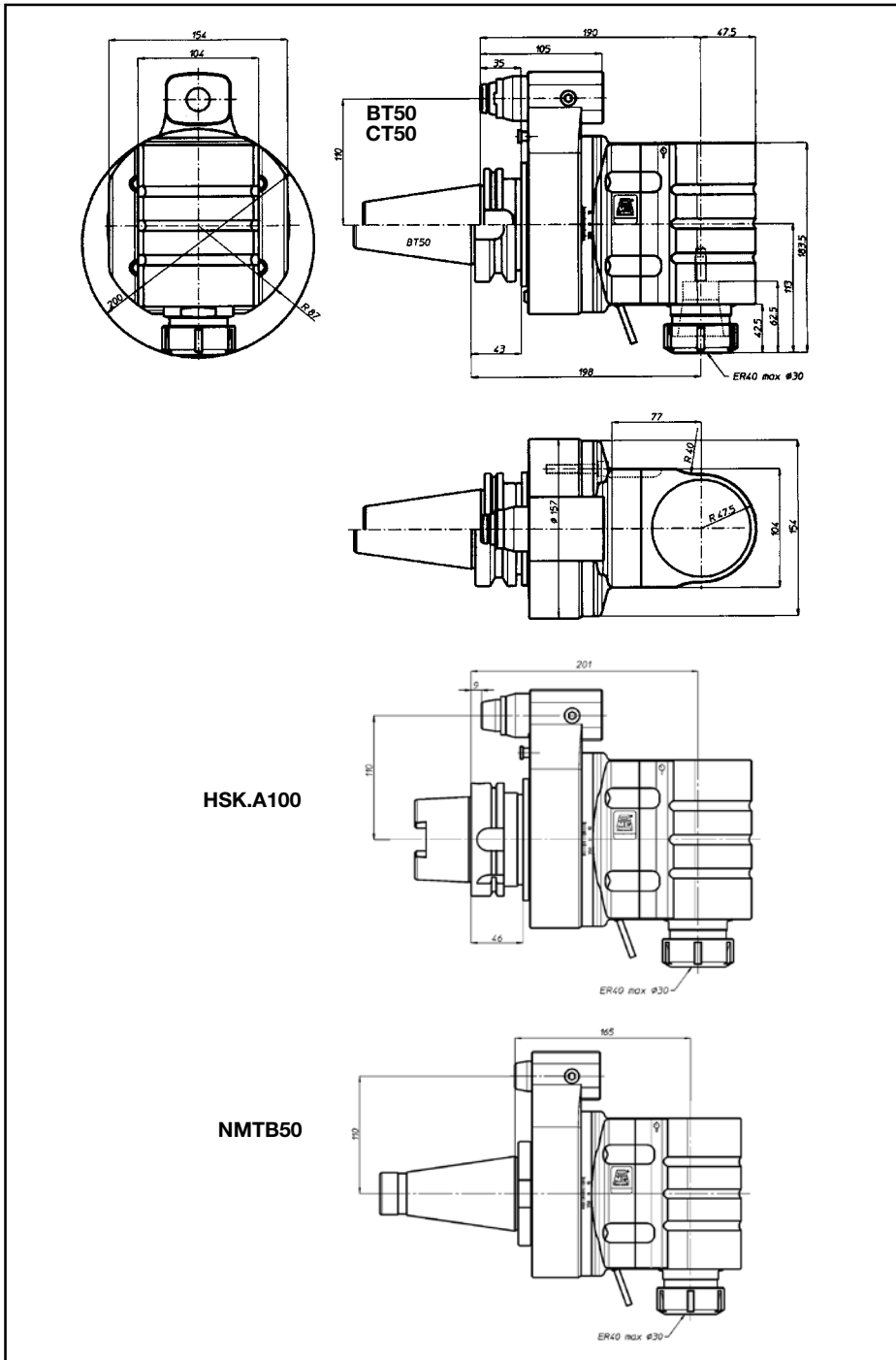
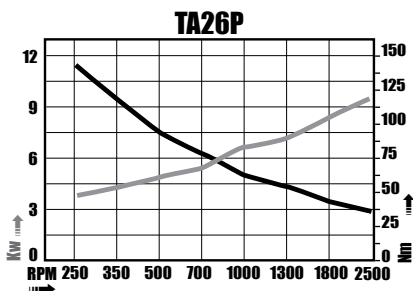
TA26P - Right Angle Heads



TA26P - CT50
TA26P - MAS 403-BT50
TA26P-HSK-A100
DIN69893
TA26P - NMTB-50

Ø24mm 1"	M20 3/4"	1-1	Rpm 2500	Kg 21

— Power
 — Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity
BT50	TA26PB50	BT50 - TA26P	ECX/ER40	26 mm (1") Ø
CT50	TA26PC50	CT50 - TA26P	ECX/ER40	26 mm (1") Ø
HSK100A	TA26PH100	HSK100A-TA26P	ECX/ER40	26 mm (1") Ø
NMTB50	TA26PN50	NMTB50 - TA26P	ECX/ER40	26 mm (1") Ø

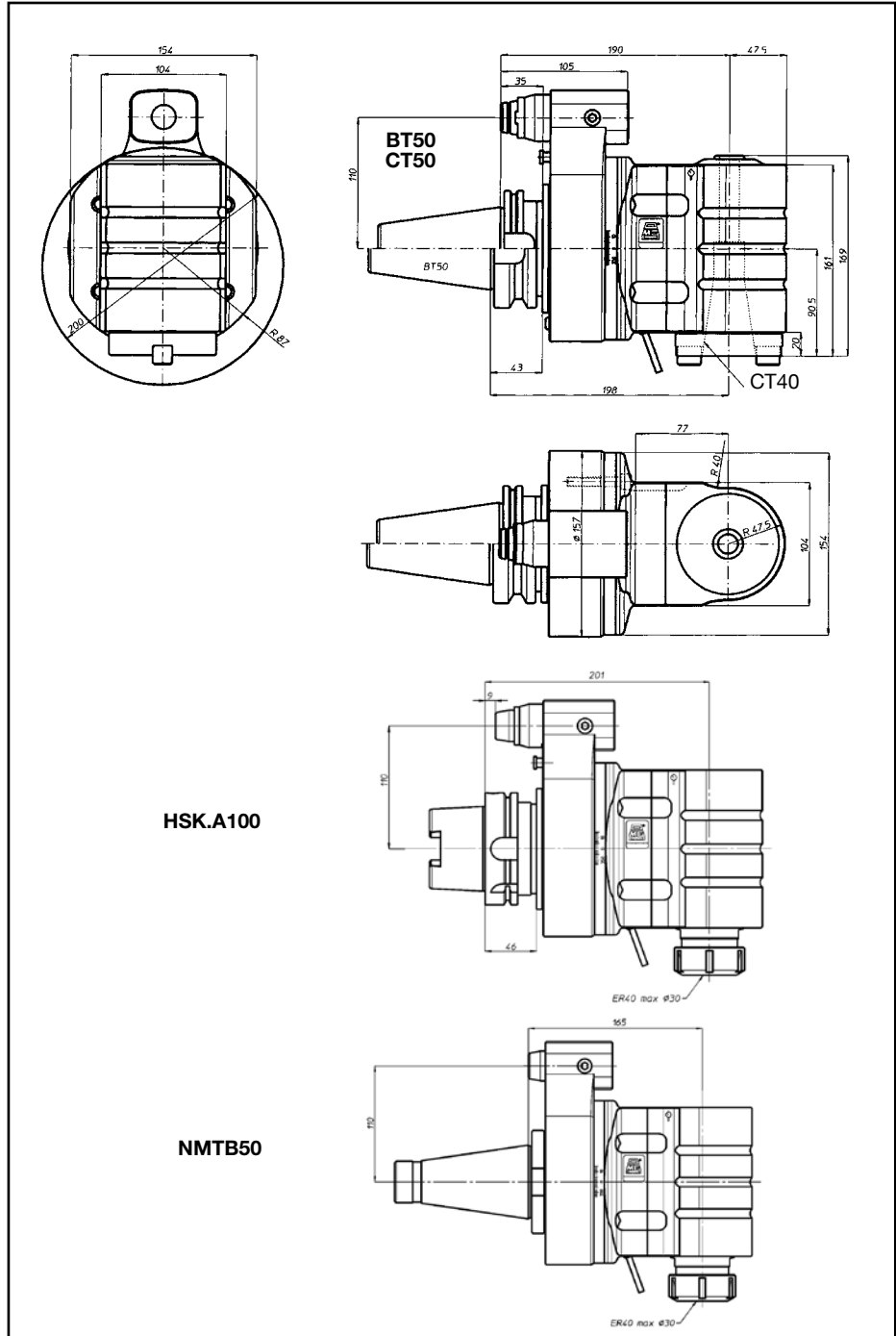
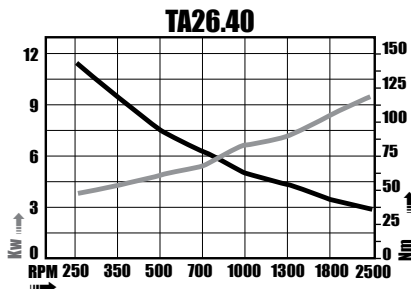
TA26.40P - Right Angle Heads



TA26.40 - CT50
TA26.40 - MAS 403-BT50
TA26.40 - NMTB-50

Ø26mm 1"	M20 3/4"	1-1	Rpm 2500	Kg 22

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Taper
BT50	TA2640B50	BT50 - TA26-40	CT40
CT50	TA2640C50	CT50 - TA26-40	CT40
HSK100A	TA2640H100	HSK100A-TA26-40	CT40
NMTB50	TA2640N50	NMTB50 - TA26-40	CT40

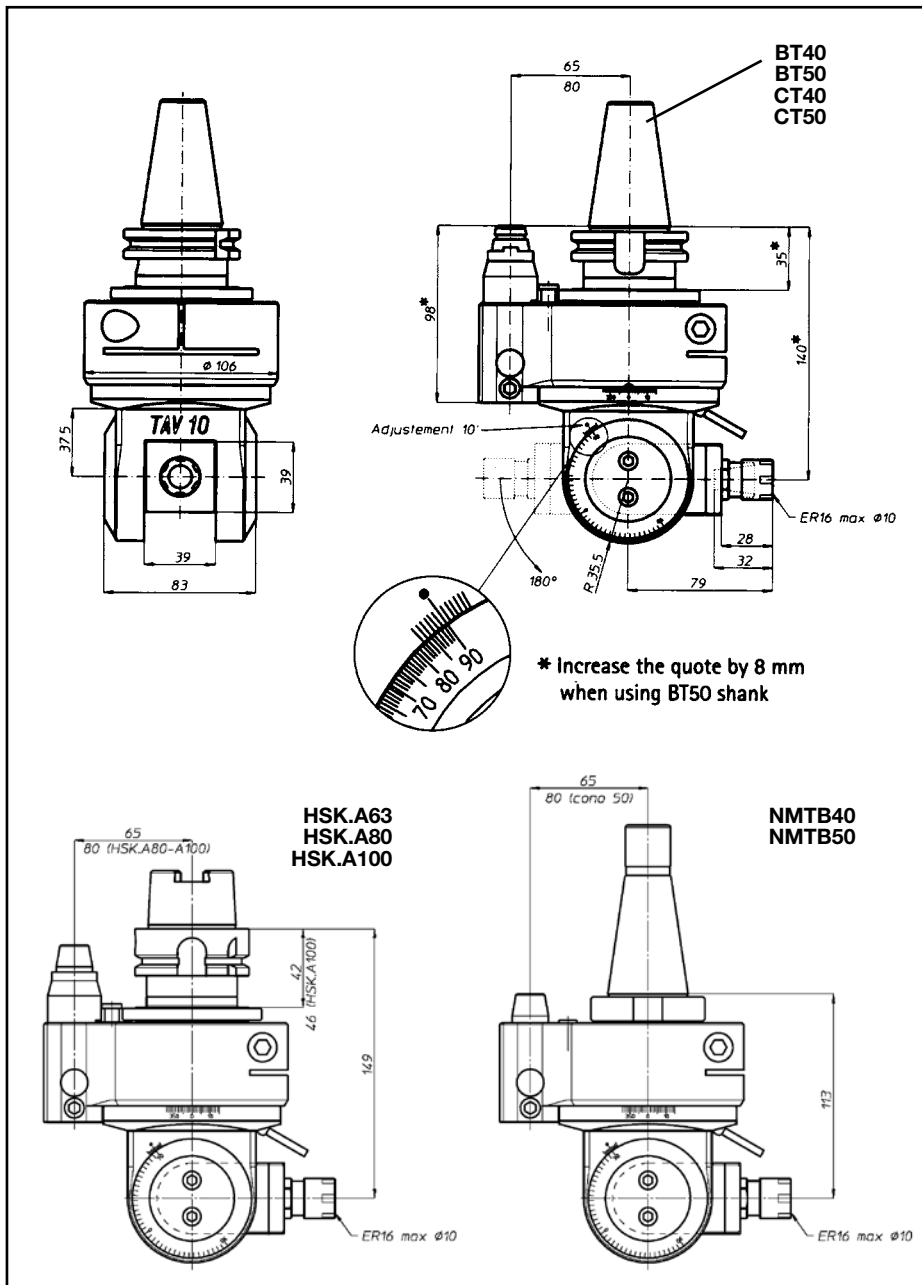
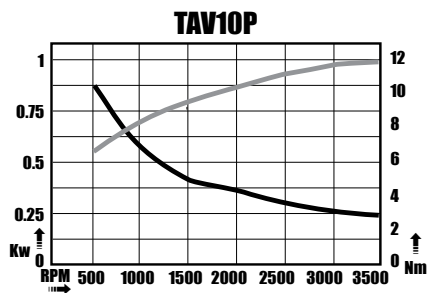
TAV10.P- Universal Angle Heads



- TAV10.P - CT40/CT50**
- TAV10.P - MAS403-BT40/BT50**
- TAV10.P-HSK-A63**
DIN69893
- TAV10.P-HSK-A80**
DIN69893
- TAV10.P-HSK-A100**
DIN69893

Ø10mm 3/8"	M8 5/16"	1-1	Rpm 4000	Kg 6.4-40 8.5-50

— Power
— Max. Torque



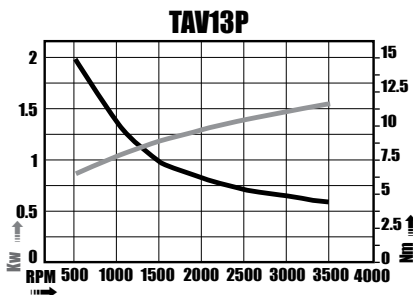
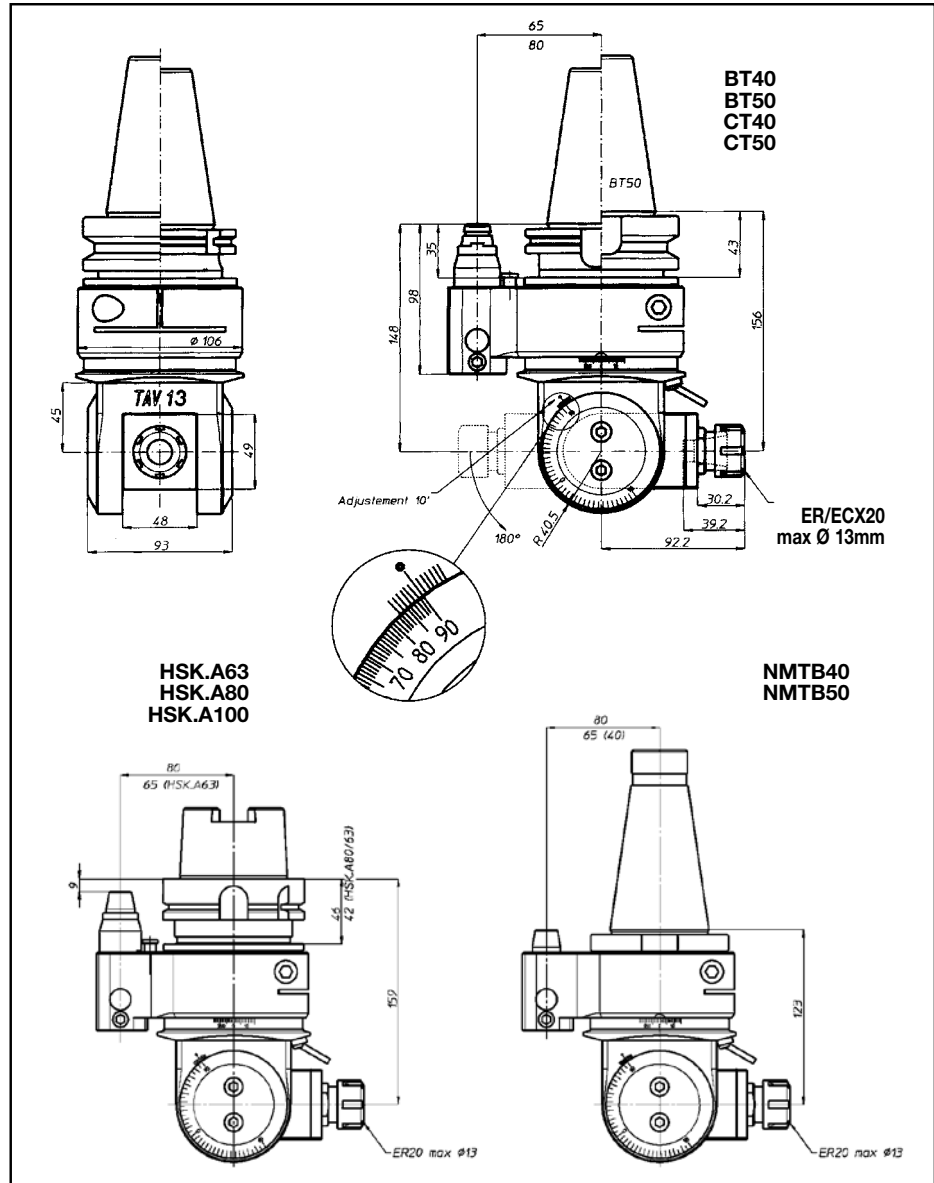
Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity
BT40	TAV10PB40	BT40 - TAV10P	ER/ECX16	10mm (3/8")
BT50	TAV10PB50	BT50 - TAV10P	ER/ECX16	10mm (3/8")
CT40	TAV10PC40	CT40 - TAV10P	ER/ECX16	10mm (3/8")
CT50	TAV10PC50	CT50 - TAV10P	ER/ECX16	10mm (3/8")
HSK63A	TAV10PH63	HSK63A-TAV10P	ER/ECX16	10mm (3/8")
HSK80A	TAV10PH80	HSK80A-TAV10P	ER/ECX16	10mm (3/8")
HSK100A	TAV10PH100	HSK100A-TAV10P	ER/ECX16	10mm (3/8")
NMTB40	TAV10PN40	NMTB40-TAV10P	ER/ECX16	10mm (3/8")
NMTB50	TAV10PN50	NMTB50-TAV10P	ER/ECX16	10mm (3/8")

TAV13.P- Universal Angle Heads



- TAV13.P - CT40/CT50**
- TAV13.P - MAS 403-BT40/BT50**
- TAV13.P-HSK-A63**
DIN69893
- TAV13.P-HSK-A80**
DIN69893
- TAV13.P-HSK-A100**
DIN69893
- TAV13.P - NMTB-50**

Ø13mm 1/2"	M10 3/8"	1-1	Rpm 3000	Kg 7.8-40 10.5-50



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TAV13PB40	BT40 - TAV13P	ER/ECX20	13mm (1/2")
BT50	TAV13PB50	BT50 - TAV13P	ER/ECX20	13mm (1/2")
CT40	TAV13PC40	CT40 - TAV13P	ER/ECX20	13mm (1/2")
CT50	TAV13PC50	CT50 - TAV13P	ER/ECX20	13mm (1/2")
HSK63A	TAV13PH63	HSK63A-TAV13P	ER/ECX20	13mm (1/2")
HSK80A	TAV13PH80	HSK80A-TAV13P	ER/ECX20	13mm (1/2")
HSK100A	TAV13PH100	HSK100A-TAV13P	ER/ECX20	13mm (1/2")
NMTB40	TAV13PN40	NMTB40 - TAV13P	ER/ECX20	13mm (1/2")
NMTB50	TAV13PN50	NMTB50 - TAV13P	ER/ECX20	13mm (1/2")

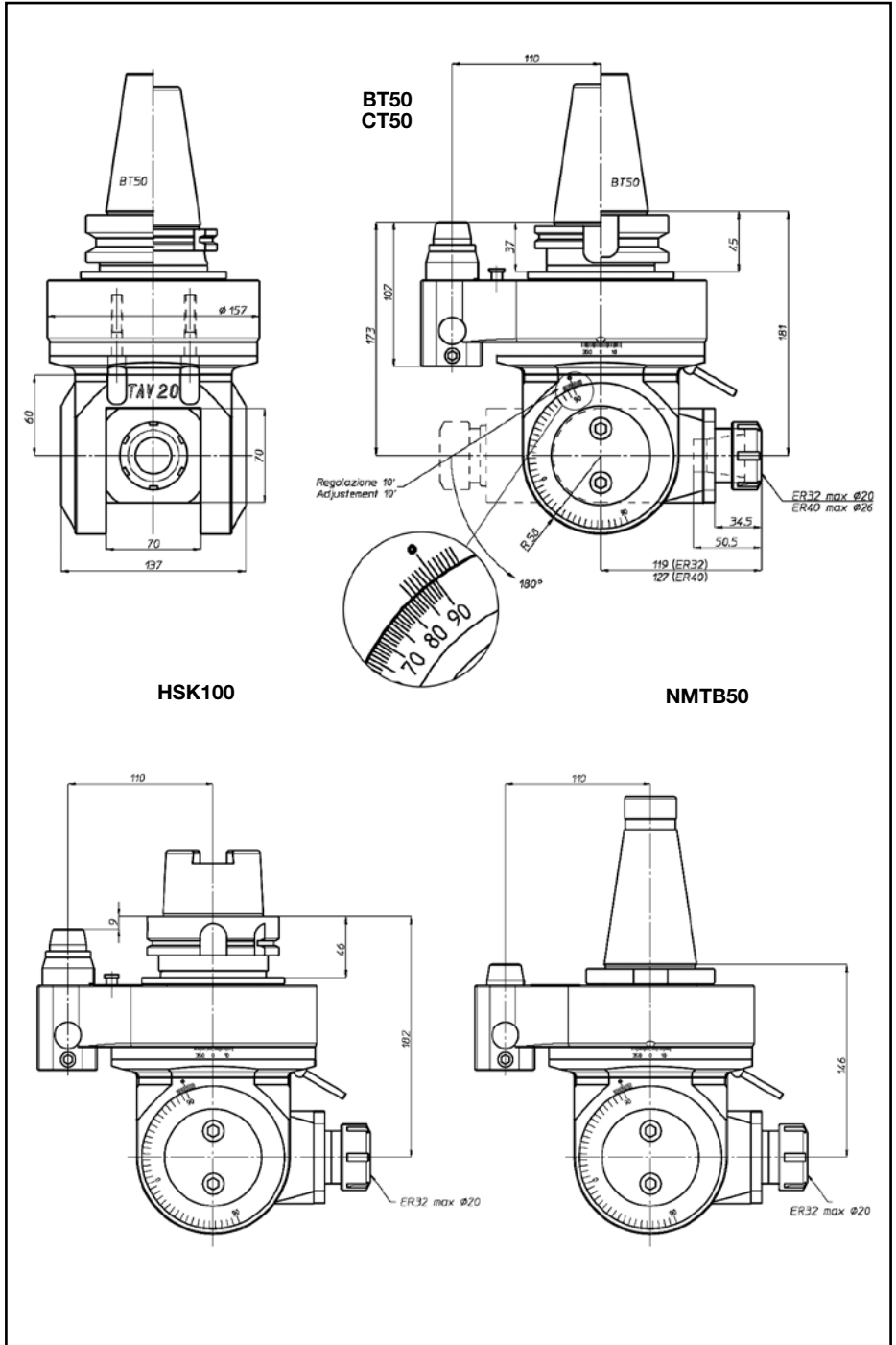
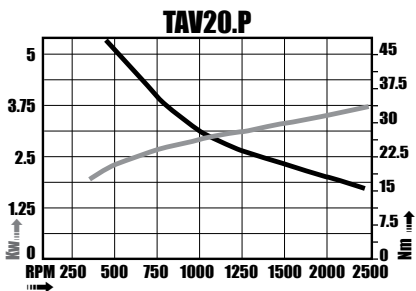
TAV20.P- Universal Angle Heads



TAV20.P - CT50
TAV20.P - MAS 403 - BT50
TAV20.P - NMTB-50

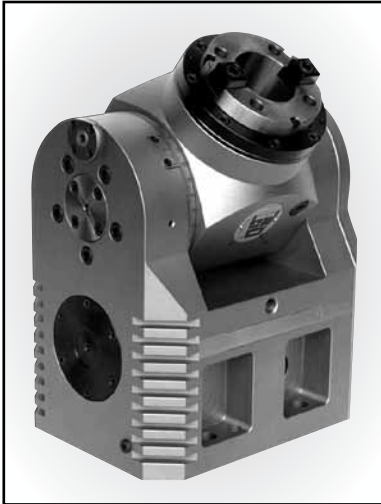
Ø20mm 3/4"	M16 5/8"	1-1	2500	18.5 50

———— Power
———— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TAV20PB50	BT50 - TAV20P	ECX/ER32	20mm (3/4")
CT50	TAV20PC50	CT50 - TAV20P	ECX/ER32	20mm (3/4")
HSK100A	TAV20PH100	HSK100A - TAV20P	ECX/ER32	20mm (3/4")
MTB50	TAV20PN50	NMTB50 - TAV20P	ECX/ER32	20mm (3/4")

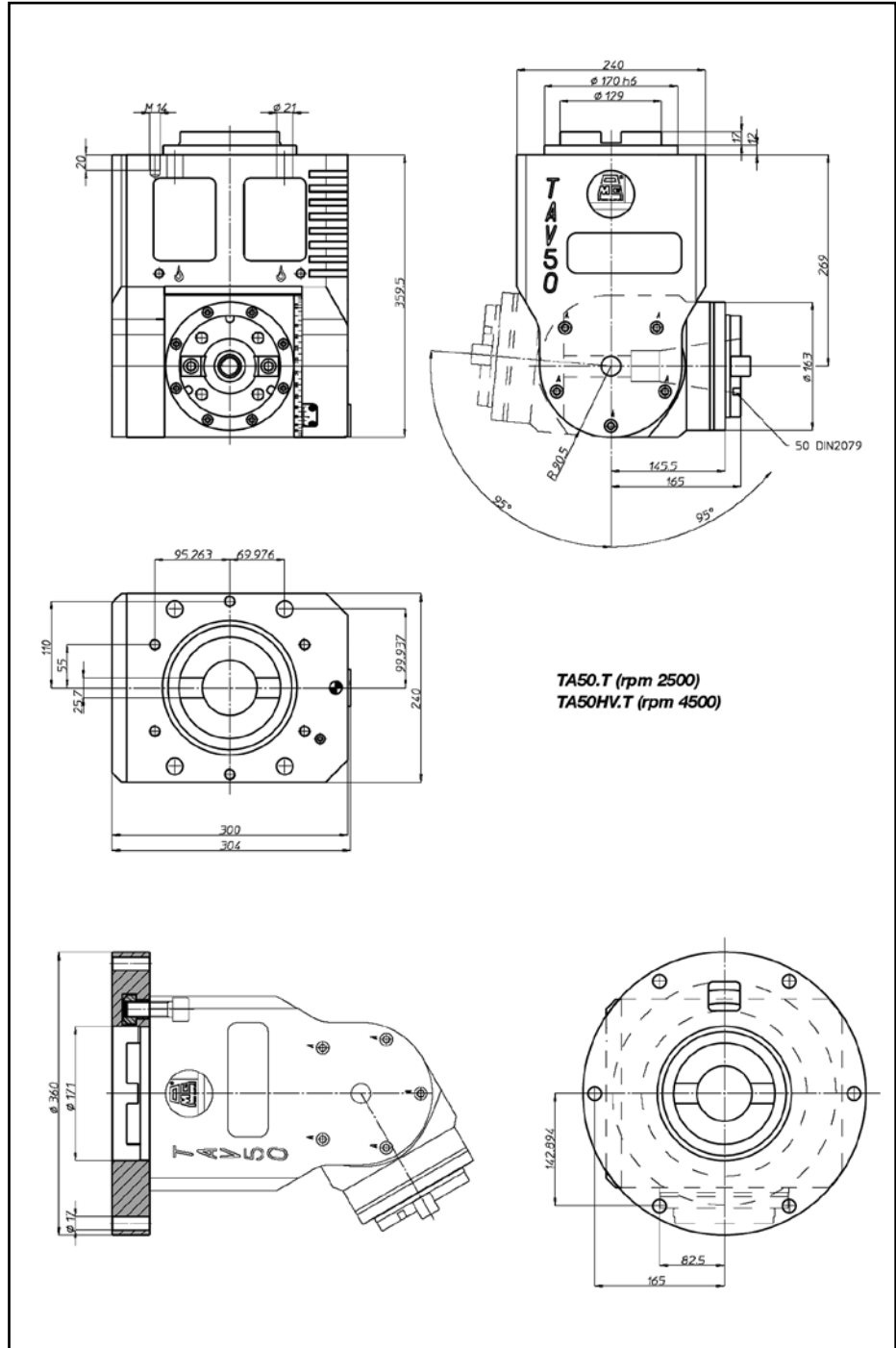
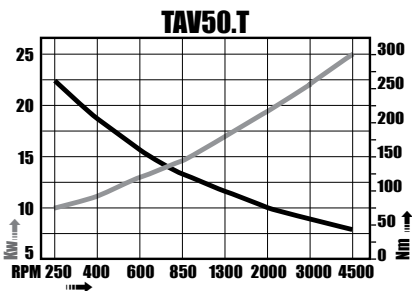
TAV50.T- Universal Angle Heads



TAV50.T - CT50
TAV50.T- MAS 403 - BT50
TAV50.T - NMTB-50

Ø45 mm	M36	1-1 1-2	2500 4500	145

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Taper
50	TA50T	TA50T	CT50
50	TA50HVT	TA50HVT	CT50

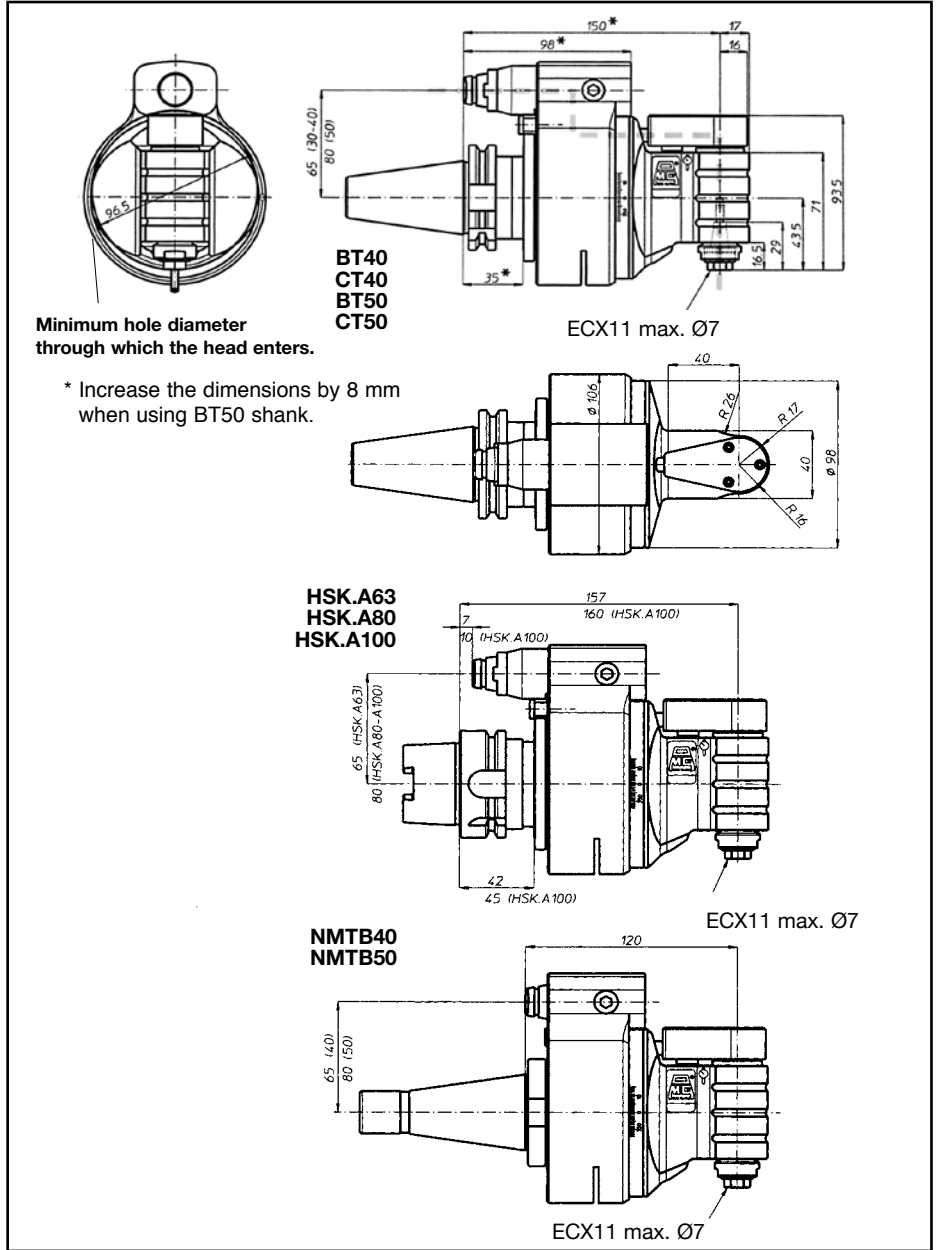
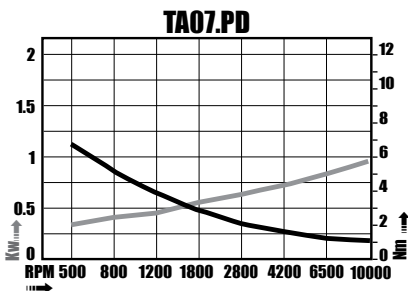
TA07.PD Right Angle Heads



With Coolant Through Output Spindle

Ø7	M6	1-1	10000	5-40	10	
1/4"	1/4"			7-50	bar	

— Power
— Max. Torque



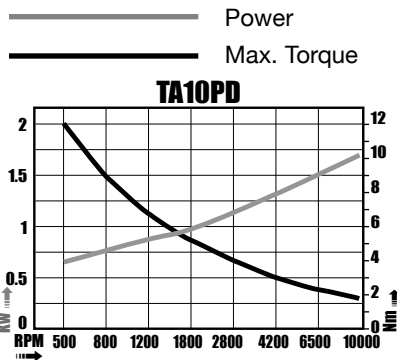
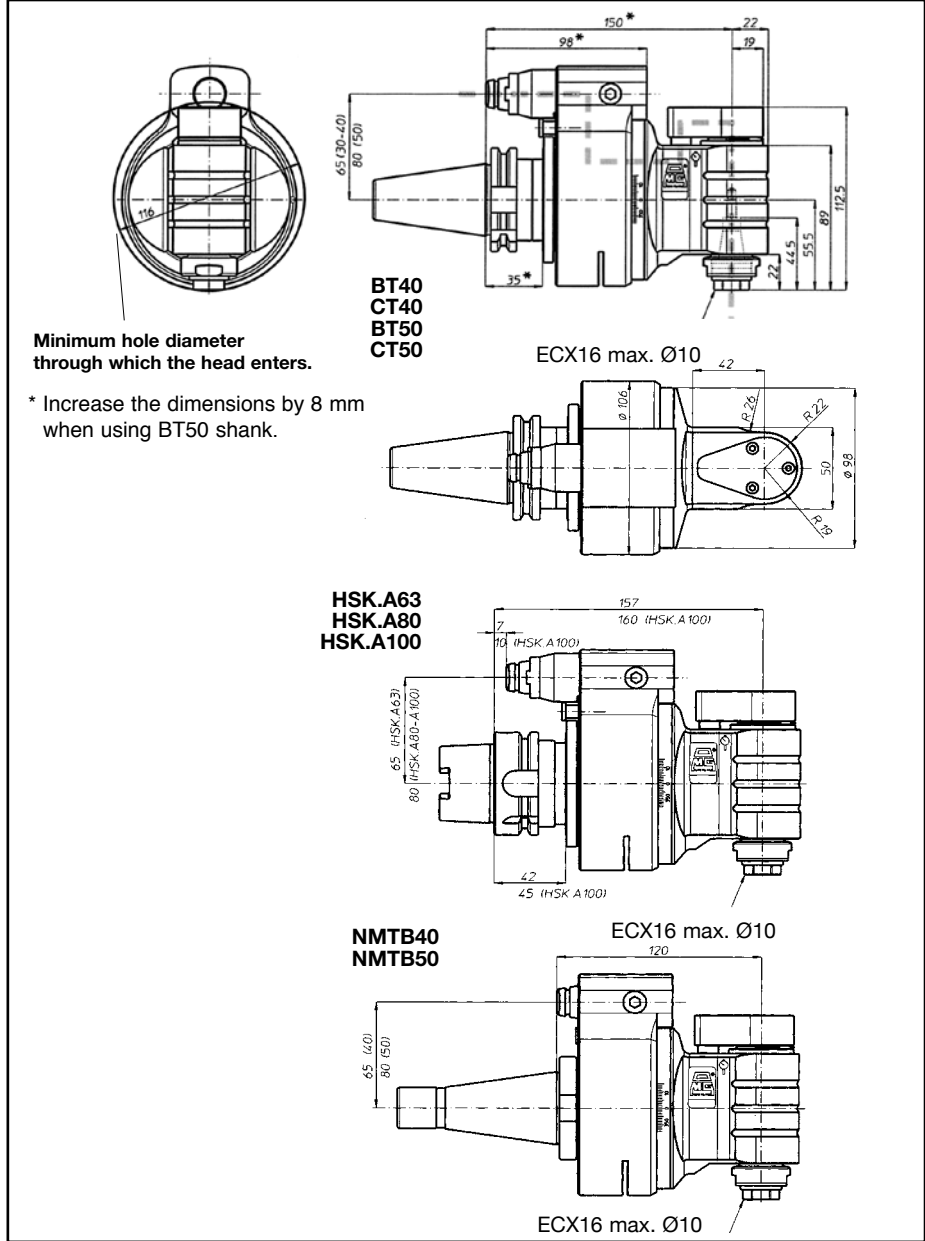
Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA07PDB40	BT40-TA07PD	ECX/ER11	7 mm
BT50	TA07PDB50	BT50-TA07PD	ECX/ER11	7 mm
CT40	TA07PDC40	CT40-TA07PD	ECX/ER11	7 mm
CT50	TA07PDC50	CT50-TA07PD	ECX/ER11	7 mm
HSKA63A	TA07PH63	HSK63A-TA07PD	ECX/ER11	7 mm
HSKA80A	TA07PH80	HSK80A-TA07PD	ECX/ER11	7 mm
HSKA100A	TA07PH100	HSK100A-TA07PD	ECX/ER11	7 mm
NMTB40	TA07PN40	NMTB40-TA07PD	ECX/ER11	7 mm
NMTB50	TA07PN50	NMTB50-TA07PD	ECX/ER11	7 mm

TA10.PD Right Angle Heads



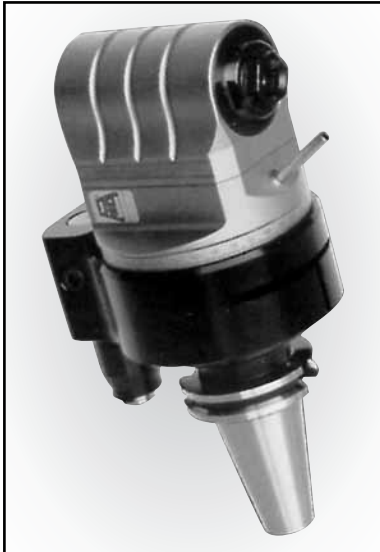
**With Coolant
Through
Output
Spindle**

Ø10 3/8"	M8 5/16"	1-1	Rpm 10000	Kg 5.5-40 7.5-50	10 bar



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA10PDB40	BT40-TA10PD	ECX/ER16	10mm (3/8")
BT50	TA10PDB50	BT50-TA10PD	ECX/ER16	10mm (3/8")
CT40	TA10PDC40	CT40-TA10PD	ECX/ER16	10mm (3/8")
CT50	TA10PDC50	CT50-TA10PD	ECX/ER16	10mm (3/8")
HSK63A	TA10PDH63	HSK63A-TA10PD	ECX/ER16	10mm (3/8")
HSK80A	TA10PDH80	HSK80A-TA10PD	ECX/ER16	10mm (3/8")
HSK80A	TA10PDH80	HSK80A-TA10PD	ECX/ER16	10mm (3/8")
HSK100A	TA10PDH100	HSK100A-TA10PD	ECX/ER16	10mm (3/8")
NMTB40	TA10PDN40	NMTB40-TA10PD	ECX/ER16	10mm (3/8")
NMTB50	TA10PDN50	NMTB50-TA10PD	ECX/ER16	10mm (3/8")

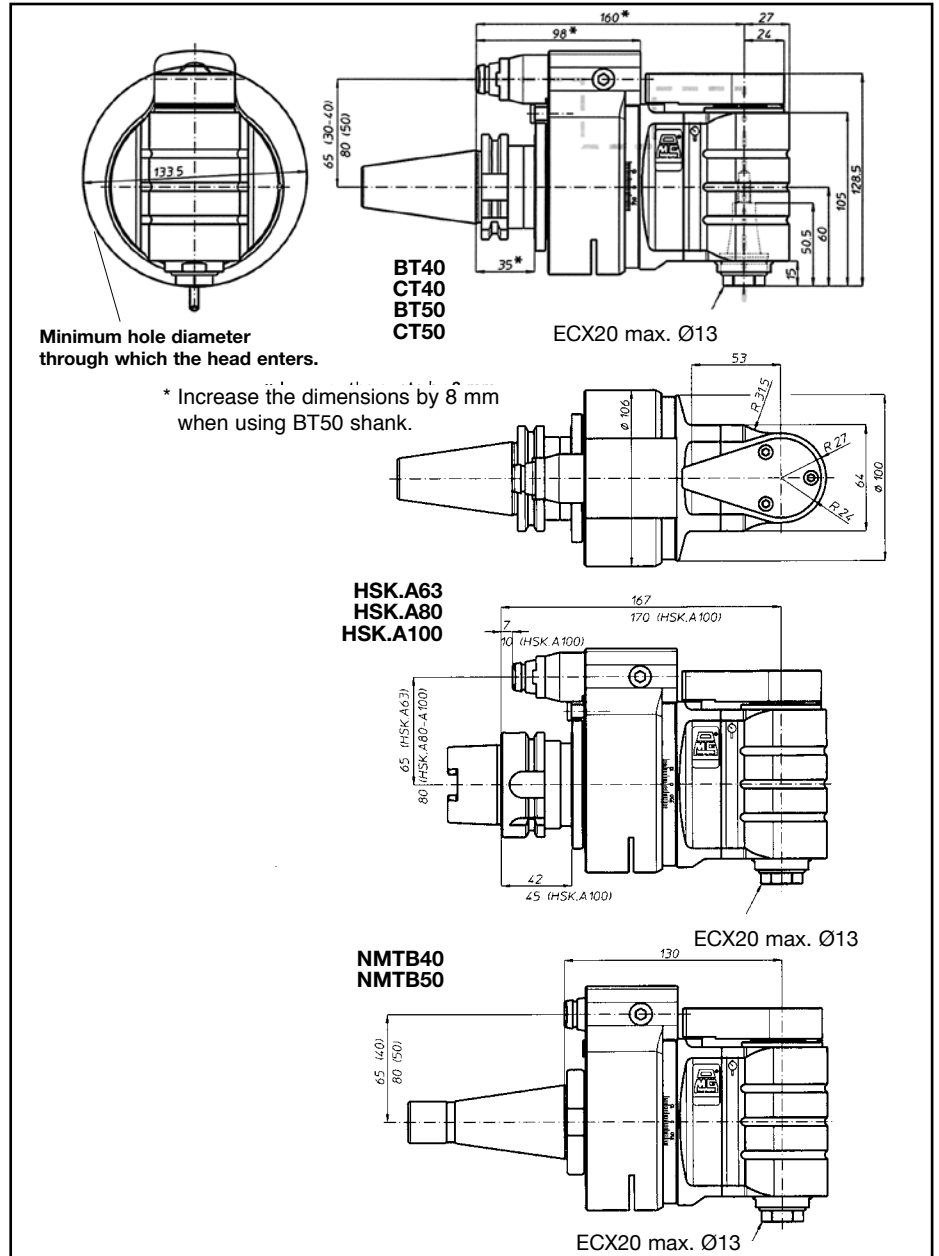
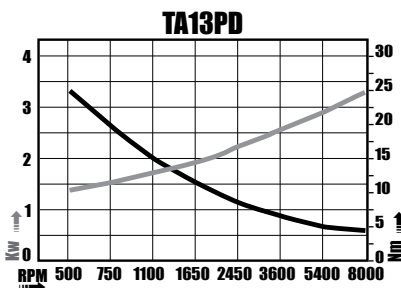
TA13.PD Right Angle Heads



**With Coolant
Through
Output
Spindle**

Ø10 1/2"	M10 3/8"	1-1	Rpm	8000	6.5-40 7.5-50	10 bar

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA13PDB40	BT40-TA13PD	ECX/ER16	13mm (1/2")
BT50	TA13PDB50	BT50-TA13PD	ECX/ER16	13mm (1/2")
CT40	TA13PDC40	CT40-TA13PD	ECX/ER16	13mm (1/2")
CT50	TA13PDC50	CT50-TA13PD	ECX/ER16	13mm (1/2")
HSK63A	TA13PDH63	HSK63A-TA13PD	ECX/ER16	13mm (1/2")
HSK80A	TA13PDH80	HSK80A-TA13PD	ECX/ER16	13mm (1/2")
HSK100A	TA13PDH100	HSK100A-TA13PD	ECX/ER16	13mm (1/2")
NMTB40	TA13PDN40	NMTB40-TA13PD	ECX/ER16	13mm (1/2")
NMTB50	TA13PDN50	NMTB50-TA13PD	ECX/ER16	13mm (1/2")

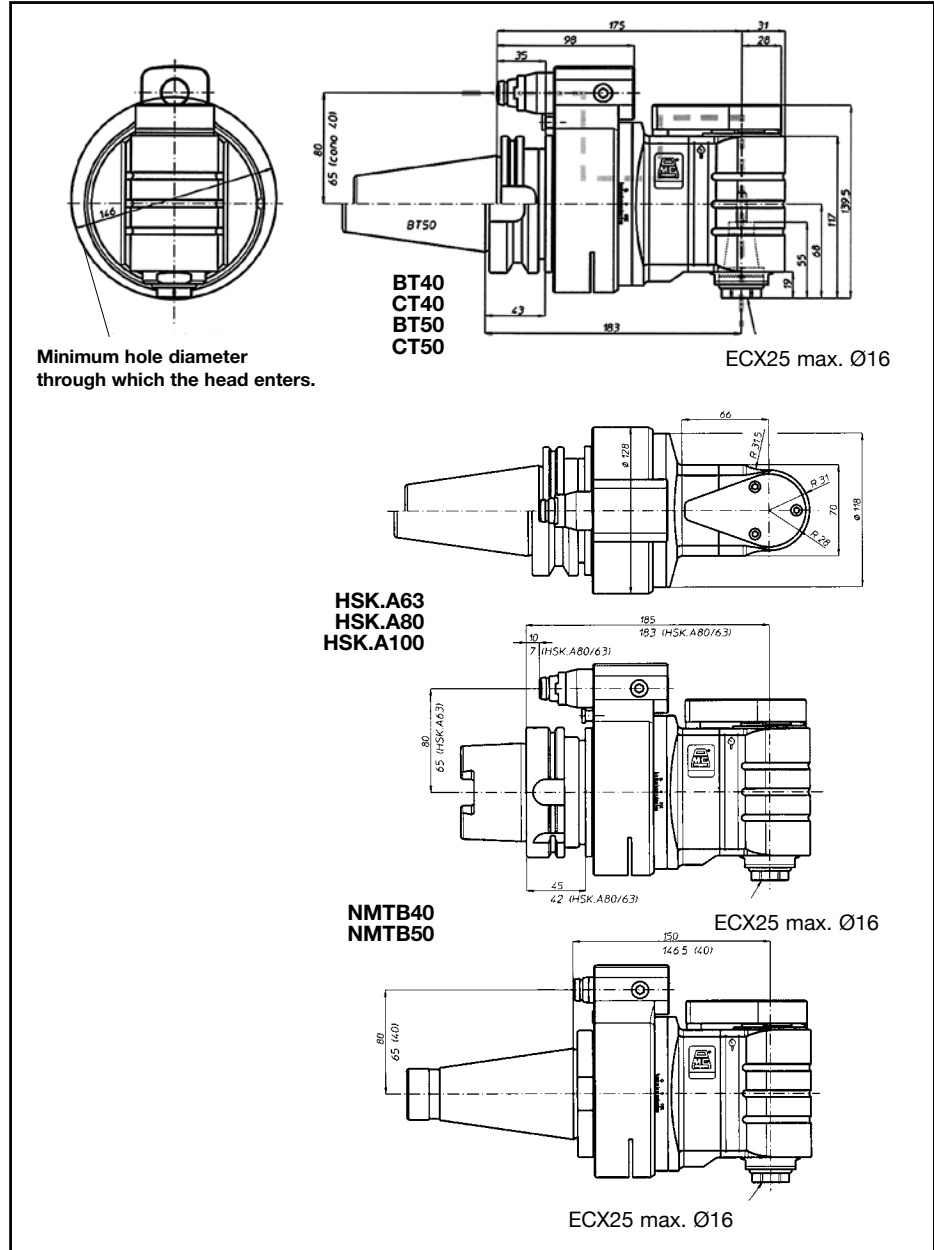
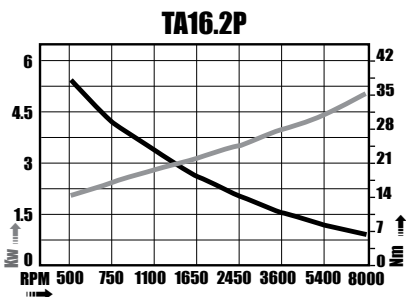
TA16.PD Right Angle Heads



**With Coolant
Through
Output
Spindle**

Ø16 / M12	1-1	6000	7.7-40 11.2-50	8	bar	

Power
Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA16PDB40	BT40-TA16PD	ECX/ER25	16mm (5/8")
BT50	TA16PDB50	BT50-TA16PD	ECX/ER25	16mm (5/8")
CT40	TA16PDC40	CT40-TA16PD	ECX/ER25	16mm (5/8")
CT50	TA16PDC50	CT50-TA16PD	ECX/ER25	16mm (5/8")
HSK63A	TA16PDH63	HSK63A-TA16PD	ECX/ER25	16mm (5/8")
HSK80A	TA16PDH80	HSK80A-TA16PD	ECX/ER25	16mm (5/8")
HSK100A	TA16PDH100	HSK100A-TA16PD	ECX/ER25	16mm (5/8")
NMTB40	TA16PDN40	NMTB40-TA16PD	ECX/ER25	16mm (5/8")
NMTB50	TA16PDN50	NMTB50-TA16PD	ECX/ER25	16mm (5/8")

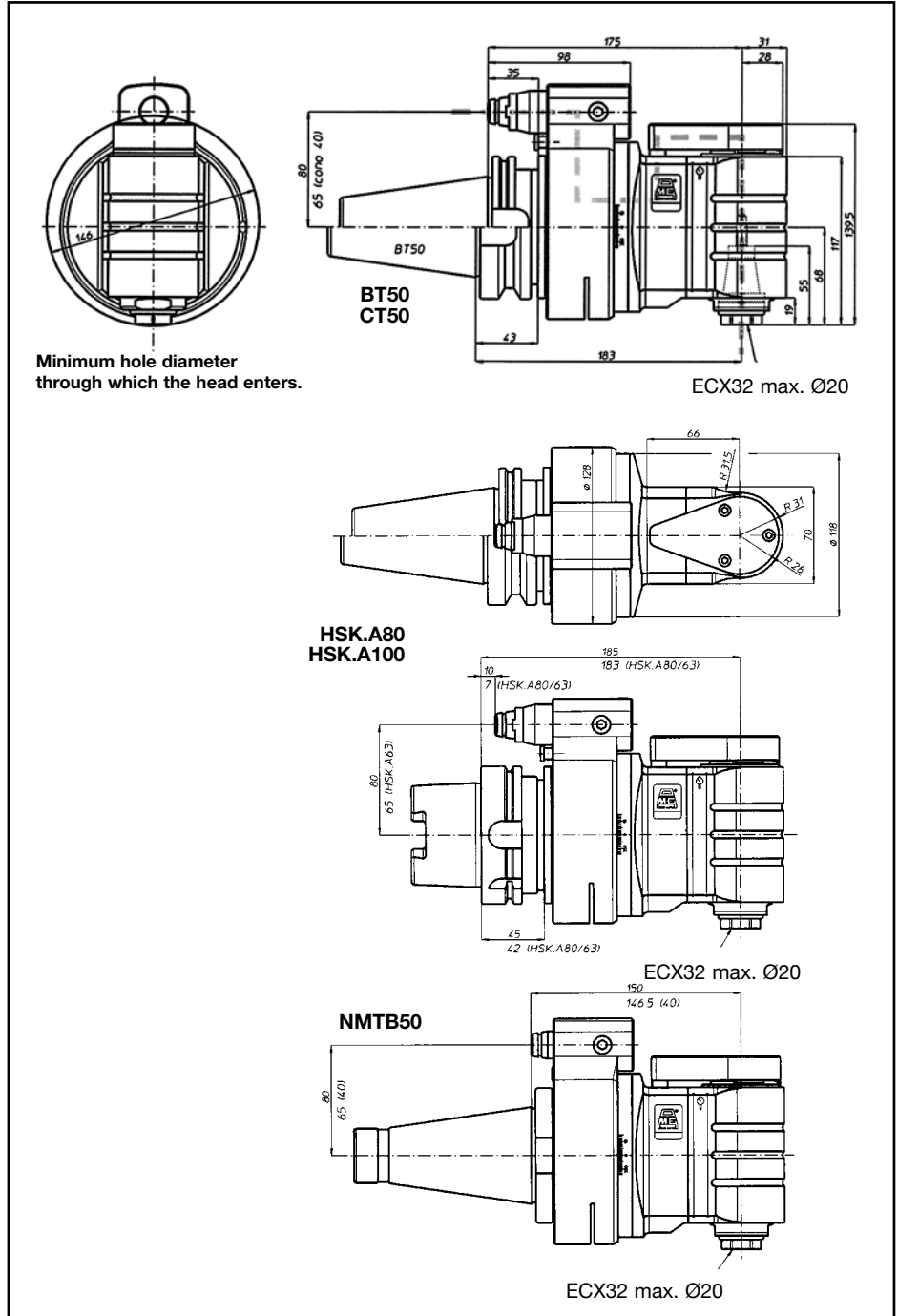
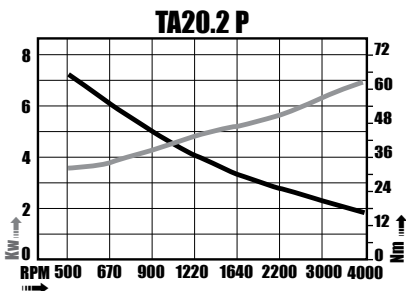
TA20.PD Right Angle Heads



With Coolant Through Output Spindle

Ø20 M14 3/4" 9/16"	1-1	3500	14-50	8 bar	

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TA20PDB50	BT50-TA20PD	ECX/ER32	20mm (3/4")
CT50	TA20PDC50	CT50-TA20PD	ECX/ER32	20mm (3/4")
HSK80A	TA20PDH100	HSK80A-TA20PD	ECX/ER32	20mm (3/4")
HSK100A	TA20PDH100	HSK100A-TA20PD	ECX/ER32	20mm (3/4")
NMTB50	TA20PDN50	NMTB50-TA20PD	ECX/ER32	20mm (3/4")

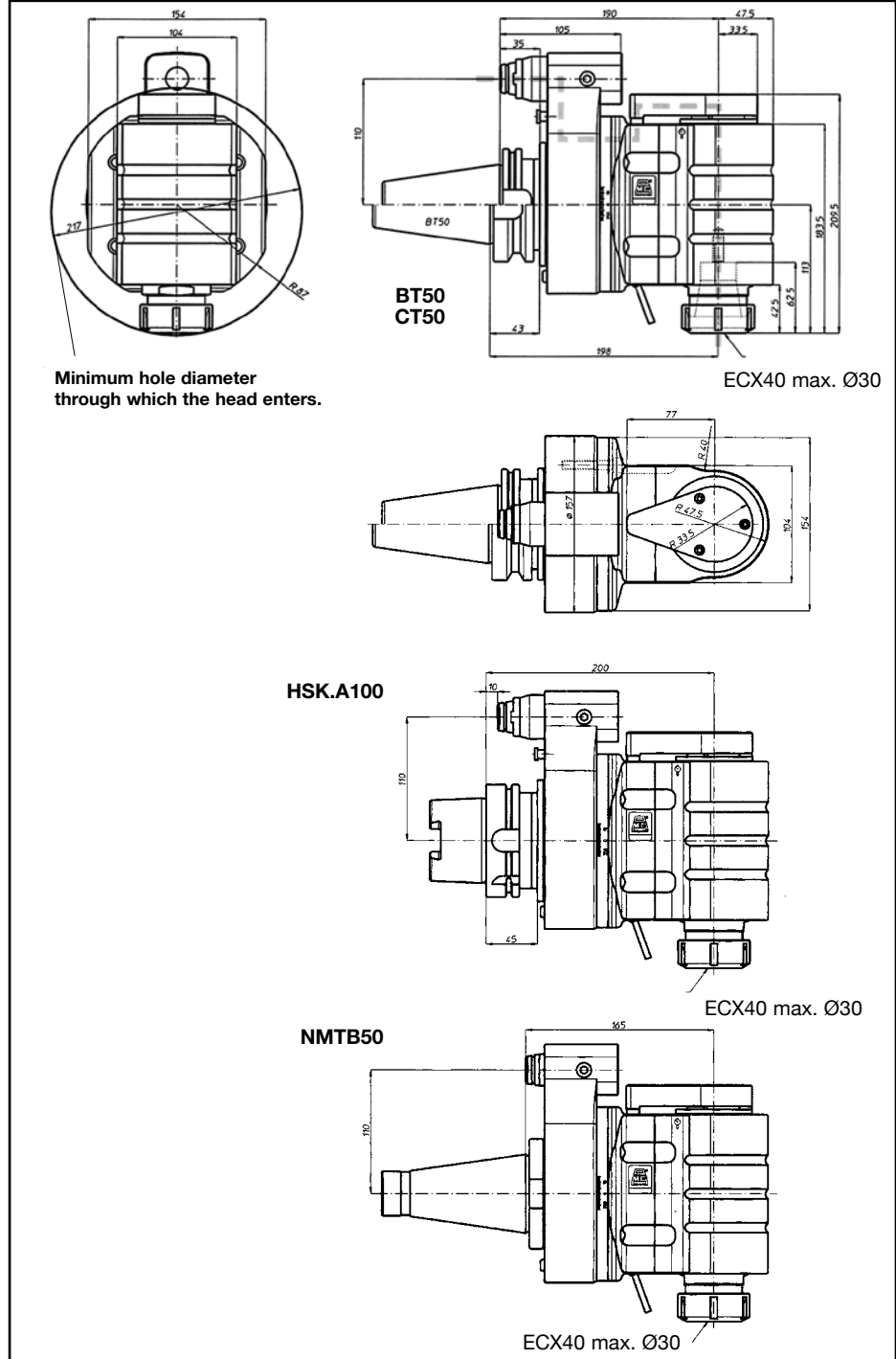
TA26.PD Right Angle Heads



With Coolant Through Output Spindle

Ø26 1"	M20 3/4"	1-1	2500	21-50	8 bar

— Power
— Max. Torque



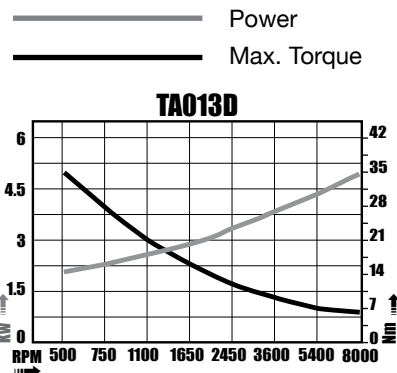
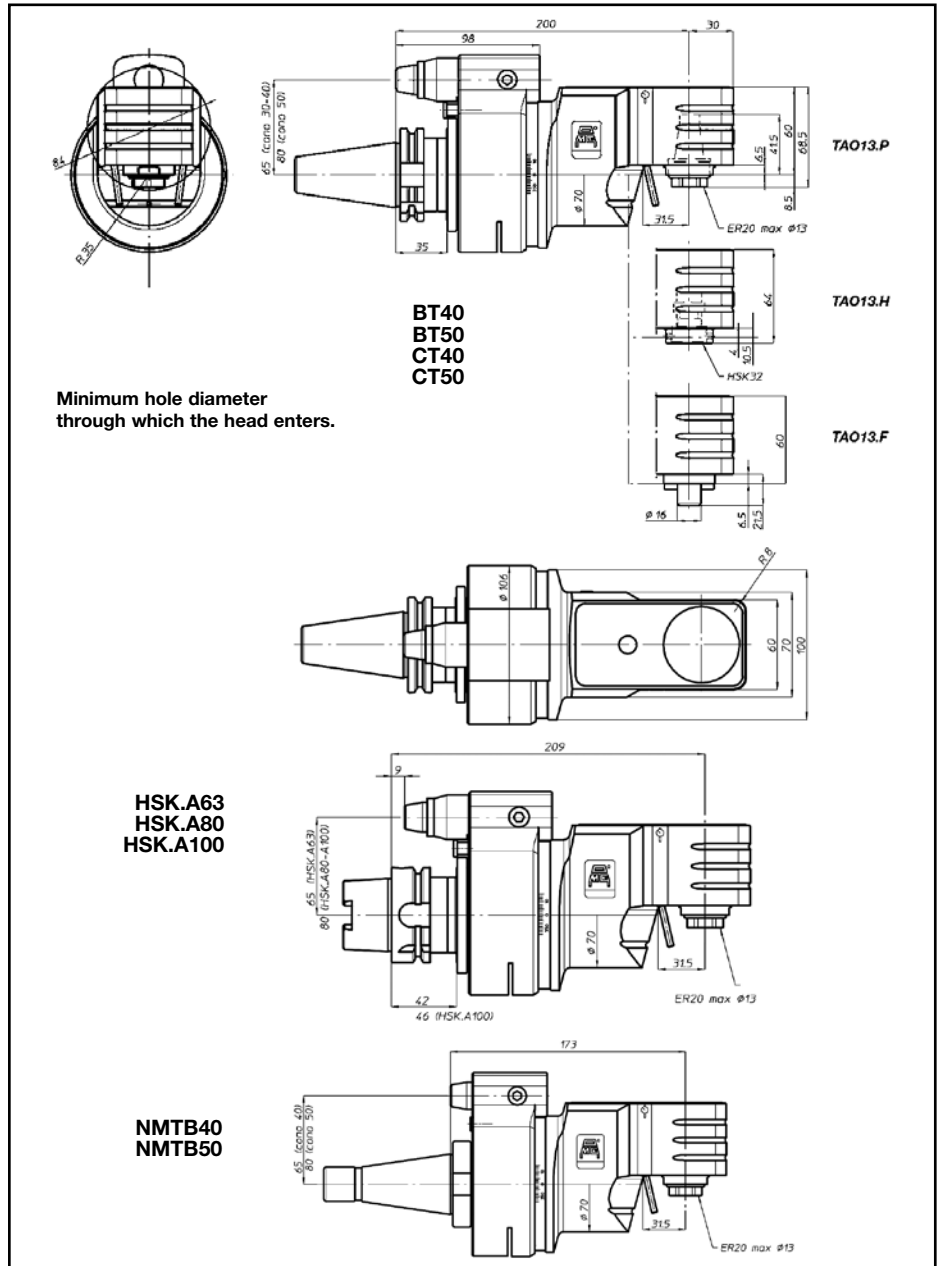
Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TA26PDB50	BT50-TA26PD	ECX/ER40	26mm (1")
CT50	TA26PDC50	CT50-TA26PD	ECX/ER40	26mm (1")
HSK100A	TA26PDH100	HSK100A-TA26PD	ECX/ER40	26mm (1")
NMTB50	TA26PDN50	NMTB50-TA26PD	ECX/ER40	26mm (1")

TA013... Right Angle Heads



TA013...

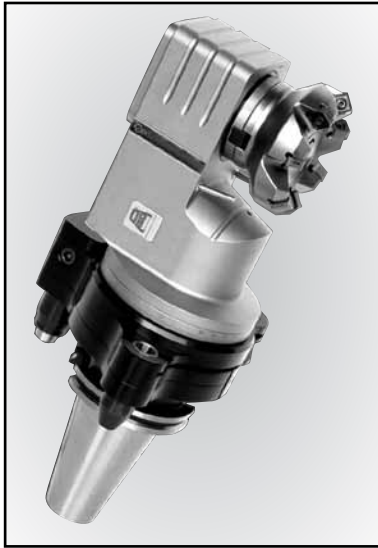
Ø13	M10	1-1	Rpm	Kg
			4500	7.8-40 10.5-50



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA013*B40	BT40-TA013P*	ECX/ER20	13mm (1/2")
BT50	TA013*B50	BT50-TA013P*	ECX/ER20	13mm (1/2")
CT40	TA013*C40	CT40-TA013P*	ECX/ER20	13mm (1/2")
CT50	TA013*C50	CT50-TA013P*	ECX/ER20	13mm (1/2")
HSK63A	TA013*H63	HSK63A-TA013P*	ECX/ER20	13mm (1/2")
HSK80A	TA013*H80	HSK80A-TA013P*	ECX/ER20	13mm (1/2")
HSK100A	TA013*H100	HSK100A-TA013P*	ECX/ER20	13mm (1/2")
NMTB40	TA013*N40	NMT40-TA013P*	ECX/ER20	13mm (1/2")
NMTB50	TA013*N50	NMTB50-TA013P*	ECX/ER20	13mm (1/2")

* P= ECX/ER20 Output H=HSK32A Output F= Face Mill Output

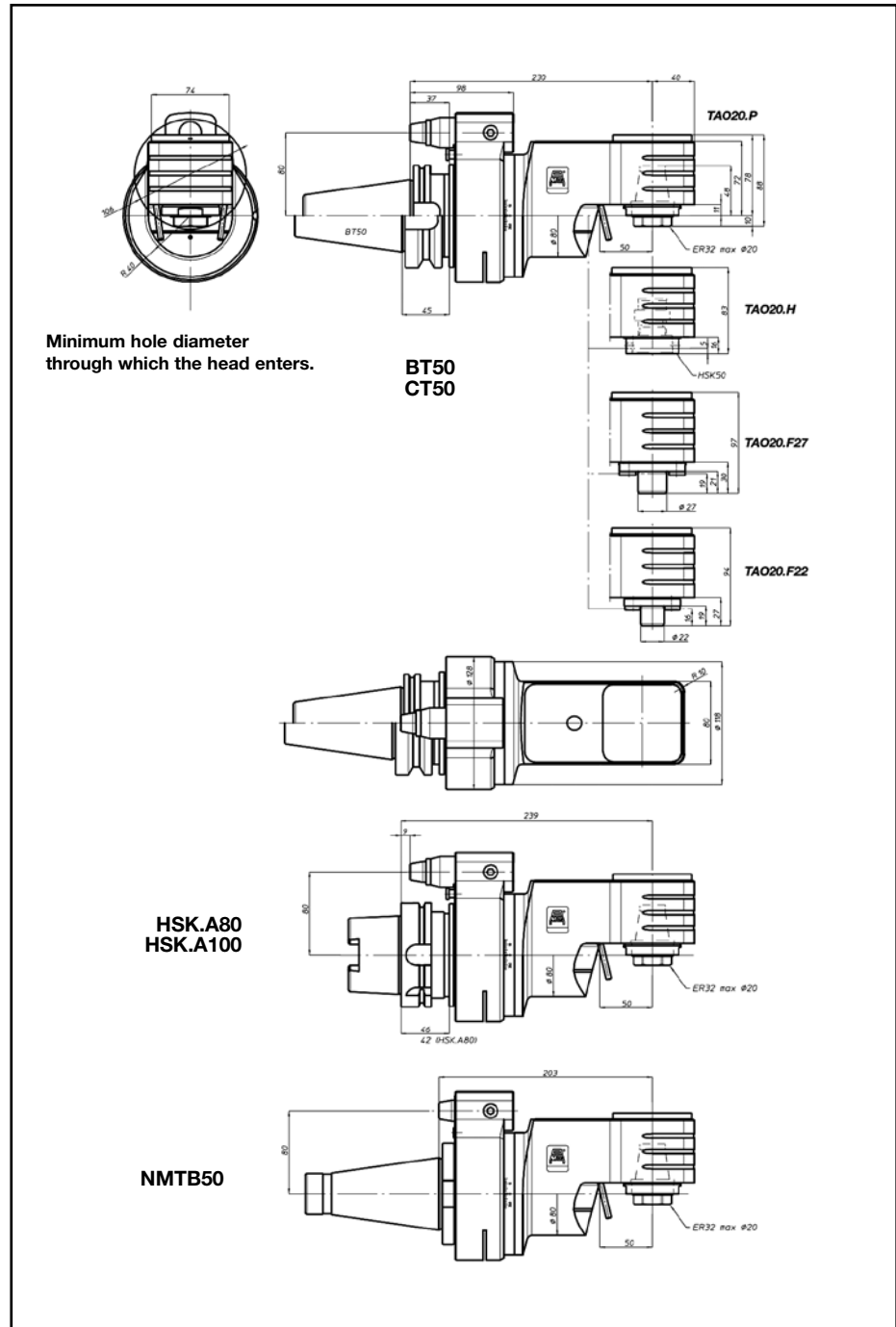
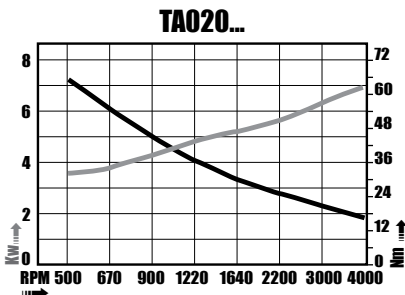
TAO20... Right Angle Heads



TAO20...

Ø20	M14	1-1	3500	14.5-50

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TAO20*B50	BT50-TAO20PD	ECX/ER32	20mm (3/4")
CT50	TAO20*C50	CT50-TAO20PD	ECX/ER32	20mm (3/4")
HSK80A	TAO20*H80	HSK80A-TAO20PD	ECX/ER32	20mm (3/4")
HSK100A	TAO20*H100	HSK100A-TAO20PD	ECX/ER32	20mm (3/4")
NMTB50	TAO20*N50	NMTB50-TAO20PD	ECX/ER32	20mm (3/4")

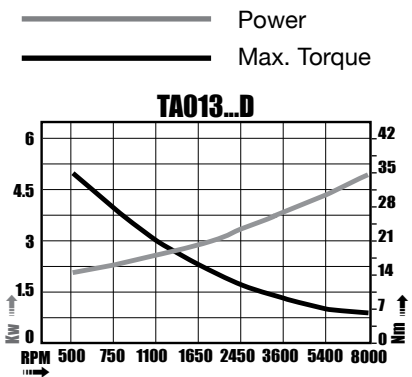
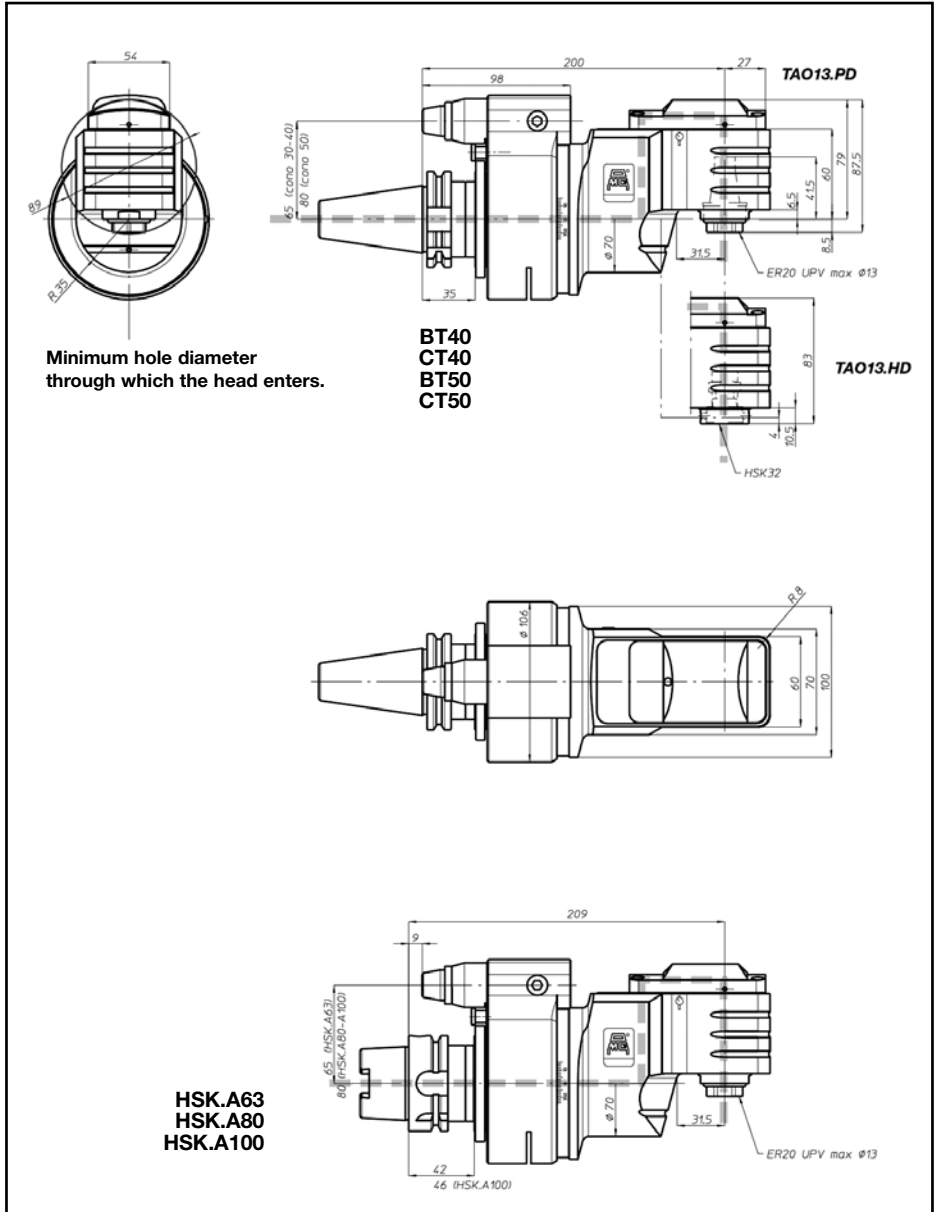
* P = ECX/ER32 Output H = HSK50A Output F = Facemill Output

TA013...D Right Angle Heads



TA013...D

Ø13	M10	1-1	Rpm 4500	Kg 7,5-40 10,5-50	40 bar



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA013*B40	BT40-TA013*D	ECX/ER20	13mm (1/2")
BT50	TA013*B50	BT50-TA013*D	ECX/ER20	13mm (1/2")
CT40	TA013*C40	CT40-TA013*D	ECX/ER20	13mm (1/2")
CT50	TA013*C50	CT50-TA013*D	ECX/ER20	13mm (1/2")
HSK63A	TA013*H63	HSK63A-TA013*D	ECX/ER20	13mm (1/2")
HSK80A	TA013*H80	HSK80A-TA013*D	ECX/ER20	13mm (1/2")
HSK100A	TA013*H100	HSK100A-TA013*D	ECX/ER20	13mm (1/2")

* P = ECX/ER20 Output H = HSK32A Output

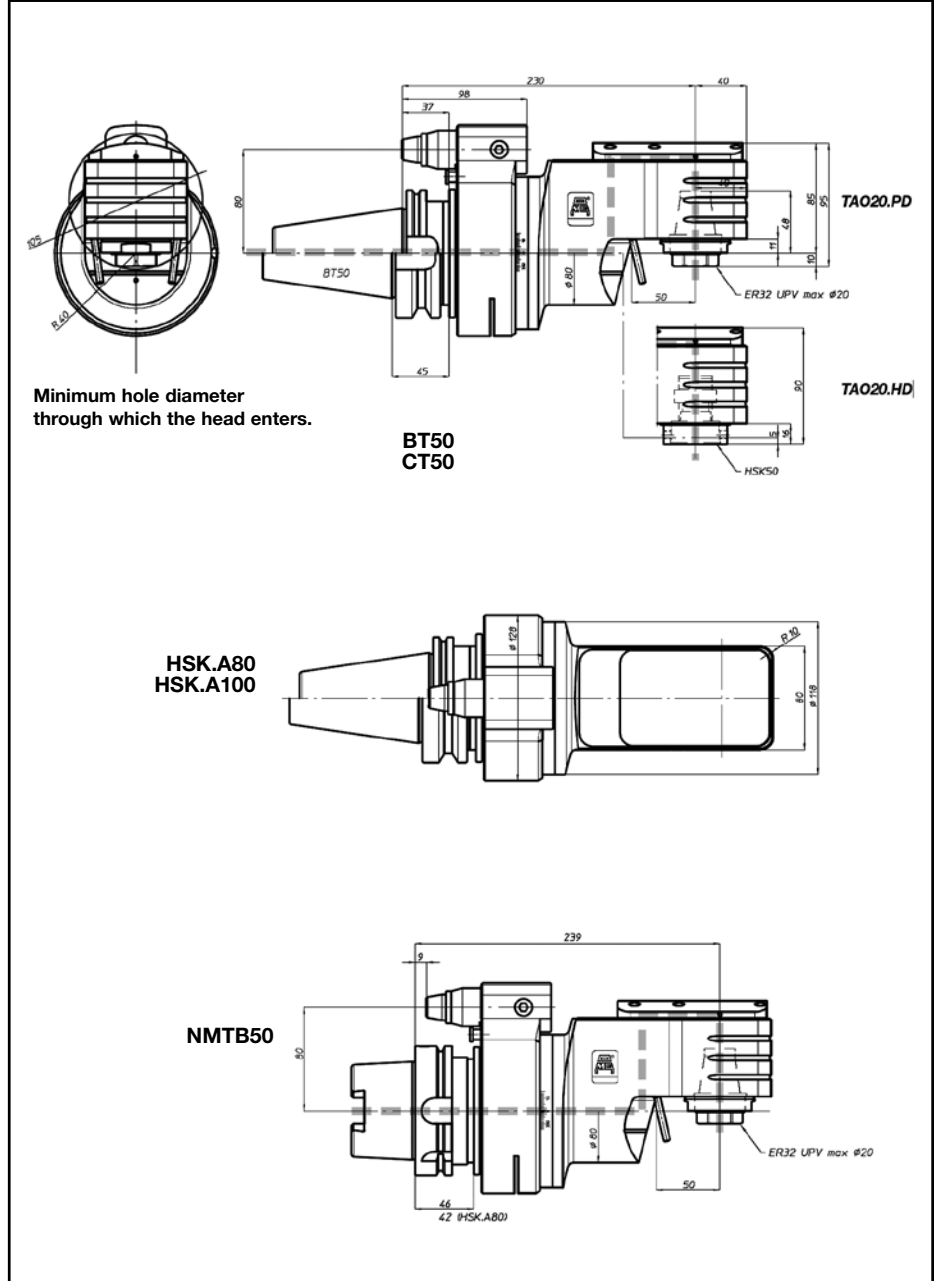
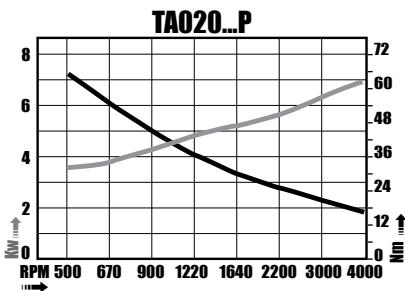
TAO20...D Right Angle Heads



TAO20...D

Ø20 M14 3/4" 9/16"	1-1	3500	14-50	8	bar

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TA020*DB50	BT50-TA020*D	ECX/ER32	20mm (3/4")
CT50	TA020*DC50	CT50-TA020*D	ECX/ER32	20mm (3/4")
HSK80A	TA020*DH100	HSK80A-TA020*D	ECX/ER32	20mm (3/4")
HSK100A	TA020*DH100	HSK100A-TA020*D	ECX/ER32	20mm (3/4")

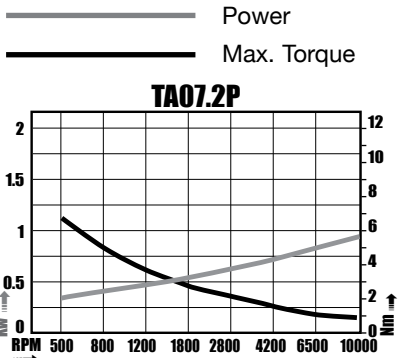
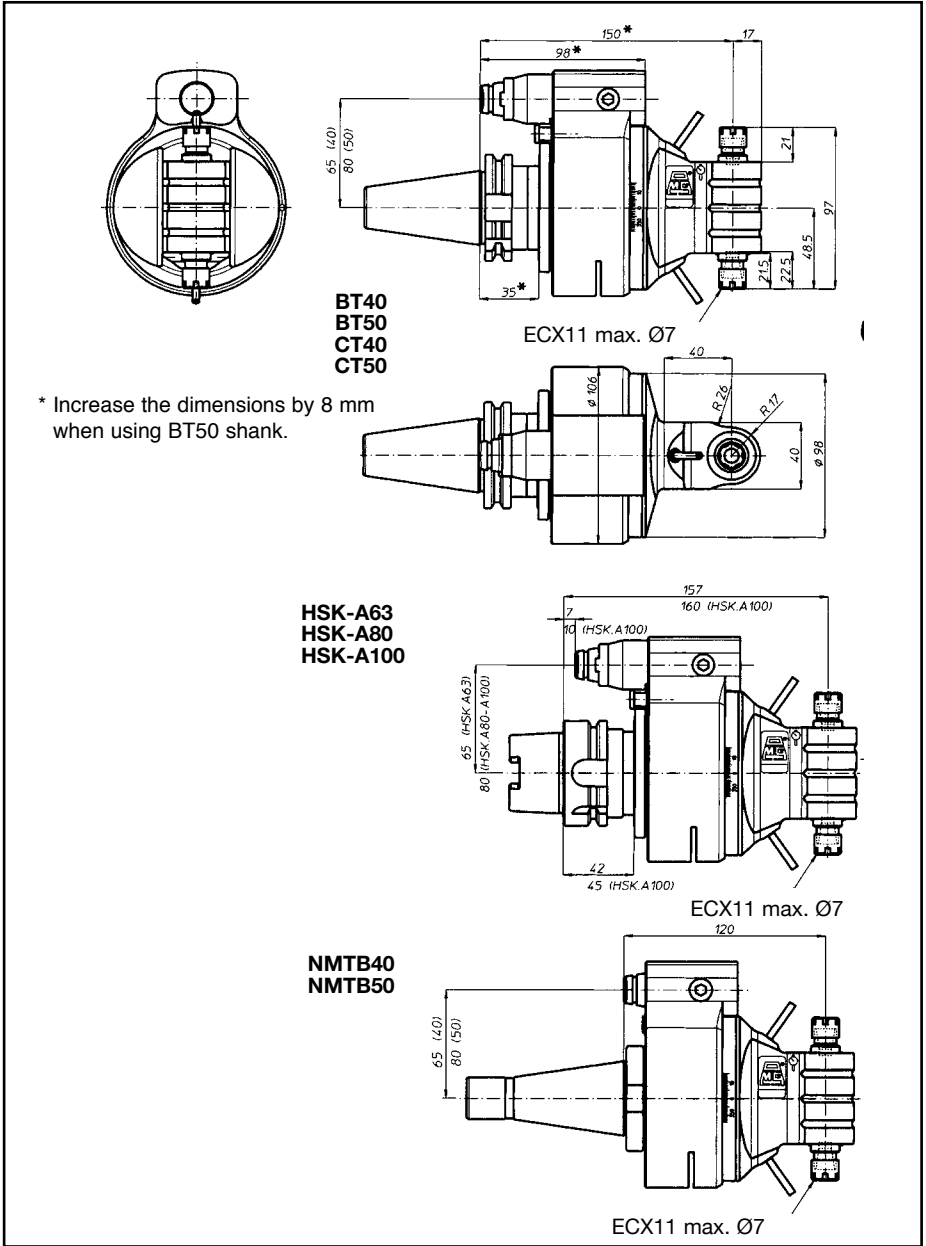
* P = ECX/ER32 Output H = HSK50A Output

TA07.2P Right Angle Heads



With Double Spindle Output

Ø7 1/4"	M6 1/4"	1-1	10000	5-40 7-50



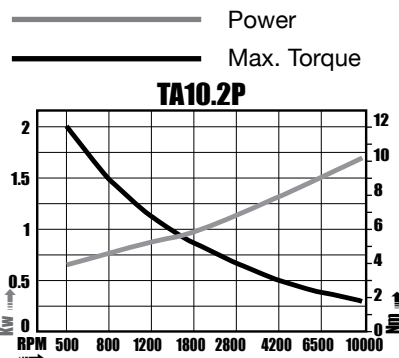
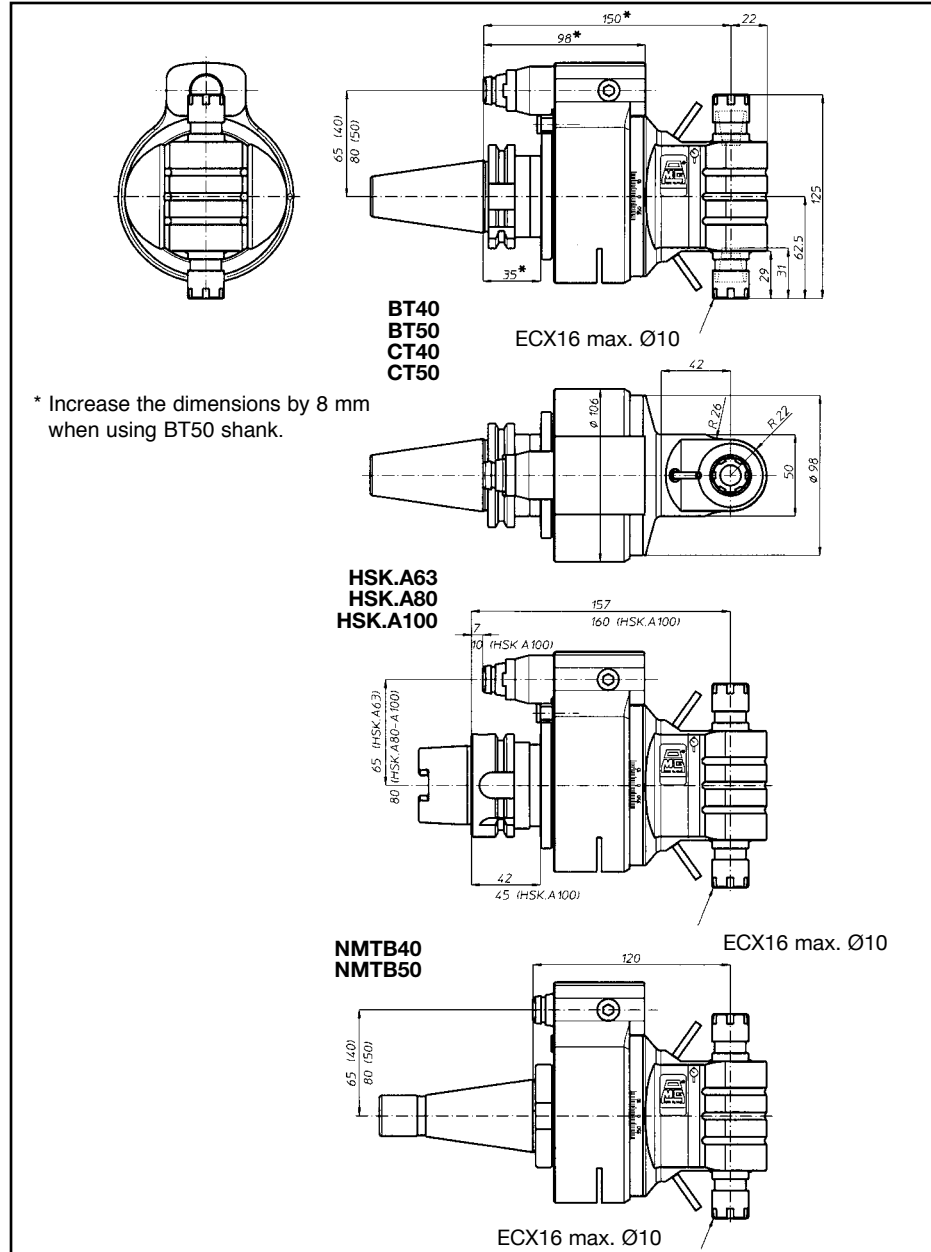
Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA072PB40	BT40-TA07.2P	ECX/ER11	7 mm
BT50	TA072PB50	BT50-TA07.2P	ECX/ER11	7 mm
CT40	TA072PC40	CT40-TA07.2P	ECX/ER11	7 mm
CT50	TA072PC50	CT50-TA07.2P	ECX/ER11	7 mm
HSK63A	TA072PH63	HSK63A-TA07.2P	ECX/ER11	7 mm
HSK80A	TA072PH80	HSK80A-TA07.2P	ECX/ER11	7 mm
HSK100A	TA072PH100	HSK100A-TA07.2P	ECX/ER11	7 mm
NMTB40	TA072PN40	NMTB40-TA07.2P	ECX/ER11	7 mm
NMTB50	TA072PN50	NMTB50-TA07.2P	ECX/ER11	7 mm

TA10.2P Right Angle Heads



With Double Spindle Output

Ø12	M10	1-1	10000	5.5-40 7.5-50



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA102PB40	BT40-TA10.2P	ECX/ER16	10 mm (3/8")
BT50	TA102PB50	BT50-TA10.2P	ECX/ER16	10 mm (3/8")
CT40	TA102PC40	CT40-TA10.2P	ECX/ER16	10 mm (3/8")
CT50	TA102PC50	CT50-TA10.2P	ECX/ER16	10 mm (3/8")
HSK63A	TA102PH63	HSK63A-TA10.2P	ECX/ER16	10 mm (3/8")
HSK80A	TA102PH80	HSK80A-TA10.2P	ECX/ER16	10 mm (3/8")
HSK100A	TA102PH100	HSK100A-TA10.2P	ECX/ER16	10 mm (3/8")
NMTB40	TA102PN40	NMTB40-TA10.2P	ECX/ER16	10 mm (3/8")
NMTB50	TA102PN50	NMTB50-TA10.2P	ECX/ER16	10 mm (3/8")

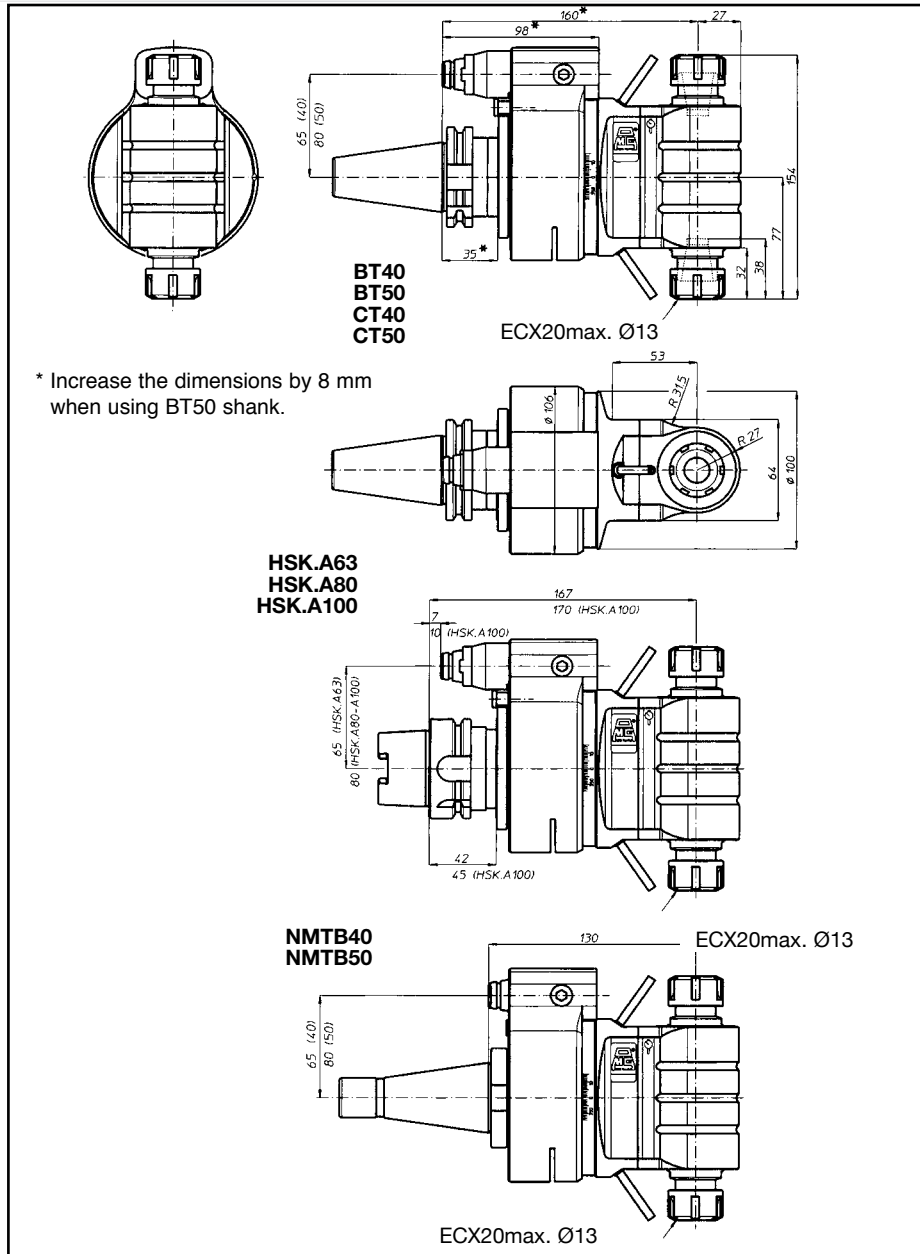
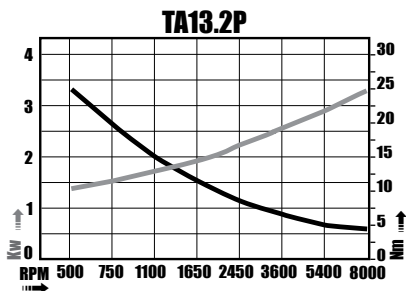
TA13.2P Right Angle Heads



With Double Spindle Output

Ø13	M10	1-1	8000	6.5-40 7.5-50

— Power
— Max. Torque



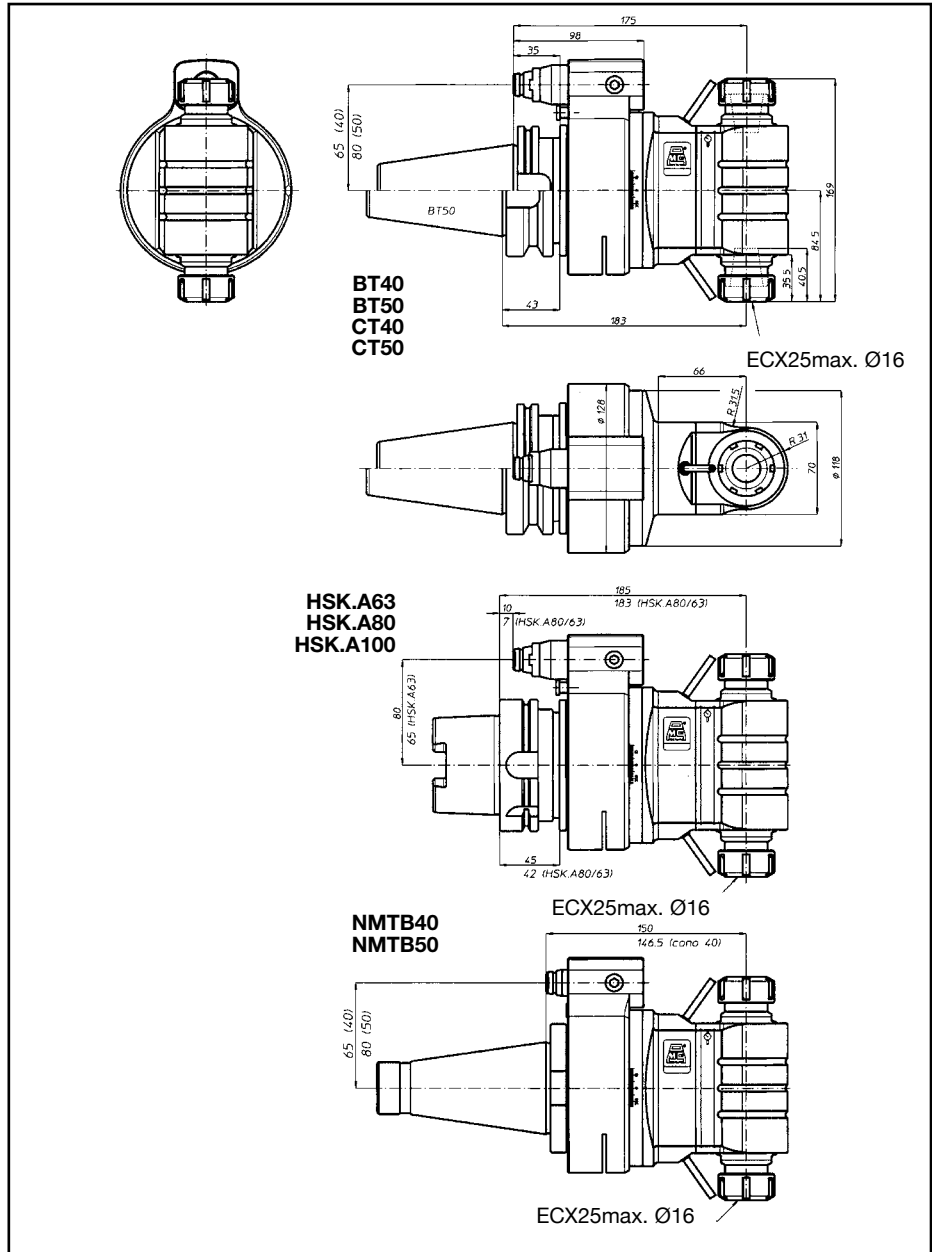
Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA132PB40	BT40-TA13.2P	ECX/ER20	13 mm (1/2")
BT50	TA132PB50	BT50-TA13.2P	ECX/ER20	13 mm (1/2")
CT40	TA132PC40	CT40-TA13.2P	ECX/ER20	13 mm (1/2")
CT50	TA132PC50	CT50-TA13.2P	ECX/ER20	13 mm (1/2")
HSK63A	TA132PH63	HSK63A-TA13.2P	ECX/ER20	13 mm (1/2")
HSK80A	TA132PH80	HSK80A-TA13.2P	ECX/ER20	13 mm (1/2")
HSK100A	TA132PH100	HSK100A-TA13.2P	ECX/ER20	13 mm (1/2")
NMTB40	TA132PN40	NMTB40-TA13.2P	ECX/ER20	13 mm (1/2")
NMTB50	TA132PN50	NMTB50-TA13.2P	ECX/ER20	13 mm (1/2")

TA16.2P Right Angle Heads

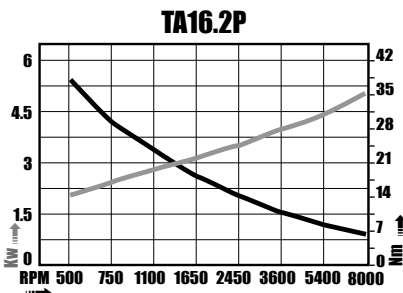


With Double Spindle Output

Ø16	M12	1-1	5000	7.7-40
				11.2-50



— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT40	TA162PB40	BT40-TA16.2P	ECX/ER25	16 mm (5/8")
BT50	TA162PB50	BT50-TA16.2P	ECX/ER25	16 mm (5/8")
CT40	TA162PC40	CT40-TA16.2P	ECX/ER25	16 mm (5/8")
CT50	TA162PC50	CT50-TA16.2P	ECX/ER25	16 mm (5/8")
HSK63A	TA162PH63	HSK63A-TA16.2P	ECX/ER25	16 mm (5/8")
HSK80A	TA162PH80	HSK80A-TA16.2P	ECX/ER25	16 mm (5/8")
HSK100A	TA162PH100	HSK100A-TA16.2P	ECX/ER25	16 mm (5/8")
NMTB40	TA162PN40	NMTB40-TA16.2P	ECX/ER25	16 mm (5/8")
NMTB50	TA162PN50	NMTB50-TA16.2P	ECX/ER25	16 mm (5/8")

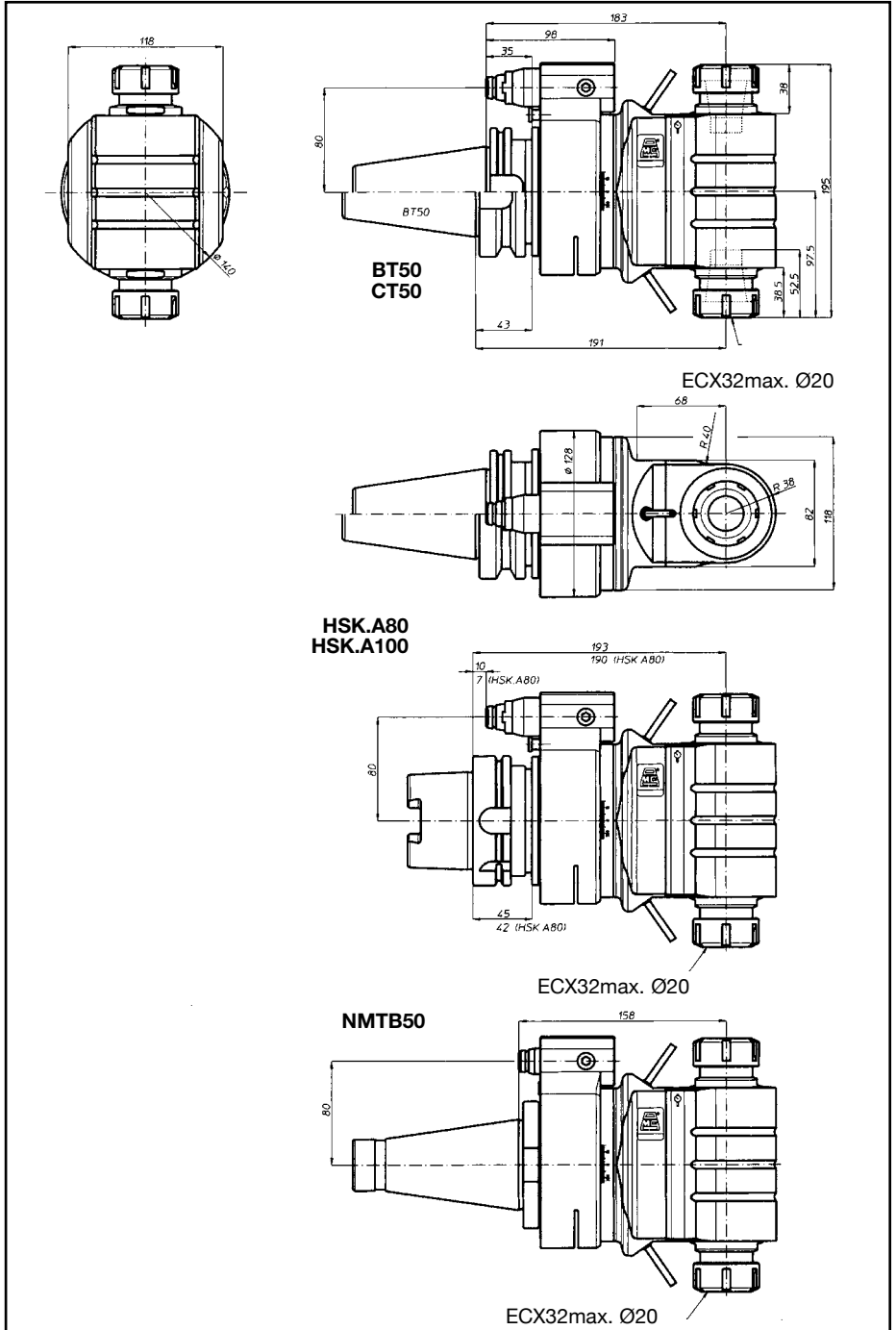
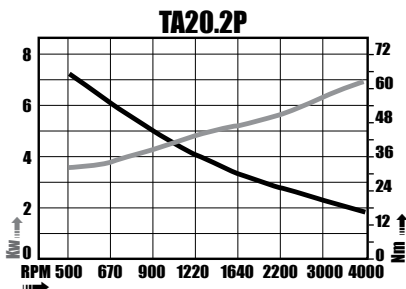
TA20.2P Right Angle Heads



With Double Spindle Output

Ø20	M14	1-1	3500	15-50

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TA202PB50	BT50-TA20.2P	ECX/ER32	20 mm (3/4")
CT50	TA202PC50	CT50-TA20.2P	ECX/ER32	20 mm (3/4")
HSK80A	TA202PH80	HSK80A-TA20.2P	ECX/ER32	20 mm (3/4")
HSK100A	TA202PH100	HSK100A-TA20.2P	ECX/ER32	20 mm (3/4")
NMTB50	TA202PN50	NMTB50-TA20.2P	ECX/ER32	20 mm (3/4")

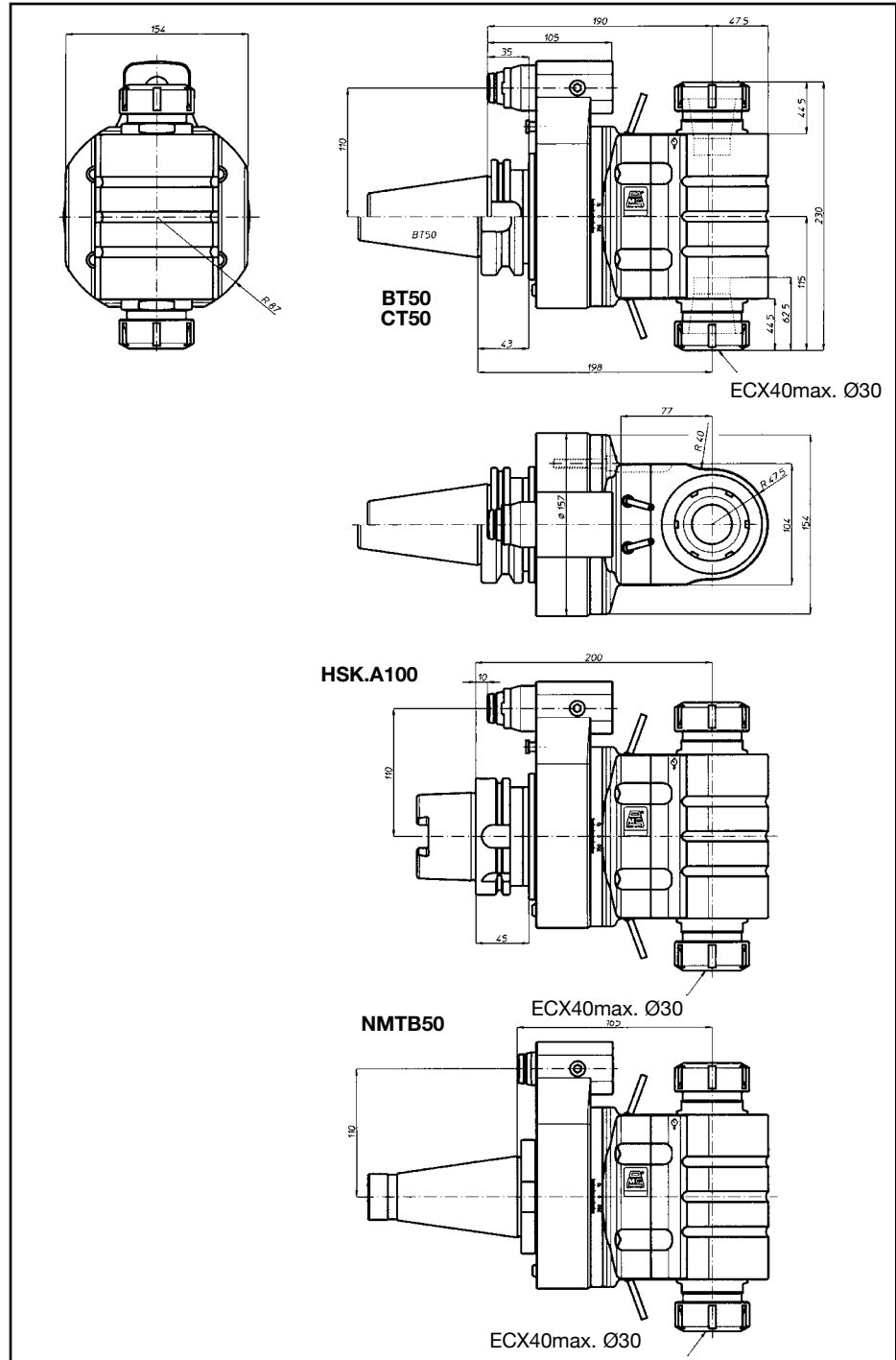
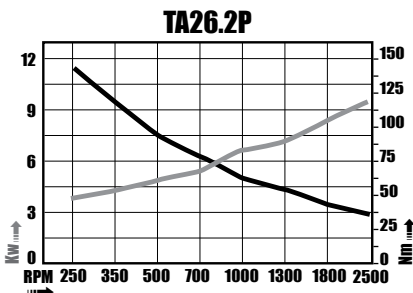
TA26.2P Right Angle Heads



With Double Spindle Output

Ø26 1"	M20 3/4"	1-1	2500	22.5 50

— Power
— Max. Torque



Taper	Order No.	Device Type	Output Spindle Collet Style	Max. Capacity Ø
BT50	TA262PB50	BT50-TA26.2P	ECX/ER40	26 mm (1")
CT50	TA262PC50	CT50-TA26.2P	ECX/ER40	26 mm (1")
HSK100A	TA262PH100	HSK100A-TA26.2P	ECX/ER40	26 mm (1")
NMTB50	TA262PN50	NMTB50-TA26.2P	ECX/ER40	26 mm (1")

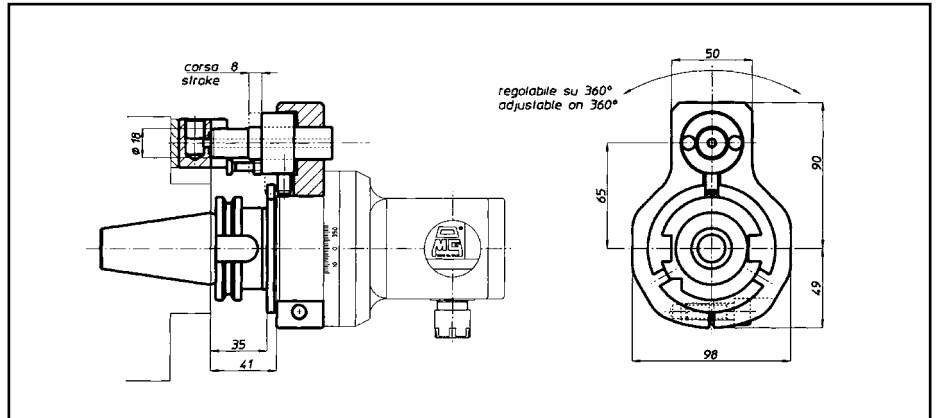
Angle Head Accessories

(Old Style) Torque Arm & Stop Block

Heads with shank 40



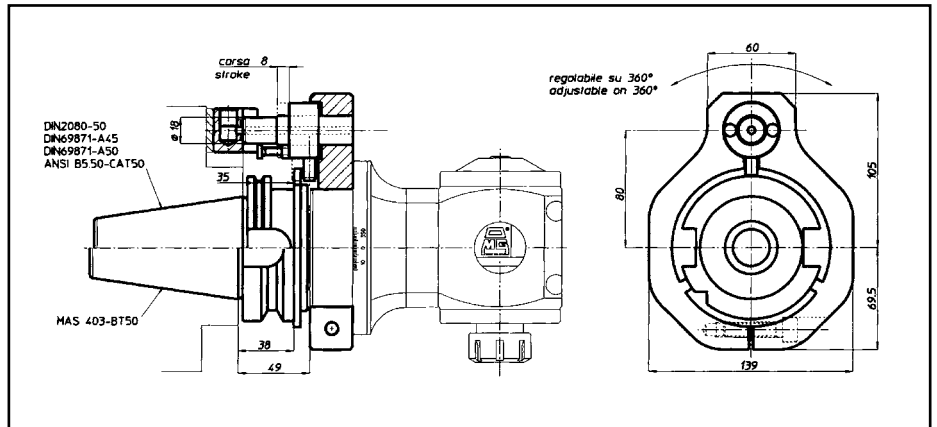
In your application, when possible, position the pin $\varnothing 18$ on the opposite side of the angle heads spindle.



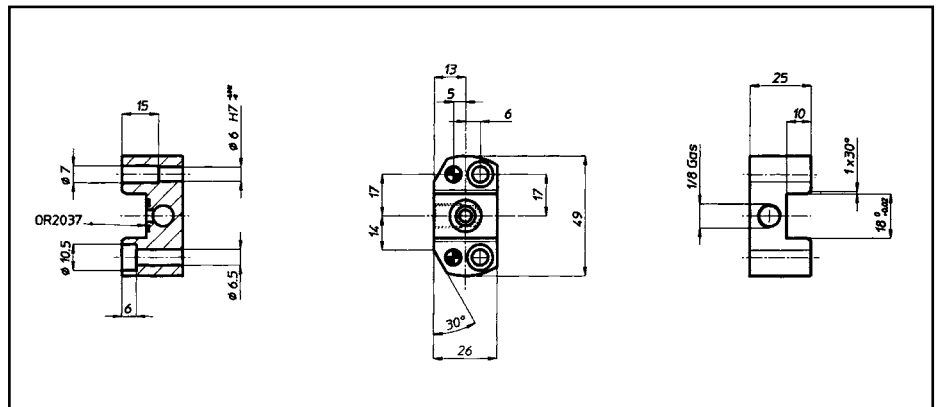
Heads with shank 40-45



In your application, when possible, position the pin $\varnothing 18$ on the opposite side of the angle heads spindle.



Stop-block

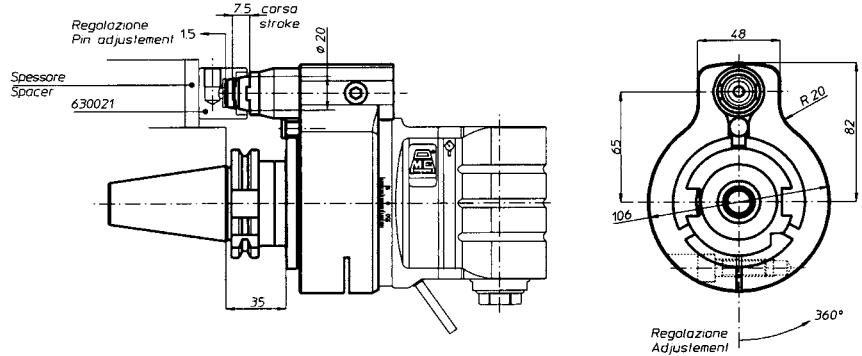


Angle Head Accessories (New Style) Torque Arm & Stop Block

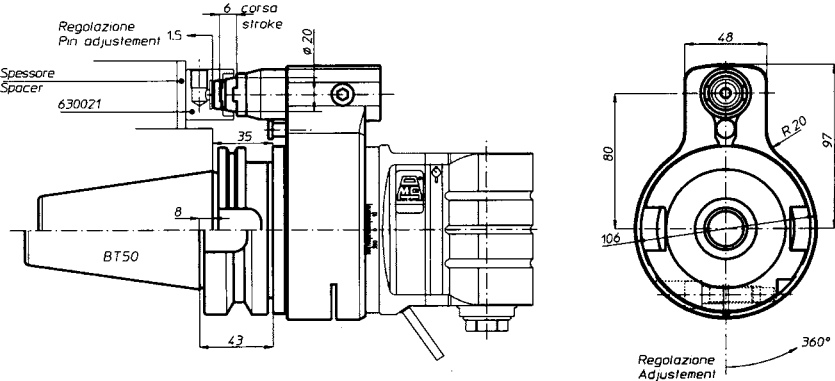


In your application, when possible, position the pin $\phi 18$ on the opposite side of the angle heads spindle.

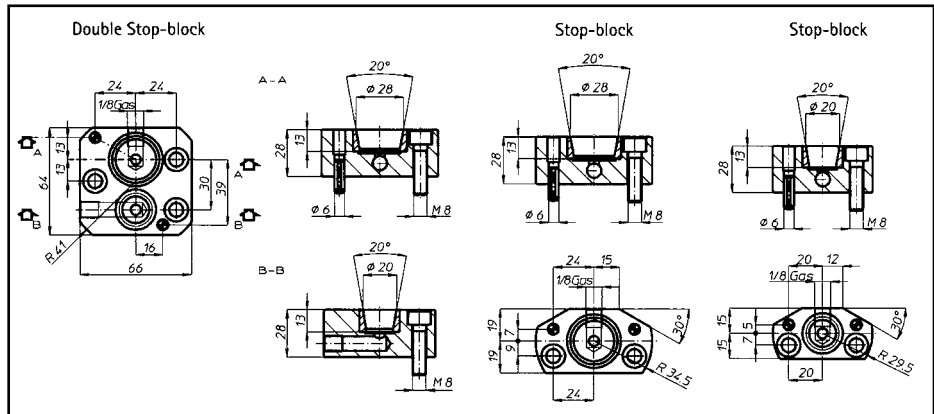
Heads with 40 shank



TA04-TA06-TA07-TA10-TA13-TAV10-TAV13-TAF13 heads with 50 shank



Stop-block

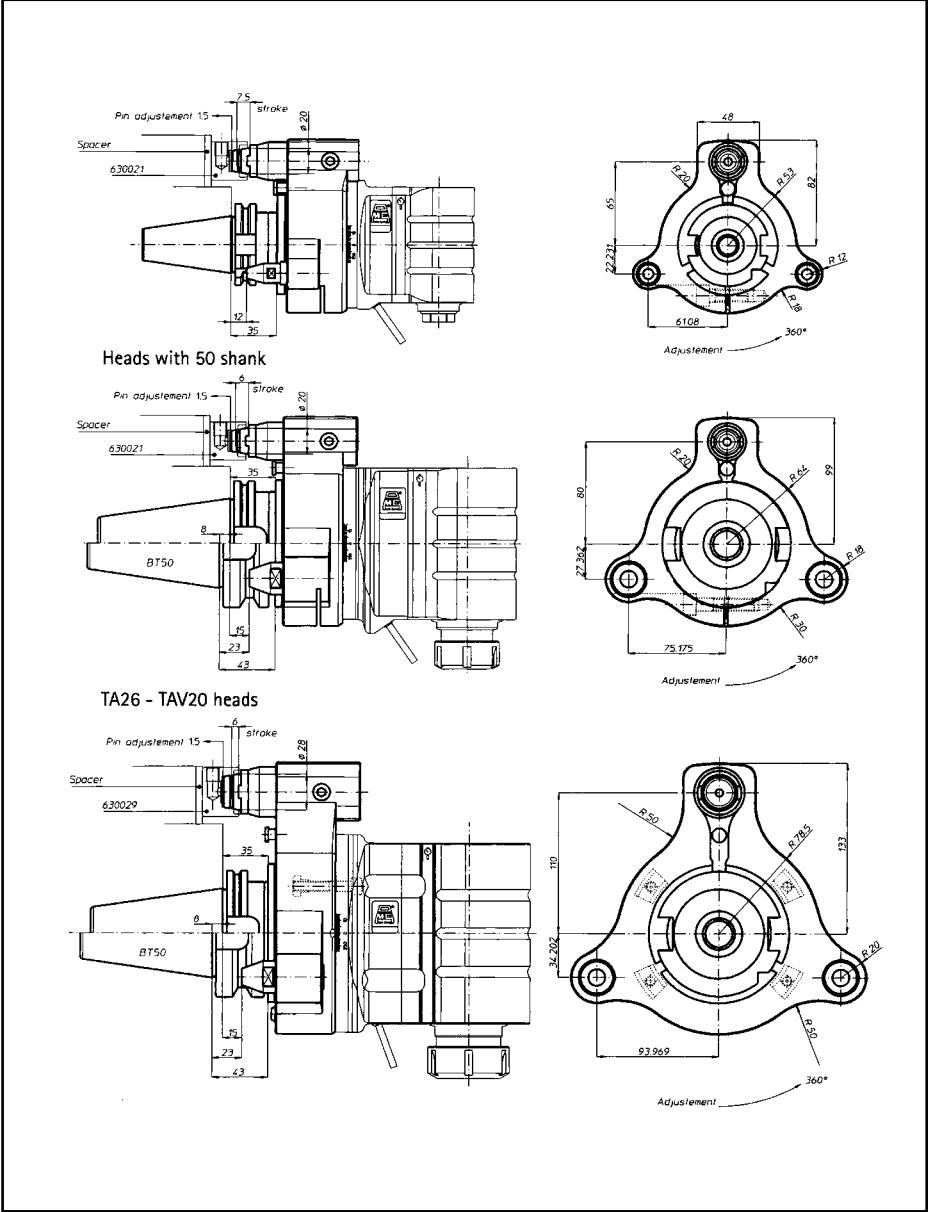


Angle Head Accessories

Triblock Torque Arm

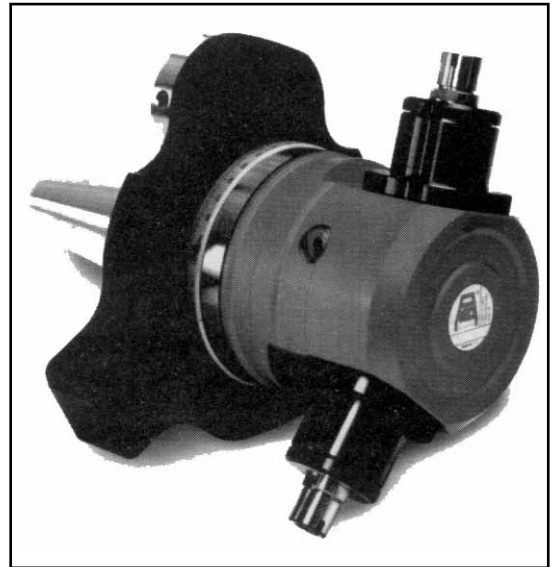
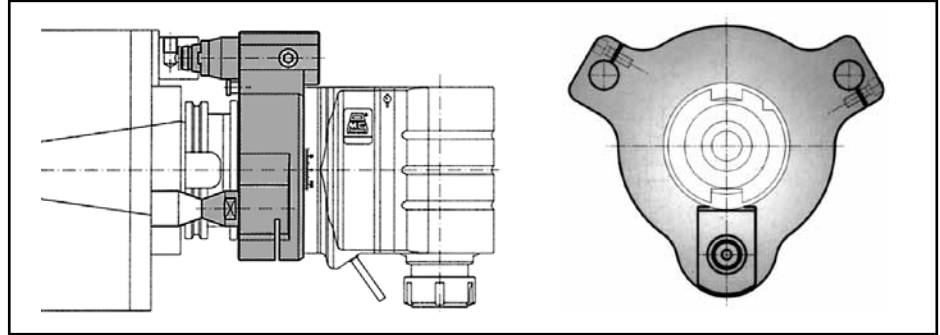


In your application, when possible, position the pin $\varnothing 18$ on the opposite side of the angle heads spindle.



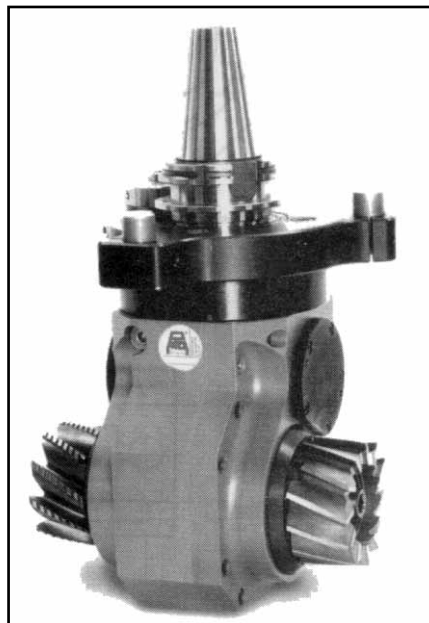
Angle Head Accessories

Triblock Torque Arm

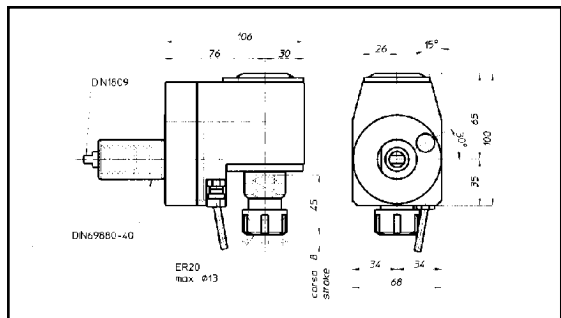
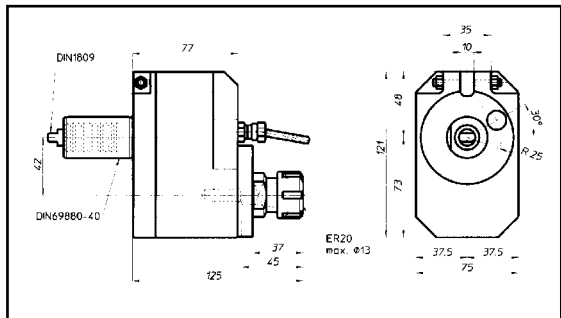


Twin milling head, nr.2
milling cutter $\varnothing 100$
weight Kg33

Twin drilling head,
weight Kg18



Special Angle Heads



1. Drilling angle head with shank HSK63 - weight kg 5

2. Drilling angle head weight kg 5

3. Twin angle head with nr.2 milling cutter for wood weight kg 3

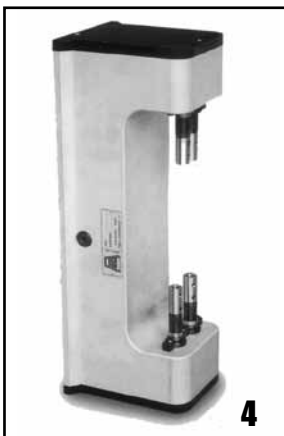
4. Angle head with two opposite twin spindles weight kg 18



5. Drilling angle head with coolant through the spindle weight kg 21

6. Twin spindle angle head TA9020P not in line with the machine spindle weight kg 24

7. Angle head TA9016 not in line with the machine spindle weight kg 17



Special Angle Heads



1



2



3

1. Milling angle head milling cutter ø 100 - weight kg 22

2. Twin milling head, nr.2 milling cutter ø 60 weight kg 15.5

3. Twin milling head, nr.2 milling cutter ø 130 weight kg 290



4



5

4. Milling angle head with brushless motor weight kg160

5. Twin milling head, nr.2 disk weight kg 25

6. Twin angle head, one for drilling and one for tapping weight kg 16



6



7



8

7. Angle head TA9101 with TAR1 head components weight kg 5

8. TAR1 special angle head milling on plastic weight kg 4

9. Twin angle head TA9013 for milling cast iron bodies weight kg 6,5



9

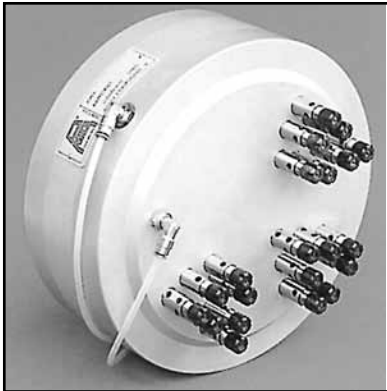


10

10. Twin spindle angle head for gear box milling weight kg 70

Fixed Centers Multi-Heads

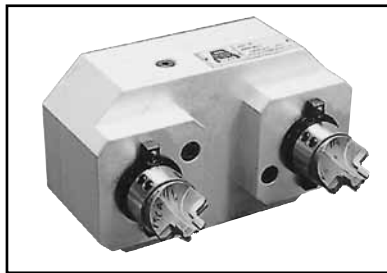
3 Series of fixed Centre heads: MT, TC and TC3



For higher precision, increased cutting and tool speeds.

MT Series

The MT system is for small centre distances and low torque requirements. MT units are normally compact and with 3 or 4 spindles weigh little and are permanent grease lubricated. Rotating components are hardened and ground, and are carried in anti-friction bearing enabling these head to run to to 10,000 rpm. In special cases MT head are built with large bodies and high numbers of spindles - even in excess of 20.



TC Series

Many TC system- medium capacity-heads have been supplied for drilling machines, unit head applications, special machines and machining centers. Outstanding is that this standardized series has become the industries Modular multi-head market leader. Head bodies of many sizes and form have been rationalized.



With a minimum centre distance of 16 mm holes patterns can be provided to any client need; spindles with all types of tool connection (DIN 6499 collets, DIN 55058, KOMET, ABS, DIN 1895 etc.) are carried in combinations of selected needle, angular contact ball and precision taper roller bearings to suit all tool types. Threading spindles with lead nuts give a minimum centers distance of 28 mm; additionally, fixed and movable columns with bush plates for tool guidance are available when required. When the tools or work demand, TC series head spindles can be run in excess of 10,000 rpm.



TC3 Series

The TC3 series is the embodiment of high technology; it is the system to high power machining with large units, on transfer or flexible matching system with automatic head change.

Massive, solid and weighing up to 900 kg, their application are limited only by the host machines; TC3 head bodies are usually of cast iron incorporating hardened and ground transmissions with positive, pressurized lubrication systems. TC3 head are frequently carry spindles with 100 mm bearing diameters - as do many types of machine tools. Machine tools are frequently integrated with O.M.G heads and the quality of work produced depends almost entirely on the head precision.



Special Heads

The O.M.G. technical office will gladly study such case and offer special solutions.

SECTION 3

Collets For Toolholding & Workholding



Collets For Toolholding & Workholding

Techleader precision collets and extensions are made from specially-developed, fine-grain, carbon steel to ensure maximum life to your collets and extensions. With the latest in computer-controlled and specialized machine tools and techniques, we maintain an edge ahead of our competition.

The latest in automated heat-treatment technology is employed to guarantee consistent accuracy in the hardening process. And, all our collets and extensions are 100% inspected to further ensure a prolonged working life and higher precision.

Techleader's range of collets is used to hold bar stock and cutting tools in many different industries - ranging from the automotive to the aerospace, and from the computer to the medical world.

With an experienced team of design engineers at our disposal, we can offer a comprehensive service for the design and manufacture of custom collets for both workholding and toolholding applications.

Through the years, Techleader has catalogued in excess of 40,000 different collet sizes and types. We have listed below some of the various machines we can supply collets for, which are not shown in this catalogue.

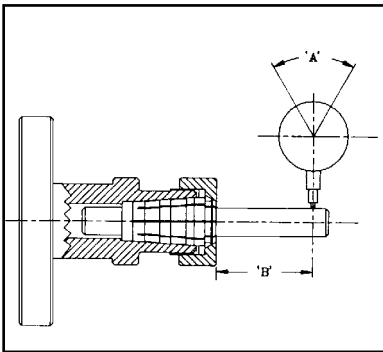
**BECHLER
BOLEY
BROWN & SHARPE
CITIZEN
DAVENPORT
DECO
EMCO**

**DIN 6343
GILDERMEISTER
HERBERT
INDEX
JONES & SHIPMAN
MANURHIN
MAZAK**

**MORI SEIKI
NAKAMURA
NOMURA
OKUMA
PITTLER
RIKKEN
SCHAUBLIN**

**STAR
TORNOS/BECHLER
TRAUB
H.W. WARD
WICKMAN
& MANY MORE**

TG Collets



TG COLLET (High Precision) Standard Accuracy Chart

	Bore Dia	'A'	'B'
OVER	2.0 mm to 3.0 mm	0.018 mm	10.0 mm
OVER	0.079" to 0.118"	0.0007"	0.394"
OVER	3.0 mm to 6.0 mm	0.018 mm	16.0 mm
OVER	0.118" to 0.236"	0.0007"	0.630"
OVER	6.0 mm to 10.0 mm	0.020 mm	25.5 mm
OVER	0.236" to 0.394"	0.0008"	1.000"
OVER	10.0 mm to 19.0 mm	0.030 mm	38.0 mm
OVER	0.394" to 0.748"	0.001"	1.500"
OVER	19.0 mm to 25.4 mm	0.030 mm	51.0 mm
OVER	0.748" to 1.000"	0.0012"	2.000"
OVER	25.4 mm to 32.0 mm	0.040 mm	63.5 mm
OVER	1.000" to 1.260"	0.0013"	2.500"
OVER	32.0 mm to 50.8 mm	0.040 mm	76.0 mm
OVER	1.250" to 2.000"	0.0013"	3.000"

Precision ground and concentric with 0.0005" TIR at collet nose.

75TG INCH COLLETS

L₁ Total Length: 1.811" A Max. Dia: 1.063"

HIGH PRECISION Order No.	STANDARD PRECISION Order No.	D1 Size (in)
075-003	-	3/64
075-004	-	1/16
075-005	-	5/64
075-006	075-006-SP	3/32
075-007	075-007-SP	7/64
075-008	075-008-SP	1/8
075-009	075-009-SP	9/64
075-010	075-010-SP	5/32
075-011	075-011-SP	11/64
075-012	075-012-SP	3/16
075-013	075-013-SP	13/64
075-014	075-014-SP	7/32
075-015	075-015-SP	15/64
075-016	075-016-SP	1/4
075-017	075-017-SP	17/64
075-018	075-018-SP	9/32
075-019	075-019-SP	19/64
075-020	075-020-SP	5/16
075-021	075-021-SP	21/64
075-022	075-022-SP	11/32
075-023	075-023-SP	23/64
075-024	075-024-SP	3/8
075-025	075-025-SP	25/64
075-026	075-026-SP	13/32
075-027	075-027-SP	27/64
075-028	075-028-SP	7/16
075-029	075-029-SP	29/64
075-030	075-030-SP	15/32
075-031	075-031-SP	31/64
075-032	075-032-SP	1/2
075-033	075-033-SP	33/64
075-034	075-034-SP	17/32
075-035	075-035-SP	35/64
075-036	075-036-SP	9/16
075-037	075-037-SP	37/64
075-038	075-038-SP	19/32
075-039	075-039-SP	39/64
075-040	075-040-SP	5/8
075-041	075-041-SP	41/64
075-042	075-042-SP	21/32
075-043	075-043-SP	43/64
075-044	075-044-SP	11/16
075-045	075-045-SP	45/64
075-046	075-046-SP	23/32
075-047	075-047-SP	47/64
075-048	075-048-SP	3/4

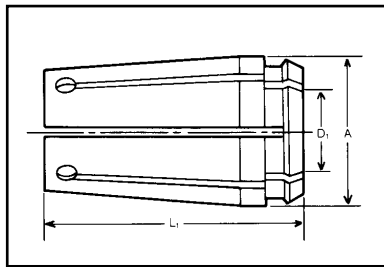
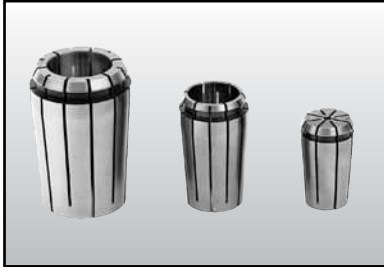
75TG COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
075-ST12SP	12	1/16" to 3/4"x16 ^{ths}
075-ST17SP	17	1/16" to 3/4"x32 nd
075-ST45SP	45	1/16" to 3/4"x64 ^{ths}

75TG COLLETS SETS

HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
075-ST12HP	12	1/16" to 3/4"x16 ^{ths}
075-ST17HP	17	1/16" to 3/4"x32 nd
075-ST45HP	45	1/16" to 3/4"x64 ^{ths}

TG Collets



100TG INCH COLLETS

L₁ Total Length: 2.375" A Max. Dia: 1.379"

100TG METRIC COLLETS

150TG INCH COLLETS

L₁ Total Length: 3" A Max. Dia: 2"

High Precision Order No.	Standard Precision Order No.	D ₁ Size (in)
100-004	-	1/16
100-005	-	5/64
100-006	100-006-SP	3/32
100-007	100-007-SP	7/64
100-008	100-008-SP	1/8
100-009	100-009-SP	9/64
100-010	100-010-SP	5/32
100-011	100-011-SP	11/64
100-012	100-012-SP	3/16
100-013	100-013-SP	13/64
100-014	100-014-SP	7/32
100-015	100-015-SP	15/64
100-016	100-016-SP	1/4
100-017	100-017-SP	17/64
100-018	100-018-SP	9/32
100-019	100-019-SP	19/64
100-020	100-020-SP	5/16
100-021	100-021-SP	21/64
100-022	100-022-SP	11/32
100-023	100-023-SP	23/64
100-024	100-024-SP	3/8
100-025	100-025-SP	25/64
100-026	100-026-SP	13/32
100-027	100-027-SP	27/64
100-028	100-028-SP	7/16
100-029	100-029-SP	29/64
100-030	100-030-SP	15/32
100-031	100-031-SP	31/64
100-032	100-032-SP	1/2
100-033	100-033-SP	33/64
100-034	100-034-SP	17/32
100-035	100-035-SP	35/64
100-036	100-036-SP	9/16
100-037	100-037-SP	37/64
100-038	100-038-SP	19/32
100-039	100-039-SP	39/64
100-040	100-040-SP	5/8
100-041	100-041-SP	41/64
100-042	100-042-SP	21/32
100-043	100-043-SP	43/64
100-044	100-044-SP	11/16
100-045	100-045-SP	45/64
100-046	100-046-SP	23/32
100-047	100-047-SP	47/64
100-048	100-048-SP	3/4
100-049	100-049-SP	49/64
100-050	100-050-SP	25/32
100-051	100-051-SP	51/64
100-052	100-052-SP	13/16
100-053	100-053-SP	53/64
100-054	100-054-SP	27/32
100-055	100-055-SP	55/64
100-056	100-056-SP	7/8
100-057	100-057-SP	57/64
100-058	100-058-SP	29/32
100-059	100-059-SP	59/64
100-060	100-060-SP	15/16
100-061	100-061-SP	61/64
100-062	100-062-SP	31/32
100-063	100-063-SP	63/64
100-064	100-064-SP	1

Order No.	D ₁ Size
100-503	3mm (0.118")
100-504	4mm (0.1575")
100-505	5mm (0.197")
100-506	6mm (0.2362")
100-507	7mm (0.275")
100-508	8mm (0.3150")
100-509	9mm (0.354")
100-510	10mm (0.3937")
100-511	11mm (0.433")
100-512	12mm (0.4724")
100-513	13mm (0.512")
100-514	14mm (0.5512")
100-515	15mm (0.590")
100-516	16mm (0.6299")
100-517	17mm (0.669")
100-518	18mm (0.7087")
100-519	19mm (0.748")
100-520	20mm (0.7874")
100-521	21mm (0.826")
100-522	22mm (0.8661")
100-523	23mm (0.905")
100-524	24mm (0.9449")
100-525	25mm (0.9844")

Also available in 0.5 increments on request.

High Precision Order No.	Standard Precision Order No.	D ₁ Size (in)
150-032	150-032-SP	1/2
150-033	150-033-SP	33/64
150-034	150-034-SP	17/32
150-035	150-035-SP	35/64
150-036	150-036-SP	9/16
150-037	150-037-SP	37/64
150-038	150-038-SP	19/32
150-039	150-039-SP	39/64
150-040	150-040-SP	5/8
150-041	150-041-SP	41/64
150-042	150-042-SP	21/32
150-043	150-043-SP	43/64
150-044	150-044-SP	11/16
150-045	150-045-SP	45/64
150-046	150-046-SP	23/32
150-047	150-047-SP	47/64
150-048	150-048-SP	3/4
150-049	150-049-SP	49/64
150-050	150-050-SP	25/32
150-051	150-051-SP	51/64
150-052	150-052-SP	13/16
150-053	150-053-SP	53/64
150-054	150-054-SP	27/32
150-055	150-055-SP	55/64
150-056	150-056-SP	7/8
150-057	150-057-SP	57/64
150-058	150-058-SP	29/32
150-059	150-059-SP	59/64
150-060	150-060-SP	15/16
150-061	150-061-SP	61/64
150-062	150-062-SP	31/32
150-063	150-063-SP	63/64
150-064	150-064-SP	1
150-065	150-065-SP	1-1/64
150-066	150-066-SP	1-1/32
150-067	150-067-SP	1-3/64
150-068	150-068-SP	1-1/16
150-069	150-069-SP	1-5/64
150-070	150-070-SP	1-3/32
150-071	150-071-SP	1-7/64
150-072	150-072-SP	1-1/8
150-073	150-073-SP	1-9/64
150-074	150-074-SP	1-5/32
150-075	150-075-SP	1-11/64
150-076	150-076-SP	1-3/16
150-077	150-077-SP	1-13/64
150-078	150-078-SP	1-7/32
150-079	150-079-SP	1-15/64
150-080	150-080-SP	1-1/4
150-081	150-081-SP	1-17/64
150-082	150-082-SP	1-9/32
150-083	150-083-SP	1-19/64
150-084	150-084-SP	1-5/6
150-085	150-085-SP	1-21/64
150-086	150-086-SP	1-11/32
150-087	150-087-SP	1-23/64
150-088	150-088-SP	1-3/8
150-089	150-089-SP	1-25/64
150-090	150-090-SP	1-13/32
150-091	150-091-SP	1-27/64
150-092	150-092-SP	1-7/16
150-093	150-093-SP	1-29/64
150-094	150-094-SP	1-15/32
150-095	150-095-SP	1-31/64
150-096	150-096-SP	1-1/2

100TG COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
100-ST8SP	8	1/8" to 1" x 8ths
100-ST11SP	11	3/8" to 1" x 16ths
100-ST15SP	15	1/8" to 1" x 16ths
100-ST21SP	21	3/8" to 1" x 32nds
100-ST30SP	30	3/32" to 1" x 32nds
100-ST41SP	41	3/8" to 1" x 64ths
100-ST59SP	59	3/32" to 1" x 64ths

100TG COLLETS SETS

HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
100-ST8HP	8	1/8" to 1" x 8ths
100-ST11HP	11	3/8" to 1" x 16ths
100-ST15HP	15	1/8" to 1" x 16ths
100-ST21HP	21	3/8" to 1" x 32nds
100-ST30HP	30	3/32" to 1" x 32nds
100-ST41HP	41	3/8" to 1" x 64ths
100-ST59HP	59	3/32" to 1" x 64ths

TG Coolant Sealed Collets



Max Pressure 600 PSI

75TG INCH COLLETS

L₁ = Total Length: 1.811"

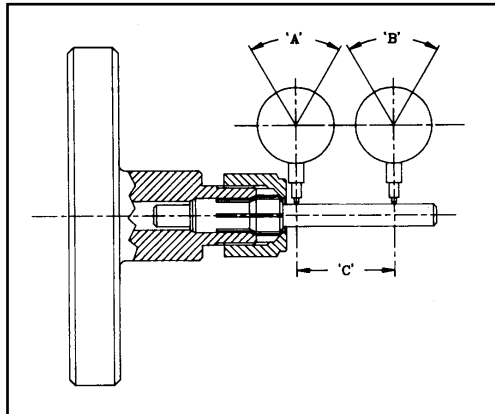
A = Max. Dia: 1.063"

100TG INCH COLLETS

L₁ = Total Length: 2.375" A = Max. Dia: 1.379"

D ₁ Size (in)	TG 75 Order No.	TG 100 Order No.	Metric (mm)	TG 75 Order No.	TG 100 Order No.
1/8	075-008-CS		3	075-503-CS	100-503-CS
9/64	075-009-CS		4	075-504-CS	100-504-CS
5/32	075-010-CS	100-010-CS	5	075-505-CS	100-505-CS
11/64	075-011-CS	100-011-CS	6	075-506-CS	100-506-CS
3/16	075-012-CS	100-012-CS	7	075-507-CS	100-507-CS
13/64	075-013-CS	100-013-CS	8	075-508-CS	100-508-CS
7/32	075-014-CS	100-014-CS	9	075-509-CS	100-509-CS
15/64	075-015-CS	100-015-CS	10	075-510-CS	100-510-CS
1/4	075-016-CS	100-016-CS	11	075-511-CS	100-511-CS
17/64	075-017-CS	100-017-CS	12	075-512-CS	100-512-CS
9/32	075-018-CS	100-018-CS	13	075-513-CS	100-513-CS
19/64	075-019-CS	100-019-CS	14	075-514-CS	100-514-CS
5/16	075-020-CS	100-020-CS	15	075-515-CS	100-515-CS
21/64	075-021-CS	100-021-CS	16	075-516-CS	100-516-CS
11/32	075-022-CS	100-022-CS	17	075-517-CS	100-517-CS
23/64	075-023-CS	100-023-CS	18	075-518-CS	100-518-CS
3/8	075-024-CS	100-024-CS	19	075-519-CS	100-519-CS
25/64	075-025-CS	100-025-CS	20	075-520-CS	100-520-CS
13/32	075-026-CS	100-026-CS	21	-	100-521-CS
27/64	075-027-CS	100-027-CS	22	-	100-522-CS
7/16	075-028-CS	100-028-CS	23	-	100-523-CS
29/64	075-029-CS	100-029-CS	24	-	100-524-CS
15/32	075-030-CS	100-030-CS	25	-	100-525-CS
31/64	075-031-CS	100-031-CS			
1/2	075-032-CS	100-032-CS			
33/64	075-033-CS	100-033-CS			
17/32	075-034-CS	100-034-CS			
35/64	075-035-CS	100-035-CS			
9/16	075-036-CS	100-036-CS			
37/64	075-037-CS	100-037-CS			
19/32	075-038-CS	100-038-CS			
39/64	075-039-CS	100-039-CS			
5/8	075-040-CS	100-040-CS			
41/64	075-041-CS	100-041-CS			
21/32	075-042-CS	100-042-CS			
43/64	075-043-CS	100-043-CS			
11/16	075-044-CS	100-044-CS			
45/64	075-045-CS	100-045-CS			
23/32	075-046-CS	100-046-CS			
47/64	075-047-CS	100-047-CS			
3/4	075-048-CS	100-048-CS			
49/64	-	100-049-CS			
25/32	-	100-050-CS			
51/64	-	100-051-CS			
13/16	-	100-052-CS			
53/64	-	100-053-CS			
27/32	-	100-054-CS			
55/64	-	100-055-CS			
7/8	-	100-056-CS			
57/64	-	100-057-CS			
29/32	-	100-058-CS			
59/64	-	100-059-CS			
15/16	-	100-060-CS			
61/64	-	100-061-CS			
31/32	-	100-062-CS			
63/64	-	100-063-CS			
1	-	100-064-CS			

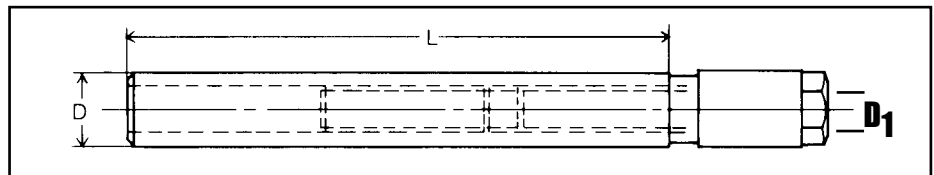
Double Angle Collets & Extensions



DOUBLE ANGLE COLLET Standard Precision Accuracy Chart

Bore Dia		'A'	'B'	'C'
(mm)	1.0	0.025	0.040	12.0
(in.)	0.39	0.0008	0.0015	0.472
Over (mm)	1.0 to 3.0	0.025	0.050	25.0
Over (in.)	0.39-0.118	0.0008	0.002	0.984
Over (mm)	3.0 to CAP.	0.013	0.025	25.0
Over (in.)	0.118-CAP.	0.0005	0.001	0.984

Precision ground and concentric with 0.0005" TIR at collet nose.

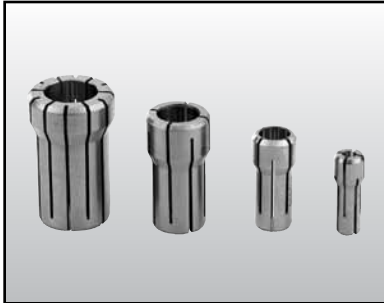


Double Angle Collet Extensions

To ensure long life of accuracy and durability, the Techleader Double Angle Tool Extensions are manufactured utilizing the latest technology of heat treat and processing, combined with high quality carbon steel. The product is hardened and tempered with a high degree of accuracy outlasting our competitors and making us No. 1 in quality and precision.

EXTENSIONS					NUTS
Order No.	Range D ₁ (in)	Collet	D (in)	L (in)	Order No.
030-000	0.031 - 0.250	300DA	1/2	5-1/2	030-000-NI
030-000S	0.031 - 0.250	300DA	1/2	3.60"	030-000-NI
030-00IS	0.031 - 0.250	300DA	5/8	3.75"	030-000-NI
020-000	0.047 - 0.375	200DA	3/4	5-1/2	020-000-NI
020-000S	0.047 - 0.375	200DA	5/8	3.75"	020-000-NI
020-00IS	0.047 - 0.375	200DA	3/4	3.80"	020-000-NI
010-000	0.047 - 0.562	100DA	1	5-1/2	010-000-NI
010-000S	0.047 - 0.562	100DA	1	4.00"	010-000-NI
018-000	0.047 - 0.750	180DA	1-1/4	5-1/2	018-000-NI
018-001	0.047 - 0.750	180DA	1	6.20"	018-000-NI

Double Angle Collets



300DA COLLETS

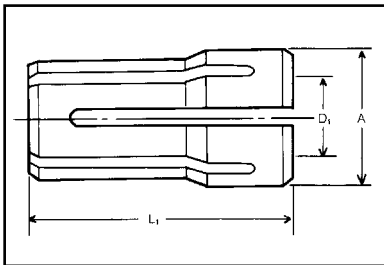
L₁ Total Length: 1.000" A Max. Dia: 0.375"

HIGH PRECISION Order No.	STANDARD PRECISION Order No.	D ₁ Size Order No.
030-002	-	1/32"
030-003	-	3/64"
030-004	030-004-SP	1/16"
030-005	030-005-SP	5/64"
030-006	030-006-SP	3/32"
030-007	030-007-SP	7/64"
030-008	030-008-SP	1/8"
030-009	030-009-SP	9/64"
030-010	030-010-SP	5/32"
030-011	030-011-SP	11/64"
030-012	030-012-SP	3/16"
030-013	030-013-SP	13/64"
030-014	030-014-SP	7/32"
030-015	030-015-SP	15/64"
030-016	030-016-SP	1/4"

200DA COLLETS

L₁ Total Length: 1.188" A Max. Dia: 0.531"

HIGH PRECISION Order No.	STANDARD PRECISION Order No.	D ₁ Size Order No.
020-003	-	3/64"
020-004	020-004-SP	1/16"
020-005	020-005-SP	5/64"
020-006	020-006-SP	3/32"
020-007	020-007-SP	7/64"
020-008	020-008-SP	1/8"
020-009	020-009-SP	9/64"
020-010	020-010-SP	5/32"
020-011	020-011-SP	11/64"
020-012	020-012-SP	3/16"
020-013	020-013-SP	13/64"
020-014	020-014-SP	7/32"
020-015	020-015-SP	15/64"
020-016	020-016-SP	1/4"
020-017	020-017-SP	17/64"
020-018	020-018-SP	9/32"
020-019	020-019-SP	19/64"
020-020	020-020-SP	5/16"
020-021	020-021-SP	21/64"
020-022	020-022-SP	11/32"
020-023	020-023-SP	23/64"
020-024	020-024-SP	3/8"



300DA COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
030-ST7SP	7	1/16" to 1/4" x 32 ^{nds}
030-ST9SP	9	1/8" to 1/4" x 64 ^{ths}
030-ST13SP	13	1/16" to 1/4" x 64 ^{ths}
030-ST14SP	14	3/64" to 1/4" x 64 ^{ths}

200DA COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
020-ST9SP	9	1/8" to 3/8" x 32 ^{nds}
020-ST11SP	11	1/16" to 3/8" x 32 ^{nds}
020-ST17SP	17	1/8" to 3/8" x 64 ^{ths}
020-ST21SP	21	1/16" to 3/8" x 64 ^{ths}

Double Angle Collets

Metric-Sizes also available on request

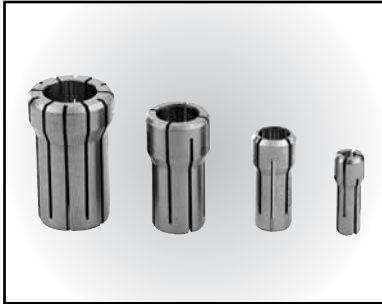
300DA COLLETS SETS

HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
030-ST7HP	7	1/16" to 1/4" x 32 ^{nds}
030-ST9HP	9	1/8" to 1/4" x 64 ^{ths}
030-ST13HP	13	1/16" to 1/4" x 64 ^{ths}
030-ST14HP	14	3/64" to 1/4" x 64 ^{ths}

200DA COLLETS SETS

HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
020-ST9HP	9	1/8" to 3/8" x 32 ^{nds}
020-ST11HP	11	1/16" to 3/8" x 32 ^{nds}
020-ST17HP	17	1/8" to 3/8" x 64 ^{ths}
020-ST21HP	21	1/16" to 3/8" x 64 ^{ths}

Double Angle Collets



100DA COLLETS

L₁ Total Length: 1.438"
A Max. Dia: 0.769"

HIGH PRECISION Order No.	STANDARD PRECISION Order No.	D ₁ Size Order No.
010-003	-	3/64"
010-004	010-004-SP	1/16"
010-005	010-005-SP	5/64"
010-006	010-006-SP	3/32"
010-007	010-007-SP	7/64"
010-008	010-008-SP	1/8"
010-009	010-009-SP	9/64"
010-010	010-010-SP	5/32"
010-011	010-011-SP	11/64"
010-012	010-012-SP	3/16"
010-013	010-013-SP	13/64"
010-014	010-014-SP	7/32"
010-015	010-015-SP	15/64"
010-016	010-016-SP	1/4"
010-017	010-017-SP	17/64"
010-018	010-018-SP	9/32"
010-019	010-019-SP	19/64"
010-020	010-020-SP	5/16"
010-021	010-021-SP	21/64"
010-022	010-022-SP	11/32"
010-023	010-023-SP	23/64"
010-024	010-024-SP	3/8"
010-025	010-025-SP	25/64"
010-026	010-026-SP	13/32"
010-027	010-027-SP	27/64"
010-028	010-028-SP	7/16"
010-029	010-029-SP	29/64"
010-030	010-030-SP	15/32"
010-031	010-031-SP	31/64"
010-032	010-032-SP	1/2"
010-033	010-033-SP	33/64"
010-034	010-034-SP	17/32"
010-035	010-035-SP	35/64"
010-036	010-036-SP	9/16"

180DA COLLETS

L₁ Total Length: 1.625"
A Max. Dia: 1.035"

HIGH PRECISION Order No.	STANDARD PRECISION Order No.	D ₁ Size Order No.
018-003	-	3/64"
018-004	018-004-SP	1/16"
018-005	018-005-SP	5/64"
018-006	018-006-SP	3/32"
018-007	018-007-SP	7/64"
018-008	018-008-SP	1/8"
018-009	018-009-SP	9/64"
018-010	018-010-SP	5/32"
018-011	018-011-SP	11/64"
018-012	018-012-SP	3/16"
018-013	018-013-SP	13/64"
018-014	018-014-SP	7/32"
018-015	018-015-SP	15/64"
018-016	018-016-SP	1/4"
018-017	018-017-SP	17/64"
018-018	018-018-SP	9/32"
018-019	018-019-SP	19/64"
018-020	018-020-SP	5/16"
018-021	018-021-SP	21/64"
018-022	018-022-SP	11/32"
018-023	018-023-SP	23/64"
018-024	018-024-SP	3/8"
018-025	018-025-SP	25/64"
018-026	018-026-SP	13/32"
018-027	018-027-SP	27/64"
018-028	018-028-SP	7/16"
018-029	018-029-SP	29/64"
018-030	018-030-SP	15/32"
018-031	018-031-SP	31/64"
018-032	018-032-SP	1/2"
018-033	018-033-SP	33/64"
018-034	018-034-SP	17/32"
018-035	018-035-SP	35/64"
018-036	018-036-SP	9/16"
018-037	018-037-SP	37/64"
018-038	018-038-SP	19/32"
018-039	018-039-SP	39/64"
018-040	018-040-SP	5/8"
018-041	018-041-SP	41/64"
018-042	018-042-SP	21/32"
018-043	018-043-SP	43/64"
018-044	018-044-SP	11/16"
018-045	018-045-SP	45/64"
018-046	018-046-SP	23/32"
018-047	018-047-SP	47/64"
018-048	018-048-SP	3/4"

100DA COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
010-ST8SP	8	1/8" to 9/16" x 16 ^{ths}
010-ST11SP	11	1/4" to 9/16" x 32 ^{nds}
010-ST15SP	15	1/8" to 9/16" x 32 ^{nds}
010-ST17SP	17	1/16" to 9/16" x 32 ^{nds}
010-ST21SP	21	1/4" to 9/16" x 64 ^{ths}
010-ST29SP	29	3/8" to 9/16" x 64 ^{ths}
010-ST33SP	33	1/16" to 9/16" x 64 ^{ths}

100DA COLLETS SETS

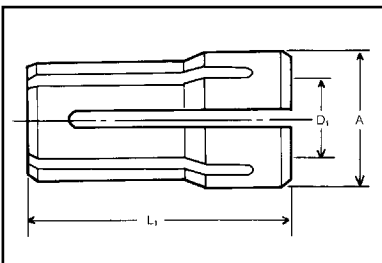
HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
010-ST8HP	8	1/8" to 9/16" x 16 ^{ths}
010-ST11HP	11	1/4" to 9/16" x 32 ^{nds}
010-ST15HP	15	1/8" to 9/16" x 32 ^{nds}
010-ST17HP	17	1/16" to 9/16" x 32 ^{nds}
010-ST21HP	21	1/4" to 9/16" x 64 ^{ths}
010-ST29HP	29	3/8" to 9/16" x 64 ^{ths}
010-ST33HP	33	1/16" to 9/16" x 64 ^{ths}

180DA COLLETS SETS

STANDARD PRECISION Order No.	NUMBER OF PIECES	SIZE
018-ST9SP	9	1/4" to 3/4" x 16 ^{ths}
018-ST17SP	17	1/4" to 3/4" x 32 ^{nds}
018-ST21SP	21	1/8" to 3/4" x 32 ^{nds}
018-ST33SP	33	1/4" to 3/4" x 64 ^{ths}
018-ST41SP	41	1/8" to 3/4" x 64 ^{ths}

180DA COLLETS SETS

HIGH PRECISION Order No.	NUMBER OF PIECES	SIZE
018-ST9HP	9	1/4" to 3/4" x 16 ^{ths}
018-ST17HP	17	1/4" to 3/4" x 32 ^{nds}
018-ST21HP	21	1/8" to 3/4" x 32 ^{nds}
018-ST33HP	33	1/4" to 3/4" x 64 ^{ths}
018-ST41HP	41	1/8" to 3/4" x 64 ^{ths}



Double Angle Collets

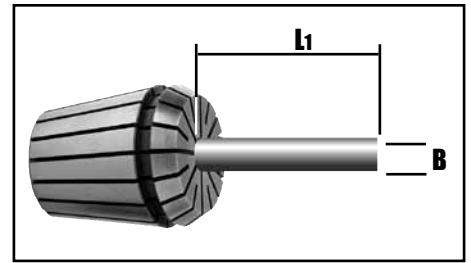
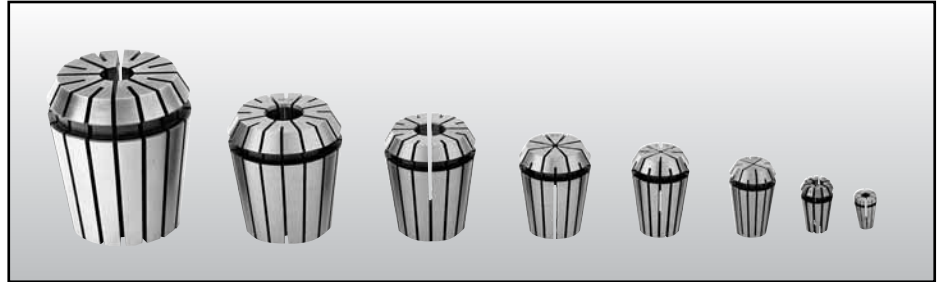
Metric sizes also available on request

ECX (ER) Super Flex Standard & Ultra Precision Collets



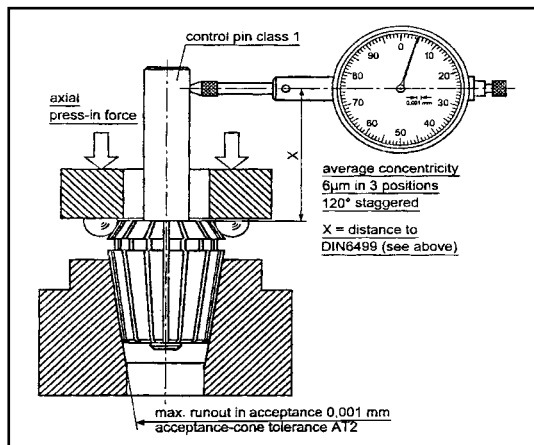
See pages 1-10 and 1-15 for
Collet Chucks and Extensions

Our ECX is equivalent to
the following competitors'
styles: DR, ER, ESX & RD



Concentricity details for Collets to
DIN6499 (ECX/ER) are checked to the
test method described below.

BORE SIZE B	L1 mm	ECX/ER 8 & 50		ECX/ER 11, 16, 20 & 25, 32 & 40	
		Metric	Inch	Metric	Inch
over 1.0 to 1.6	6	0.015 SP	0.0006" SP	0.015 SP	0.0006" SP
1.6 to 3.0	10	0.010 UP	0.0004" UP	0.006 UP	0.00025" UP
3.0 to 7.0	16	0.020 SP	0.0008" SP	0.020 SP	0.0008" SP
7.0 to 10.0	25	0.015 UP	0.0006" UP	0.006 UP	0.00025" UP
10.0 to 18.0	40	0.020 SP/UP	0.0008" SP/UP	0.020 SP	0.0008" SP
18.0 to 26.0	50			0.015 UP	0.0006" UP
26.0 to 34.0	60				



SP = Standard Precision

UP = Ultra Precision
(Made in Germany)

For applications which require highest concentricity, it is absolutely necessary to pay attention to the complete system (machine spindle, collet acceptance, nut, collet and cutting tool).

ECX (ER) Super Flex Standard & Ultra Precision Collets

ECX/ER 8 Collets

L₁ = Total Length: 0.531" (13.5 mm) A = Max. Dia: 0.355" (8.5 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Part No.	Order No.	Size
0.020 - 0.039	0.5 - 1.0	008-040-SP	008-040	-	-
0.039 - 0.059	1.0 - 1.5	008-060-SP	008-060	-	-
0.059 - 0.079	1.5 - 2.0	008-080-SP	008-080	-	-
0.079 - 0.098	2.0 - 2.5	008-100-SP	008-100	-	-
0.098 - 0.118	2.5 - 3.0	008-120-SP	008-120	-	-
0.118 - 0.138	3.0 - 3.5	008-140-SP	008-140	-	-
0.138 - 0.157	3.5 - 4.0	008-160-SP	008-160	-	-
0.157 - 0.177	4.0 - 4.5	008-180-SP	008-180	-	-
0.177 - 0.197	4.5 - 5.0	008-200-SP	008-200	-	-

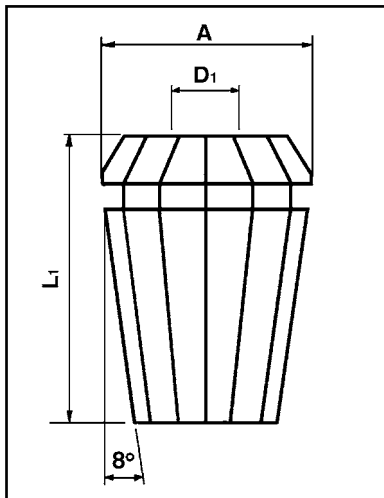
Collet Sets

Order No.	No. of Pieces	Device Type	Range
008-ST9SP	9 PC	ECX 8 SP Collet Set	0.5 mm to 5 mm By 0.5 mm Incr.
008-ST9	9 PC	ECX 8 UP Collet Set	0.5 mm to 5 mm By 0.5 mm Incr.

ECX/ER 11 Collets

L₁ = Total Length: 0.709" (18 mm) A = Max. Dia: 0.453" (11.5 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Part No.	Size
0.020 - 0.039	0.5 - 1.0	011-040-SP	011-040	011-008-I	1/8"
0.039 - 0.059	1.0 - 1.5	011-060-SP	011-060	011-012-I	3/16"
0.059 - 0.079	1.5 - 2.0	011-080-SP	011-080	011-016-I	1/4"
0.079 - 0.098	2.0 - 2.5	011-100-SP	011-100	-	-
0.098 - 0.118	2.5 - 3.0	011-120-SP	011-120	-	-
0.118 - 0.138	3.0 - 3.5	011-140-SP	011-140	-	-
0.138 - 0.157	3.5 - 4.0	011-160-SP	011-160	-	-
0.157 - 0.177	4.0 - 4.5	011-180-SP	011-180	-	-
0.177 - 0.197	4.5 - 5.0	011-200-SP	011-200	-	-
0.197 - 0.217	5.0 - 5.5	011-220-SP	011-220	-	-
0.217 - 0.236	5.5 - 6.0	011-240-SP	011-240	-	-
0.236 - 0.256	6.0 - 6.5	011-260-SP	011-260	-	-
0.256 - 0.276	6.5 - 7.0	011-280-SP	011-280	-	-



Collet Sets

Order No.	No. of Pieces	Device Type	Range
011-ST13SP	13 PC	ECX 11 SP Collet Set	1 mm to 7 mm By 0.5 mm Incr.
011-ST13	13 PC	ECX 11 UP Collet Set	1 mm to 7 mm By 0.5 mm Incr.

ECX (ER) Super Flex Standard & Ultra Precision Collets

ECX/ER 12 Collets

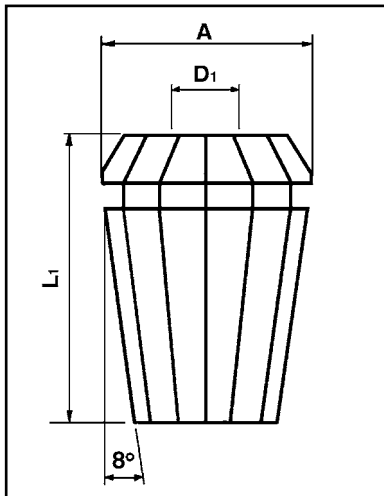
L_1 = Total Length: 0.767" (19.5 mm) A = Max. Dia: 0.472" (12 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.020 - 0.039	0.5 - 1.0	012-040-SP	012-040	-	-
0.039 - 0.059	1.0 - 1.5	012-060-SP	012-060	-	-
0.059 - 0.079	1.5 - 2.0	012-080-SP	012-080	-	-
0.079 - 0.0984	2.0 - 2.5	012-100-SP	012-100	-	-
0.0984 - 0.118	2.5 - 3.0	012-120-SP	012-120	-	-
0.118 - 0.158	3.0 - 4.0	012-160-SP	012-160	-	-
0.158 - 0.197	4.0 - 5.0	012-200-SP	012-200	-	-
0.197 - 0.236	5.0 - 6.0	012-240-SP	012-240	-	-
0.236 - 0.276	6.0 - 7.0	012-280-SP	012-280	-	-

ECX/ER 16 Collets

L_1 = Total Length: 1.063" (27 mm) A = Max. Dia: 0.669" (17 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.020 - 0.039	0.5 - 1.0	016-040-SP	016-040	016-004-I	1/16"
0.039 - 0.059	1.0 - 1.5	-	016-060	016-008-I	1/8"
SP 0.039 - 0.079/ UP 0.059 - 0.079	SP 1.0 - 2.0/ UP 1.5 - 2.0	016-080-SP	016-080	016-012-I	3/16"
0.079 - 0.118	2.0 - 3.0	016-120-SP	016-120	016-016-I	1/4"
0.118 - 0.158	3.0 - 4.0	016-160-SP	016-160	016-020-I	5/16"
0.158 - 0.197	4.5 - 5.0	016-200-SP	016-200	016-024-I	3/8"
0.197 - 0.236	5.0 - 6.0	016-240-SP	016-240	-	-
0.236 - 0.276	6.0 - 7.0	016-280-SP	016-280	-	-
0.276 - 0.315	7.0 - 8.0	016-320-SP	016-320	-	-
0.315 - 0.354	8.0 - 9.0	016-360-SP	016-360	-	-
0.354 - 0.394	9.0 - 10.0	016-400-SP	016-400	-	-



Collet Sets

Order No.	No. of Pieces	Device Type	Range
016-ST10SP	10 PC	ECX 16 SP Collet Set	1 mm to 10 mm By 1 mm Incr.
016-ST11	11 PC	ECX 16 UP Collet Set	1 mm to 10 mm By 0.5 mm Incr. from 1 mm to 2 mm By 1 mm Incr. from 3 mm to 10 mm

ECX (ER) Super Flex Standard & Ultra Precision Collets

ECX/ER 20 Collets

L₁ = Total Length: 1.220" (31 mm) A = Max. Dia: 0.826" (21 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.020 - 0.039	0.5 - 1.0	020-040-SP	020-040	020-008-I	1/8
0.039 - 0.059	1.0 - 1.5	-	020-060	020-012-I	3/16
SP 0.039 - 0.079 / UP 0.059 - 0.079	SP 1.0 - 2.0 / UP 1.5 - 2.0	020-080-SP	020-080	020-016-I	1/4
0.079 - 0.118	2.0 - 3.0	020-120-SP	020-120	020-020-I	5/16
0.118 - 0.158	3.0 - 4.0	020-160-SP	020-160	020-024-I	3/8
0.158 - 0.197	4.0 - 5.0	020-200-SP	020-200	020-028-I	7/16
0.197 - 0.236	5.0 - 6.0	020-240-SP	020-240	020-032-I	1/2
0.236 - 0.275	6.0 - 7.0	020-280-SP	020-280	-	-
0.275 - 0.315	7.0 - 8.0	020-320-SP	020-320	-	-
0.315 - 0.354	8.0 - 9.0	020-360-SP	020-360	-	-
0.354 - 0.393	9.0 - 10.0	020-400-SP	020-400	-	-
0.393 - 0.433	10.0 - 11.0	020-440-SP	020-440	-	-
0.433 - 0.472	11.0 - 12.0	020-480-SP	020-480	-	-
0.472 - 0.512	12.0 - 13.0	020-520-SP	020-520	-	-

Collet Sets

Order No.	No. of Pieces	Device Type	Range
020-ST13SP	13 PC	ECX 20 SP Collet Set	1 mm to 13 mm By 1 mm Incr.
020-ST14	14 PC	ECX 20 UP Collet Set	1 mm to 13 mm By 0.5 mm Incr. from 1 mm to 2 mm By 1 mm Incr. from 3 mm to 13 mm

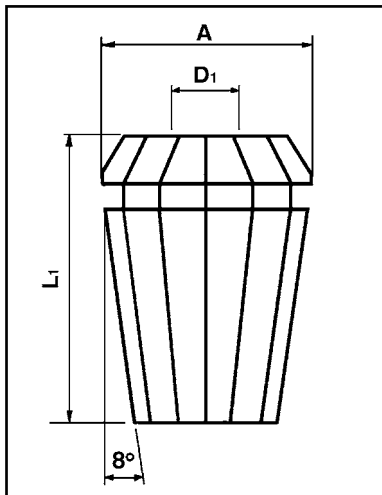
ECX/ER 25 Collets

L₁ = Total Length: 1.338" (34 mm) A = Max. Dia: 1.023" (26 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.020 - 0.039	0.5 - 1.0	025-040-SP	025-040	025-008-I	1/8
0.039 - 0.059	1.0 - 1.5	-	025-060	025-012-I	3/16
SP 0.039 - 0.079 / UP 0.059 - 0.079	SP 1.0 - 2.0 / UP 1.5 - 2.0	025-080-SP	025-080	025-016-I	1/4
0.079 - 0.118	2.0 - 3.0	025-120-SP	025-120	025-020-I	5/16
0.118 - 0.158	3.0 - 4.0	025-160-SP	025-160	025-024-I	3/8
0.158 - 0.197	4.0 - 5.0	025-200-SP	025-200	025-028-I	7/16
0.197 - 0.236	5.0 - 6.0	025-240-SP	025-240	025-032-I	1/2
0.236 - 0.275	6.0 - 7.0	025-280-SP	025-280	025-036-I	9/16
0.275 - 0.315	7.0 - 8.0	025-320-SP	025-320	025-040-I	5/8
0.315 - 0.354	8.0 - 9.0	025-360-SP	025-360	-	-
0.354 - 0.393	9.0 - 10.0	025-400-SP	025-400	-	-
0.393 - 0.433	10.0 - 11.0	025-440-SP	025-440	-	-
0.433 - 0.472	11.0 - 12.0	025-480-SP	025-480	-	-
0.472 - 0.512	12.0 - 13.0	025-520-SP	025-520	-	-
0.512 - 0.551	13.0 - 14.0	025-560-SP	025-560	-	-
0.551 - 0.590	14.0 - 15.0	025-600-SP	025-600	-	-
0.590 - 0.629	15.0 - 16.0	025-640-SP	025-640	-	-

Collet Sets

Order No.	No. of Pieces	Device Type	Range
025-ST16SP	16 PC	ECX 25 SP Collet Set	1 mm to 16 mm By 1 mm Incr.
025-ST17	17 PC	ECX 25 UP Collet Set	1 mm to 16 mm By 0.5 mm Incr. from 1 mm to 2 mm By 1 mm Incr. from 3 mm to 16 mm



ECX (ER) Super Flex Standard & Ultra Precision Collets

ECX/ER 32 Collets

L₁ = Total Length: 1.575" (40 mm)

A = Max. Dia: 1.299" (33 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.059 - 0.079	1.5 - 2.0	-	032-080	032-008-I	1/8
0.079 - 0.098	2.0 - 2.5	-	032-100	032-012-I	3/16
0.079 - 0.118	2.0 - 3.0	032-120-SP	032-120	032-016-I	1/4
0.118 - 0.158	3.0 - 4.0	032-160-SP	032-160	032-020-I	5/16
0.158 - 0.197	4.0 - 5.0	032-200-SP	032-200	032-024-I	3/8
0.197 - 0.236	5.0 - 6.0	032-240-SP	032-240	032-028-I	7/16
0.236 - 0.275	6.0 - 7.0	032-280-SP	032-280	032-032-I	1/2
0.275 - 0.315	7.0 - 8.0	032-320-SP	032-320	032-036-I	9/16
0.315 - 0.354	8.0 - 9.0	032-360-SP	032-360	032-040-I	5/8
0.354 - 0.393	9.0 - 10.0	032-400-SP	032-400	032-044-I	11/16
0.393 - 0.433	10.0 - 11.0	032-440-SP	032-440	032-048-I	3/4
0.433 - 0.472	11.0 - 12.0	032-480-SP	032-480	-	-
0.472 - 0.512	12.0 - 13.0	032-520-SP	032-520	-	-
0.512 - 0.551	13.0 - 14.0	032-560-SP	032-560	-	-
0.551 - 0.590	14.0 - 15.0	032-600-SP	032-600	-	-
0.590 - 0.629	15.0 - 16.0	032-640-SP	032-640	-	-
0.629 - 0.669	16.0 - 17.0	032-680-SP	032-680	-	-
0.669 - 0.708	17.0 - 18.0	032-720-SP	032-720	-	-
0.708 - 0.748	18.0 - 19.0	032-760-SP	032-760	-	-
0.748 - 0.787	19.0 - 20.0	032-800-SP	032-800	-	-

Collet Sets

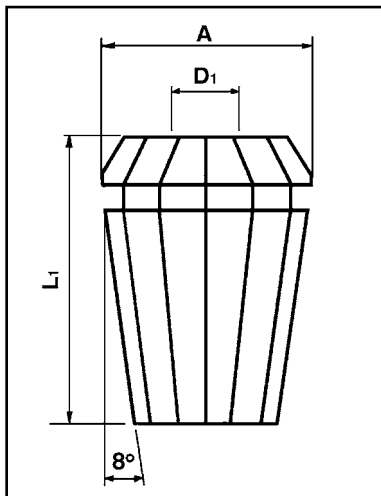
Order No.	No. of Pieces	Device Type	Range
032-ST18SP	18 PC	ECX 32 SP Collet Set	2 mm to 20 mm By 1 mm Incr.
032-ST18	18 PC	ECX 32 UP Collet Set	2 mm to 20 mm By 1 mm Incr.

ECX/ER 40 Collets

L₁ = Total Length: 1.811" (46 mm)

A = Max. Dia: 1.614" (41 mm)

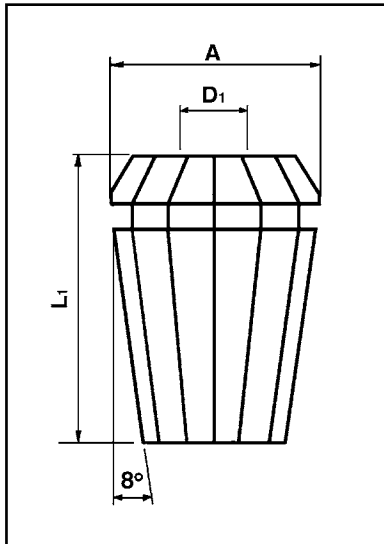
CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric	Order No.	Order No.	Order No.	Size
0.118 - 0.158	3.0 - 4.0	040-160-SP	040-160	040-008-I	1/8
0.158 - 0.197	4.0 - 5.0	040-200-SP	040-200	040-012-I	3/16
0.197 - 0.236	5.0 - 6.0	040-240-SP	040-240	040-016-I	1/4
0.236 - 0.275	6.0 - 7.0	040-280-SP	040-280	040-020-I	5/16
0.275 - 0.315	7.0 - 8.0	040-320-SP	040-320	040-024-I	3/8
0.315 - 0.354	8.0 - 9.0	040-360-SP	040-360	040-028-I	7/16
0.354 - 0.393	9.0 - 10.0	040-400-SP	040-400	040-032-I	1/2
0.393 - 0.433	10.0 - 11.0	040-440-SP	040-440	040-036-I	9/16
0.433 - 0.472	11.0 - 12.0	040-480-SP	040-480	040-040-I	5/8
0.472 - 0.512	12.0 - 13.0	040-520-SP	040-520	040-048-I	3/4
0.512 - 0.551	13.0 - 14.0	040-560-SP	040-560	040-056-I	7/8
0.551 - 0.590	14.0 - 15.0	040-600-SP	040-600	040-064-I	1
0.590 - 0.629	15.0 - 16.0	040-640-SP	040-640	-	-
0.629 - 0.669	16.0 - 17.0	040-680-SP	040-680	-	-
0.669 - 0.708	17.0 - 18.0	040-720-SP	040-720	-	-
0.708 - 0.748	18.0 - 19.0	040-760-SP	040-760	-	-
0.748 - 0.787	19.0 - 20.0	040-800-SP	040-800	-	-
0.787 - 0.827	20.0 - 21.0	040-840-SP	040-840	-	-
0.827 - 0.866	21.0 - 22.0	040-880-SP	040-880	-	-
0.866 - 0.906	22.0 - 23.0	040-920-SP	040-920	-	-
0.906 - 0.945	23.0 - 24.0	040-960-SP	040-960	-	-
0.945 - 0.984	24.0 - 25.0	040-1000SP	040-1000	-	-
0.984 - 1.024	25.0 - 26.0	040-1040SP	040-1040	-	-



Collet Sets

Order No.	No. of Pieces	Device Type	Range
040-ST23SP	23 PC	ECX 40 SP Collet Set	4 mm to 26 mm By 1 mm Incr.
040-ST23	23 PC	ECX 40 UP Collet Set	4 mm to 26 mm By 1 mm Incr.

ECX (ER) Super Flex Standard & Ultra Precision Collets



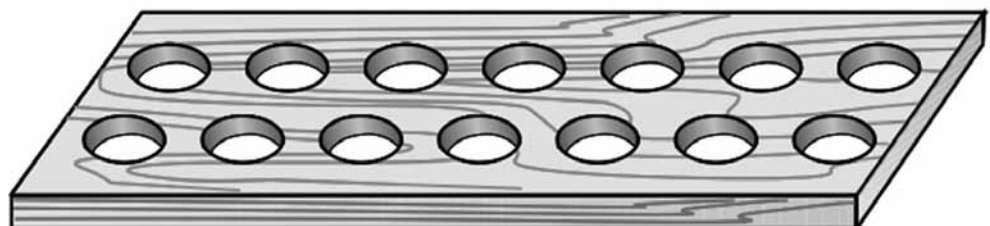
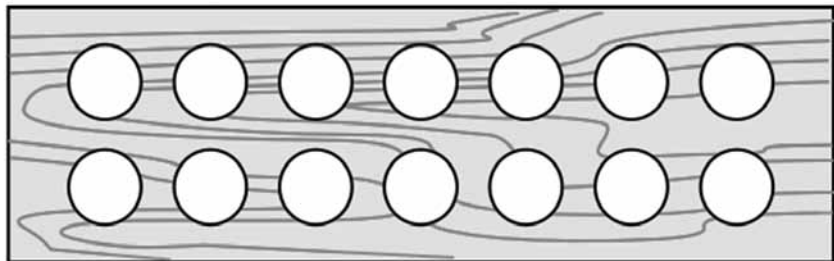
ECX/ER 50 Collets

L₁ = Total Length: 2.362" (60 mm) A = Max. Dia: 2.047" (52 mm)

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Order No.	Size
0.393 - 0.472	10.0 - 12.0	050-480-SP	050-480	-	-
0.472 - 0.551	12.0 - 14.0	050-560-SP	050-560	-	-
0.551 - 0.629	14.0 - 16.0	050-640-SP	050-640	-	-
0.629 - 0.708	16.0 - 18.0	050-720-SP	050-720	-	-
0.708 - 0.787	18.0 - 20.0	050-800-SP	050-800	-	-
0.787 - 0.866	20.0 - 22.0	050-880-SP	050-880	-	-
0.866 - 0.945	22.0 - 24.0	050-960-SP	050-960	-	-
0.945 - 1.024	24.0 - 26.0	050-1040SP	050-1040	-	-
1.024 - 1.102	26.0 - 28.0	050-1120SP	050-1120	-	-
1.102 - 1.181	28.0 - 30.0	050-1200SP	050-1200	-	-
1.181 - 1.259	30.0 - 32.0	050-1280SP	050-1280	-	-
1.259 - 1.338	32.0 - 34.0	050-1360SP	050-1360	-	-

Wooden Collet Trays

ORDER NO.	COLLET STYLE	NUMBER OF HOLES
011-WT	ECX/ER 11	13
016-WT	ECX/ER 16	10
020-WT	ECX/ER 20	12
025-WT	ECX/ER 25	15
032-WT	ECX/ER 32	18
040-WT	ECX/ER 40	23





ECX (ER) Super Flex High Precision Coolant Sealed Collets

DIN 6499 / ISO 15488 - A - FORM D



Max Pressure 600 PSI

ECX/ER 16

L₁ = Total Length: 1.063" (27 mm) A = Max. Dia: 0.657" (16.7 mm)

CLAMPING DIAMETER Inches	Order No.	CLAMPING DIAMETER Metric (mm)	Order No.
1/8	016-008ICS	3	016-120-CS
5/32	016-010ICS	4	016-160-CS
3/16	016-012ICS	5	016-200-CS
7/32	016-014ICS	6	016-240-CS
1/4	016-016ICS	7	016-280-CS
9/32	016-018ICS	8	016-320-CS
5/16	016-020ICS	9	016-360-CS
11/32	016-022ICS	10	016-400-CS
3/8	016-024ICS	-	-

ECX/ER 20

L₁ = Total Length: 1.220" (31 mm) A = Max. Dia: 0.815" (20.7 mm)

CLAMPING DIAMETER Inches	Order No.	CLAMPING DIAMETER Metric (mm)	Order No.
1/8	020-008ICS	3	020-120-CS
5/32	020-010ICS	4	020-160-CS
3/16	020-012ICS	5	020-200-CS
7/32	020-014ICS	6	020-240-CS
1/4	020-016ICS	7	020-280-CS
9/32	020-018ICS	8	020-320-CS
5/16	020-020ICS	9	020-360-CS
11/32	020-022ICS	10	020-400-CS
3/8	020-024ICS	11	020-440-CS
13/32	020-026ICS	12	020-480-CS
7/16	020-028ICS	13	020-520-CS
15/32	020-030ICS	-	-
1/2	020-032ICS	-	-

ECX (ER) Super Flex

High Precision Coolant Sealed Collets

DIN 6499 / ISO 15488 - A - FORM D

ECX/ER 25

L₁ = Total Length: 1.338" (34 mm)

A = Max. Dia: 1.011" (25.7 mm)



Max Pressure 600 PSI

CLAMPING DIAMETER Inches	Order No.	CLAMPING DIAMETER Metric (mm)	Order No.
1/8	025-008ICS	3	025-120-CS
5/32	025-010ICS	4	025-160-CS
3/16	025-012ICS	5	025-200-CS
7/32	025-014ICS	6	025-240-CS
1/4	025-016ICS	7	025-280-CS
9/32	025-018ICS	8	025-320-CS
5/16	025-020ICS	9	025-360-CS
11/32	025-022ICS	10	025-400-CS
3/8	025-024ICS	11	025-440-CS
13/32	025-026ICS	12	025-480-CS
7/16	025-028ICS	13	025-520-CS
15/32	025-030ICS	14	025-560-CS
1/2	025-032ICS	15	025-600-CS
17/32	025-034ICS	16	025-640-CS
9/16	025-036ICS	-	-
19/32	025-038ICS	-	-
5/8	025-040ICS	-	-

ECX/ER 32

L₁ = Total Length: 1.575" (40 mm)

A = Max. Dia: 1.287" (32.7 mm)

CLAMPING DIAMETER Inches	Order No.	CLAMPING DIAMETER Metric (mm)	Order No.
1/8	032-008ICS	3	032-120-CS
5/32	032-010ICS	4	032-160-CS
3/16	032-012ICS	5	032-200-CS
7/32	032-014ICS	6	032-240-CS
1/4	032-016ICS	7	032-280-CS
9/32	032-018ICS	8	032-320-CS
5/16	032-020ICS	9	032-360-CS
11/32	032-022ICS	10	032-400-CS
3/8	032-024ICS	11	032-440-CS
13/32	032-026ICS	12	032-480-CS
7/16	032-028ICS	13	032-520-CS
15/32	032-030ICS	14	032-560-CS
1/2	032-032ICS	15	032-600-CS
17/32	032-034ICS	16	032-640-CS
9/16	032-036ICS	17	032-680-CS
19/32	032-038ICS	18	032-720-CS
5/8	032-040ICS	19	032-760-CS
21/32	032-042ICS	20	032-800-CS
11/16	032-044ICS	-	-
23/32	032-046ICS	-	-
3/4	032-048ICS	-	-

ECX (ER) Super Flex

High Precision Coolant Sealed Collets

DIN 6499 / ISO 15488 - A - FORM D



Max Pressure 600 PSI

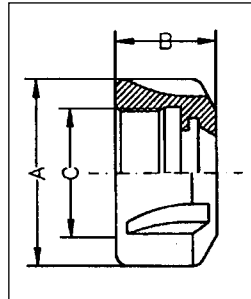
ECX/ER 40

L₁ = Total Length: 1.811" (46 mm)

A = Max. Dia: 1.602" (40.7 mm)

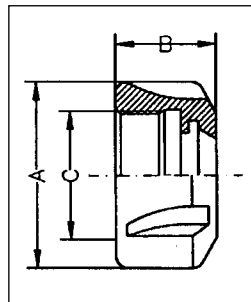
CLAMPING DIAMETER Inches	Order No.	CLAMPING DIAMETER Metric (mm)	Order No.
1/8	040-008ICS	4	040-160-CS
5/32	040-010ICS	5	040-200-CS
3/16	040-012ICS	6	040-240-CS
7/32	040-014ICS	7	040-280-CS
1/4	040-016ICS	8	040-320-CS
9/32	040-018ICS	9	040-360-CS
5/16	040-020ICS	10	040-400-CS
11/32	040-022ICS	11	040-440-CS
3/8	040-024ICS	12	040-480-CS
13/32	040-026ICS	13	040-520-CS
7/16	040-028ICS	14	040-560-CS
15/32	040-030ICS	15	040-600-CS
1/2	040-032ICS	16	040-640-CS
17/32	040-034ICS	17	040-680-CS
9/16	040-036ICS	18	040-720-CS
19/32	040-038ICS	19	040-760-CS
5/8	040-040ICS	20	040-800-CS
21/32	040-042ICS	21	040-840-CS
11/16	040-044ICS	22	040-880-CS
23/32	040-046ICS	23	040-920-CS
3/4	040-048ICS	24	040-960-CS
25/32	040-050ICS	25	040-1000-CS
13/16	040-052ICS	26	040-1040-CS
27/32	040-054ICS	-	-
7/8	040-056ICS	-	-
29/32	040-058ICS	-	-
15/16	040-060ICS	-	-
31/32	040-062ICS	-	-
1	040-064ICS	-	-

ECX (ER) Collet Nuts



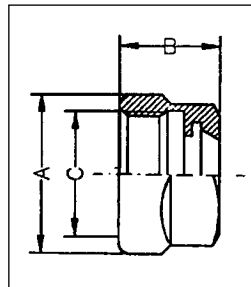
Castellation Nuts for type ECX/ER/ESX Collets. Balanced

Chuck Size	Order No.	A (mm)	B (mm)	C	Max. rpm
ECX 16	016-000 NC	32	17.5	M22 x 1.5P	40,000
ECX 20	021-000 NC	35	19	M25 x 1.5P	40,000
ECX 25	025-000 NC	42	20	M32 x 1.5P	35,000
ECX 32	032-000 NC	50	23	M40 x 1.5P	35,000
ECX 40	040-000 NC	63	25	M50 x 1.5P	25,000
ECX 50	050-000 NC	78	35.5	M64 x 2.0P	15,000



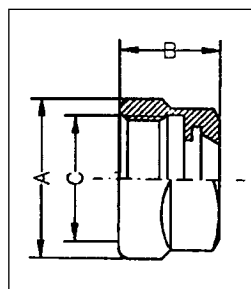
Castellation Nuts - High Clamping Power Style for type ECX/ER/ESX Collets. Balanced

Chuck Size	Order No.	A (mm)	B (mm)	C	Max. rpm
ECX 16	016-000 NCC	32	17.5	M22 x 1.5P	40,000
ECX 20	021-000 NCC	35	19.0	M25 x 1.5P	40,000
ECX 25	025-000 NCC	42	20.0	M32 x 1.5P	35,000
ECX 32	032-000 NCC	50	23.0	M40 x 1.5P	35,000
ECX 40	040-000 NCC	63	25.0	M50 x 1.5P	25,000
ECX 50	050-000 NCC	78	35.5	M64 x 2.0P	15,000



Hexagon Nuts for type ECX/ER/ESX Collets. Balanced to 40,000 RPM

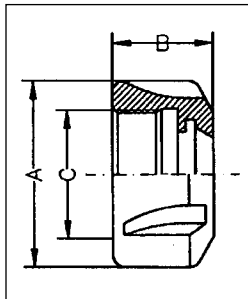
Chuck Size	Order No.	A (mm)	B (mm)	C
ECX 11	011-000-NH	19	12	M14 x 0.75P
ECX 16	016-000-NH	28	17.5	M22 x 1.5P
ECX 20	021-000-NH	34	19	M25 x 1.5P



Hexagon Nuts - High Clamping Power Style for type ECX/ER/ESX Collets. Balanced to 40,000 RPM

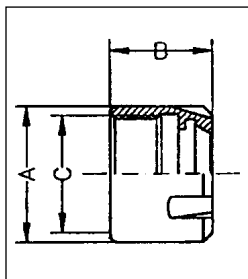
Chuck Size	Order No.	A (mm)	B (mm)	C
ECX 11	011-000 NHC	19	12.0	M14 x 0.75P
ECX 16	016-000 NHC	28	17.5	M22 x 1.5P
ECX 20	021-000 NHC	34	19.0	M25 x 1.5P

ECX (ER) Collet Nuts



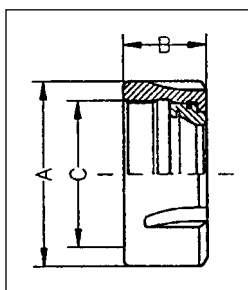
Castellation Nuts for type ECX/ER/ESX Collets. Balanced over 15,000 RPM

Chuck Size	Order No.	A (mm)	B (mm)	C	Max. rpm
ECX 16	016-000 NHS	32	18.5	M22 x 1.5P	65,000
ECX 20	021-000 NHS	35	19.5	M25 x 1.5P	60,000
ECX 25	025-000 NHS	42	20.0	M32 x 1.5P	55,000
ECX 32	032-000 NHS	50	23.0	M40 x 1.5P	50,000
ECX 40	040-000 NHS	63	26.0	M50 x 1.5P	40,000



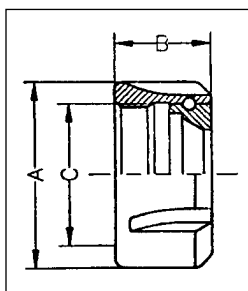
Mini Nuts for type ECX/ER/ESX Collets

Chuck Size	Order No.	A (mm)	B (mm)	C	Max. rpm
ECX 8	008-000-NM	12	10.8	M10 x 0.75P	70,000
ECX 11	011-000-NM	16	11.3	M13 x 0.75P	30,000
ECX 16	016-000-NM	22	17	M19 x 1.0P	20,000
ECX 20	020-000-NM	28	19	M24 x 1.0P	10,000
ECX 25	025-000-NM	35	20	M30 x 1.0P	8,000



Friction Bearing Nuts for type ECX/ER/ESX Collets

Chuck Size	Order No.	A (mm)	B (mm)	C
ECX 16	016-000 NFB	32	20.3	M22 x 1.5P
ECX 20	020-000 NFB	35	21.6	M25 x 1.5P
ECX 25	025-000 NFB	42	22.5	M32 x 1.5P
ECX 32	032-000 NFB	50	25.1	M40 x 1.5P
ECX 40	040-000 NFB	63	28.2	M50 x 1.5P



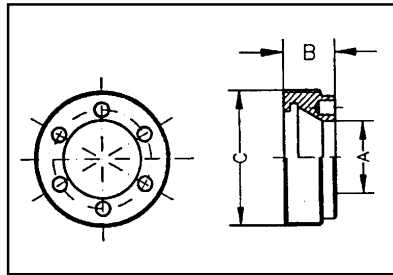
Ball Bearing Nuts for type ECX/ER/ESX Collets

Chuck Size	Order No.	A (mm)	B (mm)	C
ECX 25	025-000-NB	42	22	M32 x 1.5P
ECX 32	032-000-NB	50	26	M40 x 1.5P
ECX 40	040-000-NB	63	29	M50 x 1.5P

ECX (ER) Collet Nuts & Wrenches

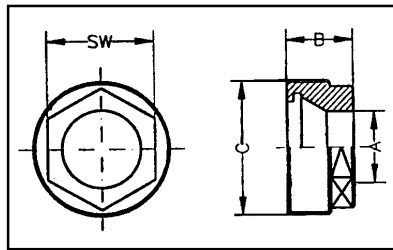


Nuts with thread on outside for type ECX/ER/ESX, DR & RD Collets



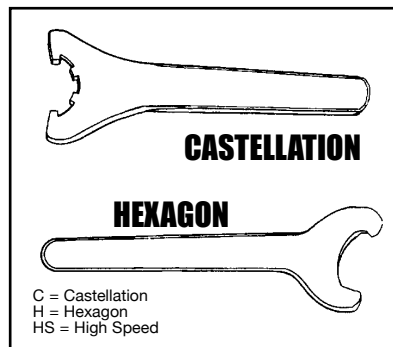
Pin Wrench Style

Chuck Size	Order No.	A	B	C
ECX 11	011-000-NAL	9 mm	6 mm	M18x1P
ECX 16	016-000-NAL	13mm	8 mm	M24x1P
ECX 20	020-000-NAL	15 mm	11 mm	M28x1.5P
ECX 25	025-000-NAL	18 mm	12.5 mm	M32x1.5P
ECX 32	032-000-NAL	24 mm	14 mm	M40x1.5P



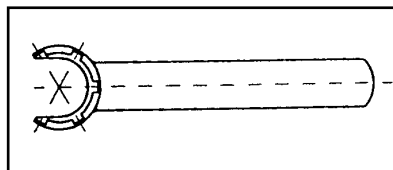
Hexagon Wrench Style

Chuck Size	Order No.	A	B	C
ECX 16	016-000-NAS	13 mm	11 mm	M24x1P
ECX 20	020-000-NAS	15 mm	14 mm	M28x1.5P
ECX 25	025-000-NAS	18 mm	14 mm	M32x1.5P
ECX 32	032-000-NAS	24 mm	17.5 mm	M40x1.5P



Spanners for ECX Collet Chucks

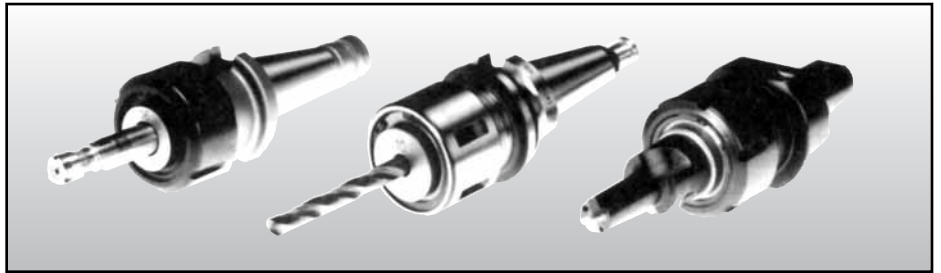
Chuck Size	Order No.	Description
ECX 16	016-000-WH	SPANNER (H)
ECX 16	016-000-WC	SPANNER (C)
ECX 16HS	016-000-HSW	SPANNER (HS)
ECX 20	021-000-WC	SPANNER (C)
ECX 20	021-000-WH	SPANNER (H)
ECX 25	025-000-WC	SPANNER (C)
ECX 32	032-000-WC	SPANNER (C)
ECX 40	040-000-WC	SPANNER (C)



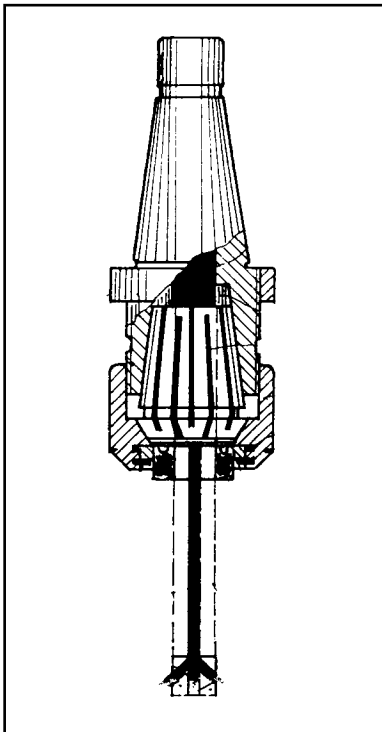
Mini Nut Style

Chuck Size	Order No.
ECX 8	008-000-WM
ECX 11	011-000-WM
ECX 16	016-000-WM
ECX 20	020-000-WM
ECX 25	025-000-WM

Coolant Sealed Collet Nuts & Discs



Techleader coolant sealed nuts and discs are used on collet chucks when the requirement is for internal, through-the-tool coolant. The nuts are recessed internally to accept a coolant disc having various bore diameters to suit the cutting tool shanks. The nuts can be used with all standard TG, & ECX/ER style collet chucks. No disassembly is required when changing worn-out tools and the cutting tool can be inserted or removed from the front. The sealing device within the disc has a total flexibility of 0.5 mm (-0.40 to +0.10 mm) from the nominal bore size indicated on the disc - e.g. a 16 mm disc has a range from 15.6 to 16.1 mm. Therefore all inch/metric shank diameters are covered within the disc range. The system can handle up to 100 bars (1,500 psi) of pressure.



Coolant Sealed Collet Nuts & Discs

Coolant Sealed Nuts



ECX TYPE

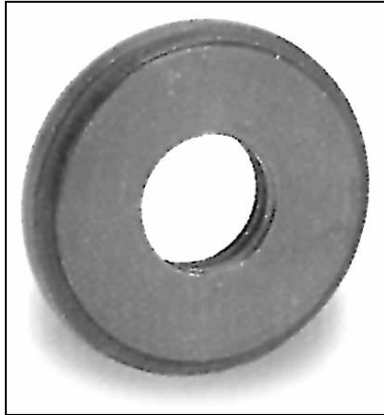
Order No.	Device Type	Thread
405-001601	ERZD16	M22 x 1.5
405-002001	ERZD20	M25 x 1.5
405-002501	ERZD25	M32 x 1.5
405-003201	ERZD32	M40 x 1.5
405-004001	ERZD40	M50 x 1.5



TG TYPE

Order No.	Device Type
405-007500	BEZD75
405-010000	BEZD100

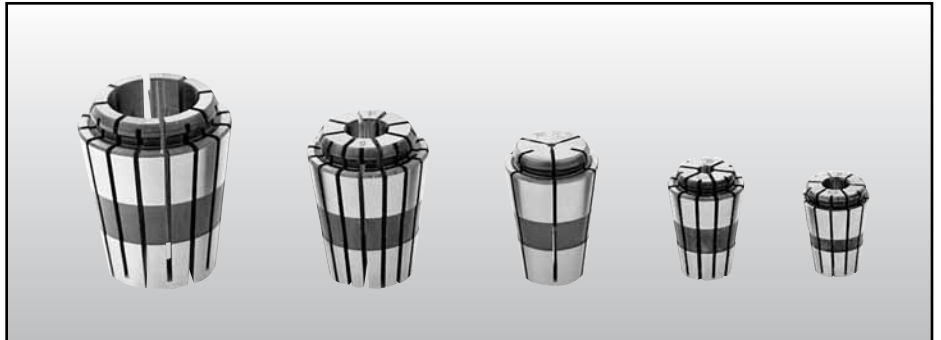
Coolant Sealed Collet Nuts & Discs



Coolant Sealed Disk

mm	Inch	ECX/ER 16	ECX/ER 20	TG75 ECX/ER 25	TG100 ECX/ER 32	ECX/ER 40
3.5 - 3.0	0.138 - 0.118	405-316035	405-320035	405-325035	405-332035	405-340035
4.0 - 3.5	0.157 - 0.138	405-316040	405-320040	405-325040	405-332040	405-340040
4.5 - 4.0	0.177 - 0.157	405-316045	405-320045	405-325045	405-332045	405-340045
5.0 - 4.5	0.196 - 0.177	405-316050	405-320050	405-325050	405-332050	405-340050
5.5 - 5.0	0.216 - 0.196	405-316055	405-320055	405-325055	405-332055	405-340055
6.0 - 5.5	0.236 - 0.216	405-316060	405-320060	405-325060	405-332060	405-340060
6.5 - 6.0	0.255 - 0.236	405-316065	405-320065	405-325065	405-332065	405-340065
7.0 - 6.5	0.275 - 0.255	405-316070	405-320070	405-325070	405-332070	405-340070
7.5 - 7.0	0.295 - 0.275	405-316075	405-320075	405-325075	405-332075	405-340075
8.0 - 7.5	0.315 - 0.295	405-316080	405-320080	405-325080	405-332080	405-340080
8.5 - 8.0	0.334 - 0.315	405-316085	405-320085	405-325085	405-332085	405-340085
9.0 - 8.5	0.354 - 0.334	405-316090	405-320090	405-325090	405-332090	405-340090
9.5 - 9.0	0.374 - 0.354	405-316095	405-320095	405-325095	405-332095	405-340095
10.0 - 9.5	0.393 - 0.374	405-316100	405-320100	405-325100	405-332100	405-340100
10.5 - 10.0	0.413 - 0.393		405-320105	405-325105	405-332105	405-340105
11.0 - 10.5	0.433 - 0.413		405-320110	405-325110	405-332110	405-340110
11.5 - 11.0	0.452 - 0.433		405-320115	405-325115	405-332115	405-340115
12.0 - 11.5	0.472 - 0.452		405-320120	405-325120	405-332120	405-340120
12.5 - 12.0	0.492 - 0.472		405-320125	405-325125	405-332125	405-340125
13.0 - 12.5	0.511 - 0.492		405-320130	405-325130	405-332130	405-340130
13.5 - 13.0	0.531 - 0.511			405-325135	405-332135	405-340135
14.0 - 13.5	0.551 - 0.531			405-325140	405-332140	405-340140
14.5 - 14.0	0.570 - 0.551			405-325145	405-332145	405-340145
15.0 - 14.5	0.590 - 0.570			405-325150	405-332150	405-340150
15.5 - 15.0	0.610 - 0.590			405-325155	405-332155	405-340155
16.0 - 15.5	0.629 - 0.610			405-325160	405-332160	405-340160
16.5 - 16.0	0.649 - 0.629				405-332165	405-340165
17.0 - 16.5	0.669 - 0.649				405-332170	405-340170
17.5 - 17.0	0.688 - 0.669				405-332175	405-340175
18.0 - 17.5	0.708 - 0.688				405-332180	405-340180
18.5 - 18.0	0.728 - 0.708				405-332185	405-340185
19.0 - 18.5	0.748 - 0.728				405-332190	405-340190
19.5 - 19.0	0.767 - 0.748				405-332195	405-340195
20.0 - 19.5	0.787 - 0.767				405-332200	405-340200
20.5 - 20.0	0.807 - 0.787					405-340205
21.0 - 20.5	0.826 - 0.807					405-340210
21.5 - 21.0	0.846 - 0.826					405-340215
22.0 - 21.5	0.866 - 0.846					405-340220
22.5 - 22.0	0.885 - 0.866					405-340225
23.0 - 22.5	0.905 - 0.885					405-340230
23.5 - 23.0	0.925 - 0.905					405-340235
24.0 - 23.5	0.944 - 0.925					405-340240
24.5 - 24.0	0.964 - 0.944					405-340245
25.0 - 24.5	0.984 - 0.964					405-340250
25.5 - 25.0	1.003 - 0.984					405-340255
26.0 - 25.5	1.023 - 1.003					405-340260

ETS High Precision Self-centering Collets



ETS High Precision Self-centering Collet

Made in Switzerland

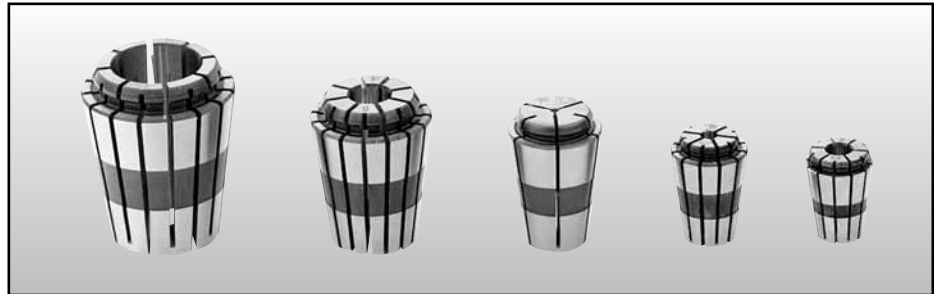
The patented ETS Collet system features a self-centering design to provide unmatched accuracy and uniform gripping pressure at any speed. It can hold tools with diameter of less than 0.3 mm/ 0.0118" with extremely small tolerances.

The outer conical surface of the ETS Collet and the corresponding inner surface of the collet holder slide into a groove, so that when the collet is closed, the two surfaces are in contact only at their end parts. Since they meet and snap into place at the point where the circumferences are equal, the front part of the collet grips the tool with even pressure completely around.

This design ensures precise tool centering and rigidity for precision cutting with minimal runout at any speed. Improved gripping pressure and self-centering contribute to longer tool life, making the ETS Collet system ideal for long run repeatability for CNC milling, drilling or reaming.

It is simple to convert your ECX/ER collet chucks or extensions. Just purchase the appropriate ETS Nut and now you can use the High Accuracy ETS Collets on your existing collets chucks & extensions.

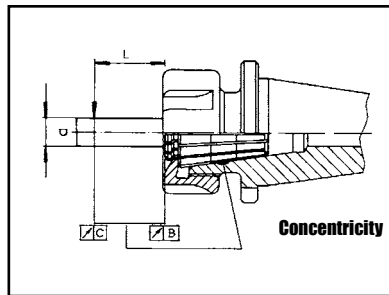
ETS High Precision Self-Centering Collets



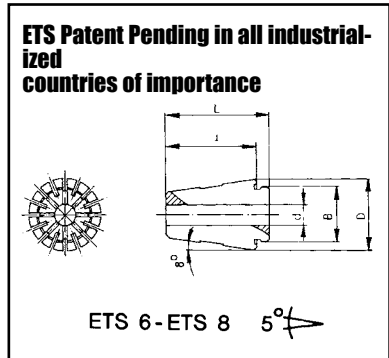
ETS High Precision Self-centering Collets

Note: To use ETS Collets in your ER/ECX Collet Chucks Extensions and Spindles, you must purchase the appropriate ETS Nut

Made in Switzerland



In Inches	Standard ECX/ER/ESX Collets	ETS Standard Collets	ETS Collets	ETS U.P. Collets	
	MAX	MAX	MAX	MAX	
D da-a	L	C	C	B	C
0.0078-0.0354	0.118	0.0006	0.00039	0.00012	0.0002
0.039-0.0551	0.236	0.0008	0.00039	0.00012	0.0002
0.0590-0.1141	0.393	0.0008	0.00059	0.00012	0.0002
0.118-0.236	0.629	0.0008	0.00059	0.00012	0.0002
0.255-0.393	0.984	0.0008	0.00059	0.00012	0.00027
0.433-0.708	1.575	0.0012	0.0008	0.00015	0.00039
0.748-1.023	1.968	0.0012	0.0008	0.00019	0.00047

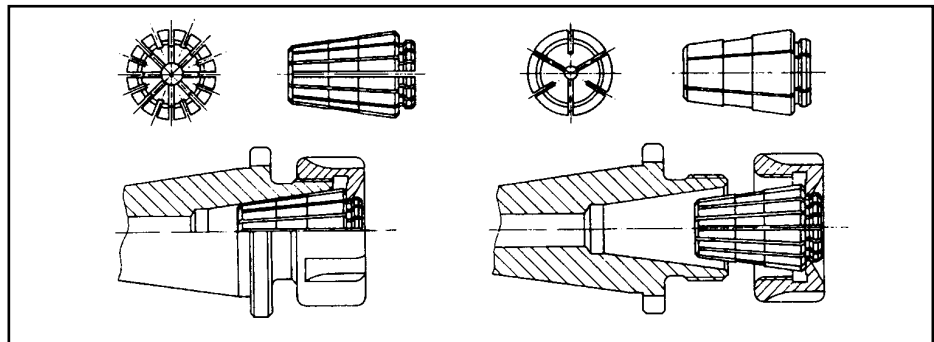


	Metric Dimensions						champing limit
	ØD	ØB	L	I	Ød	INCR	
ETS 6	6	4.30	11	9	0.20-2.00	0.10	0.10-2.00
ETS 8	8	6.30	13.2	11	1.00-4.00	0.10	0.90-4.00
ETS 10	10	7.30	14	11.80	1.00-5.00	0.10	0.90-5.00
ETS 12	12	10.40	17	14.20	1.00-4.00	0.25	0.75-7.00
					5.00-7.00	1.00	
ETS 14	14.55	13.0	20.5	17.50	1.00-4.00	0.25	0.75-8.00
					3.00-8.00	0.50	
ETS 16	17	13.60	24	21	1.00-4.00	0.25	0.75-10.00
					5.00-10.00	1.00	
ETS 20	21	17.0	30.50	26.70	1.00-4.00	0.25	0.75-12.00
					5.00-12.00	1.00	
ETS 25	26	21.0	34.0	29.40	1.00-4.00	0.25	0.75-16.00
					5.00-16.00	1.00	
ETS 32	33	27.20	40.0	34.70	1.00-4.00	0.25	0.75-20.00
					5.00-20.00	1.00	
ETS 40	41	32.0	46	40.60	4.00-26.00	1.00	3.00-26.00

Standard Collets

Collet with automatic extraction types ETS

These collets can fit your standard DR, ER, ECX & RD Collet Chucks, Extensions and spindles.



ETS High Precision Self-Centering Collets



**ETS High Precision
Self-centering
Collets**
Made in Switzerland

ETS 14

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.0196 - 0.0295	0.50 - 0.75	114-028	114-028-UP
0.0295 - 0.039	0.75 - 1.00	114-040	114-040-UP
0.039 - 0.049	1.00 - 1.25	114-050	114-050-UP
0.049 - 0.059	1.25 - 1.50	114-060	114-060-UP
0.059 - 0.0689	1.50 - 1.75	114-070	114-070-UP
0.0689 - 0.0787	1.75 - 2.00	114-080	114-080-UP
0.0787 - 0.0886	2.00 - 2.25	114-090	114-090-UP
0.0886 - 0.0984	2.25 - 2.50	114-100	114-100-UP
0.0984 - 0.118	2.50 - 3.00	114-120	114-120-UP
0.118 - 0.138	3.00 - 3.50	114-140	114-140-UP
0.138 - 0.157	3.50 - 4.00	114-160	114-160-UP
0.157 - 0.177	4.00 - 4.50	114-180	114-180-UP
0.177 - 0.197	4.50 - 5.00	114-200	114-200-UP
0.197 - 0.216	5.00 - 5.50	114-220	114-220-UP
0.216 - 0.236	5.50 - 6.00	114-240	114-240-UP
0.236 - 0.256	6.00 - 6.50	114-260	114-260-UP
0.256 - 0.276	6.50 - 7.00	114-280	114-280-UP
0.276 - 0.295	7.00 - 7.50	114-300	114-300-UP
0.295 - 0.315	7.50 - 8.00	114-320	114-320-UP

ETS 16

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.004 - 0.008	0.10 - 0.20	116-008	116-008-UP
0.008 - 0.012	0.20 - 0.30	116-012	116-012-UP
0.012 - 0.016	0.30 - 0.40	116-016	116-016-UP
0.016 - 0.0196	0.40 - 0.50	116-020	116-020-UP
0.0196 - 0.0236	0.50 - 0.60	116-024	116-024-UP
0.0295 - 0.039	0.75 - 1.00	116-040	116-040-UP
0.039 - 0.049	1.00 - 1.25	116-050	116-050-UP
0.049 - 0.059	1.25 - 1.50	116-060	116-060-UP
0.059 - 0.0689	1.50 - 1.75	116-070	116-070-UP
0.0689 - 0.0787	1.75 - 2.00	116-080	116-080-UP
0.0787 - 0.0886	2.00 - 2.25	116-090	116-090-UP
0.0886 - 0.0984	2.25 - 2.50	116-100	116-100-UP
0.0984 - 0.118	2.50 - 3.00	116-120	116-120-UP
0.118 - 0.138	3.00 - 3.50	116-140	116-140-UP
0.138 - 0.157	3.50 - 4.00	116-160	116-160-UP
0.157 - 0.197	4.00 - 5.00	116-200	116-200-UP
0.197 - 0.236	5.00 - 6.00	116-240	116-240-UP
0.236 - 0.276	6.00 - 7.00	116-280	116-280-UP
0.276 - 0.315	7.00 - 8.00	116-320	116-320-UP
0.315 - 0.354	8.00 - 9.00	116-360	116-360-UP
0.354 - 0.394	9.00 - 10.00	116-400	116-400-UP

ETS High Precision Self-Centering Collets



**ETS High Precision
Self-centering
Collets**
Made in Switzerland

ETS 20

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.029 - 0.039	0.75 - 1.00	120-040	120-040-UP
0.039 - 0.049	1.00 - 1.25	120-050	120-050-UP
0.049 - 0.059	1.25 - 1.50	120-060	120-060-UP
0.059 - 0.0689	1.50 - 1.75	120-070	120-070-UP
0.0689 - 0.0787	1.75 - 2.00	120-080	120-080-UP
0.0787 - 0.0886	2.00 - 2.25	120-090	120-090-UP
0.0886 - 0.0984	2.25 - 2.50	120-100	120-100-UP
0.0984 - 0.118	2.50 - 3.00	120-120	120-120-UP
0.118 - 0.138	3.00 - 3.50	120-140	120-140-UP
0.138 - 0.157	3.50 - 4.00	120-160	120-160-UP
0.157 - 0.197	4.00 - 5.00	120-200	120-200-UP
0.197 - 0.236	5.00 - 6.00	120-240	120-240-UP
0.236 - 0.276	6.00 - 7.00	120-280	120-280-UP
0.276 - 0.315	7.00 - 8.00	120-320	120-320-UP
0.315 - 0.354	8.00 - 9.00	120-360	120-360-UP
0.354 - 0.394	9.00 - 10.00	120-400	120-400-UP
0.394 - 0.433	10.00 - 11.00	120-440	120-440-UP
0.433 - 0.472	11.00 - 12.00	120-480	120-480-UP
0.472 - 0.512	12.00 - 13.00	120-520	120-520-UP

ETS 25

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.029 - 0.039	0.75 - 1.00	125-040	125-040-UP
0.039 - 0.049	1.00 - 1.25	125-050	125-050-UP
0.049 - 0.059	1.25 - 1.50	125-060	125-060-UP
0.059 - 0.0689	1.50 - 1.75	125-070	125-070-UP
0.0689 - 0.0787	1.75 - 2.00	125-080	125-080-UP
0.0787 - 0.0886	2.00 - 2.25	125-090	125-090-UP
0.0886 - 0.0984	2.25 - 2.50	125-100	125-100-UP
0.0984 - 0.118	2.50 - 3.00	125-120	125-120-UP
0.118 - 0.138	3.00 - 3.50	125-140	125-140-UP
0.138 - 0.157	3.50 - 4.00	125-160	125-160-UP
0.157 - 0.197	4.00 - 5.00	125-200	125-200-UP
0.197 - 0.236	5.00 - 6.00	125-240	125-240-UP
0.236 - 0.276	6.00 - 7.00	125-280	125-280-UP
0.276 - 0.315	7.00 - 8.00	125-320	125-320-UP
0.315 - 0.354	8.00 - 9.00	125-360	125-360-UP
0.354 - 0.394	9.00 - 10.00	125-400	125-400-UP
0.394 - 0.433	10.00 - 11.00	125-440	125-440-UP
0.433 - 0.472	11.00 - 12.00	125-480	125-480-UP
0.472 - 0.512	12.00 - 13.00	125-520	125-520-UP
0.512 - 0.551	13.00 - 14.00	125-560	125-560-UP
0.551 - 0.591	14.00 - 15.00	125-600	125-600-UP
0.591 - 0.630	15.00 - 16.00	125-640	125-640-UP

ETS High Precision Self-Centering Collets



**ETS High Precision
Self-centering
Collets**
Made in Switzerland

ETS 32

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.049 - 0.059	1.25 - 1.50	132-060	132-060-UP
0.059 - 0.087	1.50 - 2.00	132-080	132-080-UP
0.087 - 0.0984	2.00 - 2.50	132-100	132-100-UP
0.0984 - 0.118	2.50 - 3.00	132-120	132-120-UP
0.118 - 0.138	3.00 - 3.50	132-140	132-140-UP
0.138 - 0.157	3.50 - 4.00	132-160	132-160-UP
0.157 - 0.197	4.00 - 5.00	132-200	132-200-UP
0.197 - 0.236	5.00 - 6.00	132-240	132-240-UP
0.236 - 0.276	6.00 - 7.00	132-280	132-280-UP
0.276 - 0.315	7.00 - 8.00	132-320	132-320-UP
0.315 - 0.354	8.00 - 9.00	132-360	132-360-UP
0.354 - 0.394	9.00 - 10.00	132-400	132-400-UP
0.394 - 0.433	10.00 - 11.00	132-440	132-440-UP
0.433 - 0.472	11.00 - 12.00	132-480	132-480-UP
0.472 - 0.512	12.00 - 13.00	132-520	132-520-UP
0.512 - 0.551	13.00 - 14.00	132-560	132-560-UP
0.551 - 0.591	14.00 - 15.00	132-600	132-600-UP
0.591 - 0.630	15.00 - 16.00	132-640	132-640-UP
0.630 - 0.669	16.00 - 17.00	132-680	132-680-UP
0.669 - 0.709	17.00 - 18.00	132-720	132-720-UP
0.709 - 0.748	18.00 - 19.00	132-760	132-760-UP
0.748 - 0.787	19.00 - 20.00	132-800	132-800-UP

ETS 40

CLAMPING RANGE		STANDARD PRECISION	ULTRA PRECISION
Inches (in)	Metric (mm)	Order No.	Order No.
0.118 - 0.157	3.00 - 4.00	140-160	140-160-UP
0.157 - 0.197	4.00 - 5.00	140-200	140-200-UP
0.197 - 0.236	5.00 - 6.00	140-240	140-240-UP
0.236 - 0.276	6.00 - 7.00	140-280	140-280-UP
0.276 - 0.315	7.00 - 8.00	140-320	140-320-UP
0.315 - 0.354	8.00 - 9.00	140-360	140-360-UP
0.354 - 0.394	9.00 - 10.00	140-400	140-400-UP
0.394 - 0.433	10.00 - 11.00	140-440	140-440-UP
0.433 - 0.472	11.00 - 12.00	140-480	140-480-UP
0.472 - 0.512	12.00 - 13.00	140-520	140-520-UP
0.512 - 0.551	13.00 - 14.00	140-560	140-560-UP
0.551 - 0.591	14.00 - 15.00	140-600	140-600-UP
0.591 - 0.629	15.00 - 16.00	140-640	140-640-UP
0.629 - 0.669	16.00 - 17.00	140-680	140-680-UP
0.669 - 0.709	17.00 - 18.00	140-720	140-720-UP
0.709 - 0.748	18.00 - 19.00	140-760	140-760-UP
0.748 - 0.787	19.00 - 20.00	140-800	140-800-UP
0.787 - 0.827	20.00 - 21.00	140-840	140-840-UP
0.827 - 0.866	21.00 - 22.00	140-880	140-880-UP
0.866 - 0.906	22.00 - 23.00	140-920	140-920-UP
0.906 - 0.945	23.00 - 24.00	140-960	140-960-UP
0.945 - 0.984	24.00 - 25.00	140-1000	140-1000-UP
0.984 - 1.024	25.00 - 26.00	140-1040	140-1040-UP

ETS High Precision Self-Centering Collet Nuts

NUTS

Chuck Size	Order No.	A ₁ Ø (mm)	B (mm)	C	S (mm)
ETS 12 (Fig.1)	112-000-N	19	15	M14 x 0.75P	17
ETS 14 (Fig.2)	114-000-N	22	11.2	M17 x 1P	—
ETS 16 (Fig.1)	116-000-N	26.7	15	M20 x 1P	24
ETS 16 (Fig.2)	116-000-N1	32	15	M22 x 1.5P	—
ETS 20 (Fig.2)	120-000-N	35	16.5	M25 x 1.5P	—
ETS 25 (Fig.2)	125-000-N	42	18.5	M32 x 1.5P	—
ETS 32 (Fig.2)	132-000-N	50	22	M40 x 1.5P	—
ETS 40 (Fig.2)	140-000-N	63	25	M50 x 1.5P	—

Fig. 1

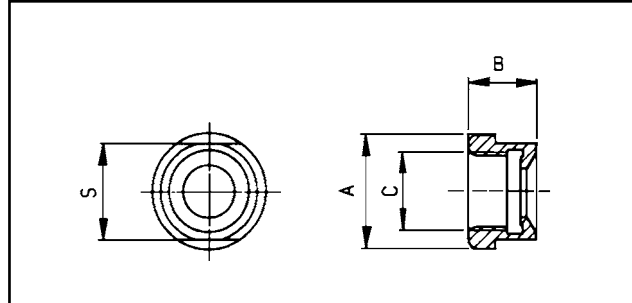
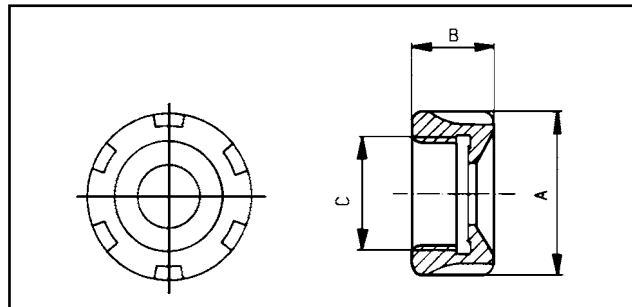


Fig. 2



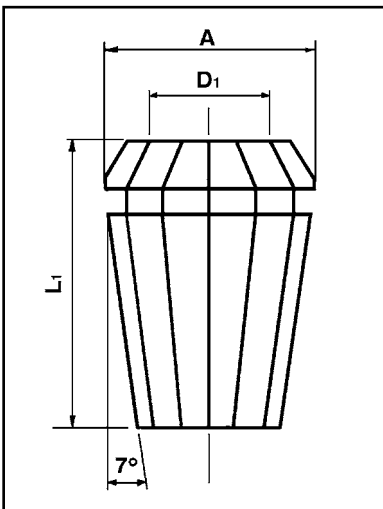
YCX Collets



YCX Collets

Inch and special bore sizes are available on request

Interchangeable with YCC collets



YCX 13 Collets

L_1 = Total Length: 1.260" (32 mm)

A = Max. Dia: 0.866" (22 mm)

CLAMPING RANGE		METRIC	INCH SERIES	
Inches (in)	Metric (mm)	Order No.	Order No.	Size (in)
0.0196 - 0.039	0.5 - 1.0	313-040	313-008	1/8
0.039 - 0.059	1.0 - 1.5	313-060	313-016	1/4
0.059 - 0.087	1.5 - 2.0	313-080	313-024	3/8
0.087 - 0.0984	2.0 - 2.5	313-100	313-032	1/2
0.0984 - 0.118	2.5 - 3.0	313-120	-	-
0.118 - 0.138	3.0 - 3.5	313-140	-	-
0.138 - 0.157	3.5 - 4.0	313-160	-	-
0.157 - 0.197	4.0 - 5.0	313-200	-	-
0.197 - 0.236	5.0 - 6.0	313-240	-	-
0.236 - 0.276	6.0 - 7.0	313-280	-	-
0.276 - 0.315	7.0 - 8.0	313-320	-	-
0.315 - 0.354	8.0 - 9.0	313-360	-	-
0.354 - 0.394	9.0 - 10.0	313-400	-	-
0.394 - 0.433	10.0 - 11.0	313-440	-	-
0.433 - 0.472	11.0 - 12.0	313-480	-	-
0.472 - 0.512	12.0 - 13.0	313-520	-	-

YCX 16 Collets

L_1 = Total Length: 1.378 (35 mm)

A = Max. Dia: 1.024" (26 mm)

CLAMPING RANGE		METRIC	INCH SERIES	
Inches (in)	Metric (mm)	Order No.	Order No.	Size (in)
0.094 - 0.118	2.5 - 3.0	316-120	316-008	1/8
0.118 - 0.138	3.0 - 3.5	316-140	316-016	1/4
0.138 - 0.157	3.5 - 4.0	316-160	316-024	3/8
0.157 - 0.197	4.0 - 5.0	316-200	316-032	1/2
0.197 - 0.236	5.0 - 6.0	316-240	316-040	5/8
0.236 - 0.276	6.0 - 7.0	316-280	-	-
0.276 - 0.315	7.0 - 8.0	316-320	-	-
0.315 - 0.354	8.0 - 9.0	316-360	-	-
0.354 - 0.393	9.0 - 10.0	316-400	-	-
0.393 - 0.433	10.0 - 11.0	316-440	-	-
0.433 - 0.472	11.0 - 12.0	316-480	-	-
0.472 - 0.512	12.0 - 13.0	316-520	-	-
0.512 - 0.551	13.0 - 14.0	316-560	-	-
0.551 - 0.591	14.0 - 15.0	316-600	-	-
0.591 - 0.630	15.0 - 16.0	316-640	-	-

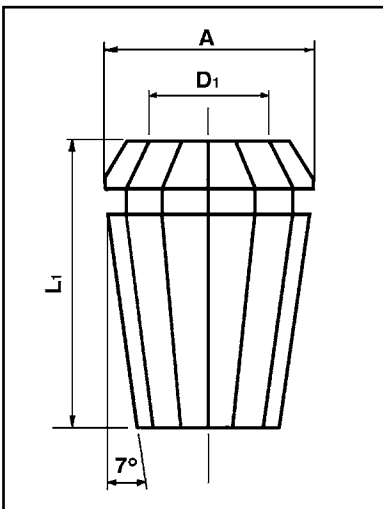
YCX Collets



YCX Collets

Inch and special bore sizes are available on request

Interchangeable with YCC collets



YCX 20 Collets

L_1 = Total Length: 1.772" (45 mm)

A = Max. Dia: 1.339" (34 mm)

CLAMPING RANGE		METRIC	INCH SERIES	
Inches (in)	Metric (mm)	Order No.	Order No.	Size (in)
0.118 - 0.138	3.0 - 3.5	320-140	320-016	1/4
0.138 - 0.157	3.5 - 4.0	320-160	320-024	3/8
0.157 - 0.197	4.0 - 5.0	320-200	320-032	1/2
0.197 - 0.236	5.0 - 6.0	320-240	320-040	5/8
0.236 - 0.276	6.0 - 7.0	320-280	320-048	3/4
0.276 - 0.315	7.0 - 8.0	320-320	-	-
0.315 - 0.354	8.0 - 9.0	320-360	-	-
0.354 - 0.394	9.0 - 10.0	320-400	-	-
0.394 - 0.433	10.0 - 11.0	320-440	-	-
0.433 - 0.472	11.0 - 12.0	320-480	-	-
0.472 - 0.512	12.0 - 13.0	320-520	-	-
0.512 - 0.551	13.0 - 14.0	320-560	-	-
0.551 - 0.591	14.0 - 15.0	320-600	-	-
0.591 - 0.630	15.0 - 16.0	320-640	-	-
0.630 - 0.669	16.0 - 17.0	320-680	-	-
0.669 - 0.709	17.0 - 18.0	320-720	-	-
0.709 - 0.748	18.0 - 19.0	320-760	-	-
0.748 - 0.787	19.0 - 20.0	320-800	-	-

YCX 25 Collets

L_1 = Total Length: 2.205" (56 mm)

A = Max. Dia: 1.654" (42 mm)

CLAMPING RANGE		METRIC	INCH SERIES	
Inches (in)	Metric (mm)	Order No.	Order No.	Size (in)
0.118 - 0.157	3.0 - 4.0	325-160	325-016	1/4
0.157 - 0.197	4.0 - 5.0	325-200	325-024	3/8
0.197 - 0.236	5.0 - 6.0	325-240	325-032	1/2
0.236 - 0.275	6.0 - 7.0	325-280	325-040	5/8
0.275 - 0.315	7.0 - 8.0	325-320	325-048	3/4
0.315 - 0.354	8.0 - 9.0	325-360	325-064	1
0.354 - 0.394	9.0 - 10.0	325-400	-	-
0.394 - 0.433	10.0 - 11.0	325-440	-	-
0.433 - 0.472	11.0 - 12.0	325-480	-	-
0.472 - 0.512	12.0 - 13.0	325-520	-	-
0.512 - 0.551	13.0 - 14.0	325-560	-	-
0.551 - 0.591	14.0 - 15.0	325-600	-	-
0.591 - 0.630	15.0 - 16.0	325-640	-	-
0.630 - 0.669	16.0 - 17.0	325-680	-	-
0.669 - 0.709	17.0 - 18.0	325-720	-	-
0.709 - 0.748	18.0 - 19.0	325-760	-	-
0.748 - 0.787	19.0 - 20.0	325-800	-	-
0.787 - 0.827	20.0 - 21.0	325-840	-	-
0.827 - 0.866	21.0 - 22.0	325-920	-	-
0.866 - 0.905	22.0 - 23.0	325-920	-	-
0.905 - 0.945	23.0 - 24.0	325-960	-	-
0.945 - 0.984	24.0 - 25.0	325-1000	-	-

YCX Collets



YCX Collets

**Inch and special bore sizes
are available on request**

**Interchangeable with
YCC collets**

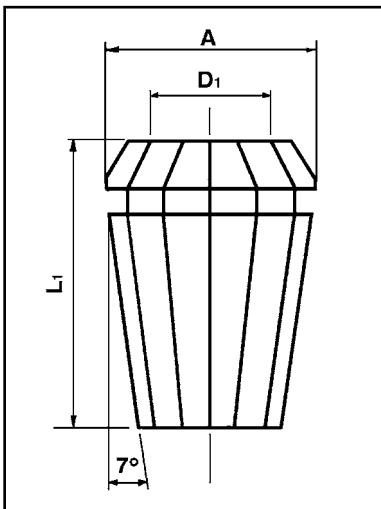
YCX 32 Collets

L₁ = Total Length: 2.835" (72 mm)

A = Max. Dia: 2.008" (51 mm)

CLAMPING RANGE		METRIC	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Size (in)
0.197 - 0.236	5.0 - 6.0	332-240	332-016	1/4
0.276 - 0.315	7.0 - 8.0	332-320	332-024	3/8
0.315 - 0.354*	8.0 - 9.0	332-360	332-032	1/2
0.354 - 0.394	9.0 - 10.0	332-400	332-040	5/8
0.433 - 0.472	11.0 - 12.0	332-480	332-048	3/4
0.591 - 0.630	15.0 - 16.0	332-640	332-064	1
0.669 - 0.709	17.0 - 18.0	332-720	332-080	1-1/4
0.748 - 0.787	19.0 - 20.0	332-800	-	-
0.827 - 0.866*	21.0 - 22.0	332-880	-	-
0.945 - 0.984	24.0 - 25.0	332-1000	-	-
1.063 - 1.102	27.0 - 28.0	332-1120	-	-
1.142 - 1.181	29.0 - 30.0	332-1200	-	-
1.220 - 1.260	31.0 - 32.0	332-1280	-	-

* While in stock is still available



Full Grip Collets



407E (SYOZ 20)

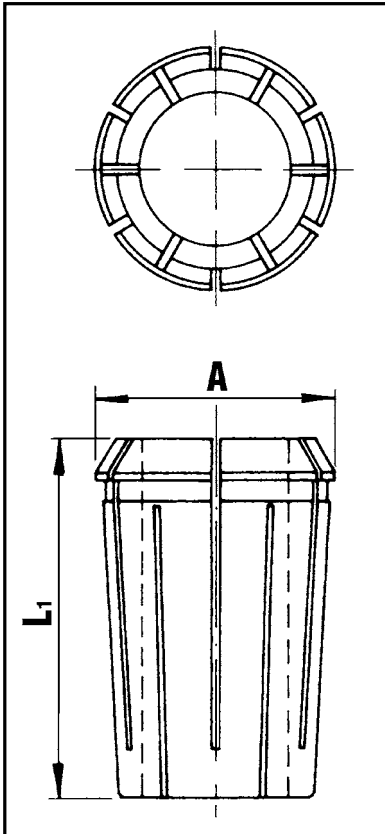
L₁ Total Length: 1.338" (34 mm) A = Max. Dia: 0.779" (19.8 mm)

CLAMPING RANGE	METRIC	INCH SERIES	
Metric (mm)	Order No.	Order No.	Size (in)
3mm	1833-503	1833-008	1/8
4mm	1833-504	1833-012	3/16
5mm	1833-505	1833-016	1/4
6mm	1833-506	1833-020	5/16
7mm	1833-507	1833-024	3/8
8mm	1833-508	1833-028	7/16
9mm	1833-509	1833-032	1/2
10mm	1833-510	-	-
11mm	1833-511	-	-
12mm	1833-512	-	-

Full Grip Collets

415E

L₁ Total Length: 1.575" (40 mm) A = Max. Dia: 1.004" (25.5 mm)



CLAMPING RANGE	METRIC	INCH SERIES	
Metric (mm)	Order No.	Order No.	Size (in)
2.0-2.5	3465-100	-	-
2.5-3.0	3465-120	-	-
3.0-3.5	3465-140	-	-
3.5-4.0	3465-160	-	-
4.0-4.5	3465-180	-	-
4.5-5.0	3465-200	-	-
5.0-5.5	3465-220	-	-
5.5-6.0	3465-240	-	-
6.0-6.5	3465-260	-	-
6.5-7.0	3465-280	-	-
7.0-7.5	3465-300	-	-
7.5-8.0	3465-320	-	-
8.0-8.5	3465-340	-	-
8.5-9.0	3465-360	-	-
9.0-9.5	3465-380	-	-
9.5-10.0	3465-400	-	-
10.0-10.5	3465-420	-	-
10.5-11.0	3465-440	-	-
11.0-11.5	3465-460	-	-
11.5-12.0	3465-480	-	-
12.0-12.5	3465-500	-	-
12.5-13.0	3465-520	-	-
13.0-13.5	3465-540	-	-
13.5-14.0	3465-560	-	-
14.0-14.5	3465-580	-	-
14.5-15.0	3465-600	-	-
15.0-15.5	3465-620	-	-
15.5-16.0	3465-640	-	-

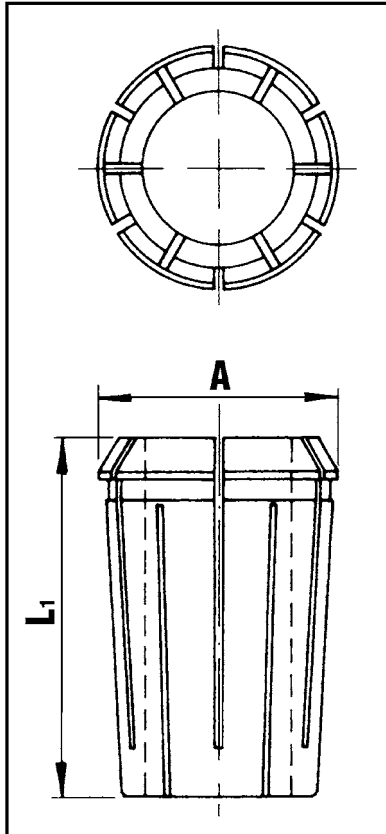
Full Grip Collets



Full Grip Collets

462E (SYOZ 25)

L₁ Total Length: 2.047" (52 mm) A = Max. Dia: 1.380" (35.05 mm)



CLAMPING RANGE		METRIC	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Size (in)
0.158-0.177	4.0-4.5	3466-180	1836-008	1/8
0.177-0.197	4.5-5.0	3466-200	1836-012	3/16
0.197-0.216	5.0-5.5	3466-220	1836-016	1/4
0.216-0.236	5.5-6.0	3466-240	1836-020	5/16
0.236-0.256	6.0-6.5	3466-260	1836-024	3/8
0.256-0.276	6.5-7.0	3466-280	1836-028	7/16
0.276-0.295	7.0-7.5	3466-300	1836-032	1/2
0.295-0.315	7.5-8.0	3466-320	1836-036	9/16
0.315-0.335	8.0-8.5	3466-340	1836-040	5/8
0.335-0.354	8.5-9.0	3466-360	1836-044	11/16
0.354-0.374	9.0-9.5	3466-380	1836-048	3/4
0.374-0.394	9.5-10.0	3466-400	1836-052	13/16
0.394-0.413	10.0-10.5	3466-420	1836-056	7/8
0.413-0.433	10.5-11.0	3466-440	1836-060	15/16
0.433-0.452	11.0-11.5	3466-460	1836-064	1
0.452-0.472	11.5-12.0	3466-480	-	-
0.472-0.492	12.0-12.5	3466-500	-	-
0.492-0.512	12.5-13.0	3466-520	-	-
0.512-0.531	13.0-13.5	3466-540	-	-
0.531-0.551	13.5-14.0	3466-560	-	-
0.551-0.571	14.0-14.5	3466-580	-	-
0.571-0.591	14.5-15.0	3466-600	-	-
0.591-0.610	15.0-15.5	3466-620	-	-
0.610-0.630	15.5-16.0	3466-640	-	-
0.630-0.650	16.0-16.5	3466-660	-	-
0.650-0.669	16.5-17.0	3466-680	-	-
0.669-0.689	17.0-17.5	3466-700	-	-
0.689-0.709	17.5-18.0	3466-720	-	-
0.709-0.728	18.0-18.5	3466-740	-	-
0.728-0.748	18.5-19.0	3466-760	-	-
0.748-0.768	19.0-19.5	3466-780	-	-
0.768-0.787	19.5-20.0	3466-800	-	-
0.787-0.807	20.0-20.5	3466-820	-	-
0.807-0.827	20.5-21.0	3466-840	-	-
0.827-0.847	21.0-21.5	3466-860	-	-
0.847-0.866	21.5-22.0	3466-880	-	-
0.866-0.886	22.0-22.5	3466-900	-	-
0.886-0.905	22.5-23.0	3466-920	-	-
0.905-0.925	23.0-23.5	3466-940	-	-
0.925-0.945	23.5-24.0	3466-960	-	-
0.945-0.965	24.0-24.5	3466-980	-	-
0.965-0.984	24.5-25.0	3466-1000	-	-

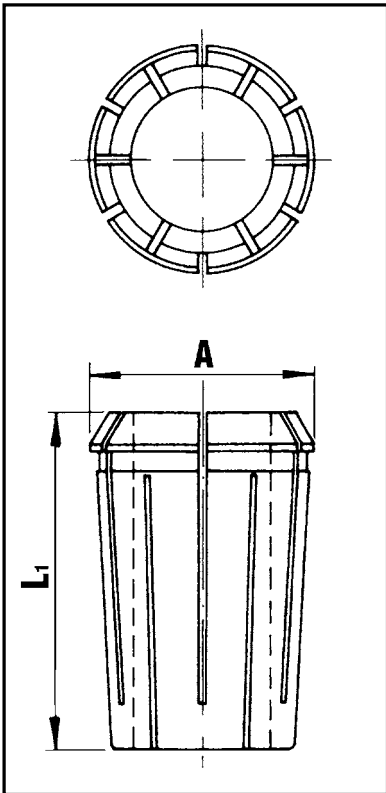
Full Grip Collets

467E

L₁ Total Length: 2.362" (60 mm) A = Max. Dia: 1.720" (43.7 mm)



Full Grip Collets



BALL BEARING NUT

CLAMPING RANGE		METRIC	INCH SERIES	
Inches	Metric (mm)	Order No.	Order No.	Size (in)
0.216-0.236	5.5-6.0	3467-240	1837-008	1/8
0.236-0.256	6.0-6.5	3467-260	1837-012	3/16
0.256-0.276	6.5-7.0	3467-280	1837-016	1/4
0.276-0.295	7.0-7.5	3467-300	1837-020	5/16
0.295-0.315	7.5-8.0	3467-320	1837-024	3/8
0.315-0.335	8.0-8.5	3467-340	1837-028	7/16
0.335-0.354	8.5-9.0	3467-360	1837-032	1/2
0.354-0.374	9.0-9.5	3467-380	1837-036	9/16
0.374-0.393	9.5-10.0	3467-400	1837-040	5/8
0.393-0.413	10.0-10.5	3467-420	1837-044	11/16
0.413-0.433	10.5-11.0	3467-440	1837-048	3/4
0.433-0.452	11.0-11.5	3467-460	1837-052	13/16
0.452-0.472	11.5-12.0	3467-480	1837-056	7/8
0.472-0.492	12.0-12.5	3467-500	1837-060	15/16
0.492-0.512	12.5-13.0	3467-520	1837-064	1
0.512-0.531	13.0-13.5	3467-540	1837-068	1-1/16
0.531-0.551	13.5-14.0	3467-560	1837-072	1-1/8
0.551-0.570	14.0-14.5	3467-580	1837-076	1-3/16
0.570-0.590	14.5-15.0	3467-600	1837-080	1-1/4
0.590-0.610	15.0-15.5	3467-620	-	-
0.610-0.629	15.5-16.0	3467-640	-	-
0.629-0.649	16.0-16.5	3467-660	-	-
0.649-0.669	16.5-17.0	3467-680	-	-
0.669-0.689	17.0-17.5	3467-700	-	-
0.689-0.708	17.5-18.0	3467-720	-	-
0.708-0.728	18.0-18.5	3467-740	-	-
0.728-0.748	18.5-19.0	3467-760	-	-
0.748-0.768	19.0-19.5	3467-780	-	-
0.768-0.787	19.5-20.0	3467-800	-	-
0.787-0.807	20.0-20.5	3467-820	-	-
0.807-0.827	20.5-21.0	3467-840	-	-
0.827-0.846	21.0-21.5	3467-860	-	-
0.846-0.866	21.5-22.0	3467-880	-	-
0.866-0.886	22.0-22.5	3467-900	-	-
0.886-0.905	22.5-23.0	3467-920	-	-
0.905-0.925	23.0-23.5	3467-940	-	-
0.925-0.945	23.5-24.0	3467-960	-	-
0.945-0.964	24.0-24.5	3467-980	-	-
0.964-0.984	24.5-25.0	3467-1000	-	-
0.984-1.004	25.0-25.5	3467-1020	-	-
1.004-1.023	25.5-26.0	3467-1040	-	-
1.023-1.043	26.0-26.5	3467-1060	-	-
1.043-1.063	26.5-27.0	3467-1080	-	-
1.063-1.082	27.0-27.5	3467-1100	-	-
1.082-1.102	27.5-28.0	3467-1120	-	-
1.102-1.122	28.0-28.5	3467-1140	-	-
1.122-1.142	28.5-29.0	3467-1160	-	-
1.142-1.161	29.0-29.5	3467-1180	-	-
1.161-1.181	29.5-30.0	3467-1200	-	-
1.181-1.201	30.0-30.5	3467-1220	-	-
1.201-1.220	30.5-31.0	3467-1240	-	-
1.220-1.240	31.0-31.5	3467-1260	-	-
1.240-1.260	31.5-32.0	3467-1280	-	-

BALL BEARING NUTS FOR FULL GRIP COLLETS

COLLET STYLE	Order No.	A(mm)	B (mm)	C
415E	1823-000-N	43	24	M33 X 1.5P
462E	1825-000-N	60	30	M48 X 2.0P
467E	1826-000-N	72	33.5	M60 X 2.5P

Flexible Rubber Collets

Drill Holders with Flexible Rubber-Collets up to 13 mm Capacity

Capacity can be increased to 15 mm by using special nut and flexible rubber collet J445

Accuracy

Techleader drill holders and flexible rubber collets are manufactured to high quality standards. Acceptable runout is guaranteed within the full collet range.

Gripping Range

Techleader drill holders using flexible rubber collets, when compared with holders using conventional collets having only a 0.5 mm gripping range, drastically reduce costs. The number of collets to cover the total capacity of the holder is less consequently the initial outlay is less and the subsequent servicing and replacement costs are minimized.

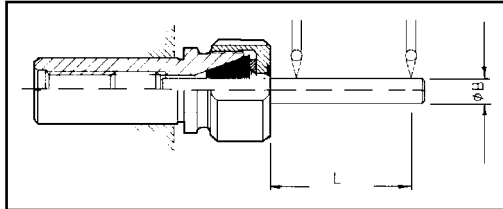
Gripping Power and Accuracy

In closing a flexible rubber collet perfect parallelism is maintained between the long collet bearing surfaces and the holder shank. Thus the high accuracy and gripping power of Techleader drill holders are constant throughout the entire collet range.

High Quality Standard of Collet Cones

Customers who manufacture their own spindles to use Techleader flexible rubber collets, must ensure very close tolerances on the mating cone angle, otherwise, the essential parallelism will not be obtained.

Accuracy: Admissible runout in a test spindle

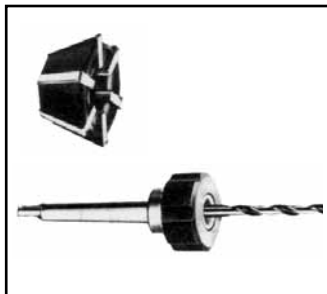


B _{h5}	L	Admissible runout
from 0.039" to 0.063"	0.236"	0.001"
over 0.063" to 0.118"	0.394"	0.001"
over 0.118" to 0.236"	0.394"	0.001"
over 0.236" to 0.394"	1.000"	0.001"
over 0.394" to 0.590"	1.574"	0.001"



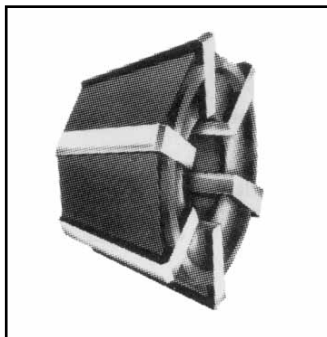
Drill Holders with Cylindrical Shank

Order No.	Model	Capacity	Shank dia	Length
410-005	41	1-6.5 mm/0.040"-0.256"	5/8"	1.18"
410-010	41	1-6.5 mm/0.040"-0.256"	3/4"	1.81"
420-010	42	2-10 mm/0.079"-0.394"	3/4"	1.81"
420-015	42	2-10 mm/0.079"-0.394"	1"	1.81"
440-015	44	1.8-15 mm/0.070"-0.590"	1"	1.81"

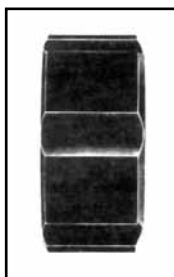


Drill Holders with Morse Taper shank DIN 228

Order No.	Model	Capacity	Shank dia
410-001	41	1-6.5 mm/0.040"-0.256"	MT.1
410-002	41	1-6.5 mm/0.040"-0.256"	MT.2
420-001	42	2-10 mm/0.079"-0.394"	MT.1
420-002	42	2-10 mm/0.079"-0.394"	MT.2
420-003	42	2-10 mm/0.079"-0.394"	MT.3
440-001	44	1.8-15 mm/0.070"-0.590"	MT.1
440-002	44	1.8-15 mm/0.070"-0.590"	MT.2
440-003	44	1.8-15 mm/0.070"-0.590"	MT.3



Order No.	Model	Collet	Size	
410-115	41	J115	0.010"-0.098"	1-2.5 mm
410-116	41	J116	0.098"-0.177"	2.5-4.5 mm
410-117	41	J117	0.177"-0.256"	4.5-6.5 mm
420-423	42	J423	0.079"-0.177"	2-4.5 mm
420-420	42	J420	0.177"-0.315"	4.5-8 mm
420-421	42	J421	0.138"-0.256"	3.5-6.5 mm
420-422	42	J422	0.256"-0.394"	6.5-10 mm
440-444	44	J444	0.071"-0.177"	1.8-4.5 mm
440-441	44	J441	0.177"-0.394"	4.5-10 mm
440-443	44	J443	0.110"-0.276"	2.8-7 mm
440-440	44	J440	0.276"-0.512"	7-13 mm
440-445	44	J445	0.354"-0.590"	9-15 mm



Nuts for Flexible Rubber Collets

Order No.	Model	Collet
410-000-N	41	J115-J116-J117
420-000-N	42	J423-J420
420-000-N	42	J421-J442
440-000-N	44	J444-J441
440-000-N	44	J443-J440
440-000-N	44	J445



Spanners for Flexible Rubber Collet Nuts

Order No.	Model
410-000-S	41
420-000-S	42
440-000-S	44

ECX/ER Tap Collets



For rigid (Synchronous) tapping operations using ECX/ER Collet Chucks the internal bore of collet is to the exact tool diameter, with Square Drive for accuracy and rigidity.

DIN 6499 / ISO 15488 - A - FORM D

TAP SIZE ANSI	SHANK SIZE	SQUARE SIZE	ORDER NO.				
			ECX 16	ECX 20	ECX 25	ECX 32	ECX 40
No. 0-6	0.141"	0.110"	016-100 RTC	020-100 RTC	025-100 RTC	032-100 RTC	040-100 RTC
No. 8	0.168"	0.131"	016-101 RTC	020-101 RTC	025-101 RTC	032-101 RTC	040-101 RTC
No. 10	0.194"	0.152"	016-102 RTC	020-102 RTC	025-102 RTC	032-102 RTC	040-102 RTC
No. 12	0.220"	0.165"	016-103 RTC	020-103 RTC	025-103 RTC	032-103 RTC	040-103 RTC
1/4"	0.255"	0.191"	016-104 RTC	020-104 RTC	025-104 RTC	032-104 RTC	040-104 RTC
5/16"	0.318"	0.238"	016-105 RTC	020-105 RTC	025-105 RTC	032-105 RTC	040-105 RTC
3/8"	0.381"	0.286"	-	020-106 RTC	025-106 RTC	032-106 RTC	040-106 RTC
7/16"	0.323"	0.242"	-	020-107 RTC	025-107 RTC	032-107 RTC	040-107 RTC
1/2"	0.367"	0.275"	-	020-108 RTC	025-108 RTC	032-108 RTC	040-108 RTC
9/16"	0.429"	0.322"	-	-	025-109 RTC	032-109 RTC	040-109 RTC
5/8"	0.480"	0.360"	-	-	025-110 RTC	032-110 RTC	040-110 RTC
11/16"	0.542"	0.406"	-	-	-	032-111 RTC	040-111 RTC
3/4"	0.590"	0.442"	-	-	-	032-112 RTC	040-112 RTC
13/16"	0.652"	0.489"	-	-	-	032-113 RTC	040-113 RTC
7/8"	0.697"	0.523"	-	-	-	-	040-114 RTC
15/16"	0.760"	0.570"	-	-	-	-	040-115 RTC
1"	0.800"	0.600"	-	-	-	-	040-116 RTC
1/8" PSS	0.3125"	0.234"	016-150 RTC	020-150 RTC	025-150 RTC	032-150 RTC	040-150 RTC
1/8" PLS	0.4375"	0.328"	-	-	025-151 RTC	032-151 RTC	040-151 RTC
1/4" P	0.562"	0.421"	-	-	-	032-152 RTC	040-152 RTC
3/8" P	0.700"	0.531"	-	-	-	-	040-153 RTC
1/2" P	0.6875"	0.515"	-	-	-	-	040-154 RTC

ECX/ER Tap Collets



For rigid (Synchronous) tapping operations using ECX/ER Collet Chucks the internal bore of collet is to the exact tool diameter, with Square Drive for accuracy and rigidity.

DIN 6499 / ISO 15488 - A - FORM D

TAP SIZE ANSI	SHANK SIZE	SQUARE SIZE	ORDER NO.				
			ECX 16	ECX 20	ECX 25	ECX 32	ECX 40
M2-M2.6	2.8 mm	2.1 mm	016-201 RTC	-	-	-	-
M3- M5	3.5 mm	2.7 mm	016-202 RTC	020-202 RTC	025-202 RTC	032-202 RTC	-
M3.5	4 mm	3 mm	016-203 RTC	020-203 RTC	025-203 RTC	032-203 RTC	-
M4	4.5 mm	3.4 mm	016-204 RTC	020-204 RTC	025-204 RTC	032-204 RTC	-
M4.5-M8	6.0 mm	4.9 mm	016-205 RTC	020-205 RTC	025-205 RTC	032-205 RTC	040-205 RTC
M10	7.0 mm	5.5 mm	016-206 RTC	020-206 RTC	025-206 RTC	032-206 RTC	040-206 RTC
M8	8.0 mm	6.2 mm	016-207 RTC	020-207 RTC	025-207 RTC	032-207 RTC	040-207 RTC
M9-M12	9.0 mm	7.0 mm	016-208 RTC	020-208 RTC	025-208 RTC	032-208 RTC	040-208 RTC
M10	10.0 mm	8.0 mm	-	020-209 RTC	025-209 RTC	032-209 RTC	040-209 RTC
M14	11.0 mm	9.0 mm	-	020-210 RTC	025-210 RTC	032-210 RTC	040-210 RTC
M16	12.0 mm	9.0 mm	-	-	025-211 RTC	032-211 RTC	040-211 RTC
M18	14.0 mm	11.0 mm	-	-	025-212 RTC	032-212 RTC	040-212 RTC
M20	16.0 mm	12.0 mm	-	-	-	032-213 RTC	040-213 RTC
M22-M24	18.0 mm	14.5 mm	-	-	-	032-214 RTC	040-214 RTC
M30	22.0 mm	18.0 mm	-	-	-	-	040-216 RTC

**TAPPING
PROBLEMS?**

**CONTACT US FOR UNIQUE
TAPPING SOLUTIONS.**

**USE HIGH PERFORMANCE
TAPS FROM**



**THREADING
TECHNOLOGY**

SWISS MADE



TG Tap Collets



For rigid (Synchronous) tapping operations using TG Collet Chucks the internal bore of collet is to the exact tool diameter, with Square Drive for accuracy and rigidity.

TAPPING PROBLEMS?

CONTACT US FOR UNIQUE TAPPING SOLUTIONS.

USE HIGH PERFORMANCE TAPS FROM



THREADING TECHNOLOGY

SWISS MADE

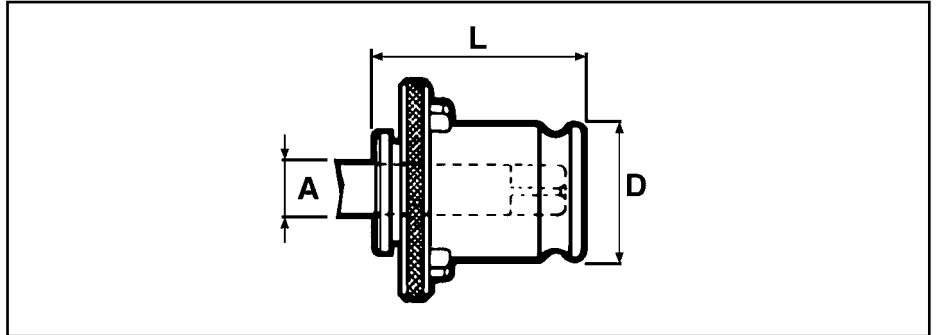


TAP SIZE ANSI	SHANK SIZE	SQUARE SIZE	ORDER NO.	
			TG 75	TG 100
No. 0-6	0.141"	0.110"	075-100 RTC	100-100 RTC
No. 8	0.168"	0.131"	075-101 RTC	100-101 RTC
No. 10	0.194"	0.152"	075-102 RTC	100-102 RTC
No. 12	0.220"	0.165"	075-103 RTC	100-103 RTC
1/4"	0.255"	0.191"	075-104 RTC	100-104 RTC
5/16"	0.318"	0.238"	075-105 RTC	100-105 RTC
3/8"	0.381"	0.286"	075-106 RTC	100-106 RTC
7/16"	0.323"	0.242"	075-107 RTC	100-107 RTC
1/2"	0.367"	0.275"	075-108 RTC	100-108 RTC
9/16"	0.429"	0.322"	075-109 RTC	100-109 RTC
5/8"	0.480"	0.360"	075-110 RTC	100-110 RTC
11/16"	0.542"	0.406"	075-111 RTC	100-111 RTC
3/4"	0.590"	0.442"	075-112 RTC	100-112 RTC
13/16"	0.652"	0.489"	-	100-113 RTC
7/8"	0.697"	0.523"	-	100-114 RTC
15/16"	0.760"	0.570"	-	100-115 RTC
1"	0.800"	0.600"	-	100-116 RTC
1/8" PSS	0.3125"	0.234"	075-150 RTC	100-150 RTC
1/8" PLS	0.4375"	0.328"	075-151 RTC	100-151 RTC
1/4" P	0.562"	0.421"	075-152 RTC	100-152 RTC
3/8" P	0.700"	0.531"	-	100-153 RTC
1/2" P	0.6875"	0.515"	-	100-154 RTC

Positive Quick Change Tap Adapters



Bilz Type Tap Chucks



TAPPING PROBLEMS?

CONTACT US FOR UNIQUE TAPPING SOLUTIONS.

USE HIGH PERFORMANCE TAPS FROM



THREADING TECHNOLOGY

SWISS MADE

		American Standard TAPS				ISO Standard Metric TAPS				DIN Standard Metric TAPS				
adapter size	tap size range	order no.	tap size	A shank dia	square AF	order no.	tap size	A shank dia	square AF	order no.	tap size	A shank dia	square AF	
CE-1*	M3-M14 0-9/16" HAND D = 19mm/0.748" L = 28.5mm/1.122" 1/8" PIPE	700-100	0-6	.141	.110	710-002	M1/2	2.50	2.00	710-101	M2	2.80	2.10	
		700-101	8	.168	.131	710-003	M3	3.15	2.50	710-102	M3/5	3.50	2.70	
		700-102	10	.194	.152	710-004	M4	4.00	3.15	710-103	M3.5	4.00	3.00	
		700-103	12	.220	.165	710-005	M4.5	4.50	3.55	710-104	M4/6	4.50	3.40	
		700-104	1/4	.255	.191	710-006	M5	5.00	4.00	710-106	M5/6/8	6.00	4.90	
		700-105	5/16	.318	.238	710-008	M6	6.30	5.00	710-107	M7/10	7.00	5.50	
		700-106	3/8	.381	.286	710-009	M7	7.10	5.60	710-108	M8	8.00	6.20	
		700-107	7/16	.323	.242	710-108	M8/11	8.00	6.20	710-011	M8	9.00	7.10	
		700-108	1/2	.367	.275	710-011	M9/12	9.00	7.10	710-012	M10	10.00	8.00	
		700-109	9/16	.429	.322	710-012	M10	10.00	8.00	710-111	M14	11.00	9.00	
		700-150	1/8pps	.3125	.234	710-013	M14	11.20	9.00					
		700-151	1/8pls	.4375	.328									
CE-2*	M7-M24 5/16-7/8" HAND D = 31mm/1.220" L = 46mm/1.811" 1/4"-3/8" 1/2" PIPE	700-205	5/16	.318	.238	720-009	M7	7.10	5.60	720-107	M7/10	7.00	5.50	
		700-206	3/8	.381	.286	720-108	M8/11	8.00	6.20	720-108	M8	8.00	6.20	
		700-207	7/16	.323	.242	720-011	M9/12	9.00	7.00	720-011	M12	9.00	7.00	
		700-208	1/2	.367	.275	720-012	M10	10.00	8.00	720-012	M10	10.00	8.00	
		700-209	9/16	.429	.322	720-013	M14	11.20	9.00	720-111	M14	11.00	9.00	
		700-210	5/8	.480	.360	720-014	M16	12.50	10.00	720-112	M16	12.00	9.00	
		700-211	11/16	.542	.406	720-015	M18/20	14.00	11.20	720-113	M18	14.00	11.00	
		700-212	3/4	.590	.442	720-016	M22	16.00	12.50	720-114	M20	16.00	12.00	
		700-213	13/16	.652	.489	720-017	M24	18.00	14.00	720-115	M22/24	18.00	14.50	
		700-214	7/8	.697	.523									
		700-250	1/4p	.562	.421									
		700-251	3/8p	.700	.531									
		700-252	1/2p	.6875	.515									
CE-3*	M14-M40 13/16-1-3/8" HAND D = 48mm/1.890" L = 69.5mm/2.736" 3/4 & 1" PIPE	700-313	13/16	.652	.489	730-013	M14	11.20	9.00	730-111	M14	11.00	9.00	
		700-314	7/8	.697	.523	730-014	M16	12.50	10.00	730-112	M16	12.00	9.00	
		700-315	15/16	.760	.570	730-015	M18/20	14.00	11.00	730-015	M18	14.00	11.00	
		700-316	1	.800	.600	730-016	M22	16.00	12.50	730-114	M20	16.00	12.00	
		700-318	1-1/8	.896	.672	730-017	M24	18.00	14.00	730-115	M22/24	18.00	14.50	
		700-320	1-1/4	1.021	.766	730-018	M27/30	20.00	16.00	730-018	M27	20.00	16.00	
		700-322	1-3/8	1.108	.831	730-019	M33	22.40	18.00	730-117	M30	22.00	18.00	
		700-349	1/2p	.6875	.515	730-020	M36	25.00	20.00	730-020	M33	25.00	20.00	
		700-350	3/4p	.906	.679	730-021	M39/40	28.00	22.00	730-021	M36	28.00	22.00	
		700-351	1p	1.125	.843									
CE-4*	M22-M48 1" - 1-7/8" HAND D = 60mm/2.362" L = 105mm/4.134" 3/4", 1" 1-1/4" & 1-1/2" PIPE	700-424	1-1/2	1.233	.925					740-115	M22/24	18.00	14.50	
		700-426	1-5/8	1.305	.979					740-018	M27	20.00	16.00	
		700-428	1-3/4	1.430	1.072					740-117	M30	22.00	18.00	
		700-430	1-7/8	1.519	1.139					740-120	M33	25.00	20.00	
										740-021	M36	28.00	22.00	
										740-020	M39/42	32.00	24.00	
										740-121	M45/48	36.00	29.00	

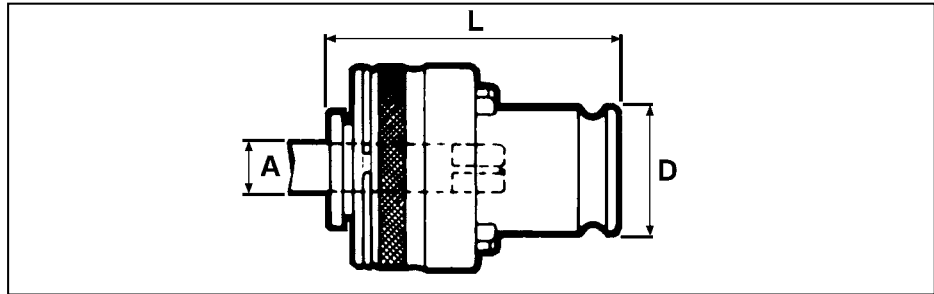
* Interchangeable with WE □ Tap Adapters.



Adjustable Torque Control Tap Adapters



Bilz Type Tap Chucks



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		American Standard TAPS				ISO Standard Metric TAPS				DIN Standard Metric TAPS				
adapter size	tap size range	order no.	tap size	A shank dia	square AF	order no.	tap size	A shank dia	square AF	order no.	tap size	A shank dia	square AF	
CES1B*	M3-M14 0-9/16" HAND D = 19mm/0.748" L = 40.5mm/1.594"	701-100	0-6	.141	.110	712-004	M4	4.00	3.15	712-101	M2	2.80	2.10	
		701-101	8	.168	.131	712-005	M4.5	4.50	3.55	712-102	M3	3.50	2.70	
		701-102	10	.194	.152	712-006	M5	5.00	4.00	712-154	M5	3.50	2.70	
		701-103	12	.220	.165	712-008	M6	6.30	5.00	712-103	M3.5	4.00	3.00	
		701-104	1/4	.255	.191	712-009	M7	7.10	5.60	712-104	M4	4.50	3.40	
		701-105	5/16	.318	.238	712-108	M8	8.00	6.20	712-155	M6	4.50	3.40	
		701-106	3/8	.381	.286	712-011	M9	9.00	7.10	712-106	M5	6.00	4.90	
		701-107	7/16	.323	.242	712-012	M10	10.00	8.00	712-156	M6	6.00	4.90	
		701-108	1/2	.367	.275	712-050	M14	8.00	6.30	712-157	M8	6.00	4.90	
		701-109	9/16	.429	.322	712-109	M12	9.00	7.00	712-107	M10	7.00	5.50	
		701-150	1/8pss	.3125	.234					712-108	M8	8.00	6.20	
		701-151	1/8pss	.4375	.328					712-109	M12	9.00	7.00	
										712-012	M10	10.00	8.00	
		CES2B*	M7-M24 5/16-7/8" HAND D = 31mm/1.220" L = 69mm/2.716"	701-205	5/16	.318	.238	722-009	M7	7.10	5.60	722-107	M7	7.00
701-206	3/8			.381	.286	722-108	M8	8.00	6.20	722-108	M8	8.00	6.20	
701-207	7/16			.323	.242	722-011	M9	9.00	7.10	722-109	M8	9.00	7.00	
701-208	12			.367	.275	722-012	M10	10.00	8.00	722-012	M10	10.00	8.00	
701-209	9/16			.429	.322	722-050	M11	8.00	6.30	722-111	M14	11.00	9.00	
701-210	5/8			.480	.360	722-109	M12	9.00	7.00	722-112	M16	12.00	9.00	
701-211	11/16			.542	.406	722-013	M14	11.20	9.00	722-113	M18	14.00	11.00	
701-212	3/4			.590	.442	722-014	M16	12.50	10.00	722-114	M20	16.00	12.00	
701-213	13/16			.652	.489	722-113	M18	14.00	11.00					
701-214	7/8			.697	.523	722-113	M20	14.00	11.00					
701-250	1/4p			.562	.421	722-016	M22	16.00	12.50					
701-251	3/8p			.700	.531	722-017	M24	18.00	14.00					
701-252	1/2p			.6875	.515									
CES3B*	M14-M40 13/16-1-3/8" HAND D = 48mm/1.890" L = 100.5mm/3.957"			701-313	13/16	.652	.489	732-013	M14	11.20	9.00	732-111	M14	11.00
		701-314	7/8	.697	.523	732-014	M16	12.50	10.00	732-112	M16	12.00	9.00	
		701-315	15/16	.760	.570	732-015	M18	14.00	11.00	732-015	M18	14.00	11.00	
		701-316	1	.800	.600	732-015	M20	14.00	11.20	732-114	M20	16.00	12.00	
		701-318	1-1/8	.896	.672	732-016	M22	16.00	12.50	732-115	M22	18.00	14.50	
		701-320	1-1/4	1.021	.766	732-017	M24	18.00	14.00	732-158	M24	18.00	14.50	
		701-322	1-3/8	1.108	.831	732-018	M27	20.00	16.00	732-018	M27	20.00	16.00	
		701-349	1/2p	.6875	.515	732-053	M30	20.00	16.00	732-117	M30	22.00	18.00	
		701-350	3/4p	.906	.679	732-019	M33	22.40	18.00	732-118	M33	25.00	20.00	
		701-351	1p	1.125	.843	732-020	M36	25.00	20.00	732-119	M36	28.00	22.00	
		701-424	1-1/2	1.233	.925					742-115	M22	18.00	14.50	
		701-426	1-5/8	1.305	.979					742-158	M24	18.00	14.50	
		701-428	1-3/4	1.430	1.072					742-018	M27	20.00	16.00	
		701-430	1-7/8	1.519	1.139					742-117	M30	22.00	18.00	
										742-118	M33	25.00	20.00	
								742-119	M36	28.00	22.00			
								742-120	M39	32.00	24.00			
								742-159	M42	32.00	24.00			
1-1/4" & 1-1/2" PIPE		701-452	1-1/4p	1.3125	.984					742-121	M45	36.00	29.00	
		701-453	1-1/2p	1.500	1.125					742-160	M48	36.00	29.00	

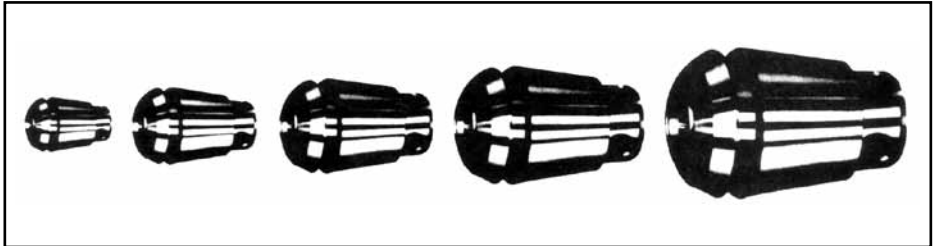
* Interchangeable with WES □ B Tap Adapters.



Tapping Collets Series ET-1

Compatible with ECX, ESX, ER, DR & RD Collets

Tapping collets series ET-1 offer the most rational and economic solution for tapping on CNC machines incorporating axial compensation in the collet. This type of collet can be used in standard collet chucks and are exclusive to Techleader. No more tapping heads necessary



Advantages of PCM Tapping Collets

- Outside profile equivalent to ECX/ESX/ER/DR and RD collets profile; can be used with all collet holders or spindles designed for these collets
- Tapping heads and special toolholders for CNC lathes or machining centers, can be replaced by Techleader tapping collets; this offers a large reduction on investment cost.
- Can be utilized with short, medium or long collet holders, according to the machining requirements.
- Automatic extraction by standard collet nuts as for the standard collets.
- Spring force adapted to the size of the tap
- Excellent alignment of the tap; robust construction and compact design

Compatible with ECX/ESX/ER Collets

Series N°	Capacity	Extension stroke
ET-1-12	M 0,5 - M 4 (No. 6)	5.5 mm
ET-1-16	M 0,7 - M 8 (No. 6 - No. 12)	7 mm
ET-1-20	M 1 - M 10 (No. 6 - 1/4")	7 mm
ET-1-25	M 1 - M 12 (No. 6 - 1/2")	8 mm
ET-1-32	M 4 - M 16 (No. 8 - 5/8")	10 mm
ET-1-40	M 6 - M 20 (1/4" - 7/8")	13 mm

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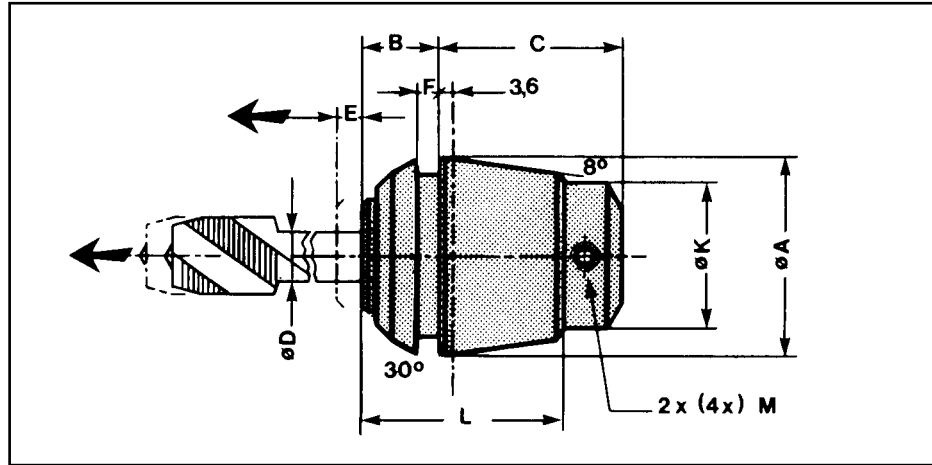


Tapping Collets Series ET-1

Compatible with ECX, ESX, ER, DR & RD Collets



SERIES ET-1



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Series N ^r	Capacity	A	B	C	D max	E	F	K	L	M	M = UNF in USA
ET - 1 - 12 ...	M 0,5 - M 4	11,5	5	16,5	3,55	5,5	2,5	7	18	2 x M 2,5	-
ET - 1 - 16 ...	M 0,7 - M 6 (M 8)	17	7	20	6	7	2,8	11	22	2 x M 4 4 x M 4	4-48
ET - 1 - 20 ...	M 1 - M 8 (M 10)	21	8	23	7	7	2,8	14	24	2 x M 4 4 x M 5	8-36 10-32
ET - 1 - 25 ...	M 1 - M 10 (M 12)	26	10	24	9	8	3	19	26	2 x M 5 4 x M 6	10-32 1/4
ET - 1 - 32 ...	M 4 - M 12 (M 16)	33	11	32	12,5	10	3	23	33	2 x M 5 4 x M 6 4 x M 8	10-32 1/4
ET - 1 - 40 ...	M 6 - M 16 (M 20)	41	12	42	16	13	3	28	42	2 x M 6 4 x M 6 4 x M 8	1/4 5/16

Recommendations for programming

The following tapping process is recommended: fast approach, then tapping feed with approximately 95% of the pitch value, which uses 20-30% of the compensation stroke when the spindle rotation and the feed movement are simultaneously reversed. Return feed must be made with 100% of the pitch, which maintains the sleeve of the tapping collet in the compensation stroke up to the tap disengagement; quick return can then be programmed with usual strike security. The relatively long axial compensation assists easy programming. When tapping at very high speed, an appropriate programming compensation may be necessary to balance the differences of inertia between the spindle and the feed movement on reverse. Do not disturb the axial compensation, use external coolant supply only.

Remark

The tapping capacity between () indicated is for free cutting material. The clamping force given by the collet nut is the limiting factor for the tapping capacity. For high torque, a special collet nut with ball bearing can be used increasing the clamping force by 30%.



Tapping Collets Series ET-1

Compatible with ECX, ESX, ER, DR & RD Collets

For TAPS DIN 371/376

Tap Size	Tap Shank Ø	ET - 1 - 12	ET - 1 - 16	ET - 1 - 20	ET - 1 - 25	ET - 1 - 32	ET - 1 - 40
M3	2,2 mm	ET-1-12220	ET-1-16220	(ET-1-20200)			
M1 to M1.8/M3.5	2,5 mm	ET-1-12250	ET-1-16250	ET-1-20250	ET-1-25250		
M2 to M2.6/M4	2,8 mm	ET-1-12280	ET-1-16280	ET-1-20280	ET-1-25280		
M3/M5	3,5 mm	ET-1-12350	ET-1-16350	ET-1-20350	ET-1-25350		
M3.5	4 mm		ET-1-16400	ET-1-20400	ET-1-25400		
M4//M6	4,5 mm		ET-1-16450	ET-1-20450	ET-1-25450	ET-1-32450	
M5/M6/M8	6 mm		ET-1-16600	ET-1-20600	ET-1-25600	ET-1-32600	ET-1-40600
M9/M10	7 mm			ET-1-20700	ET-1-25700	ET-1-32700	ET-1-40700
M8	8 mm				ET-1-25800	ET-1-32800	ET-1-40800
M12	9 mm				ET-1-25900	ET-1-32900	ET-1-40900
M10	10 mm					ET-1-32100	ET-1-40100
M14	11 mm					ET-1-32110	ET-1-40110
M16	12 mm					ET-1-32120	ET-1-40120
M18	14 mm						ET-1-40140
M20	16 mm						ET-1-40160

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For TAPS according to US standard

Tap Size	Tap Shank Ø	ET - 1 - 12	ET - 1 - 16	ET - 1 - 20	ET - 1 - 25	ET - 1 - 32	ET - 1 - 40
No. 6	0.141"	ET-1-12.141	ET-1-16.141	ET-1-20.141	ET-1-25.141		
No. 8	0.168"		ET-1-16.168	ET-1-20.168	ET-1-25.168	ET-1-32.168	
No. 10	0.194"		ET-1-16.194	ET-1-20.194	ET-1-25.194	ET-1-32.194	
No. 12	0.220"		ET-1-16.220	ET-1-20.220	ET-1-25.220	ET-1-32.220	
1/4"	0.255"			ET-1-20.255	ET-1-25.255	ET-1-32.255	ET-1-40.255
5/16"	0.318"				ET-1-25.318	ET-1-32.318	ET-1-40.318
7/16"	0.323"				ET-1-25.323	ET-1-32.323	ET-1-40.323
.1/2"	0.367"				ET-1-25.367	ET-1-32.367	ET-1-40.367
3/8"	0.381"				ET-1-25.381	ET-1-32.381	ET-1-40.381
9/16"	0.429"					ET-1-32.429	ET-1-40.429
1/8" PLS	0.437"					ET-1-32.437	ET-1-40.437
5/8"	0.480"					ET-1-32.480	ET-1-40.480
11/16"	0.542"						ET-1-40.542
1/4P	0.562"						ET-1-40.562
3/4"	0.590"						ET-1-40.590
13/16"	0.652"						ET-1-40.652
7/8"	0.697"						ET-1-40.697

Tapping Collets Series RT-1

Compatible with ORTLIEB Full Grip Collets – DIN 6388



**Tapping Collets
Series RT-1**

The most rational and economic solution for tapping on CNC machines incorporating axial compensation in the collet. This type of tapping collet can be used in all standard Weldon and VDI toolholders, or other toolholders with adapted bore. No more specific tapping heads necessary. A PCM exclusivity.

Advantages of PCM-Weldon Tapping Collets

- Outside profile equivalent to Weldon shanks (ISO 3338-2).
- Use in toolholders with all machines attachments:
ANSI - CAT - BT - DIN 69871 - ISO 7388 - VDI 3425-2 / DIN 69880.
- Super-compact execution or long version to approach very close to high shoulders.
- Heavy tapping torques are controlled by the strong clamping screws.
- Quick change, robust construction and excellent alignment of the tap
- Spring force adapted to the size of the taps
- Strong execution case hardened and ground

Use of Standard Nuts (DIN 6388)

The ball nuts are recommended for heavy tapping operations.
Assembling recommendations:

TAPPING PROBLEMS?

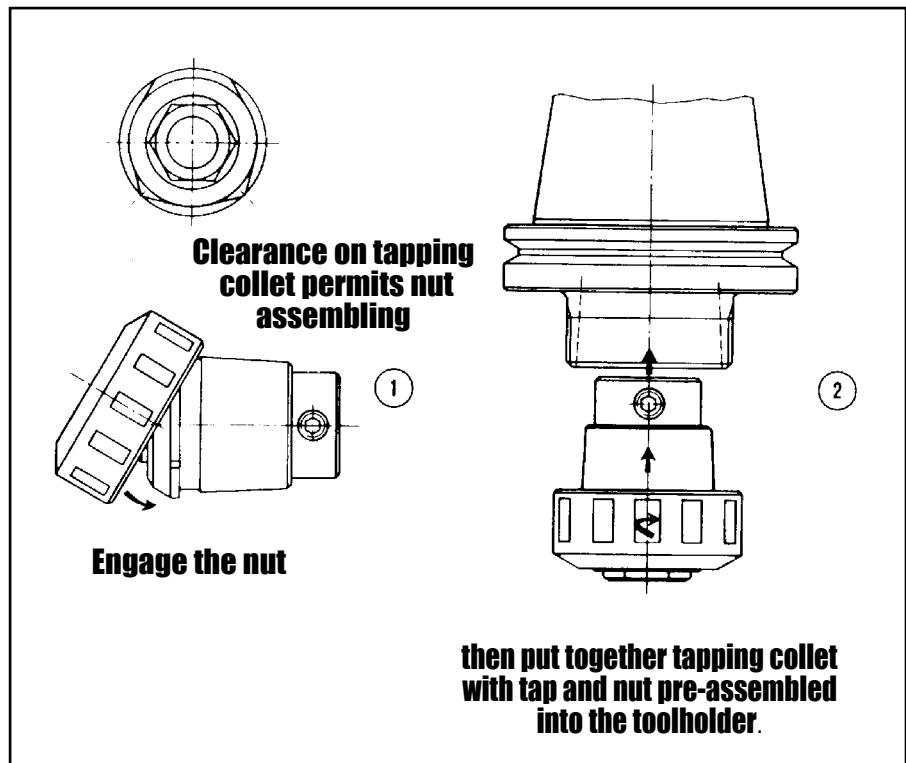
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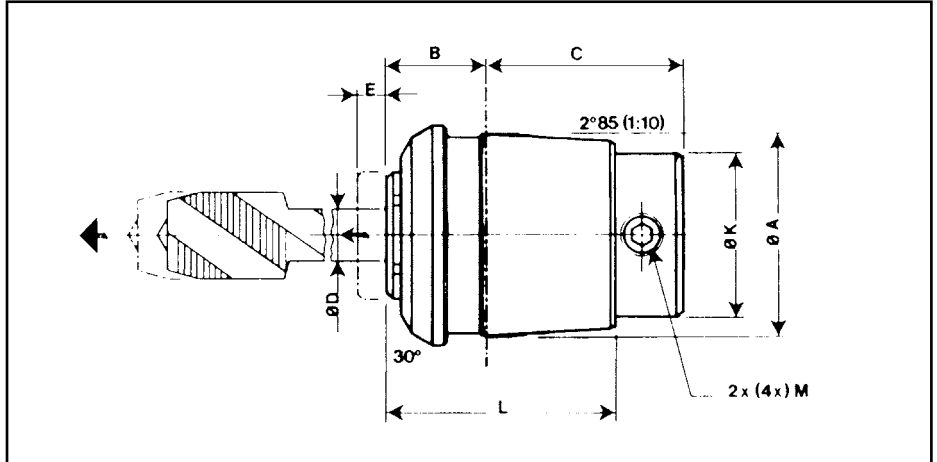


Tapping Collets Series RT-1

Compatible with ORTLIEB Full Grip Collets – DIN 6388



**Tapping Collets
Series RT-1**



Series N°	Capacity	A	B	C	D max	E	K	L	Thread M	Thread M = UNF in USA
RT - 1 - 61	M0,7-M8	15,15	9	18	6	7	11	22	2 x M4 4 x M4	4-48
RT - 1 - 62	M1 - M10	17,75	9,5	21,5	7	7	14	24	2 x M4 4 x M5	8-36 10-32
RT - 1 - 63	M1 - M12	22,65	12,5	22	9	8	19	26	2 x M5 4 x M6	10-32 1/4
RT - 1 - 64	M4 - M16	27,4	14	29	12,5	10	23	33	2 x M5 4 x M6/M8	10-32 1/4
RT - 1 - 65	M6 - M20	32,9	14	38	16	13	28	40	2 x M 6 4 x M6/M8	1/4 5/16

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Recommendations for programming

The following tapping process is recommended: fast approach, then tapping feed with approximately 95% of the pitch value, which uses 20-30% of the compensation stroke when the spindle rotation and the feed movement are simultaneously reversed. Return feed must be made with 100% of the pitch, which maintains the sleeve of the tapping collet in the compensation stroke up to the tap disengagement; quick return can then be programmed with usual strike security. The relatively long axial compensation assists easy programming. When tapping at very high speed, an appropriate programming compensation may be necessary to balance the differences of inertia between the spindle and the feed movement on reverse. Do not disturb the axial compensation, use external coolant supply only.

Tapping Collets Series RT-1

Compatible with ORTLIEB Full Grip Collets – DIN 6388

For TAPS DIN 371/376

Tap Size	Tap Shank Ø	RT-1-61	RT-1-62	RT-1-63	RT-1-64	RT-1-65
M3	2,2 mm	RT-1-61220	(RT-1-62220)			
M1 to M1.8/M3.5	2.5 mm	RT-1-61250	RT-1-62250	RT-1-63250		
M2 to M2.6/M4	2,8 mm	RT-1-61280	RT-1-62280	RT-1-63280		
M3/M5	3,5 mm	RT-1-61350	RT-1-62350	RT-1-63350		
M3.5	4 mm	RT-1-61400	RT-1-62400	RT-1-63400		
M4//M6	4,5 mm	RT-1-61450	RT-1-62450	RT-1-63450	RT-1-64450	
M5/M6/M8	6 mm	RT-1-61600	RT-1-62600	RT-1-63600	RT-1-64600	RT-1-65600
M9/M10	7 mm		RT-1-62700	RT-1-63700	RT-1-64700	RT-1-65700
M8	8 mm			RT-1-63800	RT-1-64800	RT-1-65800
M12	9 mm			RT-1-63900	RT-1-64900	RT-1-65900
M10	10 mm				RT-1-64100	RT-1-65100
M14	11 mm				RT-1-64110	RT-1-65110
M16	12 mm				RT-1-64120	RT-1-65120
M18	14 mm					RT-1-65140
M20	16 mm					RT-1-65160

For TAPS according to US standard

Tap Size	Tap Shank Ø	RT-1-61	RT-1-62	RT-1-63	RT-1-64	RT-1-65
No. 6	0.141"	RT-1-61.141	RT-1-62.141	RT-1-63.141		
No. 8	0.168"	RT-1-61.168	RT-1-62.168	RT-1-63.168	RT-1-64.168	
No. 10	0.194"	RT-1-61.194	RT-1-62.194	RT-1-63.194	RT-1-64.194	
No. 12	0.220"	RT-1-61.220	RT-1-62.220	RT-1-63.220	RT-1-64.220	
1/4"	0.255"		RT-1-62.255	RT-1-63.255	RT-1-64.255	RT-1-65.255
5/16"	0.318"			RT-1-63.318	RT-1-64.318	RT-1-65.318
7/16"	0.323"			RT-1-63.323	RT-1-64.323	RT-1-65.323
.1/2"	0.367"			RT-1-63.367	RT-1-64.367	RT-1-65.367
3/8"	0.381"			RT-1-63.381	RT-1-64.381	RT-1-65.381
9/16"	0.429"				RT-1-64.429	RT-1-65.429
1/8" PLS	0.437"				RT-1-64.437	RT-1-65.437
5/8"	0.480"				RT-1-64.480	RT-1-65.480
11/16"	0.542"					RT-1-65.542
1/4" P	0.562"					RT-1-65.562
3/4"	0.590"					RT-1-65.590
13/16"	0.652"					RT-1-65.652
7/8"	0.697"					RT-1-65.697

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KATO TC Tap Chucks

**Adjustable Torque
Control
Tap Collet**

adapter size	tap size range	tap size	order no.
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TC412



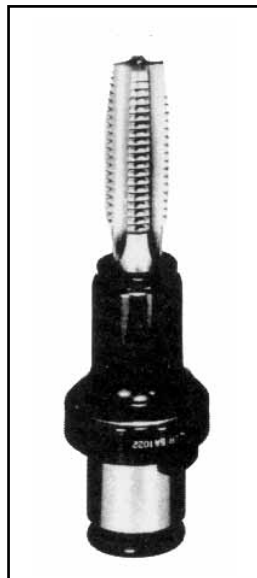
0-5/8"
HAND

1/16-3/8"
PIPE

0-6	810-100
8	810-101
10	810-102
12	810-103
1/4	810-104
5/16	810-105
3/8	810-106
7/16	810-107
1/2	810-108
9/16	810-109
5/8	810-110
1/16P	810-149
1/8LS	810-151
1/4P	810-152
3/8P	810-153

adapter size	tap size range	tap size	order no.
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TC1022



3/8-1"
HAND

1/8-3/4"
PIPE

3/8	810-206
7/16	810-207
1/2	810-208
9/16	810-209
5/8	810-210
11/16	810-211
3/4	810-212
13/16	810-213
7/8	810-214
15/16	810-215
1	810-216
1/8LS	810-249
1/4P	810-250
3/8P	810-251
1/2P	810-252
3/4P	810-253

TAPPING PROBLEMS?

**CONTACT US FOR
UNIQUE TAPPING
SOLUTIONS.**

**USE HIGH
PERFORMANCE TAPS
FROM**



**THREADING
TECHNOLOGY**

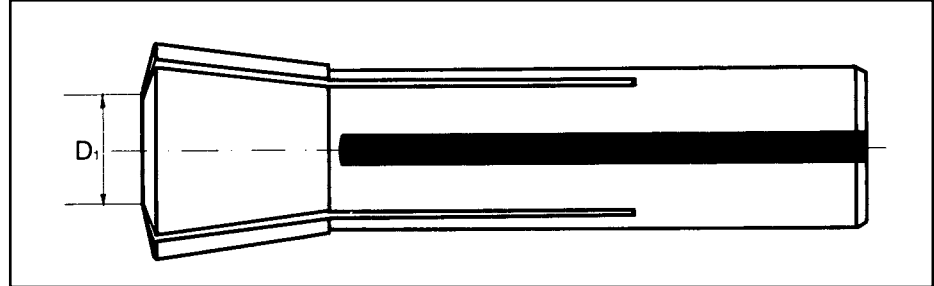
SWISS MADE



R8 Collets



To order our Standard Precision R8 Round Collets, add a '-E' at the end of the order numbers



Round Collets - Inch

Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
080-004	1/16	080-032	1/2
080-006	3/32	080-034	17/32
080-008	1/8	080-036	9/16
080-010	5/32	080-038	19/32
080-012	3/16	080-040	5/8
080-014	7/32	080-042	21/32
080-016	1/4	080-044	11/16
080-018	9/32	080-046	23/32
080-020	5/16	080-048	3/4
080-022	11/32	080-050	25/32
080-024	3/8	080-052	13/16
080-046	13/32	080-054	27/32
080-028	7/16	080-056	7/8
080-030	15/32	080-064	1

Metric

Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
080-503	3	080-511	11
080-504	4	080-512	12
080-505	5	080-513	13
080-506	6	080-514	14
080-507	7	080-515	15
080-508	8	080-516	16
080-509	9	080-517	17
080-510	10	080-518	18
		080-520	20

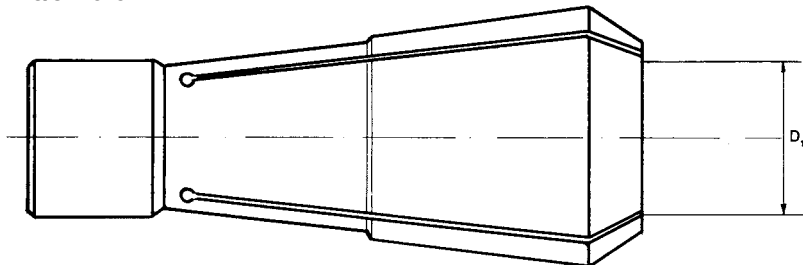
Emergency Collets

Order No.	Description
080-000S	Steel Construction

Emergency Collets have 1/16" pilot hole.

NMTB 40 Coupling Collets

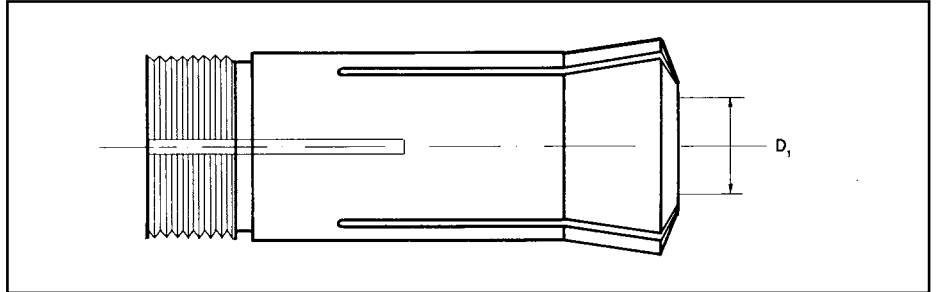
Draw Bar Thread
5/8" 11UNC



NMTB40 Coupling Collets

Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
510-408	1/8	510-428	7/16	510-448	3/4
510-412	3/16	510-432	1/2	510-452	13/16
510-416	1/4	510-436	9/16	510-456	7/8
510-420	5/16	510-440	5/8	510-460	15/16
510-424	3/8	510-444	11/16	510-464	1

5C Collets



Super Precision Style - Round

To order our Standard Precision 5C Round Collets, add a 'E' at the end of the order numbers

Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
050-003	3/64	050-021	21/64	050-039	39/64	050-056	7/8
050-004	1/16	050-022	11/32	050-040	5/8	050-057	57/64
050-005	5/64	050-023	23/64	050-041	41/64	050-058	29/32
050-006	3/32	050-024	3/8	050-042	21/32	050-059	59/64
050-007	7/64	050-025	25/64	050-043	43/64	050-060	15/16
050-008	1/8	050-026	13/32	050-044	11/16	050-061	61/64
050-009	9/64	050-027	27/64	050-045	45/64	050-062	31/32
050-010	5/32	050-028	7/16	050-046	23/32	050-063	63/64
050-011	11/64	050-029	29/64	050-047	47/64	050-064	1
050-012	3/16	050-030	15/32	050-048	3/4	050-065	1-1/64
050-013	13/64	050-031	31/64	050-049	49/64	050-066	1-1/32
050-014	7/32	050-032	1/2	050-050	25/32	050-067	1-3/64
050-015	15/64	050-033	33/64	050-051	51/64	050-068	1-1/16
050-016	1/4	050-034	17/32	050-052	13/16	050-069	1-5/64
050-017	17/64	050-035	35/64	050-053	53/64	050-070	1-3/32
050-018	9/32	050-036	9/16	050-054	27/32	050-071	1-7/64
050-019	19/64	050-037	37/64	050-055	55/64	050-072	1-1/8
050-020	5/16	050-038	19/32				

Round Metric, Hexagon, Square, Emergency and Step Collets

Round Metric			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
050-503	3	050-515	15
050-504	4	050-516	16
050-505	5	050-517	17
050-506	6	050-518	18
050-507	7	050-519	19
050-508	8	050-520	20
050-509	9	050-521	21
050-510	10	050-522	22
050-511	11	050-523	23
050-512	12	050-524	24
050-513	13	050-525	25
050-514	14	050-526	26

Metric collets are also available in 0.5 mm increments on request.

- 1) Emergency collets have 1/16" pilot hole and has hardened threads.
- 2) Step collets have soft face (for easy machining), hardened body, no internal threads.

5C Collets have external and internal threads.

* These collets do not have internal thread.

Hexagon			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
050-008-H	1/8	050-036-H	9/16
050-012-H	3/16	050-040-H	5/8
050-016-H	1/4	050-044-H	11/16
050-020-H	5/16	050-048-H	3/4
050-024-H	3/8	050-052-H	13/16
050-028-H	7/16	050-056-H	7/8*
050-032-H	1/2		

Square			
Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
050-008-S	1/8	050-032-S	1/2
050-012-S	3/16	050-036-S	9/16
050-016-S	1/4	050-040-S	5/8
050-020-S	5/16	050-044-S	11/16
050-024-S	3/8	050-048-S	3/4
050-028-S	7/16		

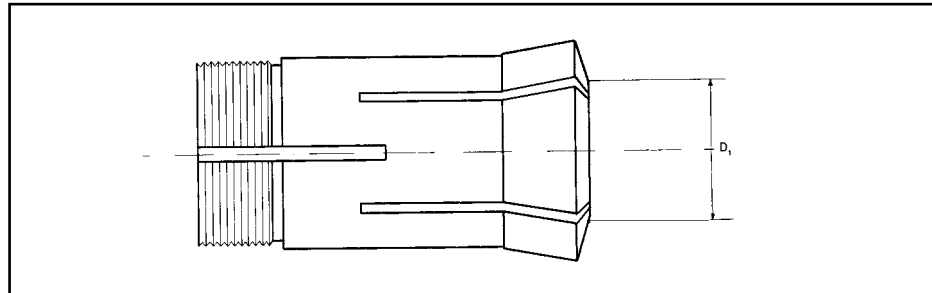
Emergency Collets (1)	
Order No.	Description
050-000-S	STEEL
050-000-B	BRASS

Step Collets (2)	
Order No.	Size (in)
050-102	2
050-103	3
050-104	4
050-105	5
050-106	6

3J Collets



Round



Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
300-004	1/16	300-022	11/32	300-040	5/8	300-058	29/32
300-005	5/64	300-023	23/64	300-041	41/64	300-059	59/64
300-006	3/32	300-024	3/8	300-042	21/32	300-060	15/16
300-007	7/64	300-025	25/64	300-043	43/64	300-061	61/64
300-008	1/8	300-026	13/32	300-044	11/16	300-062	31/32
300-009	9/64	300-027	27/64	300-045	45/64	300-063	63/64
300-010	5/32	300-028	7/16	300-046	23/32	300-064	1
300-011	11/64	300-029	29/64	300-047	47/64	300-068	1-1/16
300-012	3/16	300-030	15/32	300-048	3/4	300-072	1-1/8
300-013	13/64	300-031	31/64	300-049	49/64	300-076	1-3/16
300-014	7/32	300-032	1/2	300-050	25/32	300-080	1-1/4
300-015	15/64	300-033	33/64	300-051	51/64	300-084	1-5/16
300-016	1/4	300-034	17/32	300-052	13/16	300-088	1-3/8
300-017	17/64	300-035	35/64	300-053	53/64	300-092	1-7/16
300-018	9/32	300-036	9/16	300-054	27/32	300-096	1-1/2
300-019	19/64	300-037	37/64	300-055	55/64	300-100	1-9/16
300-020	5/16	300-038	19/32	300-056	7/8	300-104	1-5/8
300-021	21/64	300-039	39/64	300-057	57/64	300-108	1-11/16
						300-112	1-3/4

Hexagon, Square and Emergency Collets

Hexagon			
Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
300-016-H	1/4	300-060-H	15/16
300-020-H	5/16	300-064-H	1
300-024-H	3/8	300-068-H	1-1/16
300-028-H	7/16	300-072-H	1-1/8
300-032-H	1/2	300-076-H	1-3/16
300-036-H	9/16	300-080-H	1-1/4
300-040-H	5/8	300-084-H	1-5/16
300-044-H	11/16	300-088-H	1-3/8
300-048-H	3/4	300-092-H	1-7/16
300-052-H	13/16	300-096-H	1-1/2
300-056-H	7/8		

Emergency Collets have 1/16" pilot hole and hardened threads.

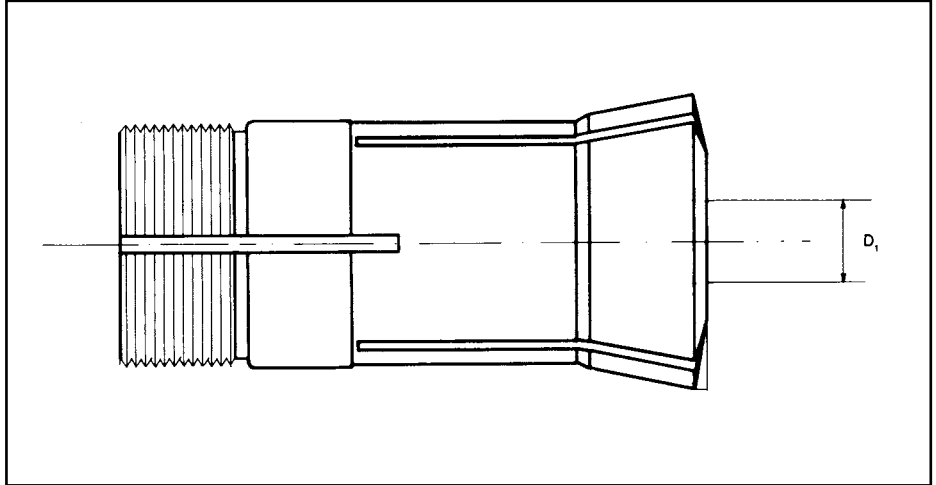
Square			
Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
300-016-S	1/4	300-052-S	13/16
300-020-S	5/16	300-056-S	7/8
300-024-S	3/8	300-060-S	15/16
300-028-S	7/16	300-064-S	1
300-032-S	1/2	300-068-S	1-1/16
300-036-S	9/16	300-072-S	1-1/8
300-040-S	5/8	300-076-S	1-3/16
300-044-S	11/16	300-080-S	1-1/4
300-048-S	3/4		

Emergency Collets	
Order No.	Description
300-000-S	Steel Construction

16C Collets



Round Smooth

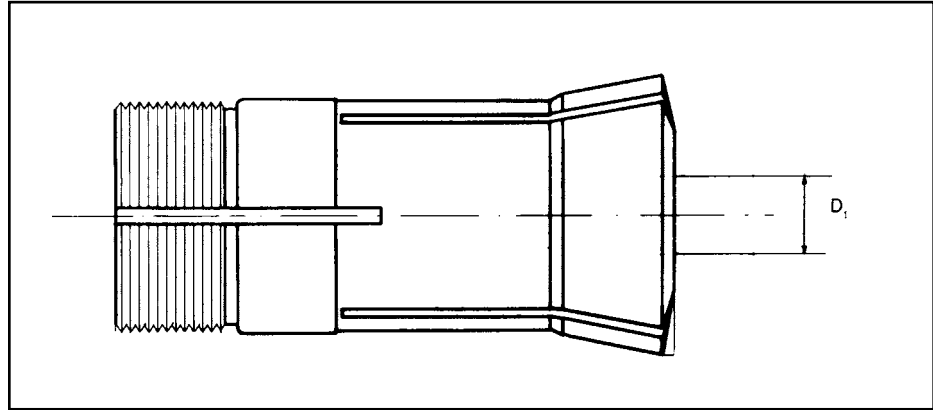


Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)	Order No.	Size D ₁ (in)
160-004	1/16	160-038	19/32	160-072	1-1/8
160-005	5/64	160-039	39/64	160-073	1-9/64
160-006	3/32	160-040	5/8	160-074	1-5/32
160-007	7/64	160-041	41/64	160-075	1-11/64
160-008	1/8	160-042	21/32	160-076	
160-009	9/64	160-043	43/64	160-077	1-13/64
160-010	5/32	160-044	11/16	160-078	1-7/32
160-011	11/64	160-045	45/64	160-079	1-15/64
160-012	3/16	160-046	23/32	160-080	1-1/4
160-013	13/64	160-047	47/64	160-081	1-17/64
160-014	7/32	160-048	3/4	160-082	1-9/32
160-015	15/64	160-049	49/64	160-083	1-19/64
160-016	1/4	160-050	25/32	160-084	1-5/16
160-017	17/64	160-051	51/64	160-085	1-21/64
160-018	9/32	160-052	13/16	160-086	1-11/32
160-019	19/64	160-053	53/64	160-087	1-23/64
160-020	5/16	160-054	27/32	160-088	1-3/8
160-021	21/64	160-055	55/64	160-089	1-25/64
160-022	11/32	160-056	7/8	160-090	1-13/32
160-023	23/64	160-057	57/64	160-091	1-27/64
160-024	3/8	160-058	29/32	160-092	1-7/16
160-025	25/64	160-059	59/64	160-093	1-29/64
160-026	13/32	160-060	15/16	160-094	1-15/32
160-027	27/64	160-061	61/64	160-095	1-31/64
160-028	7/16	160-062	31/32	160-096	1-1/2
160-029	29/64	160-063	63/64	160-097	1-33/64
160-030	15/32	160-064	1	160-098	1-17/32
160-031	31/64	160-065	1-1/64	160-099	1-35/64
160-032	1/2	160-066	1-1/32	160-100	1-9/16
160-033	33/64	160-067	1-3/64	160-101	1-37/64
160-034	17/32	160-068	1-1/16	160-102	1-19/32
160-035	35/64	160-069	1-5/64	160-103	1-39/64
160-036	9/16	160-070	1-3/32	160-104	1-5/8
160-037	37/64	160-071	1-7/64		

16C Collets



**Round Metric,
Round Serrated,
Hexagon, Square
and Emergency
Collet**



Round Metric			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
160-501	1	160-522	22
160-502	2	160-523	23
160-503	3	160-524	24
160-504	4	160-525	25
160-505	5	160-526	26
160-506	6	160-527	27
160-507	7	160-528	28
160-508	8	160-529	29
160-509	9	160-530	30
160-510	10	160-531	31
160-511	11	160-532	32
160-512	12	160-533	33
160-513	13	160-534	34
160-514	14	160-535	35
160-515	15	160-536	36
160-516	16	160-537	37
160-517	17	160-538	38
160-518	18	160-539	39
160-519	19	160-540	40
160-520	20	160-541	41
160-521	21	160-542	42

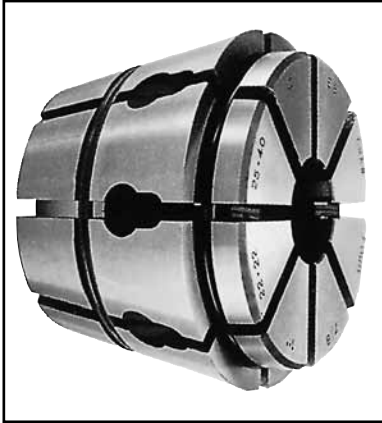
Square			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (in)
160-008-S	1/8	160-044-S	11/16
160-012-S	3/16	160-048-S	3/4
160-016-S	1/4	160-052-S	13/16
160-020-S	5/16	160-056-S	7/8
160-024-S	3/8	160-060-S	15/16
160-028-S	7/16	160-064-S	1
160-032-S	1/2	160-068-S	1-1/16
160-036-S	9/16	160-072-S	1-1/8
160-040-S	5/8	160-076-S	1-3/16

Round Serrated			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
160-048-SE	3/4	160-076-SE	1-3/16
160-050-SE	25/32	160-078-SE	1-7/32
160-052-SE	13/16	160-080-SE	1-1/4
160-054-SE	27/32	160-082-SE	1-9/32
160-056-SE	7/8	160-084-SE	1-5/16
160-058-SE	29/32	160-086-SE	1-11/32
160-060-SE	15/16	160-088-SE	1-3/8
160-062-SE	31/32	160-090-SE	1-13/32
160-064-SE	1	160-092-SE	1-7/16
160-066-SE	1-1/32	160-094-SE	1-15/32
160-068-SE	1-1/16	160-096-SE	1-1/2
160-070-SE	1-3/32	160-098-SE	1-17/32
160-072-SE	1-1/8	160-100-SE	1-9/16
160-074-SE	1-5/32	160-102-SE	1-19/32

Hexagon			
Order No.	Size D ₁ (mm)	Order No.	Size D ₁ (mm)
160-008-H	1/8	160-052-H	13/16
160-012-H	3/16	160-056-H	7/8
160-016-H	1/4	160-060-H	15/16
160-020-H	5/16	160-064-H	1
160-024-H	3/8	160-068-H	1-1/16
160-028-H	7/16	160-072-H	1-1/8
160-032-H	1/2	160-076-H	1-3/16
160-036-H	9/16	160-080-H	1-1/4
160-040-H	5/8	160-084-H	1-5/16
160-044-H	11/16	160-088-H	1-3/8
160-048-H	3/4		

Emergency Collets	
Order No.	Description
160-000-S	Steel Construction

Wide Range Multibore Standard Crawford Collets

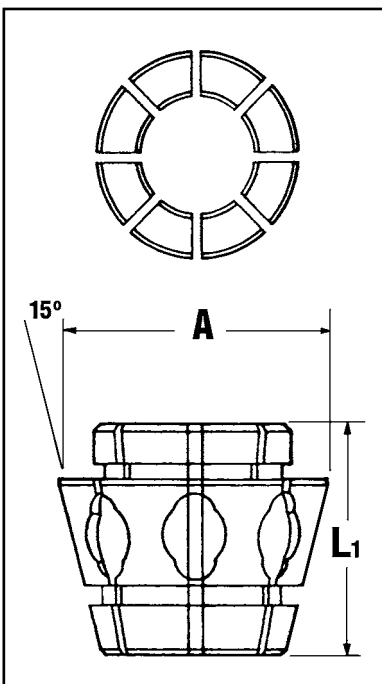


W850

L₁ = Total Length = 51.8 mm

A = Max. Dia = 70.1 mm

CLAMPING RANGE		ROUND	HEXAGON	SQUARE
Inches (in)	Metric (mm)	Order No.	Order No.	Order No.
1/16 to 3/16	1.58 to 4.76	W850-C1	W850-C68	W850-C86
1/8 to 1/4	3.17 to 6.35	W850-C2	W850-C69	W850-C87
1/4 to 3/8	6.35 to 9.52	W850-C3	W850-C70	W850-C88
3/8 to 1/2	9.52 to 12.70	W850-C4	W850-C71	W850-C89
1/2 to 5/8	12.70 to 15.87	W850-C5	W850-C72	W850-C90
5/8 to 3/4	15.87 to 19.05	W850-C6	W850-C73	W850-C91
3/4 to 7/8	19.05 to 22.22	W850-C7	W850-C74	W850-C92
7/8 to 1	22.22 to 25.40	W850-C8	W850-C75	W850-C93
1 to 1-1/8	25.40 to 28.57	W850-C9	W850-C76	W850-C94
1-1/8 to 1-1/4	28.57 to 31.75	W850-C10	W850-C77	W850-C95
1-1/4 to 1-3/8	31.75 to 34.92	W850-C11	W850-C78	-
1-3/8 to 1-1/2	34.92 to 38.10	W850-C12	W850-C79	-
1-1/2 to 1-5/8	38.10 to 41.27	W850-C13	-	-
1.535 to 1.653	39.0 to 42.00	W850-C14	-	-



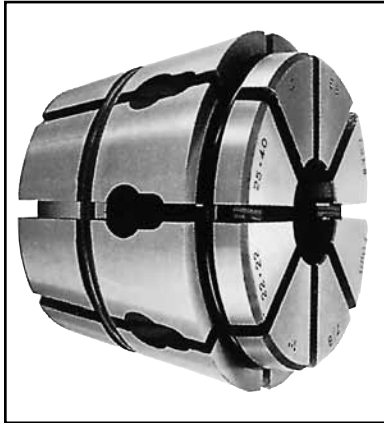
V120

L₁ = Total Length = 62.7 mm

A = Max. Dia = 88.0 mm

CLAMPING RANGE		ROUND	HEXAGON	SQUARE
Inches (in)	Metric (mm)	Order No.	Order No.	Order No.
1/8 to 1/4	3.17 to 6.35	V120-D2	V120-D69	V120-D87
1/4 to 3/8	6.35 to 9.52	V120-D3	V120-D70	V120-D88
3/8 to 1/2	9.52 to 12.70	V120-D4	V120-D71	V120-D89
1/2 to 5/8	12.70 to 15.87	V120-D5	V120-D72	V120-D90
5/8 to 3/4	15.87 to 19.05	V120-D6	V120-D73	V120-D91
3/4 to 7/8	19.05 to 22.22	V120-D7	V120-D74	V120-D92
7/8 to 1	22.22 to 25.40	V120-D8	V120-D75	V120-D93
1 to 1-1/8	25.40 to 28.57	V120-D9	V120-D76	V120-D94
1-1/8 to 1-1/4	28.57 to 31.75	V120-D10	V120-D77	V120-D95
1-1/4 to 1-3/8	31.75 to 34.92	V120-D11	V120-D78	V120-D96
1-3/8 to 1-1/2	34.92 to 38.10	V120-D12	V120-D79	V120-D97
1-1/2 to 1-5/8	38.10 to 41.27	V120-D13	V120-D80	V120-D98
1-5/8 to 1-3/4	41.27 to 44.45	V120-D14	V120-D81	-
1-3/4 to 1-7/8	44.45 to 47.62	V120-D15	V120-D82	-
1-7/8 to 2	47.62 to 50.80	V120-D16	V120-D83	-
2 to 2-1/8	50.80 to 53.97	V120-D17	-	-

Wide Range Multibore Standard Crawford Collets

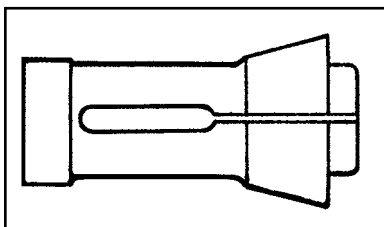
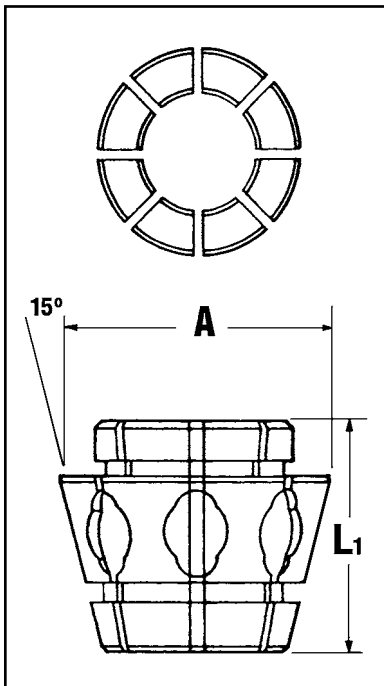


T285

L₁ = Total Length = 73.2mm

A = Max. Dia = 99.3 mm

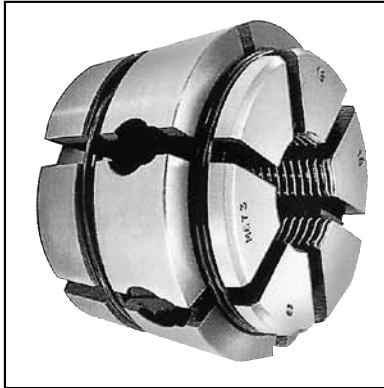
CLAMPING RANGE		ROUND	HEXAGON	SQUARE
Inches (in)	Metric (mm)	Order No.	Order No.	Order No.
1/8 to 1/4	3.17 to 6.35	T285-E2	T285-E69	T285-E87
1/4 to 3/8	6.35 to 9.52	T285-E3	T285-E70	T285-E88
3/8 to 1/2	9.52 to 12.70	T285-E4	T285-E71	T285-E89
1/2 to 5/8	12.70 to 15.87	T285-E5	T285-E72	T285-E90
5/8 to 3/4	15.87 to 19.05	T285-E6	T285-E73	T285-E91
3/4 to 7/8	19.05 to 22.22	T285-E7	T285-E74	T285-E92
7/8 to 1	22.22 to 25.40	T285-E8	T285-E75	T285-E93
1 to 1-1/8	25.40 to 28.57	T285-E9	T285-E76	T285-E94
1-1/8 to 1-1/4	28.57 to 31.75	T285-E10	T285-E77	T285-E95
1-1/4 to 1-3/8	31.75 to 34.92	T285-E11	T285-E78	T285-E96
1-3/8 to 1-1/2	34.92 to 38.10	T285-E12	T285-E79	T285-E97
1-1/2 to 1-5/8	38.10 to 41.27	T285-E13	T285-E80	T285-E98
1-5/8 to 1-3/4	41.27 to 44.45	T285-E14	T285-E81	T285-E99
1-3/4 to 1-7/8	44.45 to 47.62	T285-E15	T285-E82	-
1-7/8 to 2	47.62 to 50.80	T285-E16	T285-E83	-
2 to 2-1/8	50.80 to 53.97	T285-E17	T285-E84	-
2-1/8 to 2-1/4	53.97 to 57.15	T285-E18	T285-E85	-
2-1/4 to 2 3/8	57.15 to 60.32	T285-E19	-	-
2-3/8 to 2-1/2	60.32 to 63.50	T285-E20	-	-
2-1/2 to 2-5/8	63.50 to 66.67	T285-E21	-	-



EMERGENCY COLLETS

Order No.	Multibore Style Equiv.	Description
M286-000-S	W850	STEEL
N853-000-S	V120	STEEL
K247-000-S	T285	STEEL

Wide Range Multibore DIN 6343 Collets



M671

L₁ = Total Length = 38.0 mm

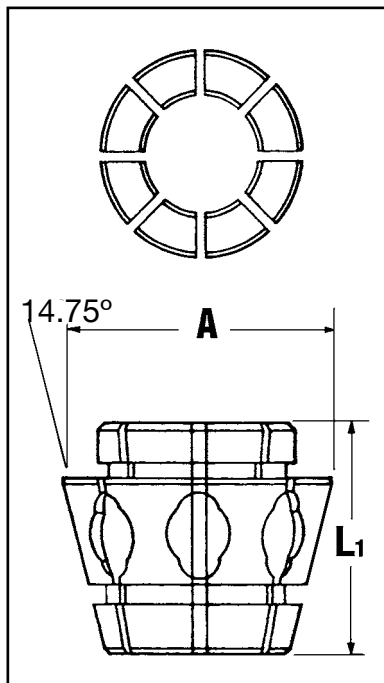
A = Max. Dia = 56.5 mm

CLAMPING RANGE	ROUND	HEXAGON	SQUARE
Metric (mm)	Order No.	Order No.	Order No.
4 to 6	M671 - R6*	M671- H6*	M671- S6*
6 to 8	M671 - R8*	M671- H8*	M671- S8*
8 to 10	M671 - R10	M671- H10	M671- S10
10 to 12	M671 - R12	M671- H12	M671- S12
12 to 14	M671 - R14	M671- H14	M671- S14
14 to 16	M671 - R16	M671- H16	M671- S16
16 to 18	M671 - R18	M671- H18	M671- S18
18 to 20	M671 - R20	M671- H20	M671- S20
20 to 22	M671 - R22	M671- H22	M671- S22
22 to 24	M671 - R24	M671- H24	M671- S24
24 to 26	M671 - R26	M671 -H26	-
26 to 28	M671 - R28	M671- H28	-
28 to 30	M671 - R30	-	-
30 to 32	M671 - R32	-	-
32 to 34	M671 - R34*	-	-

M673

L₁ = Total Length = 39.0 mm

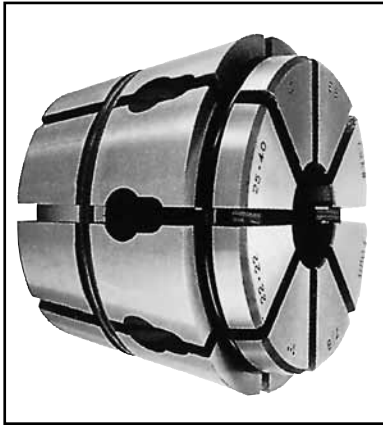
A = Max. Dia = 61.5 mm



CLAMPING RANGE	ROUND	HEXAGON	SQUARE
Metric (in)	Order No.	Order No.	Order No.
4 to 6	M673- R6*	M673- H6*	M673- S6*
6 to 8	M673- R8*	M673- H8*	M673- S8*
8 to 10	M673- R10	M673- H10	M673- S10
10 to 12	M673- R12	M673- H12	M673- S12
12 to 14	M673- R14	M673- H14	M673- S14
14 to 16	M673- R16	M673- H16	M673- S16
16 to 18	M673- R18	M673- H18	M673- S18
18 to 20	M673- R20	M673- H20	M673- S20
20 to 22	M673- R22	M673- H22	M673- S22
22 to 24	M673- R24	M673- H24	M673- S24
24 to 26	M673- R26	M673- H26	M673- S26
26 to 28	M673- R28	M673- H28	M673- S28
28 to 30	M673- R30	M673- H30	M673- S30
30 to 32	M673- R32	M673- H32	-
32 to 34	M673- R34	M673- H34	-
34 to 36	M673- R36	M673- H36	-
36 to 38	M673- R38	-	-
38 to 40	M673- R40	-	-
40 to 42	M673- R42*	-	-

*Hexagon and Square collets and those marked * can only be supplied with plain bore or annular serrations, the remainder being available with spiral serrations. Please write for details for heavy duty Auto-Multibore collets.

Wide Range Multibore DIN 6343 Collets

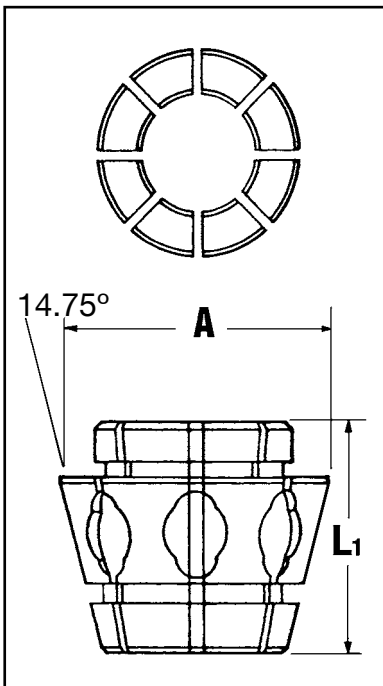


M677

L₁ = Total Length = 45.0 mm

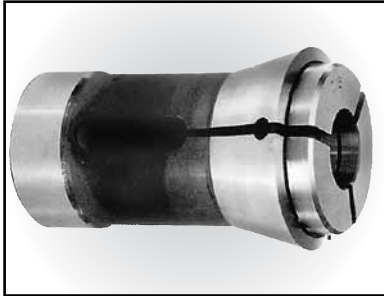
A = Max. Dia = 85.5 mm

CLAMPING RANGE Metric (mm)	ROUND	HEXAGON	SQUARE
	Order No.	Order No.	Order No.
6 to 8	M677- R8*	M677- H8*	M677- S8*
8 to 10	M677- R10	M677- H10	M677- S10
10 to 12	M677- R12	M677- H12	M677- S12
12 to 14	M677- R14	M677- H14	M677- S14
14 to 16	M677- R16	M677- H16	M677- S16
16 to 18	M677- R18	M677- H18	M677- S18
18 to 20	M677- R20	M677- H20	M677- S20
20 to 22	M677- R22	M677- H22	M677- S22
22 to 24	M677- R24	M677- H24	M677- S24
24 to 26	M677- R26	M677- H26	M677- S26
26 to 28	M677- R28	M677- H28	M677- S28
28 to 30	M677- R30	M677- H30	M677- S30
30 to 32	M677- R32	M677- H32	M677- S32
32 to 34	M677- R34	M677- H34	M677- S34
34 to 38	M677- R36	M677- H36	M677- S36
36 to 38	M677- R38	M677- H38	M677- S38
38 to 40	M677- R40	M677- H40	M677- S40
40 to 42	M677- R42	M677- H42	M677- S42
42 to 44	M677- R44	M677- H44	-
44 to 46	M677- R46	M677- H46	-
46 to 48	M677- R48	M677- H48	-
48 to 50	M677- R50	M677- H50	-
50 to 52	M677- R52	M677- H52	-
52 to 54	M677- R54	-	-
54 to 56	M677- R56	-	-
56 to 58	M677- R58	-	-
58 to 60	M677- R60*	-	-



*Hexagon and Square collets and those marked * can only be supplied with plain bore or annular serrations, the remainder being available with spiral serrations. Please write for details for heavy duty Auto-Multibore collets.

DIN 6343 B42/48 COLLETS



Round

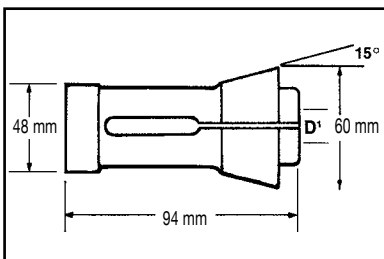
ORDER NO.	D ₁ SIZE (in)
4728-008	1/8
4728-012	3/16
4728-016	1/4
4728-020	5/16
4728-024	3/8
4728-028	7/16
4728-032	1/2
4728-036	9/16
4728-040	5/8
4728-044	11/16
4728-048	3/4
4728-052	13/16
4728-056	7/8
4728-060	15/16
4728-064	1
4728-068	1-1/16
4728-072	1-1/8
4728-076	1-3/16
4728-080	1-1/4
4728-084	1-5/16
4728-088	1-3/8
4728-092	1-7/16
4728-096	1-1/2
4728-100	1-9/16
4728-104	1-5/8

Hexagon

ORDER NO.	D ₁ SIZE (in)
4728-008-H	1/8
4728-012-H	3/16
4728-016-H	1/4
4728-020-H	5/16
4728-024-H	3/8
4728-028-H	7/16
4728-032-H	1/2
4728-036-H	9/16
4728-040-H	5/8
4728-044-H	11/16
4728-048-H	3/4
4728-052-H	13/16
4728-056-H	7/8
4728-060-H	15/16
4728-064-H	1
4728-068-H	1-1/16
4728-072-H	1-1/8
4728-076-H	1-3/16
4728-080-H	1-1/4

Square

ORDER NO.	D ₁ SIZE (in)
4728-008-S	1/8
4728-012-S	3/16
4728-016-S	1/4
4728-020-S	5/16
4728-024-S	3/8
4728-028-S	7/16
4728-032-S	1/2
4728-036-S	9/16
4728-040-S	5/8
4728-044-S	11/16
4728-048-S	3/4
4728-052-S	13/16
4728-056-S	7/8
4728-060-S	15/16
4728-064-S	1
4728-068-S	1-1/16

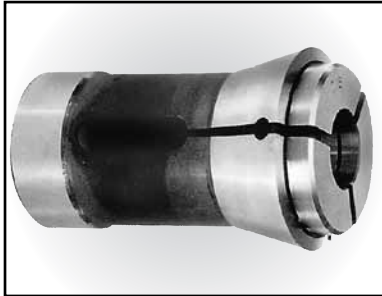


Emergency Collet

ORDER NO.	DESCRIPTION
4728-000-S	STEEL

METRIC SIZES AVAILABLE UPON REQUEST.

DIN 6343 B60/66 COLLETS



Round

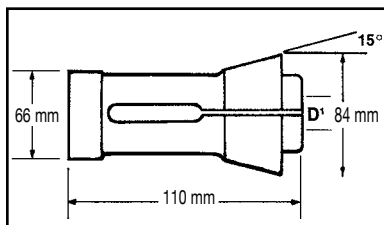
ORDER NO.	D ₁ SIZE (in)
4291-016	1/4
4291-020	5/16
4291-024	3/8
4291-028	7/16
4291-032	1/2
4291-036	9/16
4291-040	5/8
4291-044	11/16
4291-048	3/4
4291-052	13/16
4291-056	7/8
4291-060	15/16
4291-064	1
4291-068	1-1/16
4291-072	1-1/8
4291-076	1-3/16
4291-080	1-1/4
4291-084	1-5/16
4291-088	1-3/8
4291-092	1-7/16
4291-096	1-1/2
4291-100	1-9/16
4291-104	1-5/8
4291-108	1-11/16
4291-112	1-3/4
4291-116	1-13/16
4291-120	1-7/8
4291-124	1-15/16
4291-128	2
4291-136	2-1/8
4291-144	2-1/4
4291-152	2-3/8

Hexagon

ORDER NO.	D ₁ SIZE (in)
4291-016-H	1/4
4291-020-H	5/16
4291-024-H	3/8
4291-028-H	7/16
4291-032-H	1/2
4291-036-H	9/16
4291-040-H	5/8
4291-044-H	11/16
4291-048-H	3/4
4291-052-H	13/16
4291-056-H	7/8
4291-060-H	15/16
4291-064-H	1
4291-068-H	1-1/16
4291-072-H	1-1/8
4291-076-H	1-3/16
4291-080-H	1-1/4
4291-084-H	1-5/16
4291-088-H	1-3/8
4291-092-H	1-7/16
4291-096-H	1-1/2
4291-100-H	1-9/16
4291-104-H	1-5/8
4291-108-H	1-11/16
4291-112-H	1-3/4
4291-116-H	1-13/16
4291-120-H	1-7/8
4291-124-H	1-15/16
4291-128-H	2

Square

ORDER NO.	D ₁ SIZE (in)
4291-016-S	1/4
4291-020-S	5/16
4291-024-S	3/8
4291-028-S	7/16
4291-032-S	1/2
4291-036-S	9/16
4291-040-S	5/8
4291-044-S	11/16
4291-048-S	3/4
4291-052-S	13/16
4291-056-S	7/8
4291-060-S	15/16
4291-064-S	1
4291-068-S	1-1/16
4291-072-S	1-1/8
4291-076-S	1-3/16
4291-080-S	1-1/4
4291-084-S	1-5/16
4291-088-S	1-3/8
4291-092-S	1-7/16
4291-096-S	1-1/2



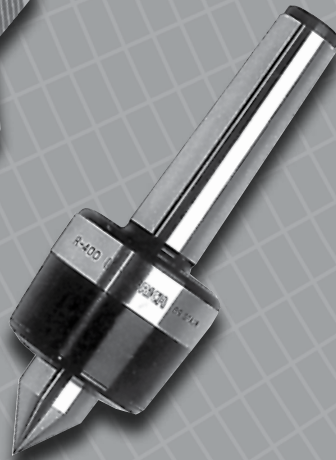
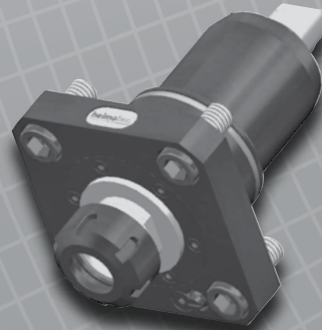
Emergency Collet

ORDER NO.	DESCRIPTION
4291-000-S	STEEL

METRIC SIZES AVAILABLE UPON REQUEST.

SECTION 4

VDI Static & Driven Toolholders, Bushings, Boring Bar Sleeves, Live Centers for CNC Lathes



VDI Static & Driven Toolholders, Bushings, Boring Bar Sleeves, Live Centers for CNC Lathes

Techleader offers the full range of VDI quick-change precision toolholders for CNC lathes. With shanks from 20 to 80 mm, and manufactured to DIN 69880-1/VDI 3425-2 standards, we hold an extensive stock at competitive prices.

The main principle behind the VDI system is a quick-change, cam-operated clamping system for each toolholder within the tool disc. Tool changes can therefore be performed within seconds, rather than within minutes as with the traditional block system. The toolholders can also be preset away from the lathe on a presetter.

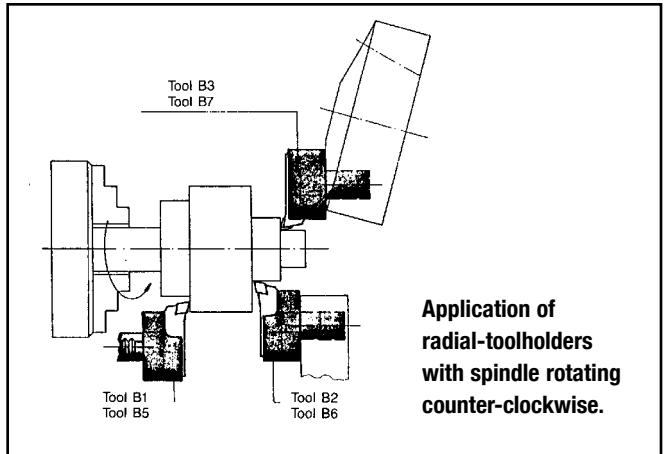
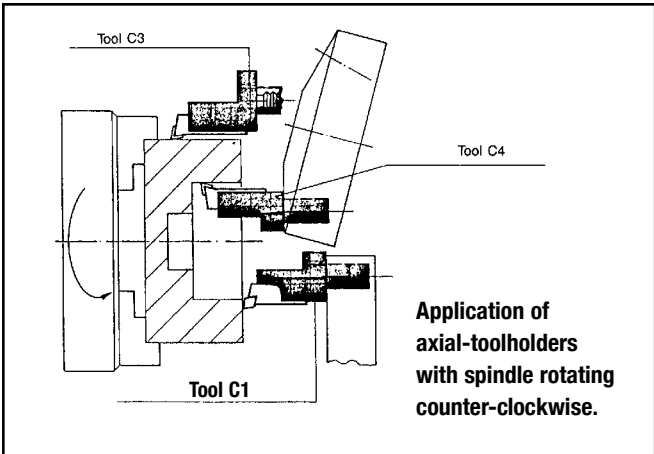
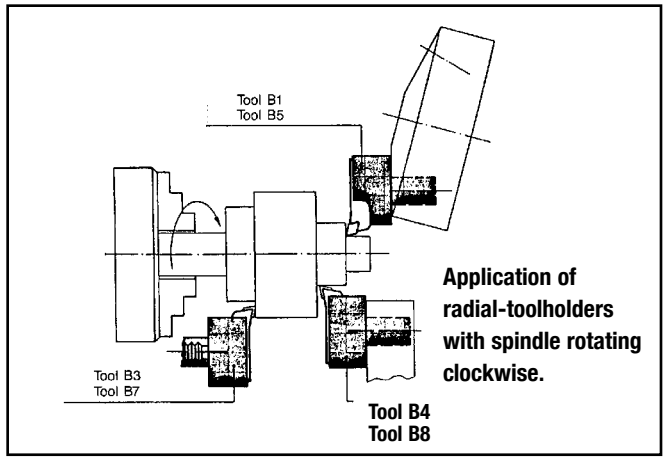
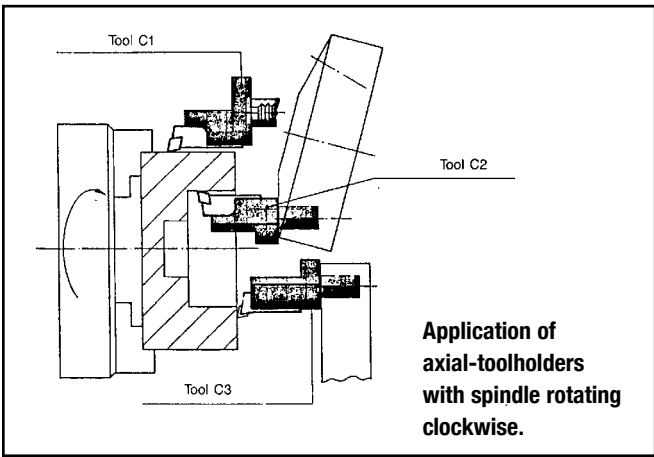
This quick-change design principle has been employed in Western Europe for many years, but is relatively new to North America.

Other features include:

- Heat-treated steel with approx. 700 N/mm² tensile strength
- Hardened and ground cylindrical shaft
- Ground tool seat faces and shoulder

In addition to these toolholders, Techleader has a full line of integral and modular driven tools for the most popular brands of CNC lathes being offered in North America today.

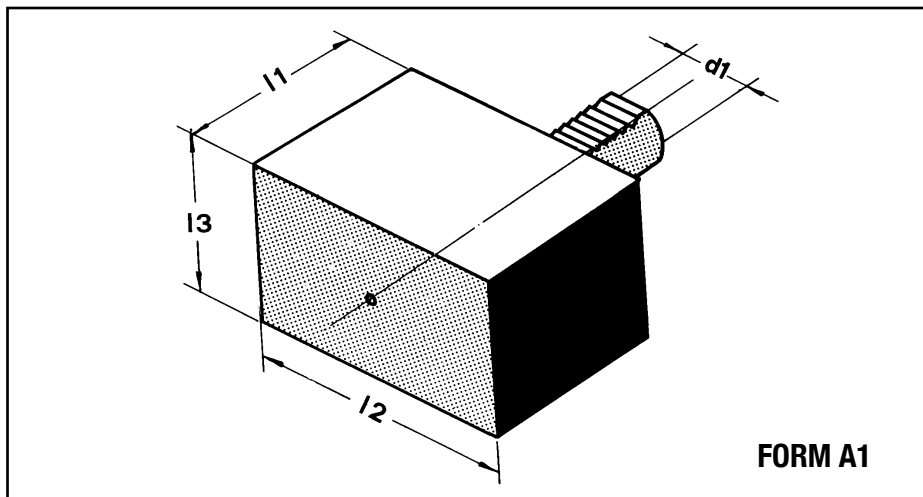
VDI Toolholders



VDI Toolholders

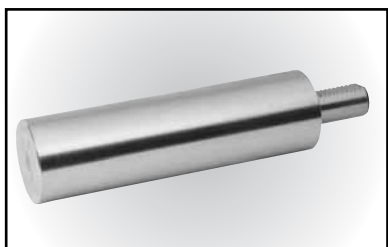


Toolholder with parallel shank for special versions, rectangular

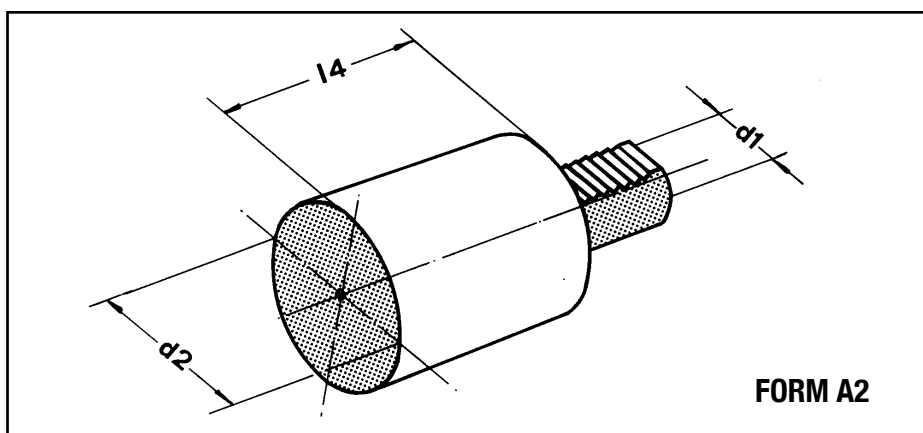


FORM A1

Order No.	Device Type	Dimensions			
		d ₁	l ₁	l ₂	l ₃
A12065	A1 20 x 65	20	65	100	60
A13085	A1 30 x 85	30	85	130	76
A140100	A1 40 x 100	40	100	151	96
A150125	A1 50 x 125	50	125	160	120
A160150	A1 60 x 150	60	150	165	125
A180200	A1 80 x 200	80	200	220	160



Toolholder with parallel shank for special versions, round



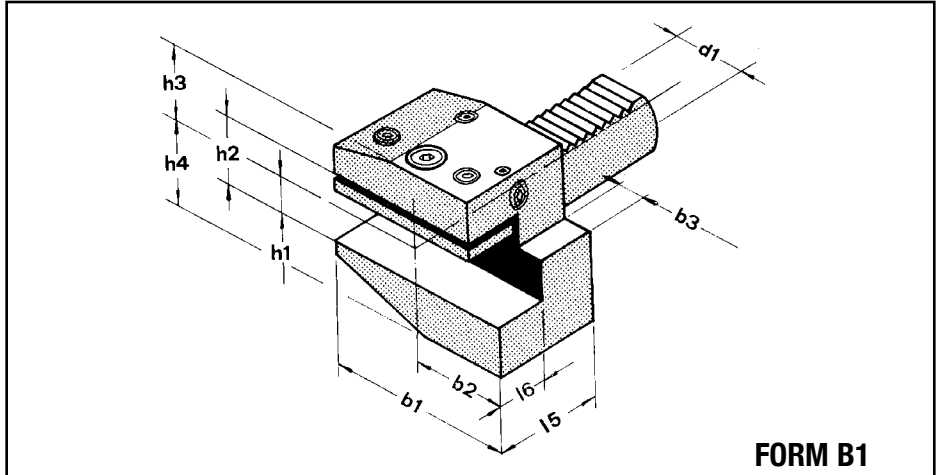
FORM A2

Order No.	Device Type	Dimensions		
		d ₁	d ₂	l ₄
A22070	A2 20 x 70	20	50	70
A230100	A2 30 x 100	30	68	100
A230240	A2 30 x 240	30	68	240
A240120	A2 40 x 120	40	83	120
A240320	A2 40 x 320	40	83	320
A250135	A2 50 x 135	50	98	135
A250400	A2 50 x 400	50	98	400
A260150	A2 60 x 150	60	123	150
A260480	A2 60 x 480	60	123	480
A280500	A2 80 x 500	80	158	500

VDI Toolholders



Toolholder with parallel shank and transversal rectangular seat, right-hand short

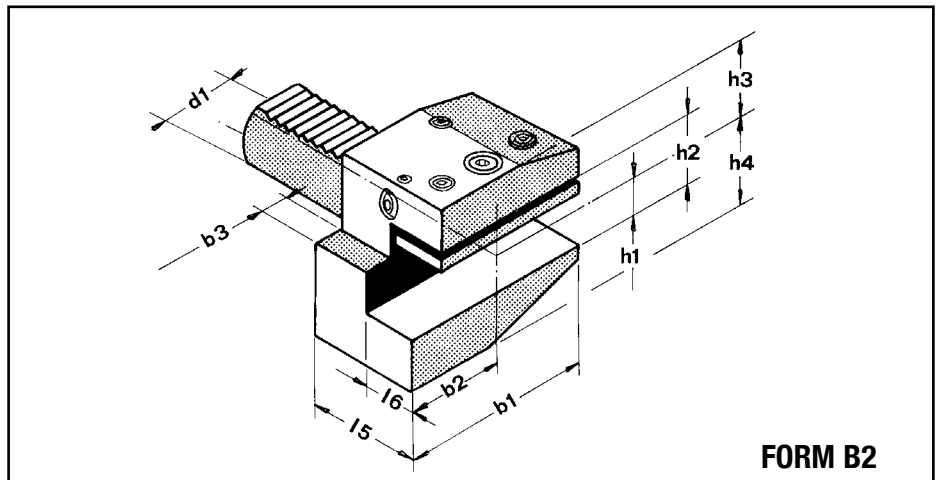


FORM B1

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B12062530	B1 20 x 5/8 x 30	20	55	30	7	5/8	22	25	30	30	14
B12062540	B1 20 x 5/8 x 40	20	55	30	7	5/8	22	25	30	40	14
B13075040	B1 30 x 3/4 x 40	30	70	35	10	3/4	29	28	38	40	18
B13075060	B1 30 x 3/4 x 60	30	70	35	10	3/4	29	28	38	60	18
B140100044	B1 40 x 1 x 44	40	85	42.5	12.5	1	34	32.5	48	44	22
B150125055	B1 50 x 1-1/4 x 55	50	100	50	16	1-1/4	41	35	60	55	25
B160125060	B1 60 x 1-1/4 x 60	60	125	62.5	16	1-1/4	41	42.5	62.5	60	30
B180150075	B1 80 x 1-1/2 x 75	80	160	80	20	1-1/2	53	55	80	75	35



Toolholder with parallel shank and transversal rectangular seat, left-hand short



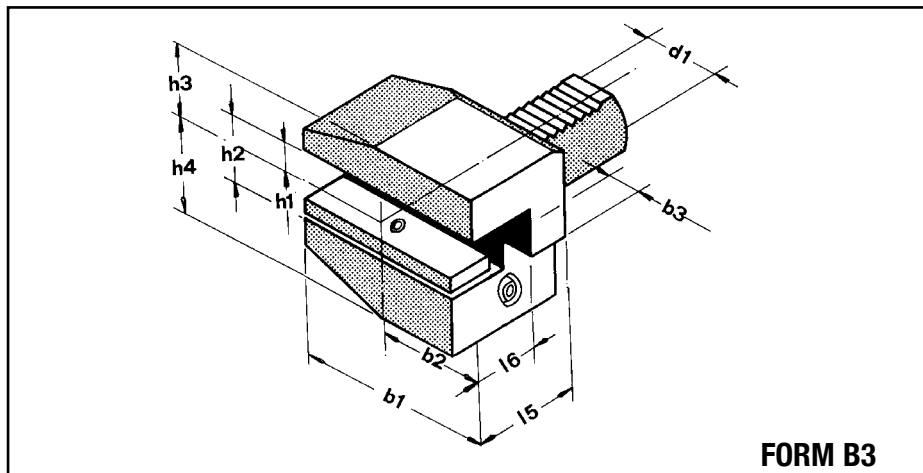
FORM B2

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B22062530	B2 20 x 5/8 x 30	20	55	30	7	5/8	22	25	30	30	14
B22062540	B2 20 x 5/8 x 40	20	55	30	7	5/8	22	25	30	40	14
B23075040	B2 30 x 3/4 x 40	30	70	35	10	3/4	29	28	38	40	18
B23075060	B2 30 x 3/4 x 60	30	70	35	10	3/4	29	28	38	60	18
B240100044	B2 40 x 1 x 44	40	85	42.5	12.5	1	34	32.5	48	44	22
B250125055	B2 50 x 1-1/4 x 55	50	100	50	16	1-1/4	41	35	60	55	25
B260125060	B2 60 x 1-1/4 x 60	60	125	62.5	16	1-1/4	41	42.5	62.5	60	30
B280150075	B2 80 x 1-1/2 x 75	80	160	80	20	1-1/2	53	55	80	75	35

VDI Toolholders



Toolholder with parallel shank and transversal rectangular seat, upside-down, right-hand short

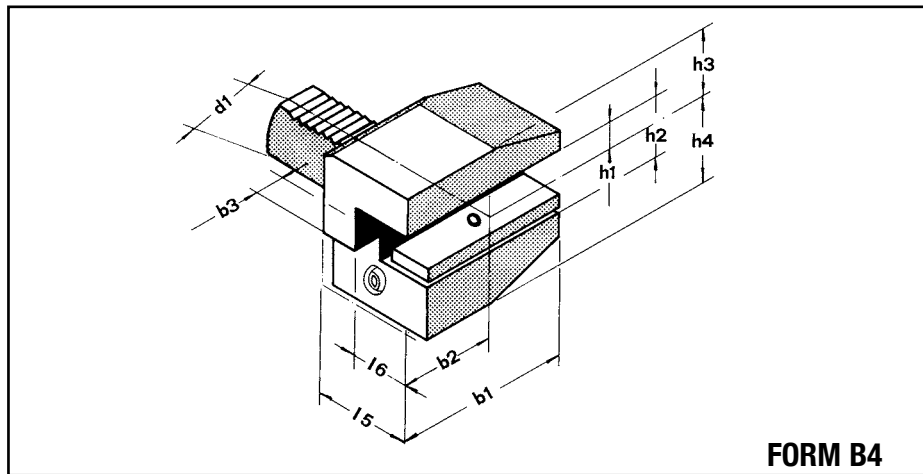


FORM B3

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B32062530	B3 20 x 5/8 x 30	20	55	30	7	5/8	22	30	25	30	14
B32062540	B3 20 x 5/8 x 40	20	55	30	7	5/8	22	30	25	40	14
B33075040	B3 30 x 3/4 x 40	30	70	35	10	3/4	29	38	35	40	18
B33075060	B3 30 x 3/4 x 60	30	70	35	10	3/4	29	38	35	60	18
B340100044	B3 40 x 1 x 44	40	85	42.5	12.5	1	34	48	42.5	44	22
B350125055	B3 50 x 1-1/4 x 55	50	100	50	16	1-1/4	41	60	50	55	25
B360125060	B3 60 x 1-1/4 x 60	60	125	62.5	16	1-1/4	41	62.5	62.5	60	30
B380150075	B3 80 x 1-1/2 x 75	80	160	80	20	1-1/2	53	80	80	75	35



Toolholder with parallel shank and transversal rectangular seat, upside-down, left-hand short



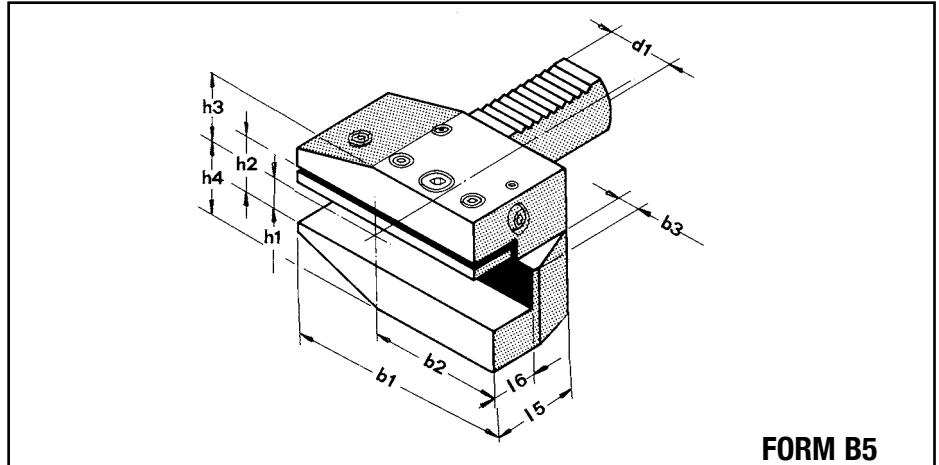
FORM B4

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B42062530	B4 20 x 5/8 x 30	20	55	30	7	5/8	22	30	25	30	14
B42062540	B4 20 x 5/8 x 40	20	55	30	7	5/8	22	30	25	40	14
B43075040	B4 30 x 3/4 x 40	30	70	35	10	3/4	29	38	35	40	18
B43075060	B4 30 x 3/4 x 60	30	70	35	10	3/4	29	38	35	60	18
B440100044	B4 40 x 1 x 44	40	85	42.5	12.5	1	34	48	42.5	44	22
B450125055	B4 50 x 1-1/4 x 55	50	100	50	16	1-1/4	41	60	50	55	25
B460125060	B4 60 x 1-1/4 x 60	60	125	62.5	16	1-1/4	41	62.5	62.5	60	30
B480150075	B4 80 x 1-1/2 x 75	80	160	80	20	1-1/2	53	80	80	75	35

VDI Toolholders

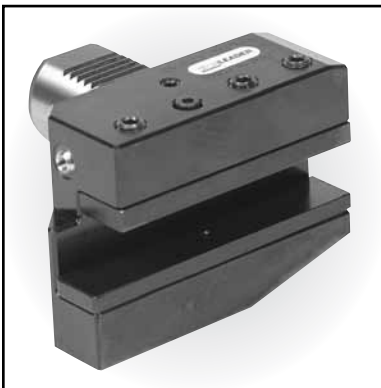


Toolholder with parallel shank and transversal seat, right-hand long

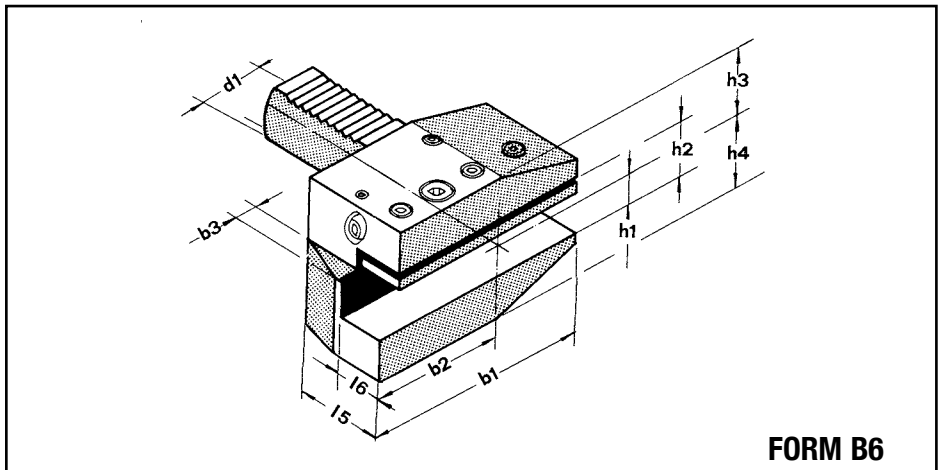


FORM B5

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B52062530	B5 20 x 5/8 x 30	20	75	50	7	5/8	22	25	30	30	14
B52062540	B5 20 x 5/8 x 40	20	75	50	7	5/8	22	25	30	40	14
B53075040	B5 30 x 3/4 x 40	30	100	65	10	3/4	29	28	38	40	18
B53075060	B5 30 x 3/4 x 60	30	100	65	10	3/4	29	28	38	60	18
B540100044	B5 40 x 1 x 44	40	118	75.5	12.5	1	34	32.5	48	44	22
B550125055	B5 50 x 1-1/4 x 55	50	130	80	16	1-1/4	41	35	60	55	25
B560125060	B5 60 x 1-1/4 x 60	60	145	82.5	16	1-1/4	41	42.5	62.5	60	30
B580150075	B5 80 x 1-1/2 x 75	80	190	110	20	1-1/2	53	55	80	75	35



Toolholder with parallel shank and transversal rectangular seat, left-hand long



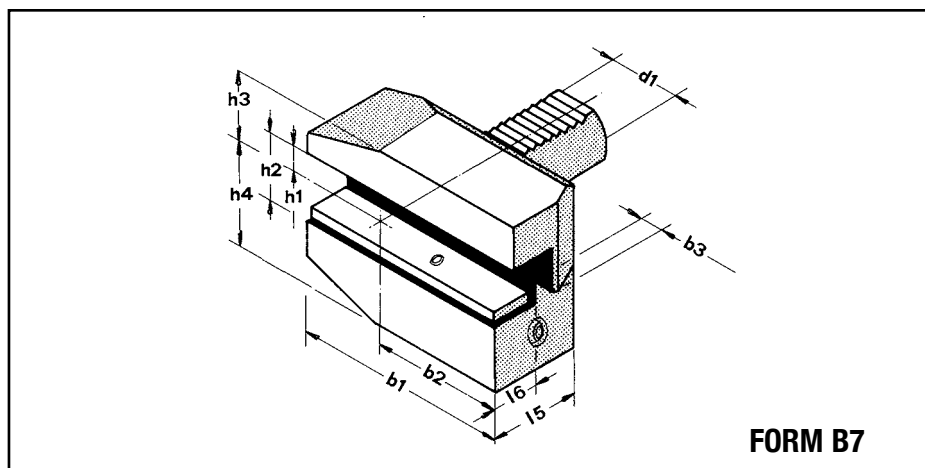
FORM B6

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B62062530	B6 20 x 5/8 x 30	20	75	50	7	5/8	22	25	30	30	14
B62062540	B6 20 x 5/8 x 40	20	75	50	7	5/8	22	25	30	40	14
B63075040	B6 30 x 3/4 x 40	30	100	65	10	3/4	29	28	38	40	18
B63075060	B6 30 x 3/4 x 60	30	100	65	10	3/4	29	28	38	60	18
B640100044	B6 40 x 1 x 44	40	118	75.5	12.5	1	34	32.5	48	44	22
B650125055	B6 50 x 1-1/4 x 55	50	130	80	16	1-1/4	41	35	60	55	25
B660125060	B6 60 x 1-1/4 x 60	60	145	82.5	16	1-1/4	41	42.5	62.5	60	30
B680150075	B6 80 x 1-1/2 x 75	80	190	110	20	1-1/2	53	55	80	75	35

VDI Toolholders



Toolholder with parallel shank and transversal rectangular seat, upside-down, right-hand long.

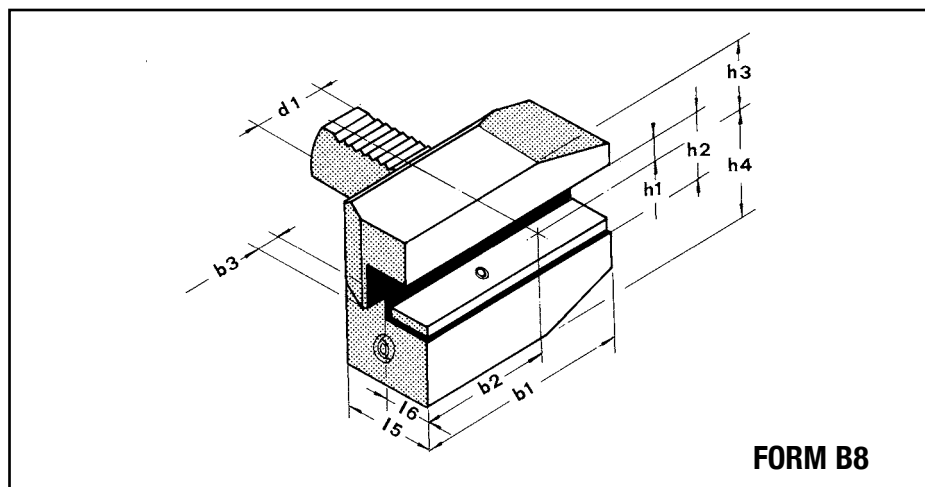


FORM B7

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B72062530	B7 20 x 5/8 x 30	20	75	50	7	5/8	22	30	25	30	14
B72062540	B7 20 x 5/8 x 40	20	75	50	7	5/8	22	30	25	40	14
B73075040	B7 30 x 3/4 x 40	30	100	65	10	3/4	29	38	35	40	18
B73075060	B7 30 x 3/4 x 60	30	100	65	10	3/4	29	38	35	60	18
B740100044	B7 40 x 1 x 44	40	118	75.5	12.5	1	34	48	42.5	44	22
B750125055	B7 50 x 1-1/4 x 55	50	130	80	16	1-1/4	41	60	50	55	25
B760125060	B7 60 x 1-1/4 x 60	60	145	82.5	16	1-1/4	41	62.5	62.5	60	30
B780150075	B7 80 x 1-1/2 x 75	80	190	110	20	1-1/2	53	80	80	75	35



Toolholder with parallel shank and transversal rectangular seat, upside-down, left-hand long.



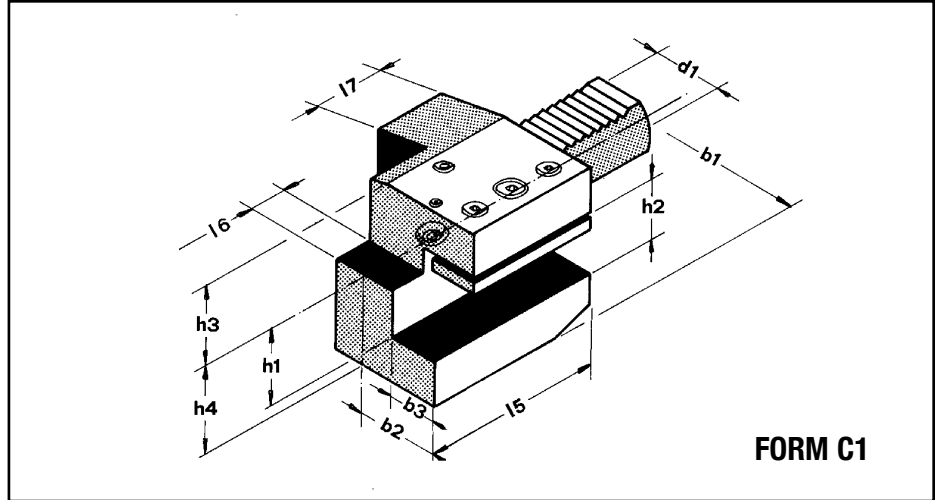
FORM B8

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
B82062530	B8 20 x 5/8 x 30	20	75	50	7	5/8	22	30	25	30	14
B82062540	B8 20 x 5/8 x 40	20	75	50	7	5/8	22	30	25	40	14
B83075040	B8 30 x 3/4 x 40	30	100	65	10	3/4	29	38	35	40	18
B83075060	B8 30 x 3/4 x 60	30	100	65	10	3/4	29	38	35	60	18
B840100044	B8 40 x 1 x 44	40	118	75.5	12.5	1	34	48	42.5	44	22
B850125055	B8 50 x 1-1/4 x 55	50	130	80	16	1-1/4	41	60	50	55	25
B860125060	B8 60 x 1-1/4 x 60	60	145	82.5	16	1-1/4	41	62.5	62.5	60	30
B880150075	B8 80 x 1-1/2 x 75	80	190	110	20	1-1/2	53	80	80	75	35

VDI Toolholders



Toolholder with parallel shank and longitudinal rectangular seat, right-hand

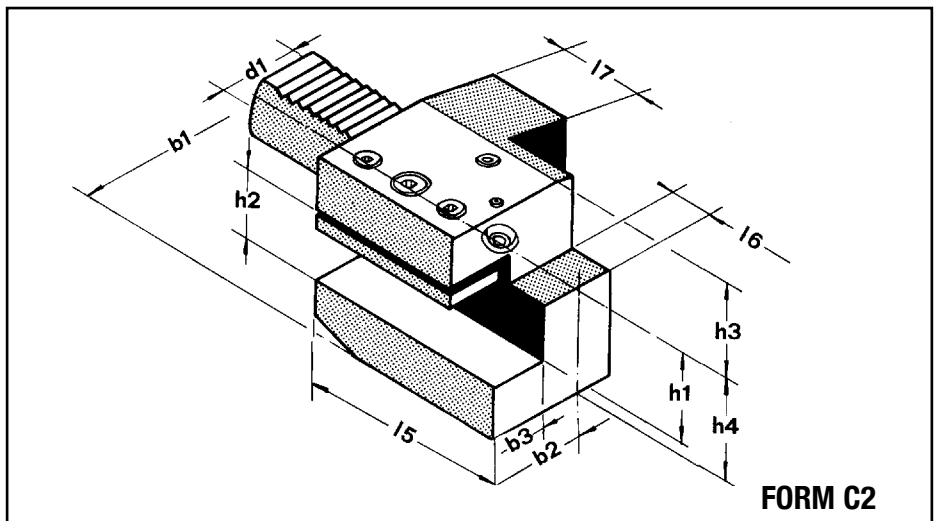


FORM C1

Order No.	Device Type	Dimensions										
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆	l ₇
C120625	C1 20 x 5/8	20	52	27	14	5/8	22	25	30	55	7	30
C120625W	C1 20 x 5/8 W	20	65	40	14	5/8	22	25	30	50	-	30
C130750	C1 30 x 3/4	30	70	35	18	3/4	29	28	38	70	10	30
C1401000	C1 40 x 1	40	85	42.5	22	1	34	32.5	48	85	12.5	30
C1501250	C1 50 x 1-1/4	50	100	50	24.5	1-1/4	41	35	60	100	16	40
C1601250	C1 60 x 1-1/4	60	125	62.5	30	1-1/4	41	42.5	62.5	125	16	40
C1801500	C1 80 x 1-1/2	80	160	80	39	1-1/2	53	55	80	160	20	40



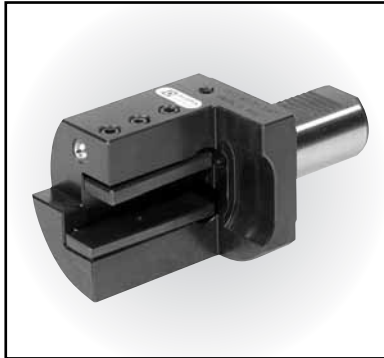
Toolholder with parallel shank and longitudinal rectangular seat, left-hand



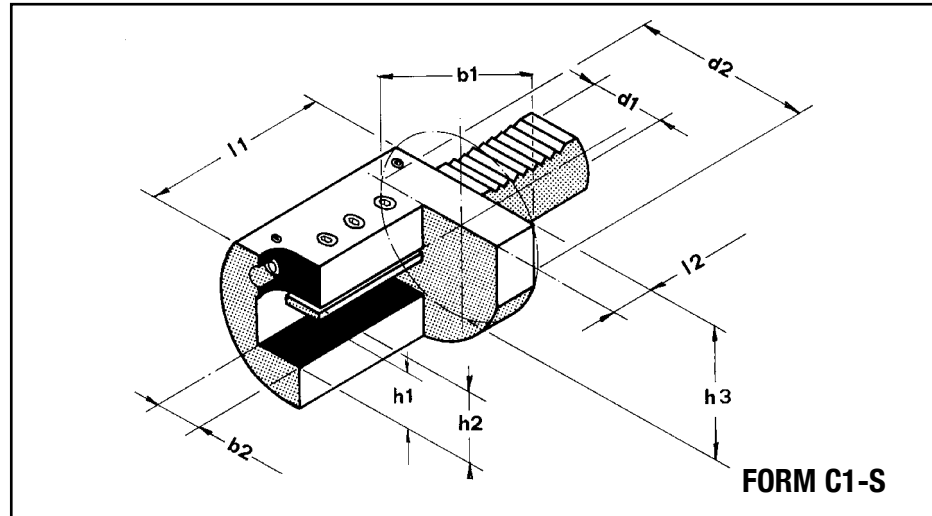
FORM C2

Order No.	Device Type	Dimensions										
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆	l ₇
C220625	C2 20 x 5/8	20	65	40	14	5/8	22	25	30	50	-	30
C230750	C2 30 x 3/4	30	76	41	18	3/4	29	28	38	70	10	30
C2401000	C2 40 x 1	40	90	47.5	22	1	34	32.5	48	85	12.5	30
C2501250	C2 50 x 1-1/4	50	105	55	24.5	1-1/4	41	35	60	100	16	40
C2601250	C2 60 x 1-1/4	60	125	62.5	30	1-1/4	41	42.5	62.5	125	16	40
C2801500	C2 80 x 1-1/2	80	160	78	37	1-1/2	53	55	80	160	20	40

VDI Toolholders



Toolholder with parallel shank and longitudinal rectangular seat, right-hand special

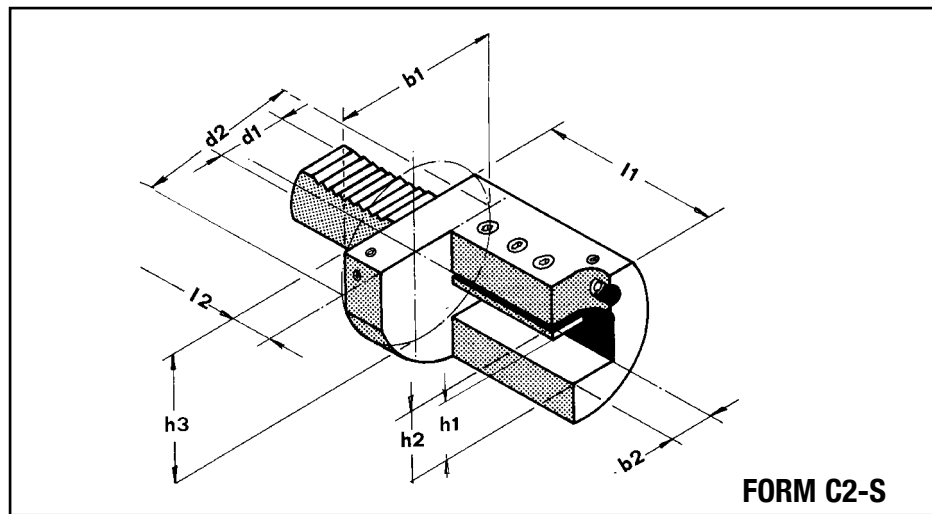


Order No.	Device Type	Dimensions								
		d ₁	d ₂	b ₁	b ₂	h ₁	h ₂	h ₃	l ₁	l ₂
C1S30750	C1-S 30 x 3/4	30	83	69.5	18	3/4	29	69.5	70	18
C1S401000	C1-S 40 x 1	40	98	84	22	1	34	84	100	22
C1S501250	C1-S 50 x 1-1/4	50	123	104	25	1-1/4	41	104	120	22
C1S601250	C1-S 60 x 1-1/4	60	123	104	32	1-1/4	41	104	135	25
C1S801500	C1-S 80 x 1-1/2	80	158	134	40	1-1/2	49	134	140	30

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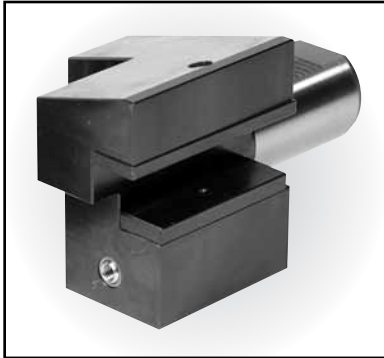
Toolholder with parallel shank and longitudinal rectangular seat, left-hand special



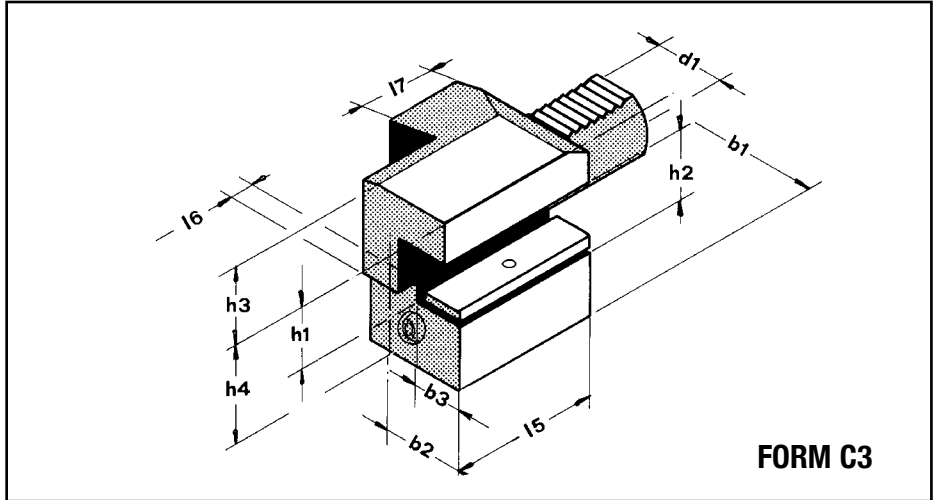
Order No.	Device Type	Dimensions								
		d ₁	d ₂	b ₁	b ₂	h ₁	h ₂	h ₃	l ₁	l ₂
C2S30750	C2-S 30 x 3/4	30	83	69.5	18	3/4	29	69.5	70	18
C2S401000	C2-S 40 x 1	40	98	84	22	1	34	84	100	22
C2S501250	C2-S 50 x 1-1/4	50	123	104	25	1-1/4	41	104	120	22
C2S601250	C2-S 60 x 1-1/4	60	123	104	32	1-1/4	41	104	135	25
C2S801500	C2-S 80 x 1-1/2	80	158	134	40	1-1/2	49	134	140	30

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VDI Toolholders



Toolholder with parallel shank and longitudinal rectangular seat, upside-down, right-hand

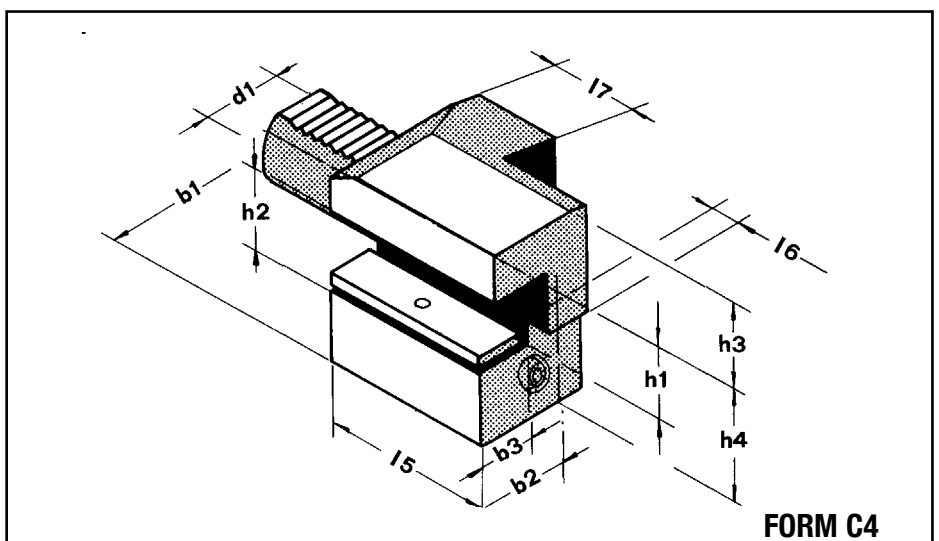


FORM C3

Order No.	Device Type	Dimensions										
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆	l ₇
C320625	C3 20 x 5/8	20	52	27	14	5/8	22	30	25	55	7	30
C320605W	C3 20 x 5/8 W	20	65	40	14	5/8	22	30	25	50	-	30
C330750	C3 30 x 3/4	30	70	35	18	3/4	29	38	35	70	10	30
C3401000	C3 40 x 1	40	85	42.5	22	1	34	48	42.5	85	12.5	30
C3501250	C3 50 x 1-1/4	50	100	50	24.5	1-1/4	41	60	50	100	16	40
C3601250	C3 60 x 1-1/4	60	125	62.5	30	1-1/4	41	62.5	62.5	125	16	40
C3801500	C3 80 x 1-1/2	80	160	80	39	1-1/2	53	80	80	160	20	40



Toolholder with parallel shank and longitudinal rectangular seat, upside-down, left-hand

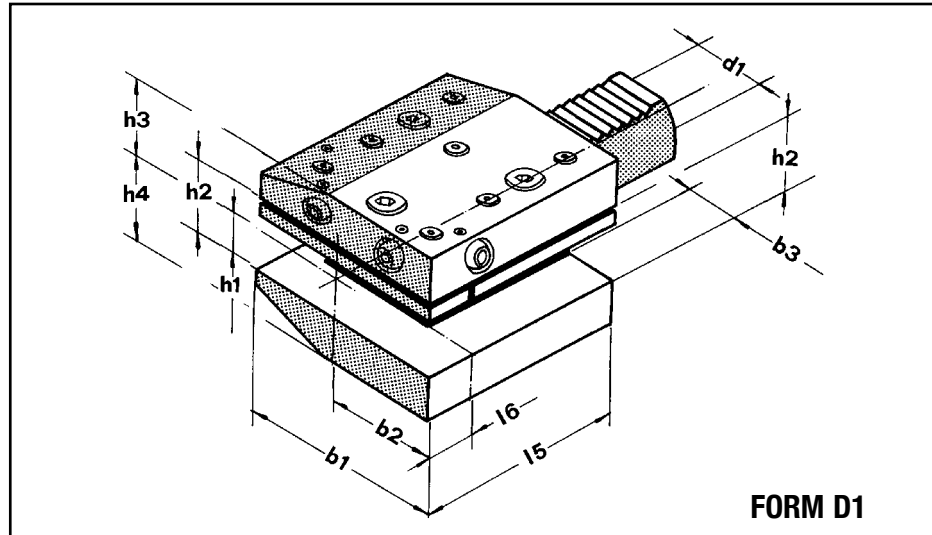


FORM C4

Order No.	Device Type	Dimensions										
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆	l ₇
C420625	C4 20 x 5/8	20	65	40	14	5/8	22	30	25	50	-	30
C430750	C4 30 x 3/4	30	76	41	18	3/4	29	38	35	70	10	30
C4401000	C4 40 x 1	40	90	47.5	22	1	34	48	42.5	85	12.5	30
C4501250	C4 50 x 1-1/4	50	105	55	24.5	1-1/4	41	60	50	100	16	40
C4601250	C4 60 x 1-1/4	60	125	62.5	30	1-1/4	41	62.5	62.5	125	16	40
C4801500	C4 80 x 1-1/2	80	160	78	37	1-1/2	53	80	80	160	20	40

VDI Toolholders

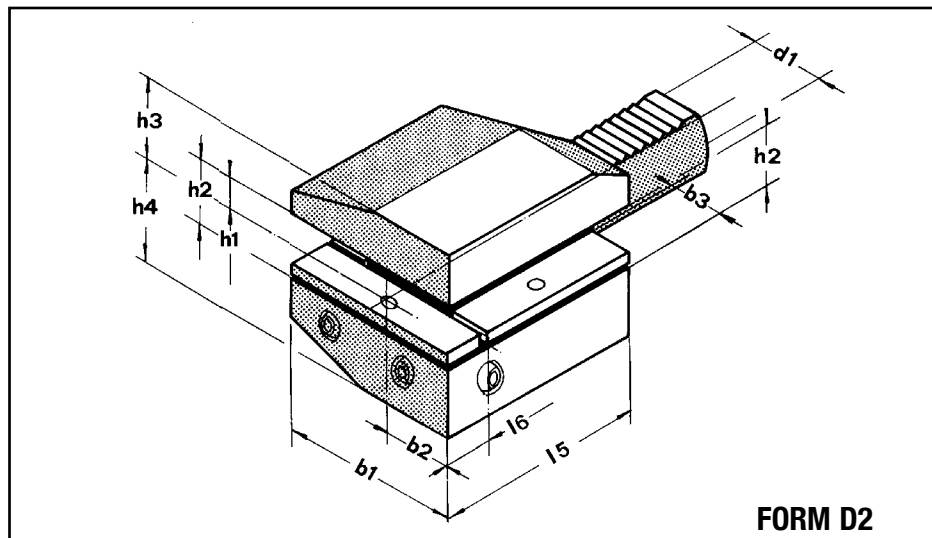
Toolholder with parallel shank and multiple rectangular seats



Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
D130750	D1 30 x 3/4	30	70	35	14.5	3/4	29	28	38	60	25
D1401000	D1 40 x 1	40	85	42.5	19.5	1	34	32.5	48	72.5	30
D1501250	D1 50 x 1-1/4	50	100	50	24.5	1-1/4	45	35	60	84	34
D1601250	D1 60 x 1-1/4	60	125	62.5	30	1-1/4	34	42.5	62.5	109	46.5
D1801500	D1 80 x 1-1/2	80	160	80	39	1-1/2	45	55	80	140	60

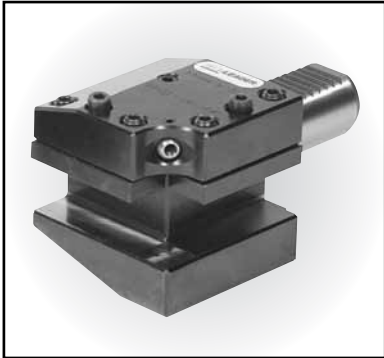


Toolholder with parallel shank and multiple rectangular seats, upside-down

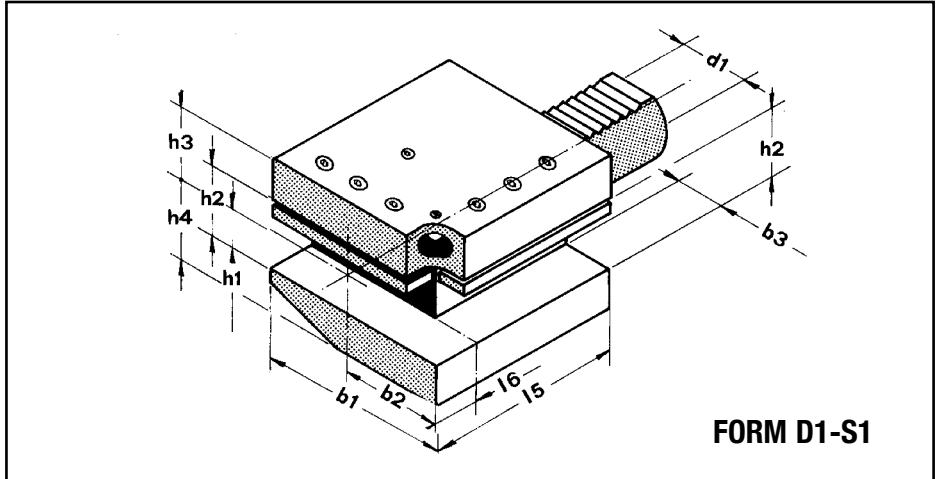


Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
D230750	D2 30 x 3/4	30	70	35	14.5	3/4	29	38	35	60	25
D2401000	D2 40 x 1	40	85	42.5	19.5	1	34	48	42.5	72.5	30
D2501250	D2 50 x 1-1/4	50	100	50	24.5	1-1/4	45	60	50	84	34
D2601250	D2 60 x 1-1/4	60	125	62.5	30	1-1/4	34	62.5	62.5	109	46.5
D2801500	D2 80 x 1-1/2	80	160	80	39	1-1/2	45	80	80	140	60

VDI Toolholders



Toolholder with parallel shank and multiple rectangular seats, right-hand special



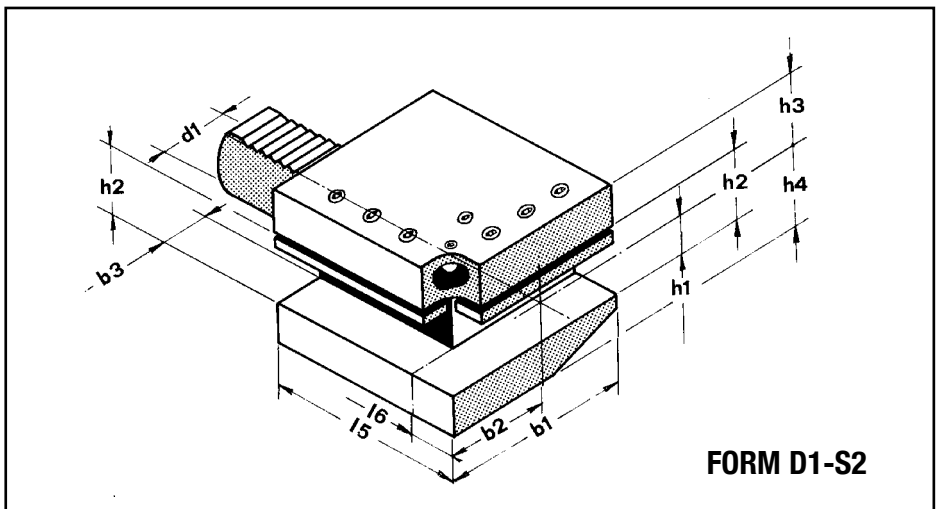
FORM D1-S1

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
D1S120625	D1-S1 20 x 5/8	20	55	30	14	5/8	22	25	30	55	14
D1S130750	D1-S1 30 x 3/4	30	70	35	18	3/4	29	28	38	70	18
D1S1401000	D1-S1 40 x 1	40	85	42.5	22	1	34	32.5	48	85	22
D1S1501250	D1-S1 50 x 1-1/4	50	100	50	25	1-1/4	41	35	60	120	25
D1S1601250	D1-S1 60 x 1-1/4	60	125	62.5	30	1-1/4	41	42.5	62.5	135	30
D1S1801500	D1-S1 80 x 1-1/2	80	160	80	39	1-1/2	53	55	80	160	35

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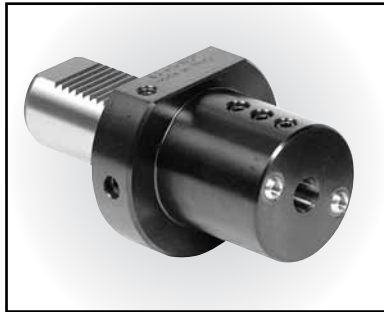
Toolholder with parallel shank and multiple rectangular seats, left-hand special



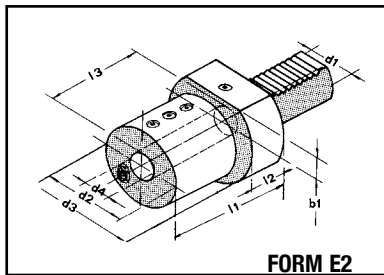
FORM D1-S2

Order No.	Device Type	Dimensions									
		d ₁	b ₁	b ₂	b ₃	h ₁	h ₂	h ₃	h ₄	l ₅	l ₆
D1S220625	D1-S2 20 x 5/8	20	55	30	14	5/8	22	25	30	55	14
D1S230750	D1-S2 30 x 3/4	30	76	41	18	3/4	29	28	38	70	18
D1S2401000	D1-S2 40 x 1	40	90	47.5	22	1	34	32.5	48	85	22
D1S2501250	D1-S2 50 x 1-1/4	50	105	55	25	1-1/4	41	35	60	120	25
D1S2601250	D1-S2 60 x 1-1/4	60	125	62.5	30	1-1/4	41	42.5	62.5	135	30
D1S2801500	D1-S2 80 x 1-1/2	80	160	80	37	1-1/2	53	55	80	160	35

VDI Toolholders



Toolholder with parallel shank for boring tools



Coolant Flow External and Internal on these Holders

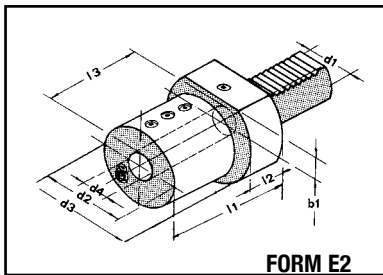
See pages 4-16 for reducing bushings

Order No.	Device Type	Dimensions							
		d ₁	d ₂	d ₃	d ₄	b ₁	l ₁	l ₂	l ₃
E220250	E2 20 x 1/4	20	40	50	1/4	-	50	18	41
E220375	E2 20 x 3/8	20	40	50	3/8	-	50	18	41
E220500	E2 20 x 1/2	20	40	50	1/2	-	50	18	41
E220625	E2 20 x 5/8	20	40	50	5/8	-	50	18	41
E220750	E2 20 x 3/4	20	50	50	3/4	-	50	18	41
E2201000	E2 20 x 1	20	50	50	1	-	60	18	51
E230250	E2 30 x 1/4	30	55	68	1/4	28	60	22	51
E230375	E2 30 x 3/8	30	55	68	3/8	28	60	22	51
E230500	E2 30 x 1/2	30	55	68	1/2	28	60	22	51
E230625	E2 30 x 5/8	30	55	68	5/8	28	60	22	51
E230750	E2 30 x 3/4	30	55	68	3/4	28	60	22	51
E2301000	E2 30 x 1	30	55	68	1	28	60	22	51
E2301250	E2 30 x 1-1/4	30	68	68	1-1/4	28	75	22	61
E2301500	E2 30 x 1-1/2	30	68	68	1-1/2	28	75	22	76
E240375	E2 40 x 3/8	40	55	83	3/8	32.5	75	22	61
E240500	E2 40 x 1/2	40	55	83	1/2	32.5	75	22	61
E240625	E2 40 x 5/8	40	55	83	5/8	32.5	75	22	61
E240750	E2 40 x 3/4	40	55	83	3/4	32.5	75	22	61
E2401000	E2 40 x 1	40	55	83	1	32.5	75	22	61
E2401250	E2 40 x 1-1/4	40	83	83	1-1/4	32.5	75	22	61
E2401500	E2 40 x 1-1/2	40	83	83	1-1/2	32.5	90	22	76
E2401750	E2 40 x 1-3/4	40	83	83	1-3/4	32.5	90	-	76
E2402000	E2 40 x 2	40	83	83	2	-	90	22	75
E250500	E2 50 x 1/2	50	68	98	1/2	35	90	30	76
E250625	E2 50 x 5/8	50	68	98	5/8	35	90	30	76
E250750	E2 50 x 3/4	50	68	98	3/4	35	90	30	76
E2501000	E2 50 x 1	50	68	98	1	35	90	30	76
E2501250	E2 50 x 1-1/4	50	68	98	1-1/4	35	90	30	76
E2501500	E2 50 x 1-1/2	50	98	98	1-1/2	35	90	30	76
E2501750	E2 50 x 1-3/4	50	98	98	1-3/4	35	90	30	76
E2502000	E2 50 x 2	50	98	98	2	35	100	30	86
E2502500	E2 50 x 2-1/2	50	98	98	2-1/2	45	100	-	86
E260625	E2 60 x 5/8	60	68	123	5/8	42.5	90	30	76
E260750	E2 60 x 3/4	60	68	123	3/4	42.5	90	30	76
E2601000	E2 60 x 1	60	68	123	1	42.5	90	30	76
E2601250	E2 60 x 1-1/4	60	68	123	1-1/4	42.5	90	30	76
E2601500	E2 60 x 1-1/2	60	98	123	1-1/2	42.5	90	30	76
E2601750	E2 60 x 1-3/4	60	98	123	1-3/4	42.5	90	30	76
E2602000	E2 60 x 2	60	98	123	2	42.5	100	30	86
E2602500	E2 60 x 2-1/2	60	110	123	2-1/2	42.5	100	30	86
E280750	E2 80 x 3/4	80	68	158	3/4	55	100	40	86
E2801000	E2 80 x 1	80	68	158	1	55	100	40	86
E2801250	E2 80 x 1-1/4	80	68	158	1-1/4	55	100	40	86
E2801500	E2 80 x 1-1/2	80	98	158	1-1/2	55	100	40	86
E2801750	E2 80 x 1-3/4	80	98	158	1-3/4	55	100	40	86
E2802000	E2 80 x 2	80	98	158	2	55	100	40	86

VDI Toolholders



Toolholder with parallel shank for boring tools



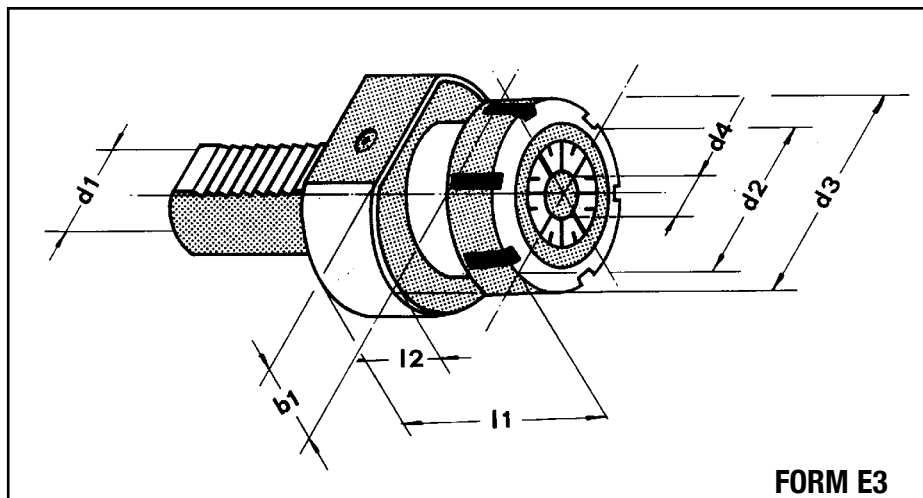
Coolant Flow External and Internal on these Holders

Order No.	Device Type	Dimensions						
		d ₁	d ₂	d ₃	d ₄	l ₁	l ₂	l ₃
E23016	E2 30 x 16	30	55	68	16	60	22	51
E23020	E2 30 x 20	30	55	68	20	60	22	51
E23025	E2 30 x 25	30	55	68	25	60	22	51
E24032	E2 30 x 32	30	68	68	32	75	22	61
E24016	E2 40 x 16	40	55	83	16	75	22	61
E24020	E2 40 x 20	40	55	83	20	75	22	61
E24025	E2 40 x 25	40	55	83	25	75	22	61
E24032	E2 40 x 32	40	83	83	32	75	22	61
E24040	E2 40 x 40	40	83	83	40	90	22	76
E24050	E2 40 x 50	40	83	83	50	90	22	75
E25016	E2 50 x 16	50	68	98	16	90	30	76
E25020	E2 50 x 20	50	68	98	20	90	30	76
E25025	E2 50 x 25	50	68	98	25	90	30	76
E25032	E2 50 x 32	50	68	98	32	90	30	76
E25040	E2 50 x 40	50	98	98	40	90	30	76
E25050	E2 50 x 50	50	98	98	50	100	30	86
E26016	E2 60 x 16	60	68	123	16	90	30	76
E26020	E2 60 x 20	60	68	123	20	90	30	76
E26025	E2 60 x 25	60	68	123	25	90	30	76
E26032	E2 60 x 32	60	68	123	32	90	30	76
E26040	E2 60 x 40	60	98	123	40	90	30	76
E26050	E2 60 x 50	60	98	123	50	90	30	86

VDI Toolholders



ECK and TG style collet chucks with parallel shank



FORM E3

Our ECK Collet Chucks accepts the following competitors styles of collets: DR, ER, ECK & RD .

See pages 3-7 to 3-15 for ECK/ER collets

ECK STYLE

Order No.	Device Type	Dimensions						
		d ₁	d ₂	d ₃	d ₄	b ₁	l ₁	l ₂
E320ECX25	E3-20-ECX 25	20	42	50	1-16 mm	-	60	18
E330ECX25	E3-30-ECX 25	30	50	68	1-16 mm	28	65	22
E330ECX32	E3-30-ECX 32	30	50	68	2-20 mm	28	65	22
E330ECX40	E3-30-ECX 40	30	63	68	4-26 mm	28	75	22
E340ECX25	E3-40-ECX 25	40	42	83	1-16 mm	32.5	65	22
E340ECX32	E3-40-ECX 32	40	50	83	2-20 mm	32.5	65	22
E340ECX40	E3-40-ECX 40	40	63	83	4-26 mm	32.5	75	22
E350ECX40	E3-50-ECX 40	50	63	98	4-26 mm	35	75	30

TG STYLE

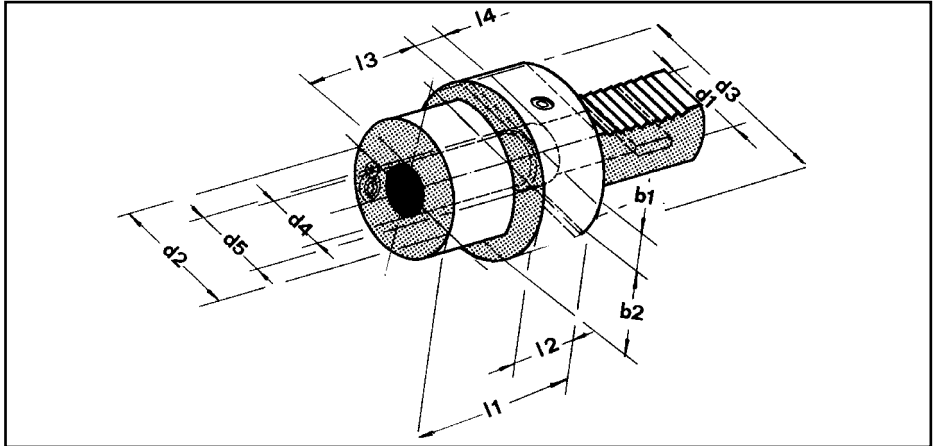
See pages 3-2 to 3-3 for TG collets

Order No.	Device Type	Dimensions						
		d ₁	d ₂	d ₃	d ₄	b ₁	l ₁	l ₂
E330TG100	E3-30-TG100	30	63.5	68	3/32"-1"	28	65	22
E340TG100	E3-40-TG100	40	63.5	83	3/32"-1"	32.5	65	22
E350TG100	E3-50-TG100	50	63.5	98	3/32"-1"	35	65	30
E360TG100	E3-60-TG100	60	63.5	123	3/32"-1"	42.5	85	30
E360TG150	E3-60-TG150	60	82.5	123	1/2"-1-1/2"	42.5	85	30

VDI Toolholders

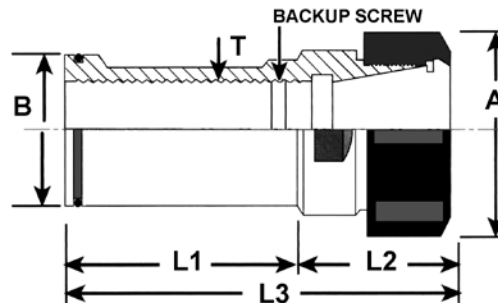
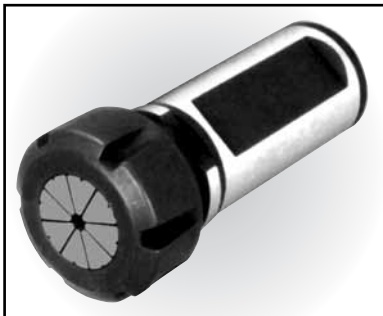


Toolholder with parallel shank and morse taper holder



Order No.	Device Type	Dimensions											
		d ₁	d ₂	d ₃	d ₄	d ₅	b ₁	b ₂	l ₁	l ₂	l ₃	l ₄	
F20MKD1	F 20 MK-D1	20	-	50	12.065	13.5	-	23	23	-	16	12	
F30MKD1	F 30 MK-D1	30	-	68	12.065	13.5	28	30	27	-	16	12	
F30MKD2	F 30 MK-D2	30	-	68	17.780	19.5	28	30	27	-	20	12	
F30MKD3	F 30 MK-D3	30	52	68	23.825	24.5	-	28	44	29	15	55	
F40MKD2	F 40 MK-D2	40	55	83	17.780	19.5	32.5	-	36	22	20	12	
F40MKD3	F 40 MK-D3	40	58	83	23.825	24.5	32.5	-	36	22	30	12	
F40MKD4	F 40 MK-D4	40	68	83	31.267	32	32.5	-	80	22	40	14	
F50MKD2	F 50 MK-D2	50	55	98	17.780	19.5	35	-	36	30	20	12	
F50MKD3	F 50 MK-D3	50	58	98	23.825	24.5	35	-	36	30	30	12	
F50MKD4	F 50 MK-D4	50	68	98	31.267	32	35	-	50	30	40	14	
F60MKD3	F 60 MK-D3	60	58	123	23.825	24.5	42.5	-	36	30	30	12	
F60MKD4	F 60 MK-D4	60	68	123	31.267	32	42.5	-	50	30	40	14	
F60MKD5	F 60 MK-D5	60	98	123	44.399	44	42.5	-	63	30	52	16	
F80MKD4	F 80 MK-D4	80	68	158	31.267	32	55	-	50	40	40	14	
F80MKD5	F 80 MK-D5	80	98	158	44.399	44	55	-	50	40	52	16	

CNC Lathe ECX/ER Collet Extensions



Order No.	Device Type	B (in)	L ₁ (mm)	L ₂ (mm)	L ₃ (mm)	A (mm)	Backup Screw
025-010	ECX25	1-1/4	60	47	107	42	M18 x 1.5
032-010	ECX32	1-1/4	60	58	118	50	M22 x 1.5
040-010	ECX40	1-1/4	60	60	120	63	M28 x 1.5
032-011	ECX32	1-1/2	80	58	138	50	M22 x 1.5
040-011	ECX40	1-1/2	75	60	135	63	M28 x 1.5

VDI Toolholders

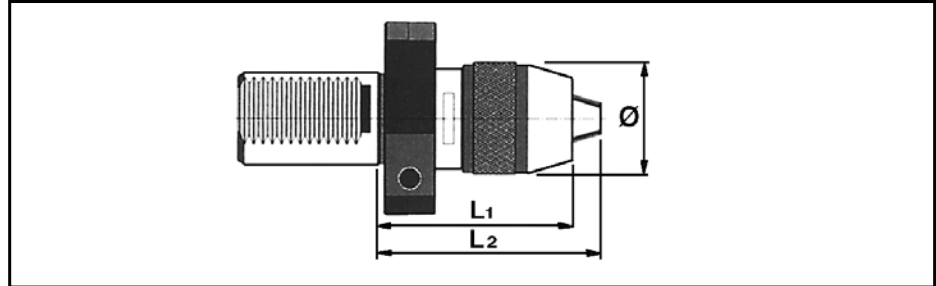


**Super Precision
Short Keyless
Drill Chuck
With VDI Shank**

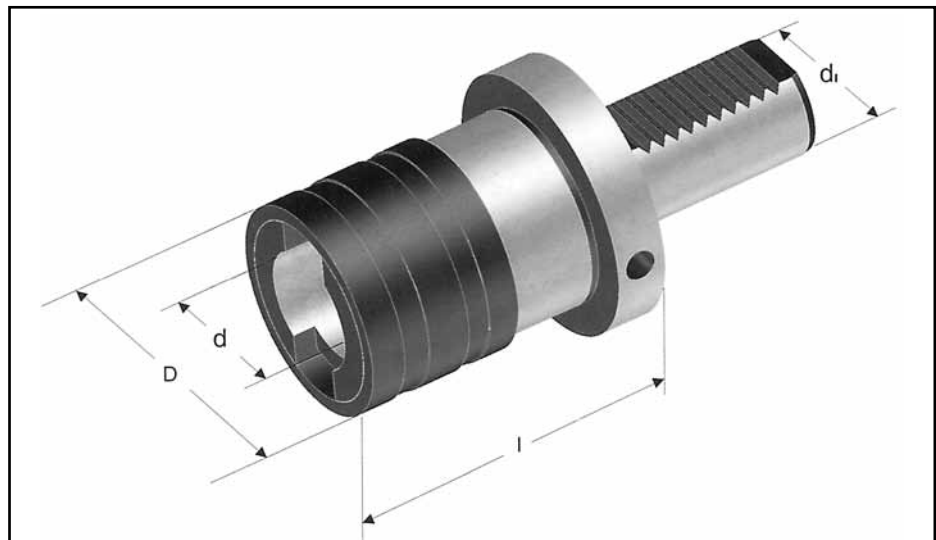


**VDI Shank
Tappers With
Tension &
Compression**

**See pages 3-36 to 3-37 for
Quick Change Tap Adapters**



Order No.	Device Type	d ₁		Capacity Minimum		Range Ød Maximum		Dimensions			Sleeve dia (D)	
		mm	inches	mm	inches	mm	inches	Closed L		mm	inches	
E73008	NPU-08-VDI30	30	0	0	0.3125	8	3.11	79	2.83	72	1.50	38
E73013	NPU-13-VDI30	30	0.031	1	0.500	13	4.13	105	3.70	94	1.89	48
E74013	NPU-13-VDI40	40	0.031	1	0.500	13	3.62	92	3.34	85	1.89	48
E74016	NPU-16-VDI40	40	0.125	3	0.625	16	3.78	96	3.34	85	2.17	55
E75016	NPU-16-VDI50	50	0.125	3	0.625	16	3.86	98	3.43	87	2.17	55
E76016	NPU-16-VDI60	60	0.125	3	0.625	16	3.86	98	3.43	87	2.17	55

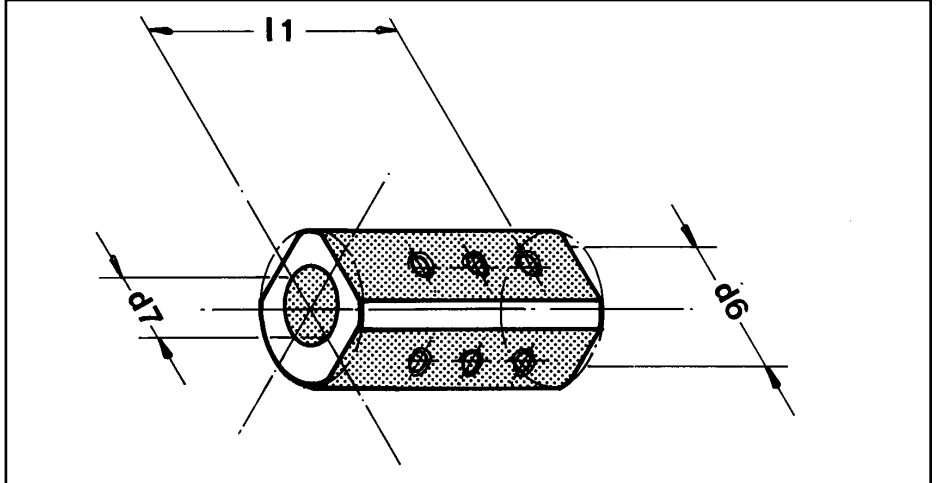


Order No.	Device Type	d ₁	d	D	I	Tap Capacity		Compensation	
						inches	mm	Return	Extra
E52019	32400 VDI20	20	19	38	55	NO. 6-9/16	M3-M12	9	9
E52031	32600 VDI20	20	31	55	77	5/16-7/8	M8-M20	15	15
E52519	32400 VDI25	25	19	38	55	NO. 6-9/16	M3-M12	9	9
E52531	32600 VDI25	25	31	55	77	5/16-7/8	M8-M20	15	15
E53019	32400 VDI30	30	19	38	55	NO. 6-9/16	M3-M12	9	9
E53031	32600 VDI30	30	31	55	77	5/16-7/8	M8-M20	15	15
E54019	32400 VDI40	40	19	38	55	NO. 6-9/16	M3-M12	9	9
E54031	32600 VDI40	40	31	55	77	5/16-7/8	M8-M20	15	15
E54048	32800 VDI40	40	48	79	110	13/16-1-3/8	M14-M33	24	24
E55048	32800 VDI50	50	48	79	110	13/16-1-3/8	M14-M33	24	24

Boring Bar Sleeves



**Boring bar sleeves
for E2 boring bar
holders**



**TAPPING
PROBLEMS?**

**CONTACT US FOR
UNIQUE TAPPING
SOLUTIONS.**

**USE HIGH
PERFORMANCE TAPS
FROM**



**THREADING
TECHNOLOGY**

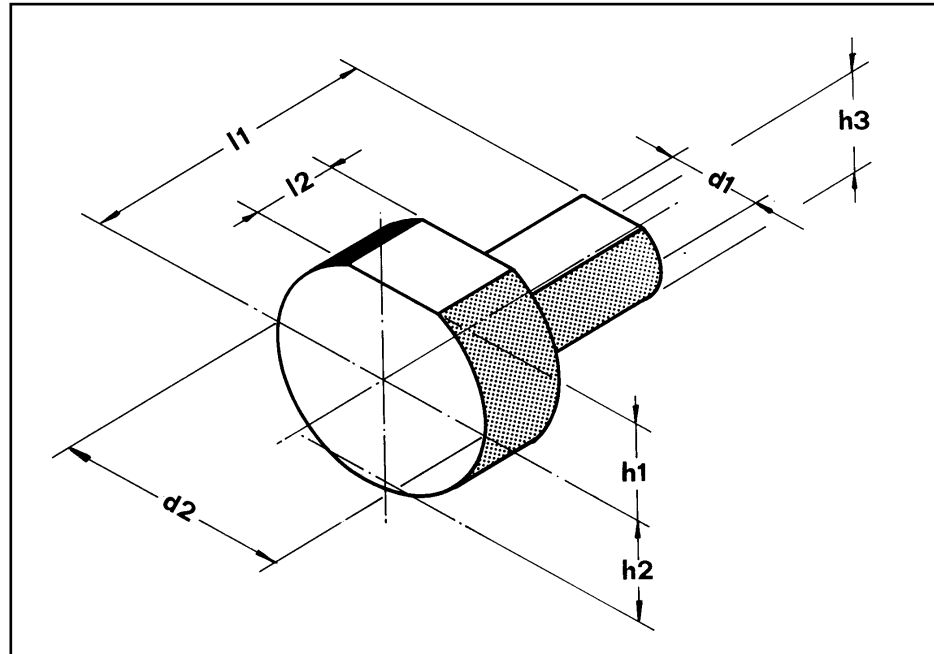
SWISS MADE



Order No.	Device Type	Dimensions		
		d ₆	d ₇	l ₁
E21100250	E2-1 1-1/4	1	1/4	60
E21100375	E2-1 1-3/8	1	3/8	60
E21100500	E2-1 1-1/2	1	1/2	60
E21125250	E2-1 1-1/4-1/4	1-1/4	1/4	70
E21125375	E2-1 1-1/4-3/8	1-1/4	3/8	70
E21125500	E2-1 1-1/4-1/2	1-1/4	1/2	70
E21125625	E2-1 1-1/4-5/8	1-1/4	5/8	70
E21125750	E2-1 1-1/4-3/4	1-1/4	3/4	70
E21150250	E2-1 1-1/2-1/4	1-1/2	1/4	80
E21150375	E2-1 1-1/2-3/8	1-1/2	3/8	80
E21150500	E2-1 1-1/2-1/2	1-1/2	1/2	80
E21150625	E2-1 1-1/2-5/8	1-1/2	5/8	80
E21150750	E2-1 1-1/2-3/4	1-1/2	3/4	80
E21200625	E2-1 2-5/8	2	5/8	90
E21200750	E2-1 2-3/4	2	3/4	90
E212001000	E2-1 2-1	2	1	90
E212001250	E2-1 2-1-1/4	2	1-1/4	90

VDI Toolholders

Plugs
Steel and Plastic



Steel

Order No.	Device Type	Dimensions						
		d_1	d_2	h_1	h_2	h_3	l_1	l_2
Z220	Z2-20	20	50	21	23	17	60	16
Z230	Z2-30	30	68	28	30	26	74	16
Z240	Z2-40	40	83	32.5	-	35	74	20
Z250	Z2-50	50	98	35	-	44	74	20
Z260	Z2-60	60	123	42.5	-	54	74	20
Z280	Z2-80	80	158	55	-	71	74	20



Plastic

Order No.	Device Type	Dimensions						
		d_1	d_2	h_1	h_2	h_3	l_1	l_2
Z2P20	Z2P-20	20	50	21	23	17	60	16
Z2P30	Z2P-30	30	68	28	30	26	74	16
Z2P40	Z2P-40	40	83	32.5	-	35	74	20
Z2P50	Z2P-50	50	98	35	-	44	74	20
Z2P60	Z2P-60	60	123	42.5	-	54	74	20
Z2P80	Z2P-80	80	158	55	-	71	74	20

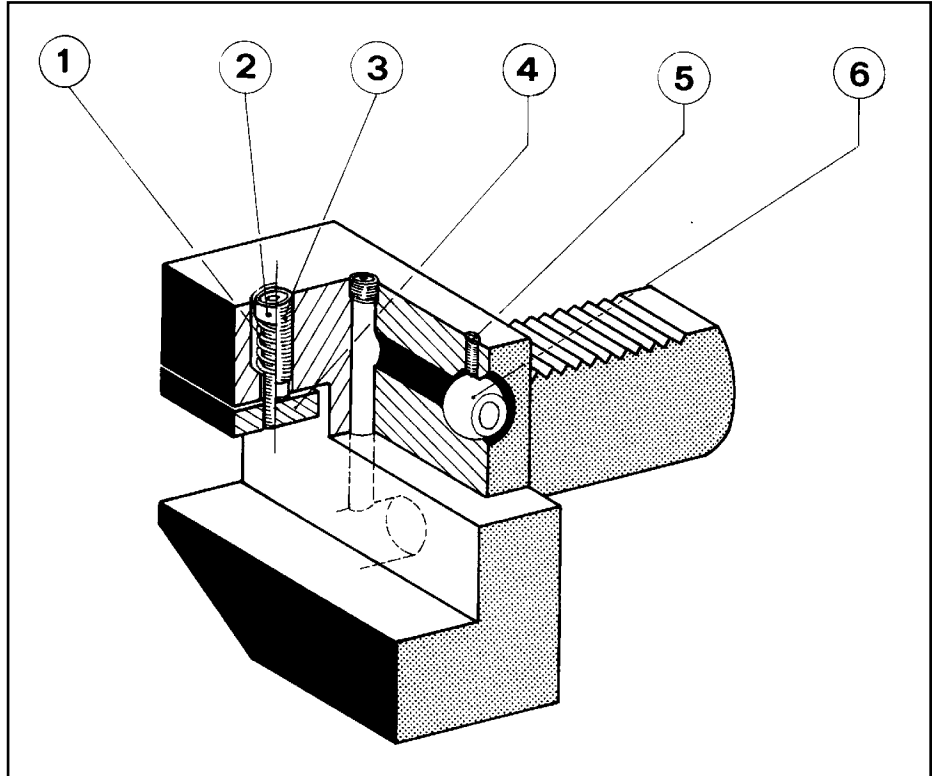
Spare Parts

Spare Parts for Toolholders Old Design

To order the spare part compare the damaged part with the drawing and specify: Part No. – Toolholder Code

Example: 6-B140 x 20 x 44

POS.	Description
1	spring
2	screw
3	adapter
4	plate
5	sphere blocking grain
6	sphere

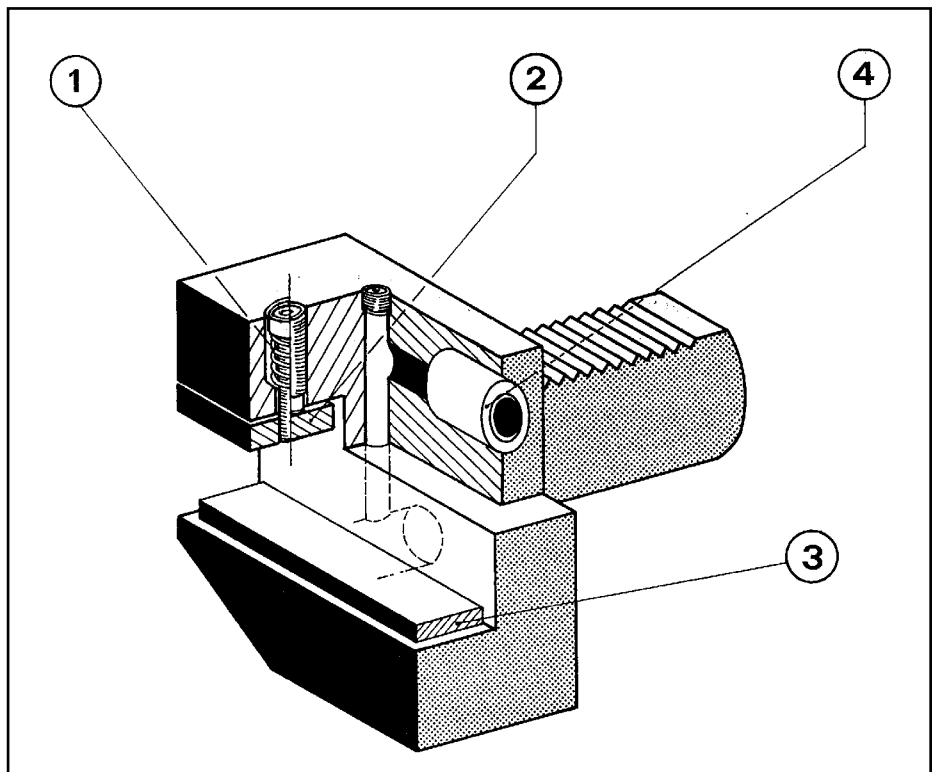


Spare Parts for Toolholders New Design

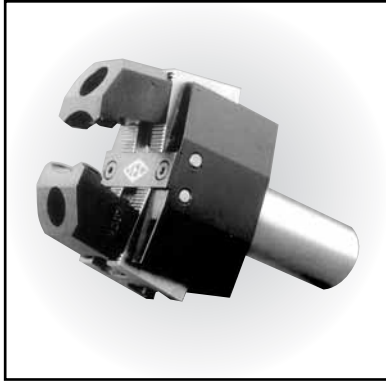
N.B. For pos. 2,3,4 when ordering please, give toolholder code

**Example:
Z3 for B140 x 25/20**

POS.	Code No.	Article
1	1102	spring
2	PB	stop plate
3	PR	reducing plate
4	Z3	cooling nozzle



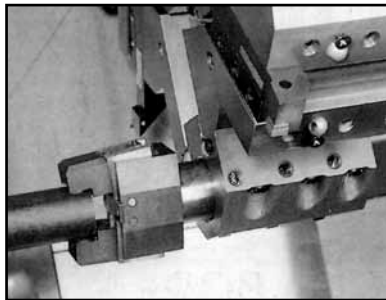
Powerpull Bar Puller



The Powerpull Bar Puller is for use on CNC or Automatic Lathes with an interchangeable tool turret. It is designed to pull bar stock and tubes into position for machining purposes, thus giving the ability for unmanned operation, without the expense and room needed with a bar feeder.

The Powerpull is a two-jaw lever chuck with variable tensioning jaws which cater to most types of material. It comes in two body sizes each with two sizes of jaws. This easy to set Bar Puller has adjustable gripping pressure and comes with a choice of standard or VDI Shanks. Special jaws can be designed and manufactured to suit unusual applications.

- TWO BODY SIZES • BAR CAPACITY 6-90mm
- ADJUSTABLE GRIPPING PRESSURE • STRONG CONSTRUCTION
- UNIT COMES WITH TWO SIZES OF JAWS PLUS CHOICE OF STANDARD SHANK SIZE

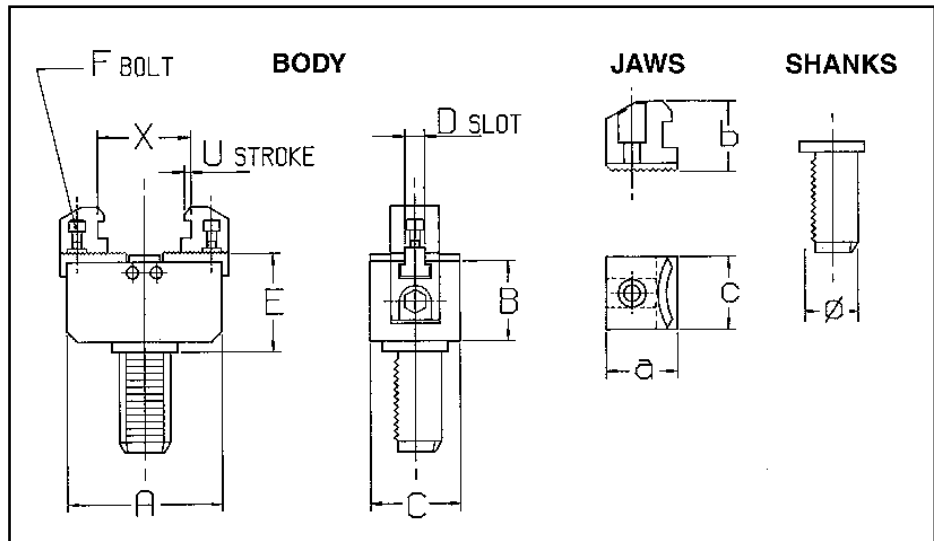


**POWERPULL ON TURRET
PULLING BAR INTO POSITION**

TECHNICAL DATA

Operating Description

The bar stock is initially fed by hand through the machine's hollow spindle to a fixed stop, the bar is then clamped by the spindle-mounted chuck or collet and machining sequence completed. The 'POWERPULL' mounted in the turret is brought towards the headstock and the jaws of the 'POWERPULL' are forced over the bar clamped in the spindle chuck. The spindle chuck is then unclamped and the spring gripping jaws of the 'POWERPULL' grip the bar stock, enabling a positive bar drag out to a predetermined stop position. Spindle chuck is then re-operated to clamp bar and the turret is withdrawn further to release gripping jaws. The bar is then ready for the machining process to be repeated.

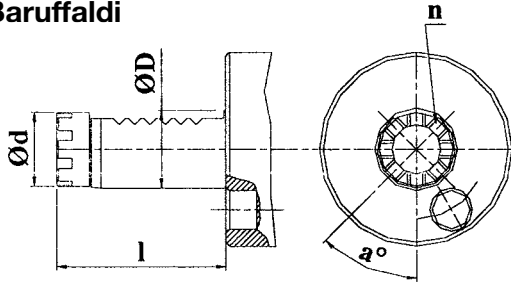


Order No.			Device Type	BODY DATA							JAW DATA				PLAIN SHANKS		VDI SHANKS	CLAMPING FORCE	
Inch	Metric	VDI		A	A	C	D	E	F	U	a	b	c	x	inch	metric		min.	max.
ER041250 ER041500 ER042000	ER0432 ER0440 ER0450	ER04V30 ER04V40 ER04V50	ER04	85	49	50	11	52	M8	2.5	30 23	38 38	29 29	6-36 1-1/2" 2"	1-1/4" 40mm 50mm	30 dia. 40 dia. 50 dia.	130	170	
ER061250 ER061500 ER062000	ER0632 ER0640 ER0650	ER06V30 ER06V40 ER06V50	ER06	120	60	60	14	65	M12	3	39 32	38 38	32 32	6-60 1-1/4" 1-1/2" 2"	32mm 40mm 50mm	30 dia. 40 dia. 50 dia.	200	270	

Coupling for VDI Driven Tools

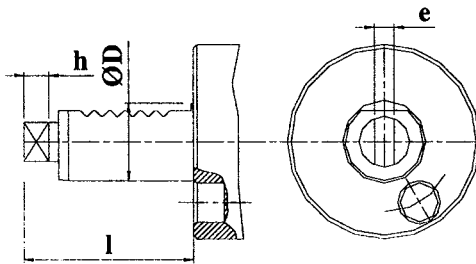
DIN 69880

Baruffaldi



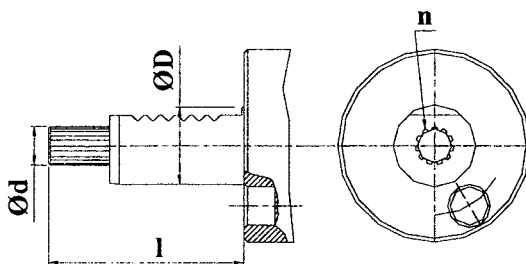
$\frac{\text{ØD}}{\text{(mm)}}$	20	25	30	40	50			
1 (mm)	44	51	59	68	84			
Ød(mm)	19	24	24	32	40			
n (mm)	6	6	6	8	8			
a°	60	60	60	45	45			
Code	...25	...26	...27	...28	...29			

Din 1809



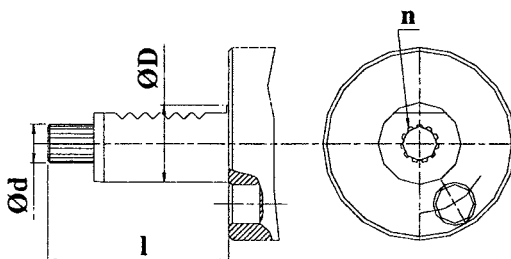
$\frac{\text{ØD}}{\text{(mm)}}$	20	25	30	40	50	60		
1	48	57	62	72	92	110		
Ød(mm)	10	12	12	18	24	29		
e (mm)	5	6	6	8	12	14		
h (mm)	6.5	7	7	6.5	13	14		
Code	...16	...17	...18	...19	...20	...21		

Sauter (Din 5482)



$\frac{\text{ØD}}{\text{(mm)}}$	16	20	30	40	50	60	80	
1 (mm)	44	51	55	63	93	108	144	
Ød(mm)	15.5	9.84	14.5	16.5	19.5	24.5	27.5	
n (mm)	13	11	8	9	12	14	15	
Code	...01	...02	...06	...09	...11	...13	...15	

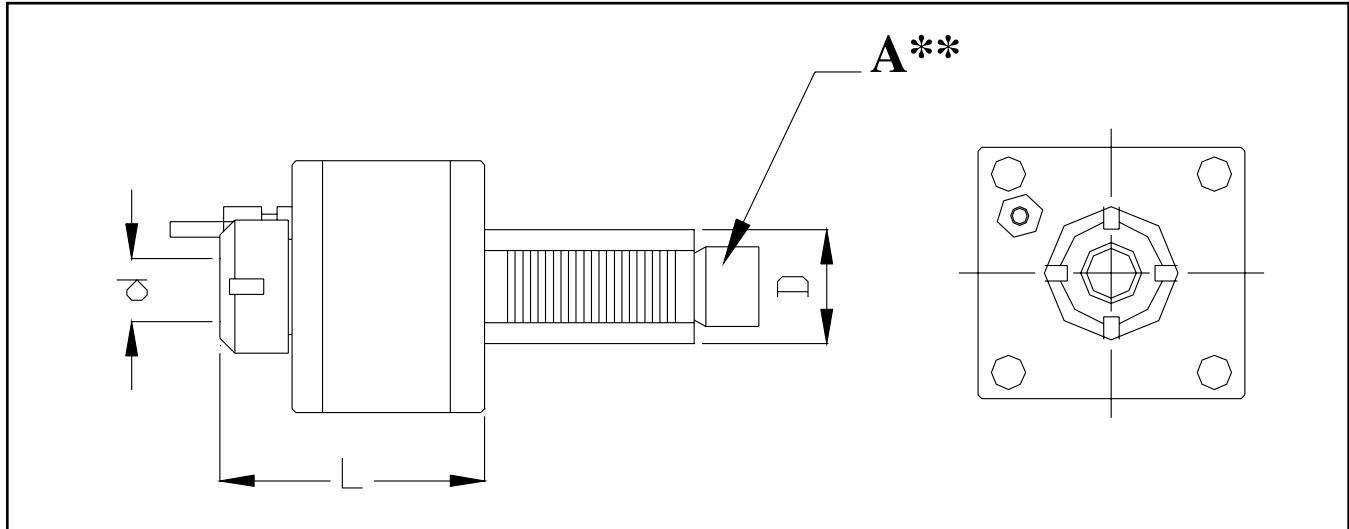
Sauter (Din 5480)



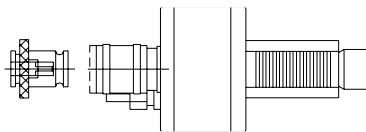
$\frac{\text{ØD}}{\text{(mm)}}$	16	20	25	30	40	50	60	80
1 (mm)	39	47	57	67	75	93	109	139
Ød(mm)	8	10	14	16	20	24	30	30
n (mm)	8	11	16	18	24	18	22	22
Code	...49	...50	...51	...52	...53	...54	...55	...56

Axial VDI Drilling & Milling Heads

DIN 69880



ORDER NO.	D(mm)	d Collet Style	L(mm)	RPM Max	Ratio	Nm	Kg.
TE16A07....	16	ECX/ER11	82	6000	1:1	15	1.1
TE20A10...	20	ECX/ER16	82	6000	1:1	15	1.1
TE30A13...	30	ECX/ER20	100	6000	1:1	25	2.8
TE40A20...	40	ECX/ER32	110	6000	1:1	60	4.0
TE50A20...	50	ECX/ER32	110	6000	1:1	80	4.8
TE50A26...	50	ECX/ER40	123	4500	1:1	80	4.9



**TAPPING HEAD (BILZ)
- ON REQUEST**

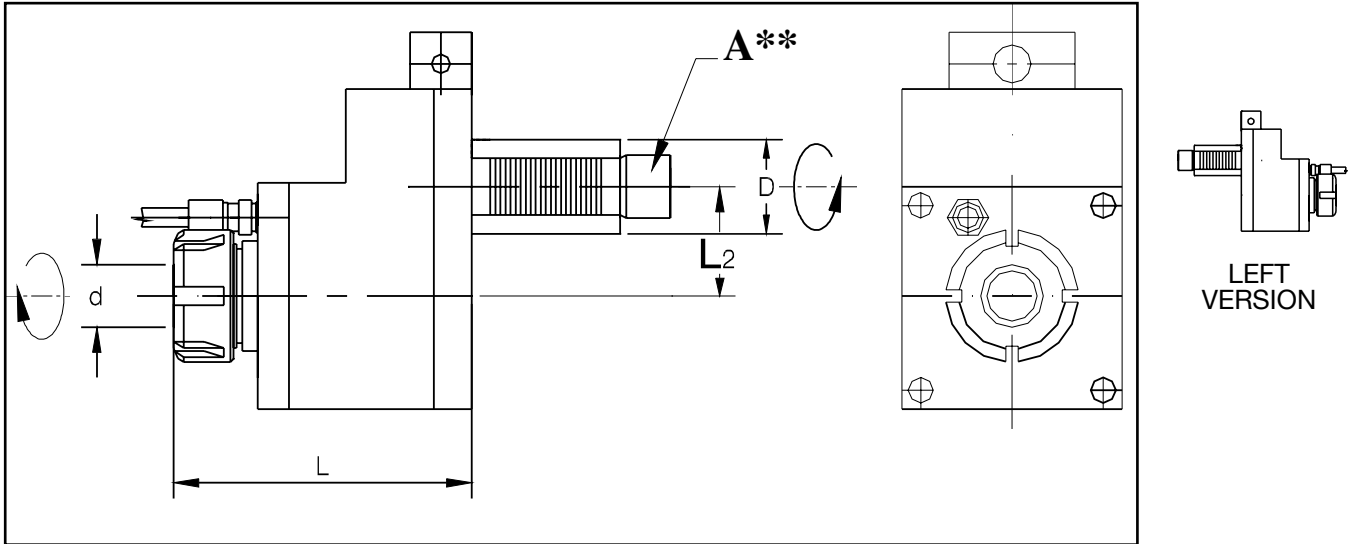
A** D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Example:

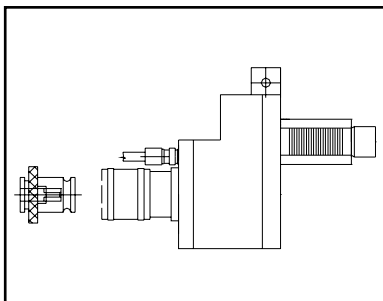
d = ECX/ER32
 D = 40
 A** = SAUTER DIN 5482
 ORDER NO. = TE40A2009

Axial Offset VDI Drilling & Milling Heads

DIN 69880



ORDER NO.	Dh6	d	L2	L	n. Max	Ratio	Nm	Kg.
TE16F07...	16	ECX/ER11	32	70	6000	1:1	15	1.1
TE30F13...	30	ECX/ER20	44	110	6000	1:1	25	3.5
TE40F20...	40	ECX/ER32	50	120	6000	1:1	50	4.5
TE50F20...	50	ECX/ER32	50	120	4500	1:1	50	7.8



TAPPING HEAD (BILZ)
- ON REQUEST

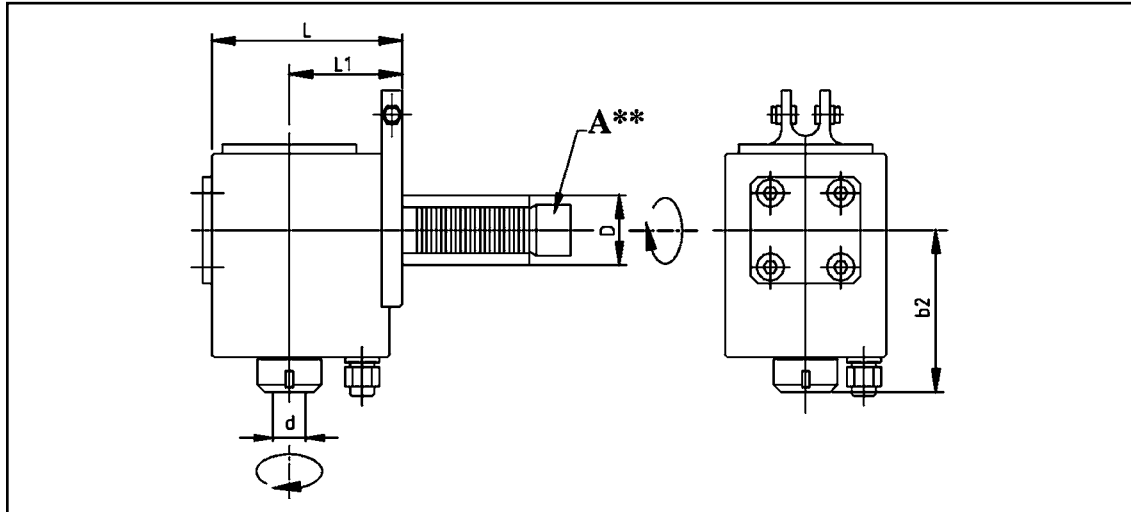
A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Example:

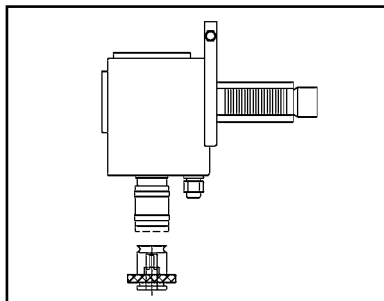
d = ECX/ER32
D = 40
A** = SAUTER DIN 5482
ORDER NO. = TE40F2009

Radial VDI Drilling & Milling Heads

DIN 69880



ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE30B13...	30	ECX/ER20	102	53	90	6000	1:1	25	3.8
TE40B20...	40	ECX/ER32	109	64	98	6000	1:1	50	6.0
TE50B20...	50	ECX/ER32	109	64	98	6000	1:1	50	6.8
TE50B26...	50	ECX/ER40	109	64	100	4500	1:1	50	7.0



TAPPING HEAD (BILZ)
- ON REQUEST

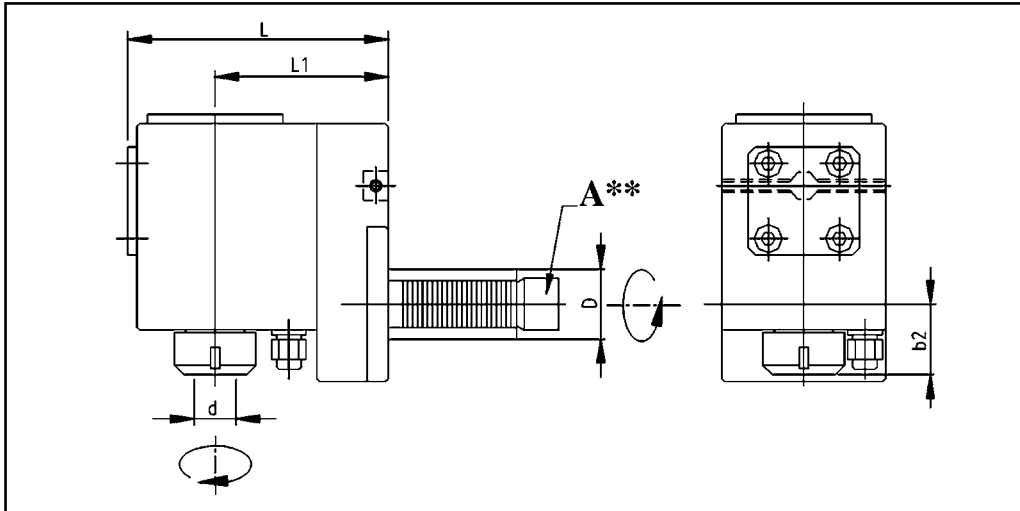
A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Example:

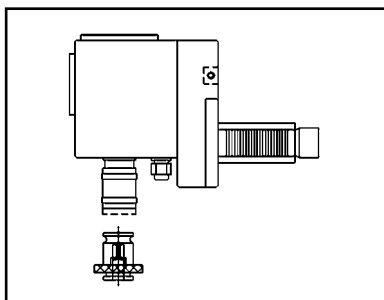
d = ECX/ER32
D = 40
A** = SAUTER DIN 5482
ORDER NO. = TE40B2009

Radial Offset VDI Drilling & Milling Heads

DIN 69880



ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE16C07...	16	ECX/ER11	70	48	28	6000	1:1	10	1.2
TE20C10...	20	ECX/ER16	70	48	37	6000	1:1	10	1.3
TE30C13...	30	ECX/ER20	106	70	48.5	6000	1:1	25	5.0
TE40C20...	40	ECX/ER32	130	86	40	6000	1:1	50	6.5
TE50C20...	50	ECX/ER32	130	86	40	6000	1:1	50	8.2
TE50C26...	50	ECX/ER40	140	100	45	4500	1:1	50	9.0



TAPPING HEAD (BILZ)
- ON REQUEST

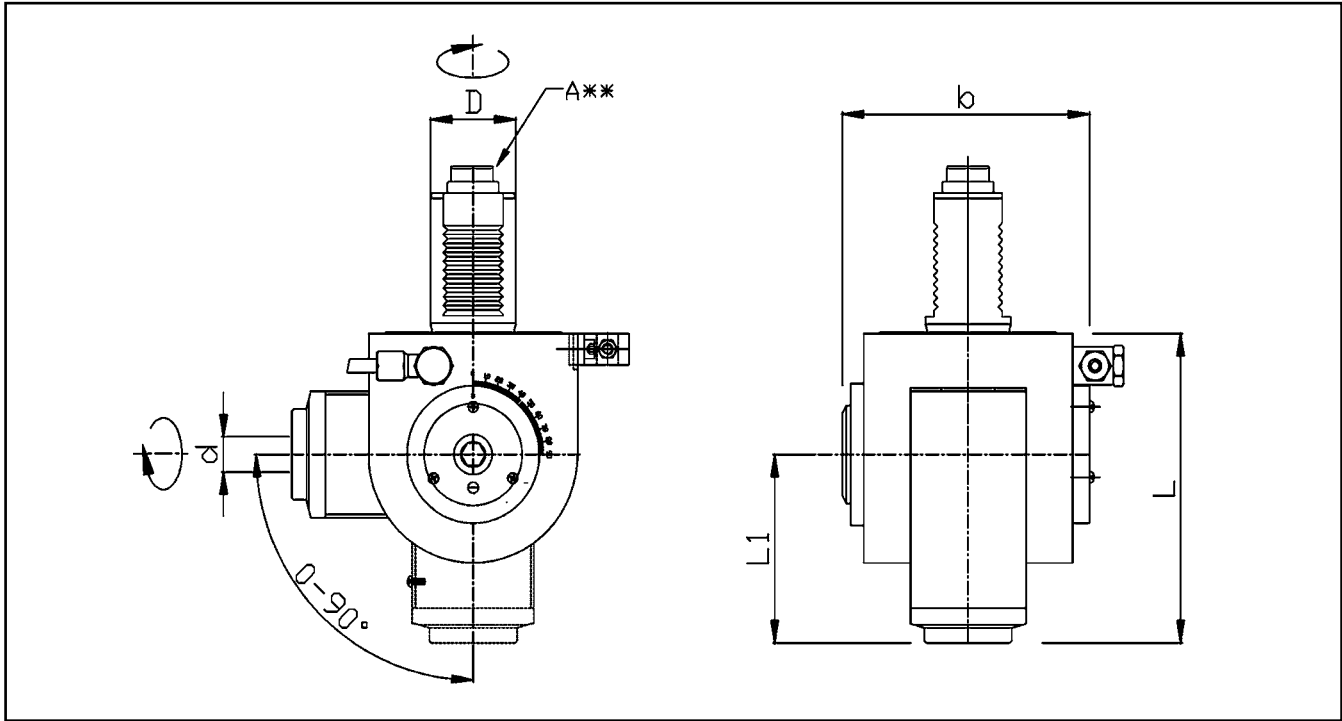
A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Example:

d = ECX/ER32
 D = 40
 A** = SAUTER DIN 5482
 ORDER NO. = TE40B2009

Universal Angle VDI Drilling & Milling Heads (0-90°)

DIN 69880

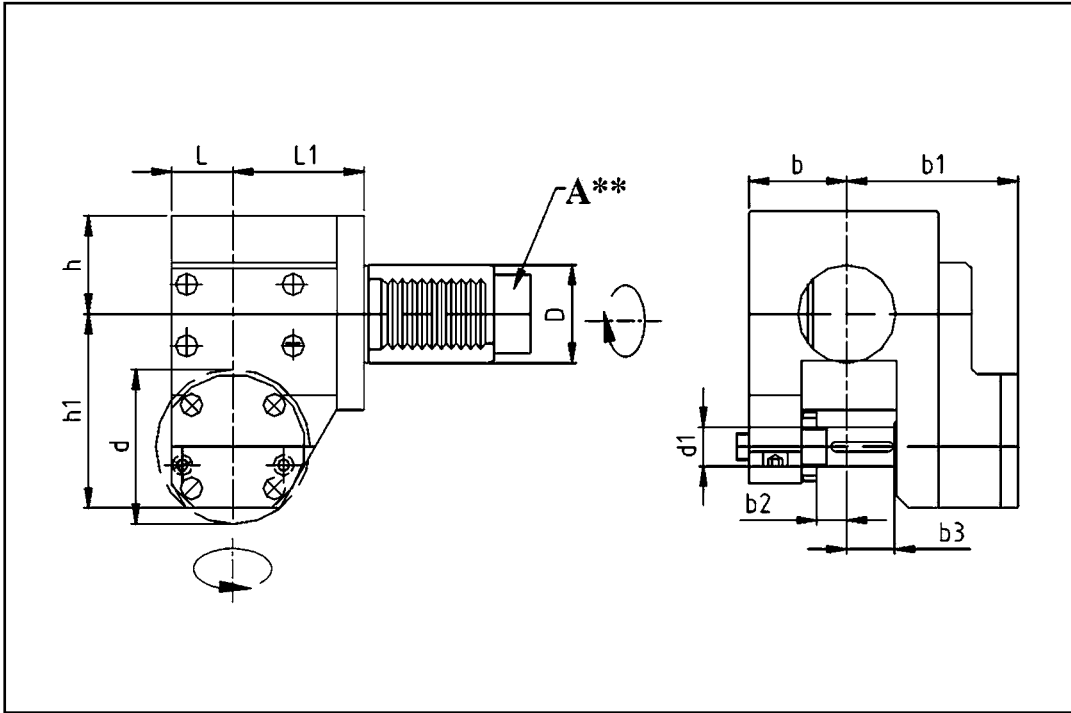


ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
TE30E10...	30	ECX/ER16	115	75	92	6000	1:1	10	4.5
HE40E16...	40	ECX/ER25	140	85	116	6000	1:1	10	6.8
HE50E16...	50	ECX/ER25	140	85	116	6000	1:1	25	7.2

A** D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Slitting Saw VDI Drilling & Milling Heads

DIN 69880

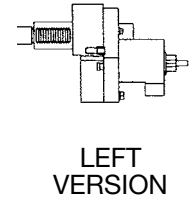
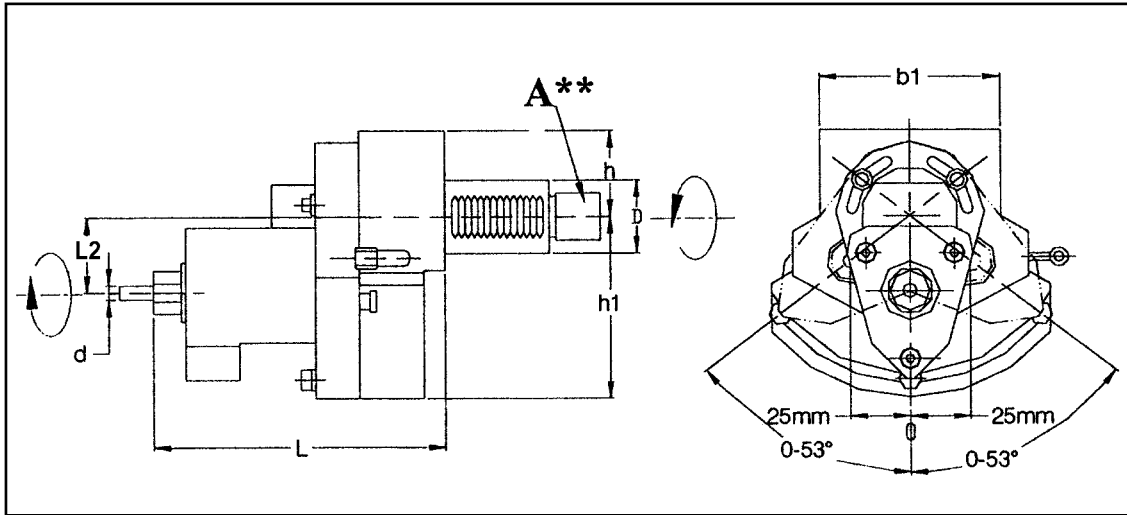


ORDER NO.	D (mm)	d (mm)	d1 (mm)	h (mm)	h1 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
TD30V63...	30	63	16	42	80	25	54	40	70	12	18	2000	1:1	25	5.5
TD40V63...	40	63	16	42	80	25	54	40	70	12	18	2000	1:1	25	6.5
TD50V63...	50	63	16	42	80	25	54	40	70	12	18	2000	1:1	25	8.2

A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Axial Adjustable Y-Axis VDI Drilling & Milling Heads

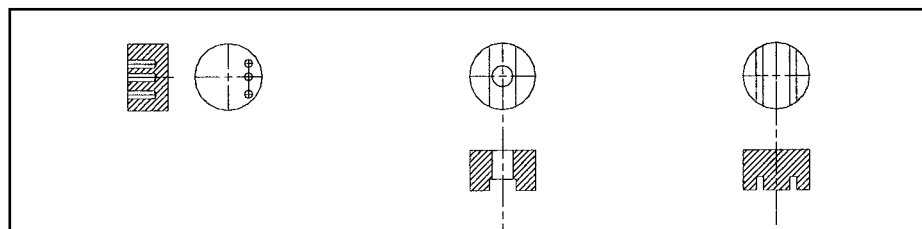
DIN 69880



ORDER NO.	D (mm)	d	L2 (mm)	L (mm)	h (mm)	h1 (mm)	b1 (mm)	RPM Max	Ratio	Nm
TE30H10...	30	ECX/ER20	31.5	120	40	75	80	6000	1:1	25
TE40H10...	40	ECX/ER32	31.5	120	40	75	80	6000	1:1	25
TE50H10...	50	ECX/ER40	31.5	120	40	75	80	6000	1:1	25

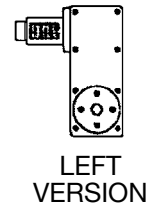
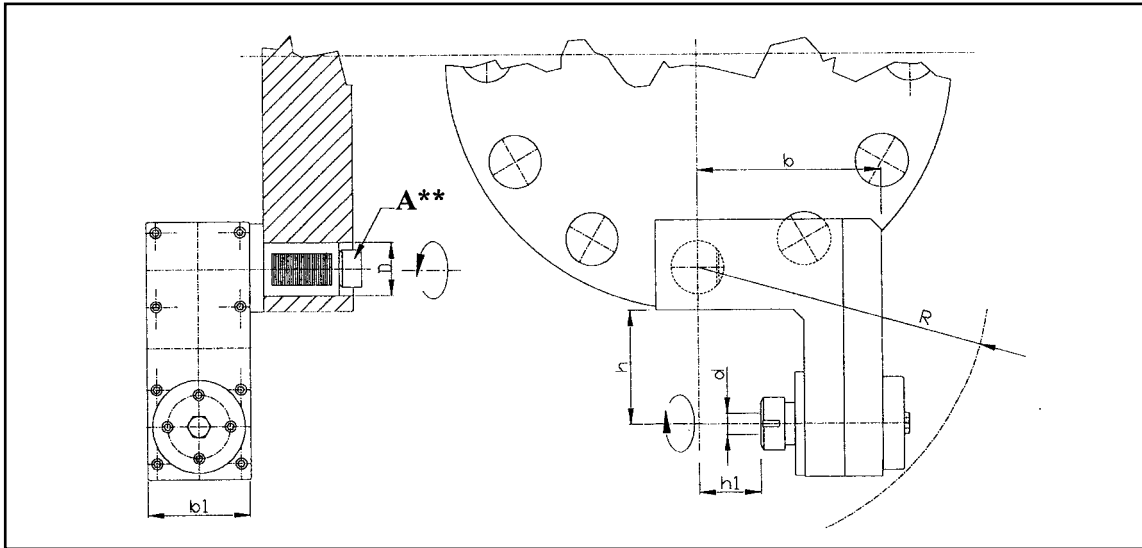
A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

WORKING EXAMPLE







Radial Adjustable Y-Axis Drilling Heads

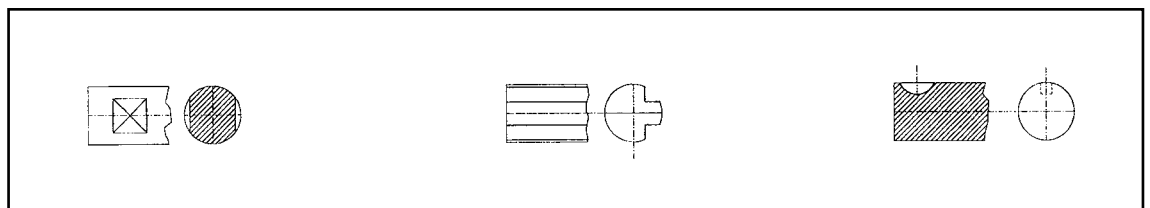
DIN 69880



ORDER NO.	D (mm)	d	R (mm)	h (mm)	h1 (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm	kg.
TE30D13...	30	ECX/ER20	170	45	25	140	70	4500	1:1	25	7.0
TE40D20...	40	ECX/ER32	200	80	30	140	80	4500	1:1	25	8.3
TE50D20...	50	ECX/ER40	275	148	50	200	98	4500	1:1	25	9.1

A** D (mm)	 <i>Baruffaldi</i>	 <i>Din 1809</i>	 <i>Sauter Din 5482</i>	 <i>Sauter Din 5480</i>
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

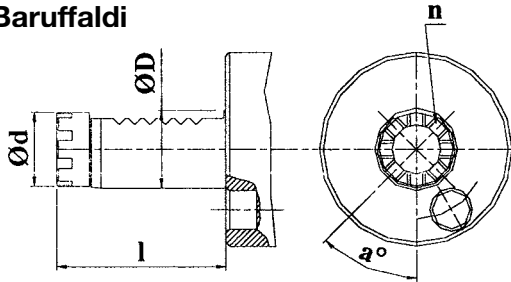
**WORKING
EXAMPLE**



Coupling for VDI Driven Tools

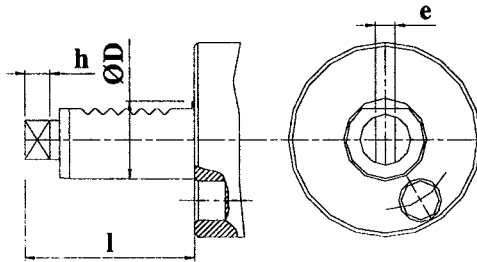
DIN 69880

Baruffaldi



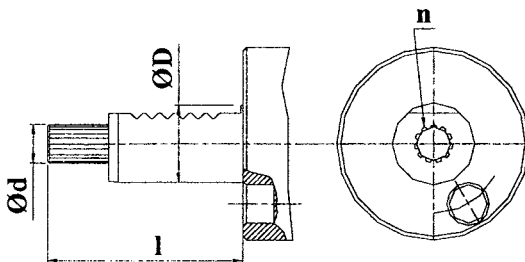
ØD (mm)	20	25	30	40	50		
l (mm)	44	51	59	68	84		
Ød(mm)	19	24	24	32	40		
n (mm)	6	6	6	8	8		
a°	60	60	60	45	45		
Code	...25	...26	...27	...28	...29		

Din 1809



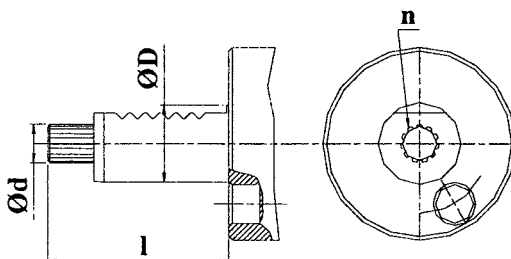
ØD (mm)	20	25	30	40	50	60	
l	48	57	62	72	92	110	
Ød(mm)	10	12	12	18	24	29	
e (mm)	5	6	6	8	12	14	
h (mm)	6.5	7	7	6.5	13	14	
Code	...16	...17	...18	...19	...20	...21	

Sauter (Din 5482)



ØD (mm)	16	20	30	40	50	60	80
l (mm)	44	51	55	63	93	108	144
Ød(mm)	15.5	9.84	14.5	16.5	19.5	24.5	27.5
n (mm)	13	11	8	9	12	14	15
Code	...01	...02	...06	...09	...11	...13	...15

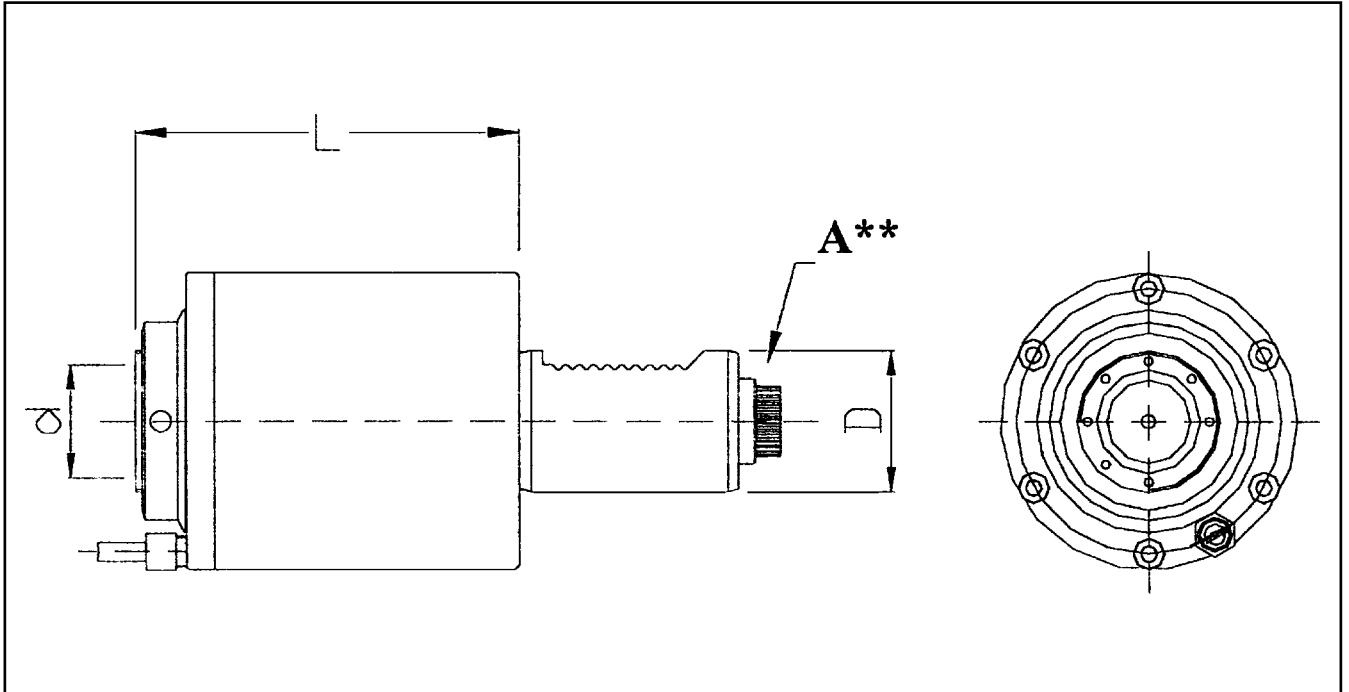
Sauter (Din 5480)



ØD (mm)	16	20	25	30	40	50	60	80
l (mm)	39	47	57	67	75	93	109	139
Ød(mm)	8	10	14	16	20	24	30	30
n (mm)	8	11	16	18	24	18	22	22
Code	...49	...50	...51	...52	...53	...54	...55	...56

Axial VDI Drilling And Milling Heads

Flush Nut DIN 69880

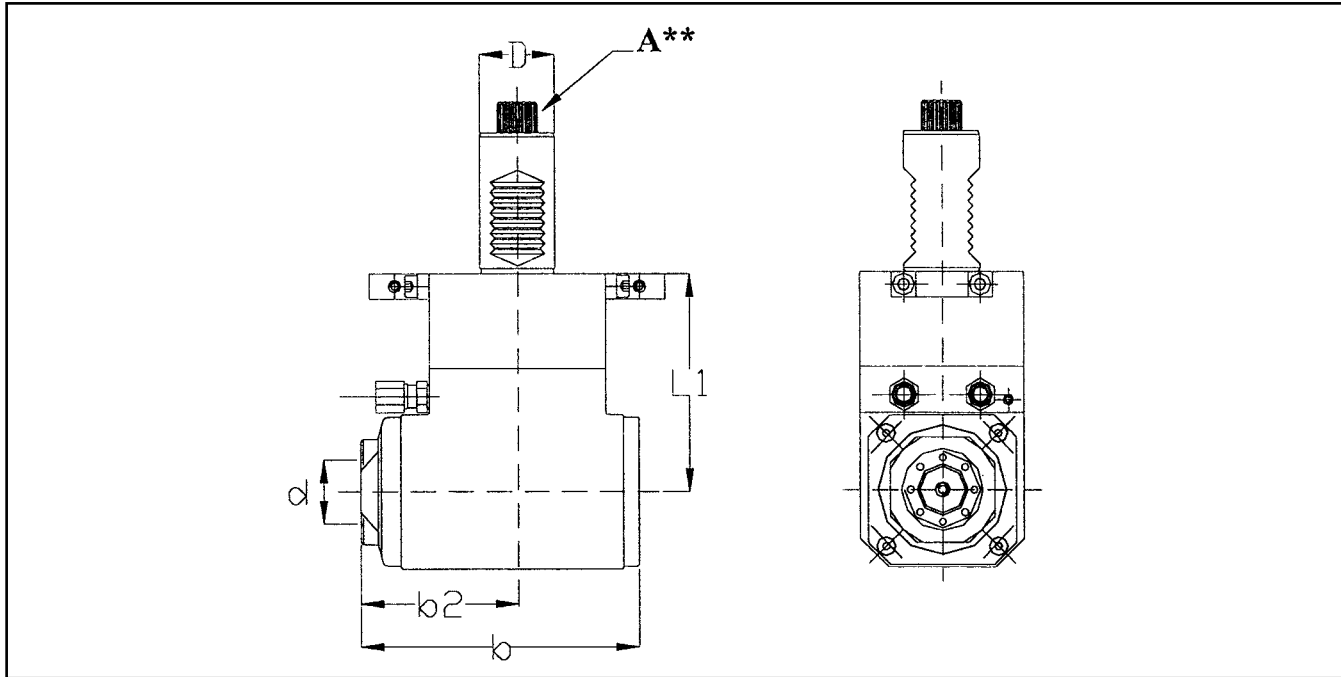


ORDER NO.	D (mm)	d	L (mm)	RPM Max	Ratio	Nm	Kg.
HE20A13...	20	ECX/ER16	61.5	6000	1:1	13	1.1
HE30A16...	30	ECX/ER25	71	6000	1:1	25	2.8
HE40A20...	40	ECX/ER25	110	6000	1:1	50	4.0

A** D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	—	—	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Radial VDI Drilling And Milling Heads

Flush Nut DIN 69880

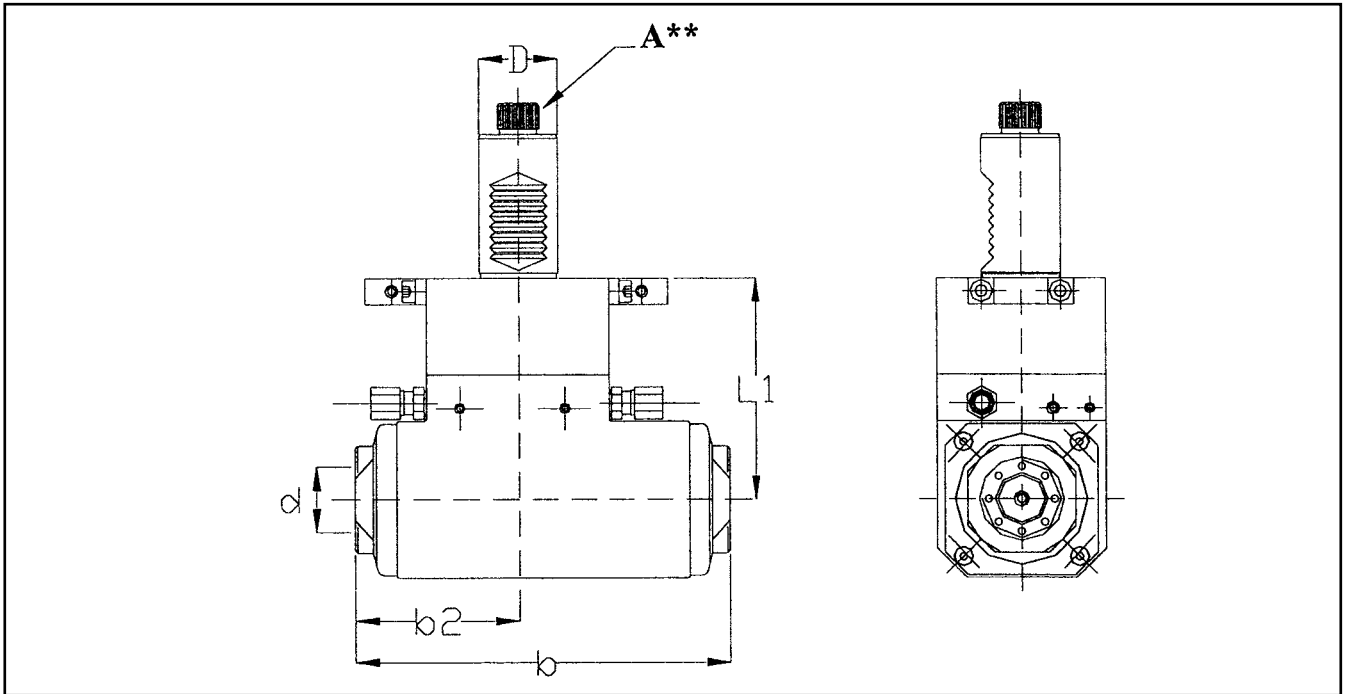


ORDER NO.	D (mm)	d	L1 (mm)	b (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE20B13...	20	ECX/ER20	75	97.5	55.5	6000	1:1	13	1.2
HE30B16...A	30	ECX/ER25	55	110.5	62.5	6000	1:1	25	3.9
HE30B16...B	30	ECX/ER25	85	110.5	62.5	6000	1:1	25	4.4
HE30B16...C	30	ECX/ER25	100	110.5	62.5	6000	1:1	25	4.6
HE40B20...A	40	ECX/ER32	100	130.5	75.5	6000	1:1	50	6.8
HE40B20...B	40	ECX/ER32	120	130.5	75.5	6000	1:1	50	7.0

A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Radial VDI Double Spindle & Milling Heads

Flush Nut DIN 69880

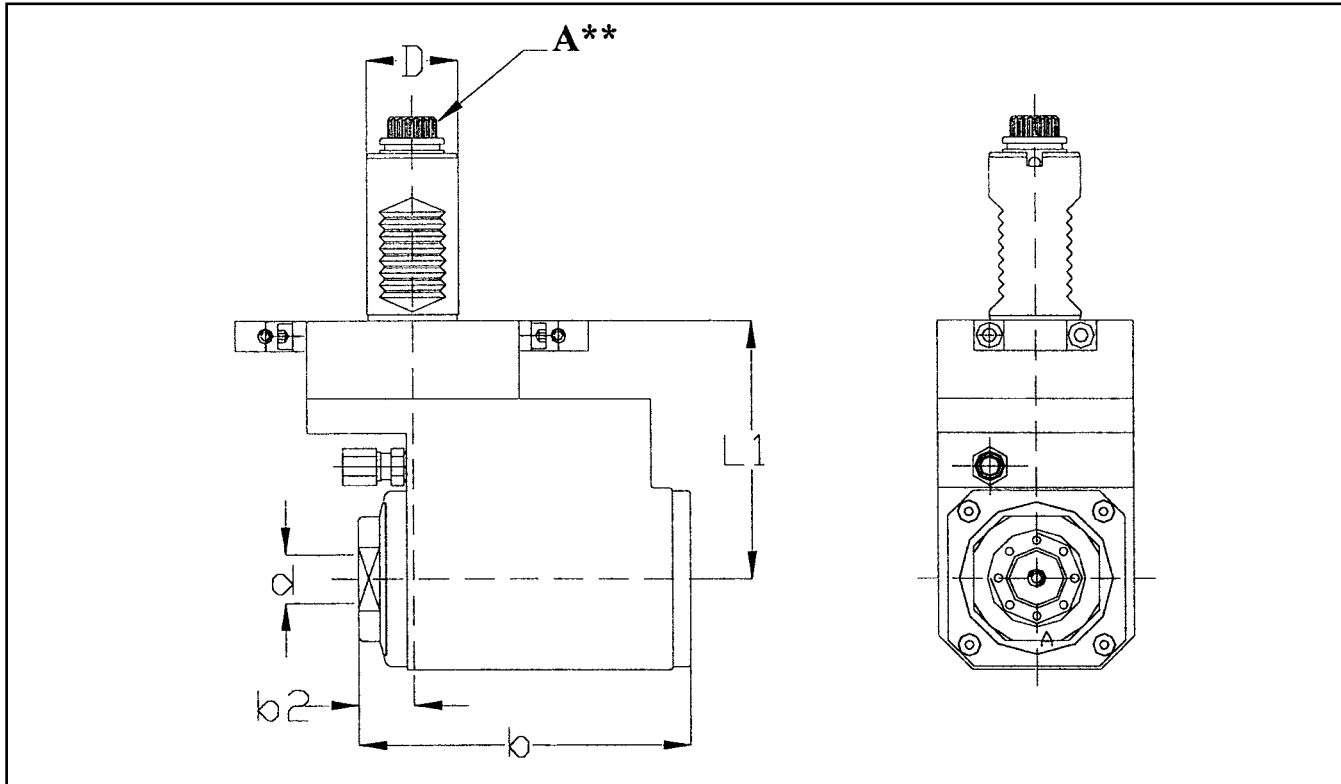


ORDER NO.	D (mm)	d	L1 (mm)	b (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE20L13...	20	ECX/ER20	75	131.5	54	6000	1:1	13	2.4
HE30L16...A	30	ECX/ER25	85	145	64	6000	1:1	25	5.4
HE30L16...B	30	ECX/ER25	100	145	64	6000	1:1	25	5.6
HE40L20...A	40	ECX/ER32	100	176	76	6000	1:1	50	8.5
HE40L20...B	40	ECX/ER32	120	176	76	6000	1:1	50	8.8

A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Radial VDI (Short) Drilling & Milling Heads

Flush Nut DIN 69880

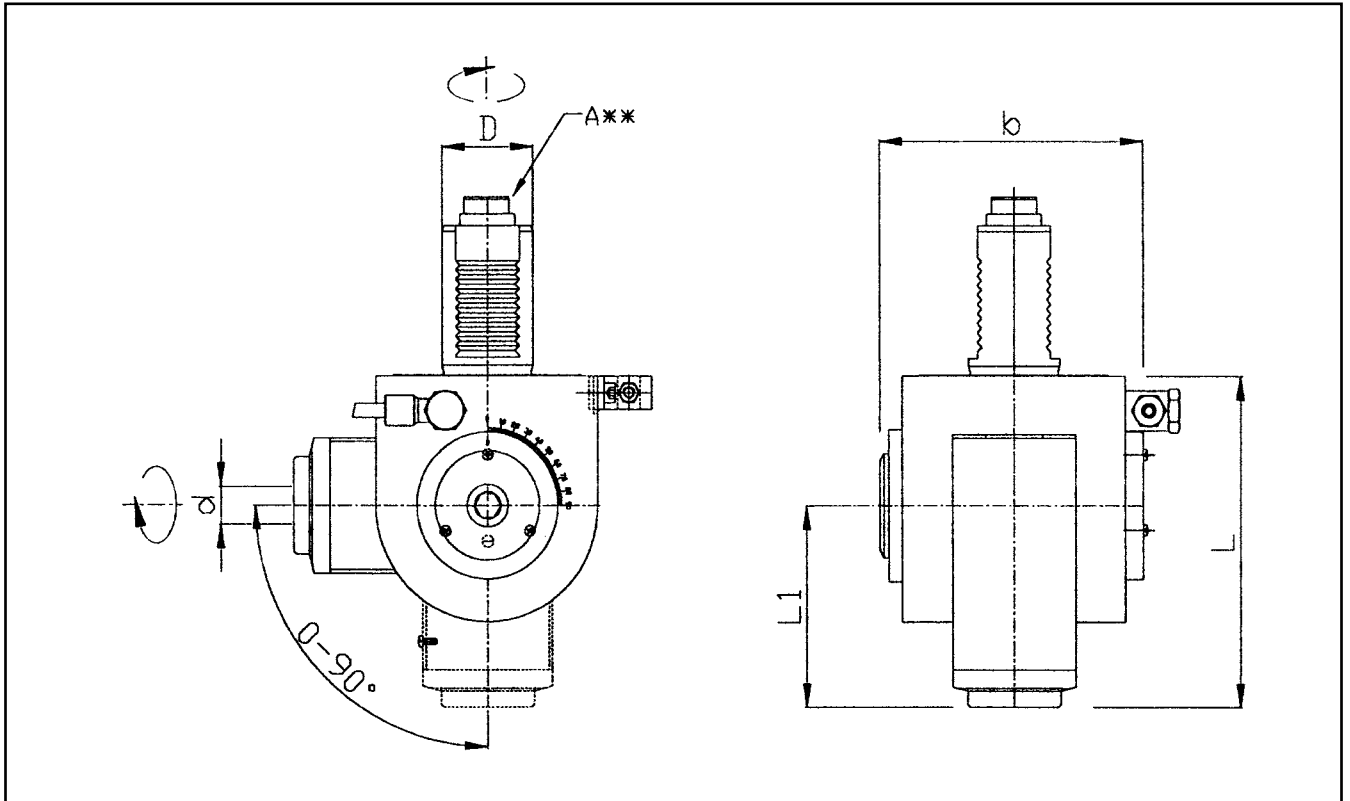


ORDER NO.	D (mm)	d	L1 (mm)	b (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE20C13...	20	ECX/ER20	61.5	100	20	6000	1:1	13	1.4
HE30C16...A	30	ECX/ER25	68.5	112	20	6000	1:1	25	6.0
HE40C20...B	40	ECX/ER32	80	136	28	6000	1:1	50	7.8

A** / D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

Universal Angle VDI 0-90° Driven Tools

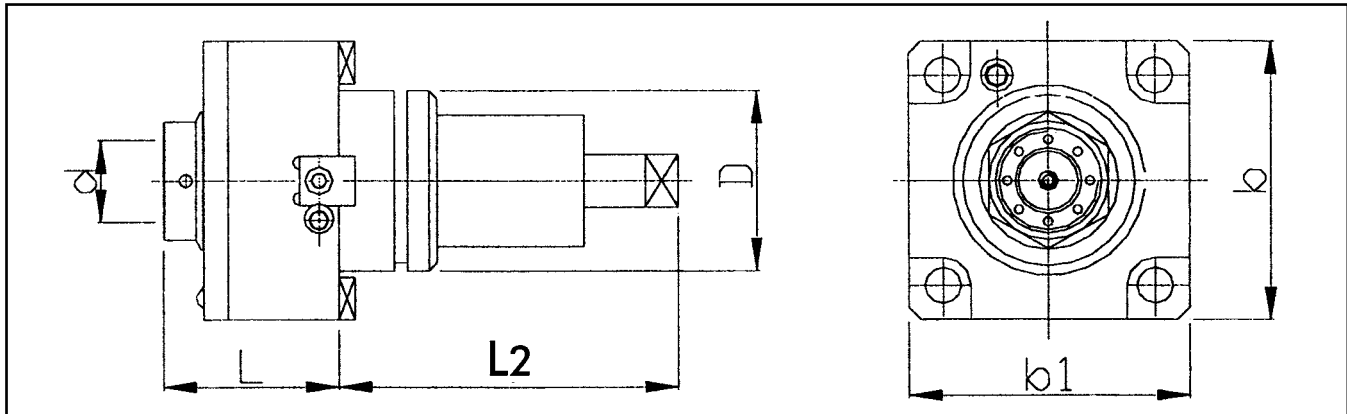
Flush Nut DIN 69880



ORDER NO.	D (mm)	d	L1 (mm)	b (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE30E10...	20	ECX/ER20	115	75	92	6000	1:1	10	4.5
HE40E16...	40	ECX/ER32	140	85	116	6000	1:1	25	6.8

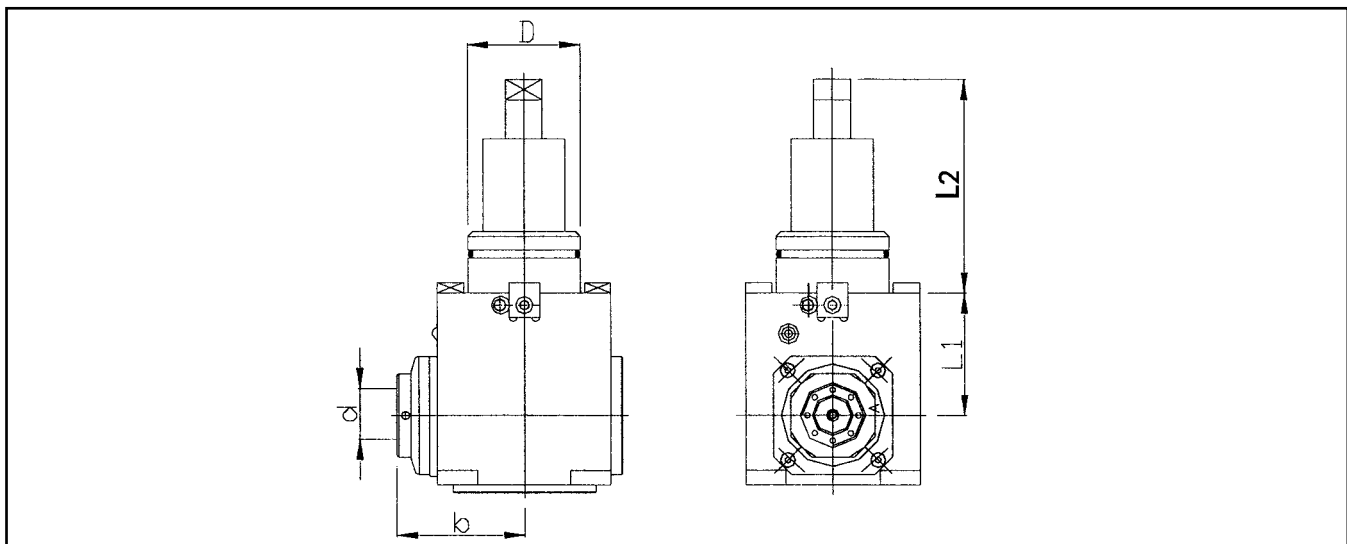
A** D (mm)	Baruffaldi	Din 1809	Sauter Din 5482	Sauter Din 5480
16	-	-	...01	...49
20	...25	...17	...02	...50
30	...27	...18	...06	...52
40	...28	...19	...09	...53
50	...29	...20	...11	...54

DAEWOO/DOOSAN Axial Drilling And Milling Heads



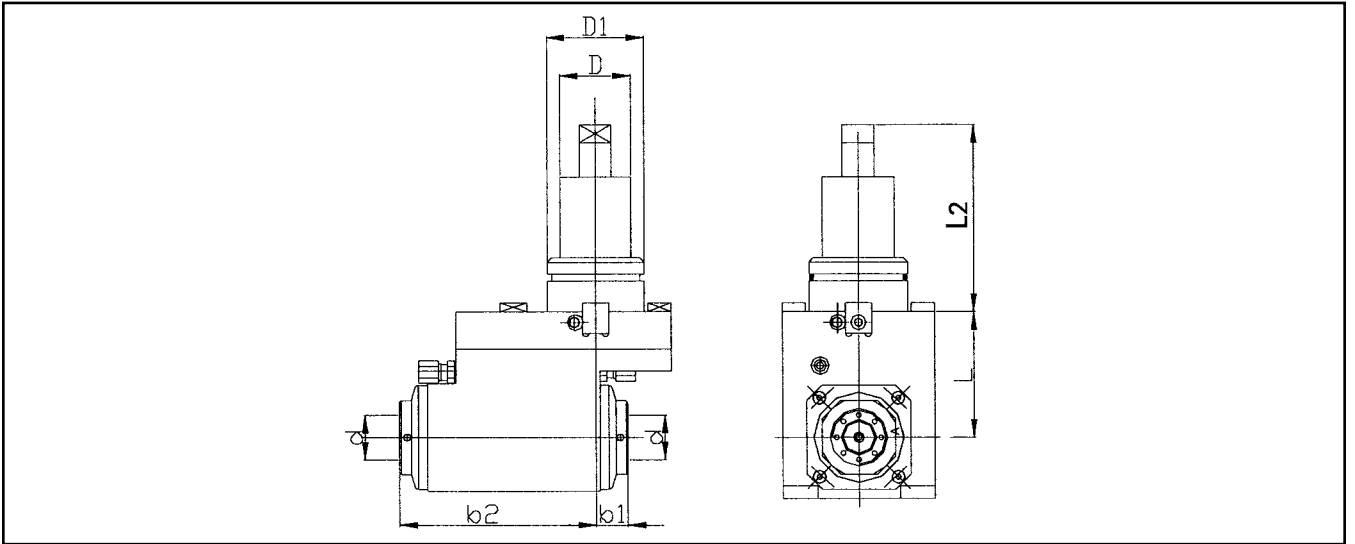
ORDER NO.	D (mm)	d	L2 (mm)	L (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm	Kg.
HE55DA16	55	ECX/ER25	104	54	85	85	6000	1:1	25	5.5
HE75DA26	75	ECX/ER40	110	75	112	112	6000	1:1	50	8.0

Radial Drilling And Milling Heads



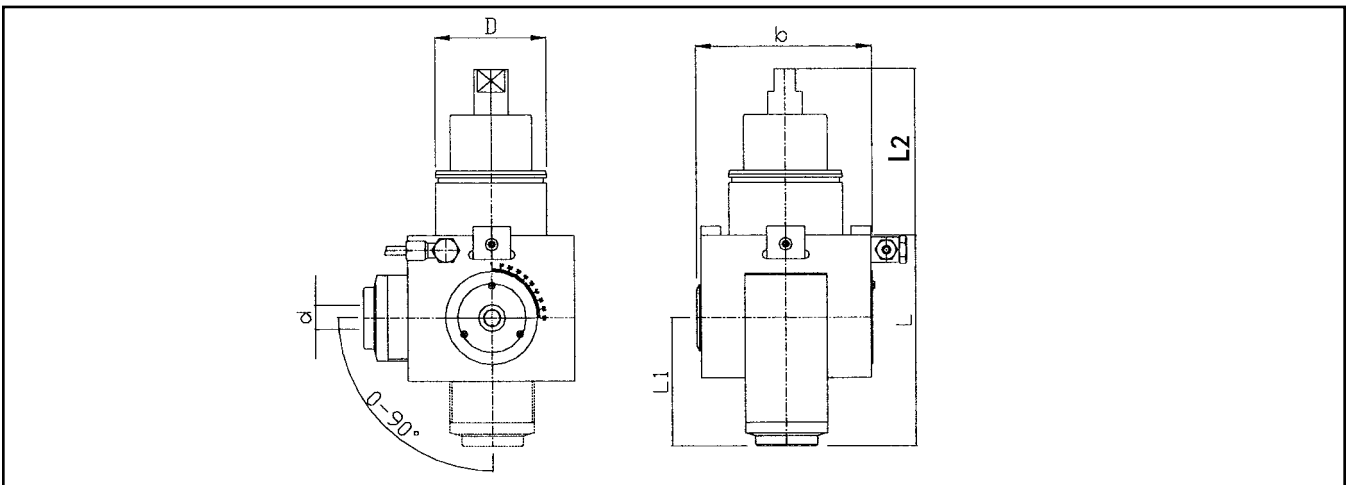
ORDER NO.	D (mm)	d	L2 (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE55DB16	55	ECX/ER25	104	60	62	6000	1:1	25	8.0
HE75DB26	75	ECX/ER40	110	60	112	6000	1:1	25	12.0

DAEWOO/DOOSAN Radial Double Drilling & Milling Heads



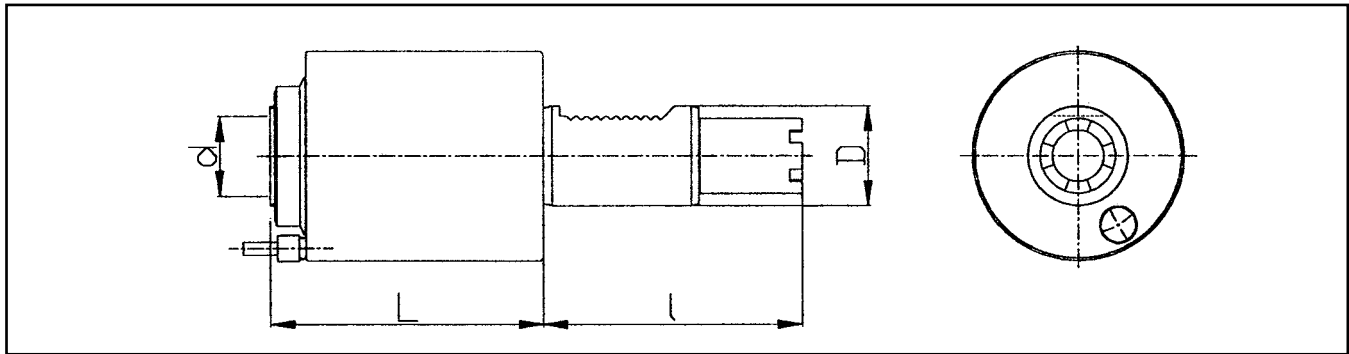
ORDER NO.	D (mm)	d	L2 (mm)	L (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE55DL16	55	ECX/ER25	104	70	19	110	6000	1:1	25	12.0

Universal Angle Drilling & Milling Heads



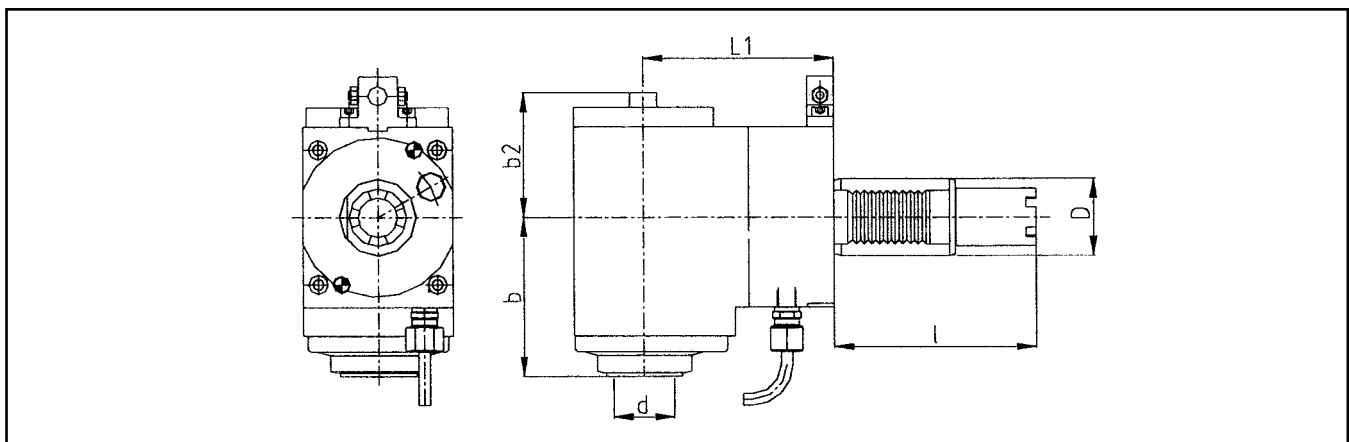
ORDER NO.	D (mm)	d	L2 (mm)	L (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE55DE10	55	ECX/ER16	104	115	76	92	6000	1:1	10	4.5
HE75DE16	75	ECX/ER25	110	140	85	116	6000	1:1	25	8.0

HAAS DIN 69880 VDI Axial Drilling And Milling Heads



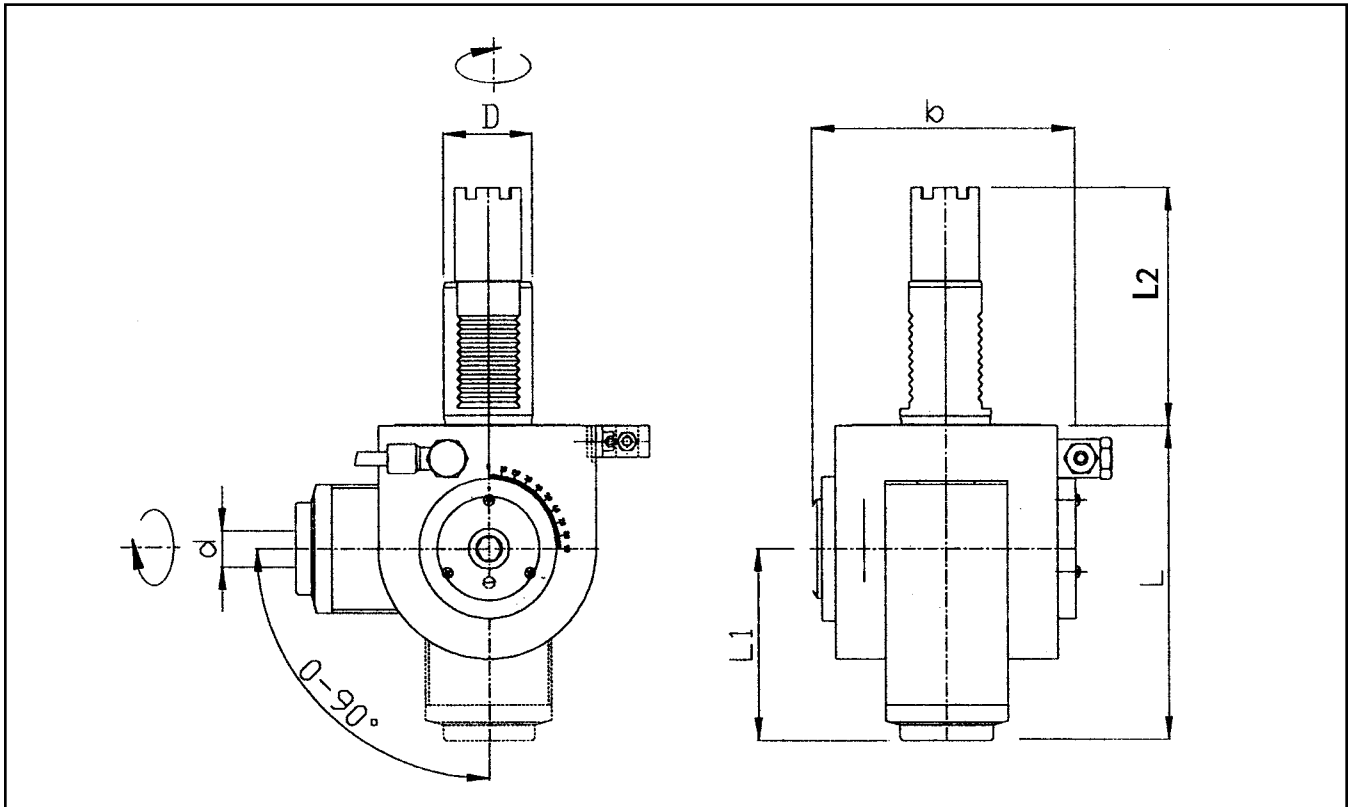
ORDER NO.	D (mm)	HAAS TURRET	VDI TURRET	1 (mm)	d	L (mm)	RPM Max	Ratio	Nm	Kg.
HE40A2090	40	-	SL-20/30	104.85 (4.128")	ECX/ER32	110	6000	1:1	50	4.0
HE40A2091	40	SL-20/30	SL-40/TL-15	117.55 (4.628")	ECX/ER32	110	6000	1:1	50	4.0
HE40A2092	40	SL-40	-	130.25 (5.128")	ECX/ER32	110	6000	1:1	50	4.1

Radial Drilling And Milling Heads



ORDER NO.	D (mm)	HAAS TURRET	VDI TURRET	1 (mm)	d	L1 (mm)	b (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE40B2090	40	-	SL-20/30	104.85 (4.128")	ECX/ER32	100	83	65	6000	1:1	50	6.8
HE40B2091	40	SL-20/30	SL-40/TL-15	117.55 (4.628")	ECX/ER32	100	83	65	6000	1:1	50	6.8
HE40B2092	40	SL-40	-	130.25 (5.128")	ECX/ER32	100	83	65	6000	1:1	50	6.9

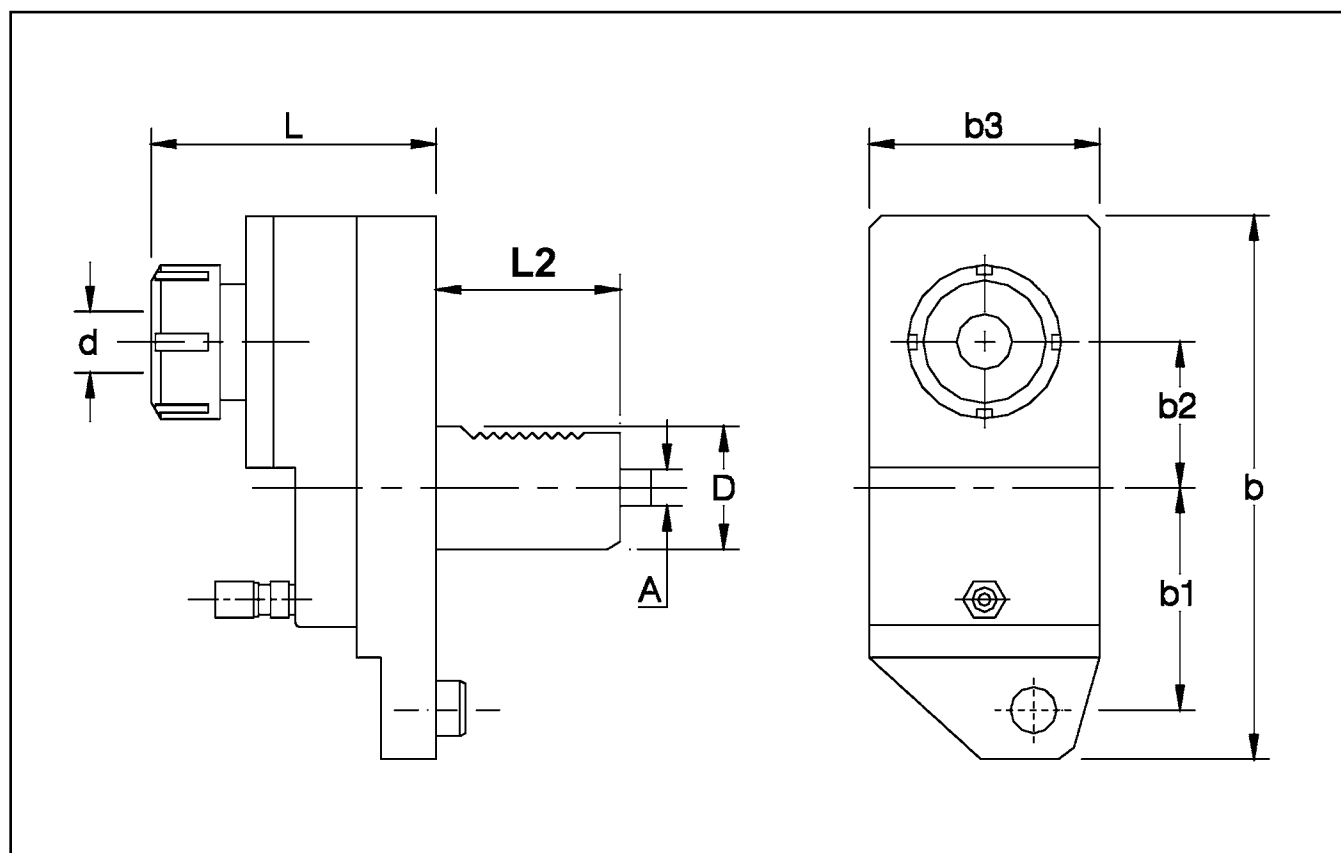
HAAS DIN 69880 VDI Universal Angle Drilling & Milling Heads



ORDER NO.	D (mm)	HAAS TURRET	VDI TURRET	L2 (mm)	d	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE40E1690	40	-	SL-20/30	104.85 (4.128")	ECX/ER25	140	85	116	6000	1:1	25	6.8
HE40E1691	40	SL-20/30	SL-40/TL-15	117.55 (4.628")	ECX/ER25	140	85	116	6000	1:1	25	6.8
HE40E1692	40	SL-40	-	130.25 (5.128")	ECX/ER25	140	85	116	6000	1:1	25	6.9

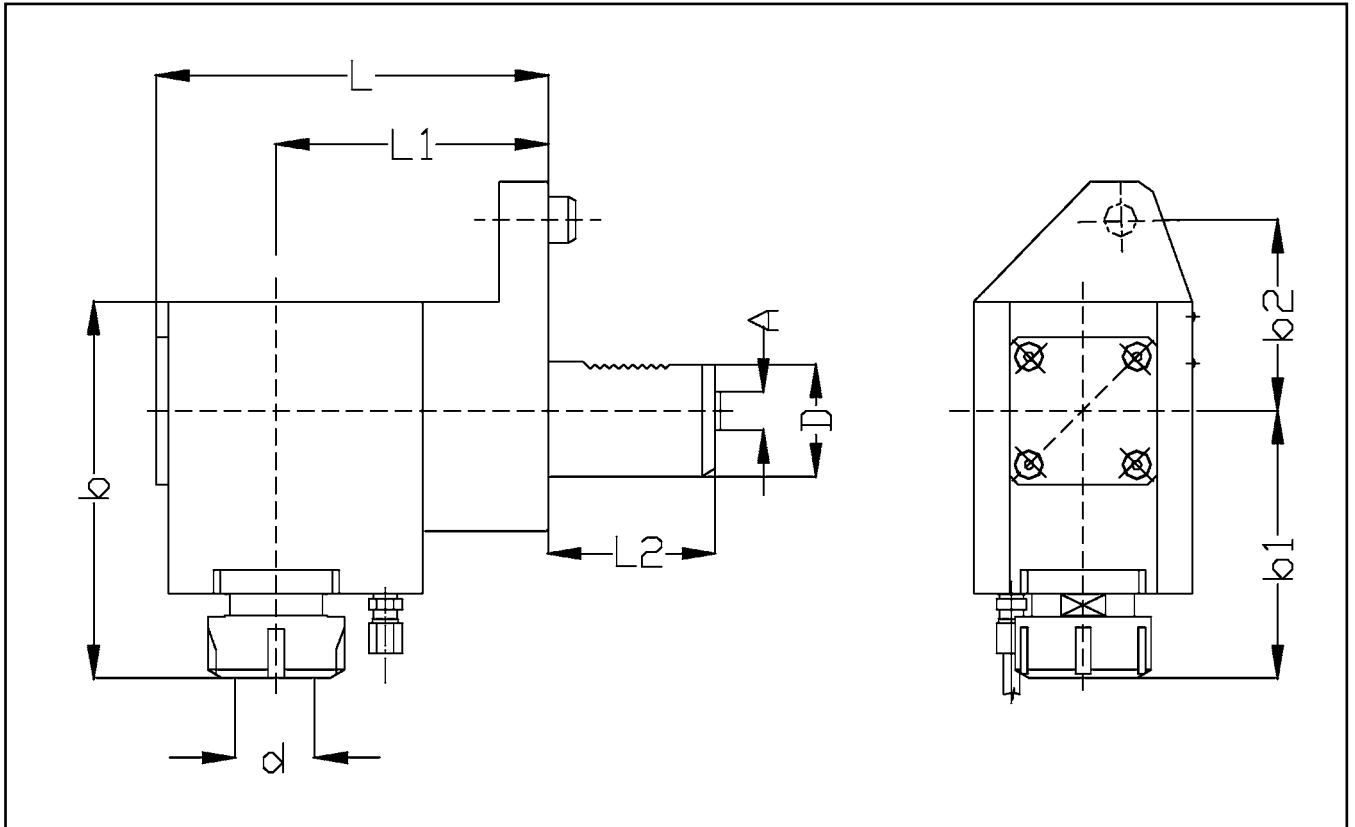
MAZAK

V-Type (Axial) Drilling & Milling Heads



ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	b (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
TE40F2045	40	SQ 10 M/C	ECX/ER32	10	60	94	174	70	50	74	6000	1:1	50	5.0
TE40F2046	40	SQ 15 MY	ECX/ER32	10	70	94	174	70	50	74	6000	1:1	50	6.0
TE40F2046	40	SQT 250 MS	ECX/ER32	10	70	94	174	70	50	74	6000	1:1	50	6.0

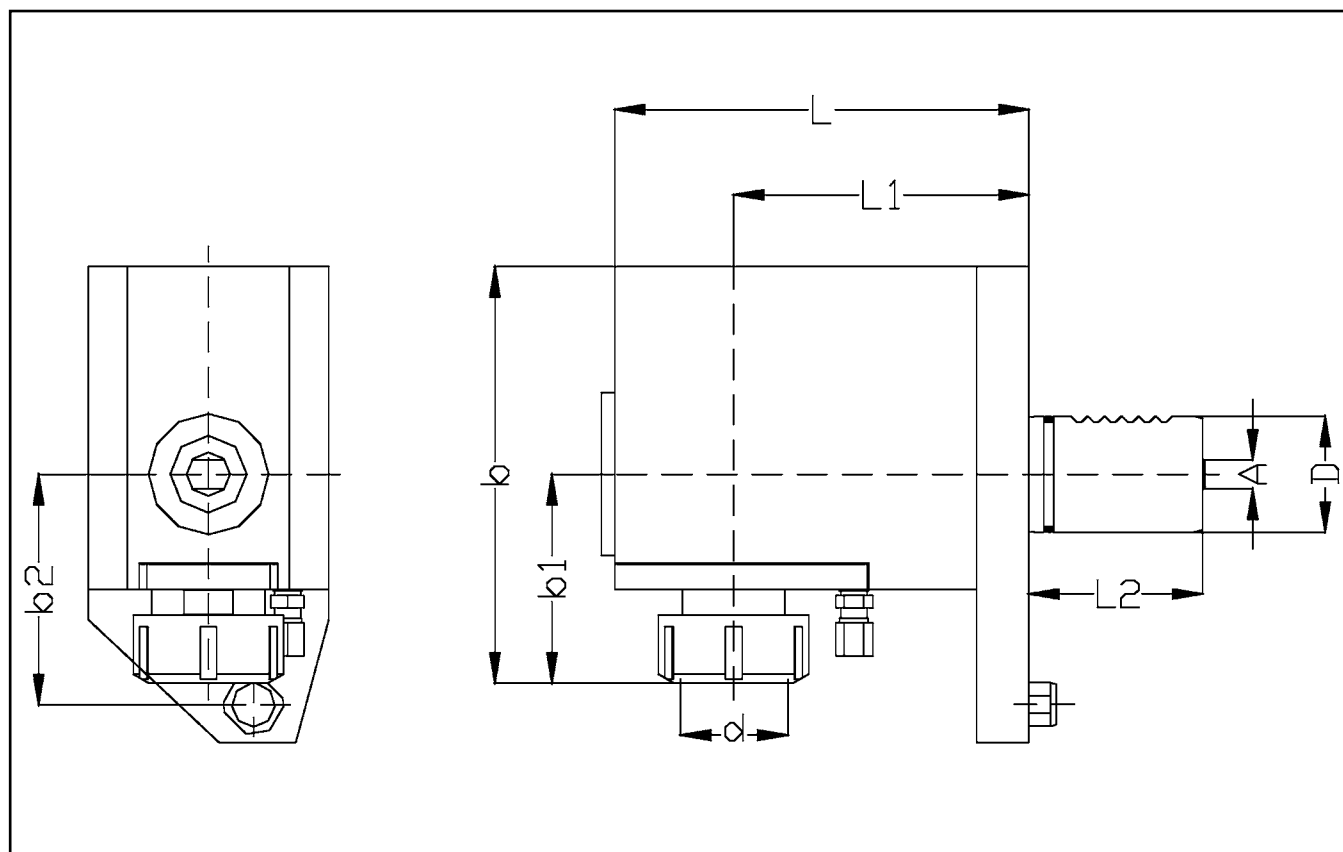
MAZAK H-Type (Radial) Drilling & Milling Heads



ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
TE40B2045	40	SQ 10 M/C	ECX/ER32	10	60	144	100	138	98	70	74	6000	1:1	50	8.0
TE40B2046	40	SQ 15 MY	ECX/ER32	10	70	174	130	138	98	70	74	6000	1:1	50	9.0
TE40B2046	40	SQT 250 MS	ECX/ER32	10	70	174	130	138	98	70	74	6000	1:1	50	9.0

MAZAK

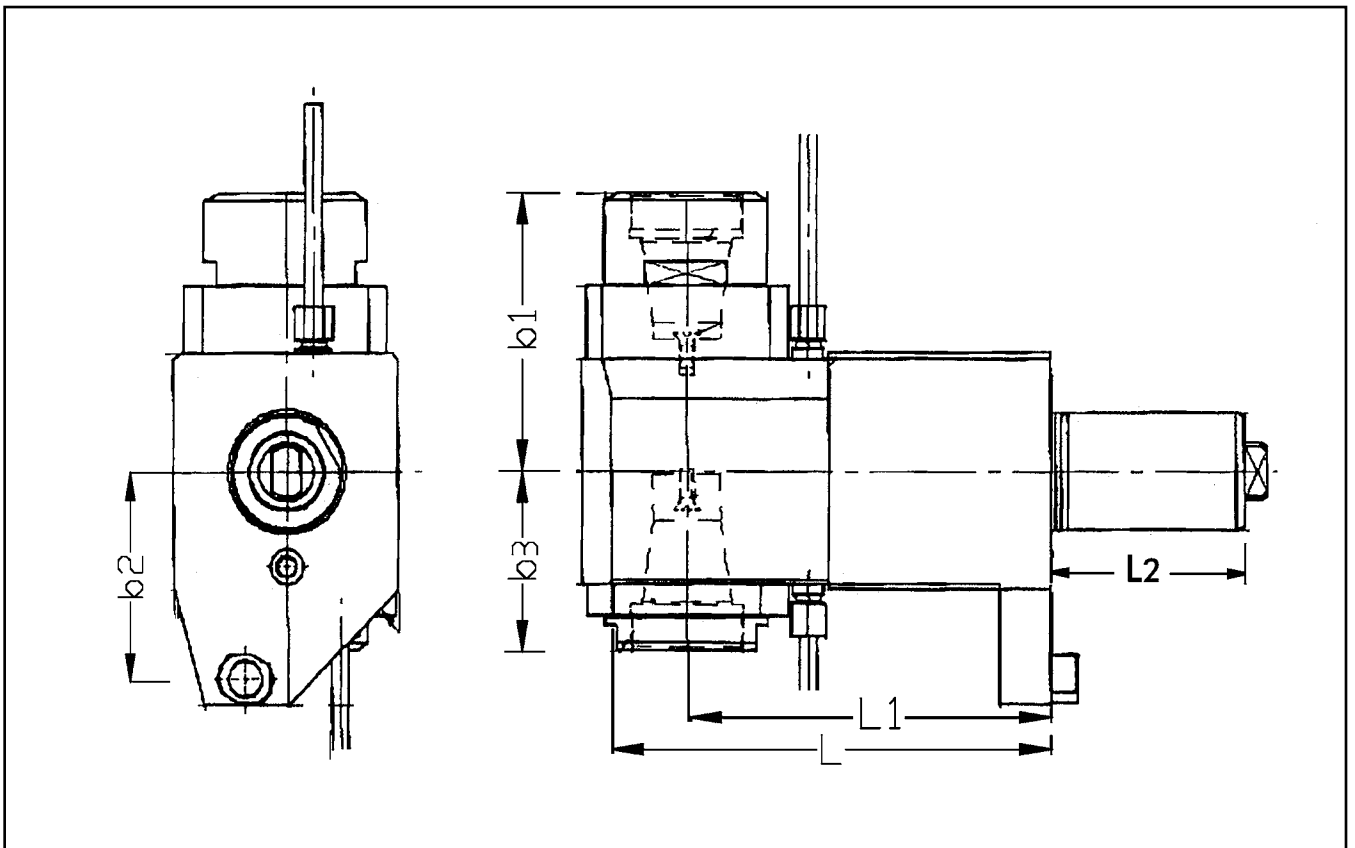
H-Type (Radial) Drilling & Milling Heads (Subspindle)



ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE40C2045S	40	SQ 10 M/C	ECX/ER32	10	60	144	100	138	40	70	6000	1:1	50	9
TE40C2046S	40	SQ 15 MY	ECX/ER32	10	70	174	130	138	40	70	6000	1:1	50	10
TE40C2046S	40	SQT 250 MS	ECX/ER32	10	70	174	130	138	40	70	6000	1:1	50	10

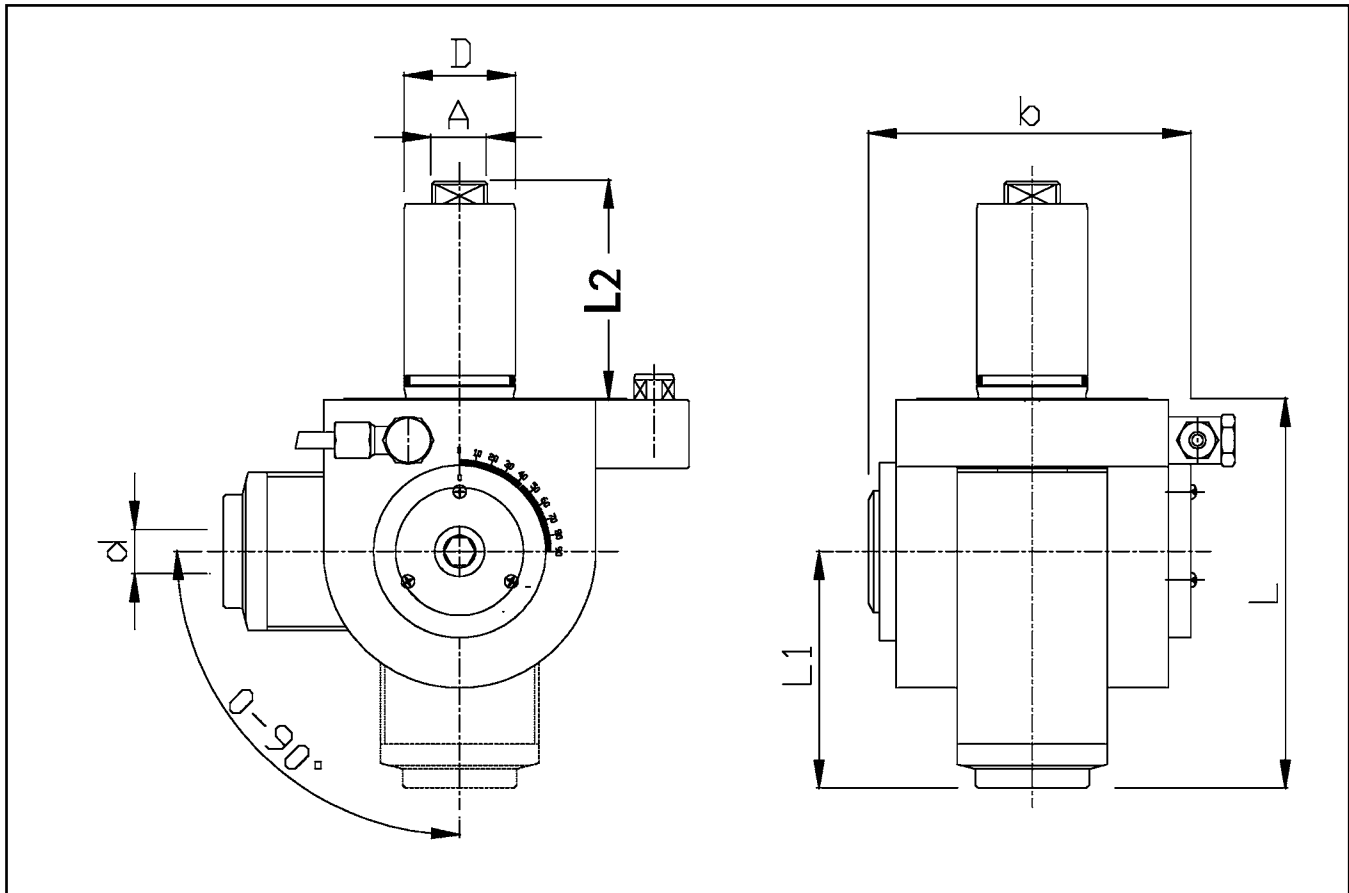
MAZAK

H-Type (Radial) Double Drilling Milling Heads



ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
TE40L2046	40	SQ 15 MY	ECX/ER32	10	70	137	100	94.5	70	60.5	6000	1:1	50	12
TE40L2046	40	SQT 250 MS	ECX/ER32	10	70	137	100	94.5	70	60.5	6000	1:1	50	12

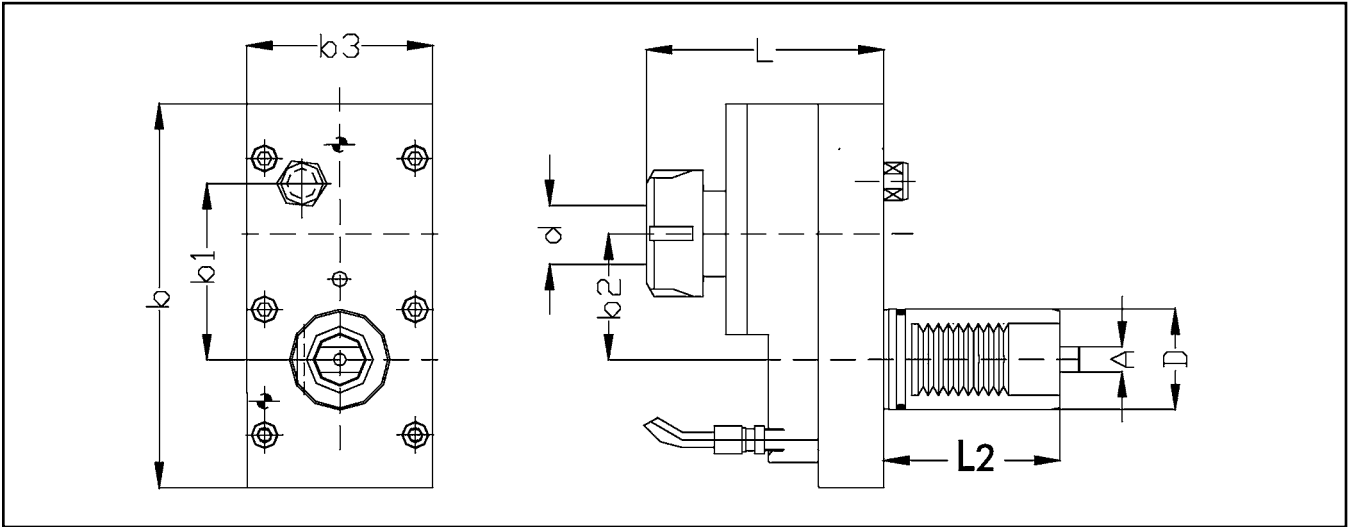
MAZAK Universal Angle Drilling-Milling Heads



ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE40E1645	40	SQ 10 M/C	ECX/ER25	10	60	140	85	116	6000	1:1	25	6.9
HE40E1646	40	SQ 15 MY	ECX/ER25	10	70	140	85	116	6000	1:1	25	6.9
HE40E1646	40	SQT 250 MS	ECX/ER25	10	70	140	85	116	6000	1:1	25	6.9

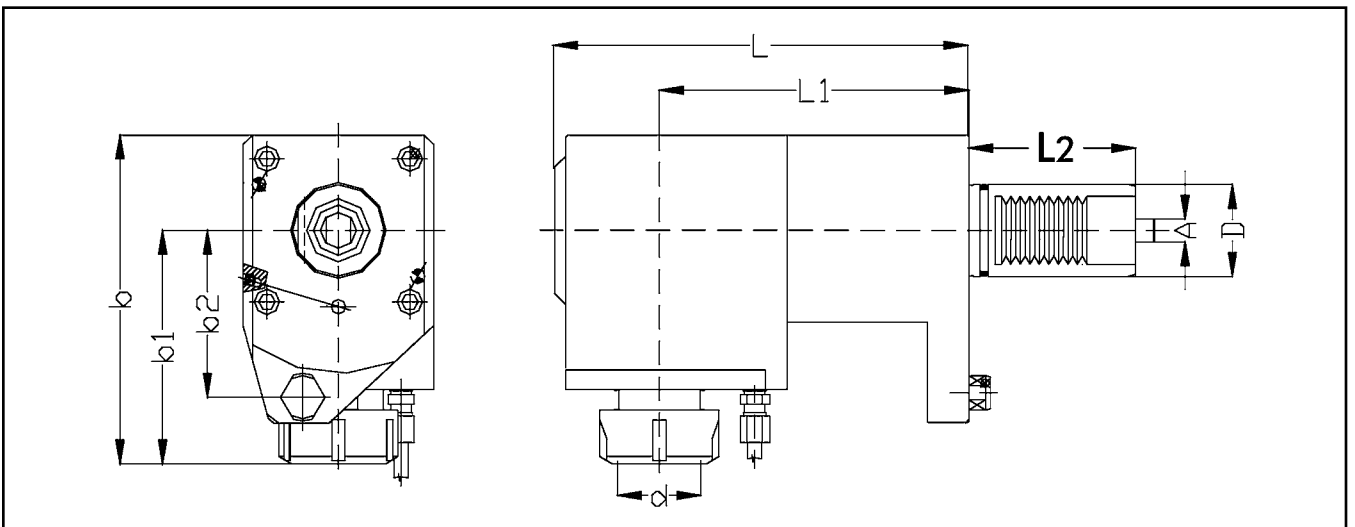
MAZAK

V-Type (Axial) Drilling & Milling Heads



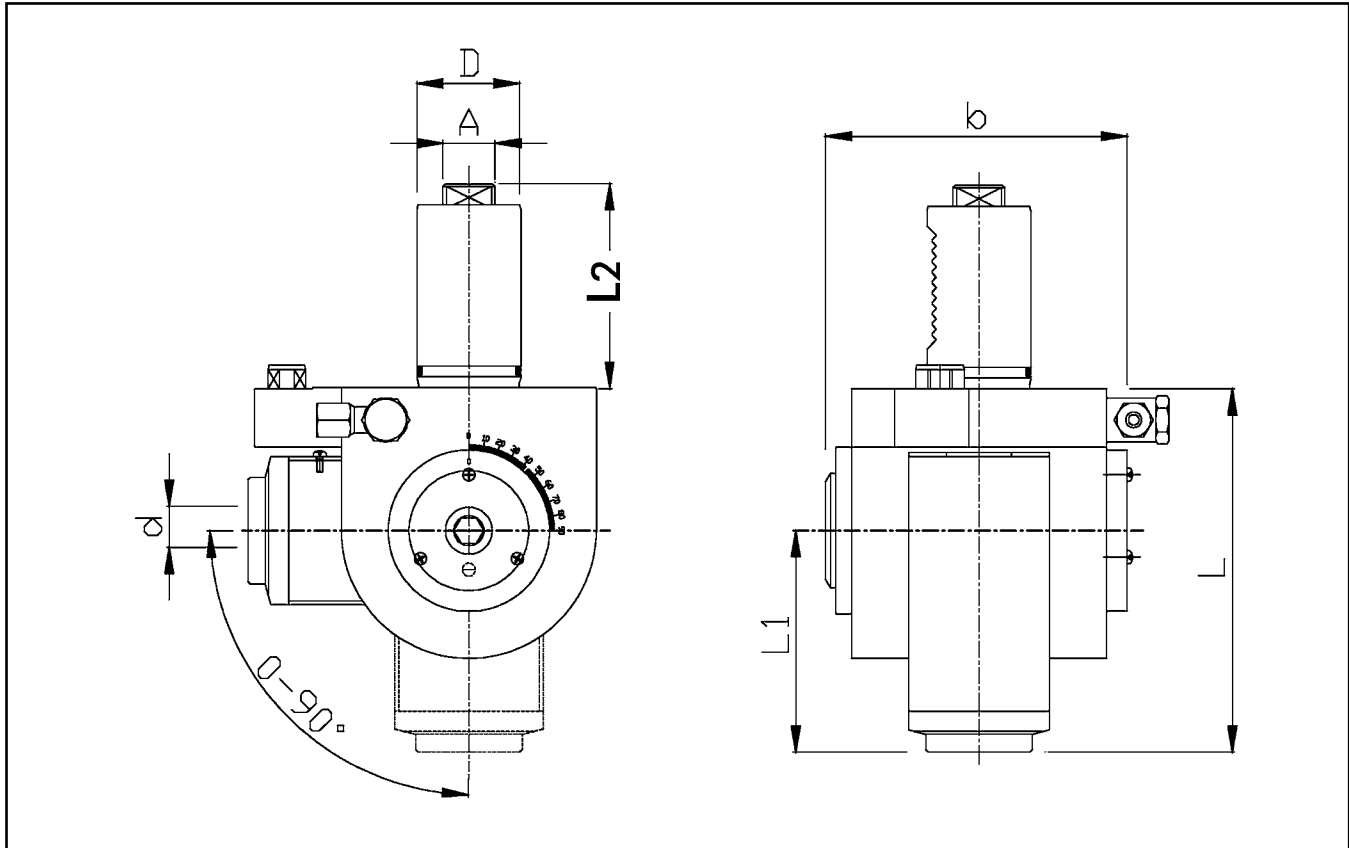
ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	b (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
TE40F2047	40	MULTIPLEX 6200	ECX/ER32	10	70	95	153	98	50	74	6000	1:1	50	6

H-Type (Radial) Drilling & Milling Heads



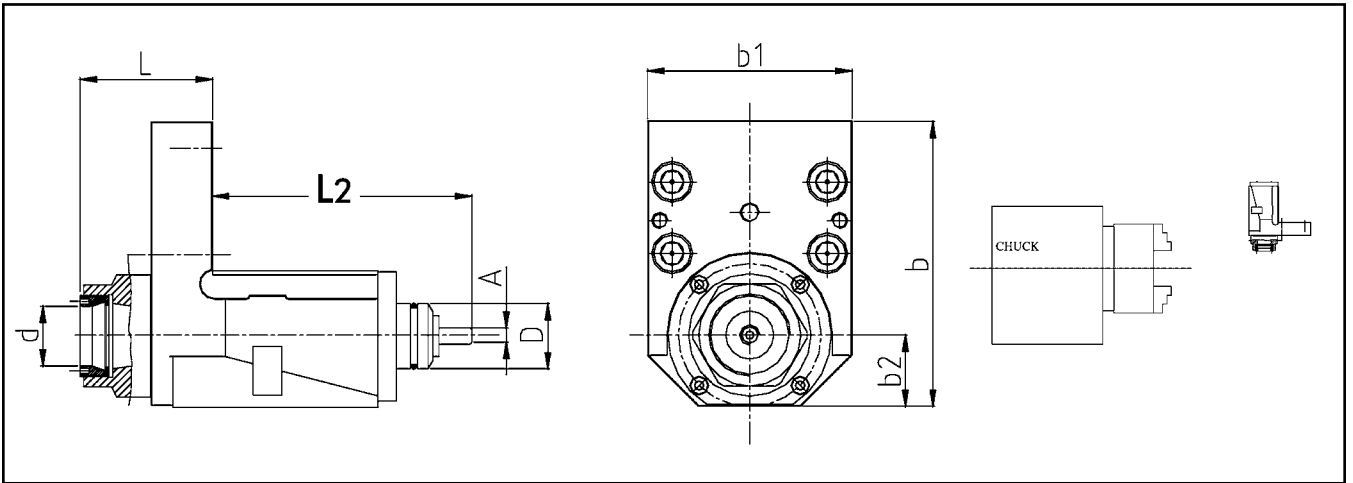
ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE40B2047	40	MULTIPLEX 6200	ECX/ER32	10	70	174	130	138	98	70	6000	1:1	50	9

MAZAK Universal Angle Drilling-Milling Heads



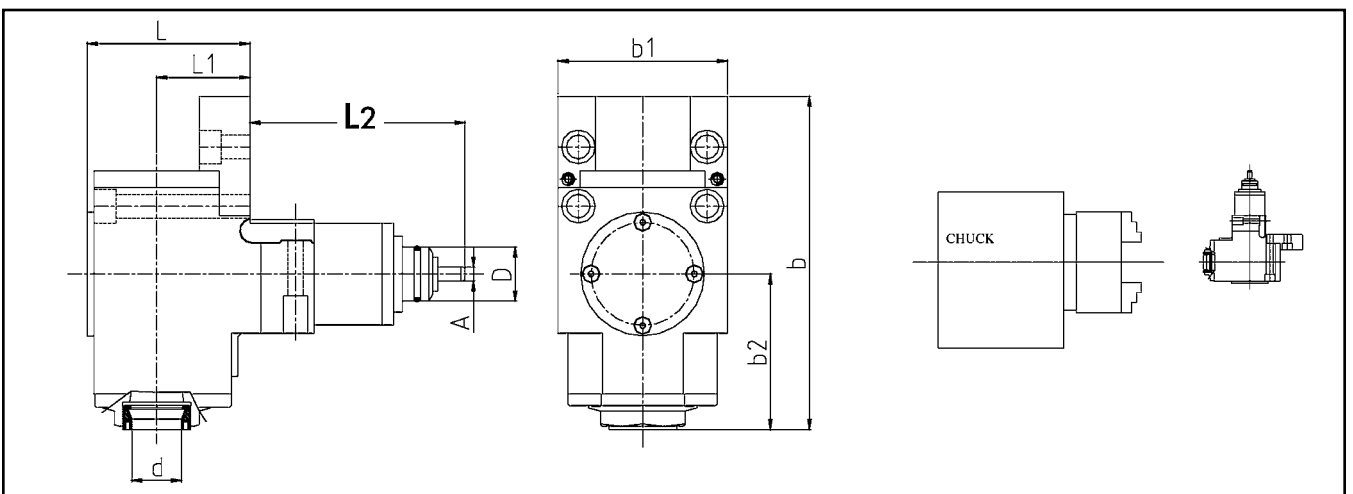
ORDER NO.	D (mm)	Machine	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE40E1647	40	MULTIPLEX 6200	ECX/ER25	10	70	140	85	116	6000	1:1	25	6.9

MORI SEIKI SL 150-200-250-300 Axial Drilling And Milling Heads



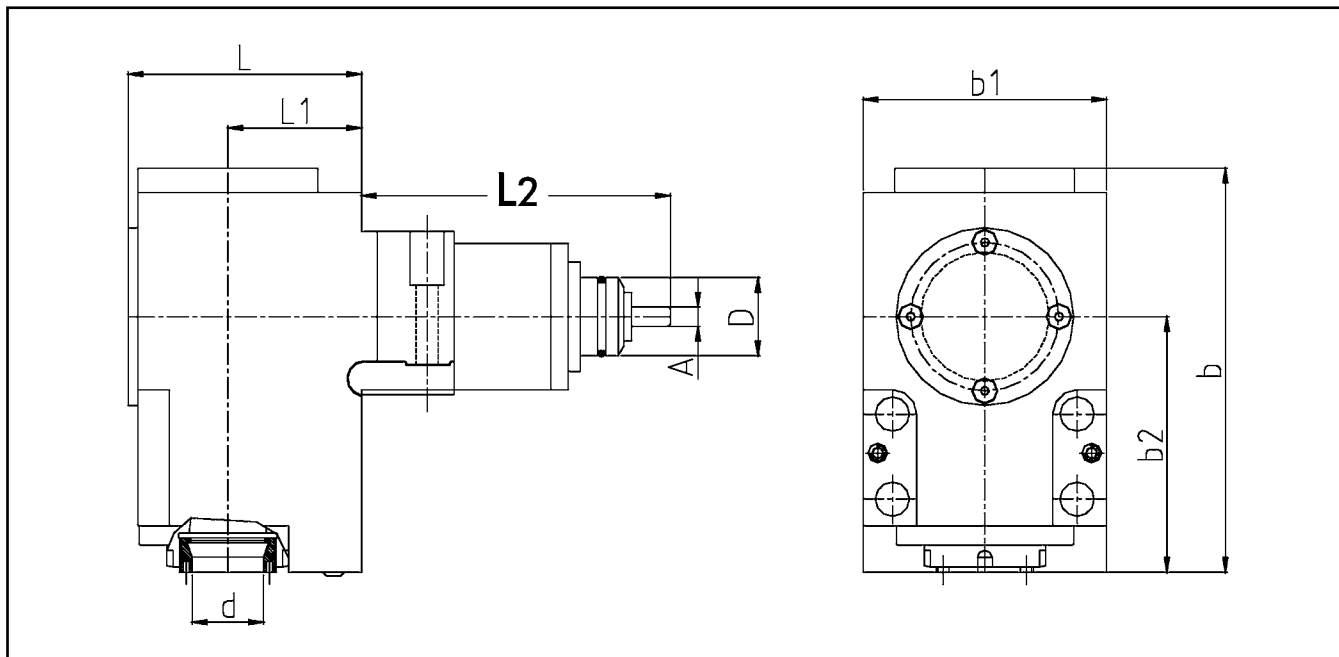
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE32MA20	32	ECX/ER32	7.9	127	64.5	140	100	35	6000	1:1	50	5.5

Radial Drilling And Milling Heads SL 150-200-250-300

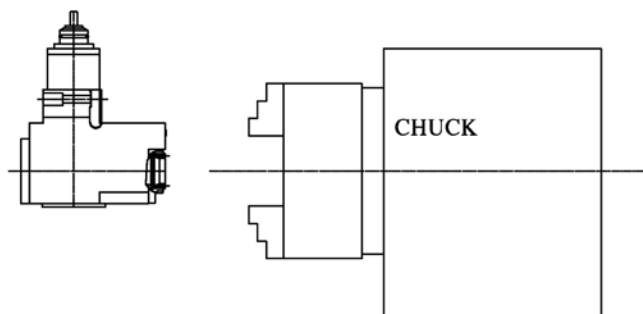


ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE32MB20	32	ECX/ER32	7.9	127	96	55	197	100	92	6000	1:1	50	10

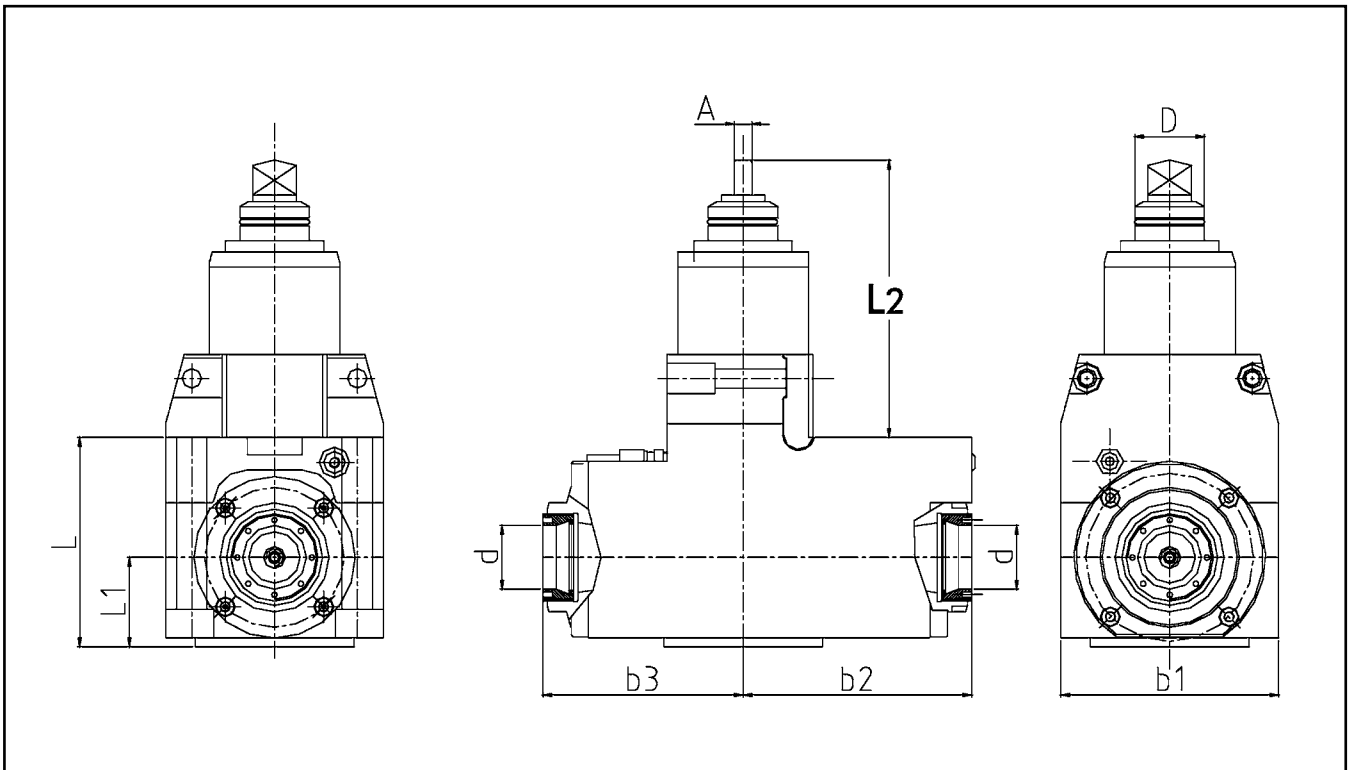
MORI SEIKI SL 150-200-250-300 Radial Drilling And Milling Heads



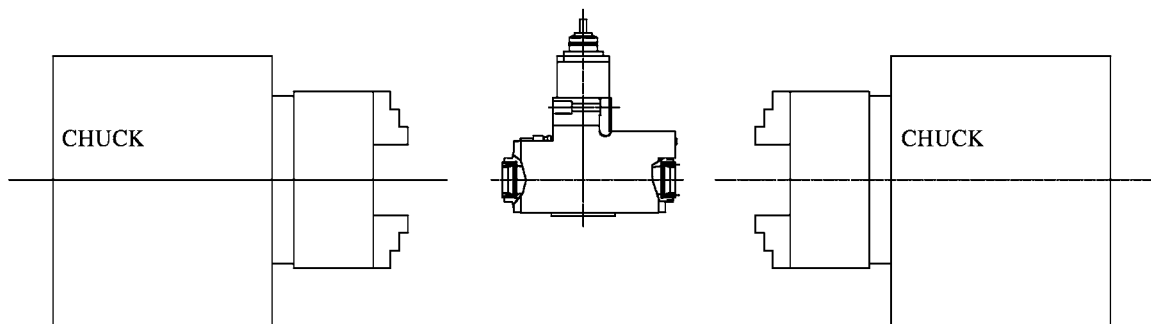
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
HE32MB20S	32	ECX/ER32	7.9	127	96	55	166	100	105	6000	1:1	50	10



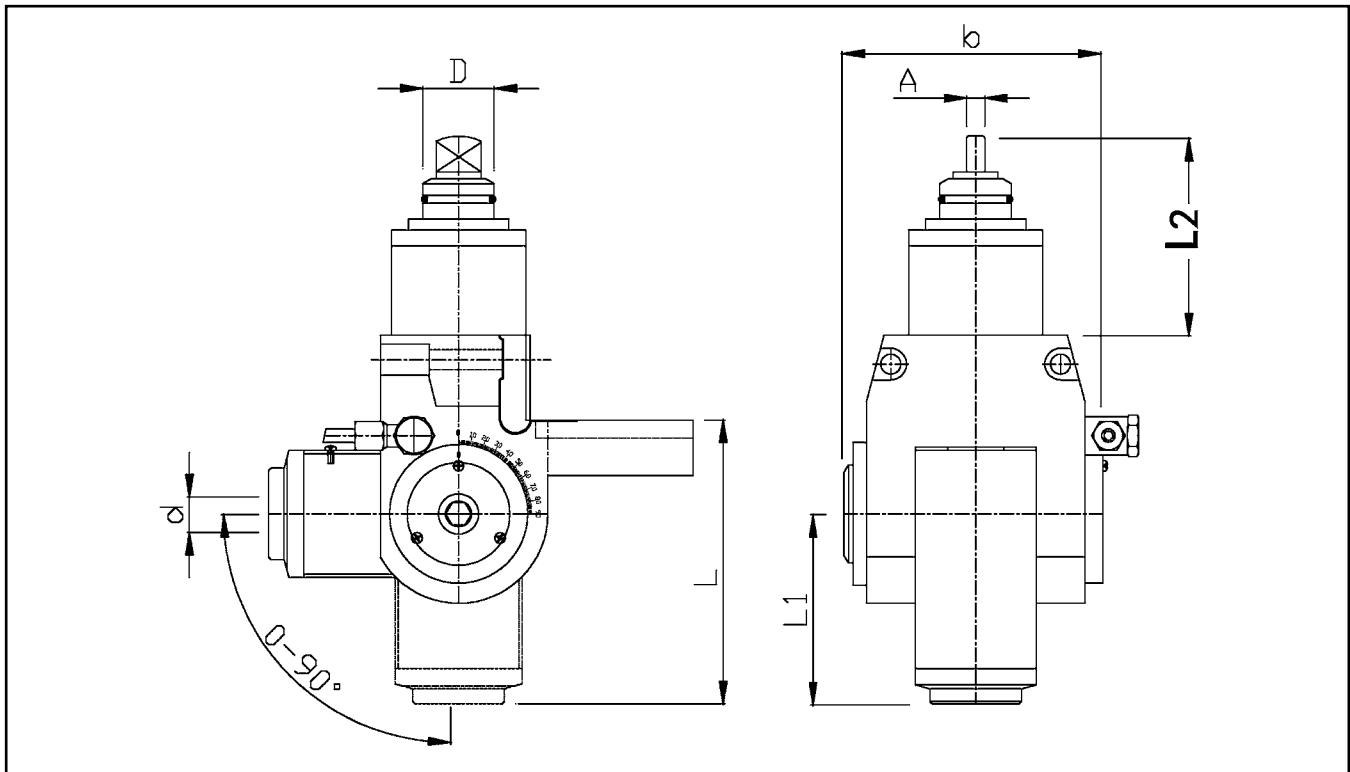
MORI SEIKI SL 150-200-250-300 Radial Double Right Angle Drilling & Milling Heads



ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
HE32ML20	32	ECX/ER32	7.9	127	96	55	100	105	92	6000	1:1	50	14

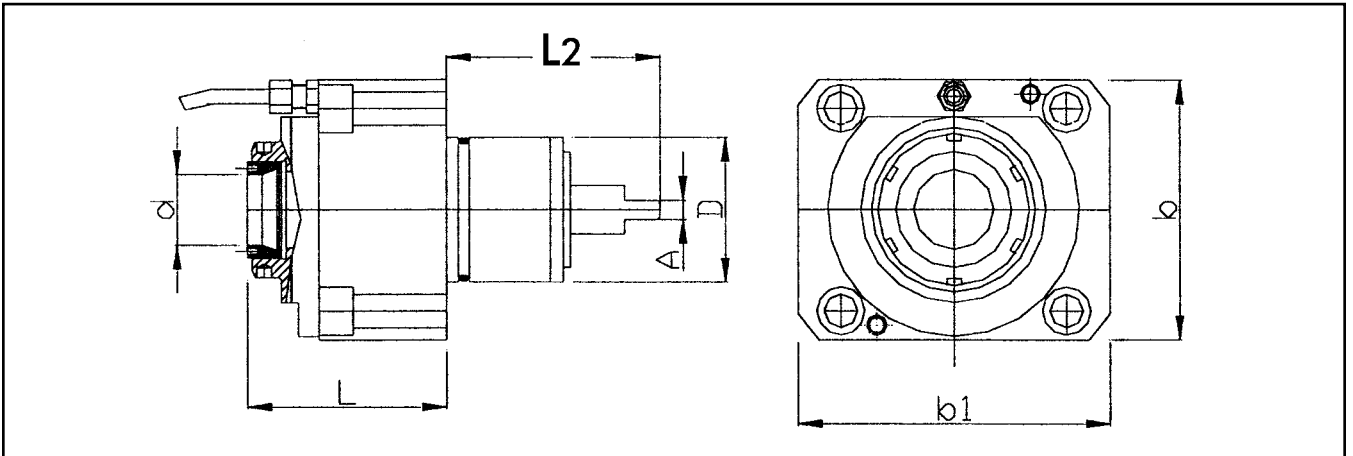


MORI SEIKI SL 150-200-250-300 Universal Angle Drilling And Milling Heads



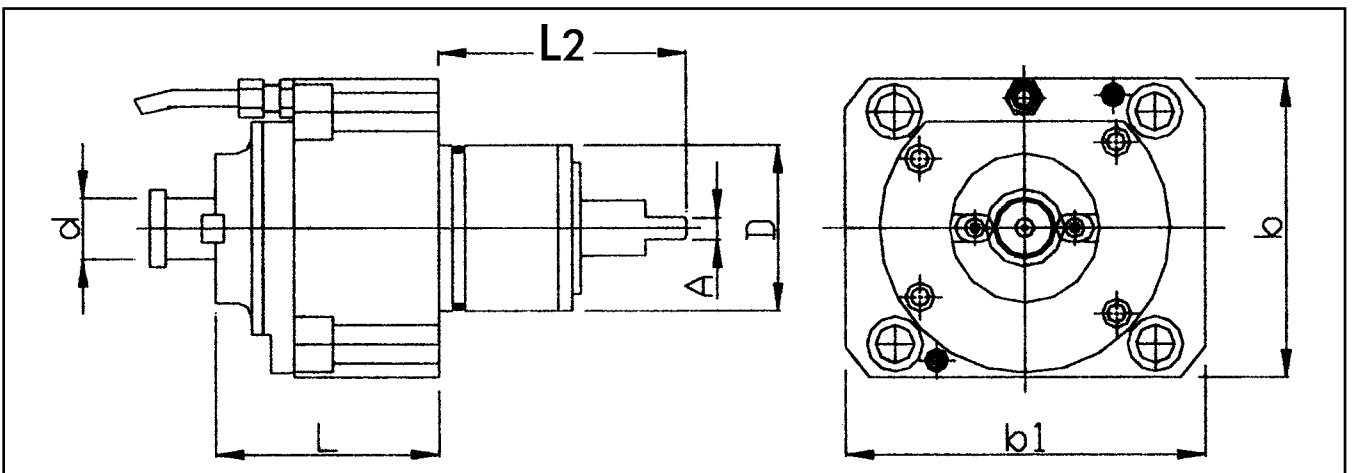
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE32ME16	32	ECX/ER25	7.9	127	130	85	116	6000	1:1	25	7.5

MORI SEIKI NL SERIES Axial Drilling And Milling Heads



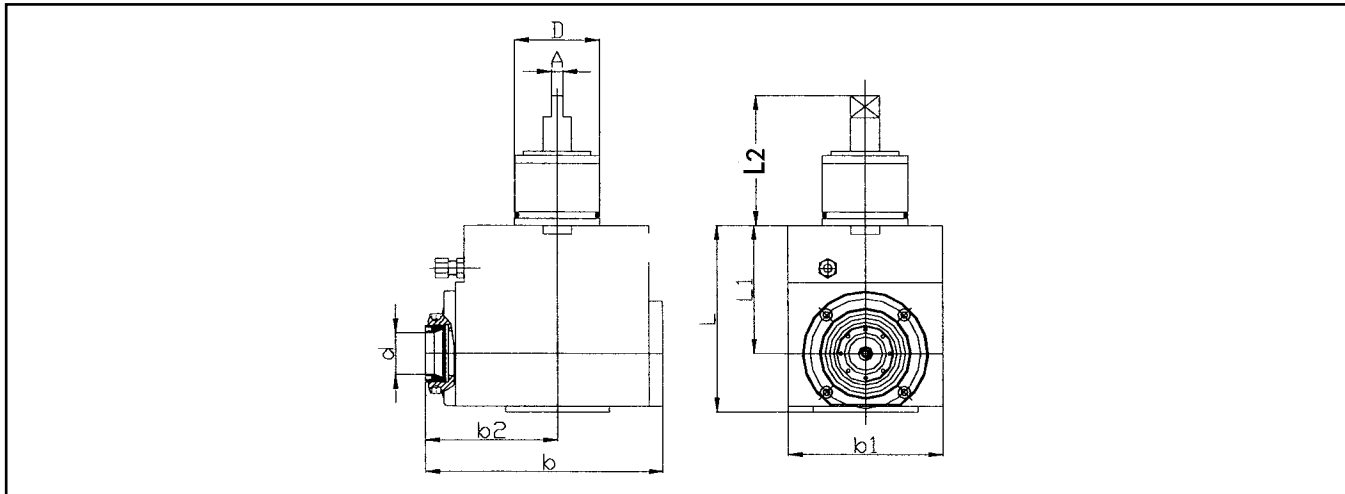
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm	Kg.
HE60MA20	60	ECX/ER32	7.9	91	82	130	108	6000	1:1	50	7.50
HE60MA26	60	ECX/ER40	7.9	91	97	130	108	6000	1:1	50	7.65

Axial Drilling And Milling Heads



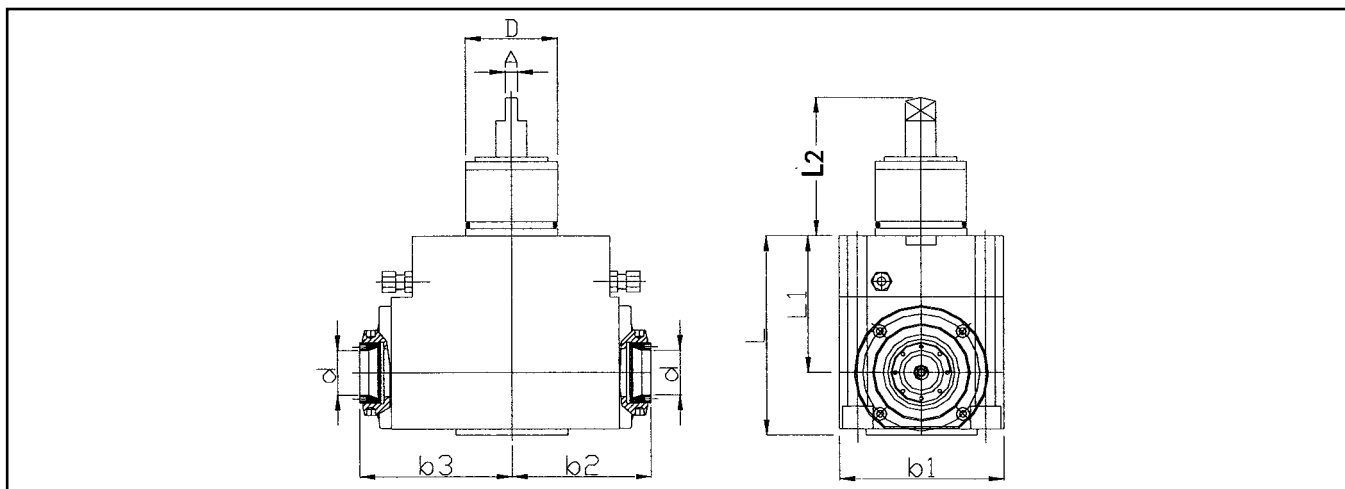
ORDER NO.	D (mm)	dh6	A (mm)	L2 (mm)	L (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm	Kg.
TF60MA22	60	Ø22	7.9	91	82	108	130	6000	1:1	50	7.8

MORI SEIKI NL SERIES Radial Drilling And Milling Heads



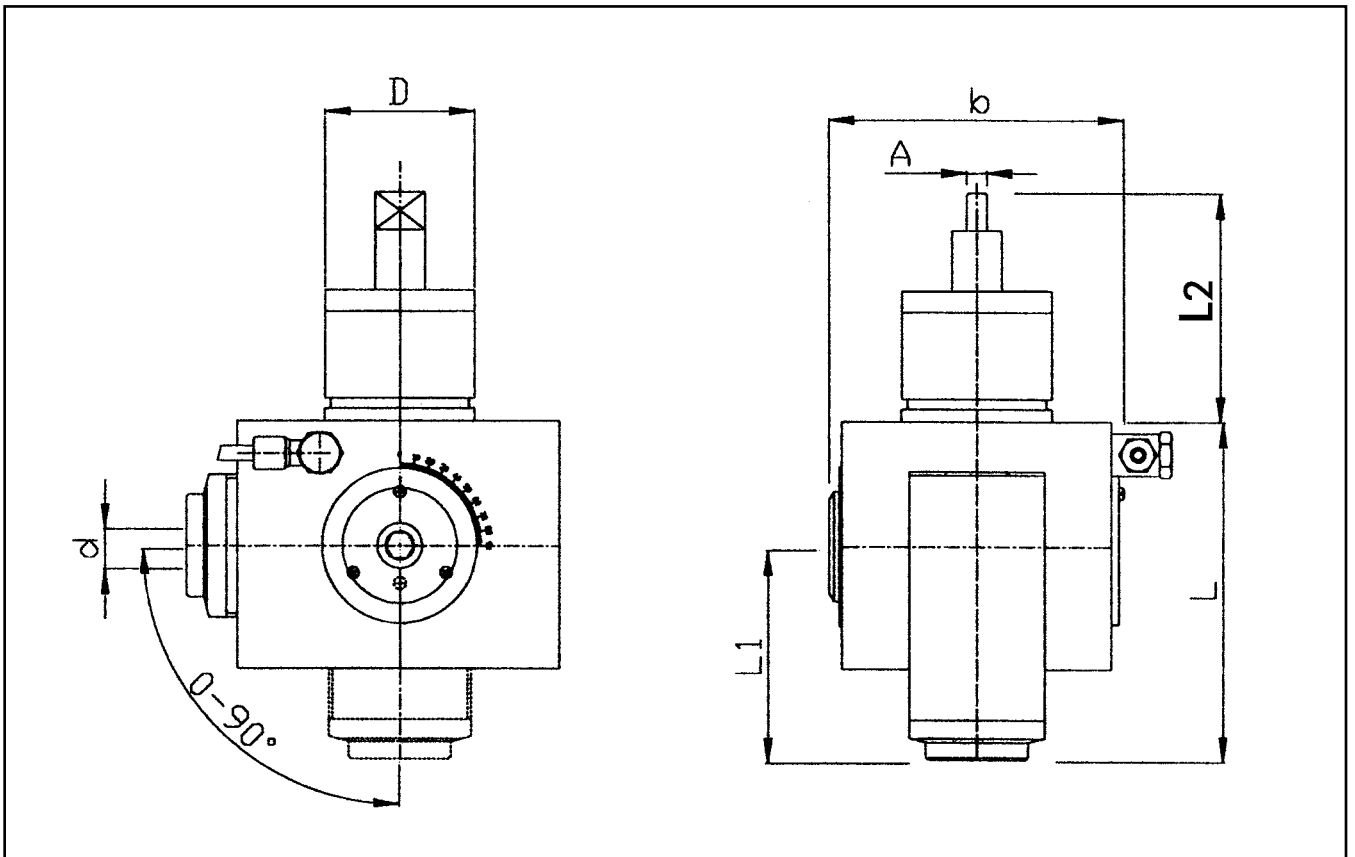
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b1 (mm)	RPM Max	Ratio	Nm	Kg.
HE60MB20	60	ECX/ER32	7.9	91	131	90	167	108	92	6000	1:1	50	14.00
HE60MB26	60	ECX/ER40	7.9	91	131	90	182	108	107	6000	1:1	50	14.15

Radial Double Drilling And Milling Heads



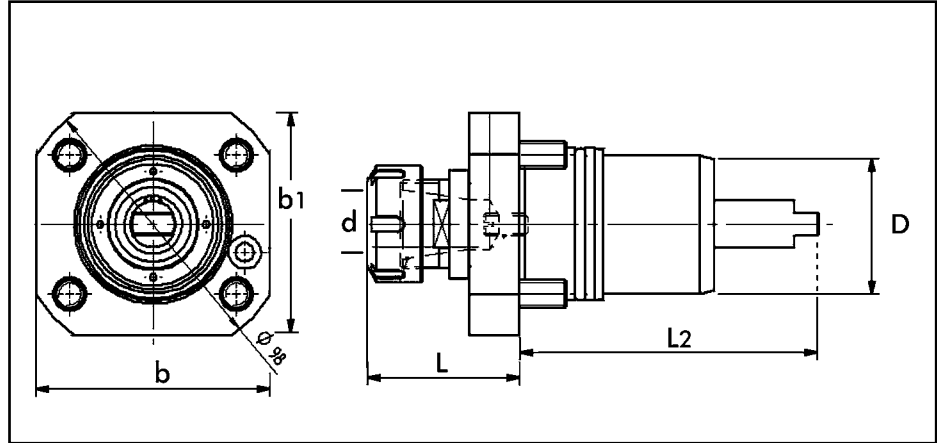
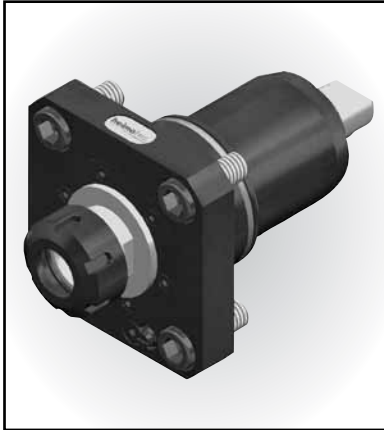
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b1 (mm)	b2 (mm)	b3 (mm)	RPM Max	Ratio	Nm	Kg.
HE60ML20	60	ECX/ER32	7.9	91	131	90	108	92	100	6000	1:1	50	15.00
HE60ML26	60	ECX/ER40	7.9	91	97	90	108	107	115	6000	1:1	50	15.15

MORI SEIKI NL SERIES Universal Angle Drilling & Milling Heads



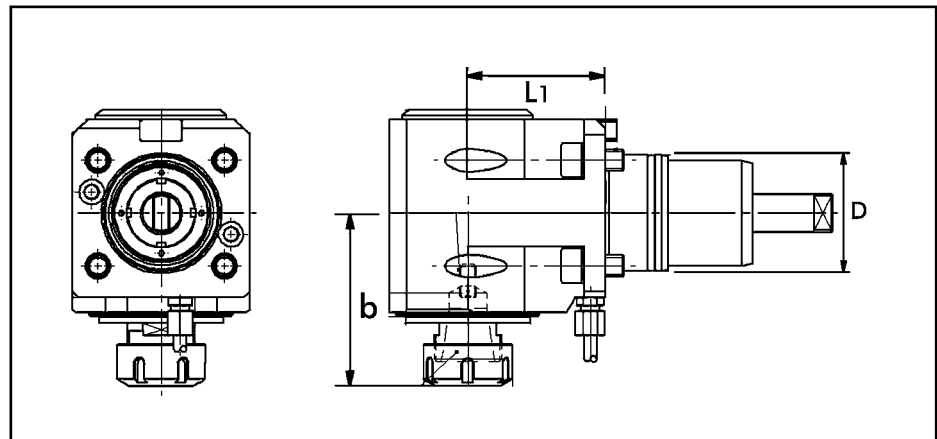
ORDER NO.	D (mm)	d	A (mm)	L2 (mm)	L (mm)	L1 (mm)	b (mm)	RPM Max	Ratio	Nm	Kg.
HE60ME16	60	ECX/ER25	7.9	91	140	85	116	6000	1:1	25	9.0

NAKAMURA Axial Drilling And Milling Heads



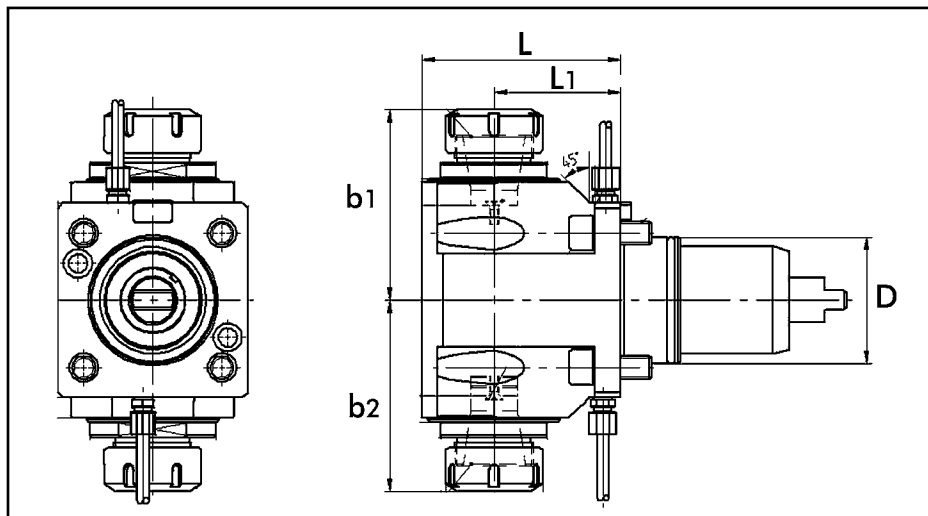
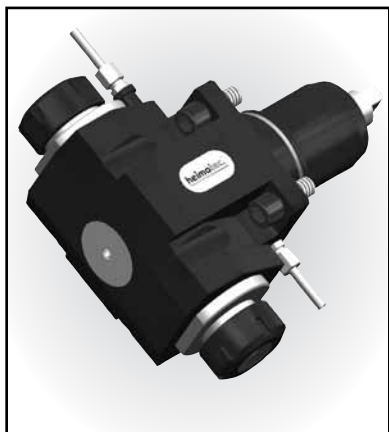
ORDER NO.	MODEL	D (mm)	d	L (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm
801055003	TW10, WTS150, SC150, SC250	55	ECX/ER25	55	80	84	6000	1:1	25
801066003	TW20, SC300	65	ECX/ER32	56	97	97	6000	1:1	50
801066011	TW30, SC450	75	ECX/ER32	73	100	115	4000	1:1	50

Radial Drilling And Milling Heads



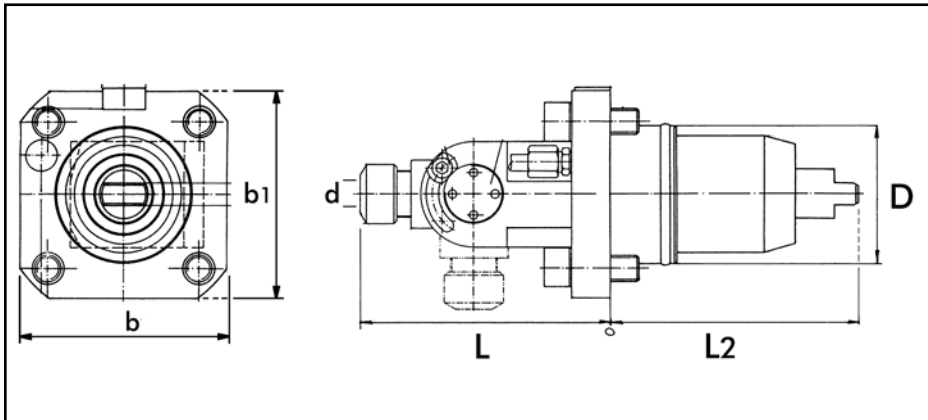
ORDER NO.	MODEL	D (mm)	d	L1 (mm)	b (mm)	RPM Max	Nm
803055037	TW10, WTS150, SC150, SC250	55	ECX/ER25	65	82	6000	50
803066002	TW20, SC300	65	ECX/ER32	65	83	6000	50
803066005	TW30, SC450	75	ECX/ER32	90	87	4000	50

NAKAMURA Radial Double Drilling & Milling Heads



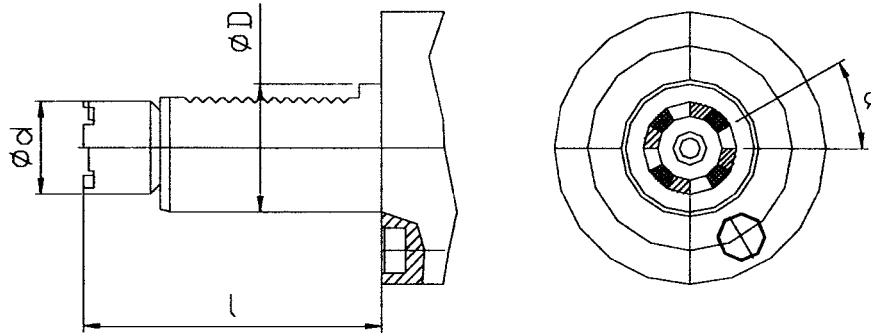
ORDER NO.	MODEL	D (mm)	d	L (mm)	L2 (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm
803955003	TW10, WTS150, SC150, SC250	55	ECX/ER25	80	55	77	77	6000	1:1	25
803966008	TW20, SC300	65	ECX/ER32	102	65	98	98	6000	1:1	50
803966012	TW30, SC450	75	ECX/ER32	127	90	98	98	6000	1:1	50

Universal Angle Drilling & Milling Heads

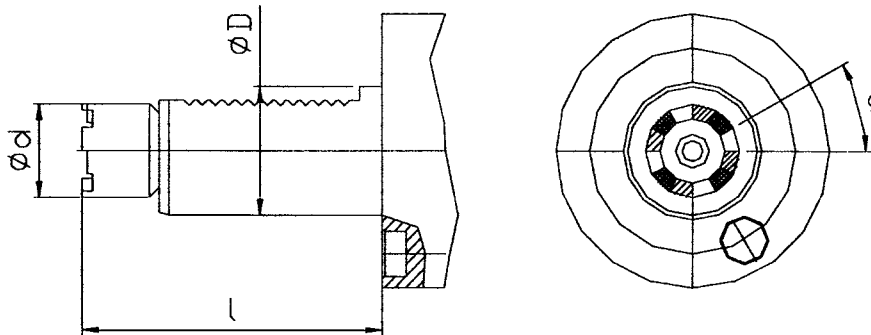


ORDER NO.	MODEL	L1 (mm)	d	L (mm)	L2 (mm)	b (mm)	b1 (mm)	RPM Max	Nm
804054002	TW10, WTS150, SC150, SC250	105	ECX/ER16	108	54	80	84	5000	50
804064000	TW20, SC300	116.3	ECX/ER16	116.3	54	97	97	4000	50
804065001	TW30, SC450	143.5	ECX/ER25	141.5	67	100	102	4000	50

OKUMA Type I & Type II Couplings

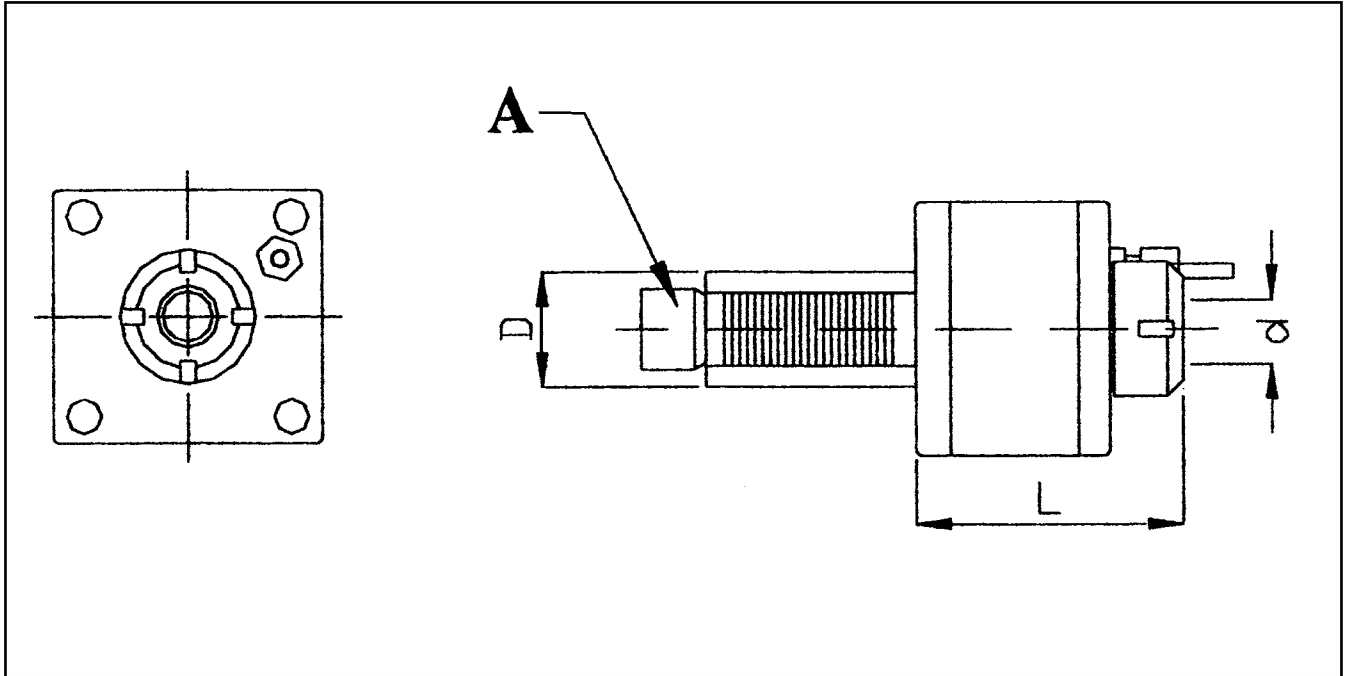


ØD (mm)	50		
1 (mm)	105		
Ød (mm)	42		
n (mm)	12		
a°	30		
Machine	LB3511M		
Code	...39		

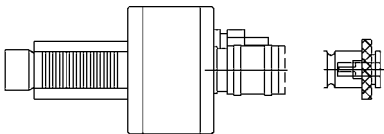


ØD (mm)	30	40	40	50	
1 (mm)	69	93	101	105	
Ød (mm)	24	29	35	42	
n (mm)	8	8	8	8	
a°	60	60	60	60	
	30	30	30	30	
Machine	LB10M LB1011M LR10M LB200M	LB15M LB1511MY LB300M LU300M LVT300M	LB1511M LU15M LB300MY L370M LVT400M	LB25M LU25M LB251M LU400 L470M	LU35M LB45 LU45
Code	...35	...36	...37	...38	

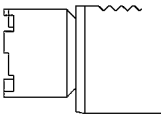

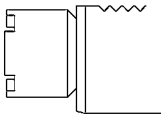

OKUMA Axial Drilling And Milling Heads



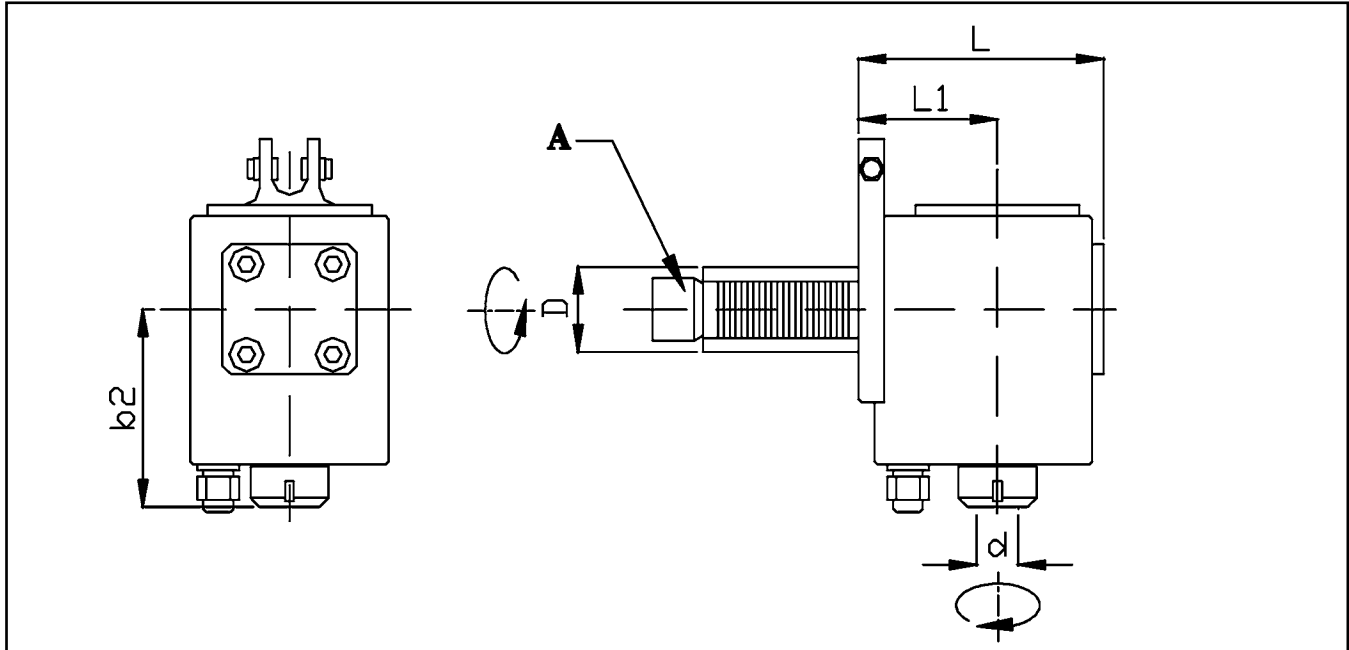
ORDER NO.	D (mm)	d	L (mm)	RPM Max	Ratio	Nm	Kg.
TE30A1335	30	ECX/ER20	100	6000	1:1	25	2.8
TE40A2036	40	ECX/ER32	110	6000	1:1	60	4.0
TE40A2037	40	ECX/ER32	110	6000	1:1	60	4.0



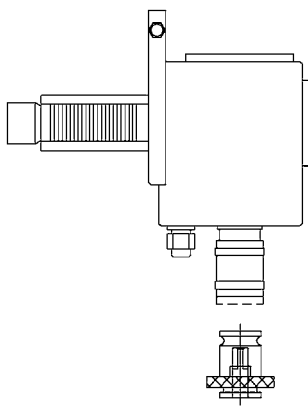
TAPPING HEAD (BLILZ)

Drive A** D (mm)	  TYPE II	  TYPE I
	30	–
40	–	...36 LB15M-LB151M LB1511MY-LU15M
40	–	...37
50	...39 LB3511M	...38

OKUMA Radial Drilling And Milling Heads



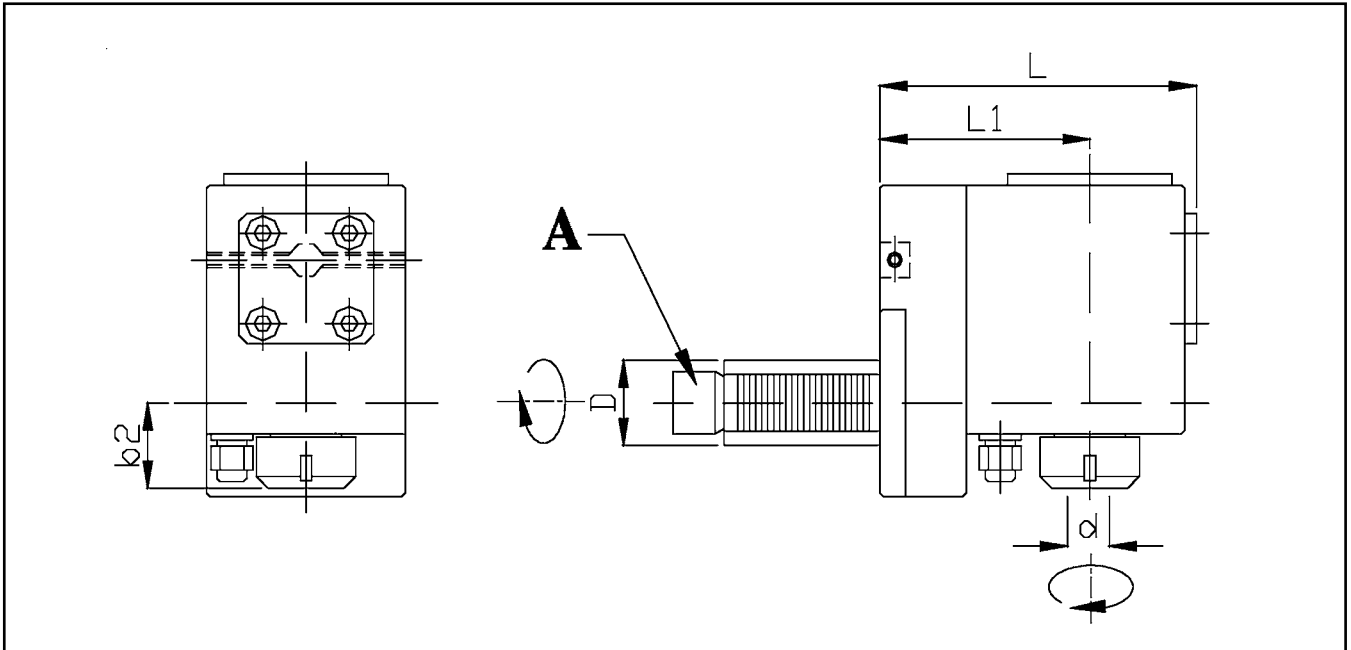
ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE30B1335	30	ECX/ER20	102	53	90	6000	1:1	25	3.8
TE40B2036	40	ECX/ER32	109	64	98	6000	1:1	50	6.0
TE40B2037	40	ECX/ER32	109	64	98	6000	1:1	50	6.0



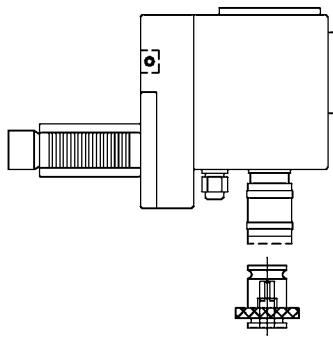
TAPPING HEAD (BLIZ)

Drive A**	 TYPE II		 TYPE I	
	D (mm)			
30	-	...35	LB10M-LB1011M LR10M-LB200M	
40	-	...36	LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M	
40	-	...37	LB25M-LU25M LB2511M-LU400 L470M	
50	...39	LB3511M	...38	LU35M-LB45 LU45

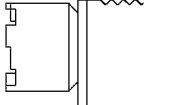

OKUMA Radial (Short) Drilling And Milling Heads



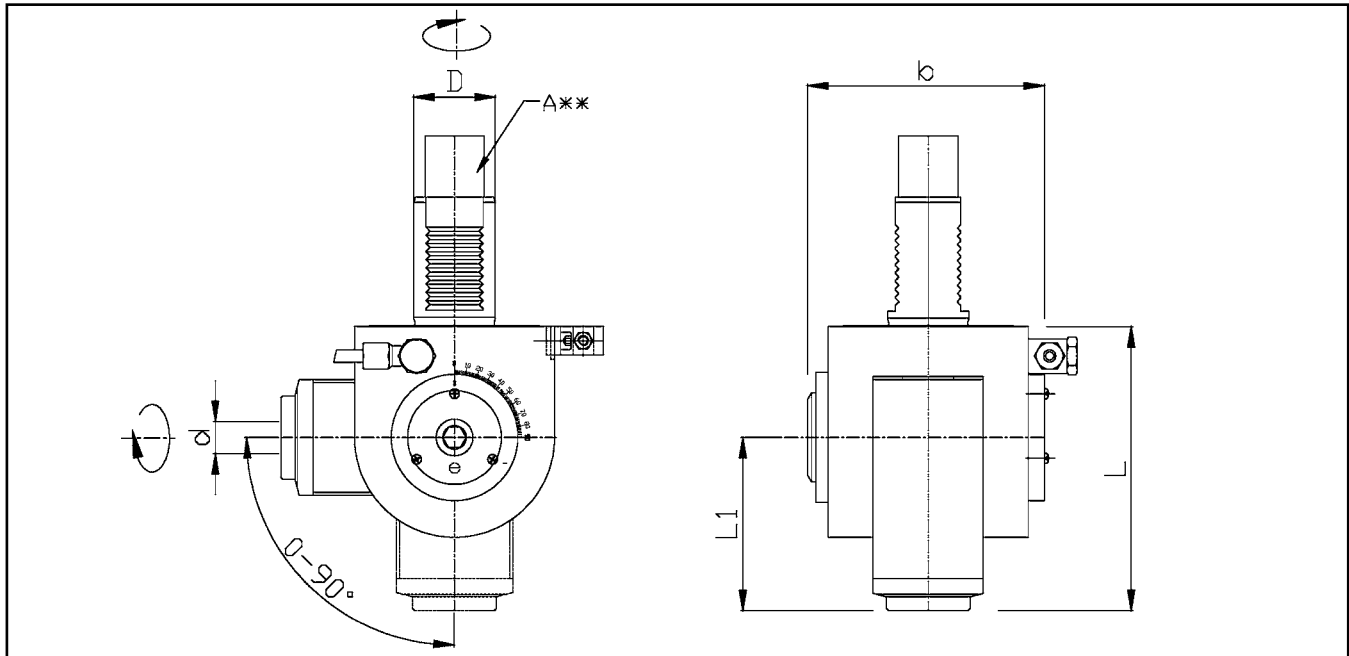
ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE30C1335	30	ECX/ER20	106	70	48.5	6000	1:1	25	5.0
TE40C2036	40	ECX/ER32	130	86	40	6000	1:1	50	6.5
TE40C2037	40	ECX/ER32	130	86	40	6000	1:1	50	6.5





TAPPING HEAD (BLILZ)

Drive A**	 	
	TYPE II	TYPE I
D (mm)		
30	-	...35 LB10M-LB1011M LR10M-LB200M
40	-	...36 LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M
40	-	...37 LB25M-LU25M LB2511M-LU400 L470M
50	...39 LB3511M	...38 LU35M-LB45 LU45

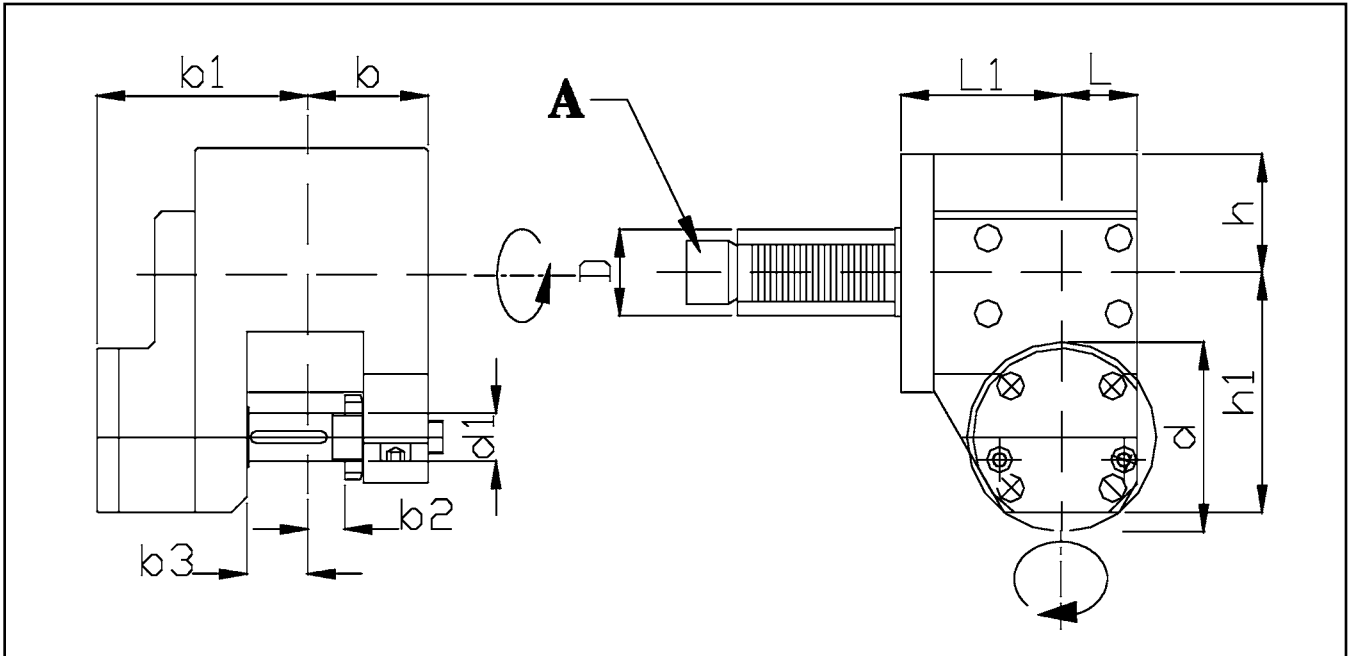
OKUMA Universal Angle Drilling-Milling Heads



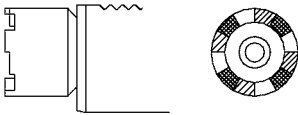
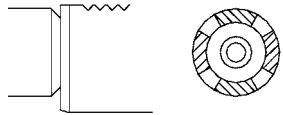
ORDER NO.	D (mm)	d	L (mm)	L1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TE30E1035	30	ECX/ER16	120	76	92	6000	1:1	10	4.6
HE40E1636	40	ECX/ER25	140	85	116	6000	1:1	25	6.8
HE40E1637	40	ECX/ER25	140	85	116	6000	1:1	25	6.8

Drive A** D (mm)	 TYPE II		 TYPE I	
	30	-	...35	LB10M-LB1011M LR10M-LB200M
40	-	...36	LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M	
40	-	...37	LB25M-LU25M LB2511M-LU400 L470M	
50	...39	LB3511M	...38	LU35M-LB45 LU45

OKUMA Driven Tool For Slitting-Milling Cutters

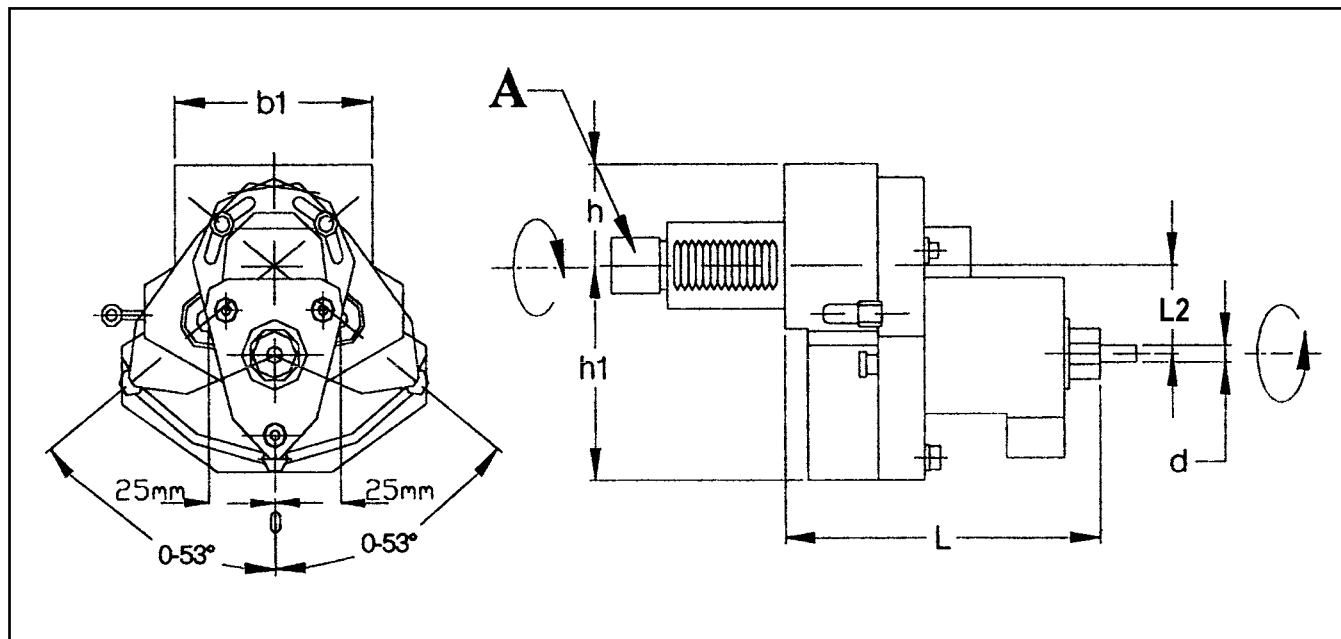


ORDER NO.	D (mm)	d	d1 (mm)	h (mm)	h1 (mm)	L (mm)	L1 (mm)	b (mm)	b1 (mm)	b2 (mm)	RPM Max	Ratio	Nm	Kg.
TD30V6335	30	ECX/ER63	16	42	80	25	54	40	70	18	2000	1:1	25	5.5
TD40V6336	40	ECX/ER63	16	42	80	25	54	40	70	18	2000	1:1	25	6.5
TD40V6337	40	ECX/ER63	16	42	80	25	54	40	70	18	2000	1:1	25	6.5

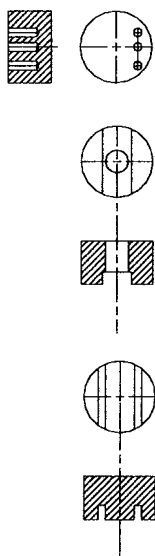
Drive A** D (mm)	 TYPE II		 TYPE I	
	30	—	...35	LB10M-LB1011M LR10M-LB200M
40	—	...36	LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M	
40	—	...37	LB25M-LU25M LB2511M-LU400 L470M	
50	...39	LB3511M	...38	LU35M-LB45 LU45

OKUMA

Axial Adjustable Y-Axis Drilling & Milling Heads



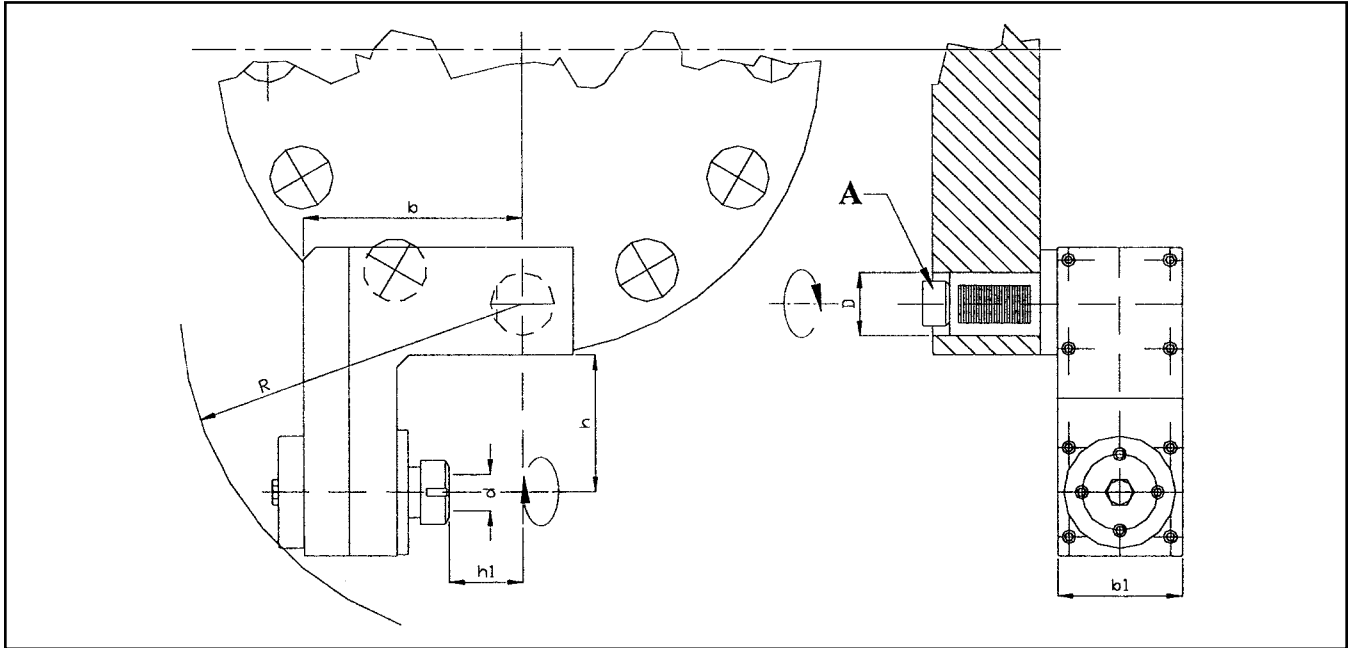
ORDER NO.	D (mm)	d	L2 (mm)	L (mm)	h (mm)	h1 (mm)	b1 (mm)	RPM Max	Ratio	Nm
TE30H1035	30	ECX/ER16	31.5	120	40	75	80	6000	1:1	25
TE40H1036	40	ECX/ER16	31.5	120	40	75	80	6000	1:1	25
TE40H1036	40	ECX/ER16	31.5	120	40	75	80	6000	1:1	25



TAPPING HEAD (BLILZ)

Drive A** D (mm)	TYPE II		TYPE I	
	30	-	...35	LB10M-LB1011M LR10M-LB200M
40	-	...36	LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M	
40	-	...37	LB25M-LU25M LB2511M-LU400 L470M	
50	...39	LB3511M	...38	LU35M-LB45 LU45

Radial Adjustable Y-Axis & Milling Heads



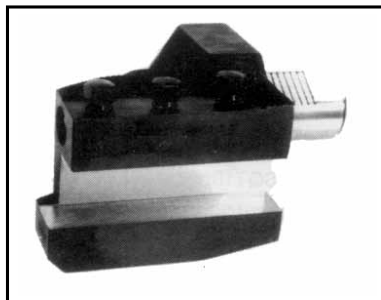
ORDER NO.	D (mm)	d	R (mm)	h (mm)	h1 (mm)	b (mm)	b1 (mm)	RPM Max	Ratio	Nm	Kg.
TE30D1035	30	ECX/ER20	170	45	25	140	70	4500	1:1	25	7.0
TE40D1036	40	ECX/ER32	200	80	30	140	80	4500	1:1	50	8.3
TE40D1036	40	ECX/ER32	200	80	30	140	80	4500	1:1	50	8.3

Drive A**	D (mm)		TYPE II		TYPE I	
	30		-	...35	LB10M-LB1011M LR10M-LB200M	
	40		-	...36	LB15M-LB1511M LB1511MY-LU15M LB300M-LB300MY LU300M-L370M LVT300M-LVT400M	
	40		-	...37	LB25M-LU25M LB2511M-LU400 L470M	
	50	...39	LB3511M	...38	LU35M-LB45 LU45	

WORKING EXAMPLE

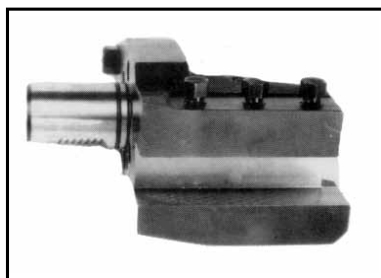
Toolholders to Fit Mazak SQT & Multiplex CNC Lathes

Forward Turn



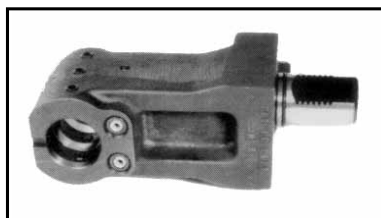
Machine Model	Description	Mazak No.	Order No.
SQT10/100	Forward Turn	53518010100	110-FTH40
SQT15/18/200/250	Forward Turn	53618010100	115-FTH40
SQT28	Forward Turn	53818010100	128-FTH50
MP420/620/6200	Forward Turn	53478005200	MP620-FTM
MP430/630	Forward Turn	53478006101	MP630-FTM

Reverse Turn



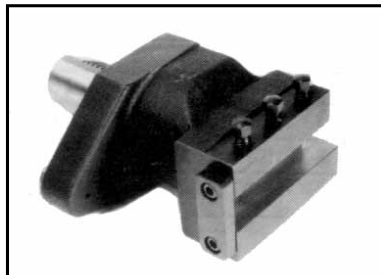
Machine Model	Description	Mazak No.	Order No.
SQT10/100	Reverse Turn	53518010700	110-RTH40
SQT15/18/200/250	Reverse Turn	53618010600	115-RTH40
SQT28	Reverse Turn	53818010600	128-RTH50
MP420/620/6200	Reverse Turn	53478005100	MP620-RTH
MP430/630	Reverse Turn	53488006001	MP630-RTH

Boring Bar



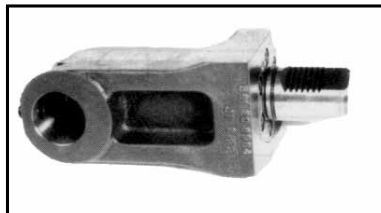
Machine Model	Description	Mazak No.	Order No.
SQT10/100	1-1/4" Boring Bar	53518010200	110-B0H40
SQT200/250	1-1/2" Boring Bar	53208015100	125-B0H40
SQT28	2" Boring Bar	53818010200	128-B0H50
MP420/620/6200	1-1/2" Boring Bar	53578005300	MP620-B0H
MP430/630	2" Boring Bar	53488006201	MP630-B0H

Facing Holder



Machine Model	Description	Mazak No.	Order No.
SQT10/100	Facing Holder	53518010300	110-FAH40
SQT15/18/200/250	Facing Holder	53618010300	115-FAH40
SQT28	Facing Holder	53818010300	128-FAH50
MP420/620/6200	Facing Holder	53578005200	MP620-FAH
MP430/630	Facing Holder	53478806400	MP630-FAH

U-Drill Holder

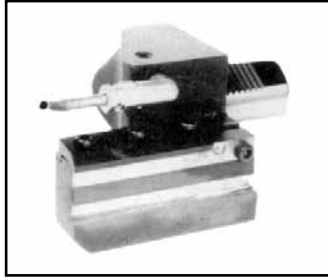


Machine Model	Description	Mazak No.	Order No.
SQT10/100	U-Drill Holder 32 mm	53518010500	110-UDH40
SQT15/18/200/250	U-Drill Holder 40mm	53208015200	115-UDH40
SQT28	U-Drill Holder 40mm	53818010500	128-UDH40
MP420/620/6200	U-Drill Holder 40mm	53478005700	MP620-UDH
MP430/630	U-Drill Holder 40mm	53488001801	MP630-UDH

Additional Mazak Toolholders available for other machines including Quick Turn (QT), Multiplex, and Dual Turn.

Toolholders to Fit Mazak SQT CNC Lathes

Cut Off Holder



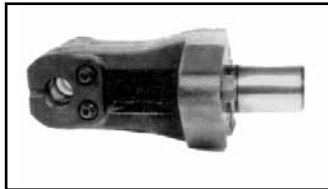
Machine Model	Description	Mazak No.	Order No.
SQT10/100	Cut off holder	53518000401	110-COH40
SQT15/18/200/250	Cut off holder	53618010400	115-COH40
SQT28	Cut off holder	53818000401	128-COH50
MP420/620-6200	Cut off holder	53478000900	MP620-COH
MP430/630	Cut off holder	53478001601	MP630-COH

Double Turn Holder



Machine Model	Description	Mazak No.	Order No.
SQT10/100	Double Turn	53538010100	110-DTH40
SQT15/18/200/250	Double Turn	53638010300	115-DTH40
SQT28	Double Turn	53838010800	128-DTH50

Double Boring Bar



Machine Model	Description	Mazak No.	Order No.
SQT10/100	3/4" double boring	53538010200	110-SBH40
SQT15/18/200/250	1" double boring	53638010400	115-SBH40
SQT28	1" double boring	53838010900	128-SBH50

Turret Cap



Machine Model	Description	Mazak No.	Order No.
SQT10/100	Turret Cap	53518000600	110-CAP40
SQT15/18/200/250	Turret Cap	53618000600	115-CAP40
SQT28	Turret Cap	53818000700	128-CAP50

Turret Clamp Set



Machine Model	Description	Mazak No.	Order No.
SQT10/100	Turret Clamp Set	53518010700	110-TCS40
SQT15/18	Turret Clamp Set	53618010600	115-TCS40
SQT28	Turret Clamp Set		128-TCS50

Additional Mazak Toolholders available for other machines including Quick Turn (QT), Multiplex, and Dual Turn.

Bushings/Parts for Mazak SQT Toolholders



Bushings

Order No.	Description	
	OD	ID
075-BS312	3/4"	5/16"
075-BS375	3/4"	3/8"
075-BS500	3/4"	1/2"
075-BS625	3/4"	5/8"
100-BS312	1"	5/16"
100-BS375	1"	3/8"
100-BS500	1"	1/2"
100-BS625	1"	5/8"
100-BS750	1"	3/4"
110-BS312	1-1/4"	5/16"
110-BS375	1-1/4"	3/8"
110-BS500	1-1/4"	1/2"
110-BS625	1-1/4"	5/8"
110-BS750	1-1/4"	3/4"
110-BS1000	1-1/4"	1"
115-BS375	1-1/2"	3/8"
115-BS500	1-1/2"	1/2"
115-BS625	1-1/2"	5/8"
115-BS750	1-1/2"	3/4"
115-BS1000	1-1/2"	1"
115-BS1250	1-1/2"	1-1/4"
125-BS375	1-1/2"	3/8"
125-BS500	1-1/2"	1/2"
125-BS625	1-1/2"	5/8"
125-BS750	1-1/2"	3/4"
125-BS1000	1-1/2"	1"
125-BS1250	1-1/2"	1-1/4"
128-BS500	2"	1/2"
128-BS625	2"	5/8"
128-BS750	2"	3/4"
128-BS1000	2"	1"
128-BS1250	2"	1-1/4"
128-BS1750	2"	1-3/4"

Morse Taper Bushings

Order No.	Description	
	OD	M.T. No.
100-MT1	1"	1
100-MT2	1"	2
110-MT1	1-1/4"	1
110-MT2	1-1/4"	2
115-MT2	1-1/2"	2
115-MT3	1-1/2"	3
128-MT2	2"	2
128-MT3	2"	3
128-MT4	2"	4

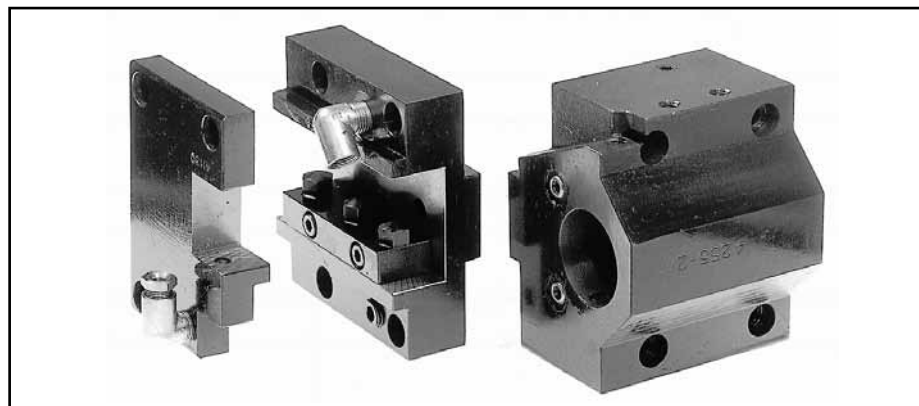
U-Drill Bushing

Order No.	Description	
	OD	ID
010-US20	32mm	20mm
010-US25	32mm	25mm
015-US20	40mm	20mm
015-US25	40mm	25mm
015-US32	40mm	32mm

Parts

Description	Mazak No.	Order No.
SQT10		
Shank	3518066490	010-SHK40
Diamond Locator	3468048090	010-DML40
Nozzles	E00PBA6E020	00PBA6E020
Screw - Short	1411539851	1411539851
Screw - Long	3468048320	3468048320
SQT15/18/200/250		
Shank	3518066490	010-SHK40
Diamond Locator	1578010821	015-DML40
Nozzles	E00PBA6E020	00PBA6E020
Screw - Short	1421538641	1421538641
Screw - Long	3478047980	3478047980
SQT28		
Shank	CTA5990	028-SHK40
Diamond Locator	1578010821	028-DML40
Nozzles	E00PBA6E020	00PBA6E020
Screw - Short	1421538641	1421538641
Screw - Long	3478047980	3478047980

Mazak Bolt-on Style Toolholders for Quick Turn (QT) Machines



QT15 8D/QT 250-12D		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT15-BOH	53418010403	Boring Bar Holder (1.500")
QT15-FAH	53418010500	Facing Holder
QT15-FTH	53418010700	Forward Turning Holder
QT15-RTH	53418010800	Reverse Turning Holder
QT15-UDH	53418010600	U Drill Holder (40 mm)

QT200-12D		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT200-BOH	53258010500	Boring Bar Holder (1.250")
QT200-FAH	53258010400	Facing Holder
QT200-FTH	53258010200	Forward Turning Holder
QT200-RTH	53258010300	Reverse Turning Holder

QT15-12D		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT12-12FAH	53418010201	Facing Holder

QTN100/12 Position		
PART NO.	MAZAK PART NO.	DESCRIPTION
QTN100-BOH	53108010400	Boring Bar Holder (1.250")
QTN100-FAH	53108010300	Facing Holder
QTN100-FTH	53108010101	Forward Turning Holder
QTN100-RTH	53108010201	Reverse Turning Holder
QTN100-UDH	53108010500	U-Drill Holder (32mm)

QT15 8D-16 Position		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT15-16BOH	53418014600	Boring Bar Holder (1.500")
QT15-16FAH	53418014800	Facing Holder
QT15-16FTH	53418015000	Forward Turning Holder
QT15-16UDH	53418015000	U-Drill Holder (40mm)

QTN 200/250/300/350		
PART NO.	MAZAK PART NO.	DESCRIPTION
QTN200-BOH	53378010302	Boring Bar Holder (1.250")
QTN350-BOH	MZK8007B	Boring Bar Holder (2.000")
QTN200-FAH	53418010500	Facing Holder
QTN350-FAH	53208010300	Facing Holder
QTN200-DTH	53208010400	Turning Holder (Forward/Reverse)
QTN200-UDH	53208010100	U-Drill Holder (32mm)

QT28 8D-16 Position / QT300		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT28-BOH	53428004502	Boring Bar Holder (2.000")
QT28-FAH	53428004402	Facing Holder
QT28-FTH	53428004300	Forward Turning Holder
QT28-UDH	53428004701	U-Drill Holder (2.000")

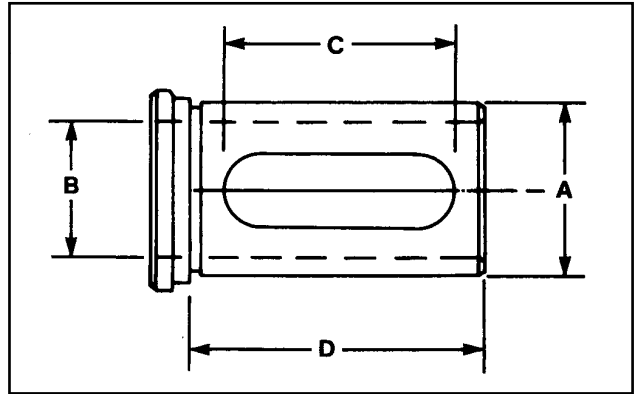
QT350-12D		
PART NO.	MAZAK PART NO.	DESCRIPTION
QT350-BOH	51488000601	Boring Bar Holder (1.250")
QT350-OBOH	51488000701	Offset Boring Bar Holder
QT350-FAH	51488000900	Facing Holder
QT350-TTH	MZK7227B	Tandem Turn Holder
QT350-UDH	51488001000	U-Drill Holder (2.000")

The above is only an example of some of the toolholders we offer. Tools for other machine models are also available. Specials upon request. It is critical to verify the number of stations on your machine turret or provide the eleven digit Mazak part number to insure the correct holder is being provided.

Toolholder Bushings



TYPE 'C'



Note:
Special bore sizes made to order

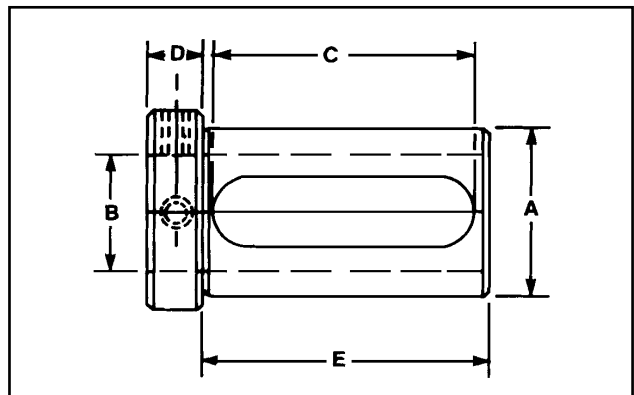
This CNC Type C Bushing is designed for universal use on all CNC turning machines. To adapt a wide variety of Boring Bars, Drills, Reamers and Shank type tools. Precision machine hardened and ground concentric. Select the O.D. size that fits your machine and order from the accompanying chart.

CNC Part Number	Bush Dia.		Standard Bore Sizes Stocked		Length of Slot	Length under head	No. of Slots	
	A		B					
	INCH	mm	INCH	mm	C	D		
CNC 86-10C	3/4	20	1/4 - 5/16 - 3/8 - 1/2		6, 8, 10, 12	1-1/2	2	1
CNC 86-11C	1	25	1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4		8, 10, 12, 16, 20	2-3/8	2-3/4	1
CNC 86-12C	1-1/4	32	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1		10, 12, 16, 20, 25	2-3/4	3-1/4	1
CNC 86-13C	1-1/2	40	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1-1/4		10, 12, 16, 20, 25, 32	3	3-3/8	1
CNC 86-14C	1-3/4	45	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1-1/4 - 1-1/2		12, 16, 20, 25, 32, 40	3-1/8	3-1/2	1
CNC 86-15C	2	50	1/2 - 5/8 - 3/4 - 1 - 1-1/4 - 1-1/2 - 1-3/4		12, 16, 20, 25, 32, 40, 45	3-5/8	4	1
CNC 86-16C	2-1/2	65	3/4 - 1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4		20, 25, 32, 40, 45, 50	4-1/8	4-1/2	1 or 2*
CNC 86-17C	3	80	1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4 - 2-1/2		25, 32, 40, 50, 60, 65	4-5/8	5	1 or 2*
CNC 86-18C	3-1/2	90	1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4 - 2-1/2 - 3		25, 32, 40, 50, 60, 65	5	5-3/4	1 or 2*

* ID's larger than 1-1/2" have 2 slots.



TYPE 'Z'
3 Lengths Available



Note:
Available in shorter and longer length under head

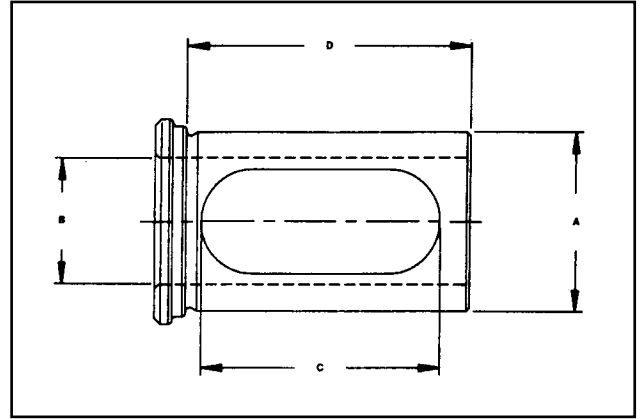
The most flexible Toolholder Bushing for all types of NC-CNC Turret Lathes and Chuckers. The elongated slots give the user a complete inter-changeability with all brands of equipment. The bushings are hardened and precision ground concentric. Can be used also for preset tooling. Select the O.D. size that fits your machine and order from the accompanying chart.

CNC Part Number	Bush Dia.		Standard Bore Sizes Stocked		Length of Slot			Head Thickness	Length under head			
	A		B		Style ZS	Style Z	Style ZL		Style ZS	Style Z	Style ZL	
	INCH	mm	INCH	mm	C			E				
CNC 86-40Z	3/4	20	1/4 - 5/16 - 3/8 - 1/2		6, 8, 10, 12	2 3/8		1/2		2 1/2		
CNC 86-41Z	1	25	1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4		8, 10, 12, 16, 20	2 3/8		1/2		2 3/4		
CNC 86-42Z	1 1/4	32	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1		10, 12, 16, 20, 25	1 7/8	2 5/8	3 3/8	5/8	2 1/4	3	3 3/4
CNC 86-43Z	1 1/2	40	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4		10, 12, 16, 20, 25, 32	2 1/8	2 7/8	3 3/8	3/4	2 1/2	3 1/4	4
CNC 86-44Z	1 3/4	45	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4		12, 16, 20, 25, 32, 40	2 3/8	3 3/8	3 7/8	3/4	2 3/4	3 1/2	4 1/4
CNC 86-45Z	2	50	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4		12, 16, 20, 25, 32, 40, 45	2 3/8	3 1/2	4 1/8	3/4	3	3 3/4	4 1/2
CNC 86-46Z	2 1/2	65	5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4		16, 20, 25, 32, 40, 45, 50	3 1/8	3 7/8	4 5/8	3/4	3 1/2	4 1/4	5
CNC 86-47Z	3	80	1 - 1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4 - 2 1/2		25, 32, 40, 50, 60, 65	3 3/8	4 3/8	5 3/8	3/4	3 3/4	4 3/4	5 3/4
CNC 86-48Z	3 1/2	90	1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4 - 2 1/2 - 3		32, 40, 50, 60, 65	3 7/8	4 7/8	5 7/8	1	4 1/2	5 1/2	6 1/2
CNC 86-49Z	4	100	1 1/2 - 1 3/4 - 2 - 2 1/4 - 2 1/2 - 3		40, 50, 60, 65, 80	4 3/8	5 3/8	7 3/8	1	5	6 1/4	7 1/2

Toolholder Bushings



TYPE 'CS' Short Series



Note:
Special bore sizes made to order

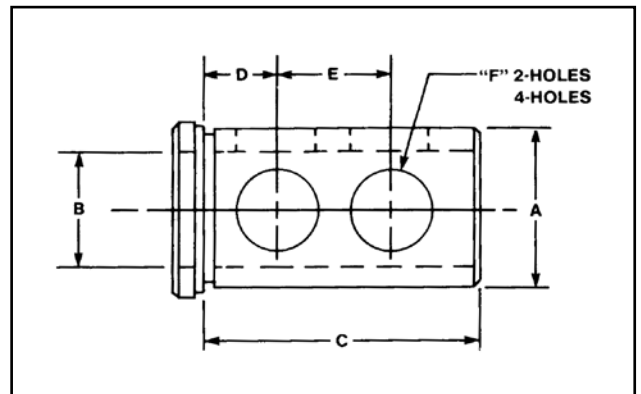
Superior Design Premium Quality

Introducing the 'all-new' CNC Type CS Bushing designed for universal use on all CNC Turning machines. This toolholder is shorter than our standard C bushing for adaptation for a variety of Boring Bars, Drills, Reamers and Shank Type tools. The bushings are hardened & precision ground concentric. Select the O.D. size that fits your machine and order from accompanying chart

CNC Part Number	Bush Dia.		Standard Bore Sizes Stocked		Length of Slot	Length under head	
	INCH	mm	B				
			INCH	mm	C	D	
CNC 86-10CS	3/4	20	1/4 - 5/16 - 3/8 - 1/2		6, 8, 10, 12	1-1/8	1-1/2
CNC 86-11CS	1	25	1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4		8, 10, 12, 16, 20	1-3/8	1-3/4
CNC 86-12CS	1-1/4	32	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1		10, 12, 16, 20, 25	1-3/4	2-1/8
CNC 86-13CS	1-1/2	40	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1-1/4		10, 12, 16, 20, 25, 32	2-1/8	2-1/2
CNC 86-14CS	1-3/4	45	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1-1/4 - 1-1/2		12, 16, 20, 25, 32, 40	2-5/8	3
CNC 86-15CS	2	50	1/2 - 5/8 - 3/4 - 1 - 1-1/4 - 1-1/2 - 1-3/4		12, 16, 20, 25, 32, 40, 45	3	3-1/2
CNC 86-16CS	2-1/2	65	3/4 - 1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4		20, 25, 32, 40, 45, 50	3-1/2	4
CNC 86-17CS	3	80	1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4 - 2-1/2		25, 32, 40, 45, 50, 60, 65	4-1/8	4-1/2
CNC 86-18CS	3-1/2	90	1 - 1-1/4 - 1-1/2 - 1-3/4 - 2 - 2-1/4 - 2-1/2 - 3		25, 32, 40, 45, 50, 60, 65	4-3/4	5-1/4



TYPE 'J'



Note:
Special bore sizes made to order

MADE IN USA

This Type J Toolholder Bushing, with long solid body, 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. They are hardened and precision ground concentric. Select the O.D. size that fits your machine and order from the accompanying chart.

CNC Part Number	Bush Dia.		Standard Bore Sizes Stocked		Special Bore sizes avail.	Length under head	Length Dimensions			Hole Size	No. Holes	
	INCH	mm	B				C	D	E			F
			INCH	mm	MIN.	MAX.						
CNC 86-01J	3/4	20	1/4 - 5/16 - 3/8 - 1/2		6, 8, 10, 12	3/16	3/8	1 1/2	3/8	1 3/16	3/8	2
CNC 86-02J	1	25	3/8 - 1/2 - 5/8 - 3/4		10, 12, 16, 20	1/4	7/8	1 3/4	7/8	1 7/8	3/8	2
CNC 86-12J	1 1/4	32	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1		10, 12, 16, 20, 25	1/4	1 1/8	2 1/8	5/8	1	3/4	2
CNC 86-03J	1 1/2	40	3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4		10, 12, 16, 20, 25, 32	1/4	1 1/4	2 1/2	1 1/16	1 1/8	7/8	2
CNC 86-04J	1 3/4	45	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2		12, 16, 20, 25, 32, 40	1/4	1 1/2	3	3/4	1 1/4	7/8	2
CNC 86-05J	2	50	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4		12, 16, 20, 25, 32, 40, 45	3/8	1 3/4	3 1/2	3/4	1 1/2	1	2
CNC 86-06J	2 1/2	65	3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4		20, 25, 32, 40, 45, 50	1/2	2 1/4	4	7/8	1 3/4	1 1/4	2
CNC 86-07J	3	80	1 - 1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4 - 2 1/2		25, 32, 40, 45, 50, 60, 65	1/2	2 1/2	4 1/2	1	2	1 1/4	4
CNC 86-08J	3 1/2	90	1 - 1 1/4 - 1 1/2 - 1 3/4 - 2 - 2 1/4 - 2 1/2 - 3		25, 32, 40, 45, 50, 60, 65	3/4	3	5 1/4	1 1/4	2 1/2	1 1/4	4

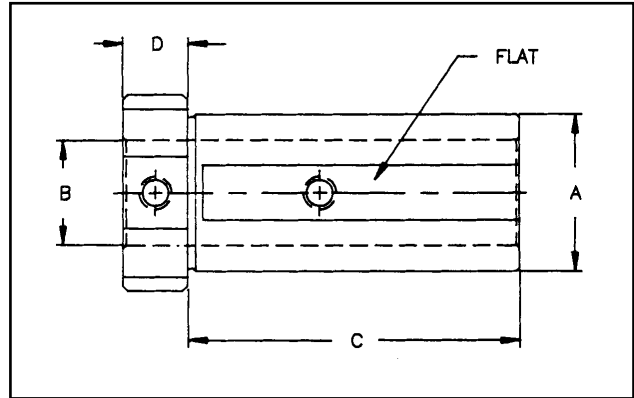
Toolholder Bushings



Superior Design Premium Quality

These LBF Type Bushings are manufactured with a flat for clamping the Toolholder and two set screws for clamping a variety of drills, boring bars and other shank tools. Equipped with two clearance notches for coolant and are heat treated and precision ground concentric.

TYPE 'LBF'



Note:
Special bore sizes made to order

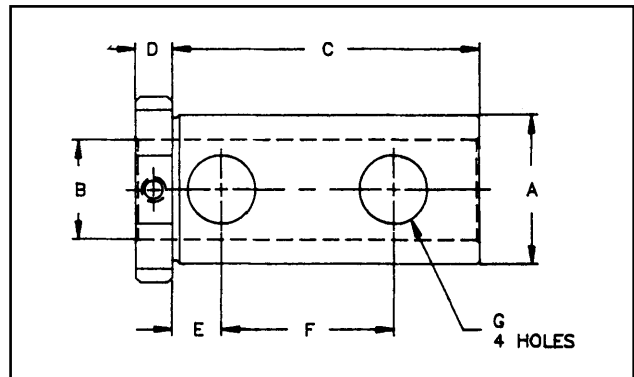
CNC Part Number	Bush Dia. A		Standard Bore Sizes Stocked B		Head Thickness D	Length Under Head C
	INCH	mm	B			
			INCH	mm	D	C
CNC 86-12LBF	1-1/4	32	1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1	8, 10, 12, 16, 20, 25	5/8	2-13/16
CNC 86-03LBF	1-1/2	40	1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4	10, 12, 16, 20, 25, 32	5/8	3-5/32
CNC 86-05LBF	2	50	1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4 - 1 1/2 - 1 3/4	12, 16, 20, 25, 32, 40, 45	3/4	3-3/4



Superior Design Premium Quality

This Type LB Toolholder Bushing with long solid body, has four clearance holes so that you can clamp directly on the tool with set screws for positive alignment of the cutting edge of the tool. Manufactured to include clearance notches for coolant. They are hardened and precision ground concentric.

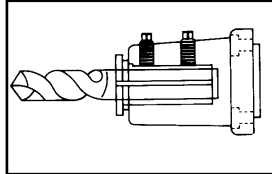
TYPE 'LB'



Note:
Special bore sizes made to order

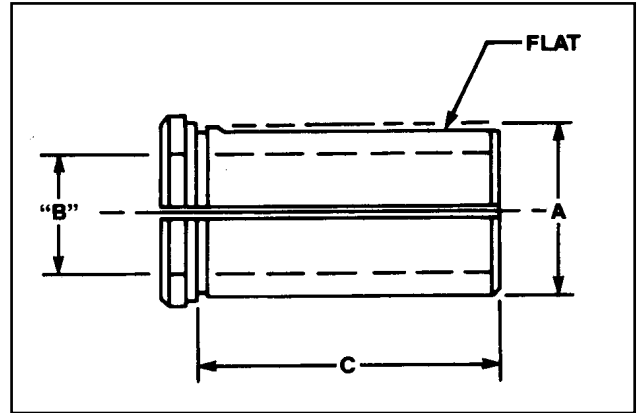
CNC Part Number	Bush Dia. A		Standard Bore Sizes Stocked B		Head Thickness D	Length Under Head C	Length Dimensions			Hole Size G
	INCH	mm	B				E	F		
			INCH	mm	D	C				
CNC 86-13LB	1-1/2	40	1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1 1/4	10, 12, 16, 20, 25, 32	3/8	3-1/8	1/2	1-3/4	5/8	

Toolholder Bushing



TYPE 'B'

Note:
Special bore sizes made to order



These split Type B Bushings are manufactured with flexible manufacturing systems, for all types and sizes of NC, CNC Lathes and Chucks, are heat treated and precision ground concentric. It is used to adapt drills, boring bars, and other shank tools. Select the O.D. size that fits your machine and order from the accompanying chart.

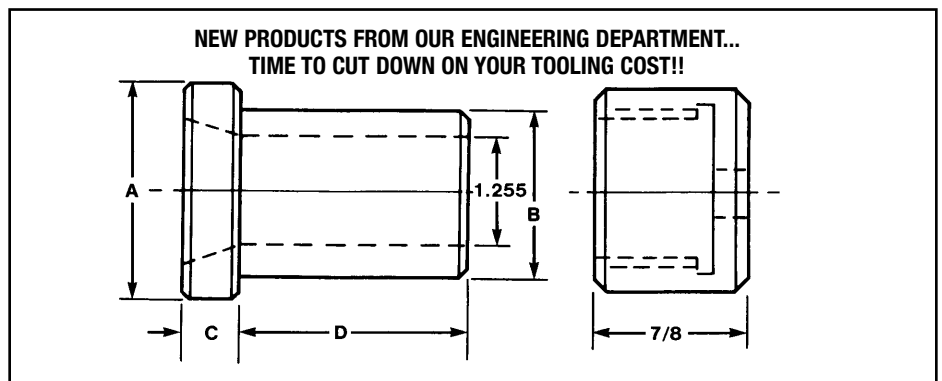
Order Number	Bush Dia.		Standard Bore Sizes Stocked		Special Bore sizes avail.		Length Under Head
	A		B		MIN.	MAX.	
	INCH	mm	INCH	mm			
8601B	3/4	20	1/4 · 5/16 · 3/8 · 1/2	6, 8, 10, 12	3/16	5/8	1-1/2
8602B	1	25	3/8 · 1/2 · 5/8 · 3/4	10, 12, 16, 20	3/16	7/8	1-3/4
8612B	1-1/4	32	3/8 · 1/2 · 5/8 · 3/4 · 7/8 · 1	10, 12, 16, 20, 25	3/16	1	2-1/8
8603B	1-1/2	40	3/8 · 1/2 · 5/8 · 3/4 · 7/8 · 1 · 1-1/4	10, 12, 16, 20, 25, 32	3/16	1-1/4	2-1/2
8604B	1-3/4	45	1/2 · 5/8 · 3/4 · 7/8 · 1 · 1-1/4 · 1-1/2	10, 12, 16, 20, 25, 32, 40	1/4	1-1/2	3
8605B	2	50	1/2 · 5/8 · 3/4 · 7/8 · 1 · 1-1/4 · 1-1/2 · 1-3/4	12, 16, 20, 25, 32, 40	1/2	1-3/4	3-1/2
8606B	2-1/2	65	1/2 · 5/8 · 3/4 · 7/8 · 1 · 1-1/4 · 1-1/2 · 1-3/4 · 2 · 2-1/4	20, 25, 32, 40, 45, 50	1/2	2-1/4	4
8607B	3	80	1 · 1-1/4 · 1-1/2 · 1-3/4 · 2 · 2-1/4 · 2-1/2	25, 32, 40, 45, 50, 60, 65	5/8	2-1/2	4-1/2
8608B	3-1/2	90	1 · 1-1/4 · 1-1/2 · 1-3/4 · 2 · 2-1/4 · 2-1/2 · 3	25, 32, 40, 45, 50, 60, 65	5/8	3	5-1/4



5C Collet Holder Bushing

**Superior Design
Premium Quality**

This brand new 5C Collet Holder Bushing is used to adapt all kinds of Drills, Reamers, Counter Bores and End Mills to your CNC machines. Adds flexibility, versatility and reduces set-up time.



Order Number	DIMENSIONS				
	A	B	C	D	O.D. Nut Size
885C-1500	2	1-1/2"	1/2	2-1/4	1-31/64
885C-40		40 mm			
885C-1750	2-1/4	1-3/4"	1/2	2-1/4	1-11/16
885C-45		45 mm			
885C-2000	2-1/2	2"	1/2	2-1/4	1-15/16
885C-50		50 mm			
885C-2500	3	2-1/2"	1/2	2-1/4	2-7/16
885C-65		65 mm			

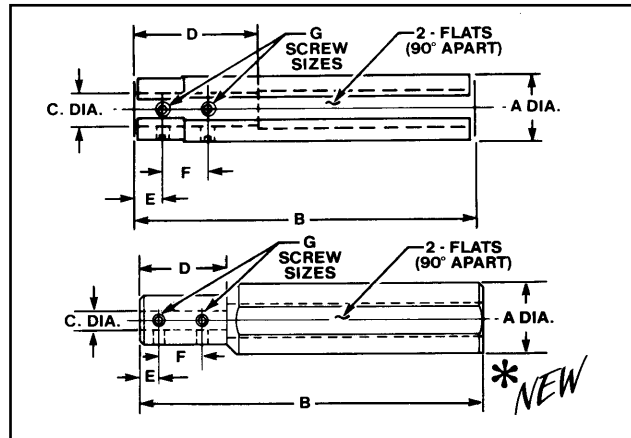
Boring Bar Sleeves



CNC boring bar sleeves are universally used to adapt all boring bar or shank type tools to any CNC turning machines and machining centers for extensions or hard to reach areas. They are hardened, precision ground, concentric, and black oxidized for long lasting protection. Select the O.D. size, length and I.D. size from the accompanying chart

NOTE:
Special O.D. and I.D. sizes made to order.
1-1/4 diameter now available

*** This new innovative design on the 1-1/2 O.D. boring bar sleeves helps the tools stay cool longer by projecting the coolant directly on the cutting edge.**



CNC Part Number	Dimensions								Screw Size
	A		B	C		D	E	F	
	INCH	mm		INCH	mm				
CNC 88-15	3/4	20	5	1/4	6	1-1/2	5/16	5/8	10-32
CNC 88-16	3/4	20	5	5/16	8	1-1/2	5/16	5/8	10-32
CNC 88-17	3/4	20	5	3/8	10	1-1/2	5/16	5/8	10-32
CNC 88-18	3/4	20	5	1/2	12	3	5/16	5/8	10-32
CNC 88-19	1	25	6	5/16	8	1-3/4	7/16	5/8	1/4-28
CNC 88-20	1	25	6	3/8	10	1-3/4	7/16	5/8	1/4-28
CNC 88-21	1	25	6	1/2	12	2	7/16	5/8	1/4-28
CNC 88-125	1-1/4	32	6-1/2	3/8	10	1-1/2	5/16	5/8	1/4-28
CNC 88-126	1-1/4	32	6-1/2	1/2	12	2-1/4	7/16	5/8	1/4-28
CNC 88-127	1-1/4	32	6-1/2	5/8	16	2-1/2	7/16	3/4	1/4-28
CNC 88-128	1-1/4	32	6-1/2	3/4	20	3	7/16	3/4	1/4-28
CNC 88-129	1-1/4	32	6-1/2	7/8	22	4	7/16	3/4	10-32
CNC 88-130	1-1/4	32	6-1/2	1	25	4	7/16	3/4	10-32
CNC 88-22*	1-1/2	40	7	3/8	10	2	5/16	5/8	1/4-28
CNC 88-23*	1-1/2	40	7	1/2	12	2-1/4	7/16	11/16	5/16-24
CNC 88-24*	1-1/2	40	7	5/8	16	2-1/4	7/16	3/4	5/16-24
CNC 88-25*	1-1/2	40	7	3/4	20	2-1/2	7/16	3/4	5/16-24
CNC 88-26*	1-1/2	40	8	7/8	22	3	7/16	3/4	1/4-28
CNC 88-27*	1-1/2	40	8	1	25	4	7/16	7/8	1/4-28
CNC 88-28	1-3/4	45	8	1/2	12	2-1/2	5/16	5/8	5/16-24
CNC 88-29	1-3/4	45	8	5/8	16	2-1/2	7/16	1	5/16-24
CNC 88-30	1-3/4	45	8	3/4	20	2-1/2	7/16	1	3/8-24
CNC 88-31	1-3/4	45	8	7/8	22	2-1/2	7/16	1	3/8-24
CNC 88-32	1-3/4	45	8	1	25	2-1/2	7/16	1	3/8-24
CNC 88-34	2	50	9	5/8	16	2	7/16	1	7/16-20
CNC 88-35	2	50	9	3/4	20	2-3/4	7/16	1	7/16-20
CNC 88-33	2	50	9	7/8	22	2	7/16	1	7/16-20
CNC 88-36	2	50	9	1	25	3-1/2	7/16	1	1/2-20
CNC 88-37	2	50	9	1-1/4	32	3	5/8	1	1/2-20
CNC 88-38	2-1/2	65	10	5/8	16	3-1/2	7/16	1	1/2-20
CNC 88-39	2-1/2	65	10	3/4	20	3-1/2	7/16	1	1/2-20
CNC 88-40	2-1/2	65	10	1	25	4	7/16	1	1/2-20
CNC 88-41	2-1/2	65	10	1-1/4	32	4	5/8	1	1/2-20
CNC 88-42	2-1/2	65	10	1-1/2	40	3-1/2	1/2	1	1/2-20
CNC 88-45	3	80	11-1/2	1	25	4	1/2	1	1/2-20
CNC 88-43	3	80	11-1/2	1-1/4	32	3-1/2	1/2	1	1/2-20
CNC 88-44	3	80	11-1/2	1-1/2	40	4-1/2	1/2	1	1/2-20
CNC 88-47	3	80	11-1/2	1-3/4	45	3-3/4	5/8	1-1/4	1/2-20
CNC 88-46	3	80	11-1/2	2	50	4-1/2	1/2	1	1/2-20
CNC 88-50	4	100	14	1-1/2	40	3-3/4	19/32	1-7/8	5/8-18
CNC 88-51	4	100	14	1-3/4	45	3-3/4	5/8	1-7/8	5/8-18
CNC 88-52	4	100	14	2	50	3-3/4	19/32	1-3/4	5/8-18
CNC 88-53	4	100	14	2-1/2	65	4	5/8	2	5/8-18
CNC 88-54	4	100	14	3	80	4	3/4	1-1/4	5/8-18

Taper Drill Sockets



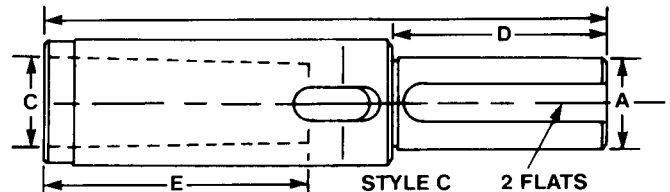
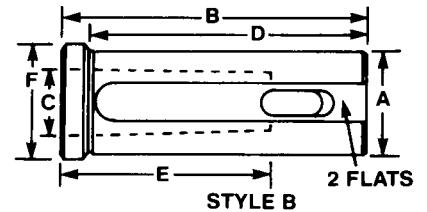
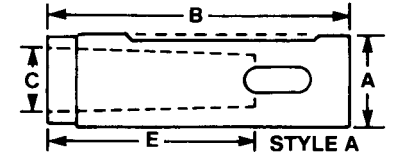
Taper Drill Sockets

**Superior Design
Premium Quality**

The straight shank style "A" taper drill sockets are manufactured in limited quantities and sizes. Please contact our courteous sales staff for availability and pricing information. Select the O.D. size that fits your machine and order from the accompanying chart.

THE NEW HEADED SERIES:

All of our taper drill sockets have been redesigned with a shoulder, as a "B" style, to further insure correct depth of the drilling operation. This new style also provides safety for secondary operations such as boring and reaming. It is held with set screws on two flats, so that it will never push back or turn. Our taper drill sockets are hardened, precision ground, and concentric within .0002 of an inch. They fit directly into toolholders and turrets to positively drive all morse taper shank tools, drills, reamers, and counterbores.



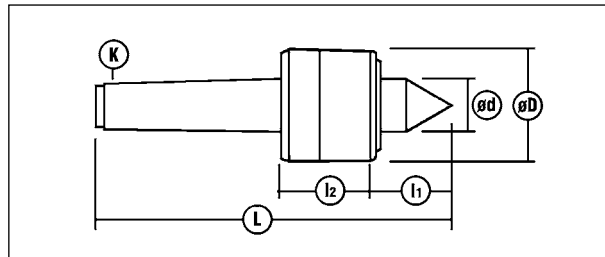
NOTE: Specials made to order

CNC Part Number	Style	Shank Dia A		B	Morse Taper C	D	E	F
		IN.	mm					
CNC 86-01-1	A	3/4	20	3-1/4	No. 1	2-5/16	2-3/16	1
CNC 86-02-1	B	1	25	3-3/4	No. 1	3-1/8	2-3/16	1-1/4
CNC 86-02-2	B	1	25	3-3/4	No. 2	3-1/8	2-5/8	1-1/4
CNC 86-03-1	B	1-1/4	32	4	No. 1	3-3/8	2-3/16	1-1/2
CNC 86-03-2	B	1-1/4	32	4	No. 2	3-3/8	2-5/8	1-1/2
CNC 86-03-3	B	1-1/4	32	4	No. 3	4	3-1/4	1-1/2
CNC 86-04-1	B	1-1/2	40	5	No. 1	4-3/8	2-3/16	1-3/4
CNC 86-04-2	B	1-1/2	40	5	No. 2	4-3/8	2-5/8	1-3/4
CNC 86-04-3	B	1-1/2	40	5	No. 3	4-3/8	3-1/4	1-3/4
CNC 86-04-4	B	1-1/2	40	5-3/4	No. 4	4-3/8	4-1/8	1-3/4
CNC 86-05-1	B	1-3/4	45	5-3/4	No. 1	5-1/8	2-3/16	2
CNC 86-05-2	B	1-3/4	45	5-3/4	No. 2	5-1/8	2-5/8	2
CNC 86-05-3	B	1-3/4	45	5-3/4	No. 3	5-1/8	3-1/4	2
CNC 86-05-4	B	1-3/4	45	5-3/4	No. 4	4-3/8	4-1/8	2
CNC 86-06-5	C	1-3/4	45	11-1/8	No. 5	4-1/4	5-1/4	1-3/8
CNC 86-07-2	B	2	50	6-1/8	No. 2	5-1/2	2-5/8	2-1/4
CNC 86-07-3	B	2	50	6-1/8	No. 3	5-1/2	3-1/4	2-1/4
CNC 86-07-4	B	2	50	6-1/8	No. 4	5-1/2	4-1/8	2-1/4
CNC 86-08-5	C	2	50	11-1/8	No. 5	4-1/4	5-1/4	2-3/8
CNC 86-09-2	B	2-1/2	65	5-3/4	No. 2	5-1/8	2-5/8	2-3/4
CNC 86-09-3	B	2-1/2	65	6-5/8	No. 3	6	3-1/4	2-3/4
CNC 86-09-4	B	2-1/2	65	6-5/8	No. 4	6	4-1/8	2-3/4
CNC 86-09-5	B	2-1/2	65	7-5/8	No. 5	7	5-1/4	2-3/4
CNC 86-11-4	B	3	80	6-5/8	No. 4	6	4-1/8	3-3/8
CNC 86-12-5	B	3	80	7-5/8	No. 5	7	5-1/4	3-3/8
CNC 86-13-4	B	2-1/4	60	6-5/8	No. 4	6	4-1/8	2-1/2
CNC 86-14-5	B	2-1/4	60	7-5/8	No. 5	7	5-1/4	2-1/2
CNC 86-15-4	B	2-3/4	70	6-5/8	No. 4	6	4-1/8	3
CNC 86-16-5	B	2-3/4	70	7-5/8	No. 5	7	5-1/4	3

Revolving Lathe Centers

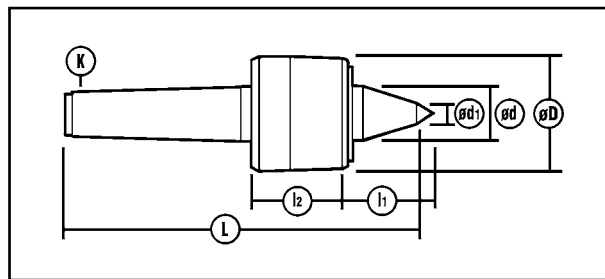


- For Accurate work holding in conventional or CNC lathes.
- Needle roller bearings in the head and at rotary shaft end, and precision axial bearings allow heavy loads with compact body dimensions.
- Capable to hold up to 1,000 kg. workpiece, and speeds up to 5,000 rpm.
- High precision accurate to 0.004 mm/0.00016" T.I.R.
- Fully hardened and precision ground.
- Standard or extended spindle configurations.
- Maintenance free.



Model RN
Designed for wide range
of general turning work

Order No.	Model	Morse Taper K	Load Factor kg/lbs	Sizes in mm					Weight kgs	Maximum Eccentricity
				D	d	l ₁	l ₂	L		
570-002	R-200N	2	180/396	42	18	24	35	128	0.430	0.003 mm / 0.00012"
570-003	R-300N	3	400/880	49	22	29	47	163	0.875	0.003 mm / 0.00012"
570-004	R-400N	4	800/1760	63	25	35	52	196	1.505	0.003 mm / 0.00012"
570-005	R-500N	5	1750/3850	85	35	48	64	250	3.955	0.004 mm / 0.00016"

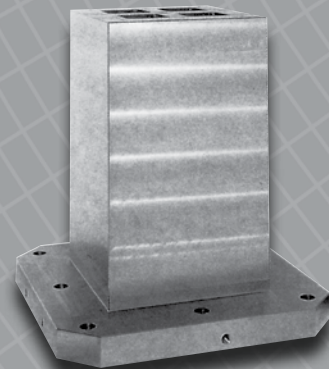
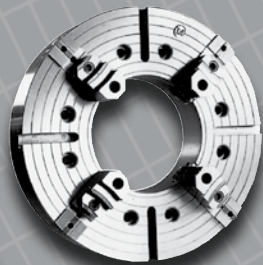
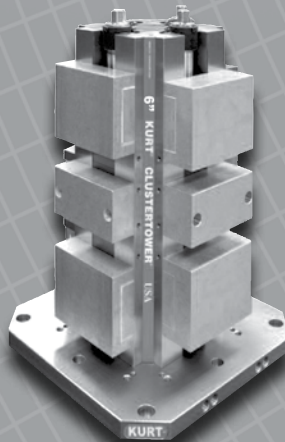
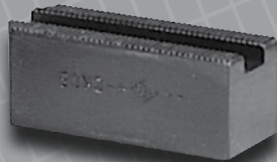
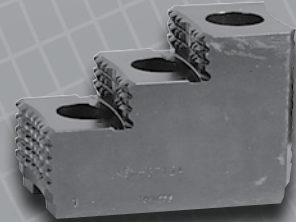
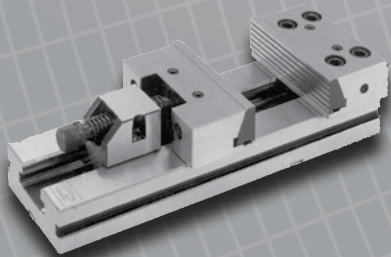
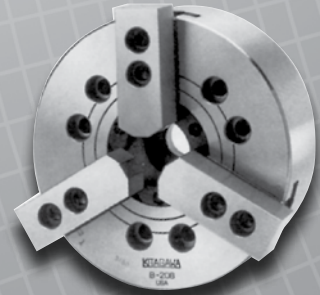


Model RC
Increases tool clearance
and operator visibility for
work on small parts
or machining close to
workpiece end.

Order No.	Model	Morse Taper K	Load Factor kg/lbs	Sizes in mm					Weight kgs	Maximum Eccentricity	
				D	d	d ₁	l ₁	l ₂			L
570-023	R-300C	3	400/880	49	22	49	38	47	174	0.875	0.003 mm / 0.00012"
570-024	R-400C	4	800/1760	63	30	63	46	52	207	1.505	0.003 mm / 0.00012"
570-025	R-500C	5	1750/3850	85	35	85	64	64	266	3.955	0.004 mm / 0.00016"

SECTION 5

Soft & Hard Top Jaws,
Samchully & Kitagawa
Power Chucks, Collet Chucks,
Tombstones & Vises



Soft & Hard Top Jaws, Samchully & Kitagawa Power Chucks, Collet Chucks, Tombstones & Vises

Techleader offers a complete range of soft and hard top jaws for virtually all makes of power chucks manufactured in the USA, Italy, Japan, the UK and Germany.

We carry a full stock of standard soft jaws, extra high soft jaws, and jaw nuts. We also offer a complete design and engineering service for customers requiring custom-engineered jaws.

Several of our products are unique. These include:

- A line of diamond jaws designed to clamp the entire circumference of the workpiece, eliminating any distortion.
- Adjustagrip hard jaws, offering superior gripping for higher metal removal rates. These are used in place of standard and special hard jaws.
- A Trueborer fixture for boring out soft jaws. This fixture is adjustable for various diameter, so that only one fixture is required for a range of different chuck sizes.

The following section also details other products for workholding, such as our new power chucks from Samchully, new manual chucks from TdeG, our new quick change dead length collet chucks from DEL/Kitagawa, Eron 5 axis vices, Techleader/Auto Super precision vises, and two and four face tombstones.

Top Jaws

Technical Information

Materials

Most *Techleader* standard jaws are manufactured from either 080M15 (En 32) low carbon steel or 590M17 (16MnCr5) alloy steel which can be case-hardened for long-term durability. Other materials can of course be used, for example more exotic steels, aluminums, plastics and composites and these are all available as specials.

T-nuts are manufactured from En24 heat-treated to the 'T' condition.

Heat Treatment

All *Techleader* standard soft jaws can be case-hardened using heat treatment. See chart for guidelines.

Below is a simple table showing British Standard and corresponding German reference numbers for various steels used in the production of *Techleader* products.

MATERIAL	BS 970/83	BS 970/55	GERMAN
Steel	080M15	En32	C15
Steel	665M17	En34	
Steel	080M40	En8	C45
Steel	590M17		16MnCr5
Steel	817M40	En24T	40NiCrMo6

Unless otherwise stated, all special jaws will be manufactured using material specified on the drawings supplied by the customer.

	Depth of Case	MATERIAL TYPE	
		080M15 (EN32)	590M17 (16MnCr5)
		Rockwell Hardness 'C'	
Thin Section	0.38 - 0.5 mm	54 - 56	57 - 59
Normal Section	0.63 - 0.75 mm	56 - 58	58 - 60
Thick Section	0.76- 1 mm	57 - 59	59 - 61

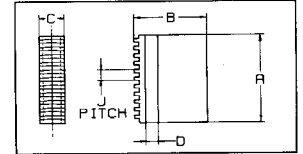
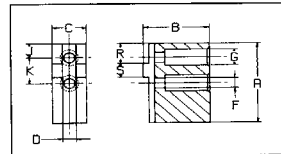
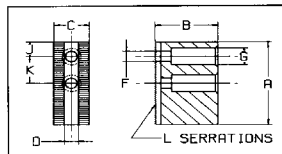
Top Jaw Weights

Careful consideration must be given when fitting oversized top jaws to a rotating chuck because the safety and performance of the chuck may be compromised. Although the calculations given in the chart below can establish approximate theoretical grip loss, the most accurate method is to establish the actual performance of the jaws on the machine, this can usually be carried out by use of a grip meter.

Techleader offers grip meter equipment for sale or hire and in either case full instructions for use and any advice required are included. Please contact our sales office for further details.

Jaw Location Dimensions

Chuck manufacturers occasionally change specifications on location details so it is important to check that the dimensions listed (right) correspond with your existing top jaws, master jaws and chuck.



L = Pitch & angle of serrations
1.5 mm x 60°; 1/16" x 90°
3 mm x 60°; 3/32" x 90°

D = slot width (locates on T-nut)

K = hole Center spacing

G = bolt nut (see note below)

D = slot width

S = tenon width

K = hole Center spacing

G = bolt hole (see note below)

C = jaw width

D = slot width

J = tooth pitch

Note: Remember the bolt hole will have clearance on the bolt. It is important that these dimensions are measured accurately. The use of a vernier or micrometer is recommended.

Warning

While every effort is made to make sure the information relating to technical data is correct, manufacturers do change specifications of their products and subsequently *Techleader* shall not be liable for any loss or consequential damage whatsoever that may arise from the use of the products, the use of information or particulars or any error or omission in this catalogue. The responsibility of correct fit and use lies with the user and the information in this catalogue should be used only as a guide.

Soft Scroll Jaws

Techleader soft scroll jaws have been manufactured to allow for a small degree of wear in the chuck guideway, therefore the slots are slightly undersized and the width slightly oversized. A minor amount of adjustment may be required to obtain a correct fit, particularly if the chuck is new.

Concentricity

Techleader manufactured standard hard jaws are made to a 0.05 - 0.07mm (0.002" - 0.003") micron concentricity tolerance using our purpose made fixtures. For optimum concentricity jaws must be ground on the chuck in the correct position on the machine.

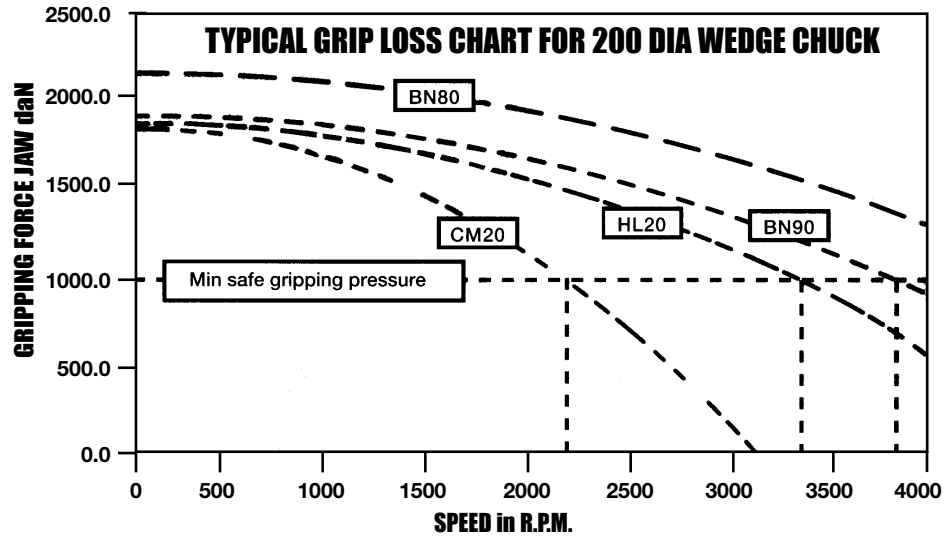
Please Note: The condition of the chuck has a great bearing on concentricity and repeatability of jaw sets. Regular servicing of chucks will prolong their life and maintain a higher level of operating accuracy. For unparalleled concentricity when boring standard soft jaws a *Techleader* Trueborer is available.

Top Jaws

Technical Information

Grip Loss Due to Centrifugal Forces

The following chart shows the typical grip loss for different types of standard jaws on a 200 dia wedge type chuck



Jaw Code	Jaw Type	Jaw Material	Weight per Jaw
BN80	Std. Soft Jaw	Mild Steel	0.93 Kg
BN90	Tall Soft Jaw	Mild Steel	1.23 Kg
CM20	Diamond Jaw	Mild Steel	4.66 Kg
HL20	Diamond Jaw	Aluminum	1.66 Kg

Conversion Factors: 1KN = 100daN 1kgf = 9.806 N

Typical Gripping forces (for external gripping) can be calculated using the following formula

For drawtube/bar operated chucks: $G_i = S_i F_o / (1 + J_i G_i) - G_i S^2 (MR+B)$

For pneumatically operated chucks: $G_i = S_i P_o / (1 + J_i G_i) - G_i S^2 (MR+B)$

Where G_i = Chuck Gripping Force (daN)

F_o = Operating Force of drawtube actuated chucks in daN

P_o = Operating Pressure of pneumatically actuated chucks in bar

S = Speed of chuck in thousandths of R.P.M. (ie. 6000 R.P.M. = 6)

M = Mass of top jaw in Kg

R = Radius of grip in cm

G_i = Height of top jaw in cm

Note: For internal gripping the centrifugal force is additive, the minus sign in the above formula therefore becomes a plus sign.

AND S_i , G_i , B_i , J_i , & P_o are constant values

associated with specific chuck types and typical values are found in tables A, B & C below.

Table A

For standard wedge type chucks

Chuck Size	160	200	250	305	380
S_i	0.80	0.80	0.80	0.80	0.80
G_i	7.5	7.5	7.5	7.5	7.5
B_i	2.3	5.2	8.9	15.9	34.0
J_i	0.08	0.06	0.05	0.04	0.03

Table B

For Compensating chucks

Chuck Size	160	200	250	305	380
S_i	0.75	0.77	0.91	0.91	0.80
G_i	8.0	8.0	8.0	8.0	8.0
B_i	-1.5	-4.2	-6.0	-11.5	-22.0
J_i	0.08	0.06	0.05	0.04	0.03

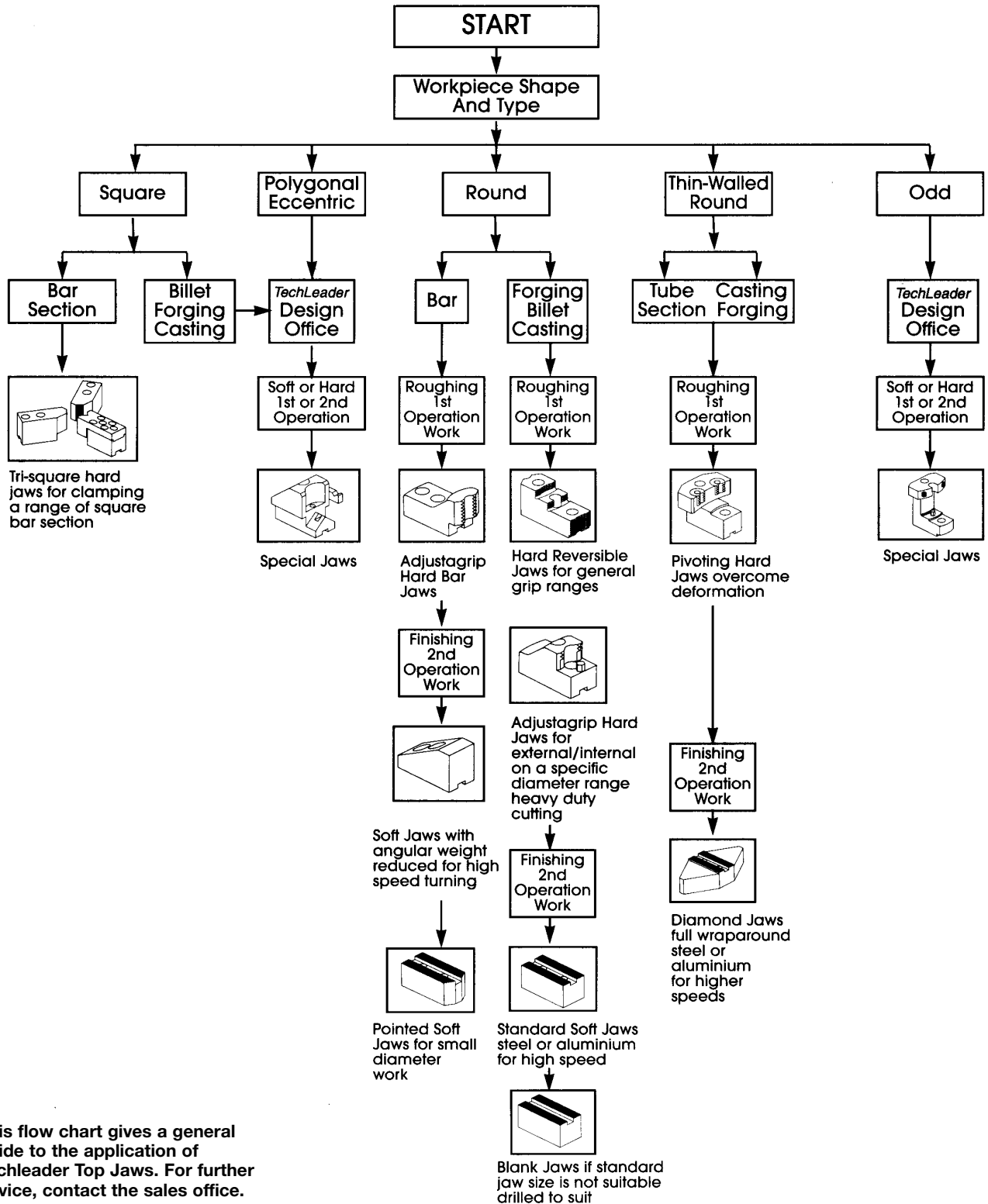
Table C

For Pneumatic chucks

Chuck Size	160	200	250	305	380
P_o	173	256	380	462	473
G_i	6.2	6.2	6.2	6.2	6.2
B_i	2.8	5.3	10.2	15.9	19.6
J_i	0.075	0.070	0.055	0.040	0.045

Note: These charts are typical examples only and should not be applied without consultation with chuck manufacturer or chuck manual.

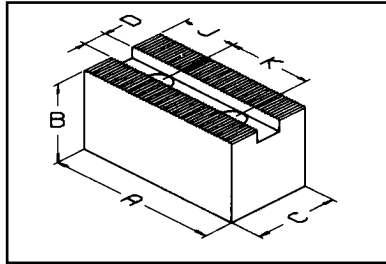
Application Flowchart for Selection of TECHLEADER Top Jaws for Power Chucks



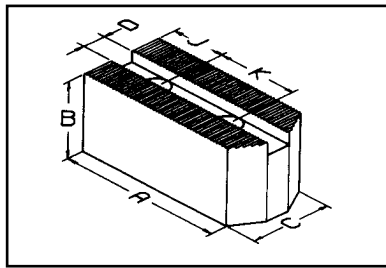
This flow chart gives a general guide to the application of Techleader Top Jaws. For further advice, contact the sales office.

Serrated Soft Top Jaws

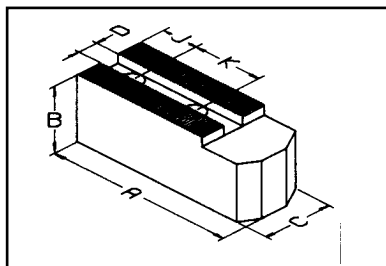
To Suit Hardinge, Howa, Kitagawa, Matsumoto, Pratt Burnerd, Röhms, Schunk & SMW-Autoblok Power Chucks



TYPE A



TYPE B



TYPE C

1.5m x 60° Serrations

**Material: 080M15 (En32)
Black Finish**

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Type	Weight Kg/Set
BO 04	48	25	20	8	15 + 8 M6	1.5 mm x 60°	A	0.5
BR 05	55	25	25	10	14 + 10 M8	1.5 mm x 60°	B	0.5
BB 05	55	40	25				B	
DK 05	55	50	25				A	1.1
BH 05	55	60	25				B	
BO 05	57	35	25	10	18 + 10 M8	1.5 mm x 60°	B	0.8
DJ 05	57	50	25	10			A	1.3
CK 05	62	25	25	10	19 + 8 M8	1.5 mm x 60°	B	0.9
DU 05	48	25	25	11	16 + 9.5 M8	1.5 mm x 60°	A	0.7
CK 06	80	35	30	11	25 + 14 M8	1.5 mm x 60°	C	1.4
BO 06	72	38	30	12	20 + 15 M10	1.5 mm x 60°	A	1.6
BB 06	72	40	30				A	
BC 06	72	50	30				A	3.5
DJ 06	72	60	30				A	1.3
PT 06	82	32	30				B	
BP 06	72	38	32	12	20 + 15 M10	3 mm x 60°	A	1.6
BO 08	95	44	35	14	25 + 25 M12	1.5 mm x 60°	A	2.7
BB 08	95	50	35				A	4.0
DJ 08	95	80	35				C	2.2
CK 09	95	44	32	14	25 + 25 M12		C	2.7
PT 08	102	40	35				B	2.9
BP 08	95	44	32	14	25 + 25 M12	3 mm x 60°	A	2.7
DU 08	85	40	40	16	25 + 20 M12	1.5 mm x 60°	A	2.8
DU 09	85	60	40				A	4.0
BO 10	110	40	40	16	30 + 30 M12	1.5 mm x 60°	A	3.4
BO 10L	4.5"	2"	1.50"				A	5.0
DJ 10	110	80	40				A	6.5
BD 10	110	100	40				A	
PT 10	125	40	40				B	4.5
				16	30 + 21 M12			4.2
DK11	110	60	40				C	5.2
BP 10	110	40	40	16	30 + 30 M12	3 mm x 60°	A	3.4

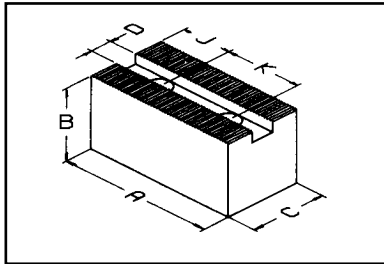
Serrated Soft Top Jaws

To Suit Hardinge, Howa, Kitagawa, Matsumoto, Pratt Burnerd, Röhm, Schunk & SMW-Autoblok Power Chucks

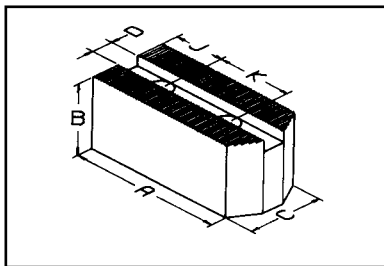
CHUCK Ø	HARDINGE	HOWA	KITAGAWA		MATSUMOTO (MMK)	PRATT BURNERD	RÖHM	SAMCHULLY	SCHUNK AUTOBLOK	SMW	
110			B-04 HOB-4								
105 110 135	4" SURE-GRIP 5" SURE-GRIP	HO1MA4 HO24M5	B204 N-04 HJ-4 B205	AS110	H-4-21		KFD-HE 130 KFN 105	H505			
135			HOB-5 B-05								
135		HO1MA5	HJA-4 N-05		HXA5-6-34 HHXA 5-6 SA 5-6-40						
110 135		HO27M4 HO27M5									
165					HA5-6 HX-6 H-6 ZA-5-6	HH-6 HJ-6 STC-6					
165 170 210	6" SURE-GRIP	HO7MA6 HO15MA6 HO22M6 HO24M6 HO27M6 HO37M6 HO47M6 HO23M8	HJA5-6 AS-165 B-160 B-06 HOH-160 HOH-06 N-160 BL206 HOS-6	N-06 B206 HO-6 NL-06 BT206 HOH206 B-07, BB06 B-106 HG738 165 HOB-6		INTERNATIONAL 9821-31723 9821-21723 HIGH SPEED QUICK CHANGE 9121-21723 9121-31723	KFD-HE 170	HC06 HS06 HST06 HH-206	ROTA NCK 165 HSL 165 ROTA NC165 ROTA NCF 165	BBM 175	
165		HO1MA6									
210	8" SURE-GRIP	HO7MA8 HO15M8	B200 B-08 N-200 AS-210 HOS-8 HJA6-8 HO-8 B-108 HOH-8 N-08	B208 HOB-8 HOH-200 NL-08 BT208 HOH208 HOH108 BB-08 BL208 NL200 HG715-210	HA6-8 HX-8 H-8 HJ-8 HHJ-8 STC-8 ZA6-8-52 ZA6-8-66 N-08	INTERNATIONAL 9821-32123 9821-42123 9827-TORNADO HIGH SPEED QUICK CHANGE 9121-32123 9121-42123	KDF-HE 210 210 KB	HC08 HS08 HST08 HH208 HHF208 HSF08	ROTA NCK 210 HSL 210 ROTA NC210 ROTA NCF 210	BBM 210	
210		HO1MA8									
210		HO27M8 HO47M8 HO24M8 HO22M8 HO37M8 HO7MA10 HO23M10 HO15M10									
254											
250 254 265	10" SURE-GRIP		B250 HOH-250 B210 AS-250 N-10 HJA8-10 HO-10 BT210 UVE-K200 UVE-K250 BL210	B-10 HOH-10 HOB-10 N-250 HJA6-10 HOS-10 NL-10 B-110 HOH110 HOH210 HG730-254	HA6-10 ZA6-10-75 H-10 HHL-10 HHJ-10 HA8-11	HA8-10 HX-10 HH-10 HJ-10 STC-10	INTERNATIONAL 9821-42623 9821-52623 9827-TORNADO HIGH SPEED QUICK CHANGE 9121-42623 9121-52623 265 KB	KFD-HE 254	HC10 HS10 HST10 HSF10	ROTA NCK 250 HSL 250 ROTA NC 250 ROTA NCF 250	BBM 250
254		HO1MA10									

Serrated Soft Top Jaws

To Suit Howa, Kitagawa, Matsumoto, Pratt Burnerd, Röhm, Schunk & SMW-Autoblok Power Chucks



TYPE A



TYPE B

60° Serrations

**Material: 080M15 (En32)
Black Finnish**

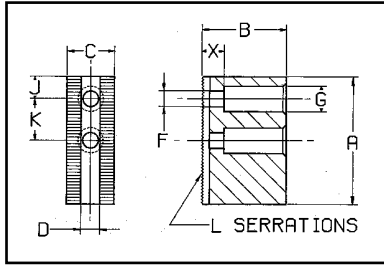
Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Type	Weight Kg/Set
DU 10	105	40	40	18	30 + 24 M14	1.5 mm x 60°	A	4.4
DU 11	105	60	40	18				6.6
BO 12	130	50	50	18	30 + 40 M14	1.5 mm x 60°	A	6.8
DJ 12	130	80	50	18				10.9
DJ 14	130	100	50	18				13.6
PT 12	145	50	50	18				7.3
BP 12	130	50	50	18	30 + 40 M14	3 mm x 60°	A	6.8
BR 13	130	50	50	21	30 + 40 M16	1.5 mm x 60°	A	6.5
DJ 13	130	80	50	21				11.0
BD 13	130	100	50	21				7.3
PT 13	145	50	50	21				7.1
DU12	111	65	50	21	35 + 25 M16	1.5 mm x 60°	A	7.1
BO 15	165	76	64	22	43 + 37 M20	1.5 mm x 60°	A	15.2
DJ 15	165	127	64	22				25.0
BR 15	135	60	50	25.5	43 + 26 M20	1.5 mm x 60°	A	8.2
CK 15	150	76	64	22	50 + 30 M20	3 mm x 60°	A	13.8
BO 18	180	76	64	25	60 + 40 M20	3 mm x 60°	A	16.5
DJ 18	180	127	64	25				29.0
BO 24	210	102	76	25	80 + 40 M20	3 mm x 60°	A	32.3

Serrated Soft Top Jaws

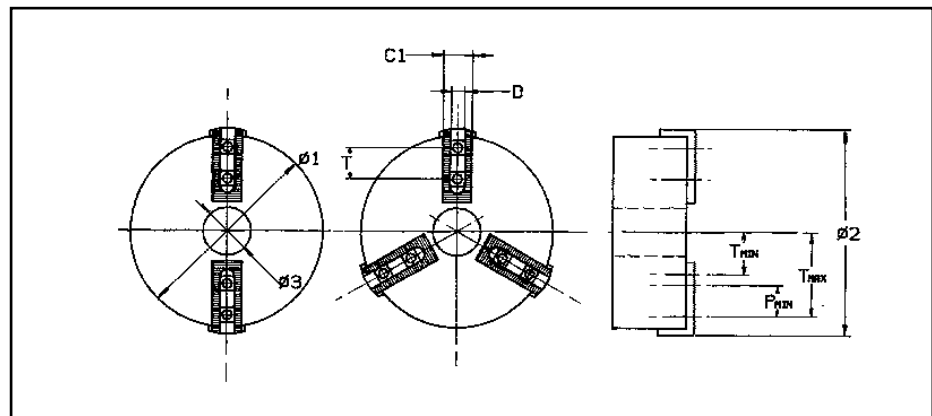
To Suit Howa, Kitagawa, Matsumoto, Pratt Burnerd, Röhm, Schunk & SMW-Autoblok Power Chucks

CHUCK Ø	HOWA	KITAGAWA	MATSUMOTO (MMK)	PRATT BURNERD	RÖHM	SAMCHULLY	SCHUNK AUTOBLOK	SMW
254	HO22M10 HO37M10 HO24M10 HO27M10 HO47M10							
304	HO7MA12 HO23M12 HO15M12							
304 305 381		B300 B-12 HOH-300 HOH-12 N-300 N-12 HOS-12 HO-12 HJA8-12 HOB-12 HJA6-12 HLA6-12 NL-12 HLA8-15 HLA6-15	HA8-12 HX-12 H-12 SH-12 HH-12 HHL-12 HJ-12 HHJ-12 ZA8-12-78 ZA8-12-85	INTERNATIONAL 9821-53123 9821-63123 9827-TORNADO HIGH SPEED QC 9121-53123 9121-63123 305KB		HC12 HCF12	HSL 315 ROTA NCK 315 ROTA NC 315 ROTA NCF 315	
304	HO1MA12							
304 315		B212 BT212 BL212			KFD-HE315	HS12 HST12 HH212 HSF12		BBM 315
304	HO27M12 HO37M12							
380 450		B380 B-15 HOH-380 HOB-15 HOH-15 B-450 B-18 HOB-18		INTERNATIONAL 9821-53823 9821-63823 HIGH SPEED QC 9121-53823 9121-63823		HAH15 HCHF15 HC15 HCF15 HAH18 HCHF18 HC18	ROTA NC 400 ROTA NCF 400	
380		B215, N15, N18						
380 450 450			HA11-15 HHL-15 H-15 HH-15 HA11-18 H-18 HH-18 ZA-15-120				HSL 400	
454 530 610		HJ-450 HJ18 B-530 B-21 HJ-530 HJ-21 HOB-21 N21 B-600 B-24 HJ-610 HJ24 N24 HOB24 UVE-LB500/630				HAH21 HAH24 HC21 HC24 HCHF21 HCHF24		
610		HOB24 HJA24 HJ24 UVE-LB800						

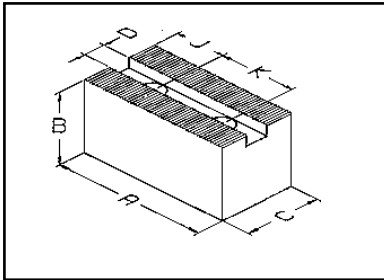
Serrated Top Jaw and Chuck Data Sheet



		2 JAW CHUCK DATA	3 JAW CHUCK DATA	REMARKS
Chuck Manufacturer / Model No.				
Chuck Ø / Type	ø1			
Maximum Swing Ø	ø2			
Chuck Bore Ø	ø3			
Base Jaw Width	C1			
T-Nut Minimum Position	Tmin			
T-Nut Maximum Position	Tmax			
T-Nuts Minimum Hole Pitch	Pmin			
Are Base Jaw Serrations Above Chuck Face	Yes No			
Are T-Nuts Single or Double	Single Double			
Slot Width	D			
Hole Center Spacing	K			
Hole Center To Back of Jaw	J			
Counterbore / Hole Ø	G/F			
Depth Under Bolt Head	X			
Serration Pitch & Angle	L			
Length Of Jaw	A			
Height Of Jaw	B			
Width Of Jaw	C			



Serrated Soft Top Jaws



90° Serrations

**Material: 080M15 (En32)
Black Finish**

To suit Berg KH power chucks

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set	Berg Chuck Type	
CS 14	55	35	22	8	14 +-11 M8	1/16" X90°	0.7	KH 110	
CS 16	70	45	25	10	20 +-15 M10	1/16" X90°	1.4	KH 140-36 / KH 140-45 / KH 160	
CS 18	80	57	32	12	21 +-15 M12	1/16" X90°	3.6	KH 175-56 / KH 200-68	
CS 20	90	57	32	12	21 +-15 M12	1/16" X90°	3.8	KH 175-56 / KH 200-68	
CS 25	111	60	40	16	29 +-18 M16	1/16" X90°	4.7	KH 250-91/ KH 315-117	
CS 40	150	80	50	20	38 +-31 M20	3/32"X90°	8.4	KH 400 / KH 500 / KH 630	

To suit Schunk & SMW-Autoblok pneumatic power chucks

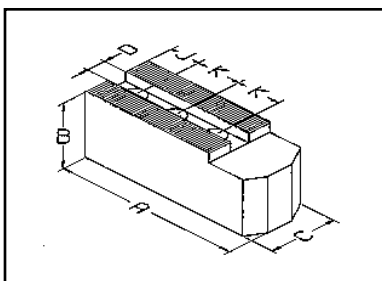
Techleader Part No.	A	B	C	D	K+J Bolt	Serrations	Weight Kg/Set	Chuck Type	
								SMW-Autoblok	Schunk
CO 13	68	40	30	11	18 +21 M8	1/16" X90°	1.6	SP 125 / STP 125 / STWP 125	TP 125
CO 16	88	51	32	14	25+25 M10	1/16" X90°	2.9	SP 160 / STP 160 / STWP 160	TP 160
CO 20	98	50	40	17	29+25 M12	1/16" X90°	4.0	SP 200 / STP 200 / LP 205 / STWP 200	TP 200
CO 25	108	70	50	21	30+28 M14*	1/16" X90°	8.0	SP 250 / STP 250 / LP 250 / STWP 250 SP 315 / STP 315 / LP 305 / STWP 315	TP 250 TP 315
CO 32	120	70	50	21	30+28 M14*	1/16" X90°	10.1	SP 315 / STP 315 / LP 305 / STWP 315	TP 315
CO 35	132	70	50	21	30+28 M14*	1/16" X90°	11.5	SP 315 / STP 315 / STWP 315	

* Please note, for 250mm Chucks upwards after mid 1997 bolt sizes changed to M16. Please specify.

To suit Schunk & SMW-Autoblok big bore power chucks

Techleader Part No.	A	B	C	D	K+J Bolt	Serrations	Weight Kg/Set	Chuck Type	
								SMW-Autoblok	Schunk
CP 40	158	76	64	25.5	40+35 M18*	3/32" X90°	15.0	BB400 / BB400-ES / STP 400 / LP 380-460	TB 400
CP 50	185	76	64	25.5	40+35 M18*	3/32" X90°	18.0	BB500 / BB500-ES / BB630-ES265 STP 500 / LP 500	TB 500
CP 63	240	102	76	30	64+40 M24	3/32" X90°	35.0	BB630 / BB630-ES-ES325 / STP 630	TB 630
CP 80	300	102	76	30	64+40 M24	3/32" X90°	43.0	BB800 / BB1000 / STP 800	TB 800 TB 1000

* Please note, after mid 1997 M18 bolt sizes change to M20. Please specify.

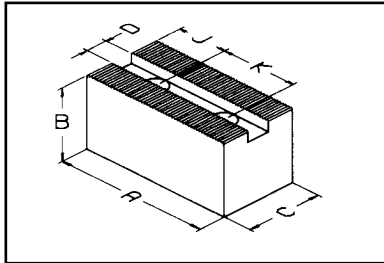


90° Serrations
**Material: 080M15 (En32)
Black Finish**

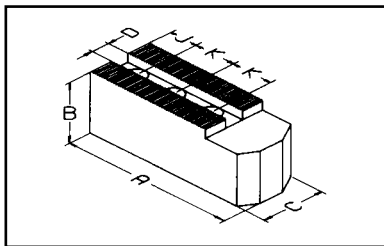
To suit Gamet power chucks

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set	Gamet Chuck Type	
BU 06	77	35	30	11	20 +-9 M8	1/16" X90°	1.3	160 N / 160 MO / 160 GP	
BU 08	102	44	32	14	22 +-10 M10	1/16" X90°	2.6	215 N / 215 MO / 215 GP	
BU 11	130	51	44	20	30 +-13 M12	1/16" X90°	5.4	250/280 N / 280 MO / 280 GP	
BU 14	170	65	50	21	40 +-22 M16	1/16" X90°	10.0	350 N / 350 MO / 350GP	

Serrated Soft Top Jaws



TYPE A



TYPE B

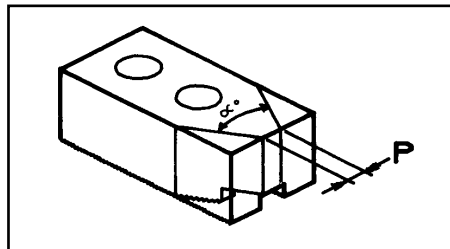
60° Serrations

**Material: 080M15 (En32)
Black Finish**

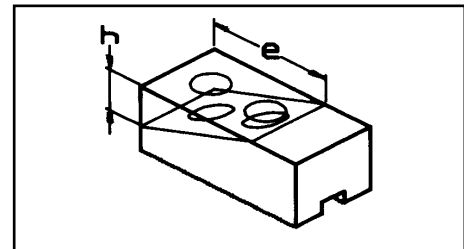
To suit Gamet, Nikko and Röhm Power Chucks

Techleader Part No.	A	B	C	D	K+J Bolt	SERRATIONS	TYPE	WEIGHT KG/set	GAMET	NIKKO	RÖHM
DL10	53	30	20	10	15+9 M8	1.5 x 60°	A	0.6	105 N 105 MO	HF-4	KFD-HE 130 KFN 105
DL 16	67	40	30	11	20+17 M8	1.5 x 60°	A	1.6	140 DE 160 GO 160 N 170 MF	GO-6 HDM-165 HF-6AB D-170	KFN 160 KFM 160
BT06	77	35	30		20+9 M8		B	1.3	160 MO 130 N 130 MO	HG-6AB MO 6	KFG 160 KFE 170
DL 22	89	57	32	14	26+18 M10	1.5 x 60°	A	3.1	170 DE 215 MF 215 N	GO-8 MO-8 HF-8 MAC 165	KFN 215 KFM 215
BT 08	102	44	32		22+10 M10		B	2.6	215 MO 215 GO	HG-8 HDM 215	KFG 215 KFE 215
DL 28	89	57	44	20	26+18 M12	1.5 x 60°	A	4.1	250 N 280 N	GO-10 HDM 250 GO-12 HDM 300	KFN 250/280 KFM 280
BT 10	117	51	44		30+13 M12		B	4.9	280 MO 280 GO	HF-10 MO-10 HF-12 MO-12	KFG 280 KFE 280
BT 11	130	51	44		30+13 M12		B	5.4	280 MF	HG-10	
DL 35	120	80	50	21	28+25 M16	1.5 x 60°	A	9.4	350 N 350 MO 350 GO 350 MF	HF-14 MAC 250 HF-16 MAC 315	KFN 350 KFM 350
BT 14	170	65	50		40+22 M16		B	10.0		HDM 250 MO-14 HDM 380	KFG 350 KFE 350

Pointed or Weight Reduced Soft Jaws



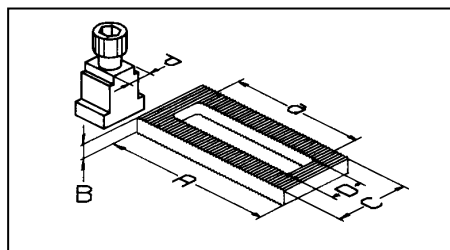
A. Pointed 60° or 120° Inclusive



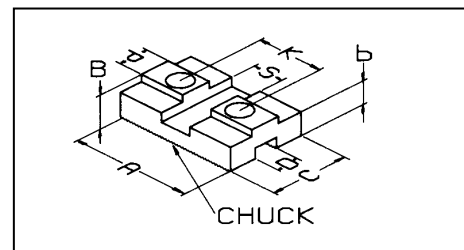
B. Rectangular Weight Reduced

Any standard soft jaw can be pointed or weight reduced, please give the following information:
1. Quantity of sets required. 2. Techleader Part No. 3. Modification required. 4. Relevant dimensions.

Conversion Plates



A. Serration to Serration

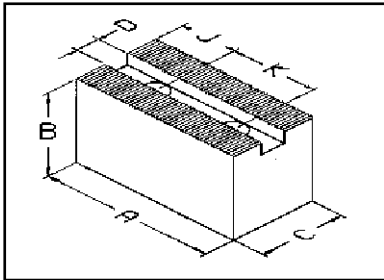


B. Serration to Slot/Tenon

Allows different top jaws to be used with base jaws of another configuration. Please contact our sales office for a quotation.



Serrated Soft Top Jaws



90° Serrations

**Material: 080M15 (En32)
Black Finish**

To suit SMW-Autoblok large & extra large open Center power chucks

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set	Autoblok Chuck Type Pratt	
CL 12	60	32	32	12	16 +-15 M8	1/16" X90°	1.0	130 BHD 125 ALD	140 BBD 125AND
CH 17	70	38	32	14	16.5+16 M10	1/16" X90°	1.3	165 BHD, BHD/FC 165 ALD	175BBD RCD 165 165 AND
CH 21	90	40	40	17	23 +-20 M12	1/16" X90°	2.8	210 BHD, BHD/FC 210 ALD	210 BBD RCD 210 210 AND
CH 25	110	44	44	21	30 +-20 M16	1/16" X90°	3.8	250 BHD, BHD/FC 250 ALD	250 BBD RCD 250 250 AND
CH 32	125	50	50	21	30 +-20 M16	1/16" X90°	5.5	315 BHD, BND/FC 315 ALD	315 BBD RCD 315 315 AND

To suit Pratt Burnerd closed/open Center wedge power chucks

Techleader Part No.	A	B	C	D	K+J Bolt	Serrations	Weight Kg/Set	Pratt Chuck Type				
BJ 16	62	32	25	12.7	17.5+14 M8	1/16" X90°	1.2	160 TYPES	1160-/	1140-/	1141-/	1180-
BJ 20	71	44	32	14.3	20.6+16 M10	1/16" X90°	2.1	200 TYPES	1160-/	1140-/	1141-/	1180-
BJ 25	83	50	40	15.9	23.8+17 M12	1/16" X90°	3.0	250 TYPES	1160-/	1140-/	1141-/	1180-
BJ 32	108	57	44	17.4	31.8+24 M14	1/16" X90°	5.2	315 TYPES	1160-/	1140-/	1141-/	1180-
BJ 40	124	65	50	20.6	38.1+24 M16	1/16" X90°	8.3	400 TYPES	1160-/	1140-/	1141-/	1180-
BJ 50	146	80	50	25.4	44.5+29 M20	3/32" X90°	12.6	500/630 TYPES	1160-/1140-/	1141-/	1180-	

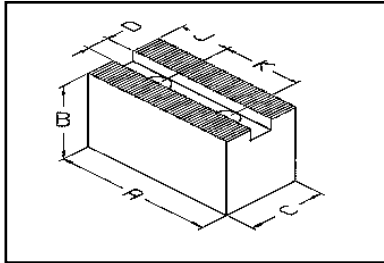
To suit Pratt Burnerd constant grip power chucks

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set	Pratt Chuck Type			
BL 16	50	38	32	15	20.6+11 M10	1/16" X90°	1.0	160 TYPES	1770-/	1771-/	1772-
BL 20	64	40	40	17	25.4+13 M12	1/16" X90°	1.6	200 TYPES	1770-/	1771-/	1772-
BL 25	80	50	40	17	25.4+13 M12	1/16" X90°	2.8	250 TYPES	1770-/	1771-/	1772-
BL 32	105	57	44	21	31.8+17 M16	1/16" X90°	5.0	315 TYPES	1770-/	1771-/	1772-
BL 40	124	65	50	21	31.8+17 M16	3/32" X90°	8.4	380 TYPES	1770-/	1771-/	1772-

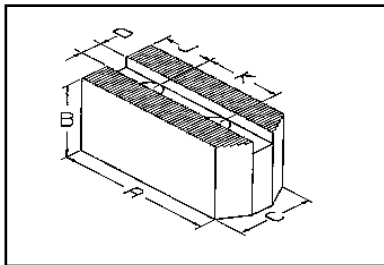
To suit Pratt Burnerd self contained (up to 89) power chucks

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set	Pratt Chuck Type			
BK 16	62	40	25	13	18+14 M8	1/16" X90°	1.1	160 TYPES	1740-/1730-/	1742-/1744-/	1157-
BK 20	76	44	32	17	22+16 M10	1/16" X90°	2.2	200TYPES	1740-/1730-/	1742-/1744-/	1157-
BK 25	89	60	40	21	25+19 M12	1/16" X90°	3.7	250 TYPES	1740-/1730-/	1742-/1744-/	1157-
BK 32	105	60	40	21	30+22 M12	1/16" X90°	4.5	315 TYPES	1740-/1730-/	1742-/1744-/	1157-

Serrated Soft Top Jaws



TYPE A



TYPE B

90° Serrations

**Material: 080M15 (En32)
Black Finish**

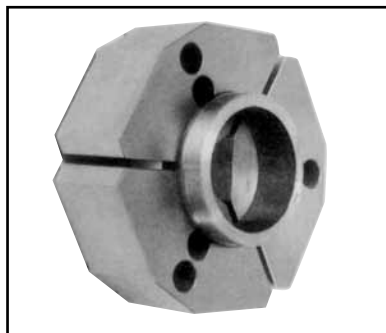
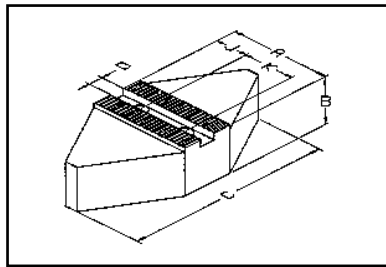
Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Type	Weight Kg/Set
BV 13	52	25	25	12	14 + 8 M8	1/16 x 90°	A	1.0
RD 13	55	38	32	12	16 + 10 M8	1/16 x 90°	A	1.2
CL12	60	32	32		16 + 15 M8		A	1.0
BV 16	72	38	32	12	20 + 10 M10	1/16 x 90°	A	1.4
CL 17	80	38	32	14	20 + 19 M10	1/16 x 90°	A	2.2
BM 16	65	40	40	17	22 + 15 M12	1/16 x 90°	A	1.3
BN 70	70	60	40				A	2.7
BN 75	80	40	40				B	2.5
BL 20	64	40	40	17	25.4 + 13 M12	1/16 x 90°	A	1.6
BL 25	80	50	40				A	2.8
BN 80	90	40	40		22 + 15 M12		A	2.8
BN 85	90	40	40				B	2.7
BN 90	90	60	40				A	3.7
BL 32	105	57	44	21	31.8 + 16 M16	1/16 x 90°	A	5.0
BM 32	116	65	50				A	7.6
BN 10	120	50	50		28 + 20 M16		A	5.4
BN 11	120	50	50				B	5.3
BN 12	120	80	50		28 + 20 M16		A	9.4
BN 14	140	50	50				A	6.3
BN 15	140	50	50				B	6.2
BN 13	140	89	64	25.5	35 + 30 M20	1/16 x 90°	A	15.0
BM 40	152	76	64	25.5	44.5 + 20 M20	3/32 x 90°	A	14.3
BN 23	155	89	64		35 + 30 M20		A	17.4
BJ 50	146	80	50	25.4	44.5 + 29 M20	3/32 x 90°	A	12.6
CL 50	160	76	64	28	38 + 25 M20	3/32 x 90°	A	14.5

Serrated Soft Top Jaws

To suit Autoblok, Forkardt, Gamet, Pratt Burnerd, Röhm, Schunk, SMW-Autoblok & SMW Power Chucks

AUTOBLOK & SMW-AUTOBLOK	FORKARDT	GAMET	PRATT BURNERD	ROHM	SCHUNK	SMW
			125 INTERNATIONAL 150 KB INTERNATIONAL			
IND 125 AND 125 ALD 125 GHDN 125	KTH 130/140		170 KB INTERNATIONAL	KFD 130 KFH 140	HSG 160-46	KDV 130 KMA 140 KMAF 140
			135 HYD. FRONT END 165 INTERNATIONAL 165 HIGH SPEED Q.C.			
IDN 170, HDB 170 IDL 170 HDN 170 GHDN 165 GHD/FC 165 AND 165, ALD 165		MAC 165/170 DE 170 GA 160/170			TP 160	SP 160
IDN 200/220 IDL 200 HDN 200/220 HDL 200 GHDN 210 CD 200 GHD/FC 210 HDB 220 AND 210 ALD 210	3KGF 160/175/200 KTG 160/200 KTN 160/200 3KGF 160/175/200 KS 160/200/250 KL 160/200 KSPS 160/200 KSF 175/200 3KTGF 200 KSHF 200 UVE 160/200/250 KP 200 KG 200 3NHf 200 3NH 200 KSH 160/200 KLNC 200 KT 160/200 KTF 200 KTH 200/250/315 QLC 175	MAC 200 MAC 220 DE 210 GA 210	160 INTERNATIONAL (UP TO 89) 160 HIGH SPEED Q.C. (UP TO 89) 165 HYD. FRONT END 210 INTERNATIONAL 210 HIGH SPEED Q.C. 210 KB INTERNATIONAL 210 KB HIGH SPEED Q.C.	KFH 160/200 KFH-NC 160/200 KFH-F 160/200 KFH-G 160/200 KFD-HF 160/200 KFD-HE 160/200 KFD-HS 200 KFD 160/200 SPD 160/200 SPO 160/215 KFD-AF 160	THF 165-37 TH 165-37 HGS 200-66 HSL 165-37 ROTA NC 165 ROTA NCF 160 ROTA NCO 165	HFKS 160/200 KDV 160/200/250 KDVG 160/200/250 KDM 160/200 KDMF 160/200/250 KMA 160/200/250 KMAF 160/200/250 KFV 160/200 SP 200 KFMF 160/200 HFK 160/200
IDN 200/220 IDL 200 HDN 200/220 HDL 200 GHDN 210 CD 200 GHD/FC 210 HDB 220 AND 210 ALD 210	3KGF 200 KTG 200 3KGF 200 KTN 200 KS 200/250 KSH 200 KL 200 KSF 200 3KTGF 200 KSHF 200 UVE 200/250 KG 200 KSPS 200 3NHf 200 KSHF 250-55 (INDEX) 3NH200 3NHf 250-65 (INDEX) 3NHf 290-104 (INDEX) KL 250 MO KS 250 MO KLNC 200 KP 200 KT 200 KTH 200/250/315 QLC 210	MAC 200 MAC 220 DE 210 GA 210	200 INTERNATIONAL (UP TO 89) 200 HIGH SPEED Q.C. (UP TO 89) 210 HYD. FRONT END 250 HIGH SPEED Q.C. (UP TO 89) 254 INTERNATIONAL 265 HIGH SPEED Q.C. 265 KB INTERNATIONAL 265 KB HIGH SPEED Q.C.	KFH 200 KFH-NC 200 KFH-F 200 KFH-G-200 KFH-HF 200 KFD-HE-200 KFD-HS 250 KFD-AF 200 SPO 215 SPD 215 KFD 200/250	THF 210-52 TH 210-52 HSG 250-91 HSL 210-52 ROTA NC 210 ROTA NCD 210 ROTA NCF 200 ROTA NCO 200 TP 200	HFKS 200 KDV 200/250 KDVG 200/250 KDM 200 KDM-F 200/250 KMA 200/250 KMA-F 200/250 KFV 200 KFMF 200 HFK 200
IDN 250/315/400 IDL 250/315/400 HDN 250/315/400 HDL 250/315/400 GHDN 250/315/400 CD 250/315 GHD/FC 250/305/400 HDB 300 AND 250 ALD 250 AND 315 ALD 315	KS 315/400 KSH 250/315/400 KG 250/315 KP 250/315 3KTGF 250/315 KT 250/315 UVE 315 KSHF 250/315/400 KTG 250/315 KLNC 250/315 KTN 250/315 KTF 250/315 3NHf 250/315 3NH 250/315 3NHf 290 3NHf 400 (INDEX) KL 250 KSPS 250/300 QLC 250/315	MAC 250 MAC 315 DE 250/260/320 GA 250/315	250 INTERNATIONAL (UP TO 89) 254 HYD. FRONT END 305 HYD. FRONT END 305 INTERNATIONAL 305 HIGH SPEED Q.C. 315 INTERNATIONAL (UP TO 89) 400 HIGH SPEED Q.C. (UP TO 89) 305 KB INTERNATIONAL 305 KB HIGH SPEED Q.C.	KFH 250/315 KFH-NC 250/315 KFH-F 250/315 KFH-G 250/315 KFH-HF 250/315 KFD 250/315 KFD-HF 250/315 KFD-HE 250/315 KFD-HS 315 KFD-AF 250/315 LVE 305 SPO 300 SPD 300	THF 250-71 TH 250-71 THF 315-86 TH 315-86 HSG 315-108 HSL 250-71 HSL 315-91 ROTA NC 250/ 315 ROTA NCD 250/ 315 ROTA NCF 250/ 315 ROTA NCO 250/ 315 TP 250/315	HFK 250/315 HFKS 250/315 KDV 315/400 KDVG 315/400 KDM 250/315/400 KMA-F 315/400 KMA 315/400 KMA-F 315
	KL 300 KSHF 560	MAC 380				
IDN 500/630/800 IDL 500/630/800 GHDN 500/610/640/800 ALD 400 AND 400	KS 500/620 KSH 500 KSL 630 KSHF 630 3KTGF 400/500 UVE 400/500/630/800 KTG 400/500 KTN 400/500 KG 400/500 3NHf 400/500/630 3NH 400/500/630 KL 400/500 KLNC 400/500 KP 400 KT 400/800 KTF 400/500 QLC 400	DE 400	400 INTERNATIONAL (UP TO 89) 400 HYD. FRONT END 500 HYD. FRONT END	KFH 400/500 KFH-F 400/500 KFH-G 400/500 KFH-NC 400/500 KFD 400/500/630/800 KFD-H 400/500 KFD-HF 400/500 KFD-HS 400/500 LVE 400/500/630/1000 KFL 500/630	THF 400-120 TH 400-120 THF 500-160 TH 500-160 TH 630-180 HSG 400-176 HSG 500-165 HSL 400-120 ROTA NC 400 ROTA NCD 400 ROTA NCF 400 ROTA NCO 400	HFK 400/500 HFKS 400/500 KDV 500 KDVG 500 KDM 500 KFV 400/500/630/800
			380 INTERNATIONAL 380 HIGH SPEED Q.C.			
IDN 500/630/800 IDL 500/630/800 GHDN 500/610/640/800 HDL 500/630/800 HDW/FC 500/630						

Serrated Diamond Soft Top Jaws



90° Serrations

**Material: 080M15 (En32)
Material: Aluminum HE30TF
Black Finish**

Techleader Part No.	A	B	C	D	K + J Bolt	Serrations	Weight Kg/Set
CM 16 STEEL	60	60	120	17	22 + 15 M12	1/16 X 90°	9.0
HL 16 ALUMINUM	64	64	120				3.2
CM 20 STEEL	76	64	150	17	22 + 15 M12	1/16 X 90°	14.0
HL 20 ALUMINUM	76	64	150				5.0
CM 25 STEEL	89	64	170	17	22 + 20 M12	1/16 X 90°	20.0
HL 25 ALUMINUM	89	64	170				7.0
CM 26 STEEL	89	64	170	21	28 + 20 M16	1/16 X 90°	20.0
HL 26 ALUMINUM	89	64	170				7.0
CM 32 STEEL	118	76	240	21	28 + 30 M16	1/16 X 90°	28.0
HL 32 ALUMINUM	118	76	240				10.0
CM 40 STEEL	152	76	280	25.5	M20		
HL 40 ALUMINUM	152	76	280				

Serrated Diamond Soft Top Jaws

To suit Autoblok, Forkardt, Gamet, Pratt Burnerd, Röhme, Schunk, SMW-Autoblok & SMW power chucks

AUTOBLOK	FORKARDT	GAMET	PRATT BURNERD	ROHM	SCHUNK	SMW
	3KGGH 160/175 KL 160, KSH 160 3KGGHF 160/175 KS 160, KSPS 160 KG 160, KSF 175 UVE 160 KTG 160, KTN 160 3KTH 160-46/175-46 QLC 175		160 INTERNATIONAL (UP TO 89) 160 HIGH SPEED Q.C. (UP TO 89) 165 HYD. FRONT END	KFH 160, KFD 160 KFH-NC 160 KFH-F 160 KFH-G 160 KFD-HF 160 SPD 160 SPO 160	THF 165-37 TH 165-37 HSL 165-37 ROTA NC 165 ROTA NCF 160 ROTA NCO 165	HFS 160 HFKS 160 KDV 160 KDVG 160 KDV 160
IDN 200/220 IDL 200 HDN 200/220 HDL 200 GHDN 210 CD 200 GHD/FC 210 HDB 220	3KGGH 200, KL 200 3KGGHF 200, KSF 200 KS 200, KSH 200 3KTGF 200, KSPS 200 UVE 200, KSHF 200 KG 200, KLNC 200 3NHF 200, KP 200 3NH 200 KTG 200, KTN 200 3KTH 200-66	MAC 200 MAC 220 DE 210	210 NEW INTERNATIONAL 210 NEW HIGH SPEED Q.C. 200 INTERNATIONAL (UP TO 89) 210 HYD. FRONT END 200 HIGH SPEED Q.C. (UP TO 89) 210 KB INTERNATIONAL 210 KB HIGH SPEED Q.C.	KFH 200 KFH-NC 200 KFH-F 200 KFH-G 200 KFH-HF 200 KDF 200 SPD 215 SPO 215	THF 210-52 TH 210-52 HSG 200-66 HSL 210-52 ROTA NC 210 ROTA NCF 210 ROTA NCD 210 ROTA NCO 200 TP 200	HFK 200 HFKS 200 KDV 200 KDVG 200 KDV 200
	QLC 210 KS 250 UVE 250 3NHF 250-65 3NHF 290-104 KL250 MO KS250 MO KSHF 250-55		254/265 NEW INTERNATIONAL 254 NEW HIGH SPEED Q.C. 250 HIGH SPEED Q.C. (UP TO 89) 265 KB INTERNATIONAL 265 KB HIGH SPEED Q.C.	KFL 250	HSG 250-91	KDV 250 KDVG 250
IDN 250 IDL 250 HDN 250 HDL 250 GHDN 250 GHD/FC 250 HDB 300 CD 250	KTG 250, KTN 250 3KTGF 250, KSH 250 KG 250, KP 250 3NHG 250, 3NH 250 3NHF 290, KLNC 250 KSHF 250, KL 250 KSPS 250 QLC 250	MAC 250 DE 250/260	250 INTERNATIONAL (UP TO 89) 254/305 HYD. FRONT END 305 NEW INTERNATIONAL 305 NEW HIGH SPEED Q.C. 305 KB INTERNATIONAL 305 KB HIGH SPEED Q.C.	KFH 250 KFH-NC 250 KFH-F 250 KFH-G 250 KFD 250 KFD-HF 250	THF 250-71 TH 250-71 HSL 250-71 ROTA NC 250 ROTA NCF 250 ROTA NCD 250 ROTA NCO 250 TP 250	HFK 250/270 HFKS 250 KDV 250 KDVG 250 KDV 250
IDN 315/400 IDL 315/400 HDN 315/400 HDL 315/400 GHDN 315/400 CD 315 GHD/FC 305/400	KS 315/400 KTG 315, KTN 315 3KTGF 315, KP 315 UVE 315, KSPS 300 KG 315, KLNC 315 3NHF 315, 3NH 315 KSH 315/400 KSHF 315/400 3NHF 400	MAC 315 DE 320	315 INTERNATIONAL (UP TO 89) 315/400 HIGH SPEED Q.C. (UP TO 89)	KFH 315 KFH-NC 315 KFH-F 315 KFH-G 315 KFD-HF 315 KFD-315 KFL 315 SPD 300 SPO 315	THF 315-86 TH 315-86 HSG 315-108 HSL 315-91 ROTA NC 315 ROTA NCD 315 ROTA NCF 315 ROTA NCO 315 TP 315	HFK 315 HFKS 315 KDV 315/400 KDVG 315/400 KDV 315/400
IDN 500/630/800 IDL 500/630/800 GHDN 500/610/640/800 ALD 400 AND 400	QLC315 KS 500/620 KSH 500 KTG 630, KSJHF 630 3KTGF 400/500 UVE 400/500/630/800 KTG 400/500 KTN 400/500 KG 400/500 3NHF 400/500/630 3NH 400/500/630 KL 400/500 KLNC 400/500/ KP 400 KT 400/800 KTF 400/500 QLC 400	DE 400	400 INTERNATIONAL (UP TO 89) 400 HYD FRONT END 500 HYD FRONT END	KFH 400/500 KFH-F 400/500 KFH-G 400/500 KFH-NC 400/500 KFD 400/500/630/800 KFD-H 400/500 KFD-HF 400/500 KKFD-HS 400/500 LVE 400/500/630/1000 KFL 500/630	THF 400-120 TH 400-120 THF 500-160 TH 500-160 TH 630-180 HSG 400-176 HSG 500-165 HSL 400-120 ROTA NC 400 ROTA NCD 400 ROTA NCF 400 ROTA NCO 400	HFK 400/500 HFKS 400/500 KDV 500 KDVG 500 KDM 500 KDV 400/500/630/800

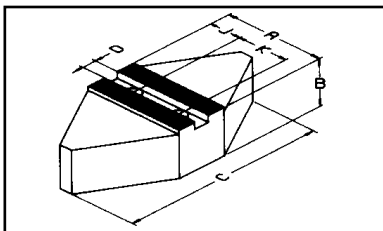
Serrated Diamond Soft Top Jaws

To suit Howa, Kitagawa, Matsumoto, Pratt Burnerd, Röhm & Schunk Power Chucks

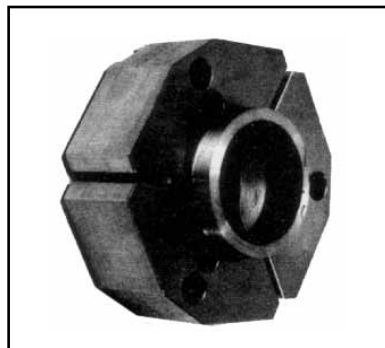
Techleader Part No.	A	B	C	D	K+J Bolt	SERRATIONS	WEIGHT KG/set	HOWA	KITAGAWA	MATSUMOTO MMK	PR11 BURNRED	Röhm	SCHUNK
CN 16 STEEL	60	60	120	12	20+15 M10	1.5 X 60°	9.0	HO1MA6 HO7MA6 HO15M6	AS-65 B-160 B-06	B206 HO-6 HOH-160	INTERNATIONAL 9821-21723 9821-31723	KFD-HE 170	HSL 165-37 ROTA NCK 165
HN16 ALUMINUM	64	64	120				3.2	HO22M6 HO27M6 HO37M6	HOB-6 HOS 6 N-160	HOH-6 HJA5-6 N-6	HIGH SPEED QUICK CHANGE 9121-21723 9121-31723		ROTA NC 165 ROTA NCK 165
*AKT6FG ALUMINUM	2"								BB-06 HG738-165	BL-206			
CN 20 STEEL	76	64	150	14	25+15 M12	1.5 X 60°	14.0	HO7MA8 HO15M8	B200 B-08 N-200	B208 HOB-8 HOH-200	INTERNATIONAL 9821-32123 9821-42123	KFD-HE 210	HSL 210-52
HN 20 ALUMINUM	76	64	150				5.0		N-08 AS-210 HOS-8	HOH-8 NL-08 HOH 208	HIGH SPEED QUICK CHANGE 9121-32123 9121-42123 210 KB		ROTA NCK 210 ROTA NC 210 ROTA NCF 210
*AKT8FG ALUMINUM	2"								HJA6-8 HO-8	BL-208 HG-715-210			
CN 25 STEEL	89	64	170	16	30+20 M12	1.5 X 60°	20.0	HO7MA10 HO15M10	B250 HOH-250 B210	B-10 BL 210 HOH-10	INTERNATIONAL 9821-42623 9821-52623	KFD-HE 254	HSL 250-71
HN 25 ALUMINUM	89	64	170				7.0		AS-250 N-10 HJA8-10	HOB-10 N-250 HJA6-10	HIGH SPEED QUICK CHANGE 9121-42623 9121-52623 265 KB		ROTA NCK 250 ROTA NC 250 ROTA NCF 250
*AKT10FG ALUMINUM	2"								HO-10 HG730 254	HOS-10 NL-10			
CN 32 STEEL	118	76	240	18	30+30 M14	1.5 X 60°	28.0	HO7MA12 HO15M12 HO27M10 HO37M10	B300 HOH-300 N-300	B-12 HOH-12 N-12	INTERNATIONAL 9821-53123 9821-63123		HSL 315-91
HN 32 ALUMINUM	118	76	240				10.0		HOS-12 HJA8-12 HJA6-12 HLA6-12 NL-12	HO-12 HOB-12 HLA8-15 HLA6-16	HIGH SPEED QUICK CHANGE 9121-53123 9121-63123 305 KB		
*AKT12FG ALUMINUM	2.5"									HA8-12 H-12 HH-12 HJ-12 ZA8-12-72 ZA8-12-85	HA8-12 HX-12 HX-10 H-10 HH-10 HJ-10 STC-10 HA8-11		
CN 33 STEEL	118	76	240	21	30+30 M16	1.5 X 60°	28.0		B212			KFD-HE 315	ROTA NCK 315 ROTA NC 315
HN 33 ALUMINUM	118	76	240				10.0						ROTA NCF 315
*AKT212FG ALUMINUM	2.5"												
CN 38 STEEL	152	76	280	22	43+37 M20	1.5 X 60°	48.0		B15				ROTA NC 400
HN 38 ALUMINUM	152	76	280				16.0		B18				ROTA NCF 400

*THESE JAWS ARE ALUMINUM PIE JAW, MADE FROM A ROUND EXTRUSION.

IMPORTANT: Allow for weight of Diamond Jaws at high R.P.M.'s as the grip loss due to the effect of centrifugal forces will be greater.



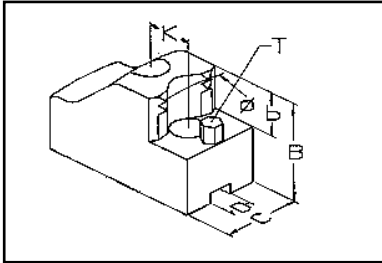
60° Serrations
Material: Steel: 080M15 (En32)
Aluminum: HE30TF



- Can be turned or bored to clamp entire circumference of workpiece
- Choice of steel or aluminum types
- Greater flexibility than pie jaws, can be reversed
- Aluminum diamond jaws - less weight for higher spindle speeds
- Helps stop distortion of thin walled components
- Can be machined to suit irregular parts

Adjustagrip Hard Top Jaws

To Suit Howa, Kitagawa & Matsumoto Power Chucks



To suit power chucks
60° Serrations
External Ø Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE								
										HOWA			KITAGAWA			MATSUMOTO (MMK)		
										H07MA	H027M	H037M	BA/H0B/H0H	B200	NL	N/NA	H/HA	ZA
LA 03	49	40	12	20	20	M6	1.5 X 60°	1.7	165	26-49	26-44	26-44		26-47	30-46	26-46		
LA 04								1.4		39-69	32-63	41-63	31-62	37-67	46-65	45-65		
LA 06								1.4		52-83	50-77	55-77	50-77	50-81	63-80	59-79		
LA 07								1.4		66-98	64-92	69-92	64-91	64-96	77-94	73-94		
LA 09								1.2		82-114	74-108	85-108	73-108	80-112	93-111	90-110		
LB 03	49	40	14	25	20	M6	1.5 X 60°	1.9	210	37-75	*26-71	*28-71	25-65	31-68	44-67	42-69	40-71	31-74
LB 06								1.8		66-102	*55-99	*57-99	54-93	60-96	72-98	69-97	69-99	60-101
LB 09								1.7		94-132	*82-128	*85-128	81-121	87-125	97-125	97-126	97-128	88-130
LB 12								1.7		121-159	*108-155	*111-155	108-149	114-152	125-151	125-152	124-155	115-158
LC 04	59	40	16	30	25	M8	1.5 X 60°	2.9	254/	40-100	*41-90	*48-86	41-81	44-85	43-83	42-91	52-92	43-88
LC 08								2.7	305	77-141	*78-130	*86-128	78-121	82-125	80-123	79-131	89-132	80-128
LC 13								2.6		120-185	*121-174	*128-172	121-165	125-169	123-167	122-175	133-176	123-171
LC 17								2.6		163-229	*164-218	*172-214	164-209	168-212	166-211	165-219	176-220	166-215
LD 05	59	50	18	30	25	M8	1.5 X 60°	4.5	304	53-128	*44-119	*54-119	46-114		55-119	51-117	50-126	55-127
LD 11								3.5		109-188	*97-179	*111-179	102-174		112-179	107-177	107-186	112-187
LD 17								3.1		173-253	*160-244	*175-244	165-239		176-244	171-241	170-251	176-252
LD 23								3.5		236-316	*223-307	*238-307	228-302		239-307	234-305	233-314	239-315
LE 05	59	50	21	30	25	M8	1.5 X 60°	4.4	304		†43-114	†50-114		48-112				
LE 10								3.4			†91-171	†104-171		102-168				
LE 16								3.0			†154-236	†167-236		165-233				
LE 23								3.4			†221-303	†234-303		232-300				
LF 05	79	60	22	43	33	M8	1.5 X 60°	9.3	380				50-108					
LF 10								8.3					99-162					
LF 16								6.0					160-224					
LF 22								5.6					220-285					
LF 28								6.0					279-345					
LF 34								7.8					339-404					

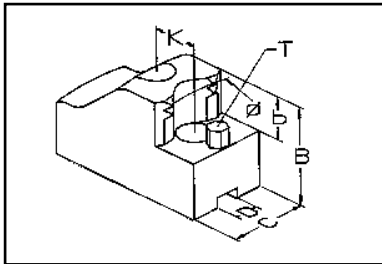
* For the jaws in these ranges to fit, special T-Nuts are required. Types GA08, GA10 & GA12.

† For the jaws in these ranges, standard T-Nuts must be split

Adjustagrip Jaws are available on request in special sizes or to suit other chuck types.

Adjustagrip Hard Top Jaws

To Suit Pratt Burnerd, Schunk & SMW-Autoblok Power Chucks



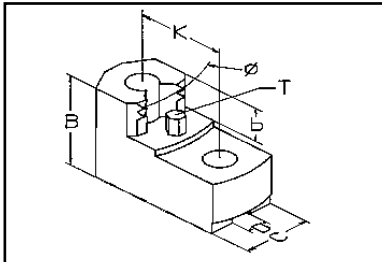
To suit power chucks
60° Serrations
External Ø Clamping Type
Material: Steel: 590M17

CHUCK TYPES – GRIPPING RANGE

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	PRATT BURNERD				SCHUNK		SMW - AUTOBLOK				
										INT'L KB	HSQC KB	INTERNATIONAL	HSQC	HSL	ROTA NCK	BB-M	BH-M	AL-M	AN-M	
LA 03 LA 04 LA 06 LA 07 LA 09	49	40	12	20	20	M6	1.5 X 60°	1.7 1.4 1.4 1.4 1.2	150	27-37 36-56 50-71 64-85 80-102										
LA 03 LA 04 LA 06 LA 07 LA 09	49	40	12	20	20	M6	1.5 X 60°	1.7 1.4 1.4 1.4 1.2	165/ 170/ 175	34-49 53-68 67-83 82-98 97-114		24-46 41-65 55-80 69-94 85-111	30-64 50-78 64-92 72-109	34-59 53-78 67-93 81-108 98-124	26-47 35-67 50-81 71-96 80-112	33-64 52-83 66-98 80-112 97-129	27-52 41-71 55-86 69-101 85-117	27-54 45-79 58-88 73-103 89-119	27-52 43-71 56-86 70-100 87-117	
LA 03 LA04 LA 06 LA 07 LA 09	49	40	12	20	20	M6	1.5 X 60°	1.7 1.4 1.4 1.4 1.2	210	62-88 82-107 96-122 111-137 127-153										
LB 03 LB 06 LB 09 LB 12	49	40	14	25	20	M6	1.5 X 60°	1.9 1.8 1.7 1.7	210		38-68 66-96 94-125 121-153	39-69 68-97 96-126 123-153	25-72 50-100 75-129 102-157	45-79 73-106 101-135 129-163	33-98 62-125 90-154 116-182	46-76 74-103 102-132 130-160	32-75 60-102 88-132 115-159	45-77 74-105 102-134 129-162	42-74 70-101 98-130 125-158	
LC 04 LC 06 LC 08 LC 10 LC 13 LC 15 LC 17	59	40	16	30	25	M8	1.5 X 60°	2.9 2.9 2.7 2.7 2.6 2.6 2.6	254/ 265/ 305	58-100 97-140 140-185 184-228	39-103 69-143 112-188 155-231	43-84 80-124 123-168 166-212	38-91 60-131 102-175 145-219	49-98 87-138 125-202 174-226	45-117 82-158 140-167 168-246	58-83 78-103 97-123 117-143 140-167 160-187 184-210	48-82 68-102 86-122 106-142 130-166 150-186 173-209	53-87 73-107 92-128 112-148 135-172 155-192 179-215	49-83 69-103 87-123 107-143 131-167 151-187 174-210	
LD 05 LD 11 LD 17 LD 23	59	50	18	30	25	M8	1.5 X 60°	4.5 3.5 3.1 3.5	304/ 305/ 315	61-118 118-180 180-245 245-307	44-125 88-185 147-250 210-314	57-124 114-184 178-249 241-312		67-138 125-198 189-263 252-327	61-160 119-220 183-286 246-349					
LE 05 LE 07 LE 10 LE 13 LE 16 LE 20 LE 23	59	50	21	30	25	M8	1.5 X 60°	4.4 4.0 3.4 3.2 3.0 3.2 3.4	304/ 315							89-125 117-153 145-181 175-211 210-246 243-279 277-314	60-126 115-182 179-246 246-315	54-131 109-187 172-252 239-320	49-124 103-181 166-246 233-313	
LF 05 LF 10 LF 16 LF 22 LF 28 LF 34	79	60	22	43	33	M8	1.5 X 60°	9.3 8.3 6.0 5.6 6.0 7.8	380		59-117 110-171 171-234 232-295 291-354 350-414	47-117 82-171 137-234 197-295 255-354 315-414								

Adjustagrip Hard Top Jaws

To Suit Howa, Kitagawa & Matsumoto Power Chucks



To suit power chucks
60° Serrations
Internal Ø Clamping Type
Material: Steel: 590M17

CHUCK TYPES – GRIPPING RANGE

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE								
										HOWA			KITAGAWA			MATSUMOTO (MMK)		
										H07MA	H027M	H037M	BA/HOB/HOH	B200	NL	N/NA	H/HA	ZA
MA 05	49	40	12	20	20	M6	1.5 X 60°	1.5	165	45-71		45-65		45-69	51-67	47-67		
MA 06								1.4		51-82	47-76	54-76	47-76	49-80	62-80	58-78		
MA 07								1.3		70-102	67-96	72-96	67-95	68-99	80-101	77-99		
MA 09								1.1		92-124	83-118	95-118	83-117	90-122	101-121	99-120		
MB 06	49	40	14	25	20	M6	1.5 X 60°	1.9	210	55-92	*50-88	*50-88	50-82	50-85	61-89	59-89	58-88	50-91
MB 08								1.8		84-122	*72-118	*75-118	72-112	78-115	89-120	80-120	87-120	78-120
MB 11								1.7		117-155	*105-151	*108-151	104-145	110-148	120-152	120-151	120-151	111-155
MB 14								1.7		146-185	*134-181	*137-181	133-174	139-178	152-177	151-177	149-181	140-184
MC 06	59	40	16	30	25	M8	1.5 X 60°	2.7	254/	56-119	*57-109	*65-105	57-100	61-103	59-102	58-109	68-111	59-107
MC 10								2.5	265/	95-159	*96-149	*104-145	96-140	100-143	98-142	97-149	108-151	98-147
MC 14								2.3	305	136-201	*137-190	*145-186	137-181	140-185	139-183	138-191	149-192	139-188
MC 18								2.2		175-240	*176-230	*184-226	176-221	180-224	178-223	177-231	188-232	178-228
MD 08	59	50	18	30	25	M8	1.5 X 60°	3.9	304	81-159	*74-150	*83-150	74-145		84-150	79-148	79-157	83-158
MD 14								3.0		142-221	*129-212	*144-212	134-207		145-212	140-210	139-219	144-220
MD 20								3.0		203-283	*189-273	*204-273	195-269		205-274	200-271	200-280	205-281
ME 08	59	50	21	30	25	M8	1.5 X 60°	3.9	304		†74-148	†80-148		78-145				
ME 14								3.0			†131-212	†144-212		142-209				
ME 20								3.0			†189-271	†203-271		201-269				
MF 10	79	60	22	43	33	M8	1.5 X 60°	8.8	380				100-162					
MF 16								7.1					160-224					
MF 22								4.1					222-287					
MF 28								4.1					280-345					

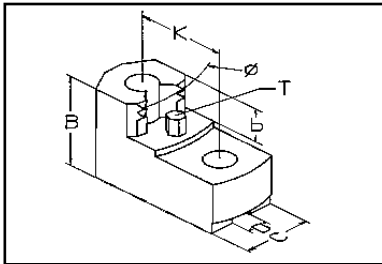
* For the jaws in these ranges to fit, special T-Nuts are required. Types GA08, GA10 & GA12.

† For the jaws in these ranges, standard T-Nuts must be split

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Adjustagrip Hard Top Jaws

To Suit Pratt Burnerd, Schunk & SMW-Autoblok Power Chucks



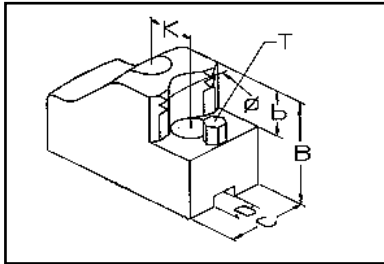
To suit power chucks
60° Serrations
Internal Ø Clamping Type
Material: Steel: 590M17

CHUCK TYPES – GRIPPING RANGE

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE										
										PRATT BURNERD				SCHUNK		SMW - AUTOBLOK				
										INT'L. KB	HSQC KB	INTERNATIONAL	HSQC	HSL	ROTA NCK	BB-M	BH-M	AL-M	AN-M	
MA 05 MA 06 MA 07 MA 09	49	40	12	20	20	M6	1.5 X 60°	1.5 1.4 1.3 1.1	150	46-58 48-70 68-89 89-111										
MA 05 MA 06 MA 07 MA 09	49	40	12	20	20	M6	1.5 X 60°	1.5 1.4 1.3 1.1	165/ 170/ 175	55-70 66-83 83-101 108-124		45-67 54-79 73-98 95-120	47-77 67-96 82-119	55-80 66-92 85-111 107-134	47-80 68-99 84-116 75-122	54-85 65-97 84-116 104-139	46-73 54-85 72-104 95-127	47-75 58-87 76-107 99-129	46-73 55-85 74-104 96-126	
MA 05 MA 06 MA 07 MA 09	49	40	12	20	20	M6	1.5 X 60°	1.5 1.4 1.3 1.1	210	84-109 95-121 115-141 137-163										
MB 06 MB 08 MB 11 MB 14	49	40	14	25	20	M6	1.5 X 60°	1.9 1.8 1.7 1.7	210		55-85 85-115 115-149 147-178	57-86 86-119 119-149 148-179	50-89 68-119 98-153 127-182	62-96 92-126 125-159 154-189	51-114 80-144 113-178 142-207	63-93 93-123 126-155 155-186	51-92 79-122 111-155 140-185	63-94 92-125 125-158 155-187	59-90 89-121 121-154 151-183	
MC 06 MC 08 MC 10 MC 12 MC 14 MC 16 MC 18	59	40	16	30	25	M8	1.5 X 60°	2.7 2.5 2.5 2.4 2.3 2.3 2.2	250/ 254/ 265	75-119 115-159 156-201 195-240	54-122 87-162 128-203 167-243	59-103 98-143 139-184 178-224	54-110 77-150 117-191 157-231	66-117 105-157 142-218 186-238	62.137 100-177 142-218 181-258	75-101 95-121 115-141 135-161 155-183 175-201 196-222	65-100 85-120 104-140 124-160 145-182 165-200 185-221	71-106 91-126 110-146 130-161 151-188 171-195 191-227	66-101 86-121 105-141 125-162 146-183 166-201 186-222	
MD 08 MD 14 MD 20	59	50	18	30	25	M8	1.5 X 60°	3.9 3.0 3.0	304/ 305/ 315	91-151 151-212 212-273	74-156 116-218 176-280	86-155 147-217 207-278		97-170 158-232 219-293	90-192 151-254 212-316					
ME 08 ME 10 ME 14 ME 18 ME 20 ME 24	59	50	21	30	25	M8	1.5 X 60°	3.9 3.5 3.0 3.0 3.0 3.1	315						122-158 154-190 186-222 215-251 245-282 275-312	92-159 156-223 215-283	85-164 149-228 208-288	79-158 143-222 201-282		
MF 10 MF 16 MF 22 MF 28	79	60	22	43	33	M8	1.5 X 60°	8.8 7.1 4.1 4.1	380			101-171 171-234 234-297 291-354	96-171 137-234 199-299 256-355							

Adjustagrip Hard Top Jaws

To Suit Autoblok Power Chucks

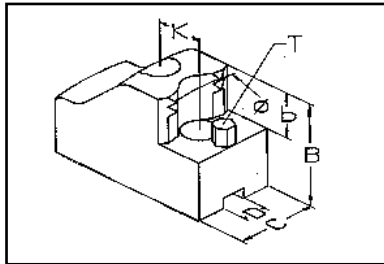


To suit power chucks
90° Serrations
External Ø Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE				
										AUTOBLOK				
										IDN/HDN	GDN	GHD/FC	BHD	BBD
IB 03	49	40	17	22	20	M6	1/16"X90°	2.7	200/210					
IB 04								2.3		33-68	34-71	34-71	34-70	41-73
IB 05								2.1		59-96	60-98	60-98	55-97	68-100
IB 08								2.1		86-125	88-127	88-127	82-126	96-129
IB 11								2.0		115-154	116-157	116-157	111-156	125-158
IB 14								1.9		144-184	146-186	146-186	140-185	155-188
IB 03	49	40	17	22	20	M6	1/16"X90°	2.7	220/250					
IB 04								2.3		37-85				
IB 05								2.1		64-113				
IB 08								2.1		92-142				
IB 11								2.0		121-172				
IB 14								1.9		150-202				
IC 04	59	50	21	25	25	M8	1/16"X90°	3.9	250					
IC 05								3.3		45-98	44-96	44-96	45-94	54-98
IC 08								2.7		88-143	87-141	87-141	89-139	98-140
IC 13								2.4		137-194	136-191	136-191	138-189	147-190
IC 18								2.8		188-245	187-243	187-243	188-241	198-242
IC 04	59	50	21	25	25	M8	1/16"X90°	3.9	250/305			50-110		
IC 05								3.3				52-97		
IC 08								2.7				96-145	105-190	
IC 13								2.4				145-195	155-242	
IC 18								2.8				195-244	206-293	
IC 04	59	50	21	25	25	M8	1/16"X90°	3.9	315	50-125	50-120		50-118	66-117
IC 05								3.3						100-152
IC 08								2.7		110-206	115-200		117-198	146-197
IC 13								2.4		160-257	165-252		167-250	196-249
IC 18								2.8		211-309	216-303		218-301	248-300
IC 04	59	50	21	25	25	M8	1/16"X90°	3.9	400	65-208		65-208		
IC 05								3.3						
IC 08								2.7		145-288		145-288		
IC 13								2.4		195-340		195-340		
IC 18								2.8		247-392		247-392		
ID 06	79	60	25.5	35	33	M8	3/32"X90°	9.0	500			90-244		
ID 13								6.3				175-333		
ID 21								4.8				261-420		
ID 30								6.6				350-509		
ID 06	79	60	25.5	35	33	M8	3/32"X90°	9.0	630			91-246		
ID 13								6.3				175-462		
ID 21								4.8				261-549		
ID 30								6.6				350-639		

Adjustagrip Hard Top Jaws

To Suit Schunk & SMW-Autoblok Power Chucks



To suit power chucks
90° Serrations
External Ø Clamping Type
Material: Steel: 590M17

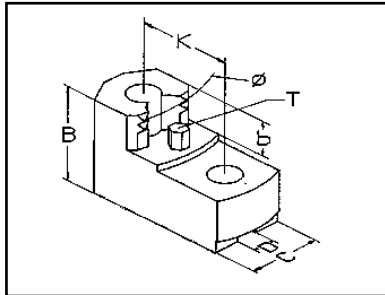
CHUCK TYPES – GRIPPING RANGE

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	SCHUNK						SMW - AUTOBLOK			
										SCHUNK		SCHUNK				SMW - AUTOBLOK		SMW - AUTOBLOK	
										TH-THF	HGS	HSL	ROTA NC/INCF	HFK/HFKS	AN-D	AL-D			
IA 03	49	40	17	19	20	M6	1/16" X 90°	1.8	160/165/200	41-76	67-113	45-72	36-64	39-63					
IA 05								1.4		60-95	86-132	64-91	55-83	58-82					
IA 07								1.5		81-118	109-154	86-114	76-106	79-104					
IA 09								1.6		103-140	131-177	108-136	89-128	101-126					
IA 11								1.5		125-162	153-200	130-158	120-150	123-149					
IA 03	49	40	17	19	20	M6	1/16" X 90°	1.8	200/210/250		95-142	59-104		47-97					
IA 05								1.4			114-161	78-123		66-116					
IA 07								1.5			136-183	100-146		88-138					
IA 09								1.6			158-206	122-168		110-161					
IA 11								1.5			181-228	145-191		132-183					
IB 03	49	40	17	22	20	M6	1/16" X 90°	2.7	200/210	34-77			35-69	35-59	35-62				
IB 04								2.3		39-89			44-81	38-70	41-74				
IB 05								2.1		66-116			71-108	65-97	68-101				
IB 08								2.1		94-145			99-137	92-126	96-130				
IB 11								2.0		123-175			128-166	121-156	125-160				
IB 14								1.9		152-205			158-196	151-185	155-189				
IC 04	59	50	21	25	25	M8	1/16" X 90°	3.9	250	34-83		35-75	35-75	34-63	35-60	35-65			
IC 05								3.3		52-118		51-110	49-110	51-97	51-94	55-99			
IC 08								2.7		96-163		95-155	93-155	95-142	94-139	99-144			
IC 11								2.5						120-167	120-164	125-169			
IC 13								2.4		145-214		144-206	142-206	144-193	144-190	149-195			
IC 16								2.6						170-219	170-216	175-220			
IC 18								2.8		196-265		195-257	193-257	195-244	195-241	200-246			
IC 04	59	50	21	25	25	M8	1/16" X 90°	3.9	315	49-136	60-135	46-126	41-135	37-126	35-116	39-122			
IC 05								3.3		82-172	94-170	78-161	72-170	68-161	64-151	70-158			
IC 08								2.7		127-217	139-216	123-206	117-215	113-206	108-197	114-203			
IC 13								2.4		177-268	190-267	174-257	167-267	163-257	158-248	165-254			
IC 18								2.8		229-320	241-319	225-309	218-318	214-309	209-299	216-306			
ID 06	79	60	25.5	35	33	M8	3/32" X 90°	9.0	400	69-154	64-157		60-162	61-155	62-134	66-139			
ID 08								7.4							105-177	109-182			
ID 13								6.3		153-242	148-245		143-249	144-243	145-221	150-227			
ID 18								5.4							187-263	192-269			
ID 21								4.8		238-329	233-332		228-336	229-330	230-308	236-314			
ID 25								5.2							275-353	280-360			
ID 30								6.6		327-418	322-421		317-426	318-419	319-397	324-403			
ID 06	79	60	25.5	35	33	M8	3/32" X 90°	9.0	500	115-272	96-247		111-259	98-249					
ID 13								6.3		202-360	182-336		198-347	185-337					
ID 21								4.8		289-447	268-423		284-435	271-424					
ID 30								6.6		378-537	357-512		373-524	360-514					



Adjustagrip Hard Top Jaws

To Suit Autoblok Power Chucks

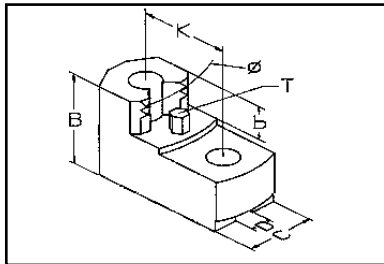


To suit power chucks
90° Serrations
Internal Ø Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE				
										AUTOBLOK				
										IDN/HDN	GHDN	GHD/FC	BHD	BBD
JB 06	49	40	17	22	20	M6	1/16"X90°	1.8	200/210	62-101	64-103	64-103	58-102	72-105
JB 09								1.8		94-133	95-135	95-135	89-134	104-137
JB 12								1.7		125-164	126-166	126-166	120-165	135-168
JB 06	49	40	17	22	20	M6	1/16"X90°	1.8	220/250	68-118				
JB 09								1.8		100-150				
JB 12								1.7		131-182				
JC 08	59	50	21	25	25	M8	1/16"X90°	3.9	250	81-117	81-114	81-114	81-114	81-113
JC 10								2.8		114-170	113-168	113-168	114-166	124-167
JC 15								2.6		165-222	163-219	163-219	165-217	175-218
JC 08	59	50	21	25	25	M8	1/16"X90°	3.9	250/305		81-115	81-164		
JC 10								2.8			122-169	132-218		
JC 15								2.6			173-220	183-269		
JC 08	59	50	21	25	25	M8	1/16"X90°	3.9	315	83-180	88-174		89-172	119-173
JC 10								2.8		137-233	142-228		144-226	173-225
JC 15								2.6		188-285	192-279		194-277	224-276
JC 08	59	50	21	25	25	M8	1/16"X90°	3.9	400	118-263		118-263		
JC 10								2.8		172-316		172-316		
JC 15								2.6		223-368		223-368		
JD 10	79	60	25.5	35	33	M8	3/32"X90°	8.6	500			135-291		
JD 17								6.7				212-370		
JD 25								4.0				291-450		
JD 10	79	60	25.5	35	33	M8	3/32"X90°	8.6	630			135-420		
JD 17								6.7				212-499		
JD 25								4.0				291-579		

Adjustagrip Hard Top Jaws

To Suit Schunk & SMW-Autoblok Power Chucks

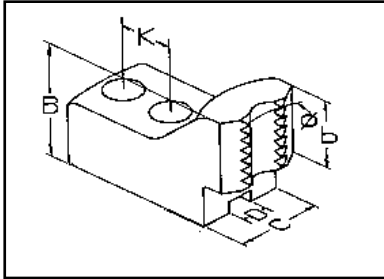


To suit power chucks
90° Serrations
Internal Ø Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	b	T	Serrations	Weight Kg/Set	Chuck Ø	CHUCK TYPES – GRIPPING RANGE						
										SCHUNK			SMW - AUTOBLOK			
										TH-THF	HGS	HSL	ROTA NC/INCF	HFK/HFKS	AN-D	AL-D
JA 05 JA 07 JA 09 JA 11	49	40	17	19	20	M6	1/16" X 90°	1.7 1.6 1.5 1.5	160/165/200	61-97 83-120 104-141 125-162	88-134 110-156 132-178 153-200	66-93 88-115 109-137 130-158	57-85 78-107 99-129 120-150	59-84 81-106 102-127 123-149		
JA 05 JA 07 JA 09 JA 11	49	40	17	19	20	M6	1/16" X 90°	1.7 1.6 1.5 1.5	200/210/250		115-163 138-185 159-207 181-228	80-125 102-148 123-169 145-191		68-118 90-140 111-162 132-183		
JB 06 JB 09 JB 12	49	40	17	22	20	M6	1/16" X 90°	1.8 1.8 1.7	200/210	70-121 102-153 133-185			75-113 107-145 138-176	68-102 100-134 131-165	72-106 104-138 134-169	
JC 08 JC 09 JC 10 JC 12 JC 15	59	50	21	25	25	M8	1/16" X 90°	3.9 3.1 2.8 2.6 2.6	250	81-136 122-190 172-241		81-128 121-182 171-233	81-128 119-182 169-233	81-120 120-172 172-221	81-112 101-144 121-166 156-191 171-217	81-117 101-149 126-171 161-196 176-222
JC 08 JC 10 JC 15	59	50	21	25	25	M8	1/16" X 90°	3.9 2.8 2.6	315	100-191 154-244 205-296	112-190 166-243 218-295	96-180 150-234 201-285	90-190 144-243 195-295	85-180 139-234 190-285	81-170 135-224 186-276	87-177 141-230 192-282
JD 10 JD 17 JD 25	79	60	25.5	35	33	M8	3/32" X 90°	8.6 6.7 4.0	400	113-201 189-279 267-359	108-203 184-282 262-361		103-208 179-287 257-366	104-202 180-280 259-360	105-180 181-258 259-337	110-185 186-264 265-343
JD 10 JD 17 JD 25	79	60	25.5	35	33	M8	3/32" X 90°	8.6 6.7 4.0	500	161-318 239-397 318-477	141-294 219-373 298-453		157-306 234-385 313-464	144-295 221-374 300-454		

Adjustagrip Jaws are available on request in special sizes or to suit other chuck types.

Hard Top Bar Jaws



60° Serrations
Bar Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	Serrations	Weight Kg/Set
KK 16	39	35	12	20	1.5" X 60°	1.5
KK 20	49	40	14	25		2.2
KK 25	49	40	16	30		2.3
KK 32	49	50	18	30		3.7
KK 33	49	50	21	30		3.7

CHUCK TYPES - GRIPPING RANGE

Techleader Part No.	CHUCK Ø	HOWA			KITAGAWA			MATSUMOTO (MMK)		
		H07MA	H027M	H037M	BA/H0B/H0H	B200	NL	N/NA	H/HA	ZA
KK 16	165	13-35	*13-29	*13-29	13-29	13-33	16-32	13-31		
KK 20	210	17-51	*16-48	*16-48	16-41	16-45	16-44	20-44	19-48	22-51
KK 25	254/305	23-81	*23-70	*28-66	23-62	25-65	24-63	23-71	39-72	25-51
KK 32	304		*27-91	*29-91	27-86		29-91	27-89	27-87	33-98
KK 33	304		*27-91	*29-91		27-88				

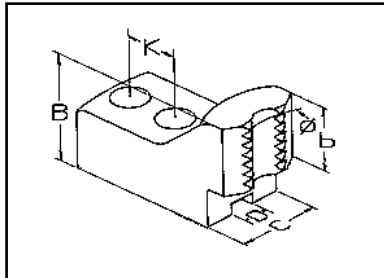
* For the jaws in these ranges to fit, special T-nuts are required Types GA08, GA10 & GA12.

CHUCK TYPES - GRIPPING RANGE

Techleader Part No.	CHUCK Ø	PRATT BURNERD				SCHUNK		SMW-AUTOBLOK			
		INT'L	HSQC	INT'L KB	HSQC KB	HSL	ROTA NCK	BB-M	BH-M	AL-M	
KK 16	150/165/175	13-31	13-30	13-23		20-45	14-33	18-50	13-38	13-40	13-37
KK 20	210	18-45	16-49	48-74	16-45	22-55	16-74	23-52	16-51	23-54	20-50
KK 25	250/254/265/305	33-65	23-71	38-81	23-83	29-79	26-98	38-63	29-62	34-68	30-63
KK 32	304/305/315	30-96	27-97	34-90	27-97	39-90	34-132				
KK 33	315							65-101	37-102	32-107	28-101

Adjustagrip Jaws are available on request in special sizes or to suit other chuck types.

Hard Top Bar Jaws



90° Serrations
Bar Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	Serrations	Weight Kg/Set
KJ 16	39	40	17	19	1/16" X 90°	1.6
KJ 20	49	40	17	22		2.0
KJ 26	49	50	21	25		2.5
KJ 32	49	50	21	25		3.0
KJ 40	59	60	25.5	35	3/32" X 90°	6.0

CHUCK TYPES - GRIPPING RANGE

Techleader Part No.	CHUCK Ø	AUTOBLOK					BERG		ROHM	
		IDN/HDN	GHDN	GHD/FC	BHD	BBD	HES	HESF	KFD	
KJ 16	160/165/175						14-23		14-40	25-71
KJ 20	200/210/250	21-52	19-54	19-54	25-56	19-53	19-38	19-41	19-56	21-94
KJ 26	250/305/315	23-73	28-71	28-71	30-70	23-69	22-64	22-69	24-80	
KJ 32	315/400	36-100	39-100	39-100	67-110	41-110		38-110	30-110	30-110
KJ 40	400/500/600	66-150		50-150			40-90	40-90	40-110	40-110

CHUCK TYPES - GRIPPING RANGE

Techleader Part No.	CHUCK Ø	FORKARDT						PRATT BURNERD	
		KS	KT	KTH	KTGF	NH/NHF	QLC	HS QUICK	
KJ 16	160/165/175	14-26	15-29	24-49		25-40	18-55		
KJ 20	200/210/250	19-40	19-42	27-64	27-64	19-55	33-89	19-56	
KJ 26	250/305/315		22-63		22-63	22-63	28-76		
KJ 32	315/400	29-110	29-110		29-110	31-110	33-128	29-110	
KJ 40	400/500/600	40-150	40-95		40-95	40-100	40-96		

CHUCK TYPES - GRIPPING RANGE

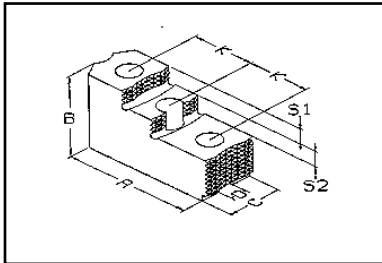
Techleader Part No.	CHUCK Ø	SCHUNK				SMW AUTOBLOK		
		TH/THF	HSG	HSL	Rota NC/NCF	AL-D	AN-D	
KJ 16	160/165/175	23-59	49-96	27-55	18-47	29-60		
KJ 16	200/210/250		77-125	41-87				
KJ 20	200/210/250	23-72			27-64	26-54	25-57	21-53
KJ 26	250/305/315	28-93		27-85	26-85	34-72	30-74	27-69
KJ 32	315/400	50-110	61-137	46-127	41-137	37-110	39-124	34-118
KJ 40	400/500/600	72-110	40-112			57-110	40-95	40-90
KJ 40	500		54-202					

Adjustagrip Jaws are available on request in special sizes or to suit other chuck types.

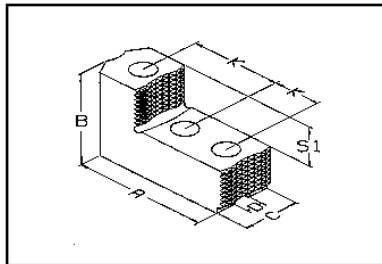


Serrated Hard Top Jaws

To Suit Autoblok & SMW Autoblok Power Chucks



TYPE A



TYPE B

90° Serrations

Reversible Type
Material: Steel: 590M17 or 080M15

Techleader Part No.	A	B	C	D	K	S1	S2	Serrations	Type	Autoblok SMW-Autoblok
GR 20	76	44	32	14	22	24		1/16"X90°	B	IDN 170 HDN 170 GHDN 165 GHD/FC 165 AND 165 ALD 165
GY 16	67	44	35	17	19	10	10	1/16"X90°	A	IDN 200/220
GY 20	74	49	40			12	12			IDL 200 HDN 200/220 HDL 200 GHDN 210 CD 200 GHD/FC 210 HDB 220 BHD 210 BHD/FC 210 BBD 210 AND 210 ALD 210
GY 25	104	59	50	21	25	14	14	1/16"X90°	A	IDN 250/315/400 IDL 250/315/400 HDN 250/315/400 HDL 250/315/400 GHDN 250/315/400 CD 250/315 HD/FC/250/350/400 HDB 300
GY 40	126	75	60	25.5	31	18	18	3/32"X90°	A	IDN 500/630/800 IDL 500/630/800 GHDN 500/610 GHDN 640/800 ALD 400 AND 400

To Suit Gamet Power Chucks

Techleader Part No.	A	B	C	D	K	S1	S2	Serrations	Type	GAMET		
GR 16	65	35	29	11	18.5	17		1/16" X 90°	B	160N	160MO	160GO
GR 20	76	44	32	14	22	24			B	215N	215MO	215GO
GR 28	94	51	44	20	28	24			B	250/280N	280MO	280GO
GR 35	128	65	50	21	40	28			B	350N	350MO	350GO

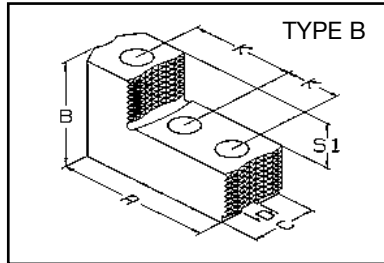
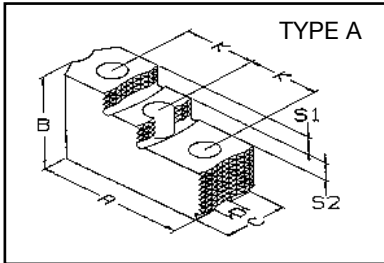
Serrated Hard Top Jaws

To suit Forkardt, Gamet, Pratt Burnerd, Rohm, Schunk & SMW Power Chucks

FORKARDT	GAMET	PRATT BURNERD	ROHM	SCHUNK	SMW
	MAC 165				
3KGF 160/175/200 3KGF 160/175/200 QLC 175 KTG 160/200 3KTGF 200 KTN 160/200 KS 160/200/250 KL 160/200 KSHF 200 KSPS 160/200 KP 200 KSF 175/200 KG 200 UVE 160/200/250 3NH 200 3NHF 200 KSH 160/200 KLNC 200 KT 160/200 KTF 200 KTH 200/250/315 QLC 210	MAC 200 MAC 220 DE 210 GA 210	160 INTER. (UP TO 89) 160 HIGH SPEED Q.C. (UP TO 89) 165 HYD. FRONT END 210 INTER. 210 HIGH SPEED Q.C. 200 INTER. (UP TO 89) 200 HIGH SPEED Q.C. (UP TO 89) 210 HYD. FRONT END 250 HIGH SPEED Q.C. (UP TO 89) 254 INTER. 265 HIGH SPEED Q.C.	KFH 160/200 KFH-NC 160/200 KFH-F 160/200 KFH-G 160/200 KFD-HF 160/200 KFD-HE 160/200 KFD-HS 200/250 KFD 160/200/250 SPD 160/215 SPO 160/215 KFD-AF 160/200 KFL 250	THF 165-37 TH 165-37 THF 210-52 TH 210-52 HSL 165-37 HSG 200-37 HSL 210-52 HSG 250-91 ROTA NC 165 ROTA NCF 160 ROTA NCO 165 ROTA NC 210 ROTA NCF 200 ROTA NCO 200	HKF 160/200 HFKS 160/200 KDV 160/200/250 KDBG 160/200/250 KDS 160/200 KDM 160/200 KDM-F 160/200/250 KMA 160/200/250 KMA-F 160/200/250 KJV 160/200 SP 200 KFMF 160/200 KDS 160/200
KS 315/400 KG 250/315 KSH 250/315/400 KP 250/315 KT 250/315 3KTGF 250 UVE 315 KSHF 200/315/400 KTG 250/315 KTF 250/315 KLNC 250/315 KTN 250/315 3NHF 250/315 3NH 250/315 3NHF 290 3NHF 400 (INDEX) KL 250 KSPS 250/300 QLC 250/315	MAC 250 MAC 315 DE 250/260/320 GA 250/315	250 INTER. (UP TO 89) 254 HYD. FRONT END 305 HYD. FRONT END 305 INTER. 305 HIGH SPEED Q.C. 315 INTER. (UP TO 89) 400 HIGH SPEED Q.C. (UP TO 89)	KFH 250/315 KFH-NC 250/315 KFH-F 250/315 KFH-G 250/315 KFD-HF 250/315 KFD 250/315 KFD-HF 250/315 KFD-HE 250/315 KFD-HS 315 KFD-AF 250/315 LVE 305 SPO 300 SPD 300	THF 250-71 TH 250-71 THF 315-86 TH 315-86 HSG 315-108 HSL 250-71 HSL 315-91 ROTA NC/250/315 ROTA NCD/250/315 ROTA NCF/250/315 ROTA NCO/250/315	HKF 250/315 HFKS 250/315 KDV 315/400 KDBG 315/400 KDS 250 KDM 250/315/400 KDM-F 315/400 KMA 315/400 KMA-F 315
KS 500/630 KSH 500 KSL 630 KSHF 630 KT 400/500/630 3KTGF 400/500 UVE 400/500/630/800 KTG 400/500 KTN 400/500 KG 400/500 3NHF 400/500/630 3NH 400/500/630 KL 400/500 KLNC 400/500 KP 400 KF 400/500 KTF 400/500 QLC 400	DE 400	400INTER. (UP TO 89) 400 HYD. FRONT END 500 HYD. FRONT END	KFH 400/500 KFH-F 400/500 KFH-G 400/500 KFH-NC 400/500 KFD 400/500/630/800 KFD-H 400/500 KFD-HF 400/500 KFD-HS 400/500 LVE 400/500/630 KFL 500/630	THF 400-120 TH 400-120 THF 500-160 TH 500-160 TH 630-180 HSG 400-126 HSG 500-165 HSL 400-120 ROTA NC 400 ROTA NCD 400 ROTA NCF 400 ROTA NCO 400	HKF 400/500 HFKS 400/500 KDV 500 KDBG 500 KDS 315/400/500 KDM 500 KJV 400/500/630/800



Serrated Hard Top Jaws



60° Serrations
Reversible Type
Material: Steel: 590M17 or 080M15

To Suit HOWA Power Chucks

Techleader Part No.	A	B	C	D	K	S1	S2	Serrations	Style	Chuck Ø	HOWA Chuck Types		
GW 06	66	38	32	12	20	11		1.5 X 60°	B	165Ø	H027M6	H037M6	HO23M08
GW 08	83	40	40	16	25	13		1.5 X 60°	B	210Ø	H027M8	H037M8	HO23M10
GW 10	98	44	44	18	30	15		1.5 X 60°	B	254Ø	H027M10	H037M10	HO23M12
GW 12	111	60	50	21	35	23		1.5 X 60°	B	304Ø	H027M12	H037M12	

To Suit KITAGAWA Power Chucks

Techleader Part No.	A	B	C	D	K	S1	S2	Serrations	Style	Chuck Ø	KITAGAWA Chuck Types	SAMCHULLY
GT 04	53	30	25	10	14	10		1.5 X 60°	B	110Ø 135Ø	B-204 B-205	HS05
GT 05	57	32	25	10	18	13		1.5 X 60°	B	135Ø	HOB-5 B-05	
GT 06	66	38	32	12	20	11	11	1.5 X 60°	A	165Ø	B-206 B-160 HOH-160 N-160 BB-06 HJAS-6 H-06 HOB-6 HOS-6 AS 165	HS06, HC00 HH206
GT 08	86	50	35	14	25	11	11	1.5 X 60°	A	210Ø	B-208 B-200 HOH-200 HJA6-8 HO-8 HOB-8 HOS-8 AS210 BB-08	HS08, HH208 HC08
GT 10	99	60	40	16	30	15	15	1.5 X 60°	A	254Ø	B210 B250 HOH-250 N-250 HJA6-10 HJA8-10 HO-10 HOB-10 HOS-10 AS250	HS10, HC10
GT 12	103	70	50	18	30	17	17	1.5 X 60°	A	304Ø	B300 HOH-300 N-300 HJA6-12 HJA8-12 HLA6-12 HO-12 HOB-12 HOS-12 HLA6-15 HLA8-15	HC12
GT 13	103	70	50	21	30	17	17	1.5 X 60°	A	304Ø	B212	HS12, HH212
GT 15	140	89	64	22	43	22	22	1.5 X 60°	A	380Ø 450Ø	B380 B-15 HOH-380 HOB-15 HOH-15 B450 B-18 HOB-18	HAH15, HAH18 HC15, HC18
GT21	178	90	60	25	60	40		3 X 60°	B	530Ø 610Ø	HJ-450 HJ-18 B-350 B21 HJ-530 HJ-21 HOB-2-1 N-21 B-600 B-24 HJ-610 HJ24 N24 HOB24	HC-21 HC-24 HCH-21 HCH-24

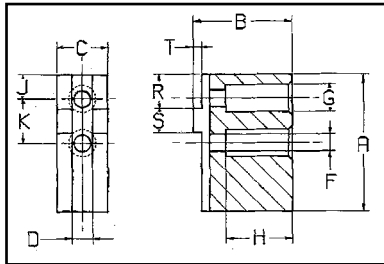
To Suit MMK MATSUMOTO Power Chucks

Techleader Part No.	A	B	C	D	K	S1	S2	Serrations	Style	Chuck Dia	MMK MATSUMOTO Chuck Types
GT 05	57	32	25	10	18	13		1.5 X 60°	B	135Ø	HXA5-6-34 HHXA5-6 SA5-6-40
GU 06	65	35	30	11	20	9	9	1.5 X 60°	A	165Ø	HA5-6 HH-6 HX-6 HJ-6 H-6 STC-6 ZA5-6
GT 08	86	50	35	14	25	11	11	1.5 X 60°	A	210Ø	HA6-8 HX-8 H-8 HH-8 HJ-8 HHJ-8 STC-8 ZA-6-8-52
GT 10	99	60	40	16	30	15	15	1.5 X 60°	A	254Ø	HA6-10 HA8-10 ZA6-10-75 H-10 HX-10 HHL-10 HH-10 HHJ-10 HJ-10 HA8-11 STC-10
GT 12	98	60	50	18	30	17	17	1.5 X 60°	A	304Ø	HA8-12 HX-12 H-12 SH-12 HH-12 HHL-12 HJ-12 HHJ-12 ZA8-12-78 ZA8-12-85
GU 15	140	89	64	22	44.5	22	22	3 X 60°	A	380Ø 450Ø	HA11-15 HHL-15 H-15 HH-15 ZA11-15-120 HA11-18 H-18 HH-18

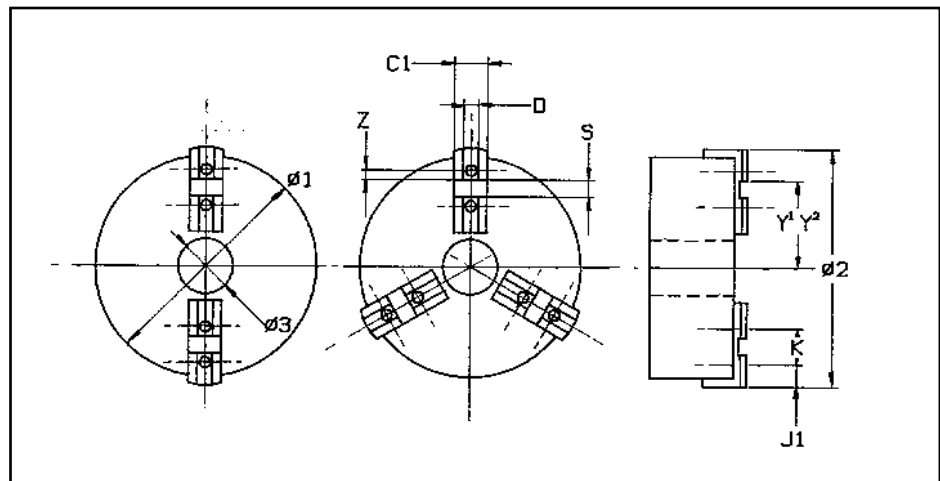
To Suit GAMET, NIKKO and ROHM Power Chucks

Techleader Part No.	A	B	C	D	K	S1	Serrations	Style	Gamet	Nikko	RoHM
GS 16	65	35	29	11	18.5	17	1.5 X 60°	B	160N 160GO 140DE 160MO 170MF	GO-6 MO-6 HDM-165 HF-6AB HG-6AB D-170	KFN160 KFM160 KFG160 KFE160
GS 20	76	44	32	14	22	24	1.5 X 60°	B	215N 215MO 170DE 215GO 215MF	GO-8 MO-8 HDM-215 HF-8 HG-8 MAC165	KFN215 KFM215 KFG215 KFE215
GS 28	94	51	44	20	28	24	1.5 X 60°	B	250-280N 280MO 280GO 280MF	GO-10-12 HF-10/12 HG-10 MO-10/12 HDM-250/300	KFN250/280 KFM280 KFG280 KFE280
GS 35	128	65	50	21	40	28	1.5 X 60°	B	350N 350MO 350GO 350MF	HF-14/16 MO-14 HDM-380 MAC-315	KFN350 KFM350 KFG350 KFE350

Slot/Tenon Top Jaw and Chuck Data Sheet

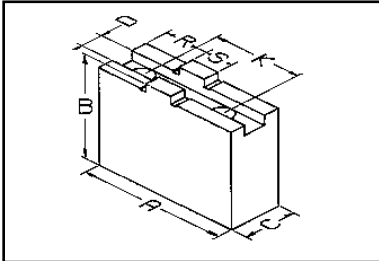


		2 JAW CHUCK DATA	3 JAW CHUCK DATA	REMARKS
Chuck Manufacturer / Model No.				
Chuck Ø / Type	ø1			
Maximum Swing Ø	ø2			
Chuck Bore Ø	ø3			
Base Jaw Width	C1			
Chuck Center to Rear of Slot	Y1 max Y2 min			
Thread	Z			
Center of Hole to Rear of Base Jaw	J1			
Tenon Width	S			
Slot Width	D			
Tenon to Back of Jaw	R			
Hole Center Spacing	K			
Counterbore/ Hole Ø	G/F			
Counterbore Depth	H			
Length of Jaw	A			
Height (Inc. Tenon) of Jaw	B			
Height of Tenon	T			
Width Of Jaw	C			



Slot/Tenon Soft Top Jaws

For Quick Jaw Change Chucks



**Material: Steel: 080M15
Black Finish**

Techleader Bolt Part No.	A	B	C	D	K	R	S		Weight Kg/set
CU 14	69	40	20	8	32	25	18	M8	0.9
CU 141	63	45	30			19			1.7
CU 16	85	40	20	8	32	25	18	M8	1.1
CU 161	85	55	30			19			2.6
DP 16	60	40	40			17			1.8
CU 163	70	60	40			19			3.3
CU 20	105	51	22	10	40	34	20	M8	2.2
CU 201	100	55	30			23			2.9
DP 20	70	40	40			22			2.2
CU 204	85	60	40			23			4.0
CU 205	95	80	40			23			5.8
CU 25	125	55	30	12	40	36	20	M12	3.6
CU 251	90	60	40			26			3.9
CU 252	125	60	40			26			5.8
CU 253	125	80	40			26			7.5
CU 254	125	100	40			26			9.6
CU 255	125	125	40			26			12.0
DP 25	90	60	60			26			6.2
CU 257	90	60	80			26			8.5
CU 32	145	60	40	12	54	45	26	M12	6.8
CU 321	110	60	40			30			4.9
CU 323	145	100	40			30			11.1
CU 324	145	125	40			30			13.9
CU 325	145	150	40			30			16.9
CU 326	110	60	60			30			7.6
DP 32	100	64	76			30			8.4
CU 328	110	80	80			30			14.1
CU 329	145	80	50			30			11.6
CU 40	180	80	50	18	60	50	30	M16	11.2
CU 401	130	76	64			35			11.9
CU 402	180	76	64			35			16.5
CU 403	155	102	64			35			15.3
CU 404	155	127	64			35			18.7
DP 40	130	80	80			35			16.2
CU 406	155	160	50			35			25.2
CU 63	260	127	64	24	82	70	40	M20	42.0

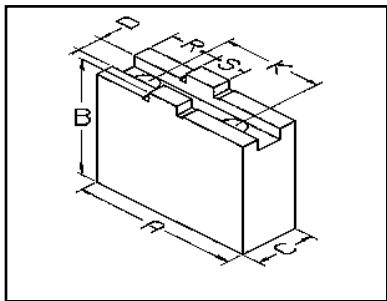
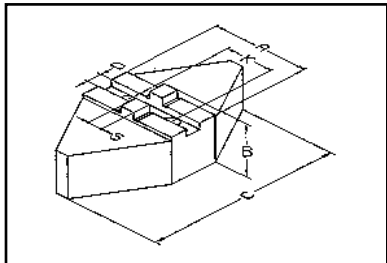
Slot/Tenon Soft Top Jaws

To Suit Forkardt, Gamet, Kitagawa, Rohm, Schunk & SMW-Autoblok Quick Change Chucks

Forkardt	Gamet	Kitagawa	Rohm	Schunk	SMW Autoblok
			DURO NC 140 DURO NC 168		KNCS 140 KNCS 140-32 KNCS-N 140-35
F160 KTNC 160 KTNCV 175 KTNCV 160 FNC 175 F+160	MX 152 MX 175		DURO 160 DURO NC 160 DURO NCE 160 DURO NC 175	ROTA-G 160 ROTA-S 160 ROTA-S plus 160 ROTA NC-W 185 THW 165R	RMG 160 HG 160 HG-F 160 HG-N 160 KNSP 160 KNCS 160 KNCS 175 KNC 160 KNCS 170-43 KNCS-N 170-43
F 200 KTNC 200 KTNCV 200 FNC 200 F+200	MX 215	QJ8	DURO 200 DURO NC 200 DURO NCE 200 DURO NC 225	ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA NC-WF 210 ROTA NC-W 225 THW 210 F THW 210R	RMG 200 HG-F210 HG 200 HG-N210 KNSP 200 KNCS 200 KNCS 225 KNCS 210-52 KNCS-N 210-52 KNCS-N 225-65
F 250 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315 UNC 250/315 FNC 250/315 F+250	MX 252 MX 315 MX 330	QJ 10 QJ 12	DURO 250 DURO NC 250 DURO NCE 250 DURO NCE 315	ROTA-G 250 ROTA NC-WF 250 ROTA-S 250 ROTA-S plus 250 ROTA NC-W 265 ROTA G315 ROTA NC-W 315 ROTA NC-WF 315 THW 250F THW 250R THW 265F THW 265R THW 315R	RMG 250 KNCS 250 KNCS 260 KNCS 315 KNCS 260-71 KNCS 315-91 KNCS-N 260-72 KNCS-N 315-91 HG 250/315 HG-F 260/315 HG-N 260/315
F 315 KTNC 360 KTNC 400 KTNCV 400 UNC 400 FNC 400 F+315	MX 380		DURO 315 DURO NC 315 DURO NCE 400	ROTA-G 400 ROTA-S 315 ROTA-S plus 315 ROTA NC-W 400 THW 315F THW 400F THW 400R	RMG-315 KNCS 400 KNCS 400-120 KNCS-N 400-128 HG 400 KNC 400 HG-N400
F 400/500L UNC 500 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630 FNC 500/630 F+400			DURO 400 DURO NC 400 DURO 500 DURO NC 500 DURO NCE 500	ROTA-S 400 ROTA-S plus 400 ROTA-G 500 ROTA-S 500 ROTA-S plus 500 THW 500F THW 500R THW 630R	HG 500 HG 630 HG-F 400/500 HG-N 500/600 KNCS 500 KNCS 630 KNCS 500-160 KNCS 630/160 KNCS-N 500-165 KNCS-N 630-165 KNCS 800-160
F 630 F+630			DURO NC 630 DURO 630	ROTA-G 630 ROTA-S 630 ROTA-S plus 630	HG-F 630



Slot/Tenon Diamond & Aluminum Top Jaws



**To Suit Quick Jaw
Change Chucks**

**Material: Steel: 080M15
Material: Aluminum HE30TF
Black Finish**

Diamond Top Jaws

Techleader Part No.	A	B	C	D	K	S	Bolt	Weight KG/ set
CQ 16 STEEL	60	60	120	8	32	18	M8	9.0
HT 16 ALUMINUM	64	64	120					3.8
CQ 20 STEEL	76	64	150	10	40	20	M8	14.0
HT 20 ALUMINUM	76	64	150					5.9
CQ 25 STEEL	89	64	170	12	40	20	M12	20.0
HT 25 ALUMINUM	89	64	170					8.4
CQ 32 STEEL	118	76	240	12	54	26	M12	28.0
HT 32 ALUMINUM	118	76	240					10.5

Aluminum Top Jaws

Techleader Part No.	A	B	C	D	K	R	S	Bolt	Weight KG/ set
CW 16	85	50	25	8	32	25	18	M8	0.7
CW 20	105	50	25	10	40	34	20	M8	0.9
CW 25	125	60	40	12	40	36	20	M12	2.0
CW 32	145	60	40	12	54	45	26	M12	2.4
CW 40	180	80	50	18	60	50	30	M16	5.1

Slot/Tenon Diamond & Aluminum Top Jaws

To Suit Forkardt, Gamet, Kitagawa, Rohm, Schunk & SMW-Autoblok Quick Change Chucks

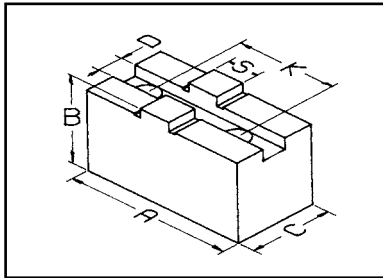
Forkardt	Gamet	Kitagawa	Rohm	Schunk	SMW-Autoblok
F 160 KTNC 160 KTNCV 175 KTNCV 160 FNC 175	MX 152 MX 175		DURO 160 DURO NC 160 DURO NC 175 DURO NCE160	ROTA-G 160 ROTA-S 160 ROTA-S plus 160 ROTA NC-W185 THW 165 R	RMG 160 KNCS 160 KNCS 175 KNCS 170-43 KNCS-N 170-43 KNSP 160 HG 160 HG-F 160 HG-N 160
F 200 KTNC 200 KTNCV 200 FNC 200	MX 215	QJ 8	DURO 200 DURO NC 200 DURO NCE 200	ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA NC-WF 210 ROTA NC-W 225 THW 210 F THF 210 R	RMG 200 HG-F 210 HG 200 HG-N 210 KNSP 200 KNCS 200 KNCS 225 KNCS 210-52 KNCS-N 210-52 KNCS-N 225-65
F 250 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315 UNC 250/315 FNC 250/315	MX 252 MX 315 MX 330	QJ10 QJ 12	DURO 250 DURO NC 250 DURO NCE 250 DURO NCE 315	ROTA-G 250 ROTA NC-WF 250 ROTA-S 250 ROTA-S plus 250 ROTA NCW 265 ROTA-G 315 ROTA NC-W 315 ROTA NC-WF 315 THW 315R THW 250 F/250 R THW 265 F/265 R	RMG 250 KNCS 250 KNCS 260 KNCS 260-71 KNCS 315 KNCS 315-91 KNCS-N 260-72 KNCS-N 315-91 HG 250/315 HG-F 260/315 HG-N 260/315
F 315 KTNC 360 KTNC 400 KTNCV 400 UNC 400 FNC 400	MX 380		DURO 315 DURO NC 315 DURO NCE 315	ROTA-G 400 ROTA-S 315 ROTA-S plus 315 ROTA NC-W 400 THW 315 F/400 F THW 400 R	RMG 315 KNCS 400 HG 400 KNC 400 KNCS 400-120 KNCS-N 400-128 HG-N 400

Aluminum Top Jaws

Forkardt	Gamet	Kitagawa	Rohm	Schunk	SMW-Autoblok
F 160 KTNC 160 KTNCV 175 KTNCV 160 FNC 175	MX 152 MX 175		DURO 160 DURO NC 160 DURO NC 175 DURO NCE160	ROTA-G 160 ROTA-S 160 ROTA-S plus 160 KNCS 170-43 THW 165 R KNSP 160 HG 160	RMG 160 KNCS 160 KNCS 175 KNCS 170-43 KNCS-N 170-43 KNSP 160 HG 160 HG-F 160 HG-N 160
F 200 KTNC 200 KTNCV 200 FNC 200	MX 215	QJ 8	DURO 200 DURO NC 200 DURO NCE 200	ROTA-G 200 ROTA-S 200 ROTA-S plus 200 ROTA NC-WF 210 ROTA NC-W 225 THW 210 F THF 210 R KNCS 210-52 KNCS-N 210-252	RMG 200 HG-F 210 HG 200 HG-N 210 KNSP 200 KNCS 200 KNCS 225 KNCS 210-52 KNCS-N 210-52 KNCS-N 225-65
F 250 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315 UNC 250/315 FNC 250/315	MX 252 MX 315 MX 330	QJ10 QJ 12	DURO 250 DURO NC 250 DURO NCE 250 DURO NCE 315	ROTA-G 250 ROTA NC-WF 250 ROTA-S 250 ROTA-S plus 250 ROTA NC-W 265 ROTA-G 315 ROTA NC-W 315 ROTA NC-WF 315 THW 315R THW 250 F/250 R THW 265 F/265 R	RMG 250 KNCS 250 KNCS 260 KNCS 260-71 KNCS 315 KNCS 315-91 KNCS-N 260-72 KNCS-N 315-91 HG 250/315 HG-F 250/315 HG-N 260/315
F 315 KTNC 360 / 400 KTNCV 400 FNC 400 UNC 400	MX 380		DURO 315 DURO NC 315 DURO NCE 400	ROTA-G 400 DURO S 315 ROTA-S plus 315 ROTA NC-W 400 THW 315 F/400 F THW 400 R	RMG 315 KNCS 400 HG 400 KNC 400 KNCS 400-120 KNCS-N 400-128 HG-N 400
F 400/500L UNC 500 KTNC 500 KTNC 630 KTNCV 500/630 FNC 500/630			DURO 400 DURO NC 400 DURO 500 DURO NC 500 DURO NCE 500		HG 500 HG-F 400/500 HG 630 KNCS 500 HG-N 500/600 HG 630 KNCS 500 KNCS 630 KNCS 500-160 KNCS-N 500-165 KNCS 630-160 KNCS-N 630-165



Slot/Tenon Soft Top Jaws



For Manual and Power Operated Chucks AMERICAN STANDARD BASE JAWS

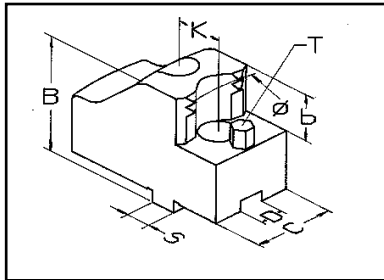
Techleader Part No.	Chuck Diameter	A	B	C	D	K	S	Bolt Size
DM13	5"	2.18"	1.37"	0.75"	0.313"	1.250"	0.436"	5/16"
DM16	6"	2.81"	1.37"	1.00"	0.313"	1.500"	0.499"	3/8"
DM16L	6"	3.25"	1.37"	1.00"	0.313"	1.500"	0.499"	3/8"
DM20	8"	3.31"	1.87"	1.25"	0.313"	1.750"	0.499"	3/8"
DM20L	8"	3.75"	1.88"	1.25"	0.313"	1.750"	0.499"	3/8"
DM25	10"	3.94"	1.87"	1.50"	0.501"	2.125"	0.749"	1/2"
DM25L	10"	4.62"	1.88"	1.50"	0.501"	2.125"	0.749"	1/2"
DM32	12"	4.50"	2.12"	1.75"	0.501"	2.500"	0.749"	1/2"
DM32L	12"	5.37"	2.13"	1.75"	0.501"	2.500"	0.749"	1/2"
DM38	15"	5.18"	2.25"	1.75"	0.501"	3.000"	0.749"	5/8"
DM38L	15"	6.25"	2.25"	1.75"	0.501"	3.000"	0.749"	5/8"
DM46	18"	5.18"	2.75"	2.25"	0.501"	3.000"	0.749"	3/4"
DM46L	18"	6.37"	2.75"	2.25"	0.501"	3.000"	0.749"	3/4"

Adjustagrip Hard Top Jaws

For Slot/Tenon Quick Jaw Change Chucks

FOR SPECIAL SIZE ADJUSTAGRIP JAWS AND FOR CHUCK TYPES NOT LISTED

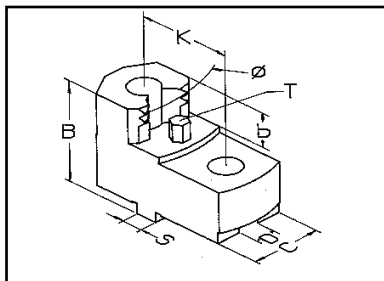
If the standard listed type is not suitable, please fill in the drawing details below and return to us for a quotation.



EXTERNAL GRIPPING

CHUCK MAKE AND TYPE:

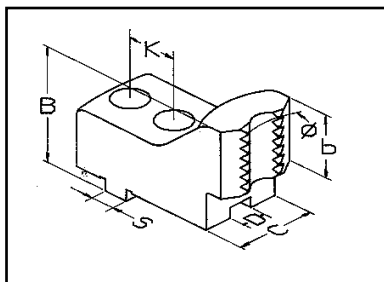
B	
C	
D	
K	
S	
b	
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INTERNAL GRIPPING

CHUCK MAKE AND TYPE:

B	
C	
D	
K	
S	
b	
Ø	



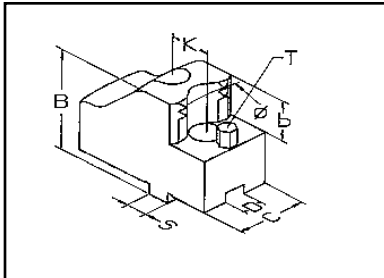
BAR GRIPPING

CHUCK MAKE AND TYPE:

B	
C	
D	
K	
S	
b	
Ø	

Adjustagrip Hard Top Jaws

For Slot/Tenon Quick Jaw Change Chucks



External Ø Clamping Type
Material: Steel: 590M17

Techleader Part No.	B	C	D	K	S	b	T	Weight KG/set
LY10	49	30	8	32	18	20	M6	1.3
LY 11								1.3
LY 12								1.2
LY 13								1.2
LY 14								1.1
LY 15								1.1
LY 16								1.4
LY 17	1.4							
LY20	49	30	10	40	20	20	M6	1.3
LY 21								1.3
LY 22								1.2
LY 23								1.2
LY 24								1.2
LY 25								1.2
LY 30	59	40	12	40	20	25	M6	2.4
LY 31								2.4
LY 32								2.3
LY 33								2.3
LY 34								2.0
LY 35								2.0
LY 40	59	50	12	54	26	25	M8	4.0
LY 41								4.0
LY 42								3.2
LY 43								3.2
LY 50								78
LY 51	5.6							
LY 52	5.1							
LY 53	5.1							

These jaws suit the following quick jaw change chuck types:

BERG	KHNC
FORKARDT	KTNC, KTNCs, KTNCV, FNC
ROHM	DURO NC
SCHUNK	THW
SMW	KNCS
SMW-AUTOBLOK	KNCS-N

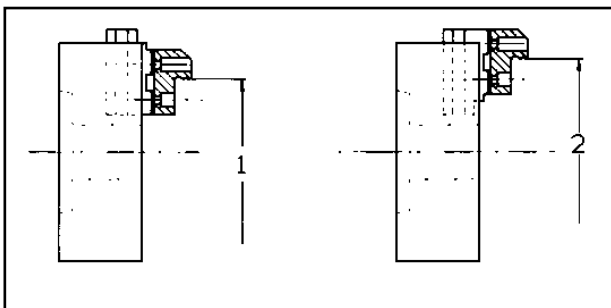
These jaws will also fit Gamet MX, Kitagawa QJ and Reishauer RHU chucks. Grip ranges are available on request. Internal and bar gripping type jaws are also available on request. A grip range table can be supplied if required.

Adjustagrip Hard Top Jaws

For Slot/Tenon Quick Jaw Change Chucks
 To Suit Schunk THW Chucks Material: Steel: 590M17
 External Gripping

THW 165-37				THW 210-52				THW 250-65				THW 265-71				THW 315-86				THW 400-120			
GRIP RANGE Ø	Max Swing	Pos	Part No.	GRIP RANGE Ø	Max Swing	Pos	Part No.	GRIP RANGE Ø	Max Swing	Pos	Part No.	GRIP RANGE Ø	Max Swing	Pos	Part No.	GRIP RANGE Ø	Max Swing	Pos	Part No.	GRIP RANGE Ø	Max Swing	Pos	Part No.
29-33	182	1	LY10	27-30	247	1	LY20	33-38	296	1	LY30	33-38	307	1	LY30	36-42	345	1	LY30	55-61	313	1	LY40
33-37			LY11	30-32			LY21	37-42			LY31	37-42			LY31	41-47			LY31	61-67			LY41
37-41			LY10	31-37			LY20	41-47			LY30	41-47			LY30	46-52			LY30	65-71			LY40
41-46			LY11	36-41			LY21	46-52			LY31	46-52			LY31	50-56			LY31	71-77			LY41
46-50			LY10	40-45			LY20	51-57			LY30	51-57			LY30	56-62			LY30	75-81			LY40
50-54			LY11	44-50			LY21	56-62			LY31	56-62			LY31	61-67			LY31	81-87			LY41
54-60			LY12	49-54			LY20	61-67			LY30	61-67			LY30	66-72			LY30	85-91			LY40
60-64			LY13	53-59			LY21	66-72			LY31	66-72			LY31	71-77			LY31	91-98			LY41
64-69			LY12	58-63			LY20	71-78			LY30	71-78			LY30	76-83			LY30	95-101			LY40
69-73			LY13	62-68			LY21	77-83			LY31	77-83			LY31	81-88			LY31	101-108			LY41
73-78			LY12	67-73			LY20	82-88			LY30	82-88			LY30	87-93			LY30	106-112			LY40
78-82			LY13	71-77			LY21	87-94			LY31	87-94			LY31	92-98			LY31	112-119			LY41
81-85			LY14	76-81			LY23	92-98			LY33	92-98			LY33	98-104			LY30	116-123			LY40
85-90			LY15	80-86			LY22	98-104			LY32	98-104			LY32	103-109			LY31	123-129			LY41
90-95	LY14	85-91	LY23	103-109	LY33	103-109	LY33	108-115	LY33	127-133	LY40												
95-99	LY15	89-95	LY22	108-115	LY32	108-115	LY32	114-120	LY32	133-140	LY41												
99-104	LY14	94-100	LY23	114-120	LY33	114-120	LY33	118-125	LY33	138-144	LY40												
104-108	LY15	99-105	LY22	119-126	LY32	119-126	LY32	124-130	LY32	144-151	LY41												
109-113	LY14	103-109	LY23	124-131	LY33	124-131	LY33	129-136	LY33	148-156	LY40												
113-118	LY15	107-113	LY25	128-135	LY35	130-136	LY32	135-141	LY32	155-162	LY41												
118-124	194	1	LY16	112-118	LY24	134-140	LY34	135-142	LY33	140-147	LY33	159-166	LY40										
124-128			LY17	116-122	LY25	139-146	LY35	139-146	LY35	146-152	LY32	166-172	LY41										
128-133			LY16	121-127	LY24	145-151	LY34	145-151	LY34	151-158	LY33	170-176	LY42										
133-137			LY17	125-131	LY25	150-157	LY35	150-157	LY35	155-162	LY35	176-183	LY43										
137-142			LY16	130-136	LY24	156-162	LY34	156-162	LY34	161-167	LY34	181-187	LY42										
142-147			LY17	135-141	LY25	161-167	LY35	161-167	LY35	166-172	LY35	187-194	LY43										
147-151			LY16	140-146	LY24	166-173	LY34	166-173	LY34	171-178	LY34	192-198	LY42										
151-156			LY17	145-150	LY25	172-178	LY35	172-178	LY35	177-183	LY35	198-205	LY43										
155-160			212	2	LY16	149-155	LY24	175-182	LY34	177-184	LY34	182-189	LY34	202-209	LY42								
160-165					LY17	154-160	LY25	181-187	LY35	183-189	LY35	188-194	LY35	209-216	LY43								
165-169					LY16	159-165	LY24	186-193	LY34	186-193	LY34	193-200	LY34	213-220	LY42								
169-174					LY17	163-169	LY25	192-198	LY35	192-198	LY35	199-205	LY35	220-227	LY43								
							LY24	168-174	LY24	197-204	LY34	197-204	LY34	204-211	LY34	224-231	LY42						
							LY25	173-179	LY25	203-209	LY35	203-209	LY35	210-216	LY35	231-238	LY43						
								208-215	LY34	208-215	LY34	215-222	LY34	235-242	LY42								
								214-220	LY35	214-220	LY35	221-227	LY35	242-249	LY43								
								219-226	LY34	219-226	LY34	226-233	LY34	246-253	LY42								
								224-231	LY35	224-231	LY35	231-238	LY35	253-260	LY43								
								230-237	LY34	230-237	LY34	237-244	LY34	257-264	LY42								
								235-242	LY35	235-242	LY35	242-249	LY35	264-270	LY43								
									LY34	241-248	LY34	248-255	LY34	268-274	LY42								
									LY35	246-253	LY35	253-260	LY35	274-281	LY43								
										259-266	LY34	279-286	LY42										
										264-271	LY35	286-292	LY43										
										270-276	LY34	291-297	LY42										
										275-282	LY35	297-304	LY43										
										281-287	LY34	302-308	LY42										
										286-293	LY35	308-315	LY43										
												313-319	LY42										
												319-326	LY43										
												324-330	LY42										
												330-337	LY43										
												335-342	LY42										
												342-348	LY43										
												346-352	LY42										
												352-359	LY43										
												356-363	LY42										
												363-370	LY43										
														498	2	LY42							

BASE JAW POSITION



Adjustagrip Hard Top Jaws

**For Slot/Tenon Quick Jaw Change Chucks
To Suit SMW KNCS Chucks Material: Steel: 590M17
EXTERNAL GRIPPING**

KNCS 140-32			
GRIP RANGE Ø	Max Swing	Pos	Part No.
27-30	162	1	LY10
30-34			LY11
34-38			LY10
38-42			LY11
42-47			LY10
47-51			LY11
51-56			LY12
56-61			LY13
61-65			LY12
65-70			LY13
70-74			LY12
74-78			LY13
78-82			LY14
82-86			LY15
86-91			LY14
91-96			LY15
96-100			LY14
100-105			LY15
105-110			LY14
110-115			LY15
115-121	190	1	LY16
121-125			LY17
125-129			LY16
129-134			LY17
134-139			LY16
139-143			LY17
143-148			LY16
148-151			LY17

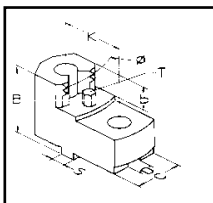
KNCS 160-32					
GRIP RANGE Ø	Max Swing	Pos	Part No.		
27-31	177	1	LY10		
31-34			LY11		
34-39			LY10		
39-43			LY11		
43-47			LY10		
47-52			LY11		
52-57			LY12		
57-61			LY13		
61-66			LY12		
66-70			LY13		
70-75			LY12		
75-78			LY13		
78-82			LY14		
82-87			LY15		
87-91			LY14		
91-96			LY15		
96-101			LY14		
101-105			LY15		
105-110	LY14				
110-115	LY15				
115-120	190	1	LY16		
120-125			LY17		
125-130			LY16		
130-134			LY17		
134-139			LY16		
139-144			LY17		
144-148			208	2	LY16
148-152					LY17
152-157					LY16
157-161					LY17
161-166	LY16				
166-170	LY17				

KNCS 175-40			
GRIP RANGE Ø	Max Swing	Pos	Part No.
27-30	186	1	LY10
30-33			LY11
32-37			LY10
36-41			LY11
41-46			LY10
45-50			LY11
49-54			LY10
54-59			LY11
59-64			LY12
63-68			LY13
68-73			LY12
72-78			LY13
77-82			LY12
81-87			LY13
85-90			LY14
89-94			LY15
94-99			LY14
98-104			LY15
103-108			LY14
108-113			LY15
112-118	LY14		
117-123	LY15		
123-128	199	1	LY16
127-133			LY17
132-137			LY16
137-142			LY17
141-147			LY16
146-151			LY17
151-156			LY16
155-161	LY17		
159-165	217	2	LY16
164-169			LY17
169-174			LY16
173-179			LY17

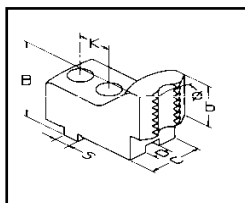
KNCS 200-41			
GRIP RANGE Ø	Max Swing	Pos	Part No.
30-35	235	1	LY20
34-39			LY21
38-43			LY20
42-48			LY21
47-52			LY20
51-57			LY21
56-61			LY20
60-66			LY21
65-70			LY23
69-75			LY22
74-79			LY23
78-84			LY22
83-88			LY23
87-93			LY22
92-97			LY23
96-101			LY25
100-106			LY24
105-110			LY25
110-115			LY24
114-120			LY25
119-125	LY24		
124-129	LY25		
129-134	273	2	LY24
133-139			LY25
138-144			LY24
143-148			LY25
147-153			LY24
152-157			LY25
157-162			LY24
161-167			LY25

KNCS 250-52			
GRIP RANGE Ø	Max Swing	Pos	Part No.
38-43	291	1	LY30
42-48			LY31
47-53			LY30
52-58			LY31
57-63			LY30
62-68			LY31
67-73			LY30
72-79			LY31
78-84			LY30
83-89			LY31
88-94			LY33
93-99			LY32
98-105			LY33
104-110			LY32
109-116			LY33
115-121			LY32
120-126			LY33
124-130			LY35
129-136			LY34
135-141			LY35
140-147	LY34		
145-152	LY35		
151-158	LY34		
156-163	LY35		
162-168	LY34		
167-174	LY35		
171-177	355	2	LY34
176-183			LY35
182-188			LY34
187-194			LY35
193-199			LY34
198-205			LY35
204-210			LY34
209-216			LY35
215-221			LY34
220-226			LY35
225-232	LY34		
231-237	LY35		

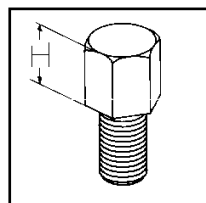
INTERNAL GRIPPING
Available on request



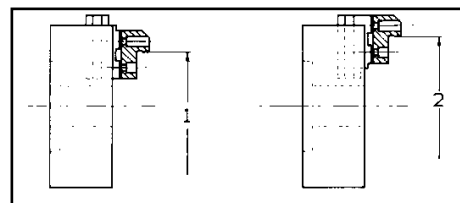
BAR GRIPPING
Available on request



WORKPIECE HEIGHT PINS



BASE JAW POSITION



Adjustagrip Hard Top Jaws

**For Slot/Tenon Quick Jaw Change Chucks
To Suit SMW KNCS Chucks Material: Steel: 590M17**
EXTERNAL GRIPPING

KNCS 260-65			
GRIP RANGE Ø	Max Swing	Pos	Part No.
38-43	302	1	LY30
42-48			LY31
47-53			LY30
52-58			LY31
57-63			LY30
62-68			LY31
67-73			LY30
72-79			LY31
78-84			LY30
83-89			LY31
88-95			LY30
93-100			LY31
98-105			LY33
104-110			LY32
109-116			LY33
115-121			LY32
120-126			LY33
125-132			LY32
131-137			LY33
135-141			LY35
140-147	LY34		
145-152	LY35		
151-158	LY34		
156-163	LY35		
162-168	LY34		
167-174	LY35		
173-179	LY34		
178-185	LY35		
182-188	366	2	LY34
187-194			LY35
193-199			LY34
198-205			LY35
204-210			LY34
209-216			LY35
215-221			LY34
220-226			LY35
225-232			LY34
231-237			LY35
236-243			LY34
242-248			LY35

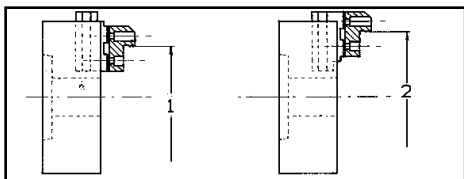
KNCS 315-77			
GRIP RANGE Ø	Max Swing	Pos	Part No.
36-42	344	1	LY30
40-46			LY31
45-51			LY30
50-56			LY31
55-61			LY30
60-67			LY31
65-72			LY30
71-77			LY31
76-82			LY30
81-88			LY31
86-93			LY30
92-98			LY31
97-104			LY30
102-109			LY31
108-115			LY30
113-120			LY31
118-125			LY33
124-130			LY32
129-136			LY33
134-141			LY32
140-146	LY33		
145-152	LY32		
151-157	LY33		
155-161	LY35		
160-167	LY34		
165-172	LY35		
171-178	LY34		
176-183	LY35		
182-189	LY34		
187-194	LY35		
193-200	LY34		
198-205	LY35		
204-211	432	2	LY34
209-216			LY35
215-221			LY34
220-227			LY35
226-232			LY34
231-238			LY35
237-243			LY34
242-249			LY35
248-254			LY34
253-260			LY35
259-265			LY34
264-271			LY35
269-276			LY34
275-282			LY35
280-287			LY34
286-293			LY35

KNCS 315-91			
GRIP RANGE Ø	Max Swing	Pos	Part No.
46-52	356	1	LY30
51-57			LY31
56-52			LY30
61-67			LY31
66-73			LY30
71-78			LY31
77-83			LY30
82-88			LY31
87-94			LY30
93-99			LY31
98-105			LY30
103-110			LY31
109-115			LY30
114-121			LY31
120-126			LY30
125-131			LY31
130-136			LY33
135-142			LY32
141-147			LY33
146-153			LY32
152-158	LY33		
157-164	LY32		
162-169	LY33		
166-173	LY35		
172-179	LY34		
177-184	LY35		
183-189	LY34		
188-195	LY35		
194-200	LY34		
199-206	LY35		
205-211	LY34		
210-217	LY35		
216-222	444	2	LY34
221-228			LY35
227-233			LY34
232-239			LY35
238-244			LY34
243-250			LY35
249-255			LY34
254-261			LY35
260-266			LY34
265-271			LY35
270-277			LY34
276-282			LY35
281-288			LY34
287-293			LY35
292-299			LY34
298-304			LY35

KNCS 400-92			
GRIP RANGE Ø	Max Swing	Pos	Part No.
54-60	419	1	LY40
60-66			LY41
63-70			LY40
70-76			LY41
73-80			LY40
80-86			LY41
83-90			LY40
90-97			LY41
94-101			LY40
100-107			LY41
104-111			LY40
111-118			LY41
115-122			LY40
122-129			LY41
125-132			LY40
132-139			LY41
136-143			LY40
143-150			LY41
147-154			LY40
154-161			LY41
158-165	LY40		
165-172	LY41		
168-176	LY42		
175-182	LY43		
179-186	LY42		
186-193	LY43		
190-197	LY42		
197-204	LY43		
201-208	LY42		
208-215	LY43		
212-219	LY42		
219-226	LY43		
223-230	LY42		
230-237	LY43		
234-241	LY42		
241-248	LY43		
245-252	LY42		
252-259	LY43		
256-263	LY42		
263-270	LY43		
266-274	LY42		
273-281	LY43		
277-285	LY42		
284-292	LY43		
289-297	497	2	LY42
296-303			LY43
300-307			LY42
307-314			LY43
311-318			LY42
318-325			LY43
322-329			LY42
329-336			LY43
333-340			LY42
340-347			LY43
344-351			LY42
351-358			LY43
355-362			LY42
362-369			LY43

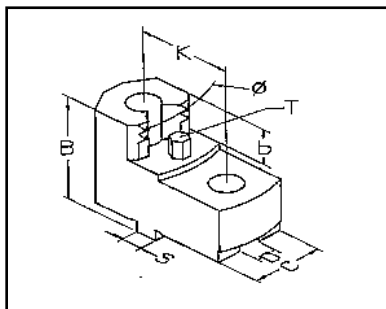
KNCS 500-128					
GRIP RANGE Ø	Max Swing	Pos	Part No.		
87-99	515	1	LY50		
95-104			LY51		
102-112			LY50		
108-118			LY51		
116-125			LY50		
122-131			LY51		
129-139			LY50		
135-145			LY51		
143-153			LY50		
149-158			LY51		
157-166			LY50		
164-174			LY52		
171-181			LY53		
178-188			LY52		
185-194			LY53		
191-201			LY52		
198-208			LY53		
205-215			LY52		
212-222			LY53		
219-229			LY52		
226-236	LY53				
233-243	LY52				
243-253	637	2	LY52		
250-260			LY53		
257-267			LY52		
264-274			LY53		
271-281			LY52		
278-288			LY53		
285-294			LY52		
291-301			LY53		
298-308			LY52		
305-315			LY53		
312-322			637	2	LY52
319-329					LY53
326-336					LY52
333-343					LY53
340-350					LY52
347-357					LY53
354-364					LY52
361-371					LY53
368-378					LY52
375-385					LY53
382-392	LY52				
389-399	LY53				

BASE JAW POSITION

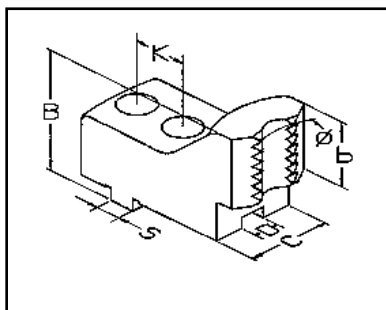


Adjustagrip Hard Top Jaws

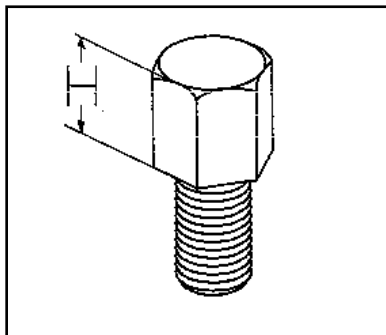
**For Slot/Tenon Quick Jaw Change Chucks
To Suit SMW-Autoblok KNCS-N Chucks Material: Steel: 590M17
EXTERNAL GRIPPING**



INTERNAL GRIPPING



BAR GRIPPING



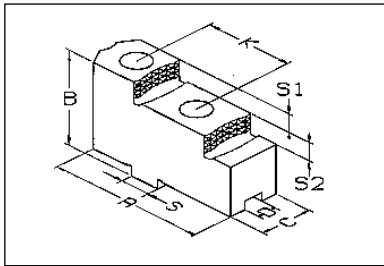
WORKPIECE HEIGHT PINS

KNCS-N 315-91			
GRIP RANGE Ø	Max Swing	Pos	Part No.
46-52	356	1	LY30
50-57			LY31
56-62			LY30
61-67			LY31
66-72			LY30
71-78			LY31
76-83			LY30
81-88			LY31
87-94			LY30
92-99			LY31
98-104			LY30
103-110			LY31
108-115			LY30
114-120			LY31
119-126			LY30
124-131			LY31
128-135			LY34
133-140			LY35
139-146			LY34
144-151			LY35
150-157	LY34		
155-162	LY35		
161-167	LY34		
166-173	LY35		
171-178	LY34		
177-184	LY35		
182-189	LY34		
188-195	LY35		
193-200	LY34		
199-206	LY35		
204-211	LY34		
210-217	LY35		
215-222	444	2	LY34
221-227			LY35
226-233			LY34
231-238			LY35
237-244			LY34
242-249			LY35
248-255			LY34
253-260			LY35
259-266			LY34
264-271			LY35
270-277			LY34
275-282			LY35
281-288			LY34
286-293			LY35
292-299			LY34
297-304	LY35		

KNCS-N 400-128			
GRIP RANGE Ø	Max Swing	Pos	Part No.
67-74	446	1	LY40
74-80			LY41
77-84			LY40
84-91			LY41
88-94			LY40
94-101			LY41
98-105			LY40
105-112			LY41
108-116			LY40
115-122			LY41
119-126			LY40
126-133			LY41
130-137			LY40
137-144			LY41
140-148			LY40
147-155			LY41
151-158			LY40
158-165			LY41
162-169			LY40
169-176			LY41
173-180	LY40		
180-187	LY41		
184-191	LY40		
191-198	LY41		
195-202	LY42		
201-209	LY43		
205-213	LY42		
212-220	LY43		
216-224	LY42		
223-231	LY43		
227-235	LY42		
234-241	LY43		
238-245	LY42		
245-252	LY43		
249-256	LY42		
256-263	LY43		
260-267	LY42		
267-274	LY43		
271-278	LY42		
278-285	LY43		
282-289	LY42		
289-296	LY43		
293-300	LY42		
300-307	LY43		
304-311	LY42		
311-318	LY43		
317-324	525	2	LY42
324-331			LY43
328-335			LY42
335-342			LY43
339-346			LY42
346-353			LY43
350-357			LY42
357-364			LY43
361-368			LY42
368-375			LY43
372-379			LY42
379-386			LY43
383-390			LY42
390-397			LY43

KNCS-N 500-155			
GRIP RANGE Ø	Max Swing	Pos	Part No.
87-98	636	1	LY50
94-103			LY51
102-111			LY50
107-117			LY51
115-124			LY50
121-130			LY51
128-138			LY50
134-144			LY51
142-152			LY50
148-157			LY51
156-165			LY50
163-173			LY52
170-180			LY53
177-187			LY52
184-193			LY53
190-200			LY52
197-207			LY53
204-214			LY52
211-221			LY53
218-228			LY52
225-235			LY53
232-242			LY52
239-249			LY53
246-256			LY52
253-263			LY53
260-270			LY52
267-277			LY53
274-284			LY52
281-290			LY53
288-297			LY52
294-304	LY53		
301-311	LY52		
308-318	LY53		
318-328	836	2	LY51
326-336			LY53
333-343			LY52
340-350			LY53
347-357			LY52
354-364			LY53
361-371			LY52
368-378			LY53
375-385			LY52
382-392			LY53
389-399			LY52
396-406			LY53
403-413			LY52
410-420			LY53
417-427			LY52
424-434	LY53		
431-441	LY52		
438-448	LY53		
445-455	LY52		
452-462	LY53		
459-469	LY52		
466-476	LY53		
473-483	LY52		
480-490	LY53		
487-497	LY52		
494-504	LY53		
501-511	LY52		
508-518	LY53		

Slot/Tenon Hard Top Jaws



Material: Steel: 590M17

Hard Reversible Jaws for Quick Jaw Change Chucks

Techleader Part No.	A	B	C	D	K	S	T	Bolt Type	Weight Kg/Set
GX 16	63	36.5	20	8	32	18	7.5	M8	0.6
GX 20	72	42	22	10	40	20	10	M8	0.8
GX 25	90	55	30	12	40	20	14	M12	1.9
GX 32	105	62	36	12	54	26	15	M12	3.2
GX 40	130	80	45	18	60	30	20	M16	10.8

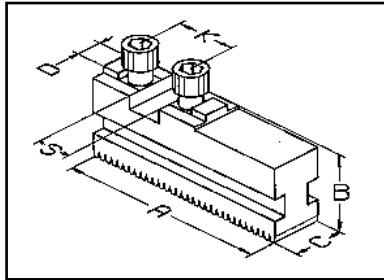
Slot/Tenon Hard Top Jaws

To suit Forkardt, Gamet, Kitagawa, Rohm, Schunk & SMW-Autoblok Quick Jaw Change Chucks

Forkardt	Gamet	Kitagawa	Rohm	Schunk	SMW-Autoblok
F 160 KTNC 160 KTNCV 175 KTNCV 160 FNC 175	MX 152 MX 175		DURO 160 DURO NC 160 DURO NC 175 DURO NCE160	THW 165-37-R ROTA-S 160 ROTA-S plus 160 ROTA-G 160 ROTA NC-W 185	RMG 160 HG 160 HG-F 160 KNCS 160 KNCS 175 KNCS 170-43 KNCS-N 170-43 KNSP 160 HG-N 160 KNC 160
F 200 KTNC 200 KTNCV 200 FNC 200	MX 215	QJ 8	DURO 200 DURO NC 200 DURO NCE 200 DURO NC 225	THW 210 F THW 210 R ROTA-S 200 ROTA-S plus 200 ROTA-G 200 ROTA NC-WF 210 ROTA NC-W 225	RMG 200 HG-F 160 HG 200 HG-N 210 KNSP 200 KNCS 200 KNCS 225 KNCS 210-52 KNCS-N 210-52 KNCS-N 225-65
F 250 KTNC 250 KTNC 280 KTNC 315 KTNCV 250 KTNCV 315 UNC 250/315 FNC 250/315	MX 252 MX 315 MX 330	QJ 10 QJ 12	DURO 250 DURO NC 250 DURO NCE 250 DURO NCE 315	THW 250-F THW 250-R THW 265-F THW 265-R THW 315-R ROTA-S 250 ROTA-S plus 250 ROTA-G 250 ROTA-G 315 ROTA NC-WF 250 ROTA NC-W 265 ROTA NC-W 315 ROTA NC-WF 315	RMG 250 KNCS 250 KNCS 260 KNCS 260-71 KNCS 315 KNCS 315-91 KNCS-N 260-72 KNCS-N 315-91 HG 250/315 HG-F 250/315 HG-N 260/315
F 315 KTNC 360 KTNC 400 KTNCV 400 UNC 400 FNC 400	MX 380		DURO 315 DURO NC 315 DURO NCE 400	THW 400 F THW 315 F THW 400 R ROTA-S 315 ROTA-S plus 315 ROTA-G 400 ROTA NC-W 400	RMG 315 KNCS 400 HG 400 KNC 400 KNCS 400-120 KNCS-N 400-128 HG-N 400
F 400/500 L UNC 500 KTNC 500 KTNC 630 KTNCV 500 KTNCV 630 FNC 500/630			DURO 400 DURO NC 400 DURO 500 DURO NC 500 DURO NCE 500	THW 500 F THW 630 R THW 500 R ROTA-S 400 ROTA-S plus 400 ROTA-S 500 ROTA-S plus 500	HG 500 HG-F 400/500 HG 630 HG-N 500/630 KNCS 500 KNCS 630 KNCS 500-160 KNCS 630-160 KNCS-N 500-165 KNCS-N 630-165 KNCS 800-160

Slot/Tenon Hard Base Jaws

To Suit Quick Jaw Change Chucks



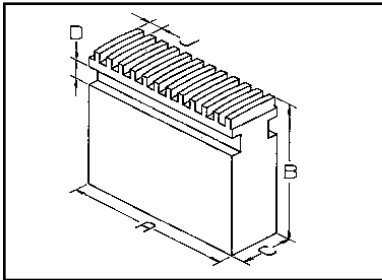
To suit Forkardt, Kitagawa, Rohm, SMW & Schunk Quick Jaw Change Chucks

Techleader Part No.	A	B	C	D	K	S	Bolt Type	Weight KG/set	Forkardt	Kitagawa	Schunk	Rohm	SMW
MFG 160	74	27	20	8	32	18	M8	0.8	F 160 F+160 KTNC 160 KTNCV 175 FNC 175		Rota-S 160 Rota-S plus 160	DURO 160 DURO NC 160 DURO NC 175 DURO NCE 160	HG-F160
MFG 200	90	32	22	10	40	20	M8	1.2	F 200 F+200 KTNC 200 KTNCV 200 FNC 200	QJ 08 QJ 210	THW 210-52F Rota-S 200 Rota-S plus 200 Rota NC-WF 210	DURO 200 DURO NC 200 DURO NCE 200 DURO NC 225	HG-F210
MFG 250	110	37	26	12	40	20	M12	2.0	F 250 F+250 UNC 250/315 KTNC 250/280/315 KTNCV 250/315 FNC 315	QJ 10 QJ 254 QJ 12 QJ 315	THW 250-65F THW 265-71F Rota-S 250 Rota-S plus 250 Rota NC-WF 250 Rota NC-WF 315	DURO 250 DURO NC 250 DURO NCE 250 DURO NCE 315	HG-F260
MFG 315	125	43	32	12	54	26	M12	3.3	F 315 F+315 UNC 400 KTNC 360/400 KTNCV 400 FNC 400		THW 315 F THW 400-120F Rota-S 315 Rota-S plus 315	DURO 315 DURO NC 315 DURO NCE 400	HG-F315
MFG 400	160	51	45	18	60	30	M16	7.3	F 400, F500L UNC 500 KTNC 500/630 KTNCV 500/630 FNC 500/630 F+400		THW 500-128 F Rota-S 400 Rota-S 500 Rota-S plus 400 Rota-S plus 500	DURO 400/500 DURO NC 400/500 DURO NCE 500	HG-F400 HG-F500

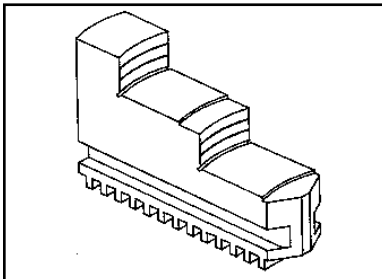
To suit SMW-Autoblok & Schunk Quick Jaw Change Chucks

Techleader Part No.	A	B	C	D	K	S	Bolt Type	Weight KG/set	SMW-Autoblok	Schunk
GBK 140	56	27.5	20	8	32	18	M8	0.6	KNCS 140	KNCS-N140
GBK 160	65	27.5	20	8	32	18	M8	0.7	KNCS 160/125 HG 160 KNCS-N-170	KNSP 160 RMG 160 Rota NC-W 185
GBK 200	85	29.5	22	10	40	20	M8	1.0	KNCS 200 HG 200 KNCS-N-210/225	KNSP 200 RMG 200 Rota NC-W 225
GBK 250	104	37	26	12	40	20	M12	1.8	KNCS 250/260 HG 250 KNCS-N 260	THW250-65R THW265-71R Rota NC-W 265 Rota-G 250
GBK 315	115	43	32	12	40	20	M12	2.7	KNCS 315 KNCS-N 315	HG 315 THW315-86R Rota-G 315 Rota NC-W 400
GBK 400	125	43	32	12	54	26	M12	3.0	KNCS 400 KNCS-N 400 RMG 315	HG 400 THW400-120R Rota-G 400 Rota NC-W 400
GBK 500	160	57	45	18	60	30	M16	7.1	KNCS 500 KNCS-N 500	HG 500 THW500-128R Rota-G 500
GBK 630	200	57	45	18	60	30	M16	9.0	KNCS 630 KNCS-N 630	HG 630 THW630-128R

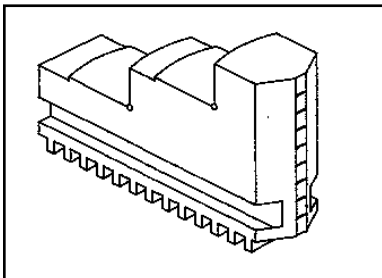
Scroll Jaws Soft and Hard



SOFT



HARD OUTSIDE



HARD INSIDE

**For Manual
Scroll Chucks**

Material: Soft Jaws: O80M15

To suit Rohm ZS & ZG Scroll Chucks

Chuck Diameter	A	B	C	D	J	Weight Kg/Set	Techleader Part No.		
							SOFT JAWS	HARD INSIDE JAWS	HARD OUTSIDE JAWS
140/160	61	51	18	7	8	1.1	EH 16	AVAILABLE ON REQUEST	
200	69	57	20	8	8	1.6	EH 20		
250	90	70	24	10	10	3.0	EH 25		
315/350/400	130	76	34	15	10	7.2	EH 32		

To suit T de G Scroll Chucks

Chuck Diameter	A	B	C	D	J	Weight Kg/Set	Techleader Part No.		
							SOFT JAWS	HARD INSIDE JAWS	HARD OUTSIDE JAWS
85	34	25	12	5	4	0.3	FS 08	AVAILABLE ON REQUEST	
110	47	32	15	6.5	5	0.4	FS 10		
135	56	45	18	8	6	1.0	FS 14		
160	67	51	22	9	7	1.4	FS 16		
200	77	57	25	10.5	8	2.6	FS 20		
250	95	64	32	12.5	10	4.6	FS 25		
315	115	76	40	14	12	8.2	FS 32		
400	140	89	40	14	12	11.8	FS 40		

To suit Bison & Toolmex 3500, 3700 Scroll Chucks

Chuck Diameter	A	B	C	D	J	Weight Kg/Set	Techleader Part No.		
							SOFT JAWS	HARD INSIDE JAWS	HARD OUTSIDE JAWS
125	51	38	20	8	7	0.8	EN 13	AVAILABLE ON REQUEST	
160	70	51	20	8	8	1.3	EN 16		
200	85	57	25	10	8	2.5	EN 20		
250	105	70	28	12	9	4.2	EN 25		
315	127	76	32	12	10	6.3	EN 32		

To suit Pratt Burnerd Metric Scroll Chucks

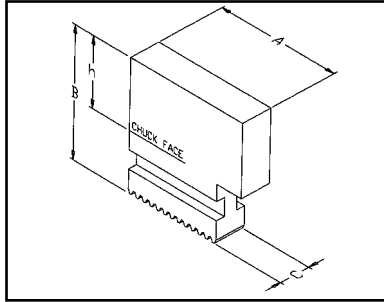
Chuck Diameter	A	B	C	D	J	Weight Kg/Set	Techleader Part No.		
							SOFT JAWS	HARD INSIDE JAWS	HARD OUTSIDE JAWS
80	37	30	10	5	6	0.2	EK 08	AVAILABLE ON REQUEST	
100	42	35	14	7	6	0.4	EK 10		
125	53	38	16	7	6	0.7	EK 13		
160	68	45	18	7	6	1.2	EK 16		
200	78	57	22	8	8	2.1	EK 20		
250	100	70	25	8	8	3.8	EK 25		
315	124	75	32	12	10	6.3	EK 32		
400	154	89	32	12	12	9.5	EK 40		

To Suit Pratt Burnerd Standard Super Precision & Griptru Scroll Chucks

Chuck Diameter	A	B	C	D	J	Weight Kg/Set	Techleader Part No.		
							SOFT JAWS	HARD INSIDE JAWS	HARD OUTSIDE JAWS
80	32	32	9.40	4.85	4.24	0.2	EJB	AVAILABLE ON REQUEST	
100	41	35	14.10	4.85	5.08	0.4	EJC		
125	51	40	15.75	8.03	6.35	0.5	EJE		
160	70	44	18.79	8.03	6.35	1.2	EJG		
200	76	57	20.62	9.53	8.46	1.9	EJJ		
250	102	70	25.40	11.10	8.46	3.8	EJM		
315	114	70	28.19	12.88	8.46	4.7	EJP		
380	127	76	30.15	11.43	10.16	6.2	EJQ		
460/535/610	146	90	38.10	14.30	12.70	10.6	EJR		

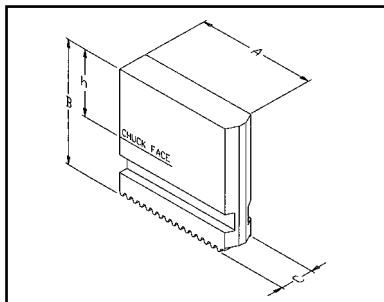
Soft Monoblock Jaws

To Suit Quick Jaw Change Chucks



**To Suit SMW-Autoblok,
Reishauer & Schunk
Quick Jaw Change Chucks**

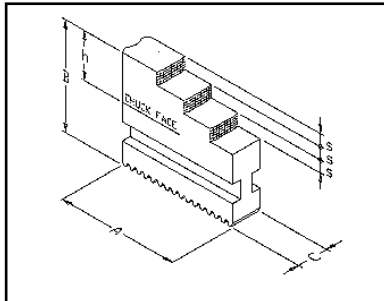
Techleader Part No	A	B	C	h	Weight KG/set	SMW-Autoblok	Reishauer	Schunk
UVB140	58	55.5	20	35	1.3	KNCS 140 KNCSN 140		
UVB170	65	55.5	20	35	1.4	KNCS 160 KNCS 175 KNCSN 170 KNSP 160 RMG 160 HG 160 HGN 160 KNCS-N170	RHU 160	THW 165 R Rota-G 160 Rota NC-W185
UVB200	77	65	22	40	2.0	KNCS 200 KNCSN 210 KNCSN 225 KNSP 200 RMG 200 HG 200 HGN 210	RHU 200	THW 210 R Rota-G 200 Rota NC-W225
UVB250	97	84	26	55	4.2	KNCS 250 KNCS 260 KNCSN 260 RMG 250 HG 250 HGN 260	RHU 250	THW 250 R THW 265 R Rota-G 250 Rota NC-W265
UVB315	118	90	32	56	6.6	KNCS 315 KNCSN 315 HG 315 HGN 315		THW 315 R Rota-G 315 Rota NC-W315
UVB 400	145	100	32	66	9.0	KNCS 400 KNCSN 400 RMG 315 HG 400 HGN 400	RHU 315	THW 400 R Rota-G 400 Rota NC-W400
UVB500	175	124	45	77	19.5	KNCS 500 KNCSN 500 HG 500 HGN 500		THW 500 R Rota-G 500
UVB600	230	134	45	87	27.5	KNCS 630 KNCSN 630 HG 630 HGN 630		THW 630 R



**To Suit Forkardt, Rohm,
SMW-Autoblok & Schunk
Quick Jaw Change Chucks**

Techleader Part No	A	B	C	h	Weight KG/set	Forkardt	Rohm	Schunk	SMW
FVB 170	79	45	20	24	1.4	F 160 F+160 KTNC 160 KTNCV 175 FNC 175	DURO 160 DURO-NC 160 DURO-NC 175 DURO-NCE 160	Rota-S 160 Rota-S plus 160	HGF 160
FVB 200	94	60	22	35	2.5	F 200 F+200 KTNC 200	DURO 200 DURO-NC 200	THW 210 F Rota-S 200	HGF 210
FVB 201	94	80	22	55	2.8	KTNCV 200 FNC 200	DURO-NCE 200	Rota-S plus 200 Rota NC-WF 210	
FVB 250	115	70	26	40	4.3	F250 F+250 KTNC 250/280/315	DURO 250 DURO-NC 250	THW 250-F THW 266-F	HG-F 260
FVB 251	115	100	26	75	4.8	KTNCV 250/315 UNC 250/315 FNC 250/315	DURO-NCE 250/315	Rota-S 250 Rota-S plus 250 Rota NC-WF 250 Rota NC-WF 315	
FVB 315	140	81	32	46	7.3	F 315 F+315 KTNC 360/400 KTNCV 400 UNC 400 FNC 400	DURO 315 DURO-NC 315 DURO-NCE 400	THW 400 F Rota-S 315 THW 315 F Rota-S plus 315	HGF 315
FVB 400	176	93	45	53	15.8	F 400/500E F+400 KTNC 500/630 KTNCV 500/630 UNC 500 FNC 500/630	DURO 400/500 DURO NC 400/500 DURO NCE 500	THW 500 F Rota-S 400 Rota-S 500 Rota-S plus 400 Rota-S plus 500	HGF 400 HGF 500

Monoblock Hard Reversible Jaws To Suit Quick Jaw Change Chucks



**To Suit Forkardt, Rohm,
SMW-Autoblok & Schunk
Quick Jaw Change Chucks**

Techleader Part No	A	B	C	S	h	Weight Kg/set	Forkardt	Rohm	SMW	Schunk
FST 16	79	45	20	7.5	24	1.1	F 160 F+160 KTNCV 175 KTNC 160 FNC 175	DURO 160 DURO-NC 160/175 DURO-NCE 160	HG-F 160	Rota-S 160 Rota-S plus 160
FST 20	94	60	22	10	35	1.9	F 200 F+200 KTNCV 200 KTNC 200 FNC 200	DURO 200 DURO-NC 200 DURO-NCE 200	HG-F 210	THW 210 F Rota-S 200 Rota-S plus 200 Rota NC-WF 210
FST 25	114	70	26	14	40	3.4	F 250 F+250 KTNCV 250 KTNCV 315 KTNC 250/280 KTNC 315 FNC 250/315	DURO 250 DURO-NC 250 DURO-NCE 250 DURO-NCE 315	HGF-260	THW 250 F THW 265 F Rota-S 250 Rota-S plus 250 Rota NC-WF 250 Rota NC-WF 315
FST 31	130	81	32	15	46	5.4	F 315 F+315 KTNCV 400 KTNC 360-400 FNC 400	DURO 315 DURO-NC 315 DURO-NCE 400	HG-F 315	THW 400 F Rota-S 315 THW 315 F Rota-S plus 315
FST 40	167	93	45	20	52	11.0	F 400 F+400 F 500L KTNCV 500 KTNCV 630 KTNC 500/630 FNC 500/630	DURO 400 DURO-NC 400 DURO 500 DURO-NC 500 DURO-NCE 500	HG-F 400 HG-F 500	THW 500 F Rota-S 400 Rota-S 500 Rota-S plus 400 Rota-S plus 500

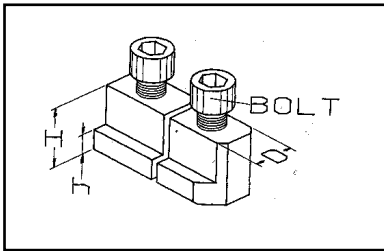
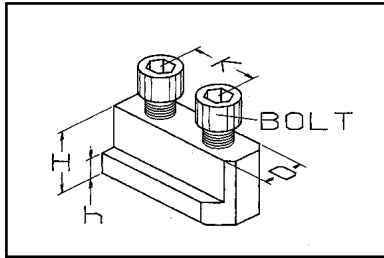
**To Suit SMW-Autoblok
& Schunk Quick Jaw
Change Chucks**

Techleader Part No	A	B	C	S	h	Weight Kg/Set	SMW-Autoblok	Schunk
GST 160-1 GST 160-2	58	43.5	20	7	22	0.6	KNCS 140 KNCS 160 KNCSN 140 KNSP 160 RMG 160 HG 160 HGN 160 KNCS-N 176	THW 160R Rota-G 160 Rota NC-W185
GST 170	65	43.5	20	7	23	0.7	KNCS 160 KNCSN 160 KNSP 160 RMG 160 HG 160 HGN 160 KNCS-N 176	THW 160R Rota-G 160 Rota NC-W185
GST 200 GST 210	75 84	51 51	22 22	8 8	26 26	1.2 1.3	KNCS 200 KNCSN 210 KNCSN 225 KNSP 200 RMG 200 HG 200 HGN 200	THW 210 R Rota-G 200 Rota NC-W225
GST 250	90	60	26	10	31	1.9	KNCS 250 KNCSN 260 RMG 250 HG 250 HGN 250	THW 250 R THW 265 R Rota-G 250 Rota NC-W265
GST 315	117	66	32	11	32	3.4	KNCS 315 KNCSN 315 HG 315 HGN 315	THW 315 R Rota-G 315 Rota NC-W315
GST 400	137	70	32	11	36	4.4	KNCS 400 KNCSN 400 RMG 315 HG 400 HGN 400	THW 400 R Rota-G 400 Rota NC-W400
GST 500	175	93	45	20	46	11.7	KNCS 500 KNCSN 500 HG 500 HGN 500 KNCS 630 KNCSN 630 HG 630 HGN 630	THW 500 R THW 600 R Rota-G 500

T-Nuts

Power Chucks

To Suit Howa, Kitagawa, Samchully & Matsumoto (MMK)



**Material: Steel: 817M40
Blackened and Ground**

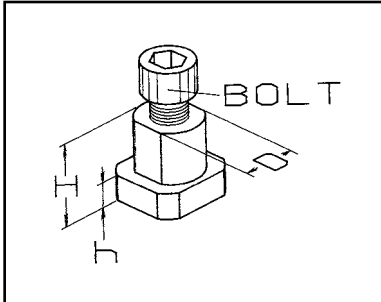
Techleader Part No.	D	H	h	k	Bolt	Howa	Samchully	Kitagawa
GP 03	10	15	5.5	14	M8 x 20	H01MA4 H024M5	HS05	B204 B205
GP 04	8	13.5	4.5	15	M6 x 18			B-04 HOB 4
GR 04	11	16.5	6.5	16	M8 x 20	H027M4 H027M5		
GP 05	10	18	5.5	18	M8 x 22			HOB-5 B-05
GP 06	12	21	7	20	M10 x 25	H01MA6 H015M6 H024M6 H047M6 H07MA6 H022M6 H037M6 H027M6 H023M8		HJA5-6 H06 N-160 AS165 B-160 HOB-6 HOS 6 HOH-160
GP 07	12	18.5	7.5	20	M10 x 25		HS06 HST06 HH206 HC06	B206 B-06 HOH 06 HG738-165 B-07 B-106 B-7 HOH 106 HOH 206
GP 08	14	23	8	25	M12 x 30	H01MA8 H07MA8 H02M8 H015M8		HJA 6-8 B-200 HOB 8 HOS 8 AS 210 HO 8 B-08 N-200 N8 HOH-08K
GP 09	14	20.5	8.2	25	M12 x 30		HS08 HST08 HH208 HC08 HHF208 HSF08	B-108 HOH-108 HG715-210 B 208 HOH 208
GR 10	16	26.5	8.5	25	M12 x 35	H07MA10 H015M10 H022M8 H024M8 H023M10 H027M8 H047M8 H037M8 H034M8		
GP 10	16	23	8	30	M12 x 30	H01MA10 H02M10		B-10 HOH-10 HOB-10 AS 250 N-280 HJA8-10 HOH 250 B-250 HO-10 HOS-10 HG 730-254
GP 11	16	21.5	8.5	30	M12 x 30		HS10 HST10 HC10 HSF10	B-210 HOH 210 B-110 HOH-110
GR 12	18	27.5	9.5	30	M14 x 35	H07MA12 H024M10 H023M12 H037M10 H022M10 H015M12 H027M10 H034M10		
GP 12	18	33	13.5	30	M14 x 45	H01MA12 H02M12		B-300 N-300 HOH-300 HLA6-12 B-12 N-12 HJA8-12 HO-12 HOB-12 HOS-12 HLA6-15 HOH-12 HLA8-15
GP 13	21	28	11.5	30	M16 x 35		HS12 HST12 HH212 HSF12	B-212 B-112 BT-212 HOH-112 HOH-212
GR 13	21	29	10.5	35	M16 x 35	H027M12 H037M12 H034M12 H047M12		
GP 15	22	45.5	16.5	43	M20 x 55		HAH15 HCHF15 HC15 HFC15 HAH18 HCHF18 HC18	B-15 B-380 B-450 HOB-15 HOH-15 HOH-380 B-18 HOB-18
GR 15	26	40	17	42	M20 x 45	H027M15 H047M15		
GP 21	25	45	19	60	M20 x 55			HS450 B530 HS530 HO321 B600 HOB24 H518 B21 HJ21 N21 B24 HS24 N24

Techleader Part No.	D	H	h	K	Bolt	Matsumoto (MMK)		
GS 05	10	16.5	5.5	19	M8 x 20	SA5-6		
GS 06*	11	20	7.5	-	M8 x 25	HA5-6 HH-6 HX-6 HJ-6 H-6 STC-6		
GS 07	11			25		ZA5-6		
GS 08*	14	25.5	9.6	-	M12 x 35	HA6-8 HJ-8 HX-8 HHJ-8 H-8 HH-8 STC-8		
GS 09*	14	24.5	8.5	-	M12 x 35	ZA6-8		
GS 10*	16	23	8	-	M12 x 30	HA8-10 H-10 HHJ-10 HH-10 HHL-10 HX-10 HJ-10 HA8-11 STC-10		
GS 11	16			30		ZA8-10		
GS 12*	18	30	14	-	M14 x 35	HA8-12 HJ-12 HX-12 HHJ-12 H-12 HH-12 HHL12		
GS 13	18			32		ZA8-12		

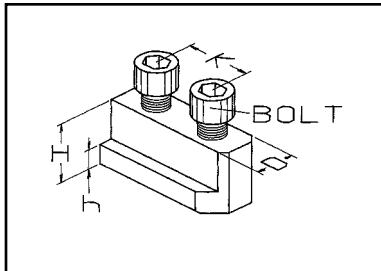
* Split nut type

T-Nuts

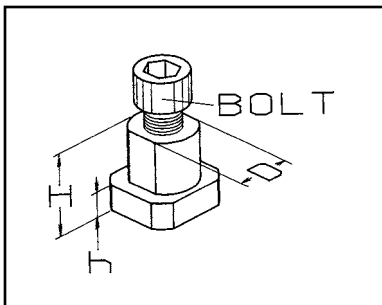
To Suit Forkardt, Pratt Burnerd, Schunk & SMW Power Chucks



GN SINGLE



GG DOUBLE

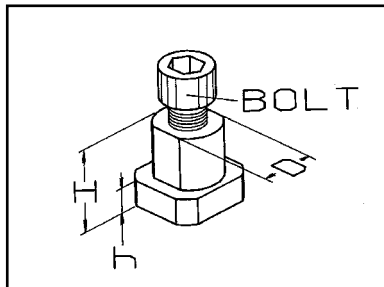


Material:
Steel: 817M40
Blackened and Ground

Techleader Part No.	D	H	h	k	Bolt	Forkardt	Pratt Burnerd	Schunk	SMW
GN 13	12	17	7		M8 x 20	3KTH 130-33 3KTH 140-37			KDV 130
GN 16 GG 20 GG 16	17 17 17	23 23 23	9 9 9	 22 19	M12 X 30 M12 x 30 M12 x 30	3KGFH 160/170 KS 160 KGFH 160/175 KSPS 160 KT 160 KL 160 KSH 160 UVE 160 KSF 175 3KSH 200 3KGFH 200 3KTGF 200 3NH200 3NHf 200 KSF200 KS200 KT200 KL200 KSH200 UVE200 KSHF200 KSPS200 KLNC200 KG200 KP200 KS250 UVE250 KSHF 250-55 (Index) 3NHf 250-65 (Index) 3NHf 290-104 (Index) KS250MO KL250MO 2BLE-PS 160 2BLE-PS 200 2BLEF 200	160 International 160 H S Q. C. 165 HYD. Front End 200 International 200 H S Q. C. 210 Hyd. Front End 210 H S Q. C. 250 H S Q. C. 254 International 265 H S Q. C.	TH 165-37 THF 165-37 TH 210-52 THF 210-52 TP 200-52	HFKS 160 KDV 160 KDVG 160 HFK 200/160 HFKS 200 KDV 200 KDVG 200 KDV 250 KDVG 250 KKA 200 KMA 160 KMA 200 KMA 250 KFV 160 KFV 200
GN 25 GG 32 GG 25	21 21 21	27 27 27	11 11 11	 28 25	M16 x 35 M16 x 35 M16 x 35	3NH 250/315 3NHf 250/315 KT 250/315 KSH 250/315 KSHF 250/315 3KTGF 210/315 KG 250/315 KP 250/315 KLNC 250/315 KL 250 KSPS 250/300 3NHf 280 KS 315/400 KSH 400 KSHF 400 UVE 315 3NHf 400 (Index) 2BLE 200 2BLE 250MO	250 International 254 Hyd. Front End 305 Hyd Front End 305 International 305 H S Q. C. 315 International 400 H S Q. C.	TH 250-71 THF 250-71 TP 250-68 TH 315-86 THF 315-86 TP 315-90 TP 315-105 KKA 250/315 KMA 315/400	HFK 250/270 HFK 315 HFKS 250 HFKS 315 KDV 315 KDV 400 KDVG 315 KDVG 400 KZF 200 KFV 250/315
GN 40 GG 40	25.5 25.5	29 29	11 11	 35	M20 x 40 M20 x 40	3NH 400/500/630 3NHf 400/500/630 3KTGF 400/500 UVE 400/500/630/800 KT 400/500 KG 400/500 KL 400/500 KLNC 400/500 KP 400 KS 500/630 KHS 500 KSL 630 KSHF 630 KL 300 KSHF 560 2BLE 250 2BLE 315 2BLE-PS 300 2BLE-PS 315 2BLE 400 2BLE 500 2BLE-PS 400/500	400 International 400 Hyd. Front End 500 Hyd. Front End	TH 380-120 THF 380-120 TH 500-128 THF 500-160 THF 630-160	HFK 400 HFK 500 HFKS 400 HFKS 500 KDV 500 KDVG 500 KDS 630 KZF 250 KZF 315 KZF 400 KKA 400 KFV 400/500 KFV 630/500

T-Nuts

To Suit Autoblok, Gamet, Mikko-Suga, Rohm & SMW-Autoblok Power Chucks



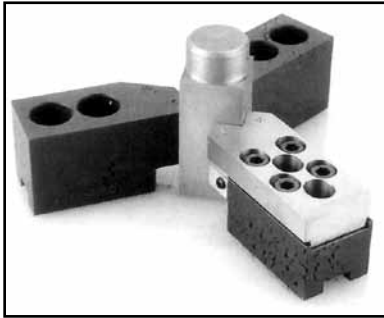
**Material: Steel: 817M40
Blackened and Ground**

Techleader Part No.	D	H	h	K	Bolt	Autoblok & SMW-Autoblok
GF 17	14	20	7.5	-	M10 x 25	IDN 170 HDN 170 IDL 170 HDL 170 GHDN 165 GHDN 170 GHD/FC 170 HDB 170 IMN 170 HMN 170 IML 170 HML 170
GF 18	14	18.5	6.5	16.5	M10 x 20	BHD 165 RCD 165 BBD 175 AND/ALD 165
GF 20	17	22	8	-	M12 x 30	IDN 200 HDN 200 IDL 200 HDL 200 IMN 200 HDN 200 HMN 200 HML 200 CD 200 IDN 220 HDN 220 GHD/FC 210 HDB 220 IML 200
GF 21	17	20.5	7.5	23	M12 x 20	BHD 210 BBD 210 RCD 210 AND/ALD 210
GF 25	21	25	11	-	M16 x 30	IDN 250/315/400 IMN 250/315/400 IDL 250/315/400 IML 250/315/400 HDN 250/315/400 HDM 250/315/400 HDL 250/315/400 HML 250/315/400 GHDN 400 GHDM 400 HDN/FC 400 HDB 300
GF 26	21	26.5	10	30	M16 x 30	BHD 250/315 RCD 250/305 BBD 250/315 AND 250/315 ALD 250/315 HBD 250/315

Techleader Part No.	D	H	h	K	Bolt	Gamet	Nikko-Suga	Rohm
GO 06	11	14.5	6.5	-	M8 x 20	130 N 130 MO 160 GO 160 N 160 MO 170 MF	HF-5 MO-5 HG-5 HF-6AB GO-6 HG-6AB HDM 165 MO-6	KFN 130/160 KFE 170 KFG 160 KFM 130/160
GO 08	14	15.5	6.5	-	M10 x 20	215 N 215 MO 215 GO 215 MF	HF8 MO-8 HG-8 GO-8 MAC 165 HDM-215	KFN 215 KFM 215 KFG 215 KFE 215
GO 11	20	21.5	8.25	-	M12 x 30	250 N 280 N 280 MF 280 MO 280 GO	HF-10 HF-12 HG-10 MO-10/12 GO 10/12 HDM 250/310	KFN 250 KFN 280 KFM 280 KFG 280 KFE 280
GO 14	21	25.5	11	-	M16 x 35	350 N 350 MO 350 GO 350 MF	HF-14 HF-16 MO-14 MAC 250/315 HDM 250/280	KFM 350 KFG 350 KFE 280

TRI Square Top Jaws

For Clamping Square Section on 3 Jaw Chucks



Tri square top jaws are adjustable hard top jaws used on three jaw chucks to clamp a range of square sections. This simple but clever top jaw system removes the need in many instances to use 2 or 4 jaw chucks for the clamping of square section.

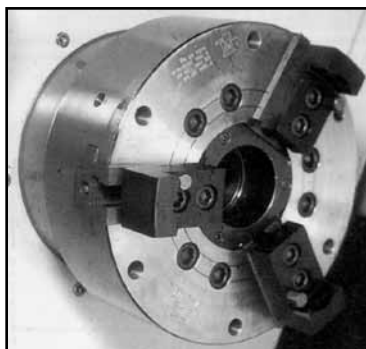
Tri square top jaws are ideal for clamping a series of square parts of different size because of the quick and easy adjustment from one size to another. Tri square top jaws allow more universal use of three jaw chucks allowing the clamping of square and round section – when using chucks as fixtures horizontally on machining centers this can save costs on special fixtures.

Techleader Part No.	Chuck Diameter	Serration	Chuck Type and A/F Clamping Range			
			HOWA H027M	HOWA H037M	KITAGAWA B	KITAGAWA B200
KS 06	160	1.5mm X 60°	10-31.5 A/F	10-31.5 A/F	10-28.0 A/F	10-31.5 A/F
KS 08	200	1.5mm X 60°	11-41.0 A/F	11-41.0 A/F	11-39.5 A/F	12-39.5 A/F
KS 10	250	1.5mm X 60°	14-45.0 A/F	14-43.0 A/F	15-40.0 A/F	14-43.0 A/F
KS 12	315	1.5mm X 60°	23-68.0 A/F	25-68.0 A/F	23-70.0 A/F	

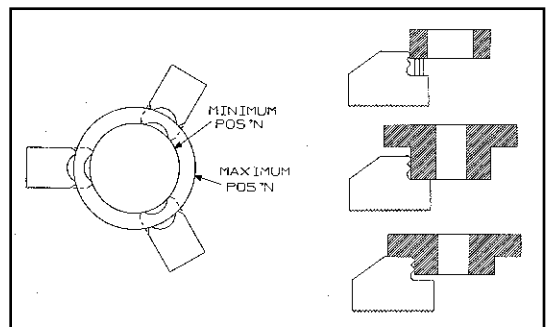
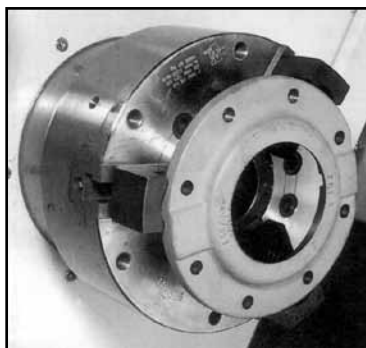
All Tri square top jaw sets are supplied fully assembled and come complete with T-nuts to suit your chuck, jaw bolts and 1 set of the required Allen keys.

Tri square top jaws for other types of chuck are available to order, plus special types to suit irregular, rectangular and polygonal shapes.

ADJUSTAGRIPS – See pages 5-17 to 5-24 & 5-36 to 5-41



- Covering chuck diameters 160 mm to 600 mm
- Gripping range from 15 mm up to 630 mm
- One set will grip various diameters
- Clamping depth varied by a range of height pins
- Radial gripping teeth for high torque and greater safety
- Manufactured in alloy steel for strength
- Lightweight for higher R.P.M.'s with more grip
- Competitively priced
- Stock or short delivery



Adjustagrip jaws give superior grip to standard hard reversible jaws and at lower cost than specially designed hard jaws.

Serration Cleaning Plate



Serration plates are available in three standard types, each supplied in a wooden case with a tube of lapping paste

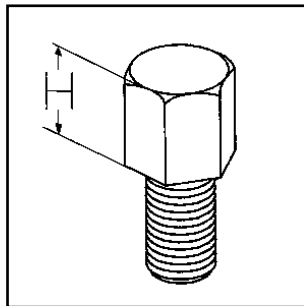
- Allows quick and easy cleaning and deburring of serrated chuck jaws.
- Improved accuracy of mounting to base jaws.
- Extends the working life and precision of the top jaws.
- Keeps jaw serrations in perfect condition.
- Different serration type on reverse of plate.

Simply apply lapping paste and guide jaw onto serrations on plate, move jaw back and forth until serrations are in top condition.

Techleader Part No.	Serration Type		
ES96	1/16" X 90°	and reverse	1.5 mm X 60°
ES99	1/16" X 90°	" "	3/32" x 90°
ES66	1.5mm X 60°	" "	3 mm X 60°



Workpiece Height Pins



- Material: En32 Hardened & Ground.
- Ordering: Please state Techleader Part No.
- Workpiece height pins are for use with Adjustagrip hard jaws or with special jaws requiring a workpiece height location.

Techleader Part No.	H	Width Across Flats	"P" Thread	Suits Adjustagrip Jaw Ranges
IT05 IT10 IT15 IT20	5 10 15 20	10	M6	LA, LB, MA, MB LY 10 - 35
IU05 IU10 IU15 IU20 IU25	5 10 15 20 25	13	M8	LC, LD, LE, LF, MC, MD, ME, MF LY 40 - 43

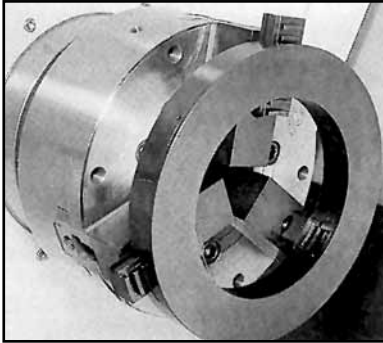
Quick Jaw Change Base Jaw Bolts



Techleader Part No.	Bolt Size	To Suit Base Jaw Type	Techleader Part No.	Bolt Size	To Suit Base Jaw Type
QA12	M8 x 1 x 20	MFG 160, MFG 200	QB 12	M8 x 20	GBK 140, GBK 160, GBK 200
QA32	M12 x 1.5 x 30	MFG 250	QB31	M12 x 25	GBK 250, GBK 315
QA33	M12 x 1.5 x 35	MFG 315	QB32	M12 x 30	GBK 400
QA54	M16 x 1.5 x 40	MFG 400	QB55	M16 x 45	GBK 500, GBK 630

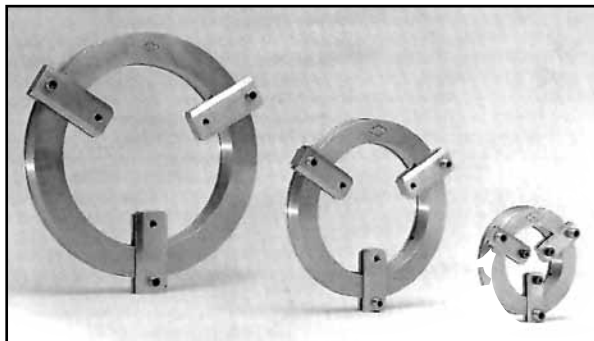
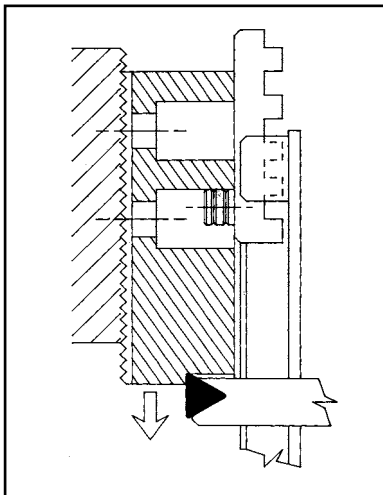
Trueborer

Jaw Boring-Turning Fixture for Power Chucks



- Quick clamping of top jaws to produce perfectly concentric bores or turned diameters
- Allows jaws to be bored or turned at the same clamping pressure required to hold the workpiece
- Only one operation even if through boring jaws
- Saves on jaw usage because of fine adjustment allowing minimal skimming of jaws
- No time wasted looking for, or turning clamping rings
- One Trueborer can be used on many chucks
- For grinding, boring or turning of soft or hard top jaws

Techleader Part No.	Best Suited For Chuck Diameter	Ring Internal Diameter	Ring External Diameter	Jaw Golt Diameter Range	Bolt Diameter	Weight Kg	Max Clamping Pressure
ES 16	125-200	100	180	30-250	13 & 16	4	8000 da N
ES 25	250-315	195	295	100-340	16	10	10000 da N
ES 42	400-600	310	420	180-550	18.5	20	13000 da N

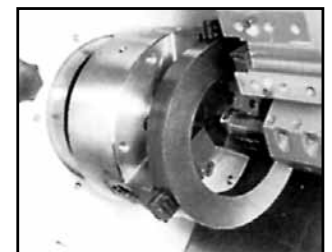
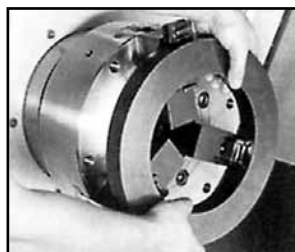
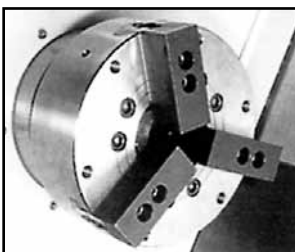


Available in three sizes to cover chuck diameters from 125mm up to 600mm

Operation

- Set top jaws on chuck master jaws to obtain required clamping diameter
- Rotate the back plate on the Trueborer to position the jaw slides so the boltheads can be inserted into the counterbore holes of the top jaws (make sure the bolts are in the correct hole on the slides).
- When in position continue to turn the backplate clockwise for boring or anti-clockwise for turning until it stops and is held tight and parallel against the top jaws.
- Clamp up chuck, Trueborer will hold jaws in required position of chuck stroke to bore or turn jaws under pressure.

The Easiest Way to Bore Soft Jaws

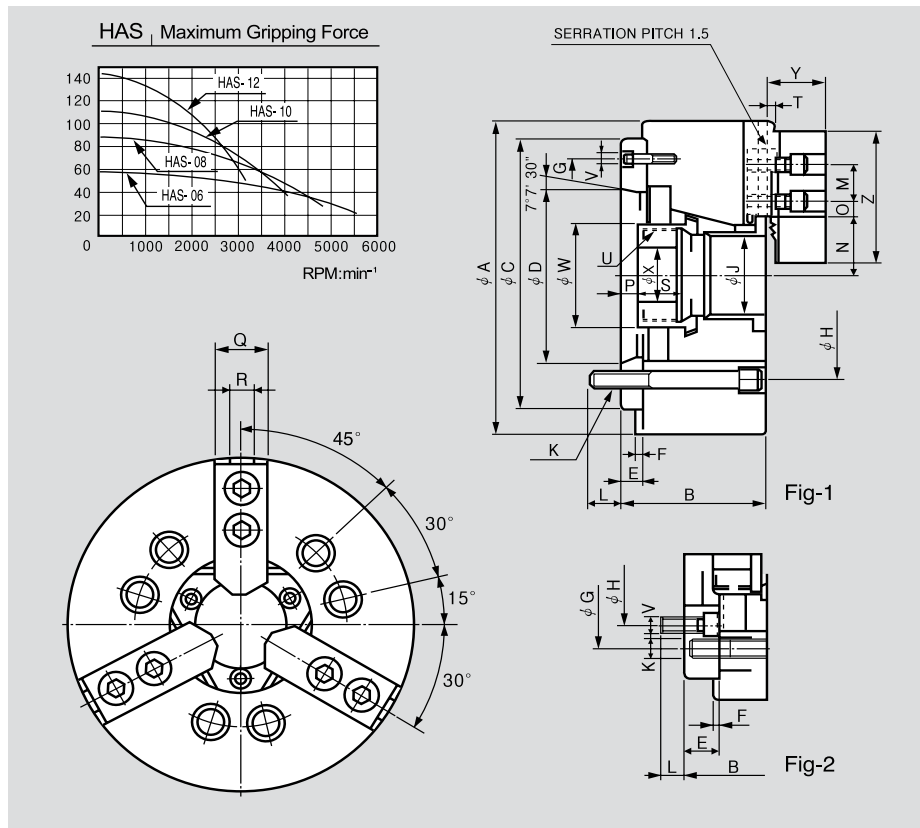


HAS Super High-Speed Open-Center Chuck With Adaptor



- 3-Jaw, wedge-type chuck with large bore
- Powerful gripping force and super-high turning speed
- Fits all spindle types by altering the adaptor
- Mounts on ASA, JIS, and KS standard spindles
- * Use in combination with cylinder to maximize performance.

MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94



*Available in a 4-Jaw version.

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HAS-06A05	169	91	140	82.563	15	5	116	104.8	45	6M10	16	20	32	29.25	22.75	9.25	26	14	26	12	19	2	M55×2	3×M6	60	20	29	66
HAS-08A06	210	103	170	106.375	17	5	150	133.4	52	6M12	18	25	38.7	35	29.75	14.75	31.5	15.5	35	14	20.5	2	M60×2	6×M6	66	30	39	95
HAS-10A06	254	120	220	106.375	25	5	171.4	133.4	75(77)	6M16	18.5	30	51	46.6	33.75	14.25	33.5	14.5	40	16	25	2	M85×2	6×M12	94	45	43	110
HAS-10A08	254	113	220	139.719	18	5	190	171.4	75(77)	6M16	24	30	51	46.6	33.75	14.25	26.5	7.5	40	16	25	2	M85×2	6×M8	94	45	43	110
HAS-12A06	304	129	220	106.375	25	6	171.4	133.4	91	6M16	18.5	30	61.3	56	45.75	15.75	33	10	50	21	28	2	M90×2	6×M12	108	50	51	111
HAS-12A08	304	122	220	139.719	18	6	190	171.4	91	6M16	25	30	61.3	56	45.75	15.75	26	3	50	21	28	2	M100×2	6×M8	108	50	51	111

※ Blank and machined draw-nuts are available.

Specifications

	Spindle Nose No.	Thru Hole Diameter (mm)	Grip Dia. (mm)		Jaw STROKE Diameter (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. rpm min ¹ (rpm)	weight kgf	GD ² N·m ² (kgf·cm ²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm ²)	Operating HARD JAW	Comparable Kitagawa [†] Model	ORDER NO.
			Max.	Min.												
HAS-06A05	A2-5	45	169	15	5.5	12	22 (2243)	57 (5812)	6000	13.7	2.45 (0.25)	SYH-1246	2.8 (28.6)	GT06	B-206A5	445-006
HAS-08A06	A2-6	52	210	13	7.4	16	34.8 (3549)	86 (8769)	5000	23.6	6.9 (0.71)	SYH-1552	2.65 (27)	GT08	B-208A6	445-012
HAS-10A06	A2-6	75(77)	254	31	8.8	19	43(4385)	111(11319)	4200	41.5	12.75 (1.3)	SYH-1875	2.7 (27.5)	GT10	B-210A6	445-021
HAS-10A08	A2-8	75(77)	254	34	8.8	19	43(4385)	111(11319)	4200	40.0	12.65 (1.29)	SYH-1875	2.7 (27.5)	GT10	B-210A8	445-022
HAS-12A06	A2-6	91	304	42	10.6	23	55(5608)	144 (14684)	3300	67.0	30.6 (3.12)	SYH-2091	2.7 (27.5)	GT12	B-212A6	445-026
HAS-12A08	A2-8	91	304	50	10.6	23	55(5608)	144 (14684)	3300	64.0	30.0 (3.06)	SYH-2091	2.7 (27.5)	GT13	B-212A8	445-027

※ Maximum turning speed is based on actual measurements.

※ HAS-10A06 and HAS10A08 are available with 75mm and 77mm thru holes.

※ Refer to figure 2 for HAS-10A06, HAS12A06.

※ Specifications are subject to change without notice.

† Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

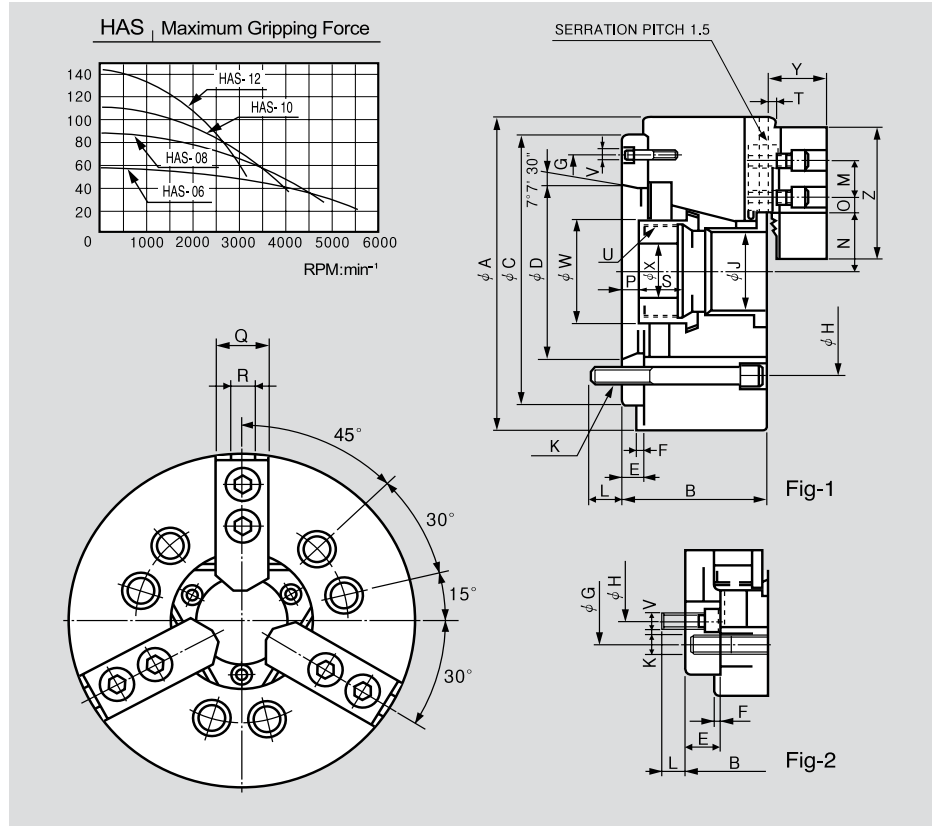
HAS Super High-Speed Open-Center Chuck With Adaptor for HAAS CNC Lathes



- 3-Jaw, wedge-type chuck with large bore
 - Powerful gripping force and super-high turning speed
 - Fits all spindle types by altering the adaptor
 - Mounts on ASA, JIS, and KS standard spindles
- * Use in combination with cylinder to maximize performance.



MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94



*Available in a 4-Jaw version.

Dimensions

MODEL	A	B	C (H6)	D	E	F	G	H	J	K	L	M	N max.	N min.	O max.	O min.	P max.	P min.	Q	R	S	T	U max.	V	W	X	Y	Z
HAS-05A05HA	135	72	110	82.563	16	4	104.78	104.78	33	3-7/16-14UNC	13.3	14	26.5	23.8	19.8	7.75	17	7	23	10	20	2	M40X1.5	3XM6	47	-	26	54
HAS-06A05HA	169	91	140	82.563	15	5	116	104.8	45	6-3/8-16UNC	16	20	32	29.25	22.75	9.25	26	14	26	12	19	2	M55X2	3XM6	60	20	29	66
HAS-08A05HA	210	103	170	106.375	17	5	150	133.4	52	6-1/2-13UNC	18	25	36.7	35	29.75	14.5	31.5	15.5	35	14	20.5	2	M60X2	6XM6	66	30	39	95
HAS-10A06HA	254	120	220	106.375	25	5	171.4	133.4	75(77)	6-5/8-11UNC	18.5	30	51	46.6	33.75	14.25	33.5	14.5	40	16	25	2	M85X2	6XM12	94	45	43	110
HAS-10A08HA	254	113	220	139.719	18	5	190	171.4	75(77)	6-5/8-11UNC	24	30	51	46.6	33.75	14.25	26.5	7.5	40	16	25	2	M85X2	6XM8	94	45	43	110
HAS-12A06HA	304	129	220	106.375	25	6	171.4	133.4	91	6-5/8-11UNC	18.5	30	61.3	56	45.75	15..75	33	10	50	21	28	2	M90X2	6XM12	108	50	51	111

* Blank and machined draw-nuts are available.

Specifications

MODEL	Spindle Nose No.	Thru Hole Diameter	Grip Diameter (mm)		Jaw Stroke Diameter (mm)	Plunger Stroke (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max rpm min ⁻¹ (rpm)	Weight kgf	GD2 N•m ² (kgf•m ²)	Operating Cylinder	Max. Hydraulic Pressure MPa (kgf/cm ²)	Operating Hard Jaw	ORDER NO.
			Max.	Min.											
HAS-05A05HA	A2-5	33	135	12	5.4	10	17.5(1784)	36(3671)	7000	6.7	0.69(0.07)	SYH-1036HA	3.43(35.0)	HB04N1	445-004
HAS-06A05HA	A2-5	45	169	15	5.5	12	22(2243)	57(5812)	6000	13.7	2.45(0.25)	SYH-1246HA	2.8(28.6)	GT06	445-007
HAS-08A05HA	A2-5	52	210	13	7.4	16	24.8(3549)	86(8769)	5000	23.6	6.9(0.71)	SYH-1552HA	2.65(27)	GT08	445-013
HAS-10A06HA	A2-6	75(77)	245	31	8.8	19	43(4385)	111(11319)	4200	41.5	12.75(1.3)	SYH-1877HA	2.7(27.5)	GT10	445-023
HAS-10A08HA	A2-6	75(77)	245	34	8.8	19	43(4385)	111(11319)	4200	40.0	12.65(1.29)	SYH-1877HA	2.7(27.5)	GT10	445-024
HAS-12A06HA	A2-6	91	304	42	10.6	23	55(5608)	144(14684)	3300	67.0	30.6(3.12)	SYH-2511HA	2.7(27.5)	GT12	445-028

※ Maximum turning speed is based on actual measurements.

※ HAS-10A06 and HAS10A08 are available with 75mm and 77mm thru holes.

※ Refer to figure 2 for HAS-10A06, HAS12A06.

※ Specifications are subject to change without notice.

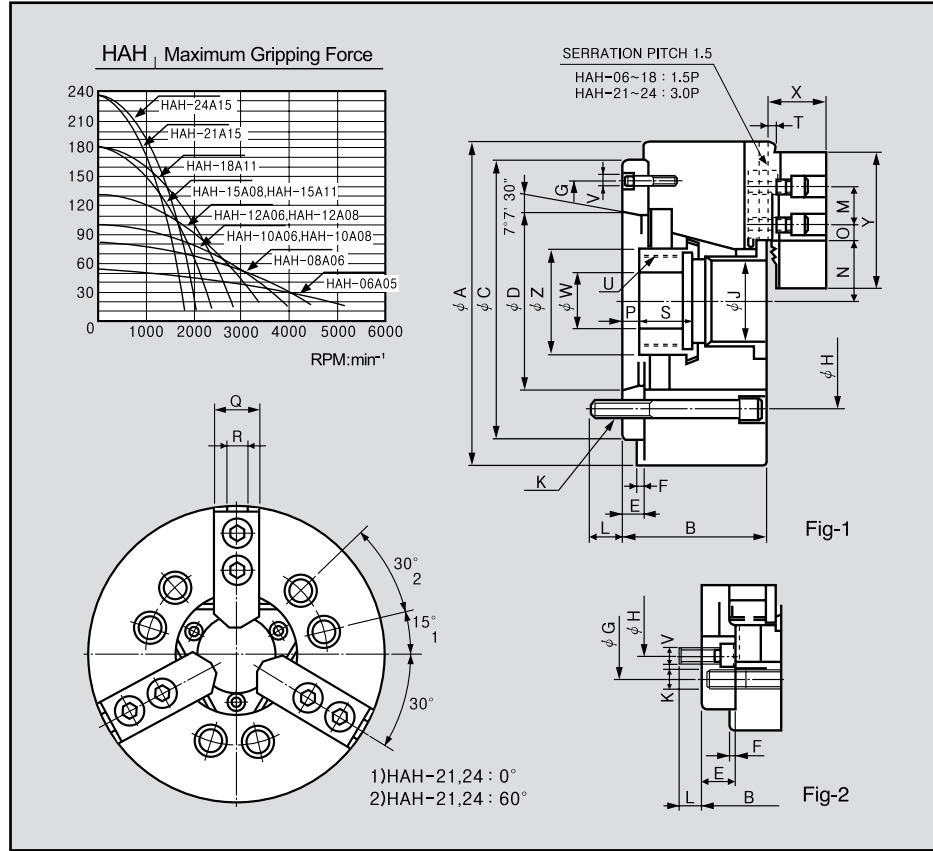
† Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

HAH - Open-Center Chuck With Adaptor



- 3-Jaw, wedge-type chuck with bore.
 - Fits all spindle types by altering the adaptor.
 - Mounts on ASA, JIS, and KS standard spindles.
- * Use in combination with cylinder to maximize performance.

MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94



Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HAH-15A08	381	160	300	139.719	33	6	235.0	171.4	117.5	6-M20	24	43	82	76.7	43.75	18.25	44	21	62	22	39	5	M130×2.0	6-M16	60	70	165	139
HAH-15A11	381	149	300	196.869	22	6	260	235.0	117.5	6-M20	28	43	82	76.7	43.75	18.25	33	10	62	22	39	5	M130×2.0	3-M10	60	70	165	139
HAH-18A11	450	149	380	196.869	22	6	320	235.0	117.5	6-M20	28	43	82	76.7	78.25	18.25	33	10	62	22	39	5	M130×2.0	3-M10	60	70	165	139
HAH-21A15	530	161	380	285.775	27	6	330.2	330.2	140	6-M22(24)	34	60	98.5	93.2	87.5	21.5	38	15	65	25	39	5	M155×3.0	3-M12	80	73	180	170
HAH-24A11	610	170	380	285.775	27	6	330.2	330.2	165	6-M22(24)	35	60	108	102.7	117.5	21.5	47	24	65	25	40	5	M175×3.0	3-M12	80	73	180	187
HAH-24A15	610	170	380	285.775	27	6	330.2	330.2	165	6-M22(24)	35	60	108	102.7	117.5	21.5	47	24	65	25	40	5	M175×3.0	3-M12	80	73	180	187

※ Refer to figure 2 for HAH-12A06, and HAH-15A8. ※ HAH-21A15 and HAH-24A15 are available with M22 or M24 mounting bolts.

Specifications

	Spindle Nose No.	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max. Min.	Jaw STROKE Diameter. (mm)	PLINGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. rpm min*(rpm)	weight kgf	GD ² N·m ² (kgf·m ²)	Operating Cylinder	Max Hydraulic Pressure MPa(kgf/cm ²)	Operating HARD JAW	Comparable Kitagawa ¹ Model	ORDER NO.
HAH-15A08	A2-8	117.5	381 30	10.6	23	71 (7240)	180(18355)	2500	134	96.89(9.88)	HYH-2511	2.3(23.5)	GT15	B-15A08	445-106
HAH-15A11	A2-11	117.5	381 30	10.6	23	71 (7240)	180(18355)	2500	127	93.55(9.54)	HYH-2511	2.3(23.5)	GT15	B-15A11	445-107
HAH-18A11	A2-11	117.5	450 30	10.6	23	71 (7240)	180(18355)	2000	178	187.30(19.1)	HYH-2511	2.3(23.5)	GT15	B-18A11	445-112
HAH-21A15	A2-15	140	530 87	10.6	23	90 (9177)	234(23861)	1700	246	362.83(37.0)	HYH-2511	3.0(30.6)	HB18B2	B-21A15	445-117
HAH-24A11	A2-15	165	610 110	10.6	23	90 (9177)	234(23861)	1400	304	660.94(67.4)	HYH-2511	3.0(30.6)	HB18B2	B-24A15	445-126
HAH-24A15	A2-15	165	610 110	10.6	23	90 (9177)	234(23861)	1400	304	660.94(67.4)	HYH-2511	3.0(30.6)	HB18B2	B-24A15	445-127

※ Blank and machined draw-nuts are available. ※ Specifications are subject to change without notice.

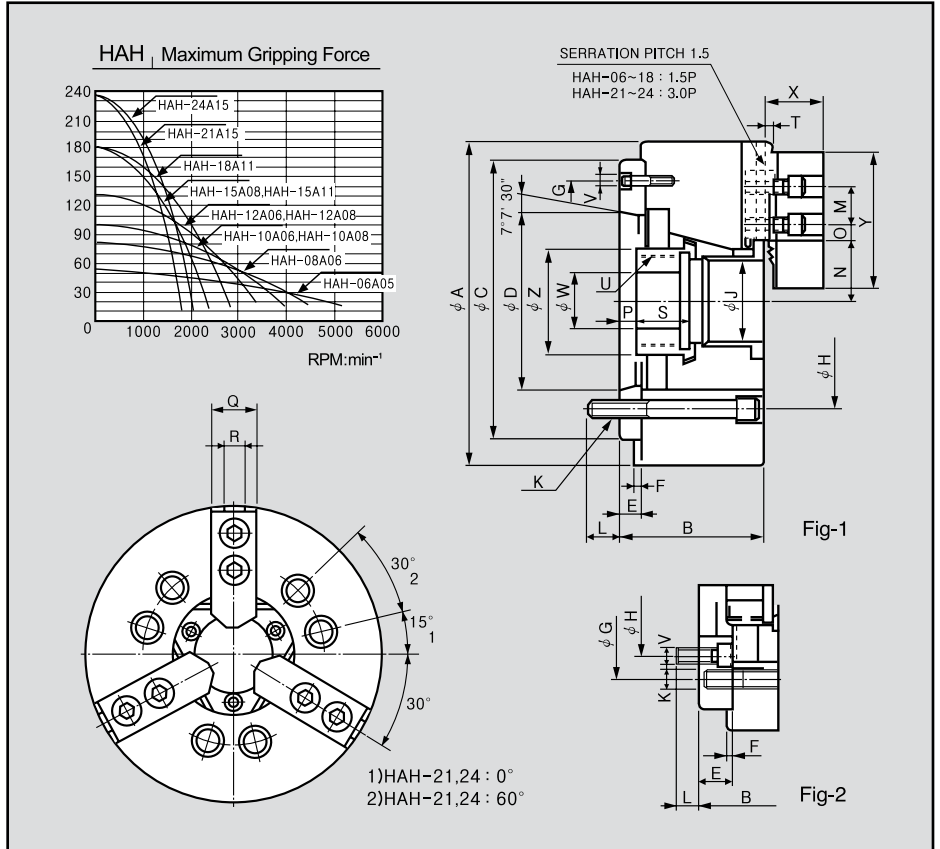
HAH - Open-Center Chuck With Adaptor for HAAS CNC Lathes



- 3-Jaw, wedge-type chuck with bore.
 - Fits all spindle types by altering the adaptor.
 - Mounts on ASA, JIS, and KS standard spindles.
- * Use in combination with cylinder to maximize performance.



MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94



Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HAH-15A08HA	381	160	300	139.719	33	6	235.0	171.4	117.5	6-3/4-10UNC	24	43	82	76.7	43.75	18.25	44	21	62	22	39	5	M130×2.0	64M16	60	70	165	139
HAH-18A11HA	450	149	380	196.869	22	6	320	235.0	117.5	6-3/4-10UNC	28	43	82	76.7	78.25	18.25	33	10	62	22	39	5	M130×2.0	34M10	60	70	165	139

※ Refer to figure 2 for HAH-12A06, and HAH-15A8. ※ HAH-21A15 and HAH-24A15 are available with M22 or M24 mounting bolts.

Specifications

	Spindle Nose No.	Thru Hole Diameter (mm)	Grip Dia. (mm) Max. Min.	Jaw STROKE Diameter (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min*(r.p.m)	weight kgf	GD ² N·m ² (kgf·m ²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm ²)	Operating HARD JAW	ORDER NO.
HAH-15A08HA	A2-8	117.5	381 30	10.6	23	71 (7240)	180(18355)	2500	134	96.89(9.88)	HYH-25011HA	2.3(23.5)	GT15	445-108
HAH-18A11HA	A2-11	117.5	450 30	10.6	23	71 (7240)	180(18355)	2000	178	187.30(19.1)	HYH-2816HA	2.3(23.5)	GT15	445-114

※ Blank and machined draw-nuts are available.

※ Specifications are subject to change without notice.

† Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

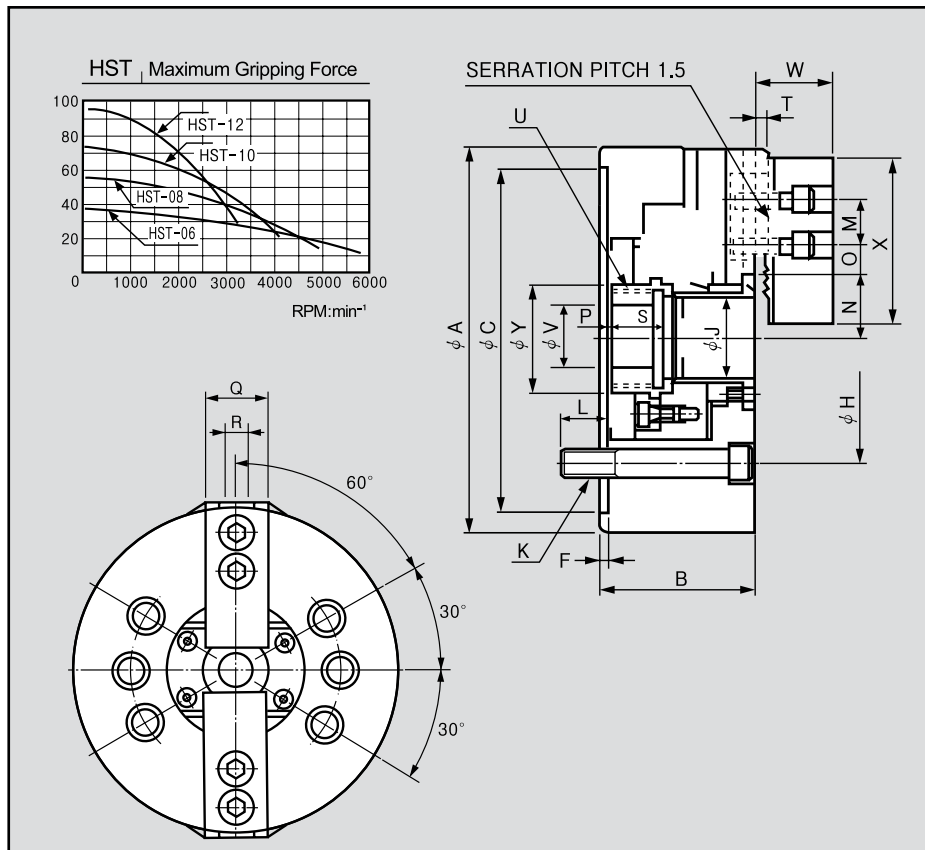
HST - 2 Jaw High-speed Open-Center Chuck



- 2-jaw, wedge-type chuck with large bore.
 - Powerful gripping force and super-high turning speed.
 - 2-jaw design facilitates work on angled structures and flanges.
 - Includes one set of soft jaws.
- ※ Use in combination with Samchully cylinder to maximize performance.



MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94



Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y
HST-06	169	81	140	5	104.8	45	6-M10×95	16	20	32	29.25	22.75	9.25	11	-1	26	12	19	2	M55×2.0	20	29	66	60
HST-08	210	91	170	5	133.4	52	6-M12×105	20	25	38.7	35	30	15	14.5	-1.5	35	14	20.5	2	M60×2.0	30	39	95	66
HST-10	254	100	220	5	171.4	75	6-M16×120	22	30	51	46.6	34	14.5	8.5	-10.5	40	16	25	2	M85×2.0	45	43	110	94
HST-12	304	110	220	6	171.4	91	6-M16×130	23	30	61.3	56	45.75	15.75	8	-15	50	21	28	2	M100×2.0	50	51	111	108

※ Blank and machined draw-nuts are available.

Specifications

	Thru Hole Diameter (mm)	Grip Dia. (mm)		Jaw STROKE Diameter (mm)	PLINGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min ⁻¹ (r.p.m)	weight kgf	GD ² N·m ² (kgf·m ²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm ²)	Comparable Kitagawa Model	ORDER NO.
		Max.	Min.											
HST-06	45	169	15	5.5	12	14.5 (1473)	38 (3875)	6000	11.5	2.21 (0.225)	SYH-1246	1.85 (18.9)	BT-206	445-040
HST-06A05	45	169	15	5.5	12	14.5 (1473)	38 (3875)	6000	11.5	2.21 (0.225)	SYH-1246	1.85 (18.9)	BT-206A05	445-041
HST-08	52	210	14	7.4	16	23.2 (2366)	57.3 (5843)	5000	21.5	6.47 (0.66)	SYH-1552	1.80 (18.4)	BT-208	445-045
HST-08A06	52	210	14	7.4	16	23.2 (2366)	57.3 (5843)	5000	21.5	6.47 (0.66)	SYH-1552	1.80 (18.4)	BT-208A06	445-047
HST-10	75	254	31	8.8	19	28.5 (2906)	74 (7546)	4200	33.5	12.06 (1.23)	SYH-1875	1.80 (18.4)	BT-210	445-050
HST-10A06	75	254	31	8.8	19	28.5 (2906)	74 (7546)	4200	33.5	12.06 (1.23)	SYH-1875	1.80 (18.4)	BT-210A06	445-051
HST-10A08	75	254	31	8.8	19	28.5 (2906)	74 (7546)	4200	33.5	12.06 (1.23)	SYH-1875	1.80 (18.4)	BT-210A08	445-052
HST-12	91	304	34	10.6	23	36.7 (3742)	96 (9789)	3300	52	27.46 (2.8)	SYH-2091	1.81 (18.5)	BT-212	445-055
HST-12A06	91	304	34	10.6	23	36.7 (3742)	96 (9789)	3300	52	27.46 (2.8)	SYH-2091	1.81 (18.5)	BT-212A06	445-056
HST-12A08	91	304	34	10.6	23	36.7 (3742)	96 (9789)	3300	52	27.46 (2.8)	SYH-2091	1.81 (18.5)	BT-212A08	445-057

※ Maximum turning speed is based on actual measurements. ※ Specifications are subject to change without notice. † Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

HH - Big Bore 3-Jaw High-speed Open-Center Chuck

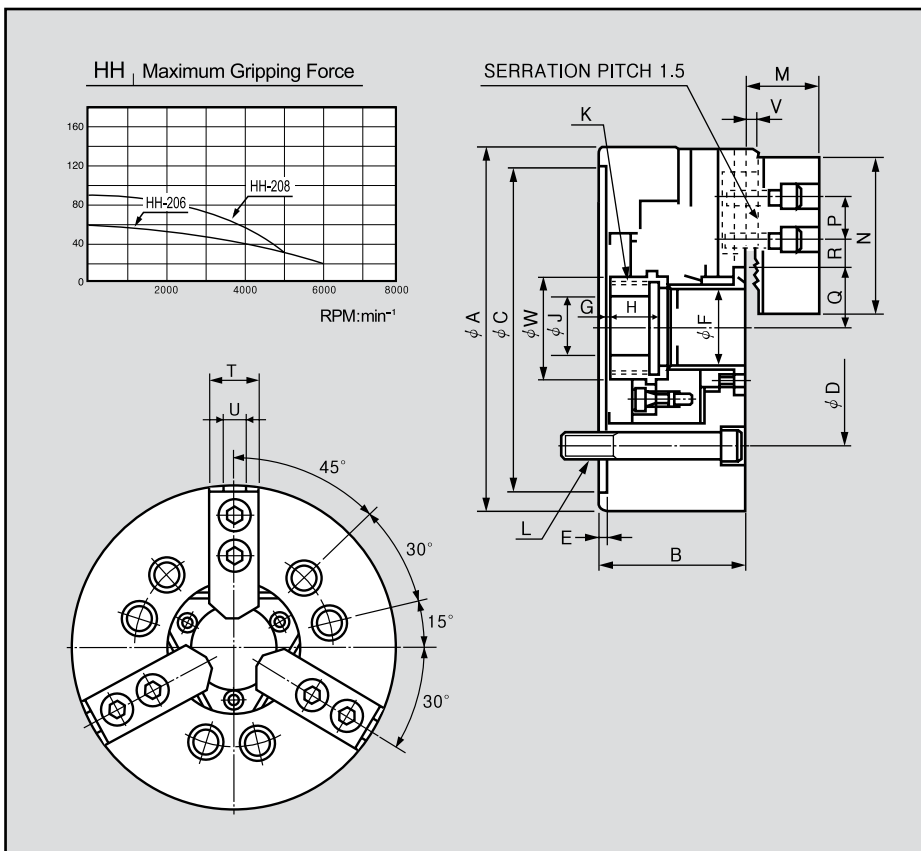


- 3-jaw, wedge-type chuck with extra large bore.
- Big bore facilitates work on large work pieces.
- Powerful gripping force and super-high turning speed.
- Includes one set of soft jaws.

※ Use in combination with Samchully cylinder to maximize performance.



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SEE PAGE 5-94



Dimensions

	A	B	C(H6)	D	E	F	Gmax.	Gmin.	H	J	Kmax.	L	M	N	P	Qmax.	Qmin.	Rmax.	Rmin.	T	U	V	W
HH-206	175	81	140	104.8	5	56	14	-1	17.5	20	M60×2.0	6-M10×95	32.5	72	20	38	34.8	21.75	10.25	31	12	2	65
HH-208	210	91	170	133.4	5	66	7	-9	27.5	35	M75×2.0	6-M12×120	39	95	25	45.7	42	23.75	11.75	35	14	2	80
MH-210	254	100	220	171.4	5	82	8.5	-11	25	52	M90 X 2.0	6-M16X20	43	110	30	54.5	50.1	32.25	14.25	40	16	2	101
HH-212	315	110	300	235.0	6	103	8	-15	28	-	M112×2.0	6-M20×130	50.5	111	30	67.3	62	45.75	15.75	50	2	2	124

※ Blank and machined draw-nuts are available.

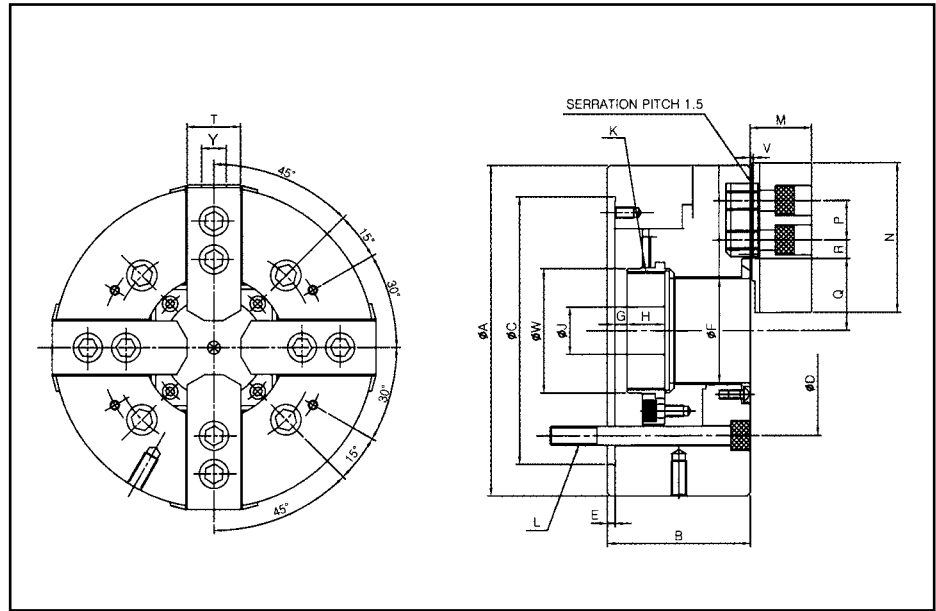
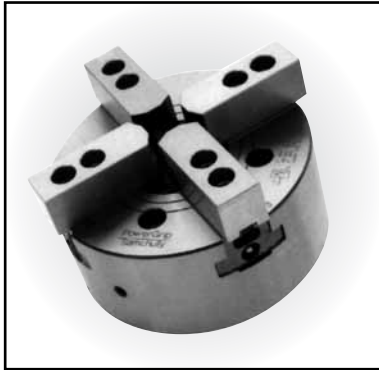
Specifications

	Thru Hole Diameter (mm)	Grip Dia. (mm) Max. Min.	Jaw STROKE Diameter (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. rpm min ⁻¹ (r.p.m)	weight kgf	GD ² N·m ² (kgf·m ²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm ²)	Operating HARD JAW	Comparable Kitagawa Model	ORDER NO.
HH-206	52	175 16.5	5.4	15	24.7 (2551)	57.3 (5812)	6000	11.9	2.25 (0.23)	SYH-1552	1.78 (18.1)	GT06	BB206	445-285
HH-206A05	52	175 16.5	5.4	15	24.7 (2551)	57.3 (5812)	6000	11.9	2.25 (0.23)	SYH-1552	1.78 (18.1)	GT06	BB206A05	445-286
HH-208	65	210 23	7.4	17.5	36.4 (3596)	87 (8872)	5000	23	5.6 (0.57)	SH-17068	2.34 (23.9)	GT08	BB208	445-290
HH-208A06	65	210 23	7.4	17.5	36.4 (3596)	87 (8872)	5000	23	5.6 (0.57)	SH-17068	2.34 (23.9)	GT08	BB208A06	445-292
MH-210	82	254 30	8.8	19	49 (4976)	126.6 (12848)	4500	32	1.26 (0.13)	SH-19082	2.74 (28)	GT10	BB210	445-295
HH-212	103	315 54	10.6	23	55 (5608)	144 (14686)	2800	55.3	28.93 (2.95)	HYH-2511	1.85 (19.0)	GT13	BB212	445-300
HH-212A08	103	315 54	10.6	23	55 (5608)	144 (14686)	2800	55.3	28.93 (2.95)	HYH-2511	1.85 (19.0)	GT13	BB212A08	445-302

※ Maximum turning speed is based on actual measurements. ※ Specifications are subject to change without notice. † Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

4 Jaw High-Speed Wedge-Type Open-Center Power Chuck

MODEL: HSF/HHF



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Dimensions

ORDER NO.	MODEL	A	B	C (HG)	D	E	F	G max.	G min.	H	J	K max.	L	M	N	P	Q max.	Q min.	R max.	R min.	T	Y	V	W
445-271	HHF-208	210	91	170	133.4	5	66	7.5	-10	27	30	M75X2.0	4-M12x115	39	95	25	45.7	42	23.75	11.75	35	14	2	80
445-274	HSF-08	210	91	170	133.4	5	52	14.5	-1.5	20.5	30	M60X2.0	4-M12x105	39	95	25	38.7	35	29.75	14.75	35	14	2	66
445-277	HSF-10	254	100	220	171.4	5	77	8.5	-11	25	45	M85X2.0	4-M16x120	43	110	30	51	46.6	33.75	14.75	40	16	2	94
445-280	HSF-12	304	110	220	171.4	6	91	8	-15	28	50	M100X2.0	4-M16x130	51	111	30	61.3	56	45.75	15.75	50	21	2	180

Specifications

ORDER NO.	MODEL	Tru Hole Diameter	Grip Diameter (mm)		Jaw Stroke Diameter (mm)	Plunger Stroke (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max rpm min ⁻¹ (rpm)	Weight kgf	GD2 N•m ² (kgf•m ²)	Operating Cylinder	Max. Hydraulic Pressure (MPa/kgf/cm ²)
			Max.	Min.									
445-271	HHF-208	66	210	23	7.4	17.5	23.5 (2397)	57.9 (5914)	5000	23.5	5.59 (0.57)	SH-17068 (SYH-1768)	1.6 (16.4)
445-274	HSF-08	52	210	13	7.4	16	23.2 (2366)	57.3 (5843)	5000	22.5	6.67 (0.68)	SH-15052 (SYH-1552)	1.8 (18.4)
445-277	HSF-10	77	254	31	8.8	19	28.5 (7546)	74 (7546)	4200	34.5	1.23 (0.13)	SH-18077 (SYH-1877)	1.8 (18.4)
445-280	HSF-12	91	304	34	10.6	23	36.7 (3742)	96 (9789)	3300	52	27.47 (2.8)	SH-21091 (SYH-2091)	2.8 (28.5)

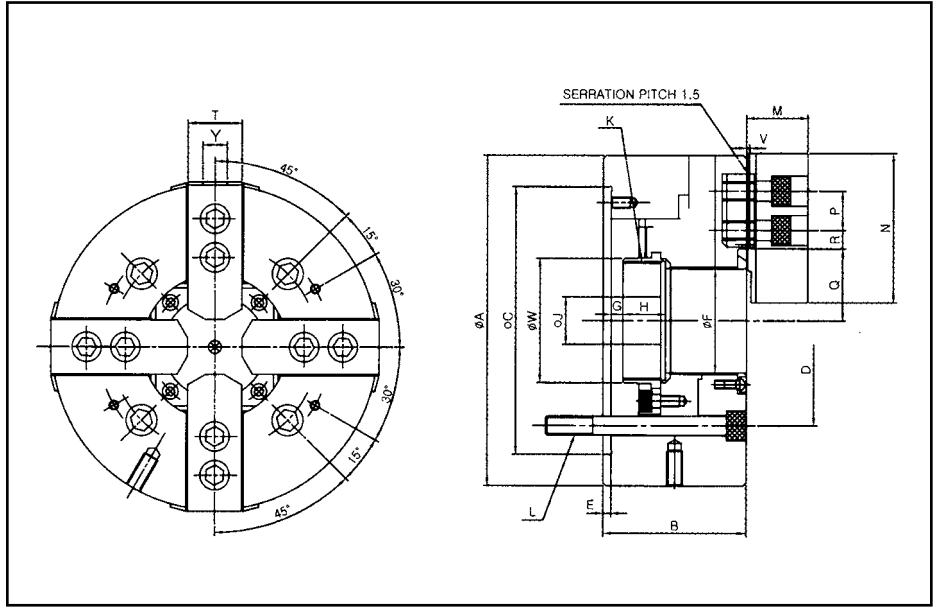
* Maximum Turning Speed is based on actual measurements.
* Specifications are subject to change without notice.

4 Jaw Open-Center Chuck

MODEL: HH



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Dimensions

ORDER NO.	MODEL	A	B	C (H6)	D	E	F	G max.	G min.	H	J	K max.	L	M	N	P	Q max.	Q min.	R max.	R min.	T	Y	V	W
445-384	HCHF-15	318	133	300	235	6	118	11	-12	39	60	M130X2.0	4M20X150	70	165	43	82	76.7	43.75	18.25	62	22	5	139
445-387	HCHF-18	450	133	380	235	6	118	11	-12	39	60	M130X2.0	4M20X130	70	165	43	82	76.7	78.25	18.25	62	22	5	136
445-390	HCHF-21	530	140	380	330.2	6	140	11	-12	39	80	M155X3.0	4M22(24)X140	73	180	60	98.5	93.5	87.5	21.5	65	25	5	170
445-394	HCHF-24	610	149	380	330.2	6	165	20	-3	40	80	M175X3.0	4M22(24)X150	73	180	60	102.7	108	117.5	21.5	65	25	5	187

* HCHF-21 and HCHF-24 are available with M22 or M24 mounting bolts.

Specifications

ORDER NO.	MODEL	Tru Hole Diameter	Grip Diameter (mm)		Jaw Stroke Diameter (mm)	Plunger Stroke (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max rpm min-1 (rpm)	Weight kgf	GD2 N•m² (kgf•m²)	Operating Cylinder	Max. Hydraulic Pressure (MPa/kgf/cm²)
			Max.	Min.									
445-384	HCHF-15	117.5	381	30	10.6	23	47 (4793)	120 (12236)	2500	115	87.3 (8.90)	SH-25011	1.5 (15.3)
445-387	HCHF-18	117.5	450	30	10.6	23	47 (4793)	120 (12236)	2000	159	165.8 (16.9)	SH-25011	1.5 (15.3)
445-390	HCHF-21	140	530	87	10.6	23	60 (6117)	156 (15907)	1700	235	351.2 (35.8)	SH-25011	1.97 (20.1)
445-394	HCHF-24	165	610	110	10.6	23	60 (6117)	156 (15907)	1400	293	651.4 (66.4)	SH-25011	1.97 (20.1)

* Maximum Turning Speed is based on actual measurements.

* Specifications are subject to change without notice.

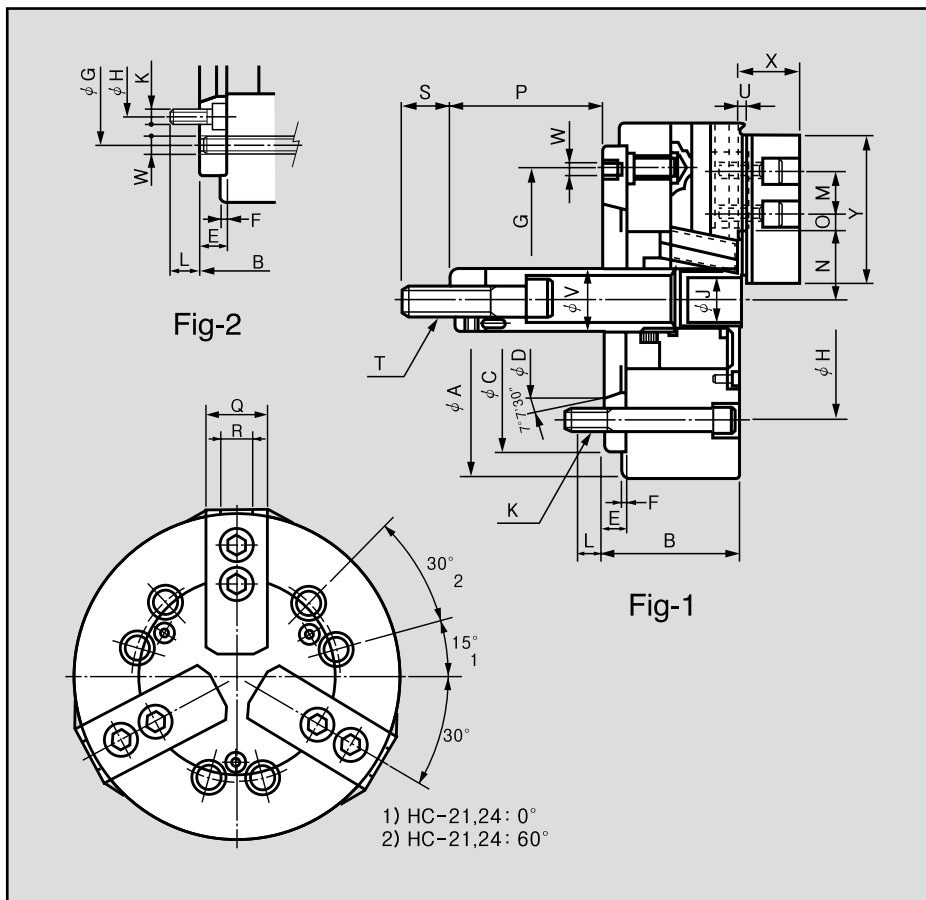
HCA - Closed Center Chuck With Adaptor



- 3-jaw, wedge-type chuck with closed center.
- Fits all spindle types by altering the adaptor.
- Mounts on ASA, JIS, and KS standard spindles.
- Includes one set of soft jaws.

※ Use in combination with Samchully cylinder to maximize performance.

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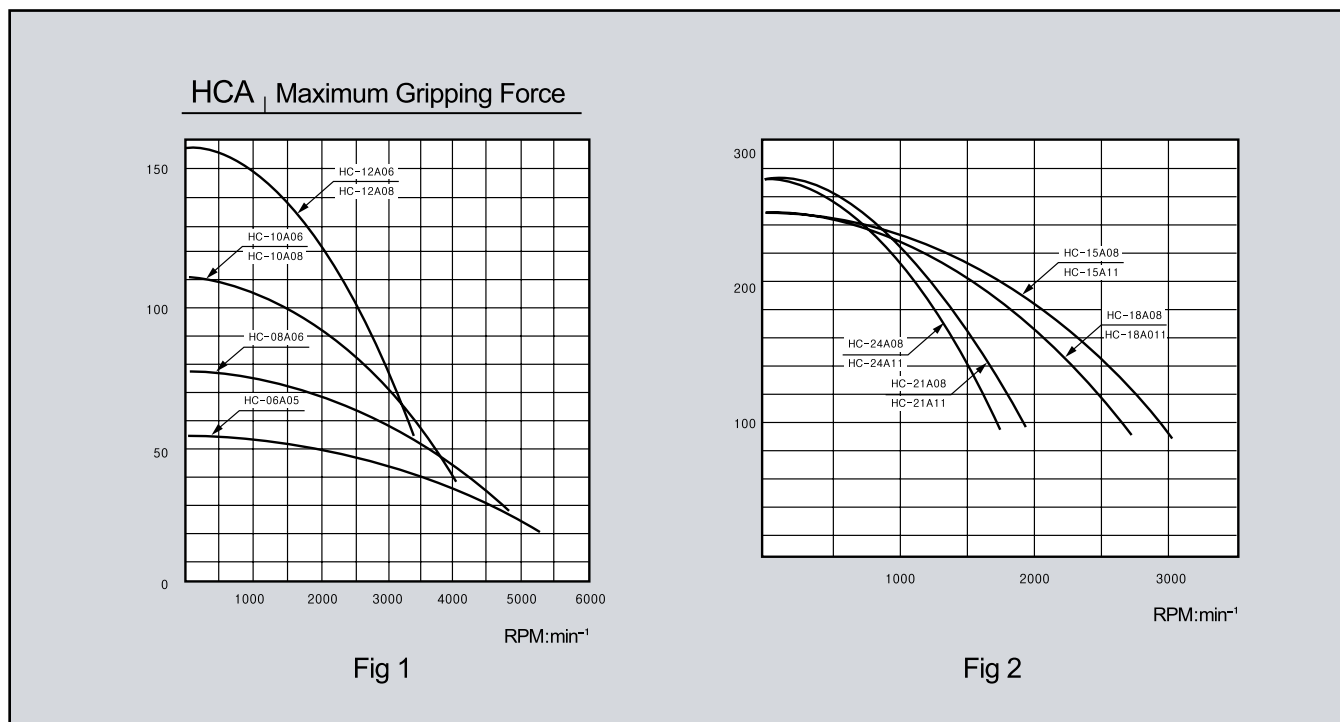
Dimensions

*Available in a 4-Jaw version.

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X	Y
HC-06A05	165	84	140	82.563	15	5	116	104.8	21	6M10	14	20	37.8	33.5	13.75	7.75	84.5(86.5)	64.5(66.5)	31	12	36	M16×2.0	4	34	3M6	35	72
HC-08A06	210	97	170	106.375	17	5	150	133.4	25	6M12	18	25	46.3	41.9	22.25	11.75	94(110)	73(89)	35	14	36	M20×2.5	5	38	3M6	42	95
HC-10A06	254	104	220	106.375	20	5	171.4	133.4	34	6M12	18	30	51.1	46.7	30.75	11.25	99(114)	74(89)	40	16	36	M20×2.5	5	45	6M16	46	110
HC-10A08	254	102	220	139.719	18	5	190	171.4	34	6M16	25	30	51.1	46.7	30.75	11.25	101(140)	76(115)	40	16	36	M20×2.5	5	45	3M8	46	110
HC-12A06	304	120	220	106.375	20	6	171.4	133.4	34	6M12	18	30	61	55.75	48.75	12.75	118(119)	88(89)	50	18	36	M24×3.0 (M20×2.5)	5	50	6M16	54	129
HC-12A08	304	118	220	139.719	18	6	190	171.4	34	6M16	25	30	61	55.75	48.75	12.75	120(145)	90(115)	50	18	36	M24×3.0 (M20×2.5)	5	50	3M8	54	129
HC-15A08	381	130	300	139.719	22	6	235.0	171.4	-	6M16	23	43	77.5	69.5	48.75	23.25	82	47	50	25.5	55	M30×3.5	2	60	6M20	61	135
HC-15A11	381	130	300	196.869	22	6	260	235.0	-	6M20	33	43	77.5	69.5	48.75	23.25	82	47	50	25.5	55	M30×3.5	2	60	3M10	61	135
HC-18A08	450	130	300	139.719	22	6	235.0	171.4	-	6M16	23	43	108	100	48.75	23.25	70	35	50	25.5	55	M30×3.5	2	60	6M20	61	135
HC-18A11	450	130	300	196.869	22	6	260	235.0	-	6M20	33	43	108	100	48.75	23.25	70	35	50	25.5	55	M30×3.5	2	60	3M10	61	135
HC-21A08	530	146	380	139.719	27	6	330.2	171.4	-	6M16	23	60	86	78	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	6M22	71	180
HC-21A11	530	146	380	196.869	27	6	330.2	235.0	-	6M20	28	60	86	78	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	6M22	71	180
HC-21A15	530	146	380	285.775	27	6	330.2	330.2	-	6M22	34	60	86	78	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	3M12	71	180
HC-24A11	610	146	380	196.869	27	6	330.2	235.0	-	6M20	28	60	125	117	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	6M22	71	180
HC-24A15	610	146	380	285.775	27	6	330.2	330.2	-	6M22	34	60	125	117	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	6M12	71	180

※ The numbers in parentheses in columns P and T are also available upon request.

HCA - Closed Center Chuck With Adaptor



*Available in a 4-Jaw version.

Specifications

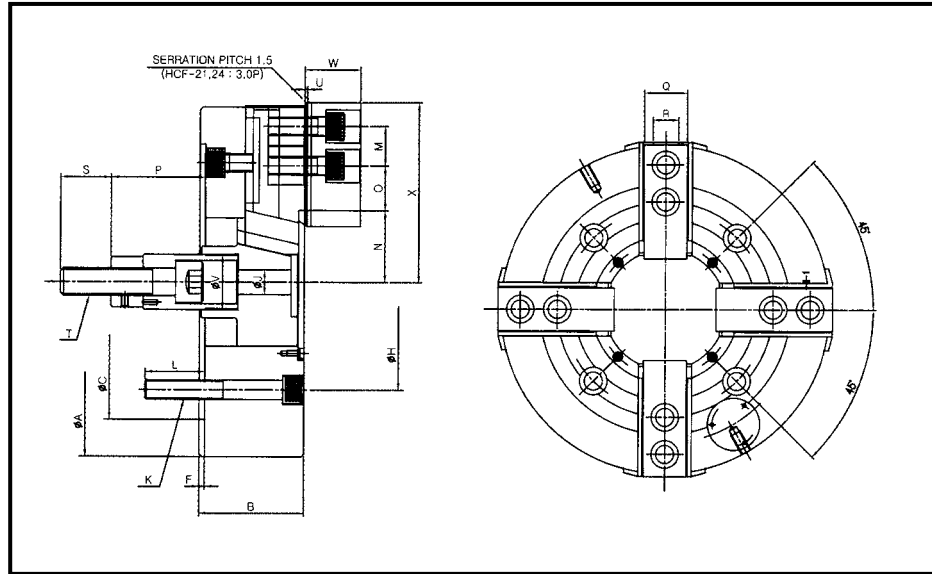
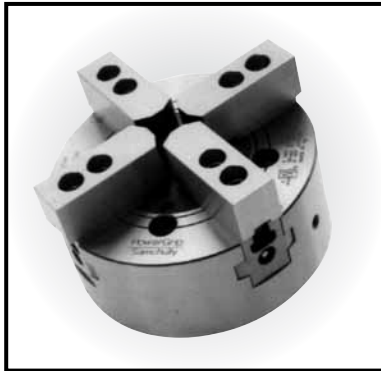
Model	Spindle Nose No.	Jaw STROKE Diameter (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. rpm KN(kgf)	weight kgf	GD ² N·m ² (kgf·m ²)	Operating Cylinder		Max Hydraulic Pressure MPa(kgf/cm ²)	Operating HARD JAW	KITAKAWA Model	ORDER NO.
				Max.	Min.						Hydraulic	Pneumatic				
HC-06A05	A ₂ -5	8.5	20	165	19	18 (1835)	52.5 (5353)	5270	14	1.96 (0.20)	Y-1020R	AY-1720R	2.6 (26.5)	GT06	N-06A05	445-161
HC-08A06	A ₂ -6	8.8	21	210	23	25 (2549)	75 (7648)	4760	27	5.79 (0.59)	Y-1225R	AY-2225R	2.5 (25.5)	GT08	N-08A06	445-167
HC-10A06	A ₂ -6	8.8	25	254	24	29 (2957)	108 (11013)	4010	40	13.14 (1.34)	Y-1225R	AY-2225R	2.8 (28.6)	GT10	N-10A06	445-171
HC-10A08	A ₂ -8	8.8	25	254	24	29 (2957)	108 (11013)	4010	40	12.84 (1.31)	Y-1225R	AY-2225R	2.8 (28.6)	GT10	N-10A08	445-172
HC-12A06	A ₂ -6	10.5	30	304	26	41 (4181)	156 (15907)	3380	67	29.81 (3.04)	Y-1530R	-	2.7 (27.5)	GT12	N-12A06	445-176
HC-12A08	A ₂ -8	10.5	30	304	26	41 (4181)	156 (15907)	3380	66	29.52 (3.01)	Y-1530R	-	2.7 (27.5)	GT12	N-12A08	445-177
HC-15A08	A ₂ -8	16	35	381	71	82 (8362)	249 (25391)	3040	105	76.49 (7.8)	Y-2035R	-	3.2 (32.6)	GT15	N-15A08	445-181
HC-15A11	A ₂ -11	16	35	381	71	82 (8362)	249 (25391)	3040	103	73.56 (7.5)	Y-2035R	-	3.2 (32.6)	GT15	N-15A08	445-182
HC-18A08	A ₂ -8	16	35	450	133	82 (8362)	249 (25391)	2710	134	97.08 (9.9)	Y-2035R	-	3.2 (32.6)	GT15	N-18A11	445-186
HC-18A11	A ₂ -11	16	35	450	133	82 (8362)	249 (25391)	2710	131	95.12 (9.7)	Y-2035R	-	3.2 (32.6)	GT15	N-18A11	445-187
HC-21A08	A ₂ -8	16	35	530	62	82 (8362)	273 (27838)	1940	201	202.99 (20.7)	Y-2035R	-	3.2 (32.6)	HB18B2	N-21A08	445-191
HC-21A11	A ₂ -11	16	35	530	62	82 (8362)	273 (27838)	1940	198	201.03 (20.5)	Y-2035R	-	3.2 (32.6)	HB18B2	N-21A11	445-192
HC-21A15	A ₂ -15	16	35	530	62	82 (8362)	273 (27838)	1940	190	194.15 (19.9)	Y-2035R	-	3.2 (32.6)	HB18B2	N-21A15	445-193
HC-24A11	A ₂ -11	16	35	610	152	82 (8362)	273 (27838)	1760	241	289.28 (29.5)	Y-2035R	-	3.2 (32.6)	HB18B2	N-24A11	445-196
HC-24A15	A ₂ -15	16	35	610	152	82 (8362)	273 (27838)	1760	234	276.54 (28.2)	Y-2035R	-	3.2 (32.6)	HB18B2	N-24A15	445-197

※ Refer to figure 2 for HC-10A06, HC-12A06, HC-15A08, HC-18A08, HC-21A08, HC-21A11, and HC-2411.

※ Specifications are subject to change without notice.

4 Jaw Closed-Center Chuck

MODEL: HCF



**MAKE SURE YOU
GREASE YOUR CHUCK
WITH CHUCK-EEZ®.**
SEE PAGE 5-94

Dimensions

Order No.		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	V	W	X
445-311	HCF-12	304	106	220	6	171.4	34	4-M16	38	30	61	557	48.75	12.75	163	133	50	18	36	M20X2.5	5	50	54	129
445-315	HCF-15	381	114	300	6	235	27	4-M20	65	43	78	70	48.75	23.25	104	69	50	26	55	M30X3.5	2	60	61	135
445-318	HCF-18	450	114	300	6	235	27	4-M20	30	43	108	100	48.72	23.25	92	57	50	26	55	M30X3.5	2	60	60	135
445-320	HCF-21	530	125	380	6	330.2	27	8-M22	61	60	86	78	93.5	27.5	97	62	65	25	55	M30X3.5	3	60	71	180
445-324	HCF-24	610	125	380	6	330.2	27	8-M22	31	60	125	117	93.5	27.5	97	62	65	25	55	M30X3.5	3	60	70	180

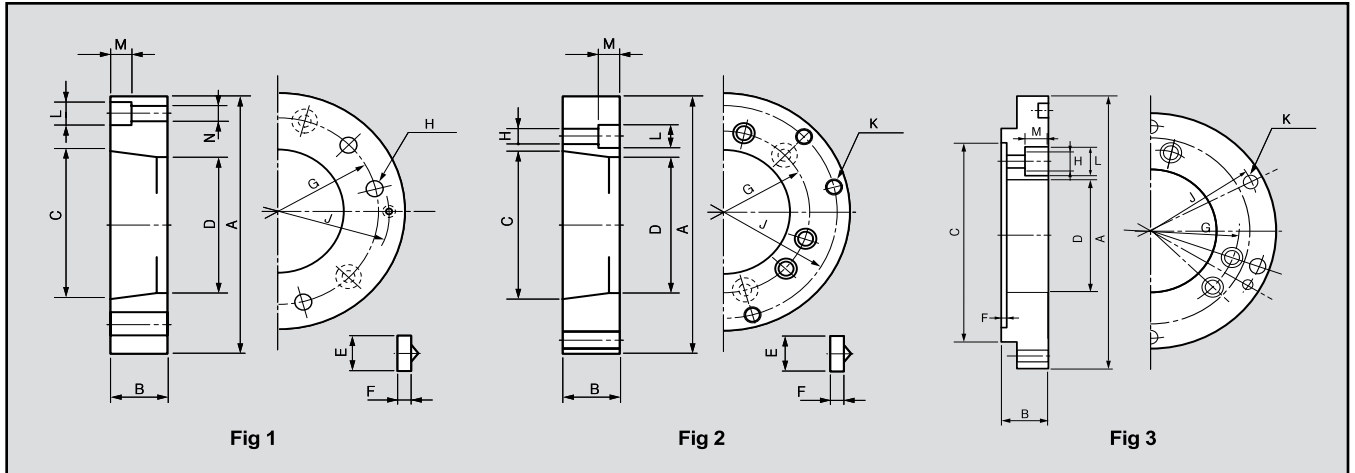
* Bank and machined draw nuts are available. * HCF-21 and HCF-24 are available with M22 or M24 mounting bolts.

Specifications

Order No.	Jaw Stroke Diameter (mm)	Thru Hole Diameter	Grip Diameter (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max rpm min ⁻¹ (rpm)	Weight kgf	GD2 N•m ² (kgf•m ²)	Operating Cylinder	Max. Hydraulic Pressure MPa (kgf/cm ²)	
			Max.	Min.								
445-311	HCF-12	10.5	30	304	26	27.5 (2804)	104 (10605)	3000	55	27.7 (2.83)	Y-1530R (RE)	1.8 (18.4)
445-315	HCF-15	16	35	381	71	54.6 (5575)	165.8 (16927)	3040	98	72.6 (7.4)	Y-2035R (RE)	2.13 (21.7)
445-318	HCF-18	16	35	450	133	54.6 (5575)	165.8 (16927)	2710	124	92.2 (9.4)	Y-2035R (RE)	2.13 (21.7)
445-320	HCF-21	16	35	530	62	54.6 (5575)	183 (18550)	1700	180	188.3 (19.2)	Y-2035R (RE)	2.13 (21.7)
445-324	HCF-24	16	35	610	152	54.6 (5575)	183 (18550)	1500	223	271.7 (27.7)	Y-2035R (RE)	2.13 (21.7)

* Maximum Turning speed is based on actual measurements.
* Specifications are subject to change without notice.

Adaptor Plates



Fits ASA B5.9 type A (DIN 55026) Spindles

Standard Adaptor Plates

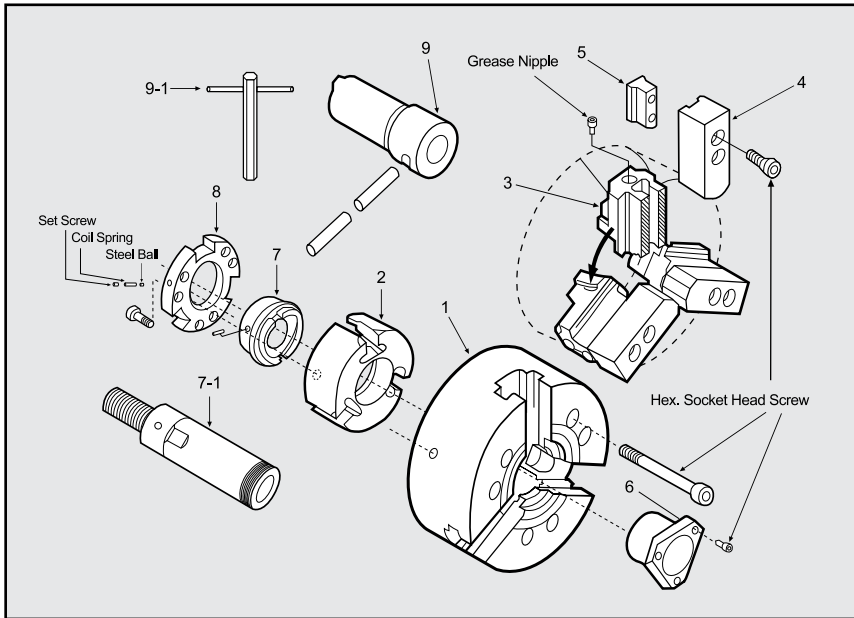
	Spindle Nose	Standard Thickness	Available Thickness	A	B	C	D	E	F	G	H	J	K	L	M	N	Fig	Corresponding Chuck
AP06A05	A2-5	15	15	140	15	82.563	79.7	16.3	6.5	104.78	12	116	-	11	7	6.6	1	HC, HCH, HS -06
APT06A05	A2-5	15	15	140	15	82.563	79.7	16.3	6.5	104.78	12	116	-	11	7	6.6	-	HCT, HST, HTH -06
AP08A05	A2-5	25	25	170	25	82.563	79.7	16.3	6.5	104.78	12	133.35	M12	18	11.5	-	2	HC, HCH, HS, HCT HST, HTH -08
AP08A06	A2-6	17	17, 25, 33, 26	170	17	106.375	103.0	19.45	6.5	133.35	13.5	150	-	11	7	6.6	1	HC, HCH, HS, HH -08
APT08A06	A2-6	17	17, 22, 26	170	17	106.375	103.0	19.45	6.5	133.35	13.5	150	-	11	7	6.6	-	HCT, HST, HTH -08
APF08A06	A2-6	-	17	170	17	106.375	103.0	19.45	6.5	133.35	13.5	150	-	11	7	6.6	1	HSF, HCH, HCF -08
AP10/12A06	A2-6	25	18, 20, 25, 28, 42	220	25	106.375	103.0	19.45	6.5	133.35	13.5	171.45	M16	20	13.5	-	2	HC, HS, HCH, HCT HST, HTH -10, 12
APF10A08	A2-8	-	18	220	18	139.719	136.0	24.2	8	171.45	18	171.45	M16	26	25	-	2	HSF, HCH, HCF -10
AP10/12A08	A2-8	18	18, 28, 42	220	18	139.719	103.0	24.2	8	171.45	17	190	-	14	10	9	1	HC, HCH, HS -10, 12
APT10/12A08	A2-8	18	18, 28	220	18	139.719	136.0	24.2	8	171.45	17	190	-	14	10	9	-	HCT, HST, HTH -10, 12
AP15/18A11	A2-11	22	22, 24, 37, 42, 45	300	22	196.870	192.9	29.36	10	235	21	260	-	17	11	11	1	HC-15, 18 HCH-15

Special Adaptor Plates

	Spindle Nose	Available Thickness	A	B	C	D	E	F	G	H	J	K	L	M	N	Fig	Corresponding Chuck
AP06A06	A2-6	33	140	33	106.375	70	19.45	6.5	133.35	14	104.78	M10	20	18.5	-	2	HC, HCH, HS -06
AP08A08	A2-8	30	170	30	139.719	103	24.2	8	171.45	18	133.35	M12	26	23	-	2	HC, HCH, HS -08
AP12A11	A2-11	22, 45, 46	300	46	197.870	192.9	29.36	10	235	21	260	-	17	11	11	1	HH-212
AP15A08	A2-8	22, 33, 37	300	37	139.719	135.46	24.2	8	171.45	18	235	M20	-	-	-	2	HC-15, HCH-15
AP18A11	A2-11	22	380	22	197.870	192.9	29.36	10	235	21	260	-	17	11	11	1	HCH-18
AP21/24A11	A2-11	27, 42	380	42	197.870	192.9	29.36	10	235	21	330.2	M22	32	21	-	2	HC, HCH-21 HC, HCH-24
AP21/24A15	A2-15	27	380	27	285.777	250	35.7	10	330.2	24	330.2	-	20	13	14	1	HC, HCH-21 HC, HCH-24
AP32A15	A2-15	33	380	33	285.777	220	35.7	10	330.2	26	330.2	-	20	13	14	1	HC-32
AP40A20	A2-20	48	520	48	380	270	-	8	330.2	26	463.6	M24	39	25	-	3	HC-40

※ Special adaptor plates may be slightly different than the referenced figure.

Hydraulic Chuck Components



ITEM NO.	DESCRIPTION	Q'TY
1	BODY	1
2	WEDGE PLUNGER	1
3	MASTER JAW	3
4	SOFT JAW/HARD JAWS	3
5	T-NUT	3
6	COVER	1
7	DRAW NUT(Open Center)	1
7-1	DRAW TUBE(Closed Center)	1
8	PLUNGER NUT(Open Center)	1
9	HANDLE(Open Center)	1
9-1	HANDLE(Closed Center)	1

WEDGE PLUNGER HS/HAS	
ORDER NO.	PART NO. 2
445-860	WP-HS 06
445-861	WP-HS 08
445-862	WP-HS 10
445-863	WP-HS 12

MASTER BASE JAWS HCH/HAH	
ORDER NO.	PART NO. 3
445-632	MJ-HS 15
445-633	MJ-HS 18
445-634	MJ-HS 21
445-635	MJ-HS 24

CHIP COVERS & PLUG/HS	
ORDER NO.	PART NO. 6
445-581	CP-HS-05
445-582	CP-HS-06
445-586	CP-HS-08
445-592	CP-HS-010
445-596	CP-HS-012

DRAW NUT HCH	
ORDER NO.	PART NO. 7
445-851	DN-HCH 15
445-852	DN-HCH 18
445-853	DN-HCH 21
445-854	DN-HCH 24

HANDLE & BAR HS/HCH	
ORDER NO.	PART NO. 9
445-910	HDL HS/HCH-04
445-911	HDL HS/HCH-05/06
445-912	HDL HS/HCH-08
445-913	HDL HS/HCH-10
445-914	HDL HS/HCH-12
445-915	HDL HS/HCH-15/16
445-916	HDL HS/HCH-21/24

WEDGE PLUNGER HCH	
ORDER NO.	PART NO. 2
445-895	WP-HST 15
445-896	WP-HST 18
445-897	WP-HST 21
445-898	WP-HST 24

MASTER BASE JAWS HH	
ORDER NO.	PART NO. 3
445-640	MJ-HH 206
445-641	MJ-HH 208
445-643	MJ-HH 212

CHIP COVERS & PLUG/HCH	
ORDER NO.	PART NO. 6
445-599	CP-HCH-15
445-600	CP-HCH-18
445-603	CP-HCH-21
445-606	CP-HCH-24

DRAW NUT HH	
ORDER NO.	PART NO. 7
445-856	DN-HH 206
445-857	DN-HH 208
445-859	PN-HH 212

HANDLE & BAR HH & MH	
ORDER NO.	PART NO. 9
445-920	HDL-HH 206
445-921	HDL-HH 208
445-922	HDL-HH 210
445-923	HDL-HH 212

WEDGE PLUNGER HST	
ORDER NO.	PART NO. 2
445-865	WP-HST 15
445-866	WP-HST 18
445-867	WP-HST 21
445-868	WP-HST 24

HARD JAWS - SET OF 3	
ORDER NO.	PART NO. 4
445-700	HB04N1 1-STEP HS 04 & 05
445-702	HB04N1 1-STEP HS06
GT06	2-STEP HS06 & HH206
GT08	2-STEP HS08 & HH208
GT10	2-STEP HS10
GT13	2-STEP HS12 & HH212
GT15	2-STEP HCH 15 & 18
445-710	HB15N1 1-STEP HC 15
445-711	HB18B2 1-STEP HC, HCH, 21 & 24

CHIP COVERS & PLUG/HH & MH	
ORDER NO.	PART NO. 6
445-610	CP-HH206
445-611	CP-HH208
445-612	CP-HH210
445-613	CP-HH212

PLUNGER DRAW NUT HAS/HAS/HST	
ORDER NO.	PART NO. 8
445-770	PN-HS 04
445-771	PN-HS 05
445-777	PN-HS 06
445-781	PN-HS 08
445-785	PN-HS 10
445-790	PN-HS 12

WEDGE PLUNGER HH	
ORDER NO.	PART NO. 2
445-640	WP-HH 206
445-641	WP-HH 208
445-643	WP-HH 212

JAWS NUTS	
ORDER NO.	PART NO. 5
445-540	TN-HS, HST 04 & 05
GP07	TN-HS, HSL HST 06
GP09	TN-HS, HSL HST 08
GP11	TN-HS, HSL HST 10
GP13	TN-HS, HSL HST 12
GP15	TN-HCH 15 & 18
445-569	TN-HC 21-24

DRAW NUT HAS/HAS/HST	
ORDER NO.	PART NO. 7
445-831	DN-HS 04
445-832	DN-HS 05
445-833	DN-HS 06
445-834	DN-HS 08
445-835	DN-HS 10
445-836	DN-HS 12

PLUNGER DRAW NUT HCH	
ORDER NO.	PART NO. 8
445-786	PN-HCH 15
445-787	PN-HCH 18
445-788	PN-HCH 21
445-789	PN-HCH 24

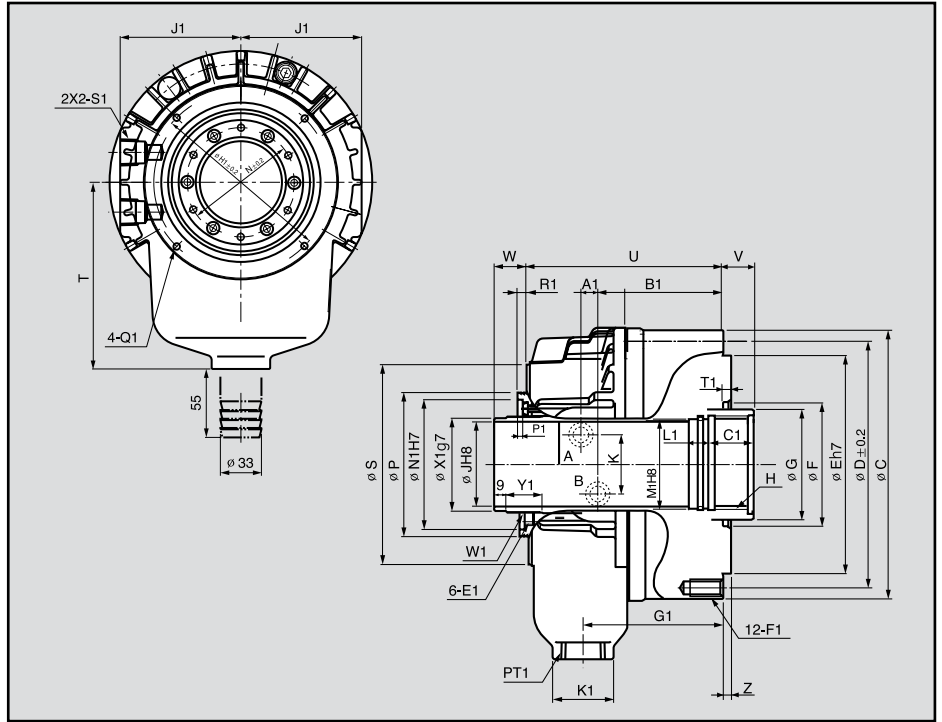
MASTER BASE JAWS HS/HAS	
ORDER NO.	PART NO. 3
445-620	MJ-HS 05
445-621	MJ-HS 06
445-622	MJ-HS 08
445-623	MJ-HS 10
445-624	MJ-HS 12

PLUNGER DRAW NUT HH	
ORDER NO.	PART NO. 8
445-791	PN-HH 206
445-792	PN-HH 208
445-794	PN-HH 212

SH - High Speed Open Center Rotary Hydraulic Cylinder



- Light-weight, high-speed hydraulic cylinder with thru hole.
- 20% reduction in body length and cylinder weight.
- 20% larger thru hole than standard models.
- Built in lock and relief valves.



Dimensions

	C	D	E	F	G	H	J	K	N	P	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1	B1	C1
SH-13046	165	130	100	80	65	M52×2	46	40	64	85	116	120	142	15	0	40	25	5	8.5	103	30
SH-15052	190	170	130	85	70	M60×2	52	40	73	96	135	130	138	22	0	47	25	5	9.0	97.5	30
SH-17068	210	190	160	120	85	M75×2	68	48	88	111	154	150	155	25	0	50	25	5	10	108	35
SH-18077	218	190	160	120	95	M85×2	77	48	108	121	164	165	167	25	0	50	25	5	10	119.5	35
SHL-25011	310	275	230	166	140	M130×2	117.5	46	138	170	230	215	258	46	-4	75	25	6	19	176.5	45

	E1	F1DP'	G1	H1	J1	K1	L1	M1	N1	P1	Q1	R1	S1	T1	W1	X1	Y1
SH-13046	M6	M10×20	111	98	82	47	15	48	76	4	M5×6	6	PT1/2	6	M52×1.5	50	24
SH-15052	M6	M10×20	101	110	92	47	15	55	85	4	M6×7	7	PT1/2	5	M58×1.5	56	20
SH-17068	M6	M10×20	113	145	97	47	15	70	100	4	M6×10	7	PT1/2	5	M74×1.5	71.5	26
SH-18077	M6	M10×20	125	155	102	47	15	80	108	4	M6×10	7	PT1/2	5	M84×2.0	81	26
SHL-25011	M6	M16×32	190.5	206	140	47	20	123	150	5.5	M6×12	7.5	PT1/2	6	M124×2.0	121.5	29

Specifications

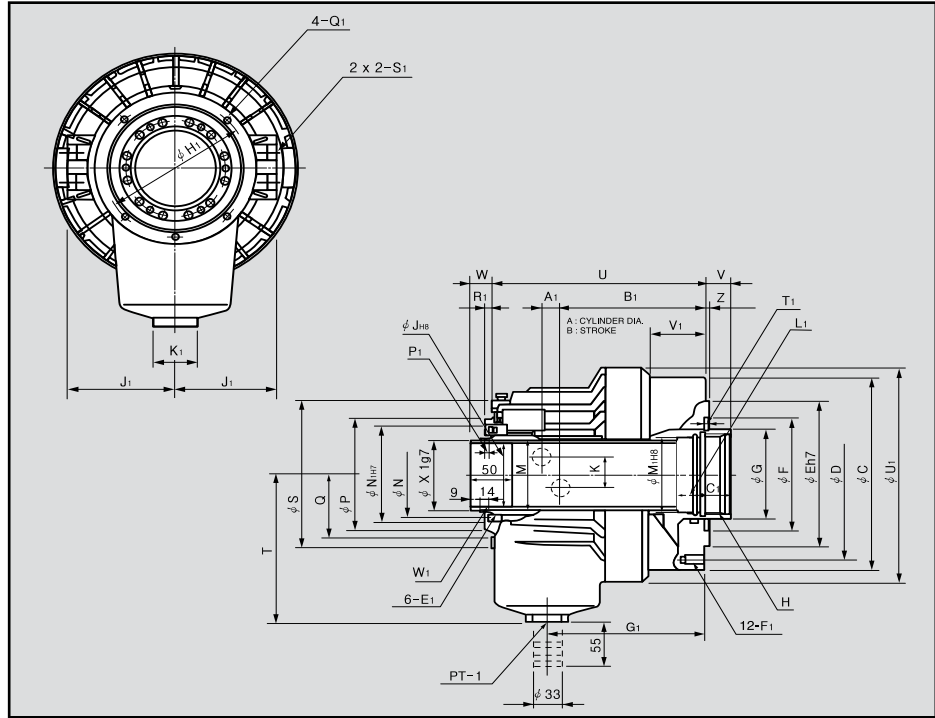
	Available I.D.	Cylinder Diameter (mm)	PISTON STROKE (mm)	Piston force		Max. Operating Pressure MPa(kgf/cm ²)	Max. r.p.m min ⁻¹ (r.p.m)	GD ² N·m ² (kgf·m ²)	weight kgf	Total Leakage ℓ (min)	ORDER NO.
				push KN(kgf)	pull KN(kgf)						
SH-13046	46	135	15	42.3(4285)	38.1(3865)	4.0(40.8)	7000	0.2(0.021)	10	3.0	445-318
SH-15052	52	156	22	60(6118)	56(5710)	4.0(40.8)	6200	0.44(0.045)	14	3.9	445-320
SH-17068	68	170	25	63(6531)	59.8(6060)	4.0(40.8)	5600	0.65(0.067)	16.5	4.0	445-322
SH-18077	77	185	25	75.3(7632)	69.6(7087)	4.0(40.8)	5000	0.83(0.084)	18	4.2	445-324
SHL-25011	117.5	255	50	132(13390)	121(12305)	4.0(40.8)	2800	1.9(0.193)	40	7.0	445-330

※ Specifications and dimensions for off sizes may vary. ※ Specifications are subject to change without notice.

SYH - High Speed Open Center Cylinder



- High-speed, open-center rotary hydraulic cylinder with large thru hole.
- Built in lock and relief valves.



Dimensions

	C	D	E	F	G	H	J	K	M	N	P	Q	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1
SYH-1036	135	115	100	65	48	M42×1.5	36	30	44.6	55	73	45	104	115	156	15	0	40	25	5	11
SYH-1246	155	130	100	80	65	M55×2.0	46	36	52.9	64	85	51.5	118	115	184	15	0	40	25	5	11.5
SYH-1552	190	170	130	85	70	M60×2.0	52	36	59.6	73	96	57	137	130	191	22	0	47	25	5	12
SYH-1875	215	190	160	120	95	M85×2.0	75	36	84.6	98	121	70	166	160	230	25	0	50	25	5	17.5
SYH-2091	240	215	180	140	110	M100×2.0	91	34	99.6	108	138	79	182	185	253	30	0	55	25	5	21
SYH-2816	325	298	220	195	190	M175×3.0	165	30	174.6	188	222	120	282	250	332.5	42	12	55	25	7	28

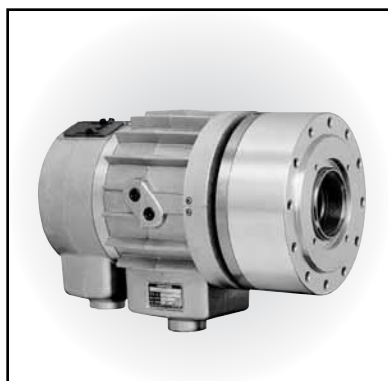
	B ₁	C ₁	E ₁	F ₁	G ₁	H ₁	J ₁	K ₁	L ₁	M ₁	N ₁	P ₁	Q ₁	R ₁	S ₁	T ₁	U ₁	V ₁	W ₁	X ₁
SYH-1036	102.5	25	M5×11	6-M10×17	98	88	73	47	15	38	64	4	M5×10	5	PT3/8	6	158	28	M44×1.5	42
SYH-1246	126.5	30	M6×9	12-M10×20	135	98	76	47	15	50	76	4	M5×10	6	PT1/2	6	200	46	M52×1.5	50
SYH-1552	136	30	M6×9	12-M10×20	145	110	86	47	15	55	85	4	M6×12	7	PT1/2	6	220	51	M58×1.5	56
SYH-1875	153.5	35	M6×9	12-M10×20	166.5	155	101	47	15	80	108	4	M6×12	7	PT1/2	6	242	58	M84×2.0	81
SYH-2091	168	35	M6×14	12-M12×24	183	165	110	47	15	95	120	4	M6×12	7	PT1/2	6	267	66	M99×2.0	96
SYH-2816	221.5	45	M6×12	12-M12×26	238.5	256	162	47	-	-	200	4	M6×12	7	PT9/16-18UNF	7	352	85.5	M173×2.0	170.5

Specifications

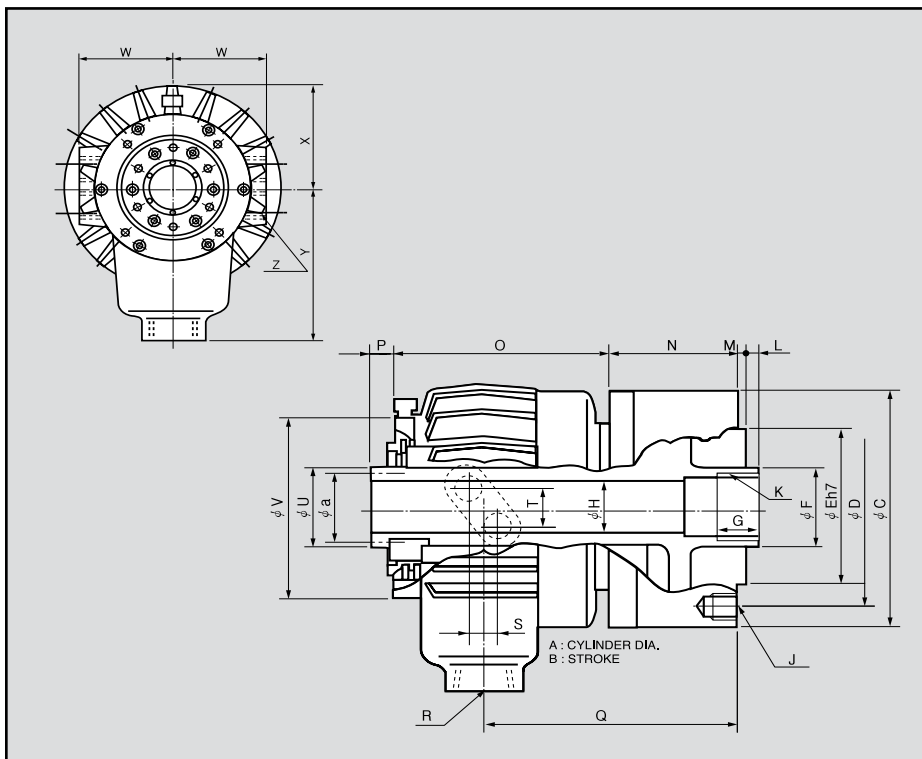
	Available I.D.	Cylinder Diameter (mm)	PISTON STROKE (mm)	Piston Surface Area		Piston force		Max Operating Pressure MPa(kgf/cm ²)	Max. rpm min ¹ (rpm)	GD ² N·m ² (kgf·m ²)	weight kgf	Total Leakage ℓ (min)	Comparable Kitagawa Model	ORDER NO.
				push cm ²	pull cm ²	push KN(kgf)	pull KN(kgf)							
SYH-1036	36	105	15	67	64.5	25(2549)	24(2447)	4.0(40.8)	8000	0.43(0.044)	8.6	3.0	S-1036	445-358
SYH-1246	36,39,40,41,43,45,46	125	15	100	89	38(3875)	33(3365)	4.0(40.8)	7000	0.76(0.078)	12.0	3.0	S-1246	445-360
SYH-1552	46,52,69	155	22	161	150	60(6118)	56(5710)	4.0(40.8)	6200	2.06(0.21)	16.8	3.9	S-1552	445-362
SYH-1875	68,69,75,77	180	25	198	183	74(7546)	69(7036)	4.0(40.8)	4700	3.73(0.83)	26.0	4.2	S-1875	445-364
SYH-2091	78,91	205	30	252	234	94(9585)	88(8973)	4.0(40.8)	3800	5.98(0.61)	33.0	4.5	S-2091	445-366
SYH-2816	165	280	30	377	332	113(11522)	100(10196)	3.3(33.6)	2000	30.92(3.15)	98	8.4	-	445-368

※ Specifications and dimensions for off sizes may vary. ※ Certain models have several thru-hole sizes available. ※ Specifications are subject to change without notice.
 ※ The bore threading varies according to I.D.. The threading in column H applies to the standard I.D. in column J. † Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

HYH - Standard Open-Center Rotary Hydraulic Cylinder



- Open-center rotary hydraulic cylinder with large thru hole.
- Built in lock and relief valves.



Dimensions

	A	B	C	D	E (h7)	F	G	H	J	K	Lmax.	Lmin.	M	N
HYH-0933	95	12	125	100	80	45	25	33.5	6-M8 × 15	M40 × 1.5	+7	-5	5	71
HYH-1236	125	12	155	130	100	50	25	36	12-M10 × 20	M42 × 1.5	+7	-5	5	78
HYH-2511	250	23	310	275	230	140	45	117.5	12-M16 × 32	M130 × 2.0	+18	-5	6	101

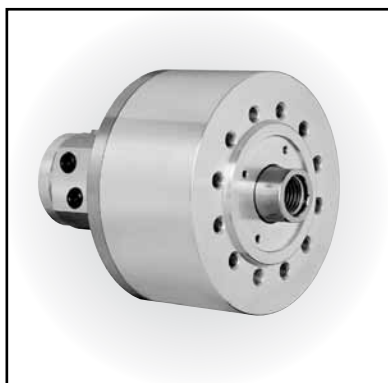
	O	Pmax.	Pmin.	Q	R	S	T	U	V	W	X	Y	Z	a
HYH-0933	119	41	29	142	PT 3/4	11.8	22	M39 × 1.5	104	64	67	110	2 × 2-PT 1/4	-
HYH-1236	134	25	13	157	PT 1	14	26	49.6	118	69	80	120	2 × 2-PT 3/8	43
HYH-2511	209	38	15	217	PT 1	27	20	134.6	232	125	135.5	215	2 × 2-PT 3/8	127

Specifications

	Thru-Hole Diameter (mm)	PISTON STROKE (mm)	Piston Surface Area		Piston force		Max. Operating Pressure MPa(kgf/cm²)	Total Leakage ℓ (min)	Max. rpm min⁻¹ (rpm)	weight kgf	GD² N·m²(kgf·m²)	Comparable Kitagawa Model	ORDER NO.
			push cm²	pull cm²	push KN(kgf)	pull KN(kgf)							
HYH-0933	33	12	58	55	22.0(2243)	20.6(2100)	4.0(40.8)	3.0	8000	8.5	0.31(0.032)	F-0933H	445-403
HYH-1236	36	12	103	103	37.0(3773)	37(3773)	4.0(40.8)	3.0	6700	13	0.88(0.09)	F-1236H	445-404
HYH-2511	117.5	23	348	336	125.0(12746)	120(12236)	4.0(40.8)	7.0	2800	60	17.5(1.78)	F-2511H	445-405

※ Specifications are subject to change without notice. † Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

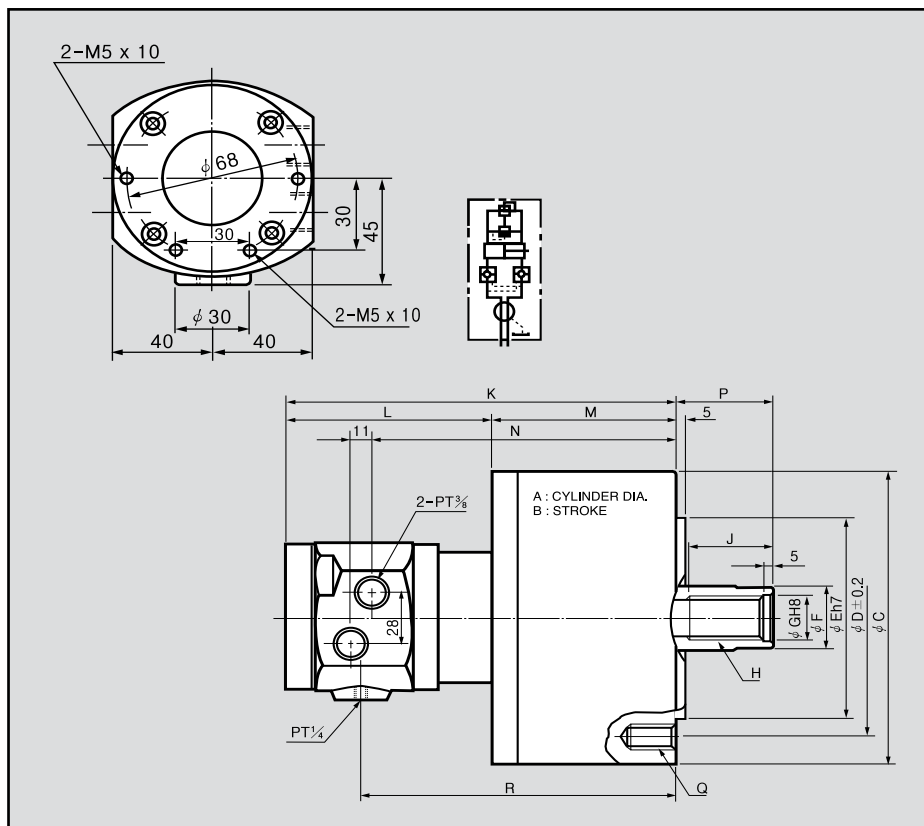
Y-R – Closed-Center Rotary Hydraulic Cylinder



- Closed-center, rotary hydraulic cylinder.
- Built in lock and relief valves.



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SEE PAGE 5-94



Dimensions

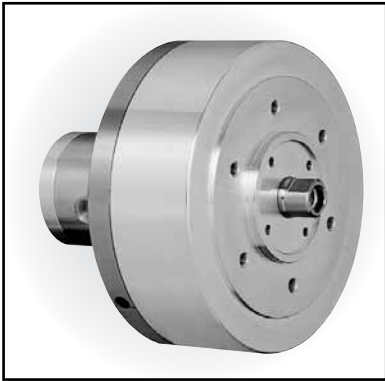
	A	B	C	D	E	F	G	H	J	K	L	M	N	Pmax.	Pmin.	Q	R
Y-0715R	75	15	104	90	65	30	21	M20×2.5	35	172	106	66	127	46	31	6-M6×20	133
Y-1020R	105	20	135	100	80	30	21	M20×2.5	35	197	108	89	152	45	25	6-M10×20	158
Y-1225R	125	25	160	130	110	35	25	M24×3.0	44	205	108	97	160	51	26	6-M12×24	166
Y-1530R	150	30	190	130	110	45	31	M30×3.5	45	214	108	106	169	56	26	12-M12×24	175
Y-2035R	200	35	245	145	120	55	37	M36×4.0	60	228	106	122	183	69	34	12-M16×30	189

Specifications

	PISTON STROKE (mm)	Piston Surface Area		Piston force		Max. Operating Pressure MPa(kgf/cm ²)	Total Leakage ℓ (min)	Max. rpm min ⁻¹ (r.p.m)	weight kgf	GD ² N·m ² (kgf·m ²)	Comparable Kitagawa Model	ORDER NO.
		push cm ²	pull cm ²	push KN(kgf)	pull KN(kgf)							
Y-0715R	15	44	37	16.6(1693)	13.9(1417)	4.0(40.8)	0.8	6000	4.0	0.118(0.012)	Y-0715R	445-410
Y-1020R	20	86	79	2.0(3264)	29(2957)	4.0(40.8)	0.8	6000	7.1	0.49(0.05)	Y-1020R	445-411
Y-1225R	25	122	113	46.0(4692)	42(4283)	4.0(40.8)	0.8	6000	10	0.88(0.09)	Y-1225R	445-412
Y-1530R	30	176	160	66.0(6732)	60(6118)	4.0(40.8)	0.8	5500	13.5	1.86(0.19)	Y-1530R	445-413
Y-2035R	35	314	290	117.0(11934)	108(11013)	4.0(40.8)	0.8	5500	22	3.82(0.39)	Y-2035R	445-414

※ Total leakage pressure: 3.0 Mpa (30.6 kgf/cm²) at 50_i/EC. ※ Specifications are subject to change without notice. † Kitagawa is a registered trade mark of Kitagawa Iron Works Co. Ltd.

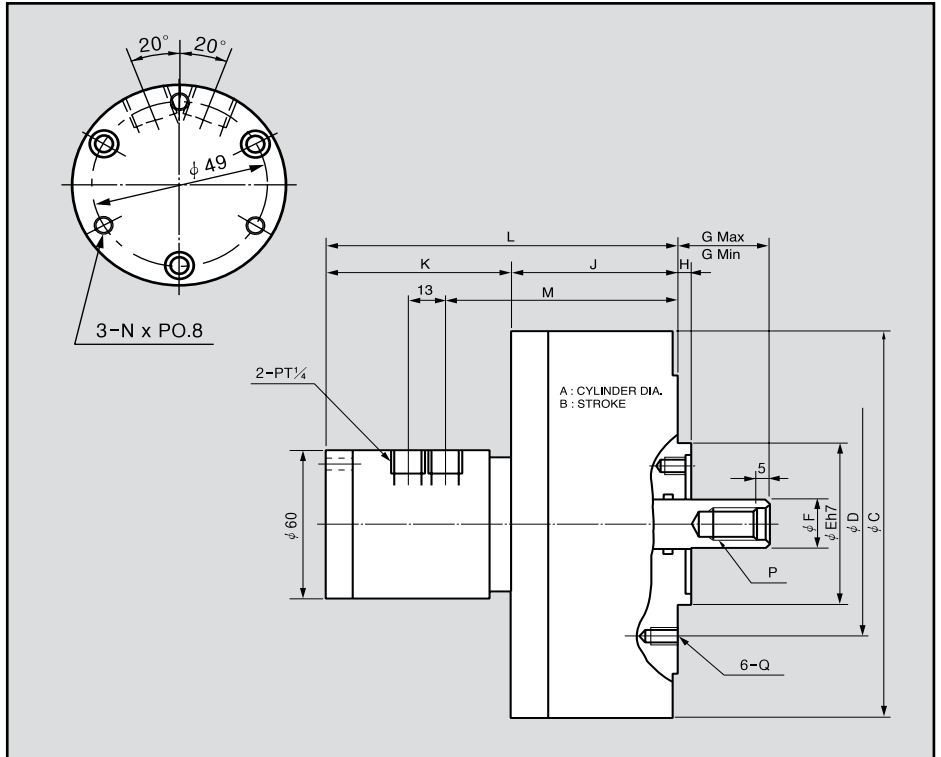
AY-R – Closed-Center Rotary Air Cylinder



- Closed-center rotary air cylinder.
- Simplistic design reduces maintenance.



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Dimensions

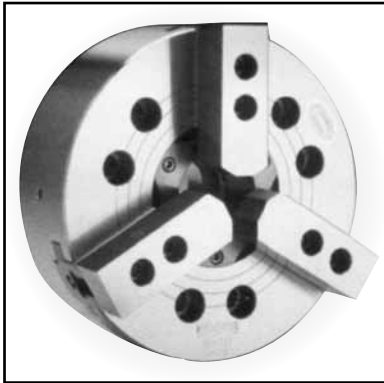
	A	B	C	D	E(h7)	F	G		H	J	K	L	M	N	Q	P
							max.	min.								
AY-1005R	100	5	128	90	65	20	30	25	5	53	70	123	79	M5	M6×11	M12×22
AY-1315R	130	15	156	90	65	20	35	20	5	63	70	133	89	M5	M6×11	M12×22
AY-1720R	170	20	200	100	80	25	65	45	5	82	70	152	108	M5	M10×16	M16×30
AY-2225R	220	25	255	130	110	30	71	46	5	93	70	163	119	M5	M12×20	M20×35
AY-2730R	270	30	305	130	110	35	76	46	5	103	74.5	177.5	133.5	M5	M12×20	M24×40

Specifications

	PISTON STROKE (mm)	Piston Surface Area		Piston force (5kgf/cm ²)	Max. Operating Pressure (kgf/cm ²)	Max. r.p.m (r.p.m)	weight (kgf)	GD ² N·m ² (kgf·m ²)	ORDER NO.
		push cm ²	pull cm ²						
AY-1005R	5	78.5	73.6	515.2	8	5000	4.1	0.07	445-435
AY-1315R	15	131.0	128.0	770	8	5000	5.2	0.07	445-436
AY-1720R	20	225.0	220.1	1320	8	5000	8.3	0.11	445-437
AY-2225R	25	378.0	371.1	2230	8	4000	13.3	0.25	445-438
AY-2730R	30	570.4	560.8	3370	8	3000	18.7	0.75	445-439

※ Specifications are subject to change without notice.

Power Chucks B & BT Series



B Series

Three-jaw and two-jaw wedge style power chucks are ideal for high speed chucking, bar chucking and universal machining. These deliver consistent accuracy and repetitive chucking.

Special Features:

- Large Thru-Hole
- Strong Clamping force
- High Speed
- Compact and Lightweight
- Direct Mount
- High Accuracy and High Endurance

SPECIFICATIONS

MODEL	UNIT	B-15A08	B-15A11	B-18A08	B-18A11	B-21A11	B-21A15	B-24A11	B-24A15
Spindle Nose		A2-8	A2-11	A2-8	A2-11	A2-11	A2-15	A2-11	A2-15
Thru-Hole	in.	4.626	4.626	4.626	4.626	5.512	5.512	6.496	6.496
Jaw Stroke (Diameter)	in.	0.417	0.417	0.417	0.417	0.417	0.417	0.417	0.417
Plunger Stroke	in.	0.906	0.906	0.906	0.906	0.906	0.906	0.906	0.906
Max. Draw Bar Pull Force	lbs.	15639	15639	15639	15639	19824	19824	19824	19824
Max. Gripping Force	lbs.	39648	39648	39648	39648	51542	51542	51542	51542
Max Speed	rpm	2500	2500	2000	2000	1700	1700	1400	1400
Net Weight	lbs.	245.8	230.6	405.0	380.0	540.7	528.6	638.8	627.8
GD ²	lbs.+ft ²	216.9	208.6	471.8	452.8	908.1	877.2	1628.8	1598.0
Matching Cylinder		F2511H	F2511H	F2511H	F2511H	F2511H	F2511H	F2511H	F2511H
Matching Soft Top Jaw		B015	B015	B015	B015	B018	B018	B018	B018
Matching Hard Top Jaw		GT15	GT15	GT15	GT15	HB18B2	HB18B2	HB18B2	HB18B2



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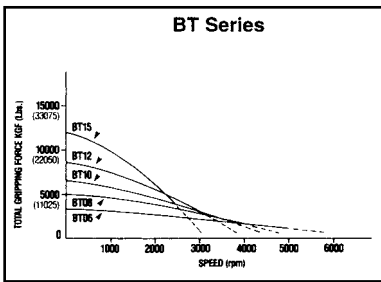
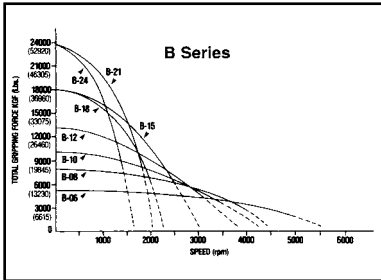


BT Series

MODEL	UNIT	BT15A08	BT15A11
Spindle Nose	in.	A2-8	A2-11
Thru-Hole	in.	4.626	4.626
Jaw Stroke (Diameter)	in.	0.417	0.417
Plunger Stroke	in.	0.906	0.906
Max. Draw Bar Pull Force	lbs.	10352	10352
Max. Gripping Force	lbs.	26432	26432
Max Speed	rpm	2500	2500
Net Weight	lbs.	234.8	219.6
GD ²	lbs.+ft ²	199.4	191.1
Matching Cylinder		F2511H	F2511H
Matching Soft Top Jaw		B015	B015

U.S. Patent NO 4410192

B & BT Series (CONT'D)



Model B and BT Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground to assure consistent accuracy and performance.

Lubrication nipple in each base jaw.

Master Jaw Serration:

Chuck size 6" to 18" 1.5mm x 60°
 Chuck size 21" & 24" 3 mm x 60°

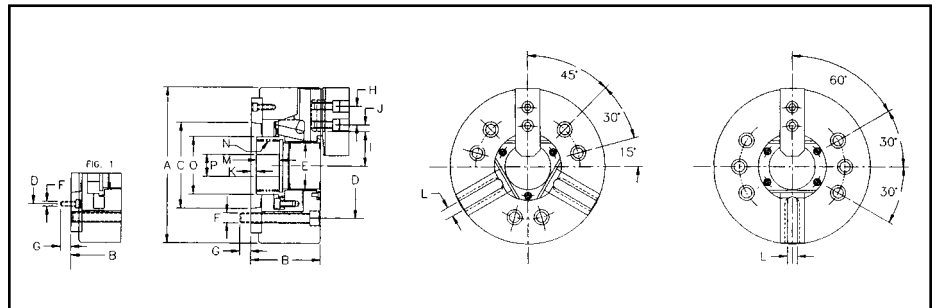
Mounting:

Direct mounting to fit ASA B5.9 type A
 (interchangeable with DIN 55026)

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.

DIMENSIONAL DRAWINGS (Fig. 1)



**Gripping
 Characteristics
 Graphs**



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DIMENSIONS (Dimension in inches)

MODEL	B-15A08 BT-15A08	B-15A11 BT-15A11	B-18A08	B-18A11	B-21A11	B-21A15	B-24A11	B-24A15
A	15.000	15.000	17.717	17.717	20.866	20.866	24.016	24.016
B	6.299	5.866	6.299	5.866	6.890	6.339	7.244	6.9693
C	5.501	7.751	5.501	7.751	7.751	11.250	7.751	11.250
D	6.750	9.252	6.750	9.252	9.252	13.000	9.252	13.000
E	4.626	4.626	4.626	4.626	5.512	5.512	6.496	6.496
F	6xM16	6xM20	6xM16	6xM20	6xM20	6xM22	6xM20	6xM22
G	0.945	1.102	0.945	1.102	1.181	1.339	1.181	1.378
H	1.693	1.693	1.693	1.693	2.362	2.362	2.362	2.362
I max.	3.228	3.228	3.228	3.228	3.878	3.878	4.252	4.252
I min.	3.020	3.020	3.020	3.020	3.669	3.669	4.043	4.043
J max.	1.724	1.724	3.083	3.083	3.448	3.448	4.630	4.630
J min.	0.719	0.719	0.719	0.719	0.847	0.847	0.847	0.847
K max.	1.732	1.299	1.732	1.299	2.047	1.496	2.402	1.850
K min.	0.827	0.394	0.827	0.394	1.142	0.591	1.496	0.945
L	0.866	0.866	0.866	0.866	0.984	0.984	0.984	0.984
M	1.299	1.299	1.299	1.299	1.299	1.299	1.378	1.378
N max.	M130x2.0	M130x2.0	M130x2.0	M130x2.0	M155x3.0	M155x3.0	M175x3.0	M175x3.0
O	5.472	5.472	5.472	5.472	6.693	6.693	7.362	7.362
P	2.362	2.362	2.362	2.362	3.150	3.150	3.150	3.150

B-15A08, B18A08, B-21A11, B-24A11, BT10A06, BT12A06, and BT15A08 are referred to in Fig. 1.
 Draw nut is supplied without thread.

Power Chucks B200 & BT200 Series

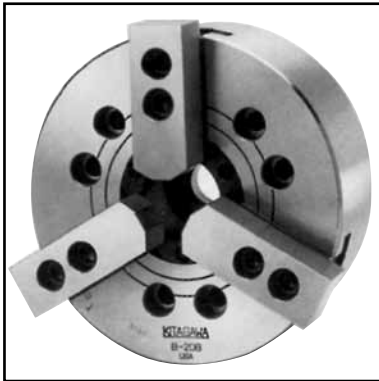
Three-jaw and two-jaw wedge style power chucks deliver up to 20% more speed, gripping force and bore size when compared to conventional chucks. The B200 Series Chucks have the largest bores of any wedge style power chuck. These deliver consistent accuracy and repetitive chucking.



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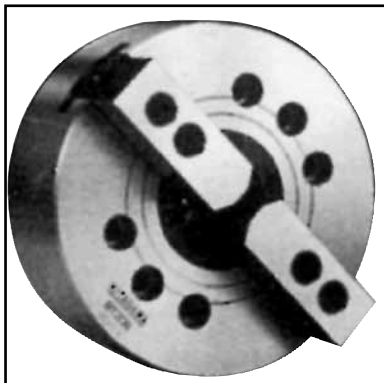
Special Features:

- Large Thru-Hole
- Compact and Lightweight
- Strong Clamping Force
- Direct Mount
- High Speed
- High Accuracy and High Endurance



B200 Series

MODEL	UNIT	B204	B205	B206A05	B208A06	B210A06	B210A08	B212A06	B212A08
Spindle Nose		3.346	4.331	A2-5	A2-6	A2-6	A2-8	A2-6	A2-8
Thru-Hole	in.	1.024	1.299	1.772	2.047	2.953	2.953	3.583	3.583
Jaw Stroke (Diameter)	in.	0.213	0.213	0.217	0.291	0.346	0.346	0.417	0.417
Plunger Stroke	in.	0.394	0.394	0.472	0.630	0.748	0.748	0.906	0.906
Max. Draw Bar Pull Force	lbs.	3150	3930	4846	7808	9471	9471	12115	12115
Max. Gripping Force	lbs.	6400	8090	12555	19292	24449	24449	31718	31718
Max Speed	rpm	8000	7000	6000	5000	4200	4200	3300	3300
Net Weight	lbs.	8.8	14.7	27.1	48.5	81.1	75.1	122.9	117.0
GD ²	lbs.+ft ²	0.52	1.4	5.2	15.6	29.9	28.9	65.7	64.7
Matching Cylinder		F0933H	F0933H	S1246	S1552	S1875	S1875	S2091	S2091
Matching Soft Top Jaw		BR04	BR05	B006	B008	B010	B010	BR13	BR13
Matching Hard Top Jaw		GT04	GT04	GT06	GT08	GT10	GT10	GT13	GT13

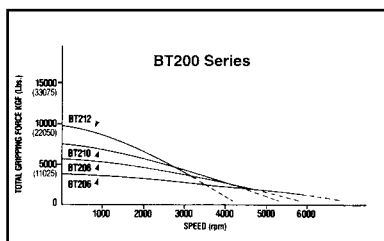
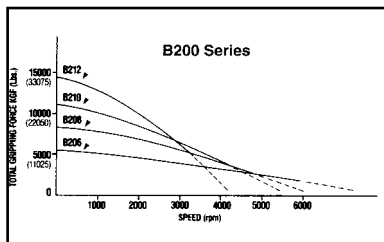


BT200 Series

MODEL	UNIT	BT205	BT206A05	BT208A06	BT210A06	BT210A08	BT212A06	BT212A08
Spindle Nose		4.331	A2-5	A2-6	A2-6	A2-8	A2-6	A2-6
Thru-Hole	in.	1.299	1.772	2.047	2.953	2.953	3.583	3.583
Jaw Stroke (Diameter)	in.	0.213	0.217	0.291	0.346	0.346	0.417	0.417
Plunger Stroke	in.	0.394	0.472	0.630	0.748	0.748	0.906	0.906
Max. Draw Bar Pull Force	lbs.	2625	3258	5053	6401	6401	8242	8242
Max. Gripping Force	lbs.	5383	8535	12577	16621	16621	21562	21562
Max Speed	rpm	7000	6000	5000	4200	4200	3300	3300
Net Weight	lbs.	14.3	26.7	45.4	76.2	70.3	112.1	106.2
GD ²	lbs.+ft ²	1.4	5.1	14.7	28.0	27.0	60.0	59.0
Matching Cylinder		S1036	S1246	S1552	S1875	S1875	S2091	S2091
Matching Soft Top Jaw		BR05	B006	B008	B010	B010	BR13	BR13
Matching Hard Top Jaw		-	-	-	-	-	-	-

U.S. Patent NO 4410192

B200 & BT200 Series (CONT'D)



Model B200 and BT200 Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground to assure consistent accuracy and performance.

Lubrication nipple in each base jaw.

Master Jaw Serration:

Chuck size 6" to 12" 1.5 mm x 60°

Mounting:

Direct mounting to fit ASA B5.9 type A
(interchangeable with DIN 55026)

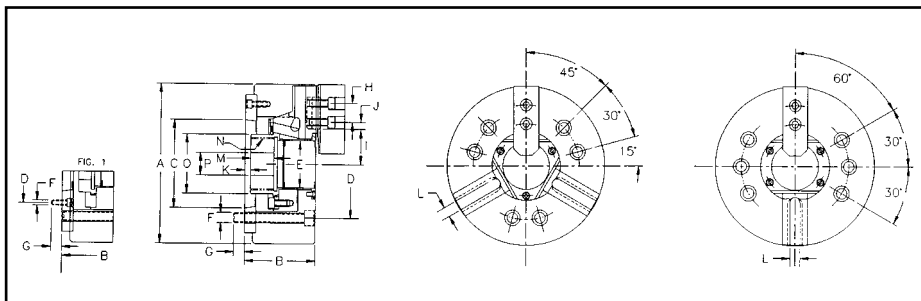
Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.



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DIMENSIONAL DRAWINGS

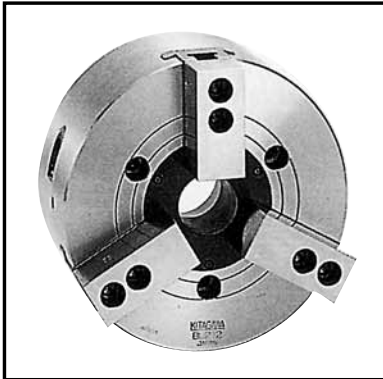


DIMENSIONS (Dimension in inches)

MODEL	B206A05 BT206A05	B208A06 BT208A06	B210A06 BT210A06	B210A08 BT210A08	B212A06 BT212A06	B212A08 BT212A08
A	6.654	8.268	10.000	10.000	11.969	11.969
B	3.583	4.055	4.724	4.449	5.079	4.803
C	3.250	4.188	4.188	5.501	4.188	5.501
D	4.125	5.250	5.250	6.750	5.250	6.750
E	1.772	2.047	2.953	2.953	3.583	3.583
F	6xM10	6xM12	6xM12	6xM16	6xM12	6xM16
G	0.630	0.709	0.728	0.945	0.728	0.984
H	0.787	0.984	1.181	1.181	1.181	1.181
I max.	1.260	1.524	2.008	2.008	2.413	2.413
I min.	1.152	1.378	1.835	1.835	2.205	2.205
J max.	0.896	1.171	1.329	1.329	1.803	1.803
J min.	0.364	0.581	0.561	0.561	0.621	0.621
K max.	1.024	1.240	1.319	1.043	1.299	1.024
K min.	0.551	0.610	0.571	0.295	0.394	0.118
L	0.472	0.551	0.630	0.630	0.827	0.827
M	0.591	0.650	0.787	0.787	0.906	0.906
N max.	M55X2.0	M60X2.0	M85X2.0	M85X2.0	M100X2.0	M100X2.0
O	2.362	2.598	3.701	3.701	4.252	4.252
P	0.787	1.181	1.772	1.772	1.969	1.969

B210A06, B212A06, BT210A06, BT212A06 are referred to in Fig. 1.
Draw nut is supplied without thread.

Lever Style Power Chucks BL200 Series



BL200 Series

Three-jaw lever style power chucks are ideal for applications requiring extra long jaw stroke. These deliver consistent accuracy and repetitive chucking.

Special Features:

- Large Thru-Hole
- Extra Long Stroke
- Suitable for Automated Systems
- Compact and Lightweight
- Direct Mount
- High Accuracy and High Endurance

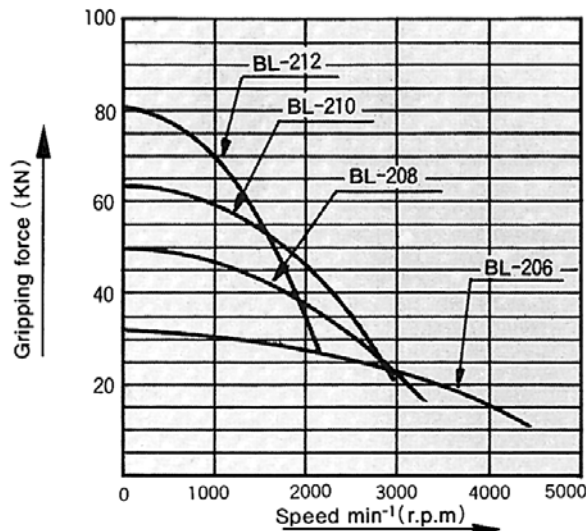


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SEE PAGE 5-94

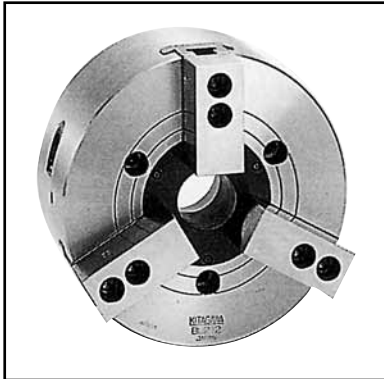
MODEL	UNIT	BL-206	BL-208	BL-210	BL-212
Open Center (Diameter)	in.	1.102	1.772	2.087	2.480
Jaw Stroke (Diameter)	in.	0.787	0.984	1.181	1.378
Plunger Stroke	in.	0.591	0.748	0.866	0.984
Max. Draw Bar Pull Force	lbs.	6314	9218	12034	15554
Max. Gripping Force	lbs.	7040	11000	14080	18040
Max Speed	rpm	4500	3300	3000	2200
Net Weight	lbs.	30.8	55.0	94.6	165.0
GD ²	lbs.+ft ²	3.4	15.8	29.4	73.4
Matching Cylinder		S1246	S1552	S1875	S2091
Matching Hard Top Jaw		GT06	GT08	GT10	GT13
Matching Soft Top Jaw		B006	B008	B010	BR13

(1) With Soft Top Jaw

Gripping Characteristic Graph



BL200 Series (CONT'D)



BL200 Series

Model BL200 Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground to assure consistent accuracy and performance.

Lubrication nipple in each base jaw.

Master Jaw Serration:

Chuck size 6" to 12" 1.5 mm x 60°

Mounting:

Direct mounting to fit ASA B5.9 type A
(interchangeable with DIN 55026)

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.

DIMENSIONAL DRAWINGS

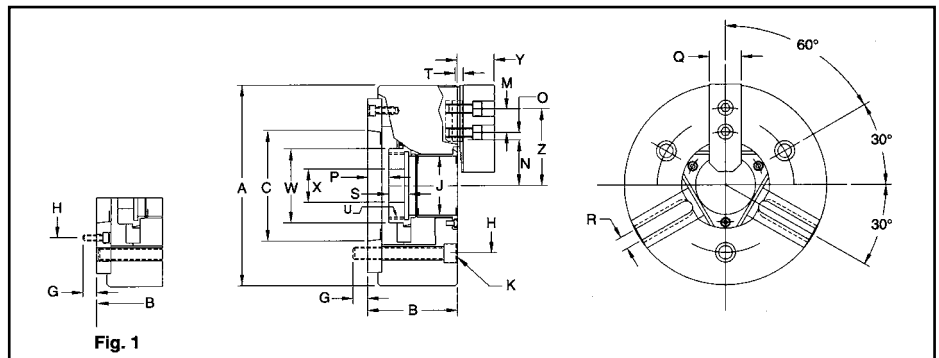


Fig. 1



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DIMENSIONS (Dimension in inches)

MODEL	BL-206A05	BL-208A06	BL-210A06*	BL-210A08	BL-212A06*	BL-212A08
A	6.496	8.268	10.000	10.000	11.969	11.969
B	3.819	4.409	5.394	5.118	6.220	5.945
C	3.250	4.188	4.188	5.501	4.188	5.501
G	0.551	0.709	0.728	0.984	0.728	0.984
H	4.126	5.252	5.252	6.748	5.252	6.748
J	1.102	1.772	2.087	2.087	2.480	2.480
K	3-M10	3-M12	3-M16	3-M16	3-M16	3-M16
M	0.787	0.984	1.181	1.181	1.181	1.181
N max.	1.516	2.087	2.461	2.461	2.933	2.933
N min.	1.122	1.594	1.870	1.870	2.244	2.244
O max.	0.660	0.818	1.034	1.034	1.507	1.507
O min.	0.364	0.463	0.443	0.443	0.502	0.502
P max.	0.984	0.787	0.748	0.472	1.307	1.031
P min.	0.394	0.039	-0.118	-0.394	0.3231	0.047
Q	1.024	1.378	1.575	1.575	1.969	1.969
R	0.472	0.551	0.630	0.630	0.827	0.827
S	0.945	1.260	1.575	1.575	1.496	1.496
T	0.079	0.079	0.079	0.079	0.118	0.118
U max.	M38x1.5	M55x2.0	M65x2.0	M65x2.0	M75x2.0	M75x2.0
W	1.772	2.480	2.874	2.874	3.268	3.268
X	0.787	1.181	1.772	1.772	1.969	1.969
Y	1.142	1.535	1.693	1.693	2.047	2.047
Z	2.598	3.740	4.330	4.330	4.370	4.370

* See figure 1

Counter Balanced Power Chucks HOH Series



HOH Series

Three-jaw wedge style power chucks are ideal for ultra high speed applications. They provide maximum gripping force at high speeds. Their unique built-in counter balanced mechanism assures stabilized jaw force every time. These deliver consistent accuracy and repetitive chucking. Counter balance allows for lower pressure gripping which is suitable for thin wall materials.

Special Features:

- High Speed
- Large Thru-Hole
- Greater Gripping Forces at High Speeds
- High Accuracy and High Endurance
- Compact and Lightweight
- Direct Mount
- Lower Gripping Force Capability

SPECIFICATIONS

MODEL	UNIT	HOH-206	HOH-208	HOH-10K	HOH-12K	HOH-15K
Spindle Nose (2)		A2-5	A2-6	A2-8	A2-8	A2-11
Open Center (Diameter)	in.	1.772	2.047	2.559	3.071	4.626
Jaw Stroke (Diameter)	in.	0.217	0.291	0.346	0.417	0.417
Plunger Stroke	in.	0.472	0.630	0.748	0.906	0.906
Max. Draw Bar Pull Force	lbs.f	4840	7480	8370	10792	15638
Max. Gripping Force	lbs.f	12540	18480	21806	28414	39647
Max Speed	rpm	7000	6000	4500	3500	2800
Net Weight	lbs.	34.5	66.0	79.5 (1)	133.0 (1)	244.5 (1)
GD ²	lbs.+ft ²	6.27	17.9	30.1	71.2	216.0
Matching Cylinder		S1246	S1552	F1768H	F2078H	F2511H
Matching Hard Top Jaw		GT06	GT08	GT10	GT12	GT15
Matching Soft Top Jaw		B006	B008	B010	B012	B015

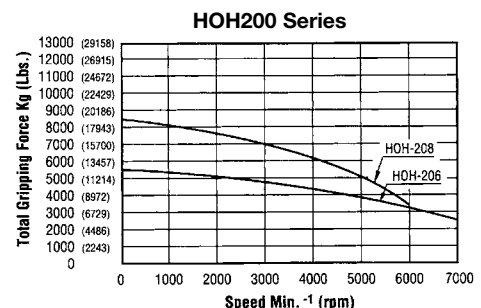
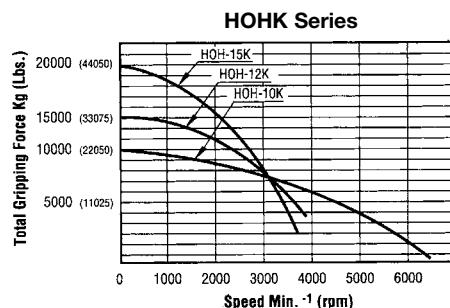
(1) Without top jaws.

(2) Other spindle mounts available.



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GRIPPING CHARACTERISTIC GRAPHS



U.S. Patent NO 4410192

HOH Series (CONT'D)



HOH Series

Uses can vary from those high-speed operations requiring heavy jaw forces for roughing work to those requiring light jaw forces for preventing part distortions. This Counter Balanced Chuck design assures accurate, repetitive chucking.

Model HOH Chucks are ultra high speed three-jaw counter balanced open center power chucks, direct mounted on ASA B5.9 type A spindles.

Model HOH Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.

Lubrication nipple in each base jaw.

Base Jaw Serration

Chuck size 6" to 15" 1.5 mm X 60°

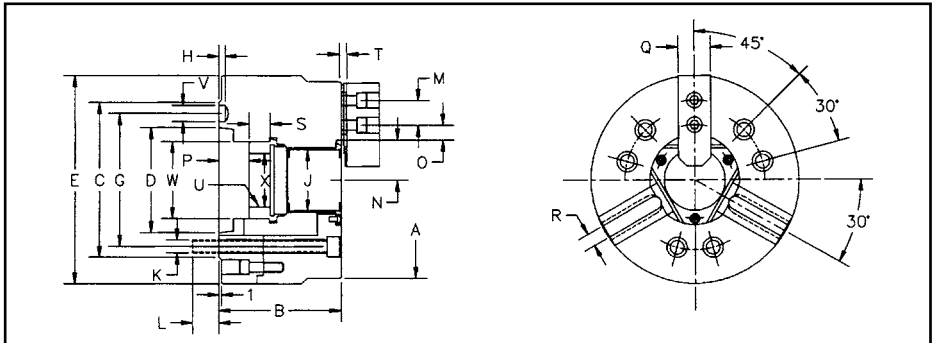
Mounting:

Direct mounting to fit ASA B5.9 type A (interchangeable with DIN 55026) DIN 55021, 55022 and 55027 mounting are available on request.

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.

DIMENSIONAL DRAWINGS



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SOFT TOP JAW DIMENSIONS (Dimension in inches)

MODEL	HOH-206	HOH-208	HOH-10K	HOH-12K	HOH-15K	MODEL	HOH-206	HOH-208	HOH-10K	HOH-12K	HOH-15K
A	6.654	8.268	10.000	11.969	15.000	O max.	0.945	1.181	1.329	1.919	1.841
B	3.740	4.331	4.488	4.921	6.063	O min.	0.295	0.413	0.443	0.443	0.541
C	5.315	6.496	8.268	8.268	11.024	P max.	1.181	1.398	0.551	1.142	1.496
D	3.2503	4.1881	5.5009	5.5005	7.7505	P min.	0.709	0.768	-0.197	0.236	0.591
E	6.890	8.858	10.000	11.969	15.000	Q	1.024	1.378	1.575	1.969	2.441
G	4.125	5.250	6.750	6.750	9.252	R (H8)	0.472	0.551	0.630	0.709	0.866
H	0.256	0.256	0.315	0.315	0.394	S	0.591	0.787	1.181	1.299	1.299
J	1.772	2.047	2.559	3.071	4.626	T	0.197	0.197	0.197	0.197	0.197
K	M10	M12	M16	M16	M20	U max.	M55x2.0	M60x2.0	M75x2.0	M88x2.0	M130x2.0
L	0.669	0.630	0.945	0.906	1.181	V ^{+0.004} ₋₀	0.641	0.766	0.953	0.953	1.156
M	0.787	0.984	1.181	1.181	1.693	W	2.362	2.598	3.327	3.780	5.472
N max.	1.260	1.524	1.969	2.283	3.228	X	0.787	1.181	1.772	1.969	2.362
N min.	1.152	1.378	1.795	2.075	3.020						

Closed Center Power Chucks N Series



N Series

Three-jaw wedge style power chucks with closed center. Cost effective solutions for high speed chucking and universal machining where no thru-hole is required. These deliver consistent accuracy and repetitive chucking.

Special Features:

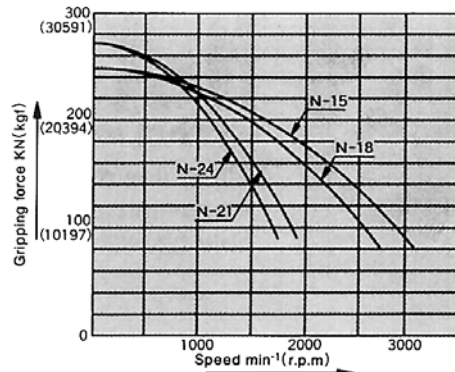
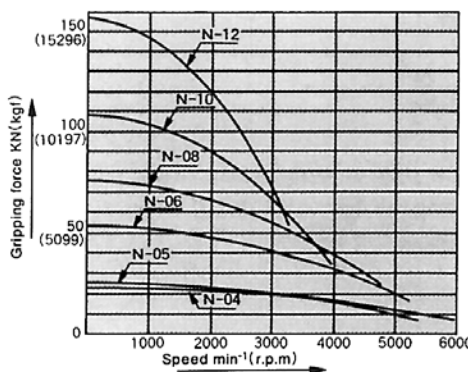
- High Speed
- Strong Clamping Force
- Interchangeable Top Tooling
- High Accuracy and High Endurance
- Compact and Lightweight
- Direct Mount

SPECIFICATIONS

MODEL	UNIT	N-06A05	N-08A06	N-10A06	N-10A08	N-12A06	N-12A08	N-15A08	N-15A11	N-18A08	N-18A11	N-21A08	N-21A11	N-21A15	N-24A11	N-24A15
Spindle Nose		A2-5	A2-6	A2-6	A2-8	A2-6	A2-8	A2-8	A2-11	A2-8	A2-11	A2-8	A2-11	A2-15	A2-11	A2-15
Jaw Stroke (Diameter)	in.	0.335	0.346	0.346	0.346	0.413	0.413	0.630	0.630	0.630	0.630	0.630	0.630	0.630	0.630	0.630
Plunger Stroke	in.	0.787	0.827	0.984	0.984	1.181	1.181	1.378	1.378	1.378	1.378	1.378	1.378	1.378	1.378	1.378
Max. Draw Bar Pull Force	lbs.	4037	5608	6505	6505	9198	9198	18396	18396	18396	18396	18396	18396	18396	18396	18396
Max. Gripping Force	lbs.	11777	16826	24229	24229	34995	34995	55860	55860	55860	55860	61244	61244	61244	61244	61244
Max Speed	rpm	5270	4760	4010	4010	3380	3380	3040	3040	2710	2710	1940	1940	1940	1760	1760
Net Weight (1)	lbs.	30.8	59.4	88.0	88.0	147.4	145.2	231.0	226.6	294.8	288.2	442.2	435.6	418.0	530.2	514.8
GD ²	lbs.+ft ²	4.0	11.8	26.8	26.2	60.8	60.2	156.0	150.0	198.0	194.0	414.0	410.0	398.0	590.2	564.0
Matching Cylinder		Y1020R	Y1225R	Y1225R	Y1225R	Y1530R	Y1530R	Y2035R	Y2035R	Y2035R	Y2035R	Y2035R	Y2035R	Y2035R	Y2035R	Y2035R
Matching Hard Top Jaw		GT06	GT08	GT10	GT10	GT12	GT12	HB15N1	HB15N1	HB15N1	HB15N1	HB18B2	HB18B2	HB18B2	HB18B2	HB18B2
Matching Soft Top Jaw		B006	B008	B010	B010	B012	B012	BR15	BR15	BR15	BR15	B018	B018	B018	B018	B018

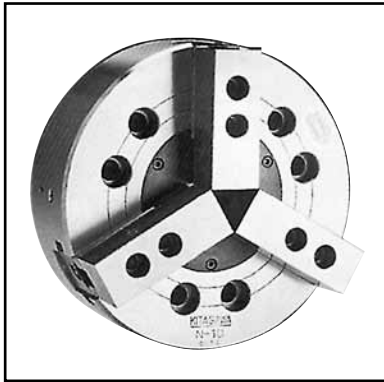
(1) Without soft top jaws.

GRIPPING CHARACTERISTIC GRAPHS



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N Series (CONT'D)



N Series



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Model N Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground to assure consistent accuracy and performance.

Lubrication nipple in each base jaw.

Master Jaw Serration

Chuck size 6" to 18" 1.5 mm X 60° Chuck size 21" to 24" 3 mm X 60°

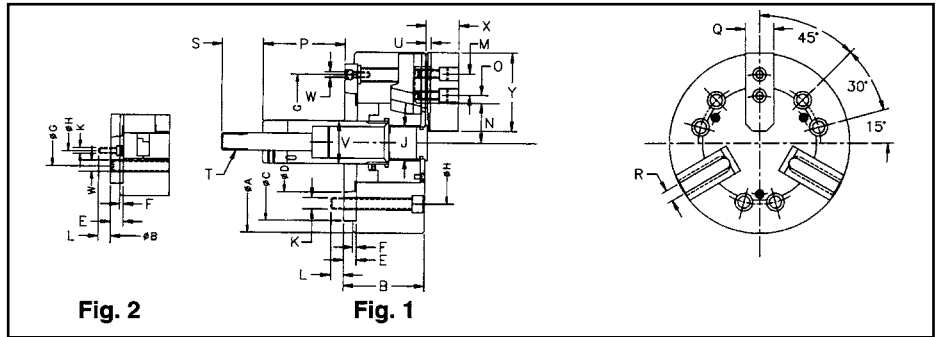
Mounting:

Direct mounting to fit ASA B5.9 type A (interchangeable with DIN 55026)

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.

DIMENSIONAL DRAWINGS



DIMENSIONS (Dimension in inches)

MODEL	N-06A05	N-08A06	N-10A06	N-10A08	N-12A06	N-12A08	N-15A08	N-15A11	N-18A08	N-18A11	N-21A08	N-21A11	N-21A15	N-24A11	N-24A15
A	6.496	8.268	10.000	10.000	11.969	11.969	15.000	15.000	17.717	17.717	20.866	20.866	20.866	24.016	24.016
B	3.307	3.819	4.094	4.016	4.724	4.646	5.118	5.118	5.118	5.118	5.748	5.748	5.748	5.748	5.748
C (H6)	5.512	6.693	8.661	8.661	8.661	8.661	11.811	11.811	11.811	11.811	14.961	14.961	14.961	14.961	14.961
D	3.251	4.188	4.188	5.501	4.188	5.501	5.501	7.751	5.501	7.751	5.501	7.751	11.251	7.751	11.251
E	0.591	0.669	0.787	0.709	0.787	0.709	0.866	0.866	0.866	0.866	1.063	1.063	1.063	1.063	1.063
F	0.197	0.197	0.197	0.197	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
G	4.567	5.906	6.748	7.480	6.748	7.480	9.252	10.236	9.252	10.236	13.000	13.000	13.000	13.000	13.000
H	4.126	5.252	5.252	6.748	5.252	6.748	6.748	9.252	6.748	9.252	6.748	9.252	13.000	9.252	13.000
J	0.827	0.984	1.339	1.339	1.339	1.339	-	-	-	-	-	-	-	-	-
K	6-M10	6-M12	6-M12	6-M16	6-M12	6-M16	6-M16	6-M20	6-M16	6-M20	6-M16	6-M20	6-M22	6-M20	6-M22
L	0.551	0.709	0.709	0.984	0.709	0.984	0.906	1.299	0.906	1.299	0.906	1.102	1.339	1.102	1.339
M	0.787	0.984	1.181	1.181	1.181	1.181	1.693	1.693	1.693	1.693	2.362	2.362	2.362	2.362	2.362
N max.	1.488	1.823	2.012	2.012	2.402	2.402	3.051	3.051	4.252	4.252	3.386	3.386	3.386	4.921	4.921
N min.	1.319	1.650	1.839	1.839	2.195	2.195	2.736	2.736	3.937	3.937	3.071	3.071	3.071	4.606	4.606
O max.	0.148	0.877	1.212	1.212	1.921	1.921	1.921	1.921	1.921	1.921	3.684	3.684	3.684	3.684	3.684
O min.	0.305	0.463	0.443	0.443	0.502	0.502	0.916	0.916	0.916	0.916	1.084	1.084	1.084	1.084	1.084
P max.	3.406	4.331	4.488	5.512	4.685	5.709	3.228	3.228	2.756	2.756	2.756	2.756	2.756	2.756	2.756
P min.	2.618	3.504	3.504	4.528	3.504	4.528	1.850	1.850	1.378	1.378	1.378	1.378	1.378	1.378	1.378
Q	1.220	1.378	1.575	1.575	1.969	1.969	1.969	1.969	1.969	1.969	2.559	2.559	2.559	2.559	2.559
R	0.472	0.551	0.630	0.630	0.709	0.709	1.004	1.004	1.004	1.004	0.984	0.984	0.984	0.984	0.984
S	1.417	1.417	1.417	1.417	1.417	1.417	2.165	2.165	2.165	2.165	2.165	2.165	2.165	2.165	2.165
T	M16x2.0	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5
U	0.157	0.197	0.197	0.197	0.197	0.197	0.079	0.079	0.079	0.079	0.118	0.118	0.118	0.118	0.118
V	1.339	1.496	1.772	1.772	1.969	1.969	2.362	2.362	2.362	2.362	2.362	2.362	2.362	2.362	2.362
W	3-M6	3-M6	6-M16	3-M8	6-M16	3-M8	6-M20	3-M10	6-M20	3-M10	6-M22	6-M22	3-M12	6-M22	6-M12
X	1.378	1.654	1.811	1.811	2.126	2.126	2.402	2.402	2.402	2.402	2.795	2.795	2.795	2.795	2.795
Y	2.835	3.740	4.331	4.331	5.079	5.079	5.315	5.315	5.315	5.315	7.087	7.087	7.087	7.087	7.087
Fig.	1	1	2	1	2	1	2	1	1	2	1	1	2	1	2

Closed Center, Long Stroke Chucks, NL/NLT Series

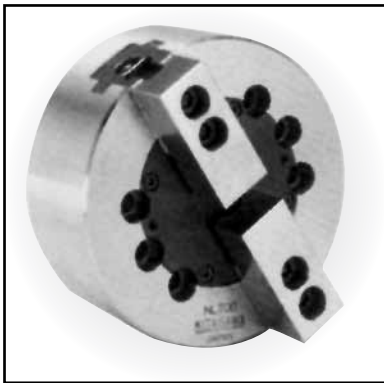


NL Series

Wedge style power chucks with closed center and long stroke.. Cost effective solutions for high speed chucking and universal machining where long stroke and no thru-hole is required. These deliver consistent accuracy and repetitive chucking.

Special Features:

- Long Stroke
- Strong Clamping Force
- Interchangeable Top Tooling
- High Speed
- High Accuracy and High Endurance
- Compact and Lightweight
- Direct Mount



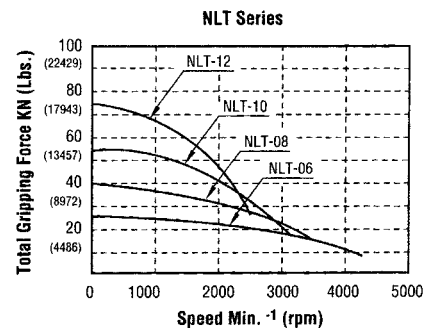
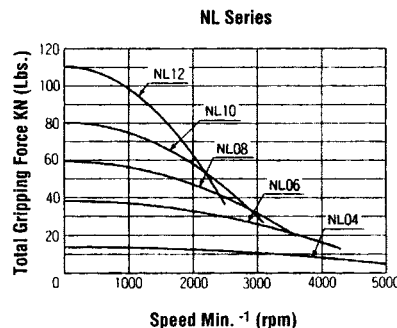
NLT Series

SPECIFICATIONS

MODEL	UNIT	NL/NLT-06A05	NL/NLT-08A06	NL/NLT-10A06	NL/NLT-10A08	NL/NLT-12A06	NL/NLT-12A08
Spindle Nose (2)		A2-5	A2-6	A2-6	A2-8	A2-6	A2-8
Jaw Stroke (Diameter)	in.	0.512	0.638	0.713	0.713	0.764	0.764
Plunger Stroke	in.	0.787	0.984	1.102	1.102	1.181	1.181
Max. Draw Bar Pull Force	lbs.f	3139	4486	5982	5982	8076	8076
Max. Gripping Force	lbs.f	5832	8972	12115	12115	16601	16601
Max Speed	rpm	4300	3600	3100	3100	2500	2500
Net Weight (1)	lbs.	27.5	52.8	79.5	78.9	135.0	134.1
GD ²	lbs.+ft. ²	3.4	10.6	23.6	23.4	57.2	56.6
Matching Cylinder		Y1020R	Y1225R	Y1530R	Y1530R	Y1530R	Y1530R
Matching Hard Top Jaw		GT06	GT08	GT10	GT10	GT12	GT12
Matching Soft Top Jaw		B006	B008	B010	B010	B012	B012

(1) Without soft top jaws.

GRIPPING CHARACTERISTIC GRAPHS



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SEE PAGE 5-94

NL/NLT Series (CONT'D)

Model NL/NLT Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.

Lubrication nipple in each base jaw.

Master Jaw Serration

Chuck size 6" to 12" 1.5 mm X 60°

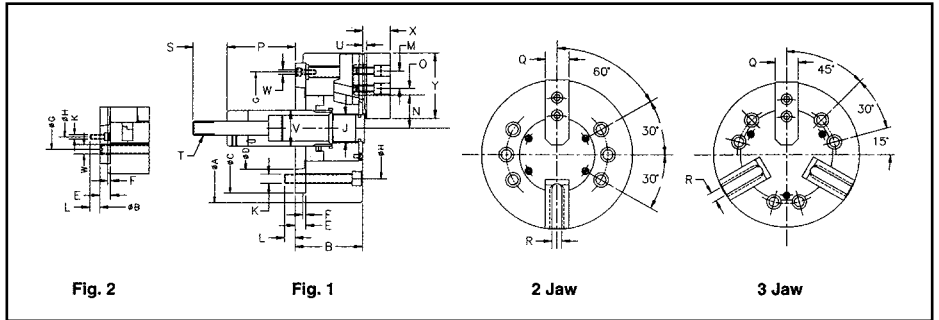
Mounting:

Direct mounting to fit ASA B5.9 type A (interchangeable with DIN 55026)

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts. T-nuts and jaw mounting bolts with wrench, draw nut wrench.

DIMENSIONAL DRAWINGS



DIMENSIONS (Dimension in inches)

MODEL	NL/NLT-06A05	NL/NLT-08A06	NL/NLT-10A06	NL/NLT-10A08	NL/NLT-12A06	NL/NLT-12A08
A	6.496	8.268	10.000	10.000	11.969	11.969
B	3.307	3.346	3.504	3.504	4.173	4.173
C (H6)	5.512	6.693	8.661	8.661	8.661	8.661
D	3.251	4.188	4.188	5.501	4.188	5.501
E	0.591	0.669	0.787	0.709	0.787	0.709
F	0.197	0.197	0.197	0.197	0.236	0.236
G	4.567	5.906	6.748	7.480	6.748	7.480
H	4.126	5.252	6.748	6.748	6.748	6.748
K	6-M10	6-M12	6-M16	6-M16	6-M16	6-M16
L	0.551	0.787	0.709	0.709	0.709	0.709
M	0.787	0.984	1.181	1.181	1.181	1.181
N max.	1.594	1.894	2.142	2.142	2.587	2.587
N min.	1.339	1.575	1.785	1.785	2.205	2.205
O max.	0.542	0.827	1.162	1.162	1.684	1.684
O min.	0.364	0.473	0.453	0.453	0.502	0.502
P max.	3.405	4.488	5.551	5.630	5.630	5.709
P min.	2.618	3.504	4.449	4.528	4.449	4.528
Q	1.220	1.378	1.575	1.575	1.969	1.969
R	0.472	0.551	0.630	0.630	0.630	0.630
S	1.417	1.417	1.417	1.417	1.417	1.417
T	M16x2.0	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5
U	0.157	0.197	0.197	0.197	0.197	0.197
V	1.339	1.496	1.772	1.772	1.969	1.969
W	1.378	1.654	1.811	1.811	2.126	2.126
X	1.378	1.654	1.811	1.811	2.126	2.126
Y	2.835	3.740	4.331	4.331	5.079	5.079
Fig.	1	1	2	1	2	1



**MAKE SURE YOU
GREASE YOUR CHUCK
WITH CHUCK-EEZ®.**
SEE PAGE 5-94

Quick Jaw-Change Chucks QB300 Series



QB300 Series

Three-jaw wedge style power chucks slash downtime and maximize productivity through unique quick change locking mechanism. Jaws can be changed in as little as 30 seconds while delivering consistent 0.0012" accuracy! QB300 Series Quick Jaw-Change chucks do not require long strike cylinders and are fully interchangeable with most power chucks.

Special Features:

- Large Thru-Hole
- 30 Second Jaw-Change
- High Accuracy and High Endurance
- Compact and Lightweight
- Direct Replacement for Most Power Chucks
- High Speed
- Expensive Base Jaws NOT Required
- Long Stroke Cylinder NOT Required

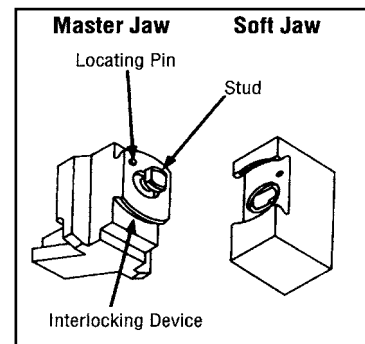
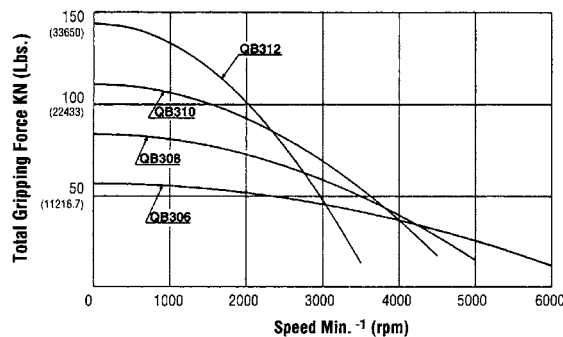
SPECIFICATIONS

MODEL	UNIT	QB306	QB308	QB310	QB312	QB315
Jaw Stroke (Diameter)	in.	0.217	0.291	0.346	0.417	0.417
Plunger Stroke	in.	0.472	0.630	0.748	0.906	0.906
Max. Draw Bar Pull Force	lbs.	4941	7637	9659	12352	15928
Max. Gripping Force	lbs.	12802	18866	24932	32343	40381
Max. Gripping Force at Max Speed	lbs.	4267	6289	8311	11013	13460
Max Speed	rpm	5500	4500	4000	3000	2300
Net Weight	lbs.	27.8	51.1	77.1	123.2	264.0
GD ²	lbs.-ft ²	5.5	16.4	30.1	70.7	-
Matching Cylinder		S1246	S1552	S1875	S2091	F2511H
Min. Gripping O.D.	in.	0.394	0.591	0.866	0.866	-
Max. Gripping O.D.	in.	5.512	7.087	8.268	9.843	-
Gripping Accuracy	in.	0.0012	0.0012	0.0012	0.0012	0.0012
Jaw Change Time (3 Jaws)	sec.	30	30	30	30	30



**MAKE SURE YOU
GREASE YOUR CHUCK
WITH CHUCK-EEZ®.**
SEE PAGE 5-94

GRIPPING CHARACTERISTIC GRAPH



Kitagawa's unique circular lock design assures positive alignment, engagement and peak accuracy.

QB300 Series (CONT'D)

Model QB300 Series Chucks are manufactured from high grade alloy steel. All sliding surfaces are hardened and ground to assure consistent accuracy and performance.

Lubrication nipple in each base jaw.

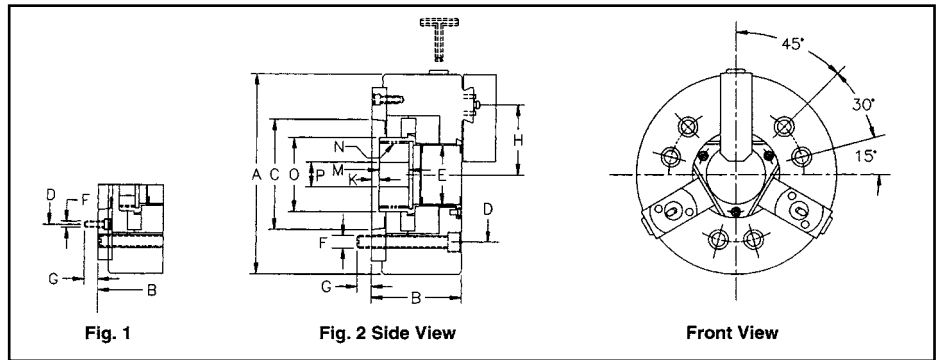
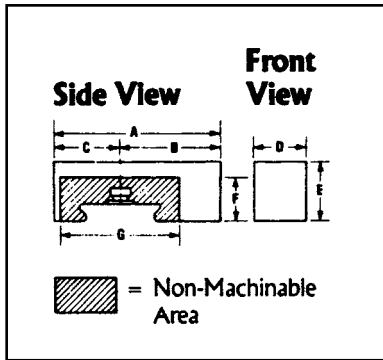
Mounting:

Direct mounting to fit ASA B5.9 type A (interchangeable with DIN 55026)

Standard Equipment:

Chuck assembled with adapter, chuck mounting bolts, wrench, draw nut wrench.

DIMENSIONAL DRAWINGS



MAKE SURE YOU GREASE YOUR CHUCK WITH CHUCK-EEZ®.
SEE PAGE 5-94

QUICK JAW-CHANGE CHUCK DIMENSIONS (Dimension in inches)

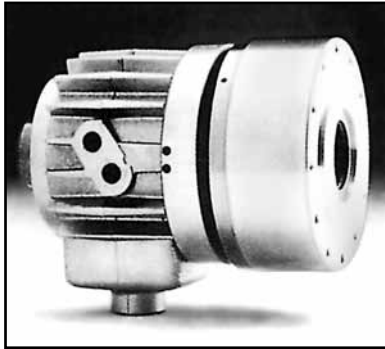
MODEL	QB306A500	QB308A600	QB310A600	QB310A800	QB312A600	QB312A800	QB315
A	6.654	8.268	10.000	10.000	11.969	11.969	15.00
B	3.583	4.055	4.724	4.449	5.079	4.803	5.236
C	3.250	4.188	4.188	5.501	4.188	5.501	-
D	4.125	5.250	5.250	6.750	5.250	6.750	9.252
E	1.772	2.047	2.953	2.953	3.583	3.583	4.626
F	6xM10	6xM12	6xM12	6xM16	6xM12	6xM16	6xM20
G	0.630	0.709	0.728	0.945	0.728	0.984	-
H max.	2.303	2.835	3.465	3.465	4.185	4.185	5.354
H min.	2.195	2.689	3.291	3.291	3.976	3.976	5.146
K max.	1.024	1.240	1.319	1.043	1.299	1.024	0.433
K min.	0.551	0.610	0.571	0.295	0.394	0.118	-0.472
M	0.591	0.650	0.787	0.787	0.906	0.906	1.299
N max.	M55x2.0	M60x2.0	M85x2.0	M85x2.0	M100x2.0	M100x2.0	M130x2.0
O	2.362	2.598	3.701	3.701	4.252	4.252	5.472
P	0.787	1.181	1.772	1.772	1.969	1.969	2.362

QB310A06 and QB312A06 are referred to in Fig. 1. Draw nut is supplied without thread.

SOFT TOP JAW DIMENSIONS (Dimension in inches)

MODEL	6" SB06BB	6" SB06BB-40	8" SB08BB	8" SB08BB-56	10" SB10BB	10" SB108BB-60	12" SB12BB	12" SB12BB-70
A	3.543	3.543	4.173	4.173	4.921	4.921	5.472	5.472
B	2.126	2.126	2.520	2.520	2.992	2.992	3.543	3.543
C	1.417	1.417	1.654	1.654	1.929	1.929	1.929	1.929
D	1.260	1.260	1.457	1.457	1.654	1.694	1.969	1.969
E	1.181	1.575	1.496	2.205	1.654	2.362	1.969	2.756
F	0.945	0.945	1.102	1.102	1.220	1.220	1.339	1.339
G	2.677	2.677	2.992	2.992	3.465	3.465	3.622	3.622
Min Gripping OD	0.394	0.394	0.591	0.591	0.866	0.866	1.181	1.181

FH & FHP Series Hydraulic Cylinders



FH Series



Coolant Collector

Designed to meet the demands of today's high speed CNC bar and chucking lathes. They feature precision finished piston bores and cool running rotary unions for years of trouble-free performance.

Special Features:

- High Speed
- Long Piston Stroke
- Efficient Cooling at High Speeds
- Built-in Check Valves and Pressure Relief Valves
- Long Life and High Endurance

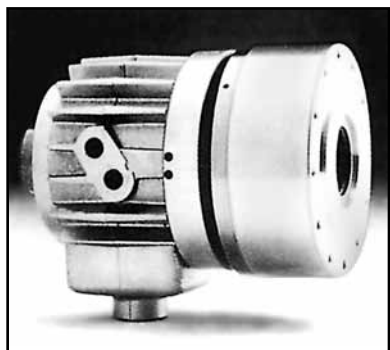
SPECIFICATIONS

MODEL	UNIT	F0933H**	F1236H**	F1546H**	F1768H**	F2078H**	F2511H	F2511HP
Bore	in.	1.299	1.417	1.811	2.677	3.071	4.626	4.626
Piston Stroke	in.	0.472	0.472	0.630	0.748	0.906	0.906	1.969
Piston Area-Pull Side	in. ²	8.25	15.97	24.09	28.47	36.50	52.20	52.20
Piston Area-Push Side	in. ²	8.522	16.01	24.91	28.55	37.77	54.00	54.00
Max. Draw Bar Pull-Side	lbs.	4935	8150	12115	14317	18502	26432	26432
Max. Draw Bar Push-Side	lbs.	4620	8150	12555	14317	19163	27533	27533
Max. Operation Pressure	psi	570	570	570	570	570	570	570
Max. Speed	rpm	8000	6700	6000	4500	3500	2800	2800
GD ²	lbs. • ft. ²	0.8	2.1	5.5	10.0	14.5	42.2	45.0
Net Weight	lbs	18.7	28.6	48.5	74.9	96.9	132.2	138.8
Oil Leakage*	gal/min.	0.7	0.8	1.0	1.0	1.0	2.0	2.0

* The oil leakage rate is reached if the cylinder is used at an operating pressure of 427 psi at oil temperature of 122° F.

** Items out of production.

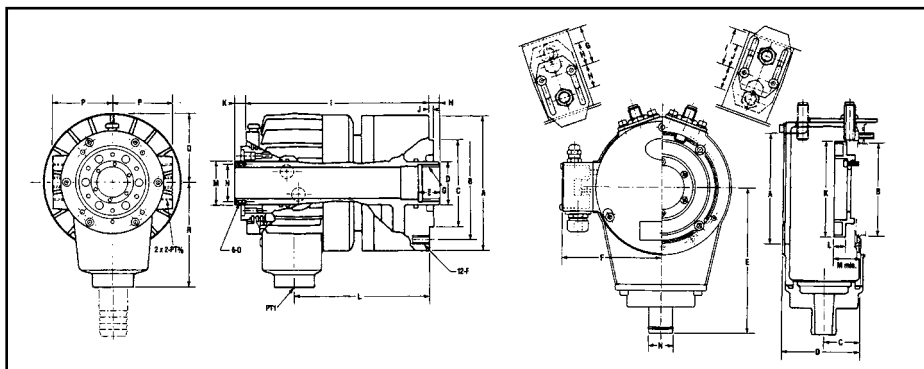
FH & FHP Series (CONT'D)



FH Series

FH & FHP SERIES HYDRAULIC CYLINDERS

FH & FHP SERIES COOLANT COLLECTORS



HYDRAULIC CYLINDERS DIMENSIONS (Dimensions in inches)

MODEL	F0933H**	F1236H**	F1546H**	F1768H**	F2078H**	F2511H	F2511HP
A	4.921	6.102	7.480	8.465	9.449	12.205	12.205
B	3.937	5.118	6.693	7.480	8.465	10.827	10.827
C	3.150	3.937	5.118	6.299	7.087	9.055	9.055
D	1.772	1.969	2.559	3.346	3.937	5.512	5.512
E	0.984	0.984	1.181	1.181	1.378	1.772	1.772
F	M8	M10	M10	M10	M12	M16	M16
G	M38x1.5	M42x1.5	M55x2.0	M75x2.0	M90x2.0	M130x2.0	M130x2.0
H max.	0.472	0.472	0.630	0.945	0.906	0.945	1.811
H min.	Ø	0	0	0.197	0	0.039	-0.157
I	7.480	8.346	9.843	10.866	11.654	12.205	13.268
J	0.197	0.197	0.197	0.197	0.197	0.236	0.236
K max.	1.614	0.984	1.142	1.142	1.496	1.496	2.559
K min.	1.142	0.512	0.512	0.394	0.591	0.591	0.591
L	5.591	6.181	7.126	7.697	8.228	8.543	9.606
M	M39x1.5	1.953	2.346	3.331	3.724	5.299	5.299
N	-	1.693	2.087	3.031	3.425	5.000	5.000
O	-	M4	M4	M5	M5	M5	M5
P	2.520	2.717	3.071	3.937	4.232	4.921	4.921
Q	-	3.150	3.586	4.331	4.626	5.335	5.335
R	4.331	4.724	5.118	6.496	7.283	8.465	8.465

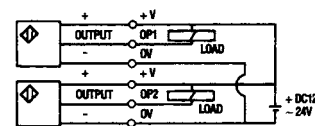
** Items out of production.

COOLANT COLLECTORS DIMENSIONS (Dimensions in inches)

MODEL	CS-F09BN	CS-F12BN	CS-F15BN	CS-F17BN	CS-20HW	CS-25HW
A	3.819	3.819	4.488	6.063	6.535	7.874
B	2.874	3.346	3.780	4.764	5.472	7.047
C	1.535	1.535	1.535	1.575	1.969	1.969
D	3.150	3.228	3.228	3.386	4.000	4.000
E	5.512	5.512	5.906	7.480	8.465	9.252
F	3.622	3.622	4.016	4.921	5.098	5.827
G	1.535	1.535	1.535	1.693	2.323	2.638
H	0.445	0.945	0.945	1.102	1.024	0.709
I	1.535	1.535	1.535	1.693	1.693	1.693
J	0.945	0.945	0.945	1.102	1.024	1.024
K	3.307	3.307	3.898	5.669	6.043	7.559
L	0.472	0.472	0.472	0.472	0.472	0.472
M min.	1.142	1.181	1.181	1.181	1.378	1.378
N	-	1.024	1.024	1.024	1.024	1.024
CYL	F0933H	F1236H	F1546H	F1768H	F2078H	F2511H(P)

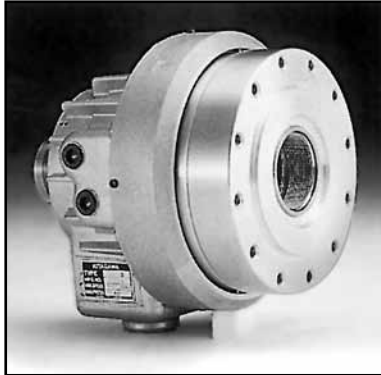
SPECIFICATION OF PROXIMITY SWITCHES

Power Supply	DC12-24V
Switching Capacity	200mA
Output Form	NPN



Standard Coolant (without proximity switch) are also available.

S & SL Series Hydraulic Cylinders



S Series



Coolant Collector

Compact and lightweight, they feature up to 20% larger bar capacity and speed than conventional cylinders. Precision finished piston bores and cool running rotary unions are included for years of trouble-free performance.

Special Features:

- Extra Large Bore
- High Speed
- Long Piston Stroke
- Efficient Cooling at High Speeds
- Built-in Check Valves and Pressure Relief Valves
- Long Life and High Endurance

SPECIFICATIONS

MODEL	UNIT	S1246	S1552	S1875	S2091	S2816	S1246L	S1552L	S1875L	S2091L	S2816L
Bore	in.	1.811	2.047	2.953	3.583	6.496	1.811	2.047	2.953	3.583	6.496
Piston Stroke	in.	0.591	0.866	0.984	1.181	1.181	1.260	1.339	1.575	1.96	2.008
Piston Area-Pull Side	in. ²	13.87	23.27	28.44	36.41	51.46	13.87	23.27	28.44	36.41	51.46
Piston Area-Push Side	in. ²	15.59	25.00	30.63	38.97	58.34	15.59	25.00	30.63	38.97	58.34
Max. Draw Bar Pull-Side	lbs.	7048	12115	14758	18943	20414	7048	12115	14758	18943	20414
Max. Draw Bar Push-Side	lbs.	8150	12996	15859	20264	23107	8150	12996	15859	20264	23107
Max. Operation Pressure	psi	570	570	570	570	435	570	570	570	570	435
Max. Speed	rpm	7000	6200	4700	3800	1700	7000	6200	4700	3800	1700
GD ²	lbs.·ft. ²	1.8	5.0	9.0	14.5	68.7	2.1	5.5	9.5	14.7	68.7
Net Weight	lbs	26.4	37.0	57.3	72.7	20.7	28.2	37.4	59.0	73.6	22.2
Oil Leakage*	gal/min.	0.8	1.0	1.1	1.2	1.7	0.8	1.0	1.1	1.2	1.7

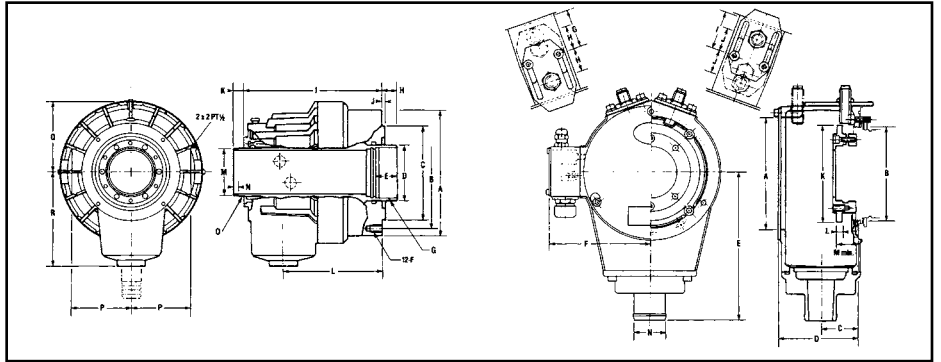
* This oil leakage rate is reached if the cylinder is used at an operating pressure of 427 psi at oil temperature of 122° F.

S & SL Series (CONT'D)



S Series

S & SL SERIES HYDRAULIC CYLINDERS



S & SL SERIES COOLANT COLLECTORS

HYDRAULIC CYLINDERS DIMENSIONS (Dimensions in inches)

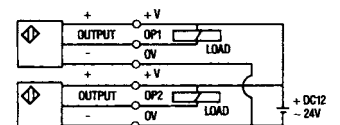
MODEL	S1246	S1552	S1875	S2091	S2816	S1246L	S1552L	S1875L	S2091L	S2816L
A	6.102	7.480	8.465	9.449	12.795	6.102	7.480	8.465	9.449	12.795
B	5.118	6.693	7.480	8.465	11.417	5.118	6.693	7.480	8.465	11.417
C	3.937	5.118	6.299	7.087	10.236	3.937	5.118	6.299	7.087	10.236
D	2.559	2.756	3.740	4.331	7.480	2.559	2.756	3.740	4.331	7.480
E	1.181	1.181	1.378	1.378	1.772	1.181	1.181	1.378	1.378	1.772
F	M10	M10	M10	M12	M16	M10	M10	M10	M12	M16
G	M55x2.0	M60x2.0	M85x2.0	M100x2.0	M180x3.0	M55x2.0	M60x2.0	M85x2.0	M100x2.0	M180x3.0
H max.	0.591	0.866	0.984	1.378	1.181	1.063	1.142	1.378	1.771	2.008
H min.	0	0	0	0	0	-0.197	-0.197	-0.197	-0.197	0
I	7.047	7.520	8.858	9.764	12.913	7.874	8.189	9.488	10.551	14.567
J	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197
K max.	1.575	1.850	1.969	2.165	2.165	2.244	2.323	2.559	2.953	2.442
K min.	0.984	0.984	0.984	0.984	0.984	0.984	0.984	0.984	0.984	0.484
L	5.315	5.709	6.555	7.205	9.252	6.142	6.378	7.185	7.992	10.906
M	1.969	2.205	3.189	3.780	6.496	1.969	2.205	3.189	3.780	6.496
N	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354
O	M52x1.5	M58x1.5	M84x2.0	M99x2.0	M173x3.0	M52x1.5	M58x1.5	M84x2.0	M99x2.0	M173x3.0
P	2.992	3.386	3.976	4.331	6.378	2.992	3.386	3.976	4.331	6.378
Q	3.937	4.331	4.764	5.256	5.551	3.937	4.331	4.764	5.256	5.551
R	4.528	5.118	6.299	7.283	9.843	4.528	5.118	6.299	7.283	9.843

COOLANT COLLECTORS DIMENSIONS (Dimensions in inches)

MODEL	CS-S12BN	CS-S15BN	CS-S18BN	CS-S20BN	CS-S28BN
A	3.819	4.488	6.063	6.063	9.843
B	3.346	3.780	4.764	5.433	-
C	1.535	1.535	1.575	2.283	2.047
D	3.228	3.228	3.386	4.016	4.044
E	5.512	5.906	7.480	7.480	11.220
F	3.622	4.016	4.921	4.921	-
G	1.535	1.535	1.693	2.047	2.343
H	0.945	0.945	1.102	1.181	1.437
I	1.535	1.535	1.693	2.047	2.343
J	0.945	0.945	1.102	1.181	1.437
K	3.307	3.898	5.669	5.669	9.528
L	0.197	0.197	0.197	0.197	0.276
M min.	0.906	0.906	0.906	1.181	-
N	1.299	1.299	1.299	1.299	1.102
CYL	S1246	S1552	S1875	S2091	S2516
	S1246L	S1552L	S1875L	S2091L	S2816L

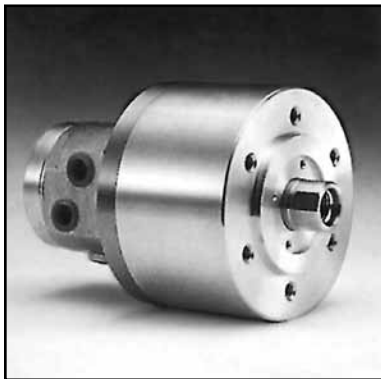
SPECIFICATION OF PROXIMITY SWITCHES

Power Supply	DC12-24V
Switching Capacity	200mA
Output Form	NPN



Standard Coolant (without proximity switch) are also available.

YR & YRE Series Hydraulic Cylinders

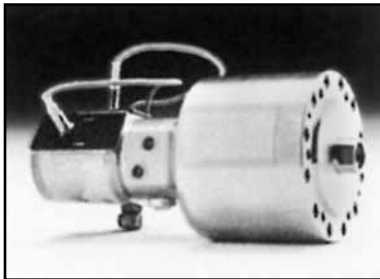


YR Series

Closed center hydraulic cylinders feature high speed and long stroke option for use with all closed center chucks with speeds up to 6000 RPM.

Special Features:

- Safety check valves to ensure safety in the event of hydraulic failure
- Safety pressure relief valve to prevent damage to cylinders in the event of over pressure
- High speed, compact and lightweight
- Maintenance free design



YRE Series

SPECIFICATIONS

MODEL	UNIT	Y1020R(E)	Y1225R(E)	Y1530R(E)	Y2035R(E)
Piston Stroke	in.	0.787	0.984	1.181	1.378
Piston Area-Pull Side	in. ²	12.3	17.5	24.8	45.0
Piston Area-Pull Side	in. ²	13.3 (13.0)	18.9 (18.6)	27.3 (27.0)	48.7 (48.4)
Max. Draw Bar Pull Force	lbs.	6505	9423	13460	24229
Max. Operation Pressure	psi	570	570	570	570
Oil Leakage Rate*	gal/min.	0.2	0.2	0.2	0.2
Max. Speed	rpm	6000	6000	5500	5500
Net Weight	lbs	16 (17)	22 (23)	30 (31)	49 (50)
GD ²	lbs. • ft. ²	1.2	2.1	4.5	9.2

(E) Designated stroke detection option using detector plates and proximity switches.

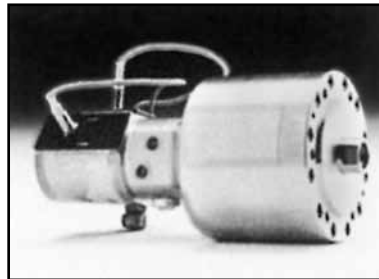
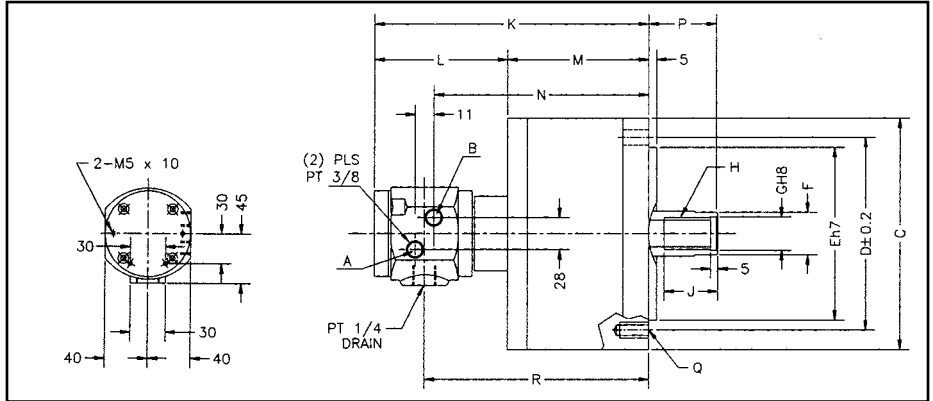
* Oil leakage rate is based on operating pressure of 435 psi at oil temperature of 122° F.

YR & YRE Series (CONT'D)



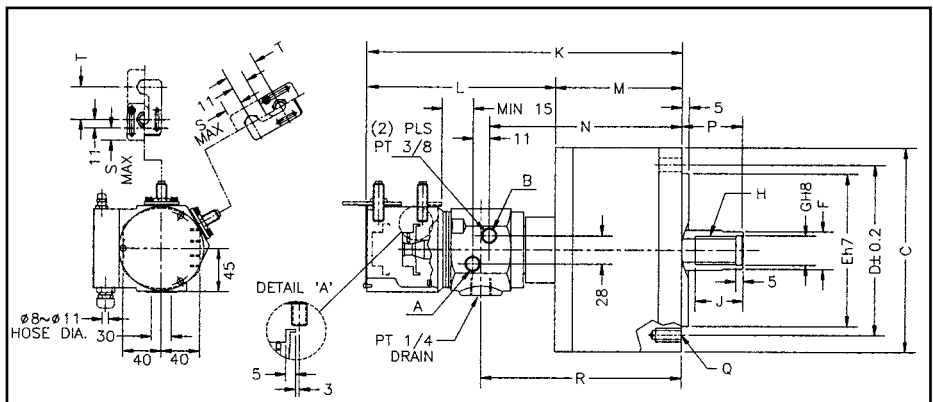
YR Series

YR DIMENSIONAL DRAWING



YRE Series

YRE DIMENSIONAL DRAWING



DIMENSIONS (Dimensions in Inches)

MODEL	Y1020R(E)	Y1225R(E)	Y1530R(E)	Y2035R(E)
A (Piston Diameter)	4.134	4.921	5.906	7.874
B (Stroke)	0.787	0.984	1.181	1.378
C	5.315	6.299	7.480	9.646
D	3.937	5.118	5.118	5.709
E	3.150	4.331	4.331	4.724
F	1.181	1.378	1.772	2.165
G	0.827	0.984	1.220	1.457
H	M20	M24	M30	M36
J	1.378	1.732	1.772	2.362
K	7.756 (9.921)	8.071 (10.236)	8.425 (10.591)	8.976 (11.339)
L	4.252(6.417)	4.252 (6.417)	4.252 (6.417)	4.173 (6.535)
M	3.504	3.819	4.173	4.803
N	5.984	6.299	6.654	7.205
P max.	1.772	2.008	2.205	2.717
P min.	0.984	1.024	1.024	1.339
Q min.	6-M10x20	6-M12x24	12-M12x24	12-M16x30
R	6.220	6.535	6.890	7.441
S	(0.906)	(0.906)	(0.906)	(1.102)
T	(1.614)	(1.614)	(1.614)	(1.811)

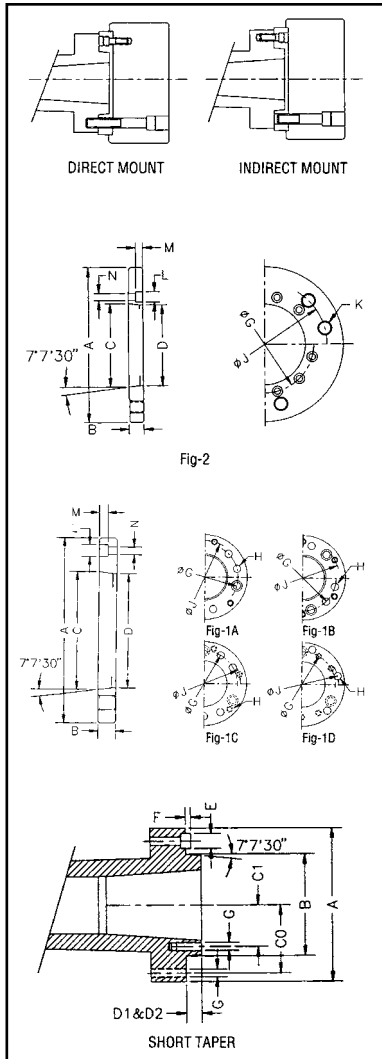
Chuck Adapters

Chuck Adapter Plates ASA B5.9 TYPE A (Interchangeable DIN 55026)



Chuck Adapter Series

DIMENSIONAL DRAWINGS



SPINDLES

MODEL	NOSE	5	6	8	11	15
N	6	CB-06A05				
	8	CN-08A05	CB-08A06			
	10		CN-10A06	CB-10A08		
	12		CN-10A06	CB-10A08		
NLT	6	CBT06A05				
	8	CNT08A05	CBT08A06			
	10		CBT10A06	CBT10A08		
	12		CBT10A06	CBT10A08		
B	6	CB-06A05				
	8	CB-08A05	CB-08A06			
	10		CB-10A06	CB-10A08		
	12		CB-10A06	CB-10A08		
	15			CB-15A08	CB-15A11	
	18			CB-18A08	CB-18A11	
	21				CB-21A11	CB-21A15
	24				CB-21A11	CB-21A15
BT	6	CBT06A06				
	8	CBT08A05	CBT08A06			
	10		CBT10A06	CBT10A08		
	12		CBT10A06	CBT10A08		
	15			CBT15A08	CBT15A11	
B-200	6	CB-06A05				
	8	CB-08A05	CB-08A06			
	10		CB-10A06	CB-10A08		
BL-200	12		CB-10A06	CB-10A08		
	12		CB-10A06	CB-10A08		
BT-200	6	CBT06A05				
	8	CBT08A05	CBT08A06			
	10		CBT10A06	CBT10A08		
	12		CBT10A06	CBT10A08		

DIMENSIONS (Dimensions in Inches)

MODEL	CB06A05	CB08A05	CB08A06	CB10A06	CB10A08	CB15A08	CB15A11	CB18A08	CB18A11	CB21A11	CB21A15	CN10A06
SPINDLE NOSE	A2-5	A2-5	A2-6	A2-6	A2-8	A2-8	A2-11	A2-8	A2-11	A2-11	A2-15	A2-6
A	5.512	6.693	6.693	8.661	8.661	11.811	11.811	14.961	14.961	14.961	14.961	7.874
B	0.591	0.866	0.669	0.984	0.709	1.299	0.866	1.299	0.866	1.614	1.063	0.787
C	3.250	3.250	4.188	4.188	5.501	5.501	7.751	5.501	7.751	7.751	11.25	4.188
D	3.138	3.138	4.055	4.055	5.354	5.512	7.563	5.512	7.563	7.563	9.921	4.055
E	0.641	0.641	0.766	0.766	0.953	0.953	1.156	0.953	1.156	1.156	1.406	0.766
F	0.256	0.256	0.256	0.256	0.315	0.315	0.394	0.315	0.394	0.394	0.394	0.256
G	4.125	4.125	5.250	5.250	6.750	6.750	9.252	6.750	9.252	9.252	13.000	5.250
H	0.472	0.433	0.531	0.531	0.669	0.669	0.827	0.669	0.827	0.827	0.945	0.531
J	4.567	5.250	5.906	6.750	7.480	9.252	10.236	9.252	12.598	13.000	13.000	6.750
K	-	M12	-	M16	-	M20	-	M20	-	M22	-	M16
L	0.433	0.669	0.433	0.787	0.551	0.984	0.669	0.984	0.669	1.260	0.787	0.787
M	0.276	0.433	0.276	0.531	0.394	0.669	0.433	0.669	0.433	0.827	0.591	0.315
N	0.260	-	0.260	-	0.354	-	0.433	-	0.433	-	0.531	-
Fig.	1A	2	1B	2	1C	2	1C	2	1C	2	1D	2

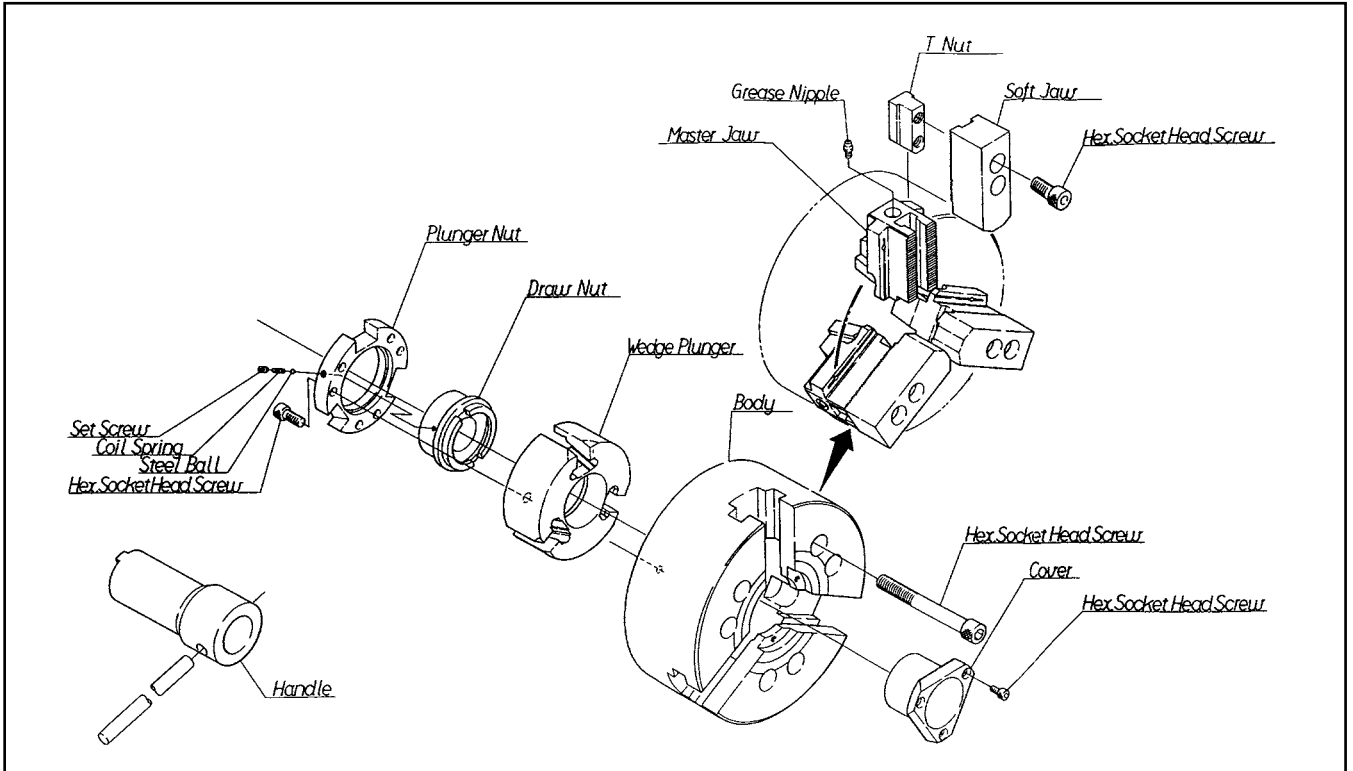
For ASA 58.9 Type A (Interchangeable DIN 55026)) Spindles

SHORT TAPER SPINDLE NOSE STANDARDS (Standards in Inches)

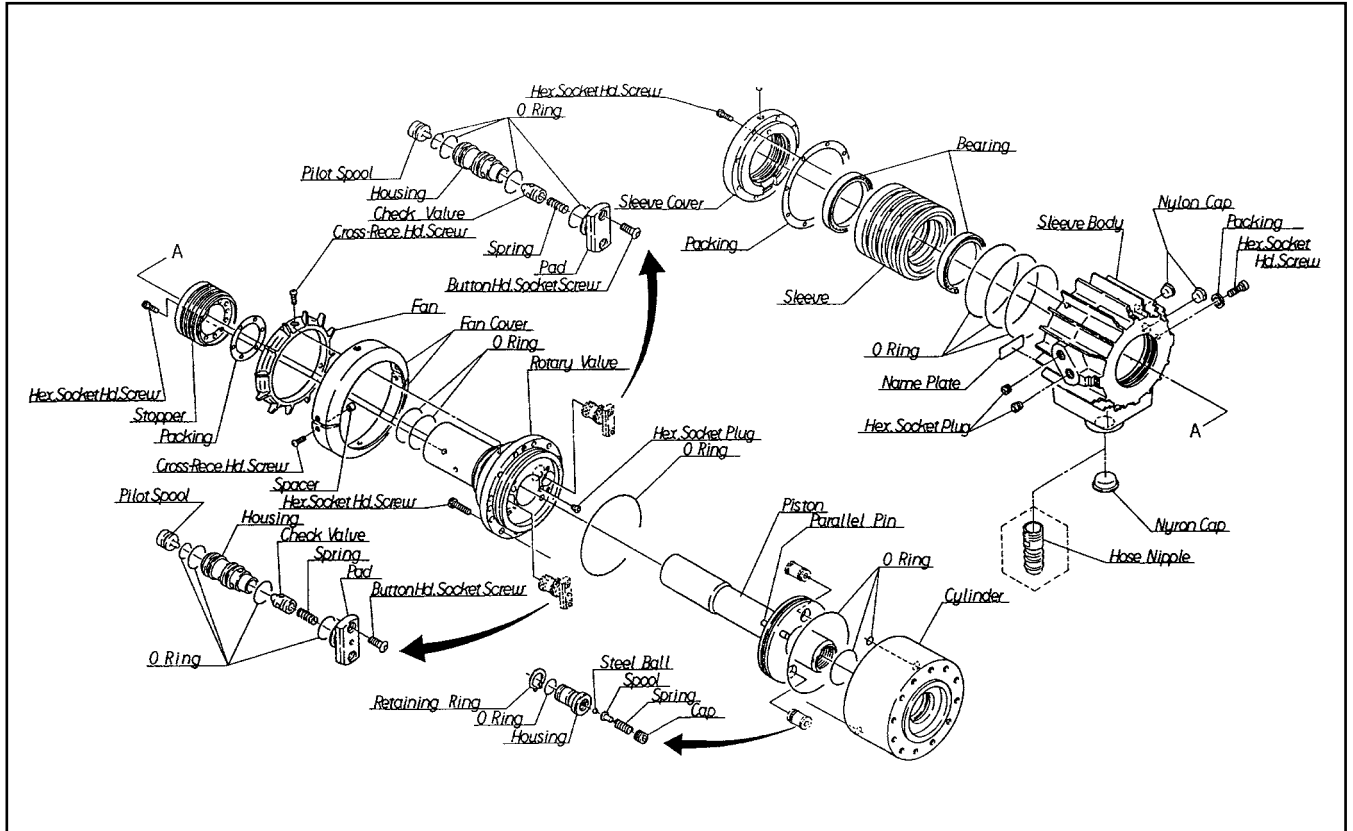
SPINDLE NOSE SIZE NO	A2-5	A2-6	A2-8	A2-11	A2-15
Outside Diameter	A	5.236	6.496	8.268	11.024
Max. Taper Diameter	B	3.251	4.188	5.501	7.751
P.C.R. Outer Bolts	C0	2.063	2.626	3.374	4.626
P.C.R. Inner Bolts A1 Only)	C1	1.219	1.626	2.187	3.250
Spigot Height (A1 Only)	D1	0.563	0.625	0.687	0.750
Spigot Height (A2 Only)	D2	0.512	0.551	0.630	0.709
Driving Stud Diameter	E	0.626	0.750	0.937	1.126
Driving Stud Height	F	0.197	0.197	0.236	0.315
Bolt Hole Size	G	M10	M12	M16	M18

Type A1 and A2 ASA B5.9 Type A, DIN 55026, ISO B702 Part 1, BS 4442 Part1.

TYPICAL CHUCK



TYPICAL CYLINDER



CHUCK-EEZ® Power Chuck Lubricant



Double to Triple Clamping pressure keeps work piece clamped in place.

- Provides boundary lubrication protection.
- Lowers friction and wear.
- Assists in wear-in of new chucks
- Lowers Maintenance costs
- High resistance to centrifuge force.

CHUCK-EEZ® is a heavy duty boundary lubricant designed to increase the clamping pressure of power chucks. CHUCK-EEZ® is formulated with a high percentage of molybdenum disulfide to reduce seizing, galling, fretting wear and lower friction under conditions of extreme pressure. Rust and oxidation inhibitors are incorporated to maximize complete rust protection during the life of the lubricant. CHUCK-EEZ® can be used on power chucks, standard chucks, fasteners, press fits and wear-in guides and ways.

Typical Specifications

Colour	Moly Gray
Base Oil Viscosity: SUS @ 100° F SUS @ 210° F	580 ±5 60 ±2
Dropping Point	380 ±10
Flash Point	450°F minimum
Pour Point	0°F minimum
Base Grease	80% ±0.5
Libricating Solids	25% ±0.2
Penetration, 1/10 mm	300 ±10

Order Code	Container Size
CHUCK-EEZ2	4 oz. Cartridges
CHUCK-EEZ	16 oz. Cartridges

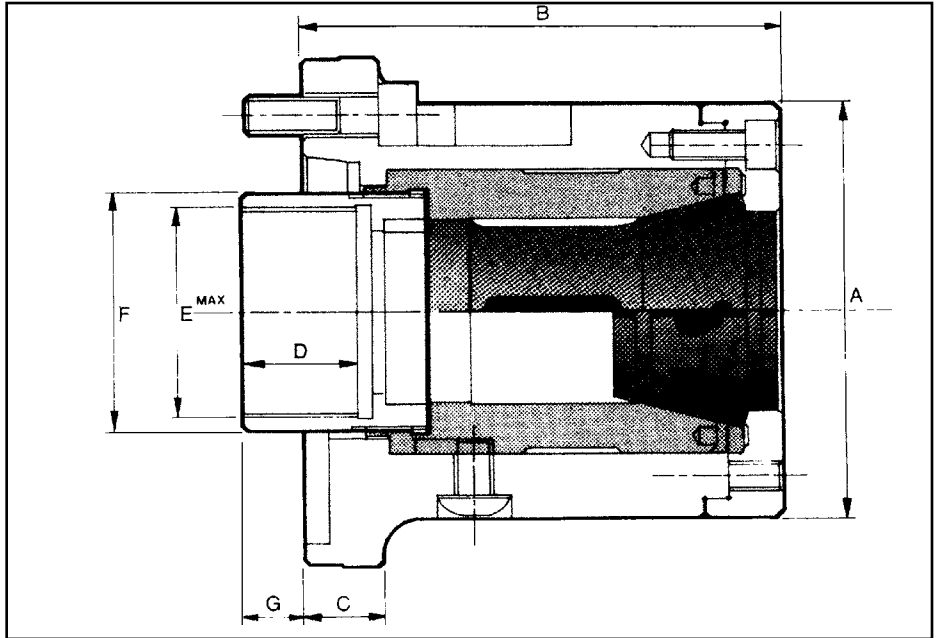
Power Collet Chucks



CRL Series

**Kitagawa Collet Chucks
for highest production
from bar stock**

**Uses both multibore and
spring collets to DIN 6343
specification**



- Dead length for all second operation applications
- Compact design - minimum overhang
- Interchangeable on spindle with KITAGAWA Series B200 power chucks
- High concentric accuracy
- Supplied complete with blank connector for threading to suit drawtube
- All parts made of alloy steel hardened and precision ground

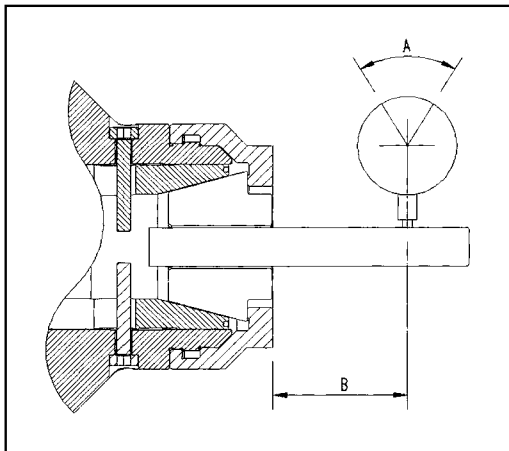
Kitagawa Collet Chucks - CR Series Standard Range and Dimensions

ORDER NO.										
Ref. No.	CRS36	CRL42	CRL42A5	CRL42A6	CRL54A6	CRL60	CRL60A6	CRL60A8	CRS66	CRS66A8
Mount	125 x 5 Recess	140 x 5 Recess	A2-5	A2-6	A2-6	170 x 5 Recess	A2-6	A2-8	220 x 5 Recess	A2-8
A	105	110	110	110	138	138	138	138	150	150
B	107	133	143	145	166	148	160	156	140	140
C	23	20	20	30	27	24	27	37	30	30
D	18	30	30	30	25	30	30	30	30	30
E max	M50-x-1.5	M55-x-1.5	M55-x-1.5	M55-x-1.5	M70-x-1.5	M70-x-1.5	M70-x-1.5	M70-x-1.5	M80-x-1.5	M80-x-1.5
F	62	62	62	62	80	80	80	80	90	90
G max	11	11	1	-1	-2	10	-2	2	-9	-15
G min	4	4	-6	-8	-9	3	-9	-5	-19	-25

Capacities										
Chuck Ref	Multibore Collet					Spring Collet				
	Catalogue No.	Capacity			Catalogue No.	Capacity				
		Round	Hexagon	Square		Round	Hexagon	Square		
CRS36	M671 DIN6343	34	28	24	171E 8742	36	30	25		
CRL42	M-673 DIN6343	42	36	29	173E 4728	42	36	30		
CRL54	V-120	54	51	41	N853	54	51	41		
CRL60	M-677 DIN6343	60	52	42	185E 4291	60	52	42		
CRS66	T-285	66	57	44						

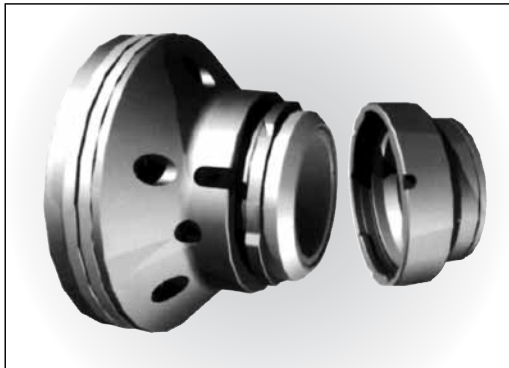
Power Collet Chucks with Quick Change Nuts

Accuracy: Exceptional accuracy and repeatability



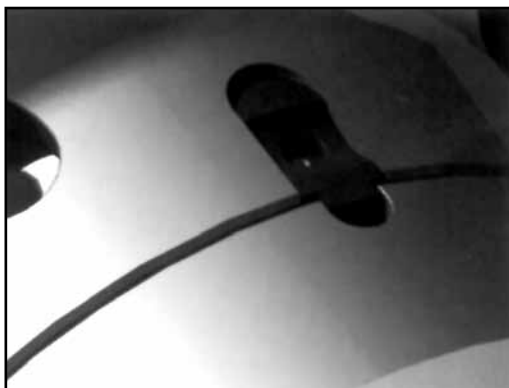
Ø or ACROSS FLATS	A ROUND	A HEX/SQUARE	B - Test LENGTH
3.0-6.0mm	0.020mm	0.060mm	16.0mm
6.0-10mm	0.020mm	0.060mm	25.0mm
10-19mm	0.030mm	0.091mm	40.0mm
19-25mm	0.030mm	0.091mm	50.0mm
25-32mm	0.040mm	0.120mm	55.0mm
32-50mm	0.040mm	0.120mm	75.0mm
over 51mm	0.040mm	0.120mm	100.0mm

Profitability & Features



- Proven quick change bayonet cap design.
- Additional thumb activated safety button. Cap is always secured.
- Interchangeable with all standard chucks including Kitagawa, Rohm, SMW Autoblock etc.
- Chuck sleeve has collet orientation slot.
- Common back body design.
- Popular models have reduction sleeves to reduce collet inventory.
- Bar seal cap fitted to eliminate swarf ingress.

Applications and Benefits



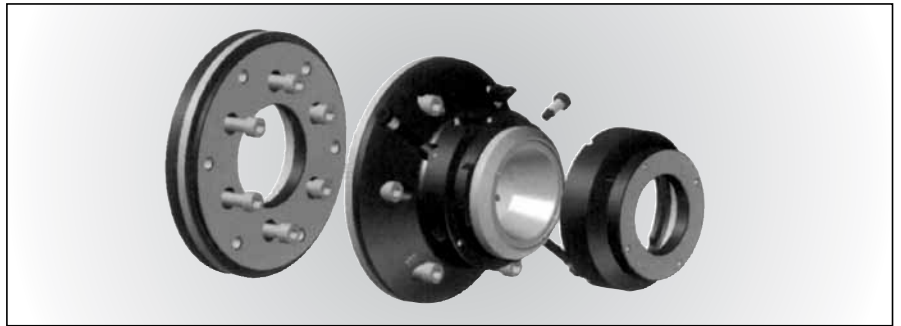
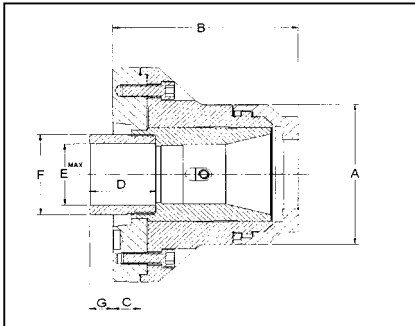
- Quick change mechanism allows rapid work piece change over.
- Safety button promotes safer working environment.
- No new drawtubes or connection problems with these chucks.
- C Axis orientation without additional expense.
- Chuck type easily interchanged using common back bodies.
- New Cap and Sleeve options allows one chuck to fit 8 collet types.

Power Collet Chucks with Quick Change Nut



Quick Change Series Power Collet Chucks

- Quick change chuck design for first or second operation.
- Ideally suited for use with barfeeders.
- Fixed Length collet – no part movement.
- Quick Change cap with safety lock.
- Uses Multibore, spring and master collets.
- Exceptional accuracy in small package.



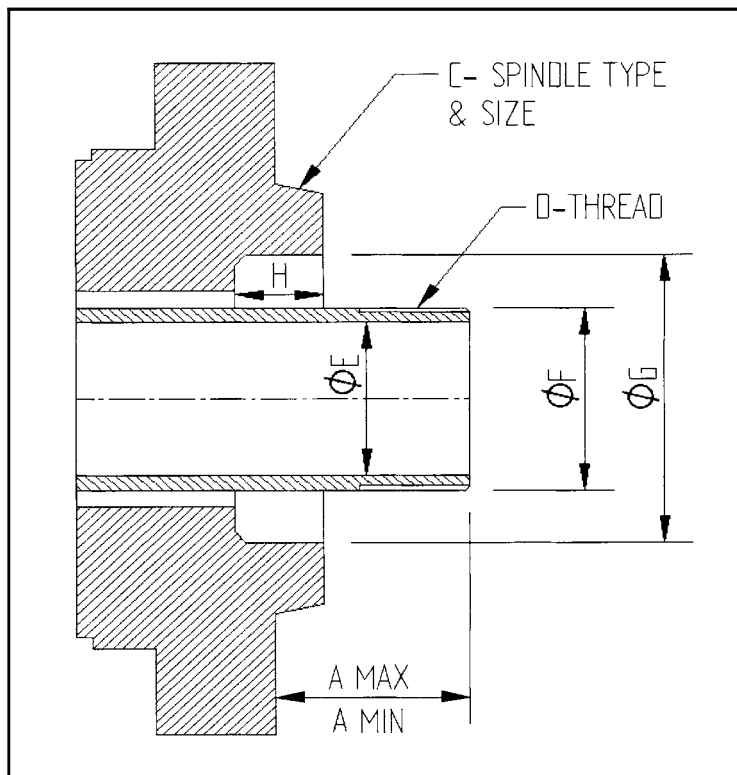
SPECIFICATIONS		QCRL42(1)		QCRL54		QCRL60		QCRS66		QCRL80	
		Inch	Din	Inch	Din	Inch	Din	Inch	Inch		
Gripping Range Round	Max.	42mm	42mm	54mm	60mm	66mm	80mm				
	Min.	1.6mm	4mm	1.6mm	4mm	1.6mm	12mm				
Collet Increment	mm	3mm	2mm	3mm	2mm	3mm	3mm	3mm			
Sleeve Stroke	mm	7		7		7		10		11	
Max Drawbar Pull	KN	22		34		34		39		44	
Max Gripping Force	KN	49		60		60		68		78	
Max Speed	rpm	7100		6300		6300		4500		4000	
Net Weight	kg	8.4		14.2		14.3		21		34	
Matching Cylinder		S1246		S1552		S1875		S1875		S2091	
Collet Ref	Multibore	W-850	M-673	V120	M-677	T-285	N-175				
	Spring	M-286	173E	N-853	185E	-	L-196				

DIMENSIONS	QCRL42(1)			QCRL54			QCRL60			QCRS66			QCRL80		
Mount	140	A5	A6	170	220	A6	170	A6	A8	220	A6	A8	220	A6	A8
A	113			143			143			162			205		
B	137			169.5			165			145	170	145	230	255	230
C	20			25			25			na	25	na	na	25	na
D	60			60			60			60			60		
E Max	M55 x 1.5			M75 x 1.5			M75 x 1.5			M90 x 2			M90 x 2		
F	65			82			82			100			100		
G Max	23			21			21			5	-20	5	20	-5	20
G Min	16			14			14			-5	-30	-5	10	-15	10

Spindle Information

CONTACT DETAILS			
Contact Name:		Position:	
Company Name:			
Address:			
Postal Code/ZIP:		Telephone:	
Country:		Fax:	
Website:	www.	Email:	

Drawtube Connector/Machine Spindle Information					
Machine Make:		Chuck Make:		Cylinder Make:	
Model:		Model:		Model:	
Year:		Serial Number:		Serial Number:	



A. Max
(Drawtube Forward Position) _____

A. Min..
(Drawtube Rear Position) _____

C. (Spindle Type & Size)
ie. A2-5, 140 x 2mm etc. _____

D-Drawtube
Thread Diameter _____

Drawtube Pitch _____

Internal or External _____

Thread Length _____

E-Drawtube ID _____

F-Drawtube OD _____

G-Counterbore / Taper ID _____

H- Counterbore / Taper Length _____

(Please enter all dimensions in mm)
Specifications and Dimensions subject to change without notice

FOR CANADA FAX OR EMAIL



MACHINERY CANADA
A DIVISION OF TURRET LATHE SERVICES LIMITED

963 Martin Grove Rd., Rexdale,
ON M9W 4V6, Canada
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E-mail: tools@machinerycanada.com
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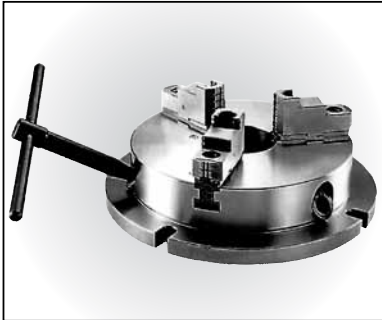
FOR USA FAX OR EMAIL



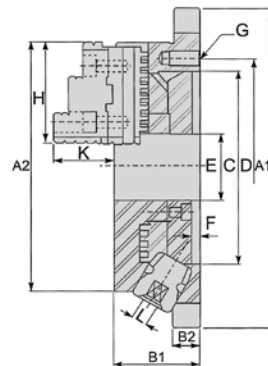
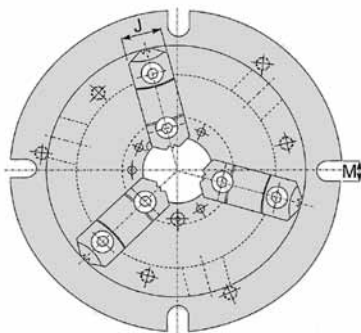
TECHLEADER[®]
TOOLING INC.
DIV. OF TURRET LATHE SERVICES LTD..

3606 CALIFORNIA ROAD, PO BOX 957, Orchard Park NY
PHONE: 716-662-6818 • 1-800-688-6810 FAX: 716-662-8965
EMAIL: tools@techleader.com • WEB: www.techleader.com

Super Thin Chucks

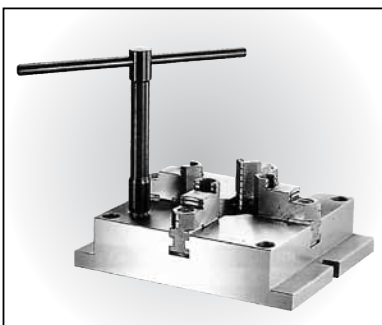


- The angle between “HANDLE” and “BASE OF CHUCK” is 30 degree, therefore, it is much more convenient for “HANDLE” rotation.
- This “POWER SUPER THIN” design of chuck may increase the “allowable length” of machining operation.
- The flanged type design make it easily for leading and unloading operation.
- “POWERFUL TYPE” design, may be used with hard jaws or soft jaws alternatively.

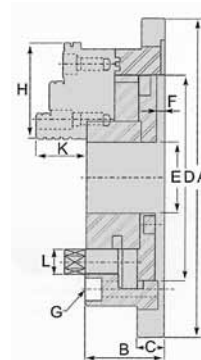
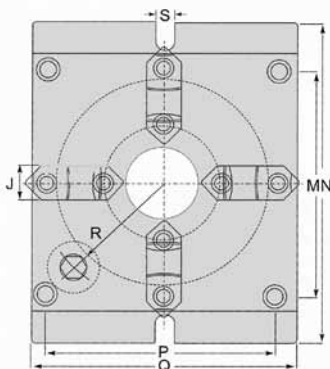


ORDER NO	MODEL	A1	A2	B1	B2	C	D	E	F	G	H	J	K	L	M	Weight	External (mm)	Internal (mm)
425-006	NBK-6	220	170	58	18	130	147	45	6	3-M10	68	26	40	10	13	11 kg	ø8-ø160	ø48-ø150
425-008	NBK-8	270	210	65	20	155	172	60	6	3-M10	82	28	45	11	13	19.5 kg	ø11-ø200	ø62-ø190
425-010	NBK-10	315	255	73	20	190	210	80	6	3-M12	93	32	52	12	16	29.5 kg	ø12-ø250	ø72-ø240
425-012	NBK-12	370	305	80	22	250	285	105	6	3-M12	117	40	59	14	18	42.5 kg	ø15-ø300	ø86-ø290

Super Thin Square Chucks



- End-surface Clamping design
- Convex design
- Position key on base plate
- MCA square chucks
- Super thin design
- Unified height for reference point
- Soft-jaws is available

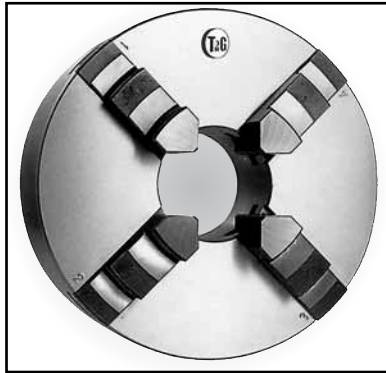
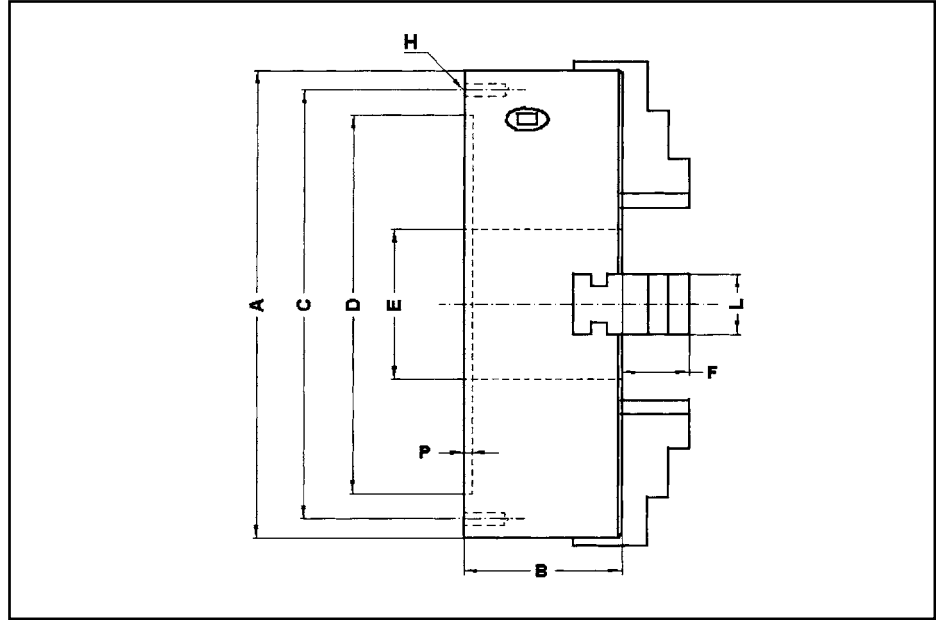


ORDER NO	MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	MAX. DIA GRIPPED BY External (mm)	Internal (mm)
425-013	MCA-6	215	57	18	130	40	5	4-M10	68	26	39	14	144	165	144	165	66	18	ø8-ø160	ø55-ø128
425-014	MCA-8	250	65	20	160	55	5	4-M12	82	28	43	17	174	200	172	200	83	18	ø5-ø162	ø62-ø162
425-015	MCA-10	310	72	22	200	70	6	4-M14	93	32	50	21	218	250	218	250	103	18	ø6-ø200	ø72-ø200
425-016	MCA-12	380	85	25	260	100	7	4M16	117	40	56	23	274	310	274	310	135	22	ø10-ø265	ø90-ø265

3 & 4 Jaw Precision Self-Centering Chucks With Solid Jaws



3 Jaws



4 Jaws

- **Cast Iron and steel body**
- **Exterior and interior jaws included**
- **Chuck sizes according to DIN 6350 NORM**
- **Centering Tolerances according to UNE 15-430-94/ISO 3089:1991 NORM**

A mm	A inch	B mm	C mm	D mm	E mm	F mm	H	L mm	P mm	=KG.3	=KG.4
85	3"	42	72	62	20	12.90	3xM6	12	3.4	1.6	1.8
110	4"	52.5	95	86	30	17.50	3xM6	15	3.5	3.2	3.4
135	5"	61	117	103	40	21.10	3xM8	18	4	6	6.4
160	6"	65	140	125	42	26.30	3xM10	22	4	10	10.2
200	8"	75	176	160	55	29.30	3xM10	25	4	17	18
250	10"	83	222	202	80	34.50	3xM12	32	4.2	25.8	27.4
315	12.5"	105	284	258	95/105	44.50	3xM14	40	5	51	52.4
350	14"	100	320	290	125/155	53.50	3xM14	40	5	57	59
400	16"	113	362	320	130	53.50	3xM16	40	5	90	92
500	20"	141	458	400	165	74.50	6xM16	45	6	175	179.5
630	24"	140	586	545	205	74.5	6xM16	45	7	195	199.5

Note: For mounting on rotary tables or center mounts, chucks may be supplied with through holes from the front of the chuck.

3 & 4 Jaw Precision Self-Centering Chucks With Solid Jaws

3 Jaws

Ø SIZE	RECESS MOUNT		DIN55029		DIN55026		DIN 55027	
	BODY	IRON	STEEL	STEEL	STEEL	STEEL	STEEL	
135mm 5"	1UF3M13500	1UA3M13500	D-4	1UA3M13542			3	1UA3M13521
			D-5	1UA3M13543			4	1UA3M13522
160mm 6"	1UF3M16000	1UA3M16000	D-4	1UA3M16042	A1-4	1UA3M16012	4	1UA4M16022
			D-5	1UA3M16043	A1-5	1UA3M16013	5	1UA4M16023
							6	1UA4M16024
200mm 8"	1UF3M20000	1UA3M20000	D-4	1UA3M20042	A1-4	1UA3M20012	5	1UA3M20023
			D-5	1UA3M20043	A1-5	1UA3M20013	6	1UA3M20024
			D-6	1UA3M20044	A1-6	1UA3M20014		
250mm 10"	1UF3M25000	1UA3M25000	D-5	1UA3M25043	A2-5	1UA3M25013	5	1UA3M25023
			D-6	1UA3M25044	A1-6	1UA3M25014	6	1UA3M25024
			D-8	1UA3M25045			8	1UA3M25025
315mm 12.5"	1UF3M31500	1UA3M31500	D-6	1UA3M31544	A2-6	1UA3M31514	6	1UA3M31524
			D-8	1UA3M31545	A1-8	1UA3M31515	8	1UA3M31525
			D-11	1UA3M31546			11	1UA3M31526
350mm 14"	1UF3M35000	1UA3M35000	D-6	1UA3M35044	A2-6	1UA3M35014	6	1UA3M35024
			D-8	1UA3M35045	A2-8	1UA3M35015	8	1UA3M35025
			D-11	1UA3M35046	A2-11	1UA3M35016	11	1UA3M35026
400mm 16"	1UF3M40000	1UA3M40000	D-6	1UA3M40044	A2-6	1UA3M40014	6	1UA3M40024
			D-8	1UA3M40045	A2-8	1UA3M40015	8	1UA3M40025
			D-11	1UA3M40046	A2-11	1UA3M40016	11	1UA3M40026
500mm 20"	1UF3M50000	1UA3M50000	D-8	1UA3M50045	A2-8	1UA3M50015	8	1UA3M50025
			D-11	1UA3M50046	A2-11	1UA3M50016	11	1UA3M50026
			D-15	1UA3M50047	A2-15	1UA3M50017		
630mm 24"	1UF3M63000	1UA3M63000	D-8	1UA3M63045	A2-8	1UA3M63015	8	1UA3M63025
			D-11	1UA3M63046	A2-11	1UA3M63016	11	1UA3M63026
			D-15	1UA3M63047	A2-15	1UA3M63017		

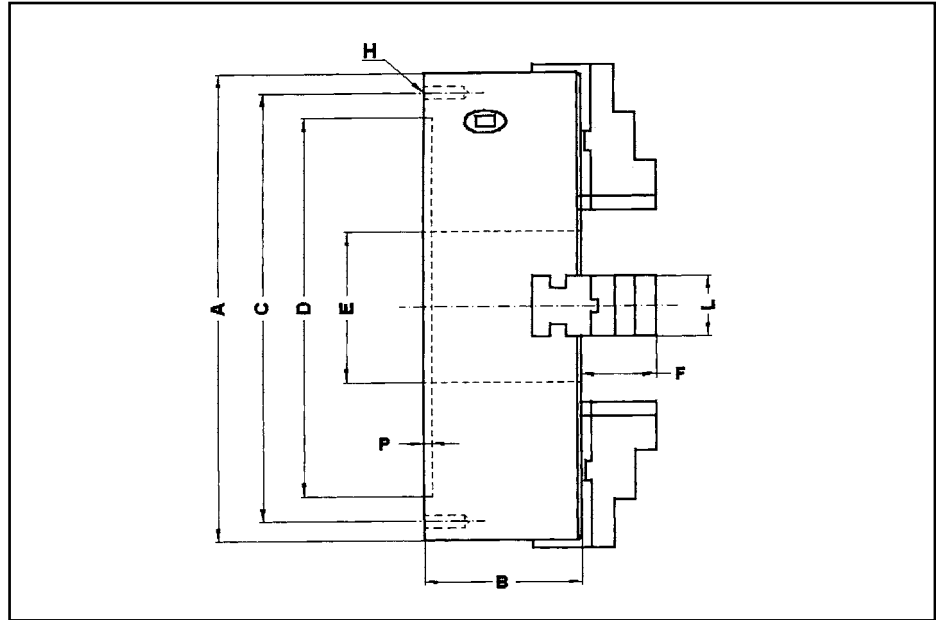
4 Jaws

Ø SIZE	RECESS MOUNT		DIN55029		DIN55026		DIN 55027	
	BODY	IRON	STEEL	STEEL	STEEL	STEEL	STEEL	
160mm 6"	1UF4M16000	1UA4M16000	D-4	1UA4M16042	A1-4	1UA4M16012	4	1UA4M16022
			D-5	1UA4M16043	A1-5	1UA4M16013	5	1UA4M16023
							6	1UA4M16024
200mm 8"	1UF4M20000	1UA4M20000	D-4	1UA4M20042	A1-4	1UA4M20012	4	1UA4M20023
			D-5	1UA4M20043	A1-5	1UA4M20013	5	1UA4M20024
			D-6	1UA4M20044	A1-6	1UA4M20014	6	
250mm 10"	1UF4M25000	1UA4M25000	D-5	1UA4M25043	A2-5	1UA4M25013	4	1UA4M25023
			D-6	1UA4M25044	A1-6	1UA4M25014	5	1UA4M25024
			D-8	1UA4M25045			8	
315mm 12.5"	1UF4M31500	1UA4M31500	D-6	1UA4M31544	A2-6	1UA4M31514	6	1UA4M31524
			D-8	1UA4M31545	A1-8	1UA4M31515	8	1UA4M31525
			D-11	1UA4M31546			11	1UA4M31526
350mm 14"	1UF4M35000	1UA4M35000	D-6	1UA4M35044	A2-6	1UA4M35014	6	1UA4M35024
			D-8	1UA4M35045	A2-8	1UA4M35015	8	1UA4M35025
			D-11	1UA4M35046	A2-11	1UA4M35016	11	1UA4M35026
400mm 16"	1UF4M40000	1UA4M40000	D-6	1UA4M40044	A2-6	1UA4M40014	6	1UA4M40024
			D-8	1UA4M40045	A2-8	1UA4M40015	8	1UA4M40025
			D-11	1UA4M40046	A2-11	1UA4M40016	11	1UA4M40026
500mm 20"	1UF4M50000	1UA4M50000	D-8	1UA4M50045	A2-8	1UA4M50015	8	1UA4M50025
			D-11	1UA4M50046	A2-11	1UA4M50016	11	1UA4M50026
			D-15	1UA4M50047	A2-15	1UA4M50017		
630mm 24"	1UF4M63000	1UA4M63000	D-8	1UA4M63045	A2-8	1UA4M63015	8	1UA4M63025
			D-11	1UA4M63046	A2-11	1UA4M63016	11	1UA4M63026
			D-15	1UA4M63047	A2-15	1UA4M63017		

3 & 4 Jaw Precision Self-Centering Chuck With Hard Reversible Top Jaws



3 Jaws



4 Jaws

- **Cast Iron and steel body**
- **Chuck sizes according to DIN 6350 NORM**
- **Centering Tolerances according to DIN 6386/ISO 3089 NORM**
- **Tongue and groove 2 piece jaws according to ASA Norms**

A mm	A inch	B mm	C mm	D mm	E mm	F mm	H	L mm	P mm	=KG.3	=KG.4
160	6"	65	140	125	42	41.7	3xM10	22	4	10	10.2
200	8"	75	176	160	55	43	3xM10	25	4	17	18
250	10"	83	222	202	80	53.6	3xM12	32	4.2	25.8	27.4
315	12.5"	105	284	258	95/105	54	3xM14	40	5	51	52.4
350	14"	100	320	290	125/155	62.1	3xM14	40	5	57	59
400	16"	113	362	320	130	62.1	3xM16	40	5	90	92
500	20"	141	458	400	165	82	6xM16	45	6	175	179.5
630	24"	140	586	545	205	82	6xM16	45	7	195	199.5

Note: For mounting on rotary tables or center mounts, chucks may be supplied with through holes from the front of the chuck.

3 & 4 Jaw Precision Self-Centering Chuck With Hard Reversible Top Jaws

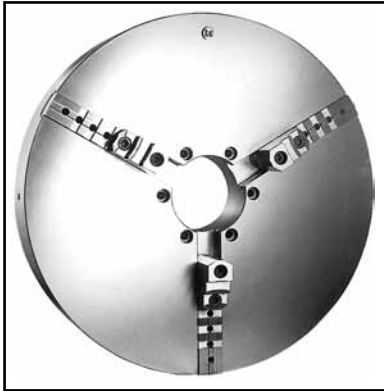
3 Jaws

Ø SIZE	RECESS MOUNT	DIN55029		DIN55026		DIN 55027	
		BODY	STEEL	STEEL	STEEL	STEEL	STEEL
160mm 6"	1UA3R16000	D-4 D-5	1UA3R16042 1UA3R16043	A1-4 A1-5	1UA3R16012 1UA3R16013	4 5 6	1UA3R16022 1UA3R16023 1UA3R16024
200mm 8"	1UA3R20000	D-4 D-5 D-6	1UA3R20042 1UA3R20043 1UA3R20044	A1-4 A1-5 A1-6	1UA3R20012 1UA3R20013 1UA3R20014	4 5 6	1UA3R20023 1UA3R20024
250mm 10"	1UA3R25000	D-5 D-6 D-8	1UA3R25043 1UA3R25044 1UA3R25045	A2-5 A1-6	1UA3R25013 1UA3R25014	4 5 8	1UA3R25023 1UA3R25024 1UA3R25025
315mm 12.5"	1UA3R31500	D-6 D-8 D-11	1UA3R31544 1UA3R31545 1UA3R31546	A2-6 A1-8	1UA3R31514 1UA3R31515	6 8 11	1UA3R31524 1UA3R31525 1UA3R31526
350mm 14"	1UA3R35000	D-6 D-8 D-11	1UA3R35044 1UA3R35045 1UA3R35046	A2-6 A2-8 A2-11	1UA3R35014 1UA3R35015 1UA3R35016	6 8 11	1UA3R35024 1UA3R35025 1UA3R35026
400mm 16"	1UA3R40000	D-6 D-8 D-11	1UA3R40044 1UA3R40045 1UA3R40046	A2-6 A2-8 A2-11	1UA3R40014 1UA3R40015 1UA3R40016	6 8 11	1UA3R40024 1UA3R40025 1UA3R40026
500mm 20"	1UA3R50000	D-8 D-11 D-15	1UA3R50045 1UA3R50046 1UA3R50047	A2-8 A2-11 A2-15	1UA3R50015 1UA3R50016 1UA3R50017	8 11	1UA3R50025 1UA3R50026
630mm 24"	1UA3R63000	D-8 D-11 D-15	1UA3R63045 1UA3R63046 1UA3R63047	A2-8 A2-11 A2-15	1UA3R63015 1UA3R63016 1UA3R63017	8 11	1UA3R63025 1UA3R63026

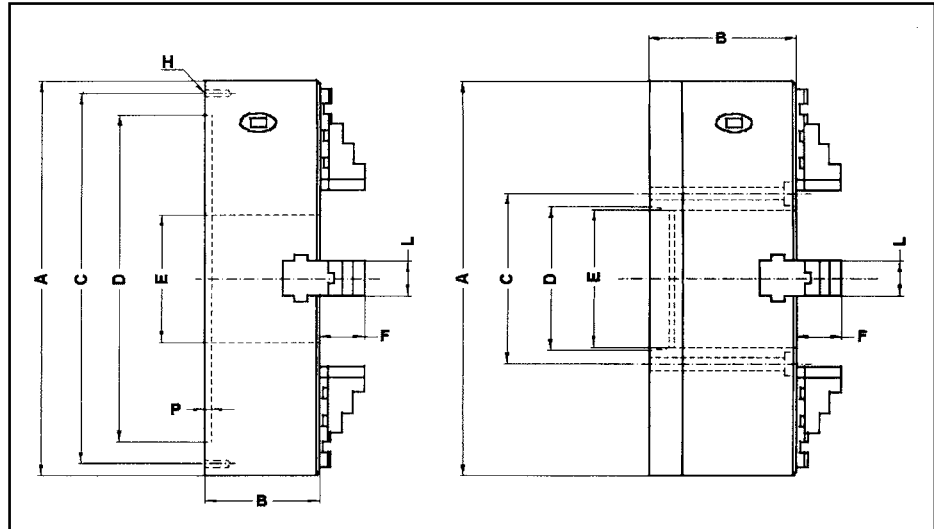
4 Jaws

Ø SIZE	RECESS MOUNT	DIN55029		DIN55026		DIN 55027	
		BODY	STEEL	STEEL	STEEL	STEEL	STEEL
160mm 6"	1UA4R16000	D-4 D-5	1UA4R16042 1UA4R16043	A1-4 A1-5	1UA4R16012 1UA4R16013	4 5 6	1UA4R16022 1UA4R16023 1UA4R16024
200mm 8"	1UA4R20000	D-4 D-5 D-6	1UA4R20042 1UA4R20043 1UA4R20044	A1-4 A1-5 A1-6	1UA4R20012 1UA4R20013 1UA4R20014	4 5 6	1UA4R20023 1UA4R20024
250mm 10"	1UA4R25000	D-5 D-6 D-8	1UA4R25043 1UA4R25044 1UA4R25045	A2-5 A1-6	1UA4R25013 1UA4R25014	4 5 8	1UA4R25023 1UA4R25024
315mm 12.5"	1UA4R31500	D-6 D-8 D-11	1UA4R31544 1UA4R31545 1UA4R31546	A2-6 A1-8	1UA4R31514 1UA4R31515	6 8 11	1UA4R31524 1UA4R31525 1UA4R31526
350mm 14"	1UA4R35000	D-6 D-8 D-11	1UA4R35044 1UA4R35045 1UA4R35046	A2-6 A2-8 A2-11	1UA4R35014 1UA4R35015 1UA4R35016	6 8 11	1UA4R35024 1UA4R35025 1UA4R35026
400mm 16"	1UA4R40000	D-6 D-8 D-11	1UA4R40044 1UA4R40045 1UA4R40046	A2-6 A2-8 A2-11	1UA4R40014 1UA4R40015 1UA4R40016	6 8 11	1UA4R40024 1UA4R40025 1UA4R40026
500mm 20"	1UA4R50000	D-8 D-11 D-15	1UA4R50045 1UA4R50046 1UA4R50047	A2-8 A2-11 A2-15	1UA4R50015 1UA4R50016 1UA4R50017	8 11	1UA4R50025 1UA4R50026
630mm 24"	1UA4R63000	D-8 D-11 D-15	1UA4R63045 1UA4R63046 1UA4R63047	A2-8 A2-11 A2-15	1UA4R63015 1UA4R63016 1UA4R63017	8 11	1UA4R63025 1UA4R63026

3 & 4 Jaw Precision Self-Centering Large Diameter Chucks With Hard Reversible Top Jaws



Large Diameter Concentric Chucks



- **Cast Iron and forged steel body.**
- **Induction Hardened in areas of friction.**
- **Chuck bodies fully ground, included guidelines.**
- **Two piece jaws according to ASA norms.**
- **Steel jaws cement hardened, treated and ground on all surfaces.**
- **Scroll Induction hardened and ground on spiral and internal diameter.**

A mm	A inch	Acop.	E mm	D mm	C mm	H	B mm	F mm	L mm	Fig.
700	27 1/2"	recess mounting	225	630	660	6xM20	145	82	60	1
		11"	192	196.8	235	segun	163	82	60	2
		15"	268	285.8	330	el	163	82	60	2
		20"	320	412.8	463/368	acorp	163	82	60	2
800	31 1/2"	recess mounting	268	730	760	6xM20	155	82	60	1
		11"	268	196.8	235	segun	173	82	60	2
		15"	268	285.8	330	el	173	82	60	2
		20"	381	412.8	463	acorp	175	82	60	2
900	35 2/5"	recess mounting	375	810	850	6xM22	165	82	60	1
		11"	281	196.8	235	segun	183	82	60	2
		15"	281	285.8	330	el	185	82	60	2
		20"	375	412.8	463	acorp.	185	82	60	2
1000	39 2/5"	recess mounting	390	910	950	6xM24	165	82	60	1
		15"	281	285.8	330	segun	188	82	60	2
		20"	408	412.8	463	acorp.	195	82	60	2

3 & 4 Jaw Precision Self-Centering Large Diameter Chucks With Hard Reversible Top Jaws

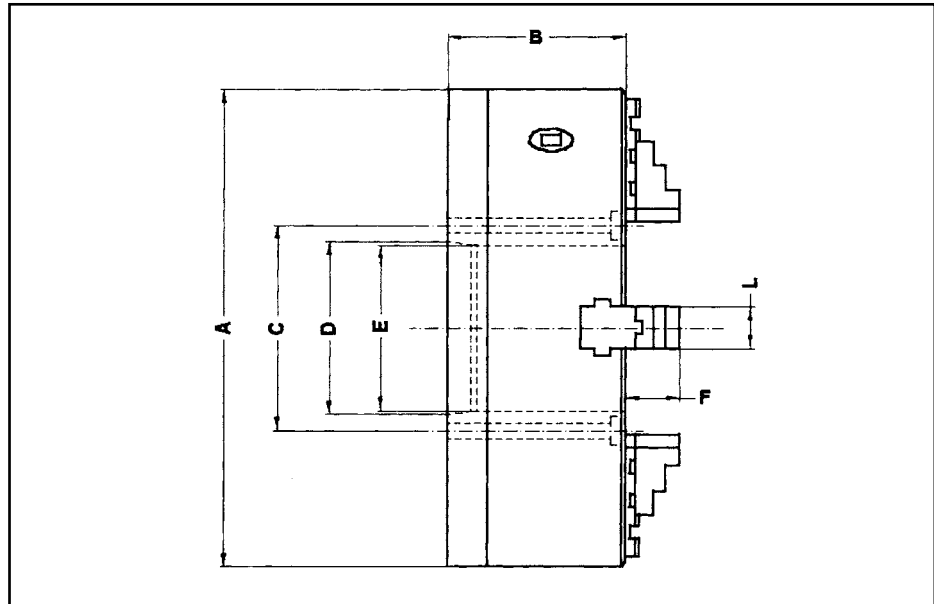
3 Jaws

Ø SIZE	RECESS MOUNT	DIN55029		DIN55026		DIN 55027	
BODY	STEEL		STEEL		STEEL		STEEL
700mm 27-1/2"	1UA3R70000	D-11 D-15	1UA3R70046 1UA3R70047	A2-11 A2-15	1UA3R70016 1UA3R70017	11 15 20	1UA3R70026 1UA3R70027 1UA3R70028
800mm 31-1/2"	1UA3R80000	D-11 D-15	1UA3R80046 1UA3R80047	A2-11 A2-15	1UA3R80016 1UA3R80017	11 15 20	1UA3R80026 1UA3R80027 1UA3R80028
900mm 35-2/5"	1UA3R90000	D-11 D-15	1UA3R90046 1UA3R90047	A2-11 A2-15 A2-20	1UA3R90016 1UA3R90017 1UA3R90018	11 15 20	1UA3R90026 1UA3R90027 1UA3R90028
1000mm 39-2/5"	1UA3R01000	D-15	1UA3R01047	A2-15 A2-20	1UA3R01017 1UA3R01018	15 20	1UA3R01027 1UA3R01028

4 Jaws

Ø SIZE	RECESS MOUNT	DIN55029		DIN55026		DIN 55027	
BODY	STEEL		STEEL		STEEL		STEEL
700mm 27-1/2"	1UA4R70000	D-11 D-15	1UA4R70046 1UA4R70047	A2-11 A2-15	1UA4R70016 1UA4R70017	11 15 20	1UA4R70026 1UA4R70027 1UA4R70028
800mm 31-1/2"	1UA4R80000	D-11 D-15	1UA4R80046 1UA4R80047	A2-11 A2-15	1UA4R80016 1UA4R80017	11 15 20	1UA4R80026 1UA4R80027 1UA4R80028
900mm 35-2/5"	1UA4R90000	D-11 D-15	1UA4R90046 1UA4R90047	A2-11 A2-15 A2-20	1UA4R90016 1UA4R90017 1UA4R90018	11 15 20	1UA4R90026 1UA4R90027 1UA4R90028
1000mm 39-2/5"	1UA4R01000	D-15	1UA4R01047	A2-15 A2-20	1UA4R01017 1UA4R01018	15 20	1UA4R01027 1UA4R01028

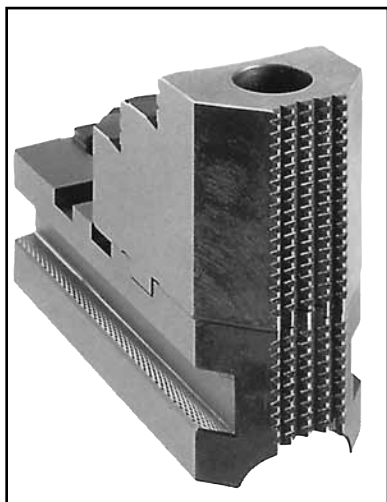
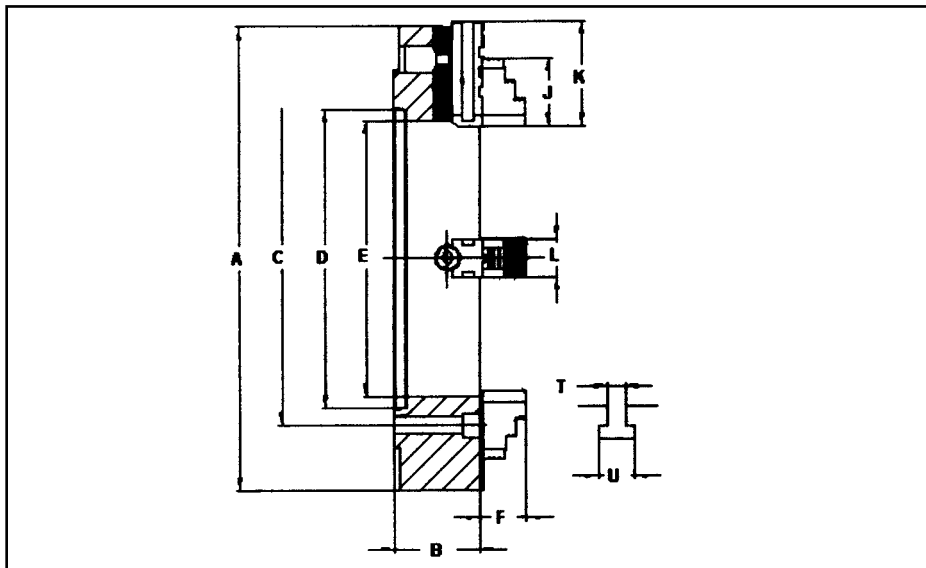
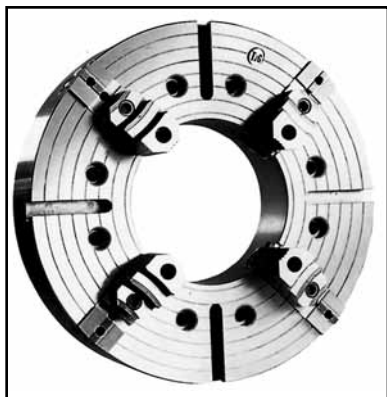
3 & 4 Oil Country Self-Centering Chucks With Hard Reversible Top Jaws



- **Forged steel body**
- **Extra heavy duty American Standard, hard top and master jaws**
- **Large thru holes standard**
- **Direct A ASA B5.9 A/DIN 55026 Type mounting**

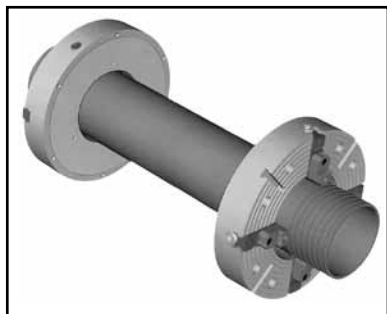
A mm	A inch	Acop.	D mm	E mm	C mm	B mm	F mm	L mm	Code 3 Jaws	Code 4 Jaws
500	20"	A2-11	196.88	192	235	161	83	60	1U03R50016	1U04R50016
		A1-15	285.80	204	2476	161	83	60	1U03R50017	1U04R50017
		A2-20	412.80	204	463	171	83	60	1U03R50018	1U04R50018
630	24-4/5"	A2-15	285.80	280	330.2	168	83	60	1U03R63017	1U04R63017
		A1-20	412.80	318	368.3	170	83	60	1U03R63018	1U04R63018
700	27-5/9"	A215	285.80	280	330.2	173	92	75	1U03R70017	1U04R70017
		A1-20	412.80	318	368.3	175	92	75	1U03R70018	1U04R70018
800	31-1/2"	A2-15	285.80	280	330.2	178	92	75	1U03R80017	1U04R80017
		A2-20	412.80	370/407	463.6	180	92	75	1U03R80017	1U04R80017
900	35-3/7"	A215	285.80	280	330.2	190	92	75	1U03R90018	1U04R90018
		A2-20	412.80	370/407	463.6	190	92	75	1U03R90018	1U04R90018
1000	39-3/8"	A2-20	412.80	407	463.6	190	92	75	1U03R01018	1U04R01018
		A2-28	584.25	470/572	647.6	194	92	75	1U03R01019	1U04R01019

4-Jaw Oil Country Independent Chucks With Hard Reversible Top Jaws



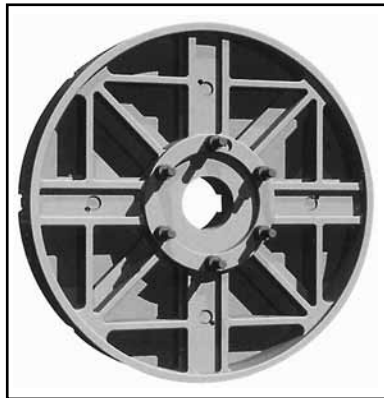
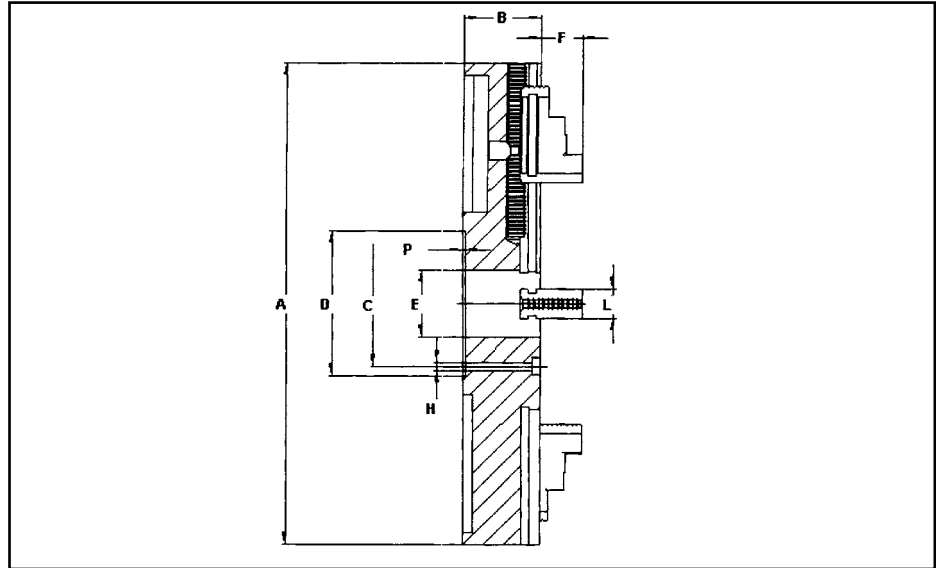
- **Forged steel body**
- **Extra heavy duty American Standard, hard top and master jaws**
- **Large thru holes standard**
- **Direct A ASA B5.9 A/DIN 55026 Type mounting**

**Gripping Surfaces
Serrated for More
Holding Power**



A mm	A inch	CONE	D mm	E mm	C mm	B mm	K mm	F mm	L mm	T mm	U mm	REF./CODE
450	18"	A2-11"	196.8	165	235	146	165	83	60	22	40	1104R45016
530	21"	A2-11"	196.8	167	235	146	165	83	60	22	40	1104R53016
		A2-15"	285.8	167	330.2	146	165	83	60	22	40	1104R53017
600	24"	A2-11"	196.8	167	235	155	203	92	75	22	40	1104R60016
		A2-15"	285.8	267	330.2	155	203	92	75	22	40	1104R60017
		A2-20"	412.8	318	463.6	155	203	92	75	22	40	1104R60018
700	28"	A2-15"	285.8	267	330.2	155	203	92	75	22	40	1104R70017
		A2-20"	412.8	318	463.6	155	203	92	75	22	40	1104R70018
800	32"	A2-15"	285.8	267	330.2	165	203	92	75	22	40	1104R80017
		A2-20"	412.8	318	463.6	165	203	92	75	22	40	1104R80018
900	36"	A2-15"	285.8	267	330.2	165	203	92	75	22	40	1104R90017
		A2-20"	412.8	318	463.6	165	203	92	75	22	40	1104R90018
1000	40"	A2-20"	412.8	318	463.6	165	203	92	75	28	48	1104R01018

4-Jaw Independent Chucks With Solid Hard Reversible Jaws



- **Cast Iron and steel body**
- **Solid Reversible Jaws**
- **Direct Mounting**
- **Operating Screw Hardened and Ground**
- **“T” Slots For Diameters 500mm (20”) and Above**

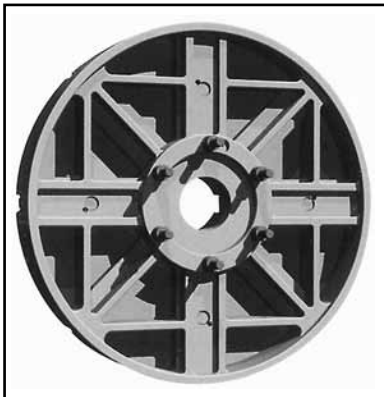
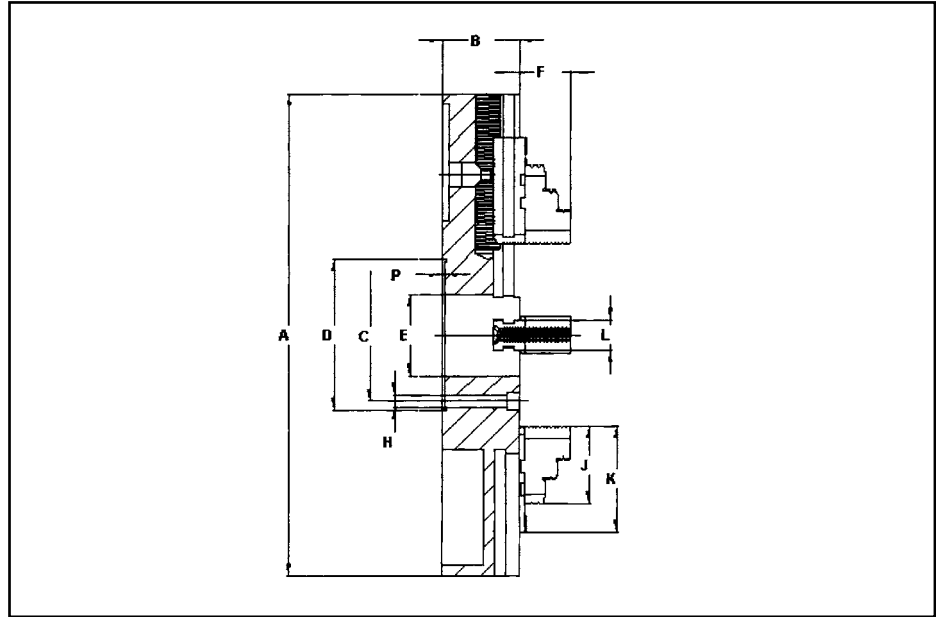
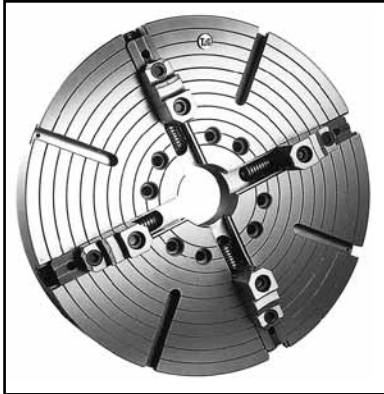


A mm	A inch	B mm	C mm	D mm	E mm	F mm	H	L mm	P mm
160	6"	60	72	145	42	28	4xM8	19.4	5
200	8"	66	120	100	45	33	4xM8	19.4	5
250	10"	76	102	122	60	32.5	4xM12	30	5
300	12"	76	125	150	60	32.5	4xM12	30	5
350	14"	80	125	150	75	44.5	4xM12	35	5
400	16"	80	150	175	80	44.5	4xM18	35	5
450	18"	80	168	200	100	44.5	4xM18	35	5
500	20"	80	220	250	100	44.5	4xM18	35	5
600	24"	100	220	250	100	89	8xM18	50	5
700	28"	120	220	250	120	89	8xM18	50	5
800	32"	125	220	250	135	89	8xM18	50	5
900	36"	135	220	250	140	89	8xM18	50	5
1000	40"	140	250	300	150	89	8xM20	60	7
1200	48"	145	250	300	160	89	8xM20	60	7
1400	56"	150	250	300	160	89	8xM24	60	7
1500	60"	165	250	300	160	89	8xM24	60	7

4-Jaw Independent Chucks With Solid Hard Reversible Jaws

Ø SIZE		RECESS MOUNT		DIN55029			DIN55026			DIN 55027		
mm	Inch	IRON	STEEL		IRON	STEEL		IRON	STEEL		IRON	STEEL
160	6"	-	11A4M16000	D-5	-	11A4M16043	A-5	-	11A4M16013	5	-	11A4M16023
200	8"	-	11A4M20000	D-5	-	11A4M20043	A-5	-	11A4M20013	5	-	11A4M20023
				D-6	-	11A4M20044	A-6	-	11A4M20014	6	-	11A4M20024
250	10"	-	11A4M25000	D-5	-	11A4M25043	A-5	-	11A4M25013	5	-	11A4M25023
				D-6	-	11A4M25044	A-6	-	11A4M25014	6	-	11A4M25024
300	12"	-	11A4M30000	D-5	-	11A4M30043	A-5	-	11A4M30013	5	-	11A4M30023
				D-6	-	11A4M30044	A-6	-	11A4M30014	6	-	11A4M30024
				D-8	-	11A4M30045	A-8	-	11A4M30015	8	-	11A4M30025
350	14"	11F4M35000	11A4M35000	D-6	11F4M35044	11A4M35044	A-5	11F4M35014	11A4M35014	5	11F4M35023	11A4M35023
				D-8	11F4M35045	11A4M35045	A-8	11F4M35015	11A4M35015	8	11F4M35024	11A4M35024
										6	11F4M35025	11A4M35025
400	16"	11F4M40000	11A4M40000	D-6	11F4M40044	11A4M40044	A-6	11F4M40014	11A4M40014	5	11F4M40023	11A4M40023
				D-8	11F4M40045	11A4M40045	A-8	11F4M40015	11A4M40015	8	11F4M40024	11A4M40024
				D-11	11F4M40046	11A4M40046	A-11	11F4M40016	11A4M40016	11	11F4M40025	11A4M40025
										6	11F4M40026	11A4M40026
450	18"	11F4M45000	11A4M45000	D-6	11F4M45044	11A4M45044	A-6	11F4M45014	11A4M45014	6	11F4M45024	11A4M45024
				D-8	11F4M45045	11A4M45045	A-8	11F4M45015	11A4M45015	8	11F4M45025	11A4M45025
				D-11	11F4M45046	11A4M45046	A-11	11F4M45016	11A4M45016	11	11F4M45026	11A4M45026
500	20"	11F4M50000	11A4M50000	D-6	11F4M50044	11A4M50044	A-6	11F4M50014	11A4M50014	6	11F4M50024	11A4M50024
				D-8	11F4M50045	11A4M50045	A-8	11F4M50015	11A4M50015	8	11F4M50025	11A4M50025
				D-11	11F4M50046	11A4M50046	A-11	11F4M50016	11A4M50016	11	11F4M50026	11A4M50026
600	24"	11F4M60000	11A4M60000	D-8	11F4M60045	11A4M60045	A-8	11F4M60015	11A4M60015	6	11F4M60024	11A4M60024
				D-11	11F4M60046	11A4M60046	A-11	11F4M60016	11A4M60016	11	11F4M60025	11A4M60025
										8	11F4M60026	11A4M60026
700	28"	11F4M70000	11A4M70000	D-8	11F4M70045	11A4M70045	A-8	11F4M70015	11A4M70015	8	11F4M70025	11A4M70025
				D-11	11F4M70046	11A4M70046	A-11	11F4M70016	11A4M70016	11	11F4M70026	11A4M70026
										15	11F4M70027	11A4M70027
800	32"	11F4M80000	11A4M80000	D-8	11F4M80045	11A4M80045	A-8	11F4M80015	11A4M80015	8	11F4M80025	11A4M80025
				D-11	11F4M80046	11A4M80046	A-11	11F4M80016	11A4M80016	11	11F4M80026	11A4M80026
							A-15	11F4M80017	11A4M80017	15	11F4M80027	11A4M80027
900	36"	11F4M90000	11A4M90000	D-11	11F4M80046	11A4M80046	A-11	11F4M90016	11A4M90016	8	11F4M90026	11A4M90026
							A-15	11F4M90017	11A4M90017	11	11F4M90026	11A4M90026
										15	11F4M90027	11A4M90027
1000	40"	11F4M01000	11A4M01000	D-11	11F4M01046	11A4M01046	A-11	11F4M01016	11A4M01016	8	11F4M01026	11A4M01026
				D-15	11F4M01047	11A4M01047	A-15	11F4M01017	11A4M01017	11	11F4M01026	11A4M01026
										15	11F4M01027	11A4M01027
1200	48"	11F4M01200	11A4M01200	D-11	11F4M01246	11A4M01246	A-11	11F4M01216	11A4M01216			
				D-15	11F4M01247	11A4M01247	A-15	11F4M01217	11A4M01217			
							A-20	11F4M01218	11A4M01218			
1400	56"	11F4M01400	11A4M01400	D-11	11F4M01446	11A4M01446	A-11	11F4M01416	11A4M01416			
				D-15	11F4M01447	11A4M01447	A-15	11F4M01417	11A4M01417			
							A-20	11F4M01418	11A4M01418			
1500	60"	11F4M01500	11A4M01500	D-15	11F4M01547	11A4M01547	A-15	11F4M01517	11A4M01517			
							A-20	11F4M01518	11A4M01518			

4-Jaw Independent Chucks With Hard Reversible Top Jaws



- **Cast Iron and steel body**
- **Two Piece Jaws According to ASA Norms Jaws**
- **Direct Mounting**
- **Operating Screw Hardened and Ground**
- **“T” Slots For Diameters 500mm (20”) and Above**

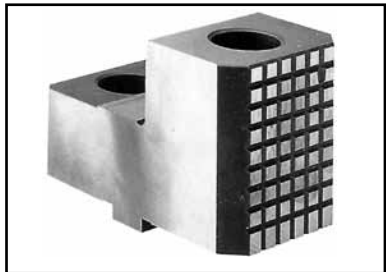
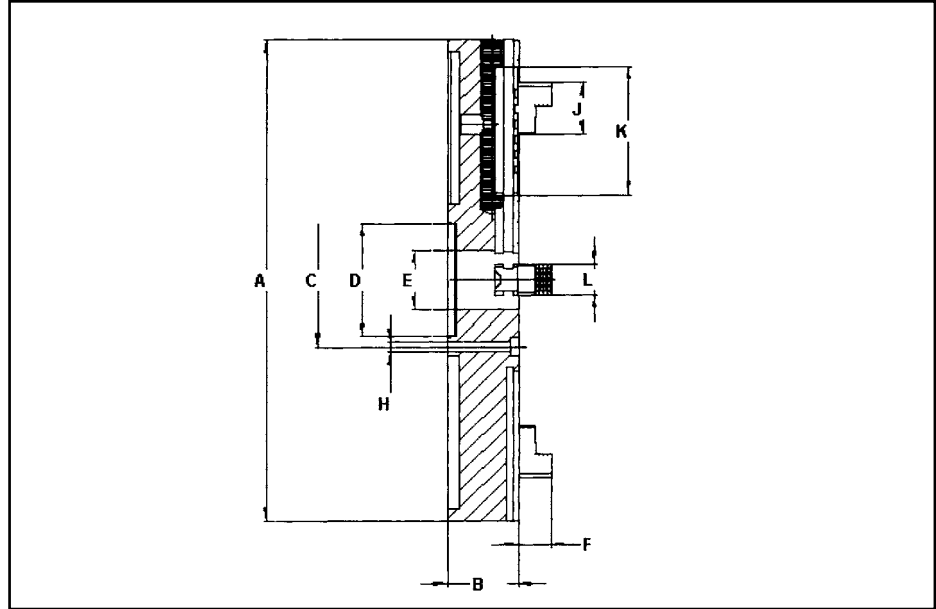
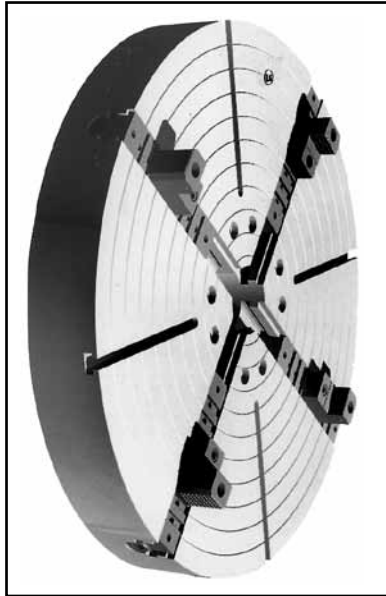


A mm	A inch	B mm	C mm	D mm	E mm	F mm	H	J mm	K mm	L mm	P mm
350	14"	80	125	150	75	68.8	4xM12	127	127	35	5
400	16"	80	150	175	80	68.8	4xM18	127	127	35	5
450	18"	100	168	200	100	86.3	4xM18	127	165	35	5
500	20"	100	220	250	100	86.3	4xM18	127	165	35	5
600	24"	100	220	250	100	83.7	8xM20	127	175	50	5
700	28"	120	220	250	120	83.7	8xM20	127	175	50	5
800	32"	125	220	250	135	83.7	8xM20	127	175	50	5
900	36"	135	220	250	140	83.7	8xM20	127	175	50	5
1000	40"	140	250	300	150	89	8xM20	127	203	60	7
1200	48"	145	250	300	160	89	8xM20	127	203	60	7
1400	56"	150	250	300	160	89	8xM24	127	203	60	7
1500	60"	165	250	300	160	89	8xM24	127	203	60	7

4-Jaw Independent Chucks With Hard Reversible Top Jaws

Ø SIZE		RECESS MOUNT		DIN55029			DIN55026			DIN 55027		
mm	Inch	IRON	STEEL		IRON	STEEL		IRON	STEEL		IRON	STEEL
350	14"	-	11A4M35000	D-6	-	11A4R35044	A-6	-	11A4R35014	5	-	11A4R35023
					-			-		6	-	11A4R35024
				D-8	-	11A4R35045	A-7	-	11A4R35015	8	-	11A4R35025
400	16"	11F4R40000	11A4R40000	D-6	11F4R40044	11A4R40044	A-6	11F4R40014	11A4R40014	5	11F4R40023	11A4R40023
				D-8	11F4R40045	11A4R40045	A-8	11F4R40015	11A4R40015	8	11F4R40024	11A4R40024
				D-11	11F4R40046	11A4R40046	A-11	11F4R40016	11A4R40016	11	11F4R40025	11A4R40025
450	18"	11F4R45000	11A4R45000	D-6	11F4R45044	11A4R45044	A-6	11F4R45014	11A4R45014	6	11F4R45024	11A4R45024
				D-8	11F4R45045	11A4R45045	A-8	11F4R45015	11A4R45015	8	11F4R45025	11A4R45025
				D-11	11F4R45046	11A4R45046	A-11	11F4R45016	11A4R45016	11	11F4R45026	11A4R45026
500	20"	11F4R50000	11A4R50000	D-6	11F4R50044	11A4R50044	A-6	11F4R50014	11A4R50014	6	11F4R50024	11A4R50024
				D-8	11F4R50045	11A4R50045	A-8	11F4R50015	11A4R50015	8	11F4R50025	11A4R50025
				D-11	11F4R50046	11A4R50046	A-11	11F4R50016	11A4R50016	11	11F4R50026	11A4R50026
600	24"	11F4R60000	11A4R60000	D-8	11F4R60045	11A4R60045	A-8	11F4R60015	11A4R60015	6	11F4R60024	11A4R60024
										8	11F4R60025	11A4R60025
				D-11	11F4R60046	11A4R60046	A-11	11F4R60016	11A4R60016	11	11F4R60026	11A4R60026
700	28"	11F4R70000	11A4R70000	D-8	11F4R70045	11A4R70045	A-8	11F4R70015	11A4R70015	8	11F4R70025	11A4R70025
										11	11F4R70026	11A4R70026
				D-11	11F4R70046	11A4R70046	A-11	11F4R70016	11A4R70016	15	11F4R70027	11A4R70027
800	32"	11F4R80000	11A4R80000	D-8	11F4R80045	11A4R80045	A-8	11F4R80015	11A4R80015	8	11F4R80025	11A4R80025
				D-11	11F4R80046	11A4R80046	A-11	11F4R80016	11A4R80016	11	11F4R80026	11A4R80026
							A-15	11F4R80017	11A4R80017	15	11F4R80027	11A4R80027
900	36"	11F4R90000	11A4R90000	D-11	11F4R80046	11A4R80046	A-11	11F4R90016	11A4R90016	8	11F4R90026	11A4R90026
										11	11F4R90026	11A4R90026
							A-15	11F4R90017	11A4R90017	15	11F4R90027	11A4R90027
1000	40"	11F4R01000	11A4R01000	D-11	11F4R01046	11A4R01046	A-11	11F4R01016	11A4R01016	8	11F4R01026	11A4R01026
										11	11F4R01026	11A4R01026
				D-15	11F4R01047	11A4R01047	A-15	11F4R01017	11A4R01017	15	11F4R01027	11A4R01027
1200	48"	11F4R01200	11A4R01200	D-11	11F4R01246	11A4R01246	A-11	11F4R01216	11A4R01216			
				D-15	11F4R01247	11A4R01247	A-15	11F4R01217	11A4R01217			
							A-20	11F4R01218				11A4R01218
1400	56"	11F4R01400	11A4R01400	D-11	11F4R01446	11A4R01446	A-11	11F4R01416	11A4R01416			
				D-15	11F4R01447	11A4R01447	A-15	11F4R01417	11A4R01417			
							A-20	11F4R01418				11A4R01418
1500	60"	11F4R01500	11A4R01500	D-15	11F4R01547	11A4R01547	A-15	11F4R01517	11A4R01517			
							A-20	11F4R01518				11A4R01518

4-Jaw Heavy Duty Independent Chucks With Hard Reversible Top Jaws



**One step Top Jaw For
Chucks Ø 600mm
and Above**

- Heavy duty cast iron and cast steel body
- Greater body rigidity with reinforced nerves
- Two piece jaw
- Optional long master jaws for added rigidity
- Hardened and ground jaws
- Direct mount



**Optional
Long Base Jaws**

A mm	A inch	B mm	C mm	D mm	H mm	E mm	F mm	J mm	L mm	K mm	K Optional mm
600	24"	135				100	73	127	60	203	250
700	28"	135				120	73	127	60	203	250
800	32"	135				135	73	127	60	203	300
900	36"	135				140	73	127	60	203	322
1000	40"	140				150	78	127	75	203	332
1200	48"	160				160	78	127	75	203	400
1400	56"	170				160	78	127	75	203	450
1500	60"	165				160	78	127	75	203	500
1600	63"	195				170	92	127	90	550	550
1800	71"	205				180	92	127	90	600	600
2000	79"	215				180	92	127	90	650	650

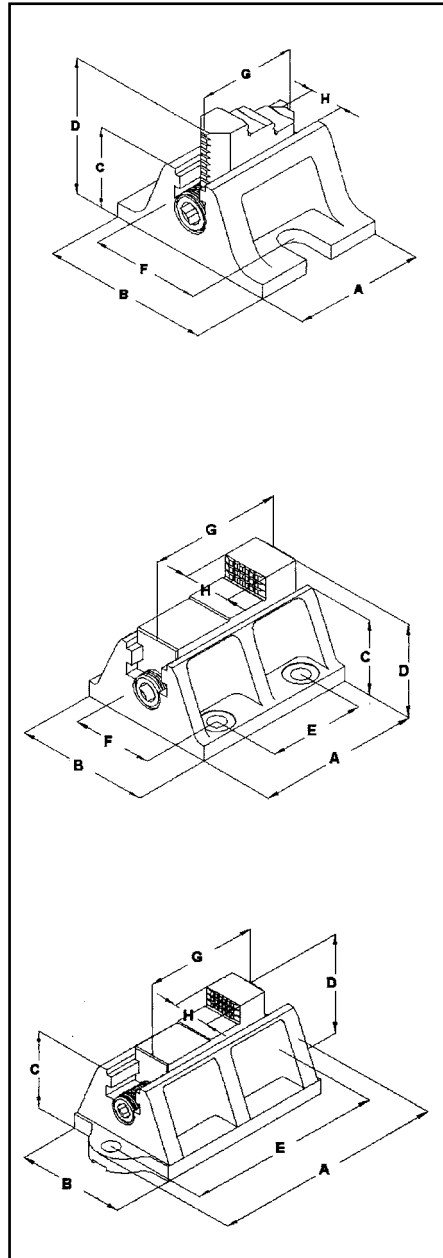
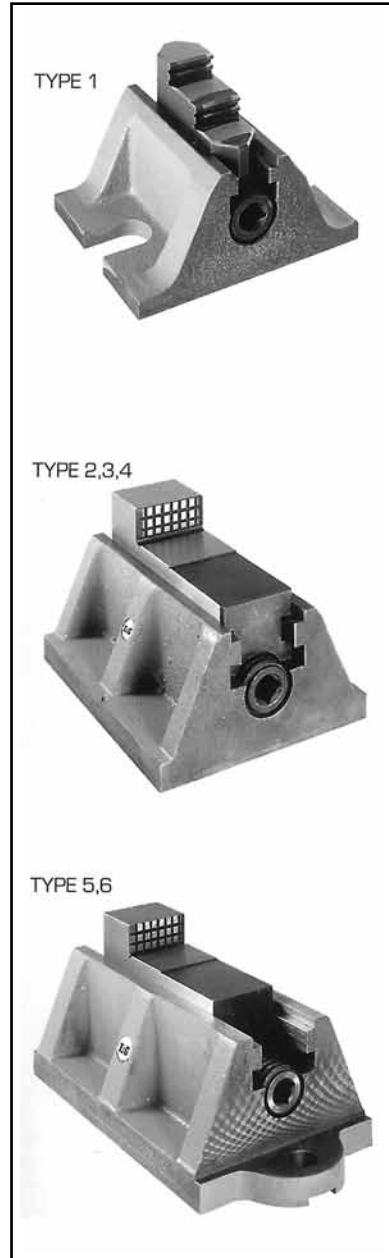
**MEASUREMENT
ACCORDING TO MOUNTING**



4-Jaw Heavy Duty Independent Chucks With Hard Reversible Top Jaws

Ø SIZE		RECESS MOUNT	DIN55029		DIN55026		DIN 55027	
mm	Inch	STEEL		STEEL		STEEL		STEEL
600	24"	1IS4R60000	D-8 D-11	1IS4R60045 1IS4R60046	A-8 A-11	1IS4R60015 1IS4R60016	8 11	1IS4R60025 1IS4R60026
700	28"	1IS4R70000	D-8 D-11	1IS4R70045 1IS4R70046	A-8 A-11	1IS4R70015 1IS4R70016	11 15	1IS4R70026 1IS4R70027
800	32"	1IS4R80000	D-11	1IS4R80046	A-8 A-11 A-15	1IS4R80015 1IS4R80016 1IS4R80017	11 15	1IS4R80026 1IS4R80027
900	36"	1IS4R90000	D-11	1IS4R80046	A-11 A-15	1IS4R90016 1IS4R90017	11 15	1IS4R90026 1IS4R90027
1000	40"	1IS4R01000	D-11 D-15	1IS4R01046 1IS4R01047	A-11 A-15 A-20	1IS4R01016 1IS4R01017	11 15	1IS4R01026 1IS4R01027 1IS4R01018
1200	48"	1IS4R01200	D-11 D-15	1IS4R01246 1IS4R01247	A-11 A-15 A-20	1IS4R01216 1IS4R01217 1IS4R01218		
1400	56"	1IS4R01400	D-11 D-15	1IS4R01446 1IS4R01447	A-11 A-15 A-20	1IS4R01416 1IS4R01417 1IS4R01418		
1500	60"	1IS4L01500	D-15	1IS4R01547	A-15 A-20	1IS4R01517 1IS4R01518		
1600	63"	1IS4L01600	D-15	1IS4L01647	A-15 A-20	1IS4L01617 1IS4L01618		
1800	71"	1IS4L01800			A-15 A-20 A-28	1IS4L01817 1IS4L01818 1IS4L01819		
2000	79"	1IS4L02000			A-15 A-20 A-28	1IS4L02017 1IS4L02018 1IS4L02019		

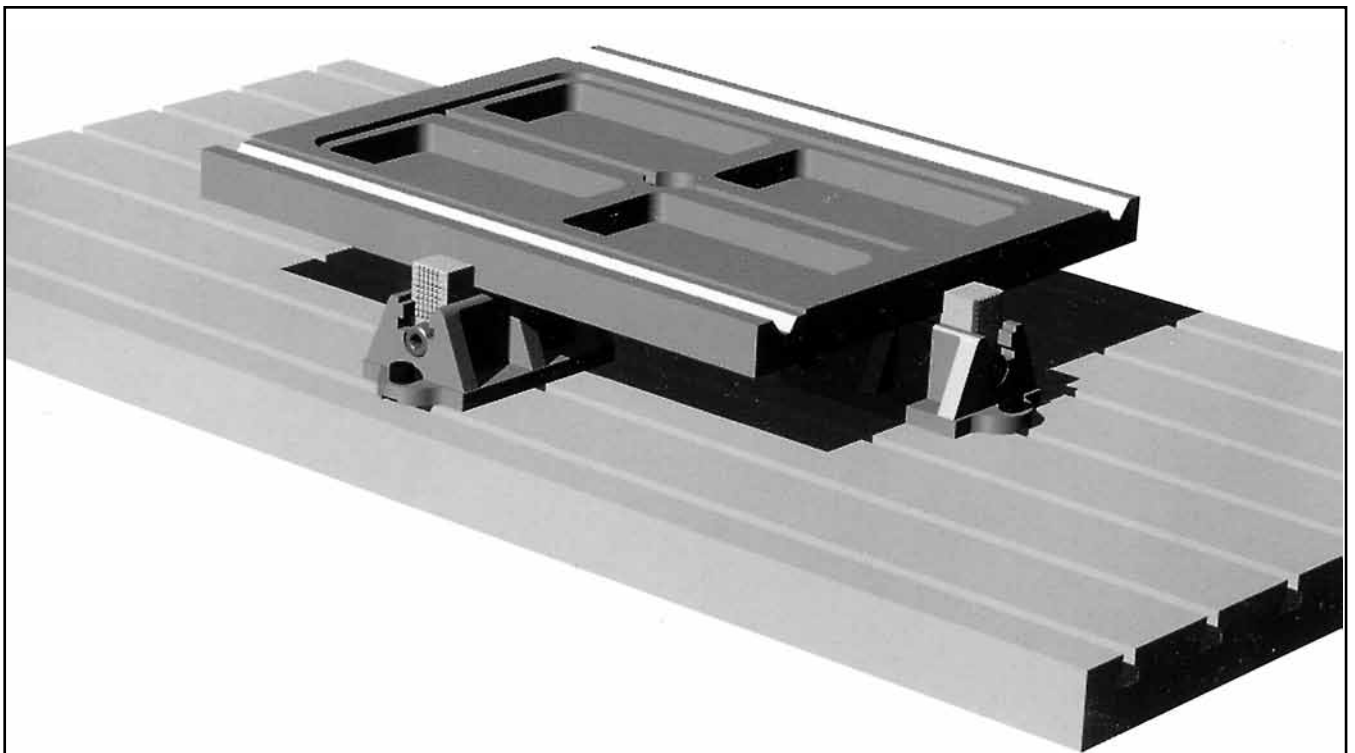
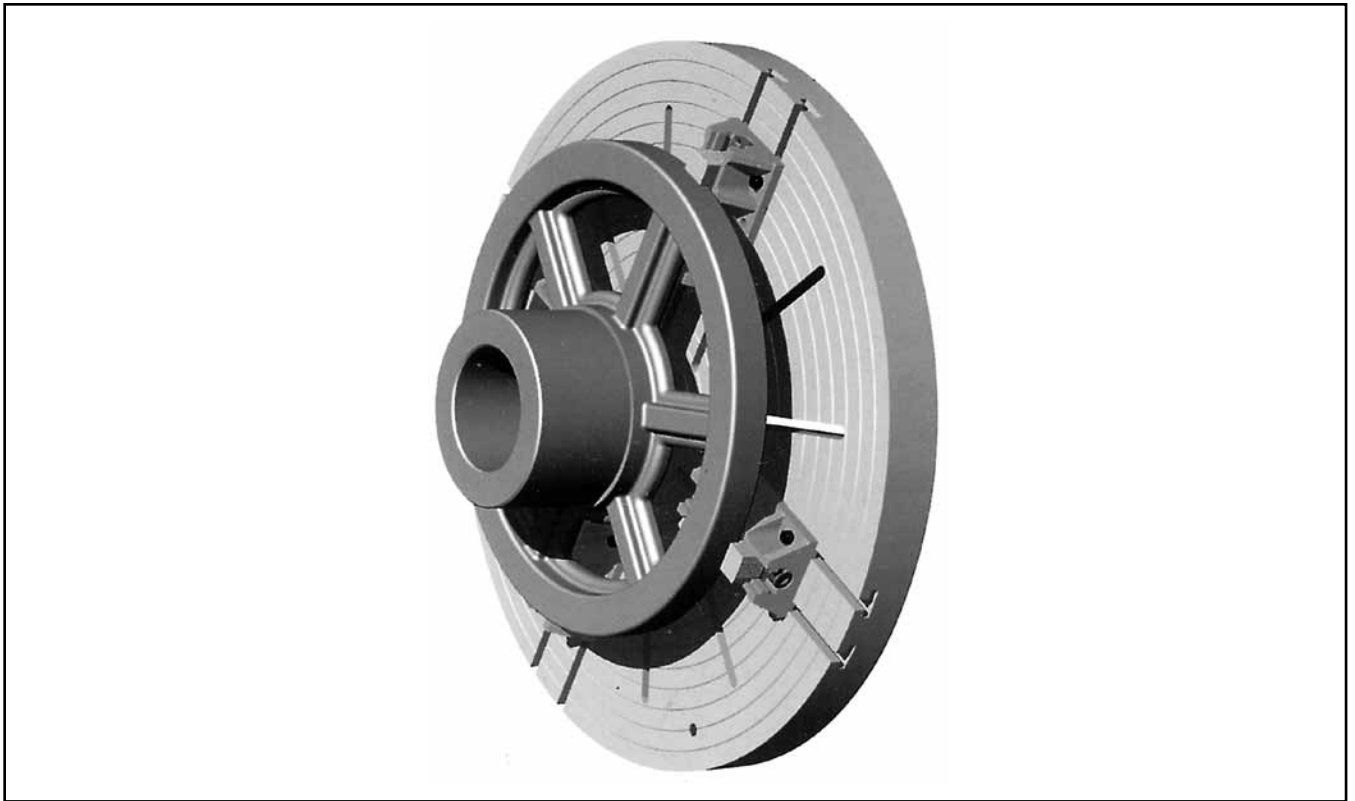
Box Jaws



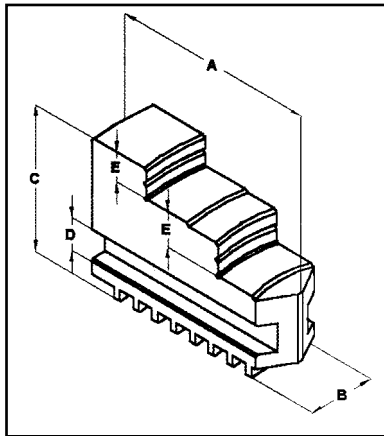
- **Chuck Size from 1000 mm to 2500 mm**
- **Individual unit supply**
- **Wide range of Box-Jaw sizes**
- **To use on lathes and milling machines**
- **Suitable for heavy duty workholding**
- **Greater rigidity of body**
- **Chucks with 4 or more jaws**
- **Direct mounting**
- **Special design according to customer specifications**

TYPE	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	CODE
1	114	146	71	104	–	96	88	30	18L0000100
2	210	172	98	139	125	125	180	50	18L0000200
3	210	172	98	139	125	125	180	60	18L0000300
4	305	220	118	160	177.8	152.4	203	75	18L0000400
5	277	130	90	135	230	–	125	35	18L0000500
6	360	170	118	159	315	–	180	60	18L0000600

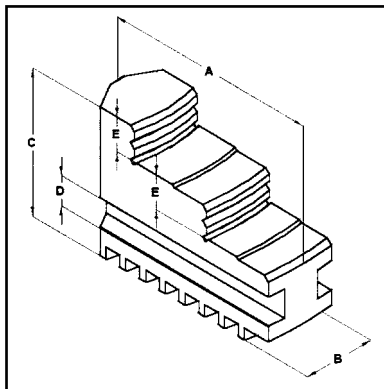
Applications for Box Jaws



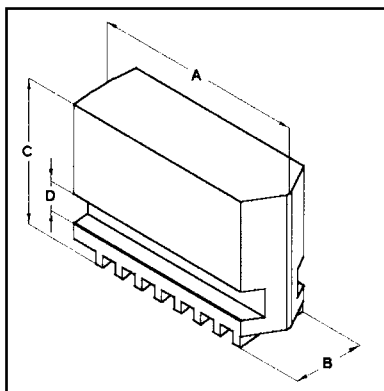
Spare Parts for Self-Centering Chucks One Piece Jaw



No. 1 Outside Hard Jaw



No. 2 Inside Hard Jaw



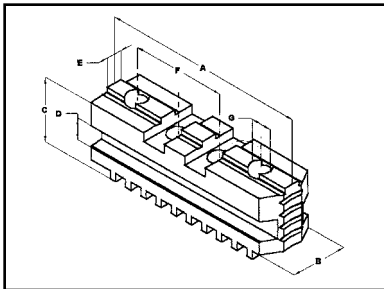
Soft Scroll Jaw

mm Ø SIZE	85	110	135	160	200	250	315	350	400	500	630
	3-1/2	4-1/4	5-1/2	6-1/4	8	10	12-1/2	13-3/4	16	20	23
A mm	34	47	55	66	77	95	115	140	140	175	175
B mm	12	15	18	22	25	32	40	40	40	45	45
C mm	24.6	31.5	39.5	47.5	54.5	64.5	79.5	89.5	89.5	119.5	119.5
D mm	5	6.5	8	9	10.5	12.482	14	14	14	16	16
E mm	6	7.5	9.5	10.5	12	15	19	23.5	23.5	34	34

Ø SIZE	No. 1 Outside Hard Jaw	No. 2 Inside Hard Jaw	Soft Scroll Jaw	Master Base Jaw	Hard Top Jaw	Soft Top Jaw
mm inch						
85 3-1/2	JGO.3	1GU3108500	1GU3208500	1GU3008500		
	JGO.4	1GU4108500	1GU4208500	1GU4008500		
110 4-1/4	JGO.3	1GU3111000	1GU3211000	1GU3011000		
	JGO.4	1GU4111000	1GU4211000	1GU4011000		
135 5-1/2	JGO.3	1GU3113500	1GU3213500	1GU3013500		
	JGO.4	1GU4113500	1GU4213500	1GU4013500		
160 6-1/4	JGO.3	1GU3116000	1GU3216000	1GU3016000	1GU3316000	1GU3416000
	JGO.4	1GU4116000	1GU4216000	1GU4016000	1GU4316000	1GU4416000
200 8	JGO.3	1GU3120000	1GU3220000	1GU3020000	1GU3320000	1GU3420000
	JGO.4	1GU4120000	1GU4220000	1GU4020000	1GU4320000	1GU4420000
250 10	JGO.3	1GU3125000	1GU3225000	1GU3025000	1GU3325000	1GU3425000
	JGO.4	1GU4125000	1GU4225000	1GU4025000	1GU4325000	1GU4425000
315 12-1/2	JGO.3	1GU3131500	1GU3231500	1GU3031500	1GU3331500	1GU3431500
	JGO.4	1GU4131500	1GU4231500	1GU4031500	1GU4331500	1GU4431500
350 13-3/4	JGO.3	1GU3135000	1GU3235000	1GU3035000	1GU3335000	1GU3435000
	JGO.4	1GU4135000	1GU4235000	1GU4035000	1GU4335000	1GU4435000
400 16	JGO.3	1GU3140000	1GU3240000	1GU3040000	1GU3340000	1GU3440000
	JGO.4	1GU4140000	1GU4240000	1GU4040000	1GU4340000	1GU4440000
500 20	JGO.3	1GU3150000	1GU3250000	1GU3050000	1GU3350000	1GU3450000
	JGO.4	1GU4150000	1GU4250000	1GU4050000	1GU4350000	1GU4450000
630 23	JGO.3	1GU3163000	1GU3263000	1GU3050000	1GU3363000	1GU3463000
	JGO.4	1GU4163000	1GU4263000	1GU4050000	1GU4363000	1GU4463000

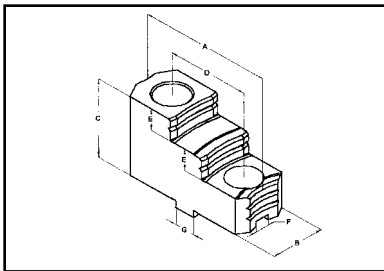
Spare Parts for Self-Centering Chucks

Two Piece Jaw



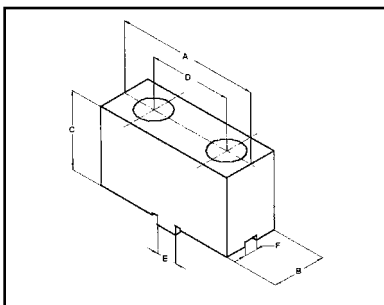
Base Jaw

Ø SIZE		A	B	C	D	E	F	G
mm	inch	mm	mm	mm	mm	mm	mm	inch
160	6-1/4	65	22	30	9	12.7	38.1	3/8"-16 UNC
200	8	78	25	33.5	10.5	12.7	48.4	3/8"-16 UNC
250	10	92	32	38.25	12.5	19.05	54	1/2"-13 UNC
315	12-1/2	108	40	43.25	14	19.05	63.5	1/2"-13 UNC
350	13-1/3	127	40	47	14	19.05	76.2	5/8"-11 UNC
400	16	127	40	47	14	19.05	76.2	5/8"-11 UNC
500	20	166	45	57	16	19.05	76.2	3/4"-10 UNC
630	23	166	45	57	16	19.05	76.2	3/4"-10 UNC



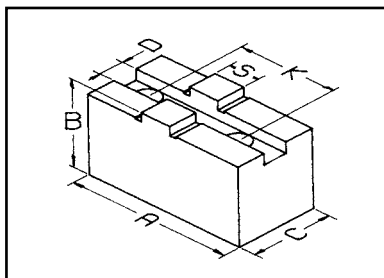
Hard Top Jaw

mm	160	200	250	315	350	400	500	630
Ø SIZE	6-1/4	8	10	12-1/2	13-3/4	16	20	23
A mm	66.5	79.2	93.8	108.5	128.5	128.5	127	127
B mm	22.5	25.5	32.5	40.5	40.5	40.5	52.5	52.5
C mm	38.1	40.4	51	51	59.5	59.5	80	80
D mm	38.1	44.4	54	63.5	76.2	76.2	76.2	76.2
E mm	8	9.5	12	12	12	12	18	18
F mm	8	8	12.7	12.7	12.7	12.7	12.7	12.7
G mm	12.6	12.6	19.05	19.05	19.05	19.05	19.05	19.05



Soft Top Jaw

mm	160	200	250	315	350	400	500	630
Ø SIZE	6-1/4	8	10	12-1/2	13-3/4	16	20	23
A mm	69	81	98	111	130	130	168	168
B mm	30	30	35	44.5	44.5	44.5	52.5	52.5
C mm	39.3	41.6	52.6	52.6	60.5	60.5	80	80
D mm	38.1	44.4	54	63.5	76.2	76.2	76.2	76.2
E mm	12.6	12.6	19.05	19.05	19.05	19.05	19.05	19.05
F mm	8	8	12.7	12.7	12.7	12.7	12.7	12.7



For Manual and Power Operated Chucks

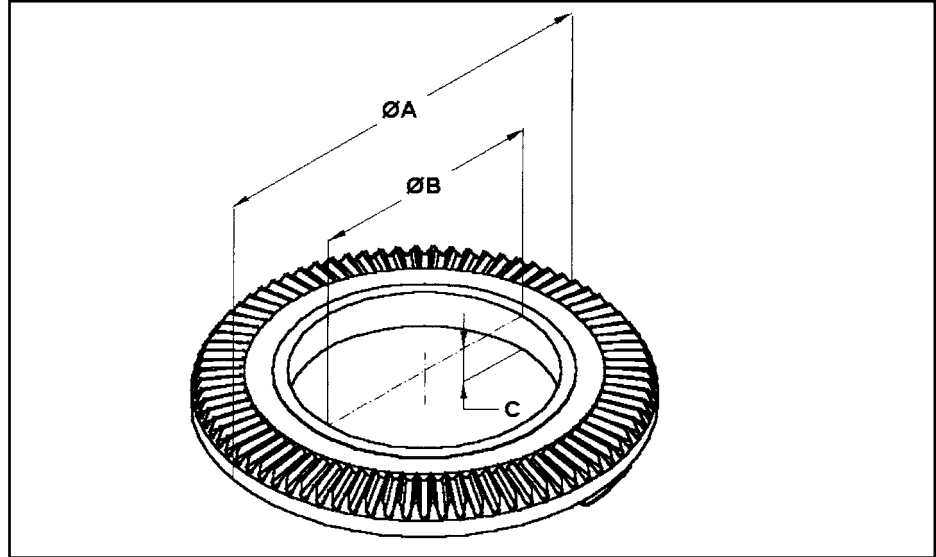
AMERICAN STANDARD BASE JAWS

Techleader Part No.	Chuck Diameter	A	B	C	D	K	S	Bolt Size
DM13	5"	2.18"	1.37"	0.75"	0.313"	1.250"	0.436"	5/16"
DM16	6"	2.81"	1.37"	1.00"	0.313"	1.500"	0.499"	3/8"
DM16L	6"	3.25"	1.37"	1.00"	0.313"	1.500"	0.499"	3/8"
DM20	8"	3.31"	1.87"	1.25"	0.313"	1.750"	0.499"	3/8"
DM20L	8"	3.75"	1.88"	1.25"	0.313"	1.750"	0.499"	3/8"
DM25	10"	3.94"	1.87"	1.50"	0.501"	2.125"	0.749"	1/2"
DM25L	10"	4.62"	1.88"	1.50"	0.501"	2.125"	0.749"	1/2"
DM32	12"	4.50"	2.12"	1.75"	0.501"	2.500"	0.749"	1/2"
DM32L	12"	5.37"	2.13"	1.75"	0.501"	2.500"	0.749"	1/2"
DM38	15"	5.18"	2.25"	1.75"	0.501"	3.000"	0.749"	5/8"
DM38L	15"	6.25"	2.25"	1.75"	0.501"	3.000"	0.749"	5/8"
DM46	18"	5.18"	2.75"	2.25"	0.501"	3.000"	0.749"	3/4"
DM46L	18"	6.37"	2.75"	2.25"	0.501"	3.000"	0.749"	3/4"

Spare Parts for Self-Centering Chucks



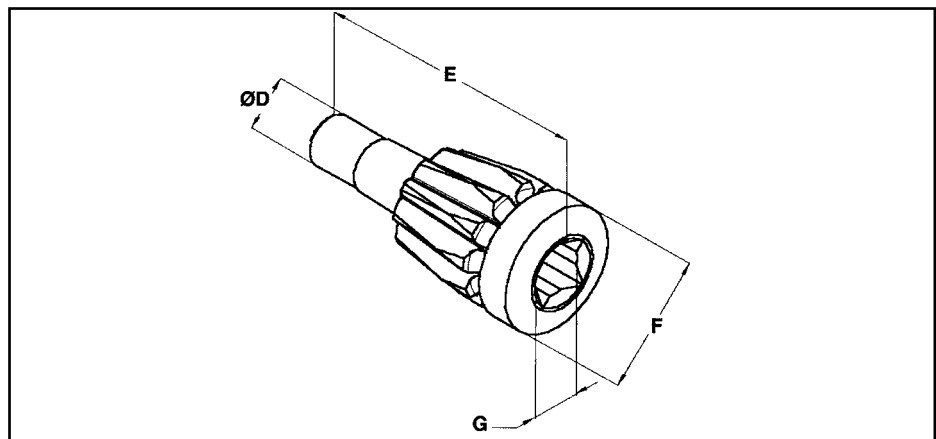
Scroll



Ø SIZE		Ø A	Ø B	C	E	F	G	Ø D	CODE	CODE
mm	inch	mm	mm	mm	mm	mm	mm	mm	SCROLL	PINION
85	3-1/2	61.2	34	11.61	31	20	6 X 6	5	2C00008500	2PN0008500
110	4-1/4	85	48	14.35	37.2	25	8 X 8	8	2C00011000	2PN0011000
135	5-1/2	102	60	16.9	44.3	28	10 X 10	9	2C00013500	2PN0013500
160	6-1/4	124.2	78	16.3	47	30	12 X 12	10	2C00016000	2PN0016000
200	8	158.5	101	19.8	58.1	32	12 X 12	11.5	2C00020000	2PN0020000
250	10	201.2	118	23.5	81.5	35	14 X 14	14	2C00025000	2PN0025000
315	12-1/2	257	138	34.1	104.9	40	14 X 14	18	2C00031500	2PN0031500
350	13-3/4	289	190	27	91	40	14 X 14	18	2C00035000	2PN0035000
400	16	318	175	39	130.5	45	17 X 17	20	2C00040000	2PN0040000
500	20	398	220	51	162.1	50	19 X 19	22	2C00050000	2PN0050000
630	23	542.5	275	50	196	50	19 X 19	22	2C00063000	2PN0063000



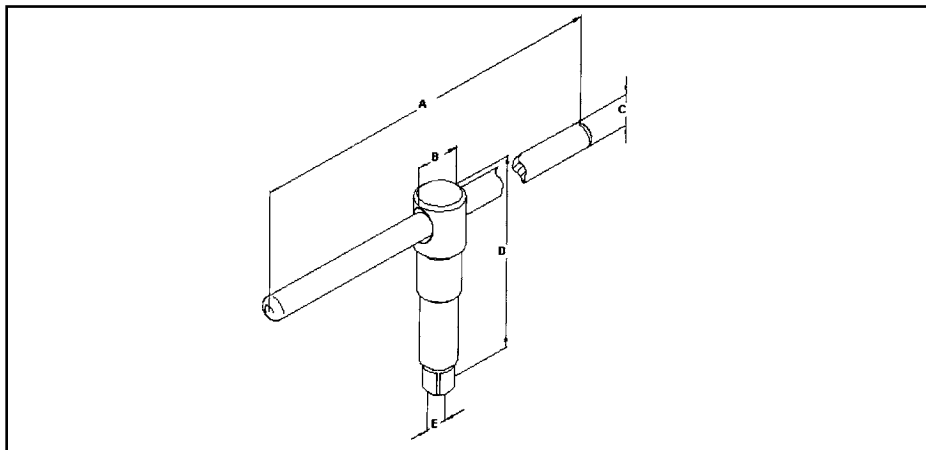
Pinion



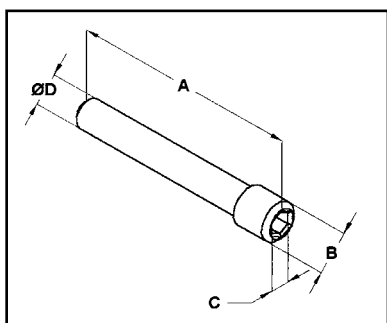
Spare Parts for Self-Centering Chucks



Chuck Key



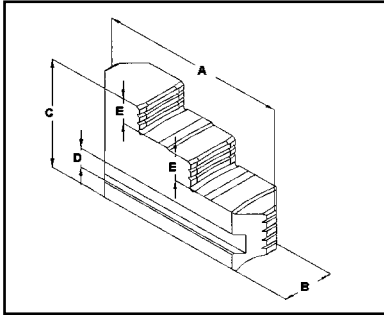
Ø SIZE		A	Ø B	D	E	Chuck Key
mm	inch	mm	mm	mm	mm	Order No.
85	3-1/2	100	14	70	6 X 6	1LL0008500
110	4-1/4	125	18	85	8 X 8	1LL0011000
135	5-1/2	150	22	85	10 X 10	1LL0013500
160	6-1/4	180	22	100	12 X 12	1LL0016000
200	8	210	22	100	12 X 12	1LL0020000
250	10	250	25	134	14 X 14	1LL0025000
315	12-1/2	315	25	134	14 X 14	1LL0031500
350	13-3/4	315	25	134	14 X 14	1LL0030000
400	16	400	30	160	17 X 17	1LL0040000
500	20	500	32	160	19 X 19	1LL0050000
630	23	500	32	160	19 X 19	1LL0063000



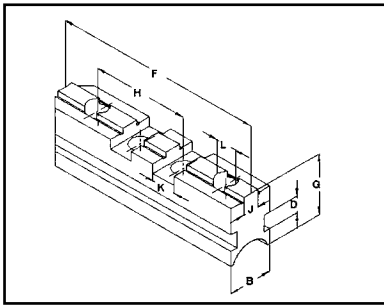
Pinion Retainer

Ø SIZE		A	Ø B	D	E	Pinion Retainer
mm	inch	mm	mm	mm	mm	Order No.
85	3-1/2	34	M6	3	4	2BU0300600
110	4-1/4	34	M6	3	4	2BU0300600
135	5-1/2	34	M6	3	4	2BU0300600
160	6-1/4	38	M6	3	4	2BU0300600
200	8	49	M8	4	6	2BU0300800
250	10	49	M8	4	6	2BU0300800
315	12-1/2	62	M12	6	9	2BU0301200
350	13-3/4	62	M12	6	9	2BU0301200
400	16	62	M12	6	9	2BU0301200
500	20	62	M12	6	9	2BU0301200
630	23	62	M12	6	9	2BU0301200

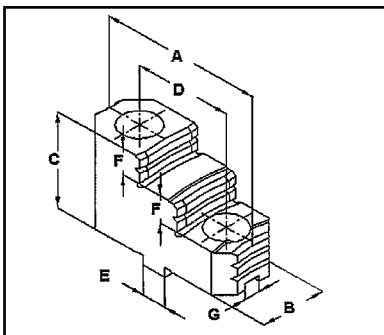
Spare Parts for 4 Jaw Independent Chucks



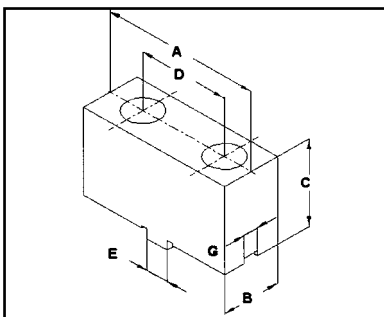
Hard Reversible Jaw



Master Base Jaw



Hard Top Jaw

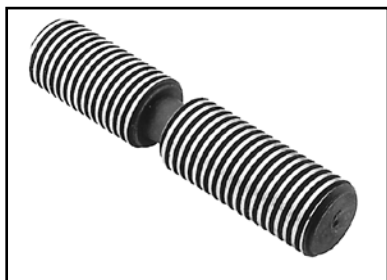


Soft Top Jaw

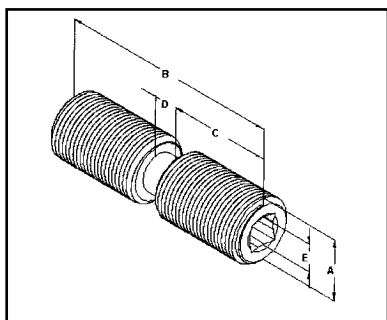
Ø SIZE	A	B	C	D	E	F	G	H	J	K	L	Hard Reversible Jaw	Master Base Jaw
mm inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	inch		
160	6	56	19.4	52	9.25	9	-	-	-	-	-	1GI0116000	-
200	8	75	19.4	57	9.25	10	-	-	-	-	-	1GI0120000	-
250	10	87.5	30	58	10	11	-	-	-	-	-	1GI0125000	-
300	12	87.5	30	58	10	11	-	-	-	-	-	1GI0125000	-
350	14	106	35	76	13	16	127	45.5	76.2	12.7	19.05	1GI0135000	1GI335000
400	16	106	35	76	13	16	127	45.5	76.2	12.7	19.05	1GI0135000	1GI335000
450	18	125	35	76	13	16	165	45.5	76.2	12.7	19.05	1GI0145000	1GI345000
500	20	125	35	76	13	16	165	45.5	76.2	12.7	19.05	1GI0145000	1GI345000
600	24	175	50	130	18	34	175	53.5	76.2	12.7	19.05	1GI0160000	1GI360000
700	28	175	50	130	18	34	175	53.5	76.2	12.7	19.05	1GI0160000	1GI360000
800	32	175	50	130	18	34	175	53.5	76.2	12.7	19.05	1GI0160000	1GI360000
900	36	175	50	130	18	34	175	53.5	76.2	12.7	19.05	1GI0160000	1GI360000
1000	40	200	60	130	18	34	203	54.5	76.2	12.7	19.05	1GI0101000	1GI301000
1200	48	200	60	130	18	34	203	54.5	76.2	12.7	19.05	1GI0101000	1GI301000
1400	56	200	60	130	18	34	203	54.5	76.2	12.7	19.05	1GI0101000	1GI301000
1500	60	200	60	130	18	34	203	54.5	76.2	12.7	19.05	1GI0101000	1GI301000

Ø SIZE	A	B	C	D	E	F	G	HARD TOP JAW	SOFT TOP JAW
mm inch	mm	mm	mm	mm	mm	mm	mm		
350	14	127	40	58	76.2	19.05	15	12.7	1GI0435000 DM38
400	16	127	40	58	76.2	19.05	15	12.7	1GI0435000 DM38
450	18	127	40	73	76.2	19.05	20	12.7	1GI0445000 DM46
500	20	127	40	73	76.2	19.05	20	12.7	1GI0445000 DM46
600	24	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
700	28	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM460
800	32	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
900	36	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
1000	40	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
1200	48	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
1400	56	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46
1500	60	127	61	74	76.2	19.05	20	12.7	1GI0460000 DM46

Spare Parts for 4 Jaw Independent Chucks



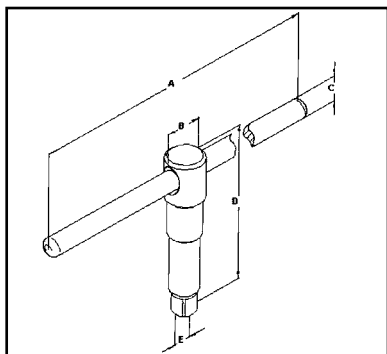
Operating Screw



Operating Screw



Thrust Bearing

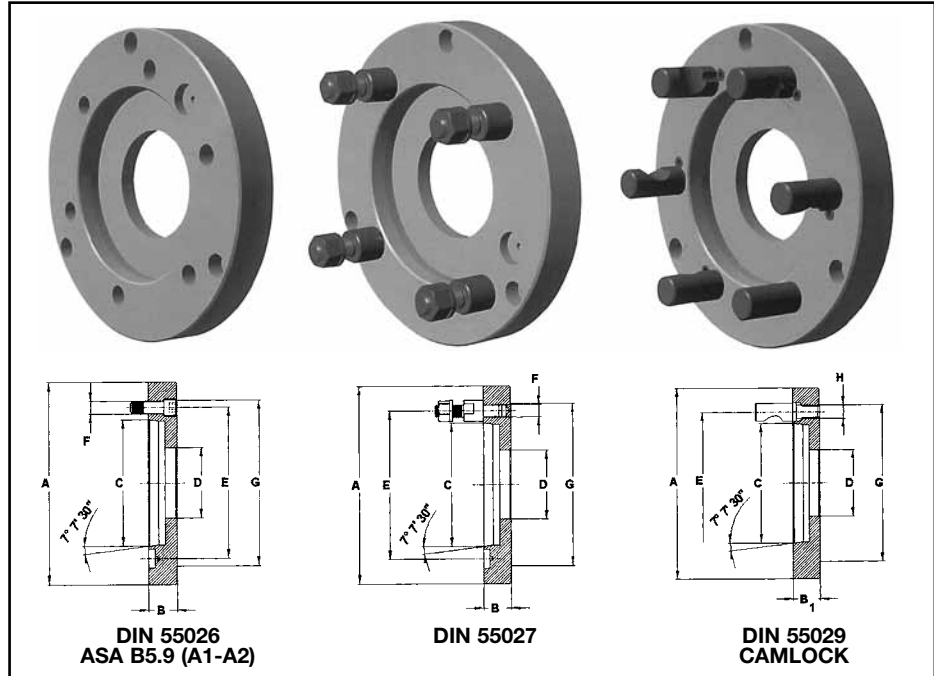


Chuck Key

Ø SIZE		A	B	C	D	E	G	H	OPERATING SCREW	THRUST BEARING
mm	inch									
160	6	22	52	23	6	10	28.75	11.5	2HU2200100	2TC0000100
200	8	22	63	28.5	6	10	36	11.5	2HU2200200	2TC0000200
250	10	32	74	31	12	14	42.5	18.5	2HU3200100	2TC0000300
300	12	32	92	40	12	14	42.5	18.5	2HU3200200	2TC0000300
350	14	32	113	50.5	12	14	42.5	18.5	2HU3200300	2TC0000300
400	16	32	127	57.5	12	14	42.5	18.5	2HU3200400	2TC0000300
450	18	32	152	70	12	14	42.5	18.5	2HU3200500	2TC0000300
500	20	32	178	83	12	14	42.5	18.5	2HU3200600	2TC0000300
600	24	40	208	96	16	17	51	23	2HU4000100	2TC0000400
700	28	40	243	126	16	17	51	23	2HU4000200	2TC0000400
800	32	40	268	126	16	17	51	23	2HU4000300	2TC0000400
900	36	40	323	153.5	16	17	51	23	2HU4000400	2TC0000400
1000	40	40	360	172	16	17	51	23	2HU4000500	2TC0000400
1200	48	40	405	127	19	19	70	32	2HU4000700	2TC0000400
1200	56	40	500	154	19	19	70	32	2HU4000900	2TC0000400
1500	60	40	615	176.5	19	19	70	32	2HU4001000	2TC0000400

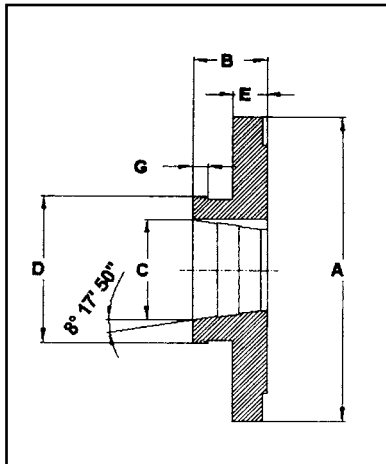
Ø SIZE		A	B	C	D	E	CHUCK KEY
mm	inch						
160	6	200	20	10	118	10	1LL0116000
200	8	200	20	10	118	10	1LL0120000
250	10	250	30	15	135	14	1LL0125000
300	12	250	30	15	135	14	1LL0130000
350	14	350	30	15	180	14	1LL0135000
400	16	350	30	15	180	14	1LL0140000
450	18	400	30	15	180	14	1LL0145000
500	20	400	30	15	180	14	1LL0150000
600	24	600	38	18	258	17	1LL0160000
700	28	600	38	18	258	17	1LL0160000
800	32	600	38	18	258	17	1LL0160000
900	36	600	38	18	258	17	1LL0160000
1000	40	800	38	18	258	17	1LL0101000
1200	48	800	38	18	228	19	1LL0101000
1400	56	800	38	18	228	19	1LL0101000
1500	60	800	38	18	228	19	1LL0101000

Spindle Mountings



SIZES

Short Taper	3"	4"	5"	6"	8"	11"	15"
A	110/135	110/135/160	135/160/200	200/250/315	250/315/350/400	350/400/500/630	400/500/630
B	22/22	20/25	20/25/25	25/30/35	35/35/35/35	36/36/40/45	36/40/45
B1	24/24	24/24/25	27/27/27	32/32/32	31/35/35/36	42/42/45/45	42/45/48
C	53.985	63.525	82.575	106.39	139.735	196.885	285.79
D	51.5	61	79.6	103.2	136.2	192.9	281.3
F	11/M-10	11/M-10	11/M-10	13/M-12	17/M-16	21/M-20	25/M-24
E	75	85	104.8	133.4	171.4	235	330.2
H	7/16"-20	7/16"-20	1/2"-20	5/8"-18	3/4"-16	7/8"-14	1"-12
N° screws DIN 55026	3	3	4	4	4	6	6
N° bolts DIN 55027	3	3	4	4	4	6	6
Lock nuts CAMLOCK Studs	3	3	6	6	6	6	6



Long Tapper

SIZES

Long Taper	L00	L0	L1	L2
A	160/200/250	160/200/250	200/325/400/250/350/500	250/350/315/400/500
B	54	63.5	76.2	88.9
C	69.85	82.65	104.775	133.35
D	3 3/4-6 UNS	4 1/2-6 UNS	6-6 UNS	7 3/4-5 UNS
E	23.5	23.5	23.5	23.5
Coter	9.59	9.59	15.925	19.1
G	14.287	14.287	15.875	22.225

Adapter Plates

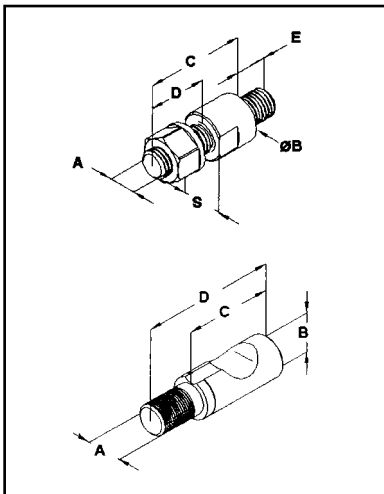


**Adapter With
No Recess**



Adapter With Recess

Studs



Ø SIZE	DIN55029		DIN55026		DIN 55027			
	BODY	FLAT	RECESS	FLAT	RECESS	FLAT	RECESS	
	mm	inch						
160	6-1/4	4"	2CP4216000	2CP4216001	2CP1216000	2CP1216001	2CP2216000	2CP2216001
		5"	2CP4316000	2CP4316001	2CP1316000	2CP1316001	2CP2316000	2CP2316001
		6"	2CP4416000	2CP4416001	2CP1416000	2CP1416001	2CP2416000	2CP2416001
200	8	4"	2CP4220000	2CP4220001	2CP1220000	2CP1220001	2CP2220000	2CP2220001
		5"	2CP4320000	2CP4320001	2CP1320000	2CP1320001	2CP2320000	2CP2320001
		6"	2CP4420000	2CP4420001	2CP1420000	2CP1420001	2CP2420000	2CP2420001
250	10	5"	2CP4325000	2CP4325001	2CP1325000	2CP1325001	2CP2325000	2CP2325001
		6"	2CP4425000	2CP4425001	2CP1425000	2CP1425001	2CP2425000	2CP2425001
		8"	2CP4525000	2CP4525001	2CP1525000	2CP1525001	2CP2525000	2CP2525001
315	12-1/2	6"	2CP4431500	2CP4431501	2CP1431500	2CP1431501	2CP2431500	2CP2431501
		8"	2CP4531500	2CP4531501	2CP1531500	2CP1531501	2CP2531500	2CP2531501
		11"	2CP4631500	2CP4631501	2CP1631500	2CP1631501	2CP2631500	2CP2631501
350	14	6"	2CP4435000	2CP4435001	2CP1435000	2CP1435001	2CP2435000	2CP2435001
		8"	2CP4535000	2CP4535001	2CP1535000	2CP1535001	2CP2535000	2CP2535001
		11"	2CP4635000	2CP4635001	2CP1635000	2CP1635001	2CP2635000	2CP2635001
		15"	2CP4635000	2CP4635001	2CP1635000	2CP1635001	2CP2635000	2CP2635001
400	16	6"	2CP4440000	1GU3240000	2CP1440000	2CP1440001	2CP2440000	2CP2440001
		8"	2CP4540000	1GU4240000	2CP1540000	2CP1540001	2CP2540000	2CP2540001
		11"	2CP4640000	2CP4640001	2CP1640000	2CP1640001	2CP2640000	2CP2640001
		15"	2CP4740000	2CP4740001	2CP1740000	2CP1740001	2CP2740000	2CP2740001
500	20	6"	2CP4450000	2CP4450001	2CP1450000	2CP1450001	2CP2450000	2CP2450001
		8"	2CP4550000	2CP4550001	2CP1550000	2CP1550001	2CP2550000	2CP2550001
		11"	2CP4650000	2CP4650001	2CP1650000	2CP1650001	2CP2650000	2CP2650001
		15"	2CP4750000	2CP4750001	2CP1750000	2CP1750001	2CP2750000	2CP2750001
630	24	8"	2CP4563000	2CP4563001	2CP1563000	2CP1563001	2CP2563000	2CP2563001
		11"	2CP4663000	2CP4663001	2CP1663000	2CP1663001	2CP2663000	2CP2663001
		15"	2CP4763000	2CP4763001	2CP1763000	2CP1763001	2CP2763000	2CP2763001

Short Taper	3"	4"	5"	6"	8"	11"	15"
	3	3	4	4	4	6	6
A	M-10	M-10	M-10	M-12	M-16	M-20	M-24
B	19.5	19.5	19.5	21.5	27	34	41
C	34	39	43	50	60	75	90
D	20	22	24	28	35	44	52
E	12	12	12	15	20	25	30
S	17	17	17	19	24	30	36

Short Taper	3"	4"	5"	6"	8"	11"	15"
	3	3	4	4	4	6	6
A	7/16"-20	7/16"-20	1/2"-20	5/8"-18	3/4"-16	7/8"-14	1"-12
B	14.3	15.8	19	22.2	25.4	30.1	34.9
C	34.9	36.5	42.8	49.2	55.5	66.7	76
D	54	55.5	65	76.2	85.7	101.6	116
S	1/4"x12.7	1/4"x12.7	1/4"x12.7	5/16"x15.9	5/16"x15.9	5/16"x15.9	5/16"x15.9

Milling Vises

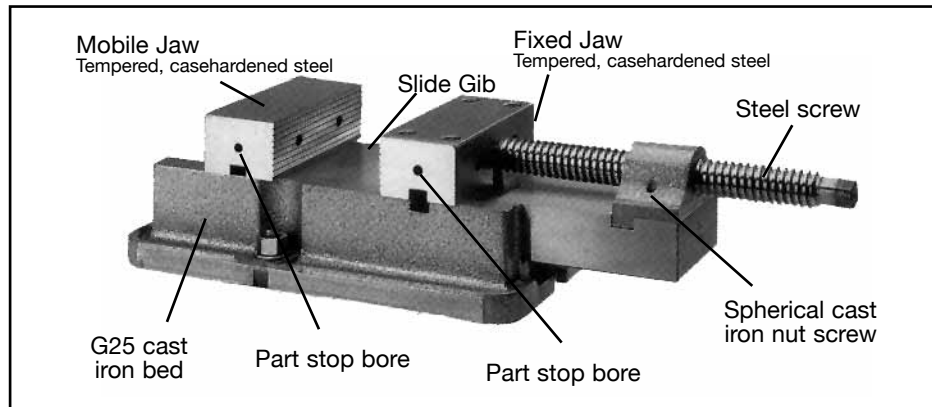
Milling Vises Precision Vises for Milling machines Long lasting precision

These machine vises are especially suited for use on machining centers & high-precision machinery. The sturdy, robust steel body ensures precision clamping.

Made In Italy

Benefits

- G26 cast iron body with high deformity resistance
 - High clamping precision
- May be fastened using screws in the bores provided or with traditional brackets
- Extremely simple to position using the tooled side rests. Two gauged bores on the base may be provided upon request
 - Rapid aperture adjustment
 - Large capacity
 - Long mobile jaw guide
 - Ground jaw surface for precise alignment checking
 - Parallel-ground jaws
- All parts subject to wear, especially the guide gib for the body, are hardened and ground to ensure a long life-span



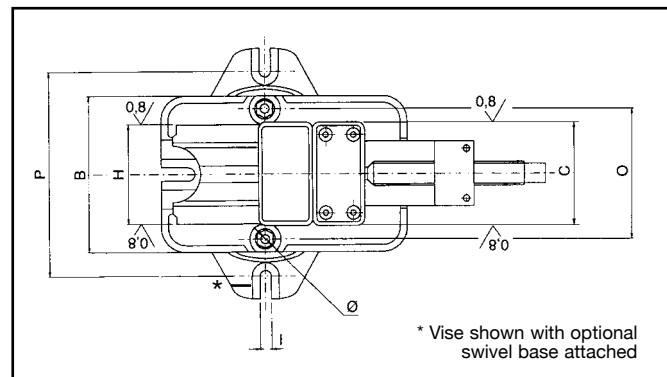
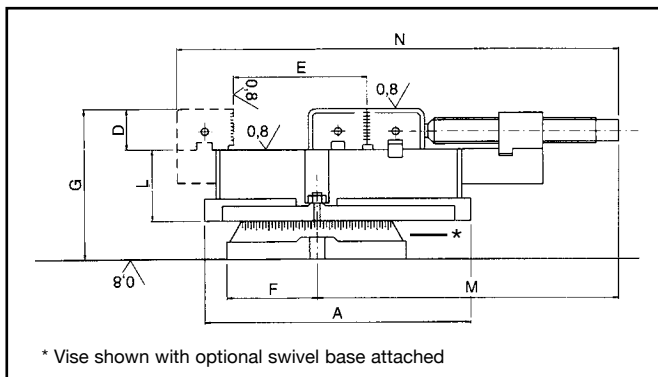
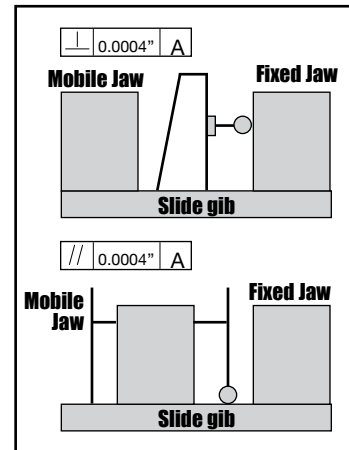
RC Vises were created for precision tooling, with features that allow a secure lock even in high-strain tooling situations. The bed is made of highly resistant G26 pearlitic cast iron, and the rest is entirely tempered, case hardened steel. The two parts interlock with high-precision grinding tolerances, so that the two materials can virtually last forever. The vises include bores for mounting V-type jaws for cylindrical materials, or the knurled jaws for raw materials.

Application

the myriad potential applications for these vises make excellent for use on all traditional machines such as mills, grinders, bong machines, sharpeners, drills, etc. Their advantages can be especially appreciated on CNC machining centers.

Gripping tolerances

The high piece gripping precision and solidity of the grip make RC Vises an essential product for working on machine tools, with a long life-span.



Vise Specifications

Model order #	useful max opening	Jaw length	Jaw height	weight		total height	total length	bed	swivel base (optional)		bed attachment bores		attachment references		bearing face length
				vis	swivel				P	I	O	Ø	F	M	
E300	310mm 12.20"	190mm 7.50"	59mm 2.32"	60 KG 132 lbs	13 KG 28.60 lbs	189mm 7.44"	820mm 32.28"	242 x 450 x 89mm 9.53" x 17.72" x 3.50"	305mm 12.00"	18.5mm 0.728"	203mm 7.99"	18mm 0.708"	170mm 6.69"	620mm 24.40"	170mm 6.69"
B200	210mm 8.26"	145mm 5.70"	48mm 1.87"	37 KG 81 lbs	8 KG 17.60 lbs	165mm 6.50"	638mm 25.11"	198 x 356 x 79 mm 7.80" x 14.01" x 3.1"	260mm 10.24"	17.5mm 0.688"	150mm 5.90"	16.5mm 0.649"	105mm 4.13"	450mm 17.71"	140mm 5.51"

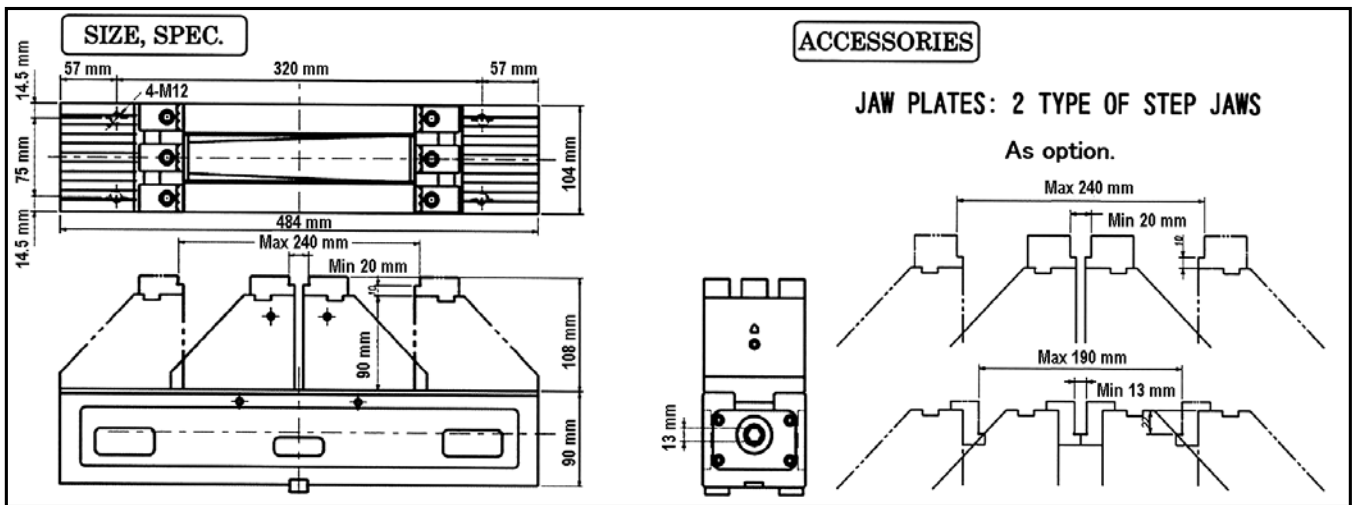
Lock-Tight 5 Axis Machine Vises



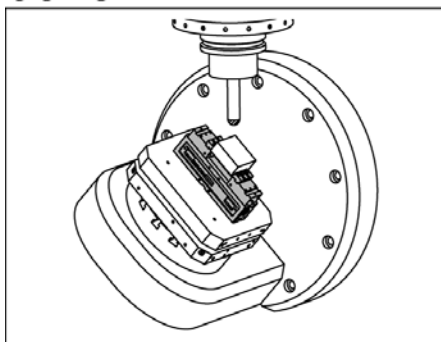
Compact Machine vises for 5 axis machines.

Features

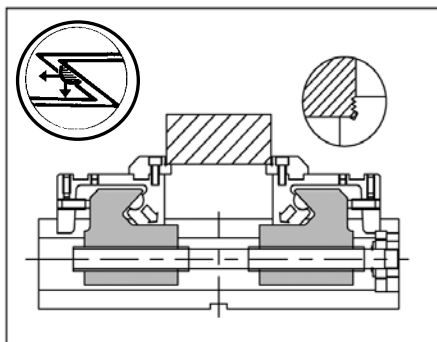
- Deep jaw construction, free of interference with the machine as the work pieces can be clamped at higher level, less interference of cutting tools.
- Built in semi-sphere segment mechanism which minimizes the jaw lifting under clamping pressure.
- Exchangeable jaw plates
1 set of serrated jaw plates on both jaws.



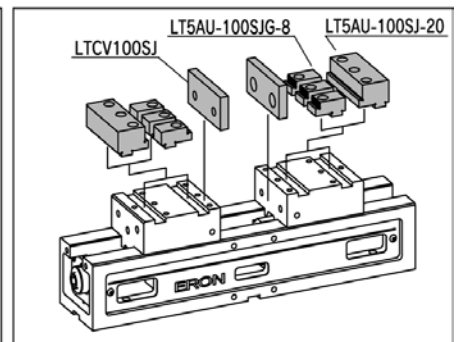
LESS INTERFERENCE W/MACHINE



BUILT IN SEMI-SPHERE MECHANISM TO MINIMIZE JAW LIFTING

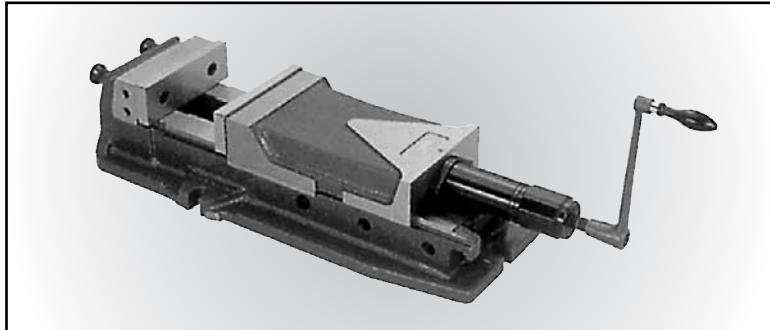


JAW EXCHANGEABLE



Order No.	Model No.	Total Length	Jaw Width	Jaw Width	Total Height	Weight	Clamping Force
595-225	LT5AU-100	484 mm	102 mm	240 mm	198 mm	32 Kg	20 KN

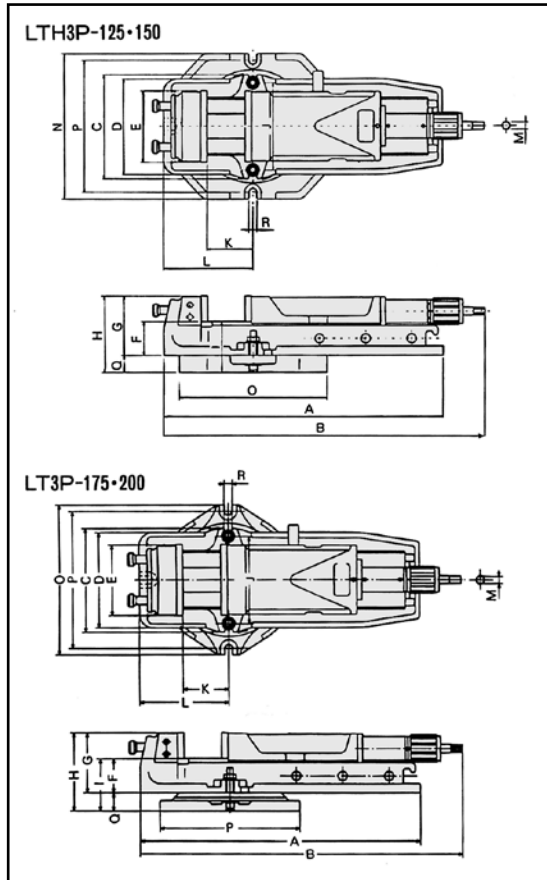
Lock-Tight Hydraulic Machine Vises MKIII



Made in Japan

Features

- Down thrust 'Semisphere Segment' eliminates jaw lift and work tilt.
- Vise body made of ductile iron (tensile strength 60 kgs mm or 80,000 psi). All surface ground. Vise bed flame-hardened.
- Easier change of mode by original clutch mechanism.
- Bolts for lifting.



SIZE

Order No.	Device Type	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm
595-125	LTH3P-125	510	564-789	187	178	129	67	121	153
595-150	LTH3P-150	605	618-933	230	210	156	75	132	170

Order No.	Device Type	I mm	J mm	K mm	L mm	M mm	N mm	O mm	P mm	Q mm	R mm
595-125	LTH3P-125	99	157	71	155	16	283	270	255	32	15
595-150	LTH3P-150	113	192	101	195	16	334	320	304	38	38

SPEC

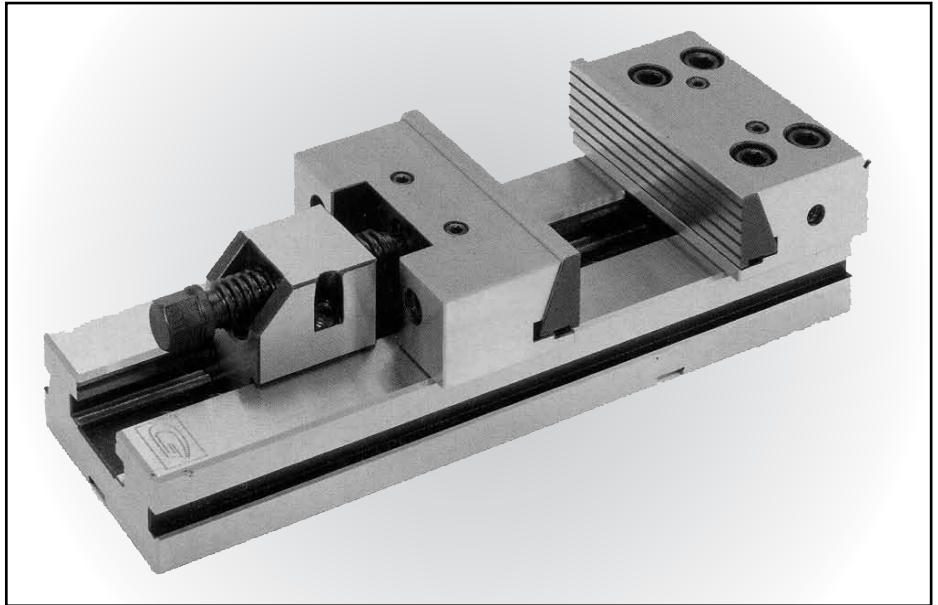
Order No.	Device Type	Jaw Width mm	Jaw Depth mm	Jaw Opening mm	Key Blocks mm	Clamping Force (kgf)	Weight (kgs)
595-125	LTH3P-125	129	54	225	16	3000	32
595-150	LTH3P-150	156	57	315	16	4000	48

Standard Modular Vises

Gerardi Precision Modular Vises

**Accuracy within
0.02 mm/0.0008 inches**

**Manufactured under rigid
quality control. Only the
most suitable materials
are used, and the accuracy
of even the smallest
components is assured.**



As a result of the high standard construction GERARDI vises can maintain their accuracy under the most severe operating conditions. Hardened and Ground steel construction throughout, they max your machine performance because they allow: bigger clamping power, bigger cutting performances, total exclusion of vibrations, lower tool wear and higher precision during machine work. The modular design and the concept of inter-changeability makes possible a wide variety of set up combination and solutions.

All GERARDI vises are modular and the components of all our vises will interchange with perfect alignment. The vises can be matched side to side with the highest precision and minimum of set up times thanks to many fixed reference points. All this is possible thanks to the high precision of the vise particularly as regards: the high of the base, alignment with longitudinal key-nuts with respect to the fixed jaw, the perpendicularity of the fixed jaw with respect to the vise base and the parallelism of the base top and bottom surfaces. Those features allows us to solve the most varied and complicated problems of clamping in a few seconds with the use of more vises.

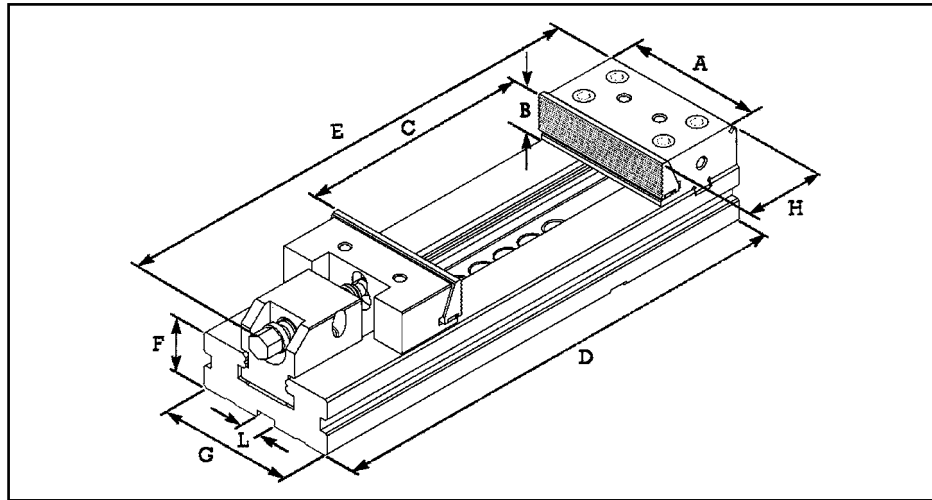
The GERARDI precision modular vise is successful thanks not only to the high accuracy, but also because of the unlimited variety of combinations and versatility.

1. The floating movable jaw allows a fast and safety clamping for rough pieces not perfectly parallels. GERARDI precision modular vise in the standard version is supplied with the guided movable jaw running parallel along the whole vise body axis.
2. The fixed jaw can be turned around 180 degrees and its back 5x5 mm step matches with centesimal accuracy to the prismatic jaw step, in this way the maximum vice opening is increased.
3. Jaw plates manufactured with a pull-down angle, ensure, during the clamping operation, a downward run of the work piece against the vise vase (by dragging).
4. The compact rack blocking system, allows mechanic hydraulic and pneumatic clamping even automatic, with simply fitting the winched/ needed blocking device; this operation takes only a few seconds.
5. The swivel base with positioning pin for perfect alignment; using the sine bar principle permits setting of angles quickly and accurately with gage blocks. The vise could be positioned on the swivel base along its whole axis.
6. The vise base is made from a solid steel bar, hardened HRC60 and perfectly ground with centesimal tolerances.

Standard Modular Vises

Gerardi Precision Modular Vises

All vises include as standard equipment: Workstop, positioning key nuts, box wrench, movable jaws supplied as either floating or guided – no extra charge



Model number	Order number	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	L mm	KG
1	301-00000	100	30	100	270	320	35	75	77.9	16	6.8
2	302-10000	125	40	150	345	410	40	95	77.9	16	12.9
3	303-20000	150	50	200	420	500	50	125	89.4	16	25.5
3	303-30000	150	50	300	520	600	50	125	89.4	16	29
4	304-20000	175	60	200	455	530	58	145	96.9	16	37
4	304-30000	175	60	300	555	630	58	145	96.9	16	42
4	304-40000	175	60	400	655	730	58	145	96.9	16	47
4	304-50000	175	60	500	755	830	58	145	96.9	16	52
5	305-20000	200	65	200	495	580	70	170	113.4	16	64
5	305-30000	200	65	300	595	680	70	170	113.4	16	69
5	305-40000	200	65	400	695	780	70	170	113.4	16	74
5	305-50000	200	65	500	795	880	70	170	113.4	16	79
5	305-60000	200	65	600	895	980	70	170	113.4	16	84
6	306-20000	300	80	200	535	630	78	195	120.4	16	95
6	306-30000	300	80	300	635	730	78	195	120.4	16	105
6	306-40000	300	80	400	735	830	78	195	120.4	16	115
6	306-50000	300	80	500	835	930	78	195	120.4	16	125
6	306-60000	300	80	600	935	1030	78	195	120.4	16	135
6	306-70000	300	80	700	1035	1130	78	195	120.4	16	145
6	306-80000	300	80	800	1135	1230	78	195	120.4	16	155

INSTRUCTIONS
Before using the vises, wishing to use the downward jaw option, loosen the screws part 381 and 382 of one quarter of a turn in order to allow jaw plates part 230-236 to run from top to bottom obtaining a downward clamping which holds work piece flat and parallel against the vise base.

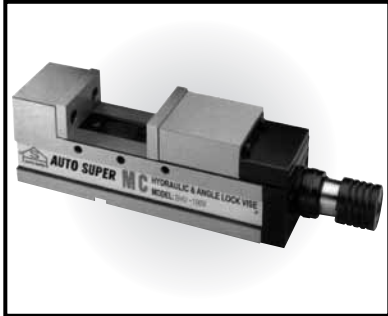
TO CLAMP A QUARTER OF A TURN OF THE BOX WRENCH part 375 IS ENOUGH TO EASILY REACH 3,000-4,000 kg BLOCKING FORCE

FOR CORRECT USE, DO NOT USE TUBES OR HAMMERS



MC Hydraulic & Angle Lock Vise

MODEL: BHV

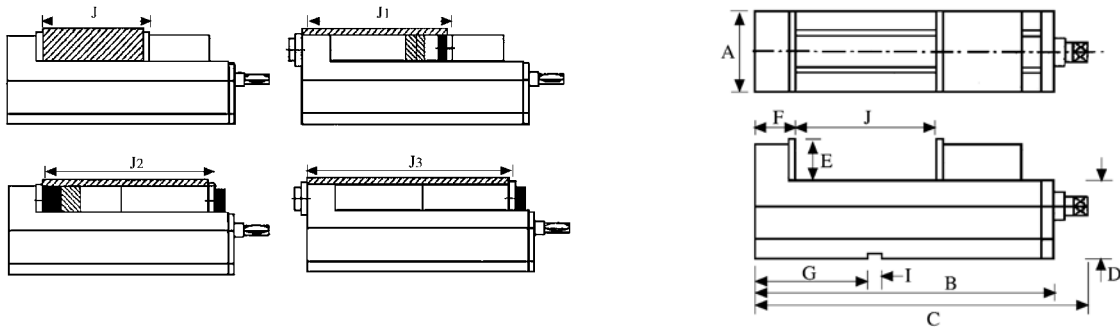


Features

1. One piece casting of vise bed and flexed jaw.
2. Down thrust "Semis-sphere Segment" mechanism-eliminates jaw life and work tilt.
3. Rigid material-vise body of iron FCD60JIS (equal to GGG60) with 60 kgs/mm² or 80,000 psi tensile strength.
4. Vise bed flange with harden treatment up to HRC 45° and up takes up wear and maintain for long.

Accuracy Testing Standard

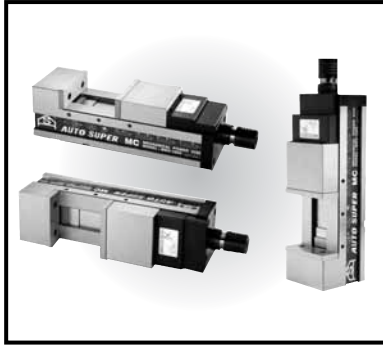
NO.	ITEM	JIS Grade 1	Guaranteed		
1	Vise side-lock on bottom slide way square	0.020 100 mm	0.010mm/0.0004" 100 mm		
2	Keyways on bottom of vise bed square to clamping surface of jaw plate	0.020 100 mm	0.015mm/0.0006" 100 mm		
3	Both jaw plate parallel	0.050 100 mm	0.020mm/0.0008" 100 mm		
4	Max opening test block parallel to bottom of Vise body	0.050 100 mm	0.030mm/0.0012" 100 mm		
5	Top of rectangular test block clamped tightly by jaw parallel to bottom of vise body	0.030 100 mm	0.020mm/0.0008" 100 mm		
6	Surface of vise bed parallel to bottom of vise body	0.020 100 mm	0.015mm/0.0006" 100 mm		



ORDER No.	MODEL	A mm	B mm	C mm	D mm	E mm	F mm	G mm	I mm	Jaw Opening (Max.)				Clamping Force	Weight Body
										J mm	J1 mm	J2 mm	J4 mm		
425-101	BHV-100V	101	340	470	85	48	80	125	16	125	190	230	320	4000 kgf	27 kgs
425-102	BHV-130V	131	405	535	95	55	85	150	18	180	240	290	380	5000 kgf	40 kgs
425-103	BHV-160V	161	495	625	105	58	100	165	18	240	320	360	470	6500 kgf	58 kgs
425-104	BHV-200V	201	570	700	110	63	108	190	18	280	360	420	540	8000 kgf	87 kgs

MC Mechanical Power Vise

MODEL: BMV

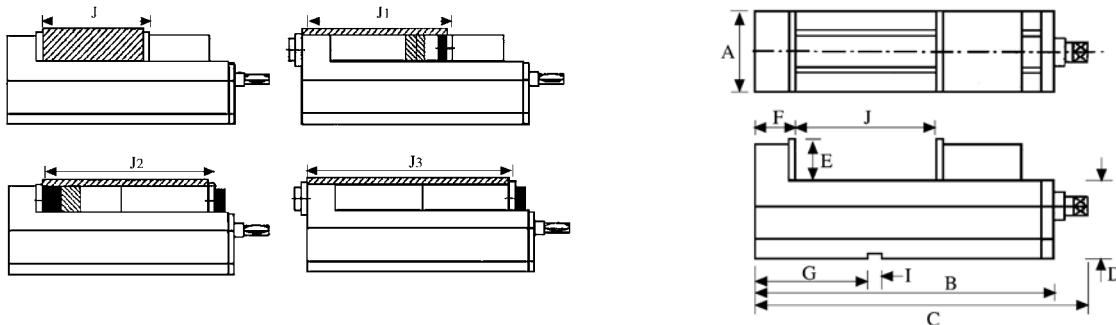


Features

1. MC Mechanical Power Vise is equipped with 8 pieces of support rollers to increase the gripping force.
2. One piece casting of vise bed and flexed jaw.
3. Down thrust "Semis-sphere Segment" mechanism-eliminates jaw life and work tilt.
4. Rigid material-vise body of iron FCD60JIS (equal to GGG60) with 60 kgs/mm² or 80,000 psi tensile strength.
5. Vise bed flame with harden treatment up to HRC 45° and up takes up wear and maintain for long.

Accuracy Testing Standard

NO.	ITEM	JIS Grade 1	Guaranteed		
1	Vise side-lock on bottom slide way square	0.020 100 mm	0.010mm/0.0004" 100 mm		
2	Keyways on bottom of vise bed square to clamping surface of jaw plate	0.020 100 mm	0.015mm/0.0006" 100 mm		
3	Both jaw plate parallel	0.050 100 mm	0.020mm/0.0008" 100 mm		
4	Max opening test block parallel to bottom of Vise body	0.050 100 mm	0.030mm/0.0012" 100 mm		
5	Top of rectangular test block clamped tightly by jaw parallel to bottom of vise body	0.030 100 mm	0.020mm/0.0008" 100 mm		
6	Surface of vise bed parallel to bottom of vise body	0.020 100 mm	0.015mm/0.0006" 100 mm		

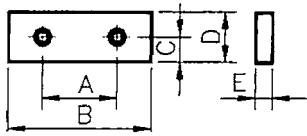


ORDER No.	MODEL	A mm	B mm	C mm	D mm	E mm	F mm	G mm	I mm	Jaw Opening (Max.)				Clamping Force	Weight Body
										J mm	J1 mm	J2 mm	J4 mm		
425-105	BMV-100V	101	340	470	85	48	80	125	16	145	190	230	320	4000 kgf	27 kgs
425-106	BMV-130V	131	405	535	95	55	85	150	18	240	240	290	380	4500 kgf	40 kgs
425-107	BMV-160V	161	495	625	105	58	100	165	18	290	320	360	470	5200 kgf	58 kgs
425-108	BMV-200V	201	570	700	110	63	108	190	18	330	360	420	540	6500 kgf	87 kgs



MC Hydraulic & Angle Lock Vise

MODEL: BHV & BMV



PLAIN HARD JAWS

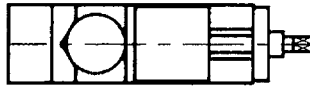
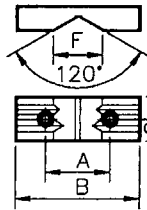
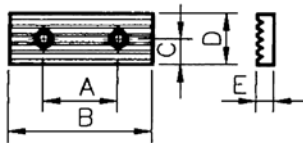
HJ-100,130,160, 200 Unit/mm

ORDER NO	425-180	425-181	425-182	425-183
HJ	100	130	160	200
A	60	90	90	120
B	100	130	160	200
C	22	25	25	28
D	48	55	58	63
E	15	15	15	18

SERRATED HARD JAWS

LJ-100,130,160, 200 Unit/mm

ORDER NO	425-185	425-186	425-187	425-188
LJ	100	130	160	200
A	60	90	90	120
B	100	130	160	200
C	22	25	25	28
D	48	55	58	63
E	15	15	15	18



V-GROOVE HARD JAWS

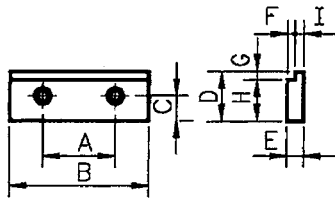
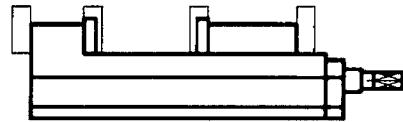
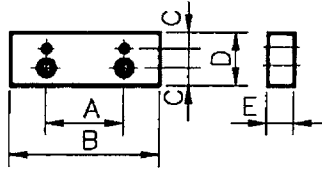
VJ-100,130,160, 200 Unit/mm

ORDER NO	425-190	425-191	425-192	425-193
VJ	100	130	160	200
A	60	90	90	120
B	100	130	160	200
C	22	25	25	28
D	48	55	58	63
E	30	32	32	40

TJ-100,130,160, 200

Unit/mm

ORDER NO	425-195	425-196	425-197	425-198
TJ	100	130	160	200
A	60	90	90	120
B	100	130	160	200
C	22	25	25	28
D	64	69	74	88
E	21	24	24	31



STEP HARD JAWS

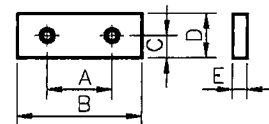
SJ-100,130,160, 200 Unit/mm

ORDER NO	425-200	425-201	425-202	425-203
SJ	100	130	160	200
A	60	90	90	120
B	100	130	160	200
C	22	25	25	28
D	48	55	58	63
E	15	15	15	18
F	5	5	5	5
G	5	5	5	5
H	43	50	53	58
I	10	10	10	13

STEP HARD JAWS

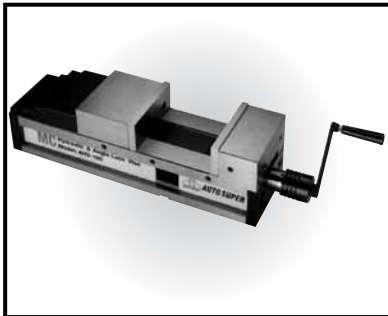
FJ-100,130,160, 200 Unit/mm

ORDER NO	425-205	425-206	425-207	425-208	425-209	425-210	425-211	425-212	425-213	425-214
FJ	1001	1002	1003	1004	1005	1301	1302	1303	1304	1305
A	60	60	60	60	60	90	90	90	90	90
B	100	100	100	100	130	130	130	130	130	130
C	22	22	22	22	22	25	25	25	25	25
D	48	63	73	48	63	55	73	103	63	73
E	15	21	23	48	48	15	23	30	48	48
F	M10	M10	M10	M10	M10	M10	M10	M10	M10	M10
ORDER NO	425-215	425-216	425-217	425-218	425-219	425-220	425-221	425-222	425-223	425-224
FG	1601	1602	1603	1604	1605	2001	2002	2003	2004	2005
A	90	90	90	90	90	90	90	90	90	120
B	160	160	160	160	160	200	200	200	200	200
C	25	25	25	25	25	28	28	28	28	28
D	58	73	103	63	73	63	103	123	63	102
E	15	23	30	48	48	18	30	37	63	63
F	M10	M10	M10	M10	M10	M12	M12	M12	M12	M12



Precision Hydraulic & Angle Lock Horizontal Vise

MODEL: AHV-160

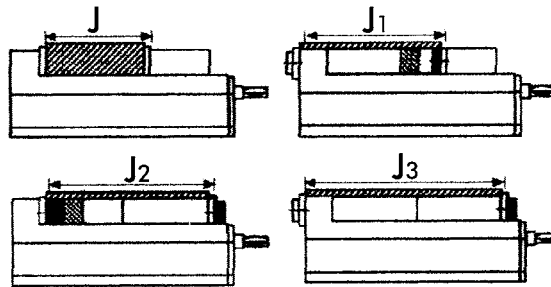


The unique features of AHV series provide the users an operation of ease and comfort.

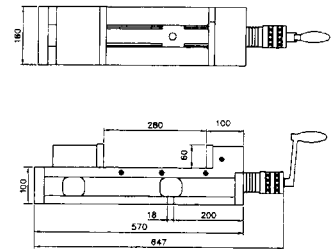
1. Angle-lock type Hydraulic vise model AHV is mostly suitable for heavy duty cutting on Vertical Machining Center.
2. Semi-spherical segment eliminates jaw lift and work piece tilt.
3. Rigid material ductile iron FCD60 with 60 Kms/mm ensures high tensile strength, low weariness and not deformation.
4. Vise bed flame hardened to HRC 45 up is capable to obtain low weariness and last the high accuracy for long.
5. For (4) different jaws set up can be obtained.
6. Chip comers is applied on this vise to prevent form chips falling lo Leadscrew and inside of vise.

Specification

Jaw width	160 mm
Depth of Jaw	60 mm
Jaw Opening J	280 mm
Jaw Opening J1	360 mm
Jaw Opening J2	420 mm
Jaw Opening J3	540 mm

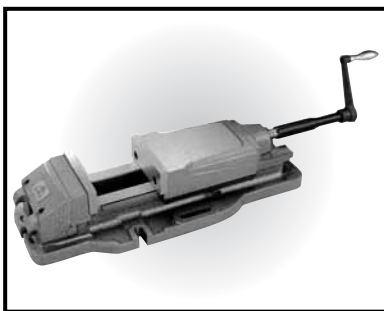


ORDER NO.
425-115



Hydraulic Vise

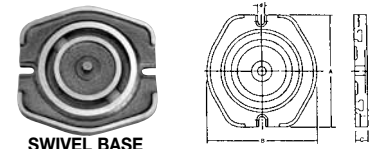
MODEL: AH



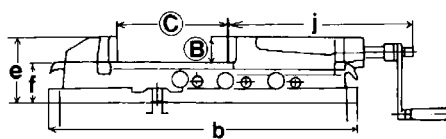
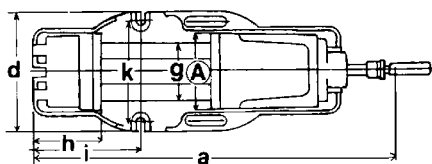
Features

1. Body is made of high quality cast iron, which resists deflection or bending, and its sliding surface flame hardened and ground.
2. Jaws are made of special steel, which is hardened and ground.
3. Hydra. Booster provided a steady clamping force against shocks and vibrations during the operation, since it fastened the work piece resiliently with and aid of the discsprings mounted inside.
4. Clamping force may be freely adjusted with this base line as a guide, it magnifies a small force into an enormous clamping force by virtue of its unique Hydra. Booster incorporated.
5. With hyra. Power Machine Vise, auxiliary with equipment such as a hydraulic pump, hose and air compressor are no longer needed.

Optional Accessories



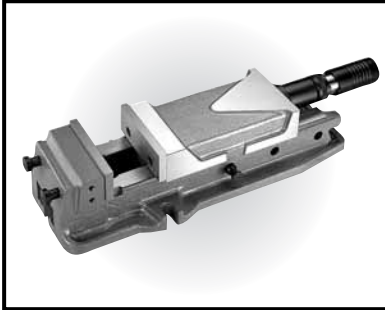
Order No.	Model	A mm	B mm	C mm	Weight (kg)
425-144	SB-402	240	22	25	7
425-145	SB-502	280	266	32	12
425-146	SB-602	330	310	35	16
425-147	SB-802	375	355	40	16



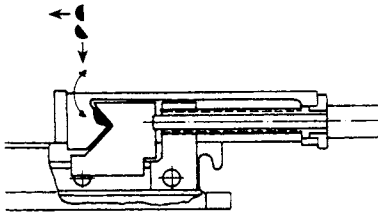
Order No.	Model	A mm	B mm	C mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	Max Clamping force (kgf)	Weight (kg)	
																	Body	Swivel Base
425-140	AH-4	100	36	170	525	430	130	160	94	60	78	100	155	263	120	2500	18	7
425-141	AH-5	125	46	220	670	540	165	185	118	72	97	117	185	341	145	3500	34	12
425-142	AH-6	150	51	300	800	620	200	240	133	82	116	125	247	380	200	5000	55	16
425-143	AH-8	200	62	300	900	700	240	280	162	100	160	165	266	435	240	8000	90	16

Hydraulic & Angle Lock Vise

MODEL: HW

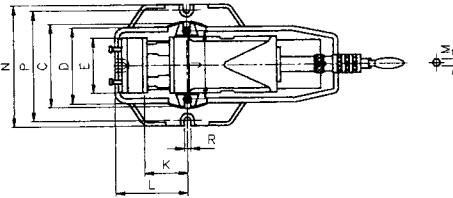


Down thrust "semi-sphere segment" mechanism eliminates jaw lift and work-piece tilt.

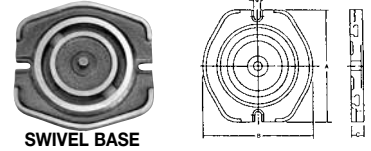


Features

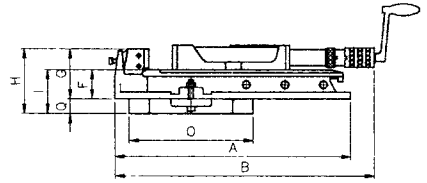
1. Rigid material vise body of ductile iron FCD60.
2. Down thrust "semi-sphere Segment" mechanism eliminates lift and work tilt.
3. Vise bed flame hardened to HRC 45 and up takes up wear and maintain accuracy for long life.
4. Max. Hydraulic clamping force.....4,000kgs
5. Max. Hydraulic & mechanical clamping force.....6,000kgs



Optional Accessories



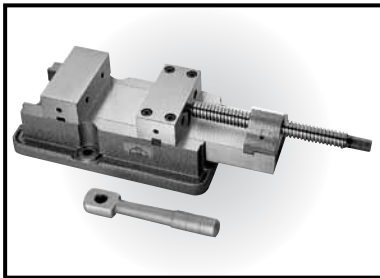
Order No.	Model	A mm	B mm	C mm	Weight (kg)
425-153	HW-125B	280	266	32	12
425-154	HW-160B	330	310	35	16
425-155	HW-200B	375	355	40	16



Order No.	Model	A mm		C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm	M mm	N mm	O mm	P mm	Q mm	R mm	Jaw Width	Jaw Opening	Jaw Depth	
		mm	mm																				
425-150	HW-125	505	570	795	190	170	130	72	127	106	160	75	180	180	14	280	268	260	32	16	130mm	220mm	55mm
425-151	HW-160	605	625	935	240	210	160	82	140	117	192	101	195	195	14	334	320	310	35	18	160mm	310mm	58mm
425-152	HW-200	700	725	1035	280	240	200	100	163	146	240	115	265	265	14	420	420	390	50	18	200mm	310mm	63mm

Heavy Duty Precision Vise

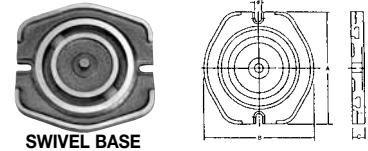
MODEL: KR



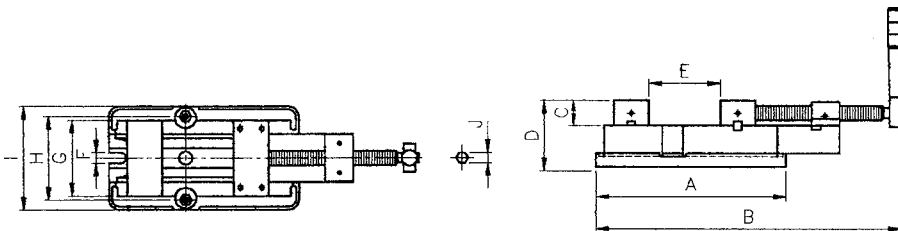
Features

1. Stationary front jaw.
2. The back jaw moves along with the slide reducing the tendency towards deflection preventing the workpieces from tilting.
3. Jaws and body are steel construction
4. Hardened & ground on all sliding and contact surface.
5. Ideal for CNC application.

Optional Accessories



Order No.	Model	A mm	B mm	C mm	Weight (kg)
425-163	KR-6B	280	266	32	12

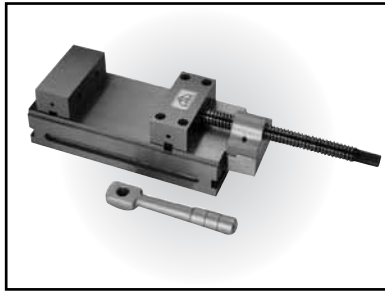


Order No.	Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm
425-160	KR-6	360	630	48	127	210	18	145	160	198	19

Jaw Width	145mm (6")
Jaw Opening	210mm (8-1/2")
Jaw Depth	48mm (1-7/8")
Overall Height	127mm (6")
Net Weight (w/o base)	40 kgs

Heavy Duty Precision Horizontal Vise

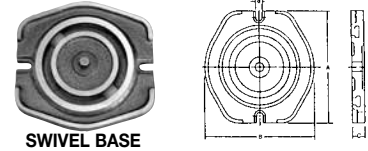
MODEL: KR-6G



Features

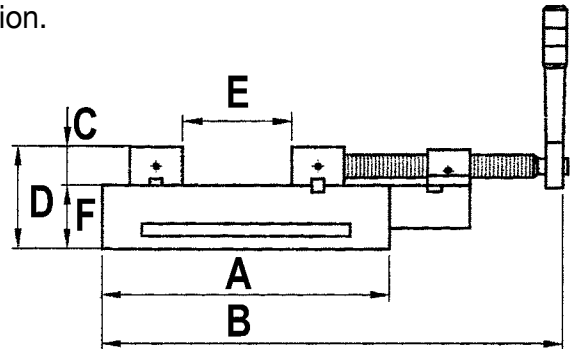
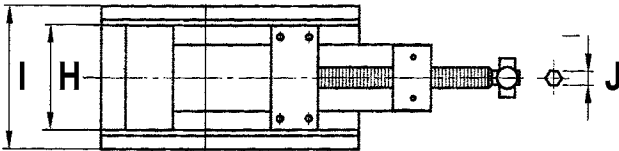
1. Stationary front jaw.
2. The back jaw moves along with the slide reducing the tendency of deflection which prevents workpieces from tilting.
3. Jaws and body are steel construction.
4. Hardened & ground on all sliding and contact surface.
5. Ideal for CNC application.

Optional Accessories



SWIVEL BASE

Order No.	Model	A mm	B mm	C mm	Weight (kg)
425-163	KR-6B	280	266	32	12



Order No.	Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm
425-161	KR-6G	360	630	48	127	210	79	145	145	160	19

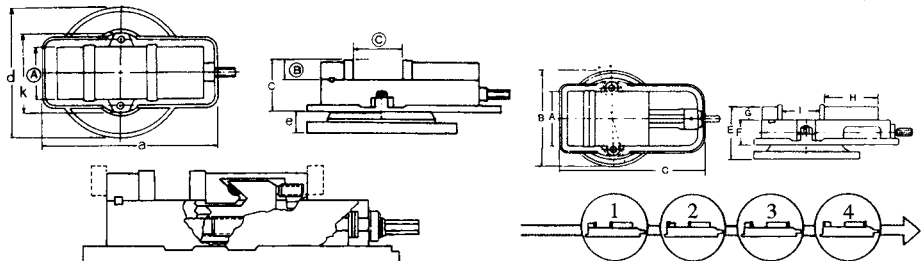
Precision Angle Lock Vise

MODEL: VA-ECONOMY



Features

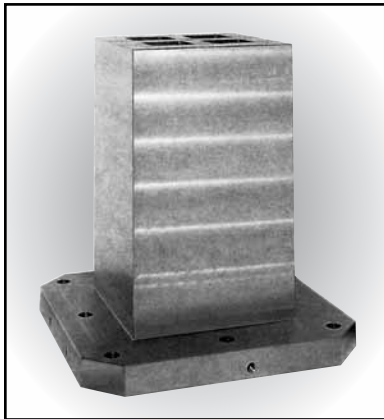
1. The vice-plate position can be changed to increase the usage range.
2. The bed of the vice and the jaw plates are hardened and ground.



Order No.	Model	A mm	B mm	C mm	a mm	k mm	c mm	d mm	e mm	f mm	Gross Weight (kg)	
											Plain	With
425-170	VA-4	102	36	103	325	165	96	243	31	6	16	20
425-171	VA-6	152	46	142	418	209	119	328	39	9	36	42
425-172	VA-8	200	62	197	548	295	147	416	45	11	70	80

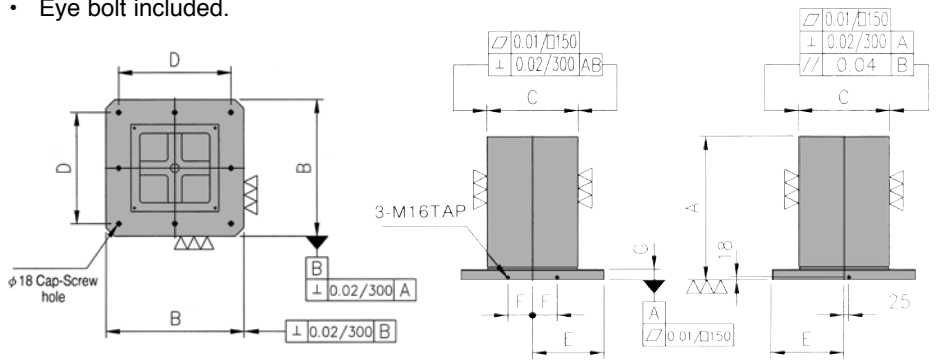


M/C Tooling Blocks/ Tombstones



AJB-HB M/C 4 FACE CLAMPING CUBES

- Material/Finish: Material: FC300 (JIS) / GG30 (DIN), Heat Treated (Normalized)
- Application: Good for horizontal M/C
- Features: Ready to finish your required hole pattern to mount your special jigs, vises or other work holding devices.
- Eye bolt included.



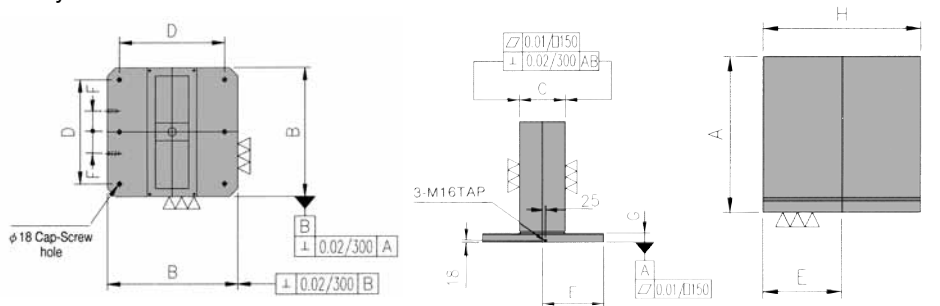
* Special Designs Welcomed!

ORDER NO.	MODEL NO.	A mm	B mm	C mm	D mm	E mm	F mm	G mm	No. of Mounting Hole	kg
425-070100	AJB400 x 250 x 500 HB	500	400	250	320	200	55	50	4	190
425-070200	AJB500 x 300 x 600 HB	600	500	300	400	250	75	60	8	253
425-070205	AJB500 x 350 x 550 HB	550	500	350	400	250	75	65	8	315
425-070300	AJB630 x 350 x 700 HB	700	630	350	500	315	100	65	8	423
425-070305	AJB630 x 400 x 700 HB	700	630	400	500	315	100	65	8	472
425-070310	AJB630 x 500 x 700 HB	700	630	500	500	315	100	65	8	525
425-070400	AJB800 x 550 x 850 HB	800	800	550	640	400	135	80	8	785



AJB-MP M/C DOUBLE-SIDED ANGLE PLATES

- Material/Finish: Material: FC300 (JIS) / GG30 (DIN), Heat Treated (Normalized)
- Application: Good for horizontal M/C
- Features: Ready to finish your required hole pattern to mount your special jigs, vises or other work holding devices.
- Eye bolt included.



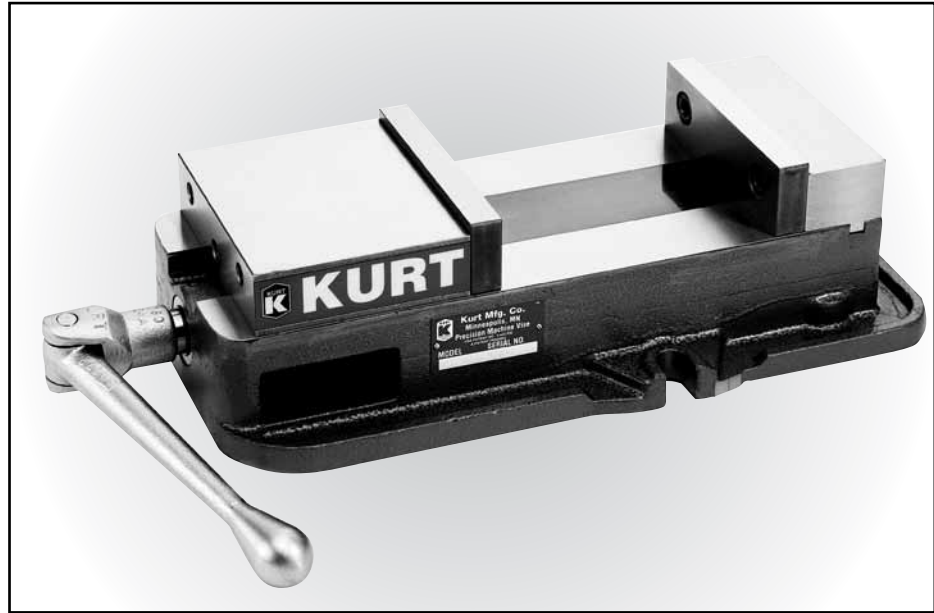
* Special Designs Welcomed!

ORDER NO.	MODEL NO.	A mm	B mm	C mm	D mm	E mm	F mm	G mm	G mm	No. of Mounting Hole	kg
425-100100	AJB400 x 150 x 500 MP	500	400	150	320	200	55	50	400	4	210
425-100200	AJB500 x 200 x 600 MP	600	500	200	400	250	75	60	500	6	275
425-100300	AJB630 x 250 x 700 MP	700	630	250	500	315	100	65	630	6	515
425-100400	AJB800 x 300 x 800 MP	800	800	300	640	400	135	80	800	6	845

ANGLOCK[®] D-Series Vises

D40
D675
D688[™]
D810
D100

**Accessories see pages
5-130 through 5-132**



The original Kurt Anglock D-Series vises are designed for precision part clamping on basic machine tools such as knee-type mills, grinders and machining centers. D-Series vises are ideal for use in running production parts where datums, flatness and parallelism is important. You can precision bore, tap, drill, grind and finish with high accuracy on most parts made of die cast aluminum, steel, and iron in your Kurt Anglock vises. No other brand can give you the time proven accuracy of the Kurt Anglock vises. All Kurt vises have a friction reducing, needle bearing, thrust collar. The needle bearing increases jaw clamping pressure.

Features:

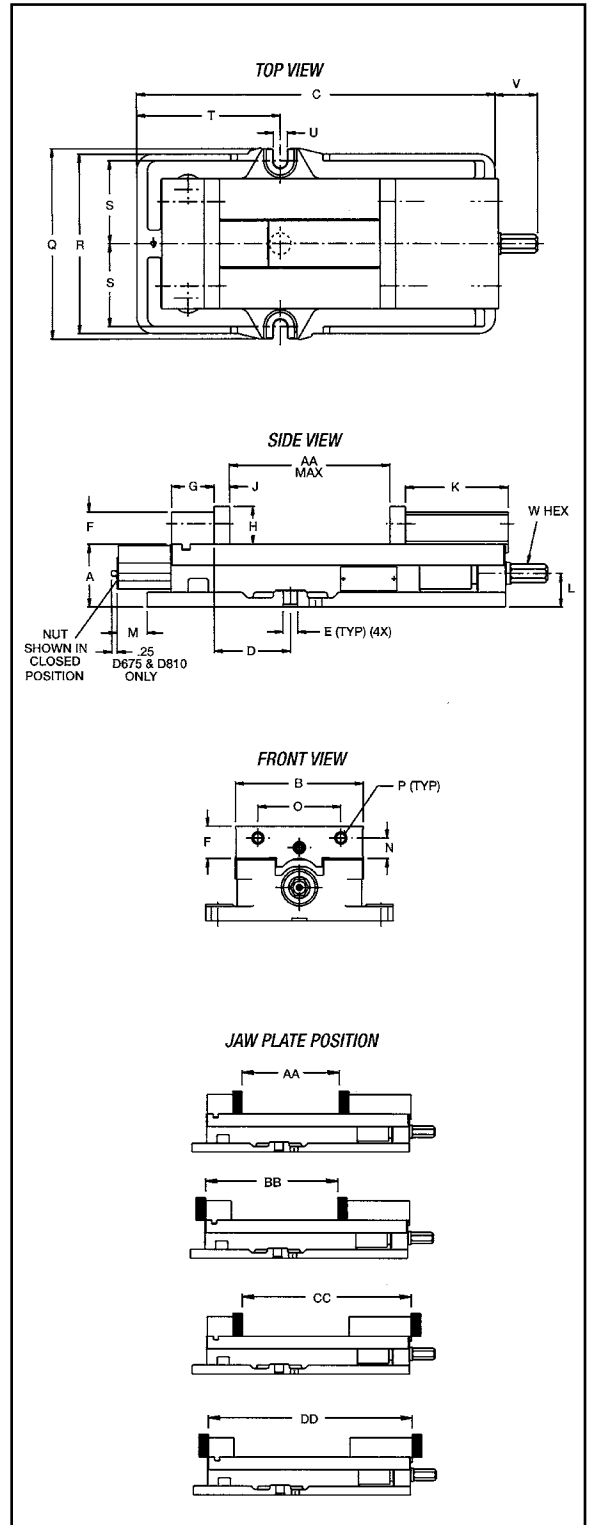
- AngLock design assures the movable jaw does not lift.
- Hardened vise bed.
- Hardened jaw plates.
- Semi-hard steel screw.
- 80,000-PSI ductile iron body.
- Matching of bed height $\pm .001$ " available at an additional cost for the D40. and D100 vises.
- Matching of the keyway to the stationary jaw $\pm .001$ " is available at additional cost.
- Some models available in metric version.
- 10 year limited warranty.



ANGLOCK® D-Series Vises

MANUAL VISE CLAMPING FORCE - LBS.					
Torque Ft.-Lbs.	D40	D675	D688	D810	D100
10	1,653	989	1,129		
20	2,923	1,776	2,242	1,834	1,698
30	4,103	2,848	3,337		
40	5,241	3,628	4,148	2,843	3,300
50	6,513	4,365	5,379		
60	7,807	5,432	6,310	4,349	4,686
70		6,111	6,977		
80		6,721	7,968	5,706	6,623
100				7,042	7,842
120				8,688	9,970
140				10,413	11,429
160				11,596	12,792
180					14,681
200					16,163
220					18,124
240					20,563
260					22,093
280					24,077
300					26,277

DIMENSIONAL DATA					
	D40	D675	D688	D810	D100
A	2.250	2.875	2.875	3.310	3.875
B	4.000	6.000	6.000	8.000	10.000
C	12.340	16.750	16.810	21.810	27.500
D	2.562	3.562	3.562	4.686	5.875
E	0.500	0.688	0.688	0.813	0.813
F	1.115	1.485	1.485	1.965	2.465
G	1.355	1.980	1.980	2.450	2.950
H	1.235	1.735	1.735	2.200	2.937
J	0.547	0.725	0.725	1.075	1.320
K	4.000	4.800	4.800	6.190	8.630
L	1.281	1.540	1.540	1.865	2.225
M	N/A	1.390	N/A	1.670	N/A
N	0.687	0.940	0.940	1.220	1.625
O	2.500	3.875	3.875	4.750	5.750
P	3/8-16	1/2-13	1/2-13	5/8-11	3/4-10
Q	6.380	8.750	8.750	11.500	14.500
R	5.750	8.250	8.250	11.000	13.250
S	2.625	3.813	3.813	4.940	6.188
T	4.590	6.710	5.667	8.500	10.590
U	0.531	0.656	0.320	0.880	0.940
V	1.000	2.000	1.860	2.375	1.690
W	9/16	3/4	3/4	7/8	1"
AA	3-7/8	7-1/2	8.80	10	9-3/4
BB	5-3/4	10-1/2	11.500	13.5	14
CC	8-7/16	13-1/8	14.320	17-1/4	19-3/4
DD	10-5/16	15-7/8	17.030	20-3/4	24-3/4
Ship Wt	32	78	78	158	300



VERSATILE LOCK™ Vises

Standard & Short

Manual Hydraulic Air

The Versatile Lock vise is the industry's ultimate single station CNC vise. It offers ultra-precision function through these important design features: The original, time proven Kurt AngLock design prevents parts from lifting upward under heavy clamping loads. The "pull-type" jaw clamping reduces jaw stationary deflection by at least 80%. The one piece vise body and stationary jaw provide greater strength while reducing weight.



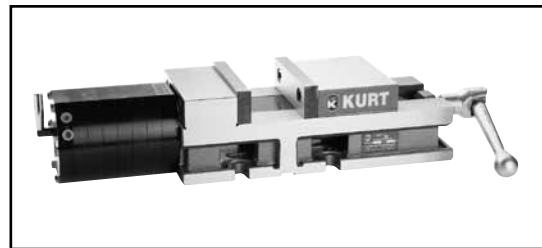
3600V

Features:

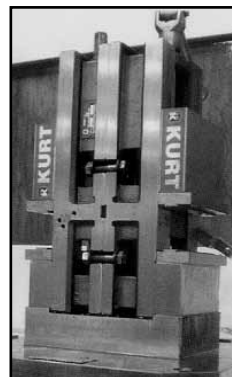
- Can be mounted upright or on either side.
- Matched stationary jaw to keyway including the body height $\pm .001$ ".
- .0005" clamping repeatability
- Footprint on the short version is 13". Ideal for the smallest machines.
- Hydraulic option is available as a complete package including the intensifier (specify foot or hand actuation).
- All air and hydraulic units feature a 1/4" vise stroke.
- Air vise has a precise and repeatable "gentle touch" for delicate parts.
- Some models available in metric.
- 10 year limited warranty.
- Optional internal hex available for 3600V only.



3600H - Standard Hydraulic



3600A - Standard Air



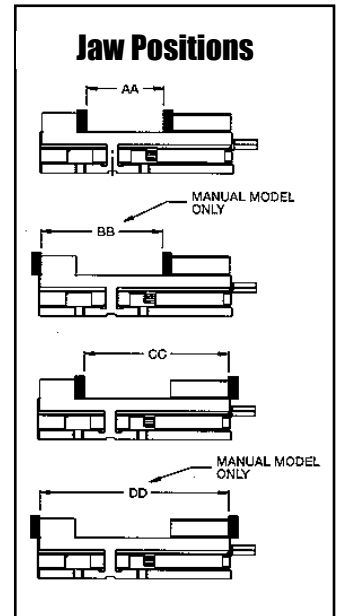
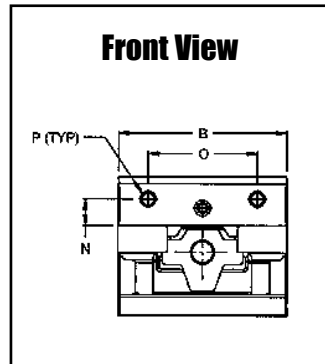
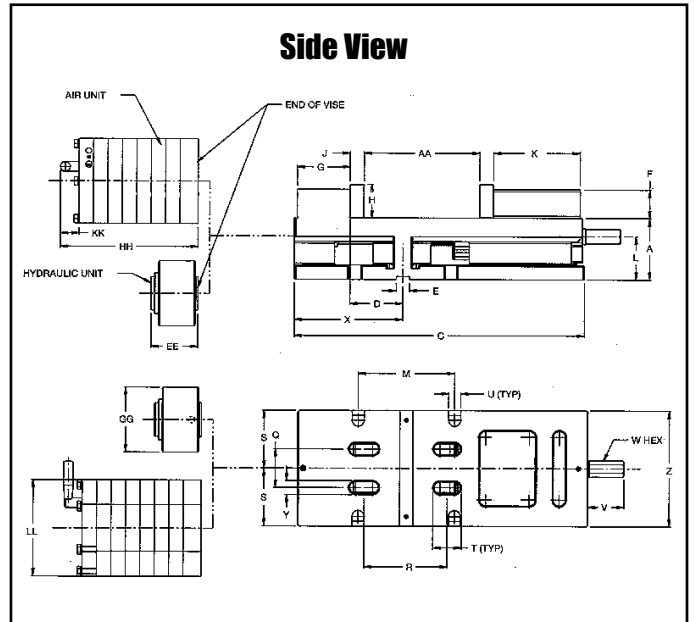
The 3600V shown mounted "back to back".

Makes a fast, easy and economical vise tombstone. Bases can be tailored for most HMC's.

VERSATILE LOCK™ Vises

Standard & Short

	DIMENSIONAL DATA					
	Manual		Hydraulic		Air	
	3600V	3620V	3600H	3620H	3600A	3620A
A	3.187	3.187	3.187	3.187	3.187	3.187
B	6.000	6.000	6.000	6.000	6.000	6.000
C	15.060	12.940	15.060	12.940	15.060	12.940
D	2.750	2.750	2.750	2.750	2.750	2.750
E	0.688	0.688	0.688	0.688	0.688	0.688
F	1.485	1.485	1.485	1.485	1.485	1.485
G	2.750	2.750	2.750	2.750	2.750	2.750
H	1.735	1.735	1.735	1.735	1.735	1.735
J	0.725	0.725	0.725	0.725	0.725	0.725
K	4.500	4.500	4.500	4.500	4.500	4.500
L	2.250	2.250	2.250	2.250	2.250	2.250
M	5.000	5.000	5.000	5.000	5.000	5.000
N	0.937	0.937	0.937	0.937	0.937	0.937
O	3.875	3.875	3.875	3.875	3.875	3.875
P	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13
Q	2.000	2.000	2.000	2.000	2.000	2.000
R	4.250	4.250	4.250	4.250	4.250	4.250
S	3.000	3.000	3.000	3.000	3.000	3.000
T	1.380	1.380	1.380	1.380	1.380	1.380
U	0.630	0.630	0.630	0.630	0.630	0.630
V	1.940	1.940	1.940	1.940	1.940	1.940
W	3/4	3/4	3/4	3/4	3/4	3/4
X	5.640	5.640	5.640	5.640	5.640	5.640
Y	0.630	0.630	0.630	0.630	0.630	0.630
AA	6.000	4.000	6.000	4.000	6.000	4.000
BB	9.500	7.500	N/A	N/A	N/A	N/A
CC	11.250	9.250	11.250	9.250	11.250	9.250
DD	14.750	12.750	N/A	N/A	N/A	N/A
EE	N/A	N/A	2.410	2.410	N/A	N/A
GG	N/A	N/A	3.375	3.375	N/A	N/A
HH	N/A	N/A	N/A	N/A	7.220	7.220
KK	N/A	N/A	N/A	N/A	1.030	1.030
LL	N/A	N/A	N/A	N/A	5.000	5.000
SHIP WT. LBS.	69	64	74	69	75	



VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	3600V	3620V
10	653	653
20	1,743	1,743
30	2,234	2,234
40	3,015	3,015
50	3,833	3,833
60	4,438	4,438
70	5,528	5,528
80	6,356	6,356

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	3600H	3620H
400	1,575	1,575
800	3,150	3,150
1200	4,725	4,725
1600	6,300	6,300
2000	7,875	7,875
2400	9,450	9,450
2800	11,025	11,025
3200	12,600	12,600

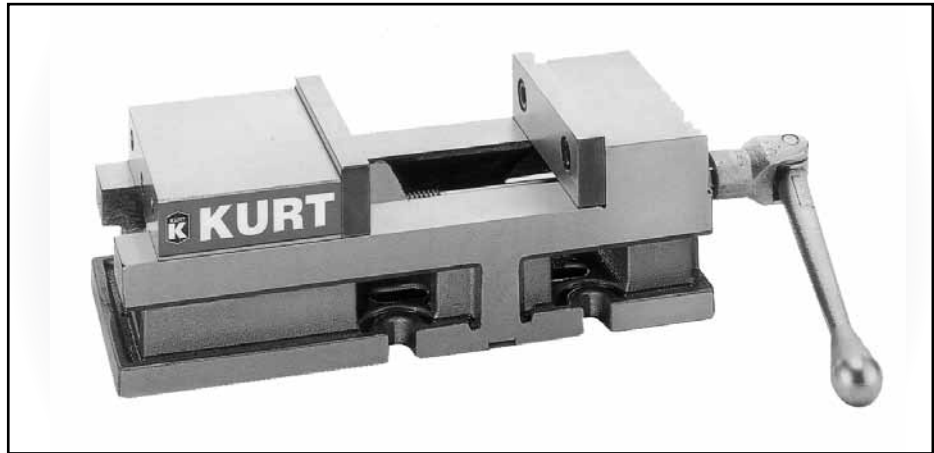
VISE CLAMPING FORCE-LBS.		
Air PSI	Air	
	3600A	3620A
10	320	320
20	840	840
30	1,280	1,280
40	1,780	1,780
50	2,200	2,200
60	2,720	2,720
70	3,240	3,240
80	3,800	3,800
90	4,380	4,380
100	5,000	5,000

VERSATILE LOCK™ Vises

Reverse and Short Reverse

Manual Hydraulic Air

Use the Versatile Lock in this configuration for the added benefit of easier part programming in "Y" axis positive direction. It also reduces the "reach-over" distance making part loading safer and easier for the operator.



Features:

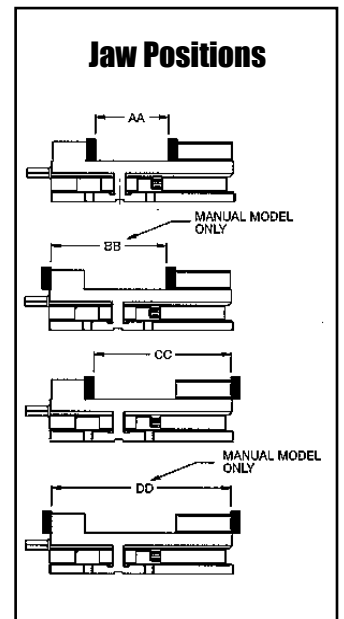
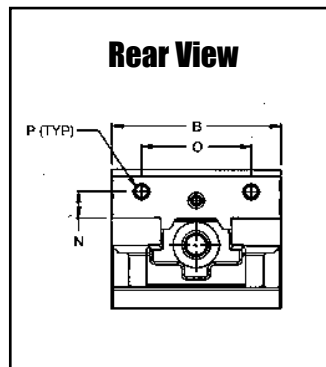
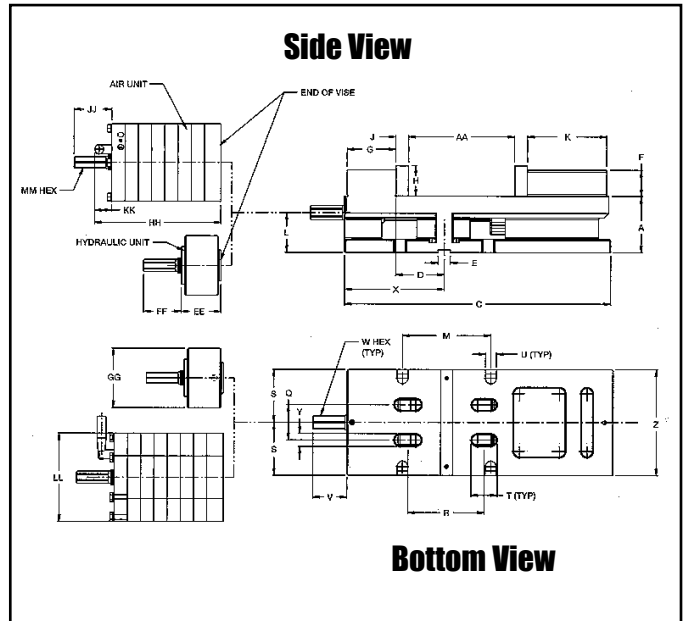
- Can be mounted upright or on either side.
- Matched stationary jaw to keyway including the body height $\pm .001$ ".
- $.0005$ " clamping repeatability
- Footprint on the short version is 13". Ideal for the smallest machines.
- Hydraulic option is available as a complete package including the intensifier (specify foot or hand actuation).
- All air and hydraulic units feature a 1/4" vise stroke.
- Air vise has a precise and repeatable "gentle touch" for delicate parts
- Some models available in metric.
- 10 year limited warranty.



VERSATILE LOCK™ Vises

Reverse and Short Reverse

DIMENSIONAL DATA						
	Manual		Hydraulic		Air	
	3610V	3630V	3610H	3630H	3610A	3630A
A	3.187	3.187	3.187	3.187	3.187	3.187
B	6.000	6.000	6.000	6.000	6.000	6.000
C15.060	12.940	15.060	12.940	15.060	12.940	
D	2.750	2.750	2.750	2.750	2.750	2.750
E	0.688	0.688	0.688	0.688	0.688	0.688
F	1.485	1.485	1.485	1.485	1.485	1.485
G	2.750	2.750	2.750	2.750	2.750	2.750
H 1.735	1.735	1.735	1.735	1.735	1.735	
J	0.725	0.725	0.725	0.725	0.725	0.725
K 4.500	4.500	4.500	4.500	4.500	4.500	
L	2.250	2.250	2.250	2.250	2.250	2.250
M	5.000	5.000	5.000	5.000	5.000	5.000
N	0.937	0.937	0.937	0.937	0.937	0.937
O	3.875	3.875	3.875	3.875	3.875	3.875
P	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13
Q	2.000	2.000	2.000	2.000	2.000	2.000
R	4.250	4.250	4.250	4.250	4.250	4.250
S	3.000	3.000	3.000	3.000	3.000	3.000
T	1.380	1.380	1.380	1.380	1.380	1.380
U	0.630	0.630	0.630	0.630	0.630	0.630
V	1.940	1.940	1.940	1.940	1.940	1.940
W	3/4	3/4	3/4	3/4	3/4	3/4
X	5.640	5.640	5.640	5.640	5.640	5.640
Y	0.630	0.630	0.630	0.630	0.630	0.630
AA	6.000	4.000	6.000	4.000	6.000	4.000
BB	9.500	7.500	N/A	N/A	N/A	N/A
CC	11.250	9.250	11.250	9.250	11.250	9.250
DD	14.750	12.750	N/A	N/A	N/A	N/A
EE	N/A	N/A	2.410	2.410	N/A	N/A
FF	N/A	N/A	1.940	1.940	N/A	N/A
GG	N/A	N/A	3.375	3.375	N/A	N/A
HH	N/A	N/A	N/A	N/A	7.220	7.220
JJ	N/A	N/A	N/A	N/A	2.100	2.100
KK	N/A	N/A	N/A	N/A	1.030	1.030
LL	N/A	N/A	N/A	N/A	5.000	5.000
MM	N/A	N/A	N/A	N/A	5/8	5/8
SHIP WT. LBS.	68	64	73	68	74	69



VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	3610V	3630V
10	653	653
20	1,743	1,743
30	2,234	2,234
40	3,015	3,015
50	3,833	3,833
60	4,438	4,438
70	5,528	5,528
80	6,356	6,356

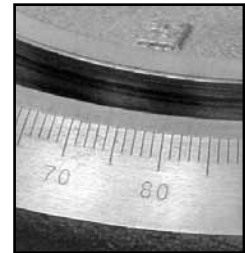
VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	3610H	3630H
400	1,575	1,575
800	3,150	3,150
1200	4,725	4,725
1600	6,300	6,300
2000	7,875	7,875
2400	9,450	9,450
2800	11,025	11,025
3200	12,600	12,600

Air PSI	Air	
	3610A	3630A
10	320	320
20	840	840
30	1,280	1,280
40	1,780	1,780
50	2,200	2,200
60	2,720	2,720
70	3,240	3,240
80	3,800	3,800
90	4,380	4,380
100	5,000	5,000

Vise Accessories

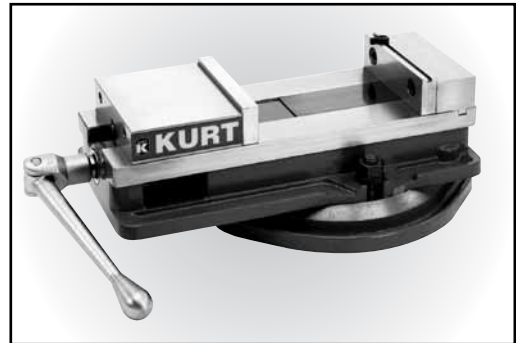
ANGLOCK® Swivel Base Parallel Keeper

Swivel Base



Swivel base allows positioning in 1 degree increments.

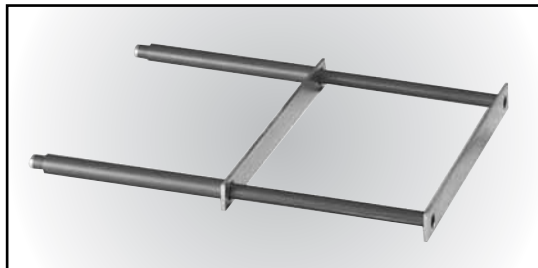
D688 vise shown mounted on D60-4-SA swivel base.



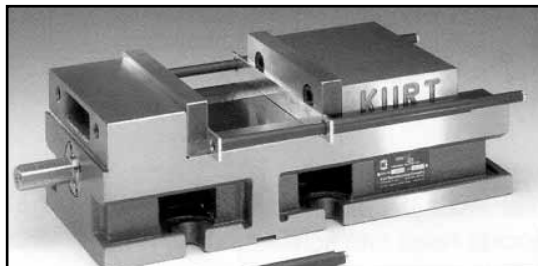
SWIVEL BASE			
Order No.	Part #	Ship Wt.	Fits These Vise Models
000-0000	D30-4-SA	7 lbs	D30
000-0000	D40-4-SA	16 lbs	D40
000-0000	D50-4-SA	20 lbs	D50
000-0000	D60-4-SA	26 lbs	D60, D675, D688
000-0000	D80-4-SA	80 lbs	D80, D810

Parallel Keeper

Part # KPS-6000



Place your parallels in the vise against the jaws. Take the Parallel Keeper, squeeze it together and place it inside the parallels. Release the Parallel Keeper, it will push against the parallels, holding them against the jaws of the vise. It's that simple! Opens to 6 inches. Your new revolutionary labor saver, your "machinists third hand," is at work, saving part change time.

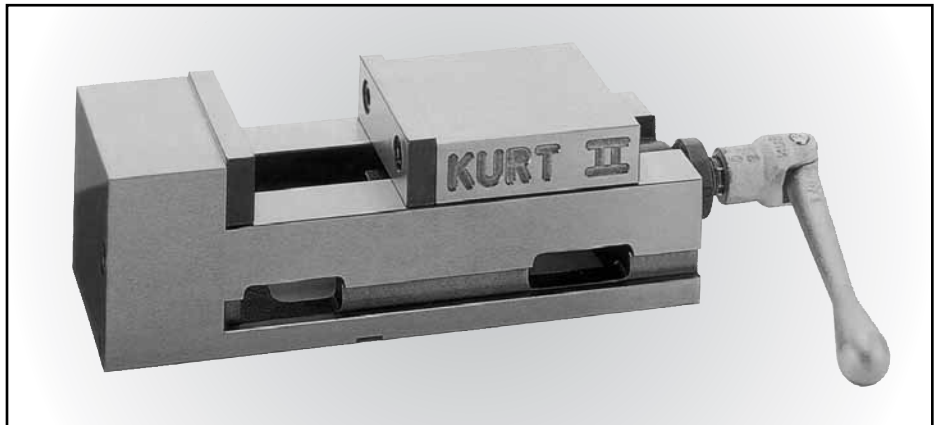


Shown with 3610V

ANGLOCK® PT Series Vises Manual and Hydraulic

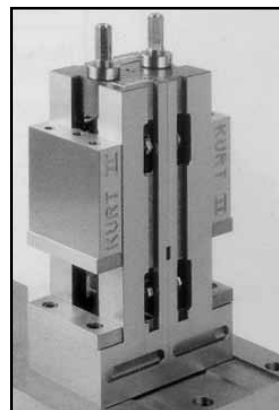
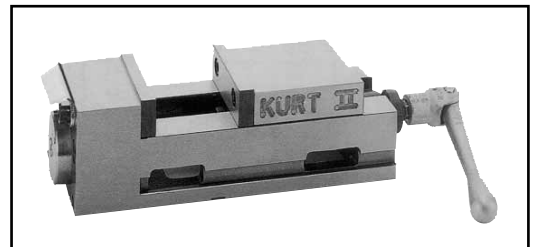
PT400A
PT800A
PTH400A
PTH800A

The AngLock PT Series vises offer high precision function through these important design features: The original, time-proven Kurt angLock design prevents parts from lifting upward under heavy clamping loads. The "pull-type" jaw clamping reduces stationary jaw deflection by at least 80% as the movable jaw is "pulled" into the stationary jaw and not pushed like standard screw type vises.



Features:

- "Pull-type" clamping means high precision and repeatability.
- Up to 20,000 lbs. precision clamping force.
- Can be mounted upright or on either side.
- CNC style allows compact spacing.
- Both sides ground square to within .001" with base and top.
- 80,000-PSI ductile iron body.
- Hydraulic option is available as a complete package, including the intensifier (specify foot or hand actuation).
- Matching of bed height $\pm .001$ " available at an additional cost.
- Matching of the keyway to the stationary jaw $\pm .001$ " is available at an additional cost.
- 10 year limited warranty.



The PTH800A shown mounted "back to back"

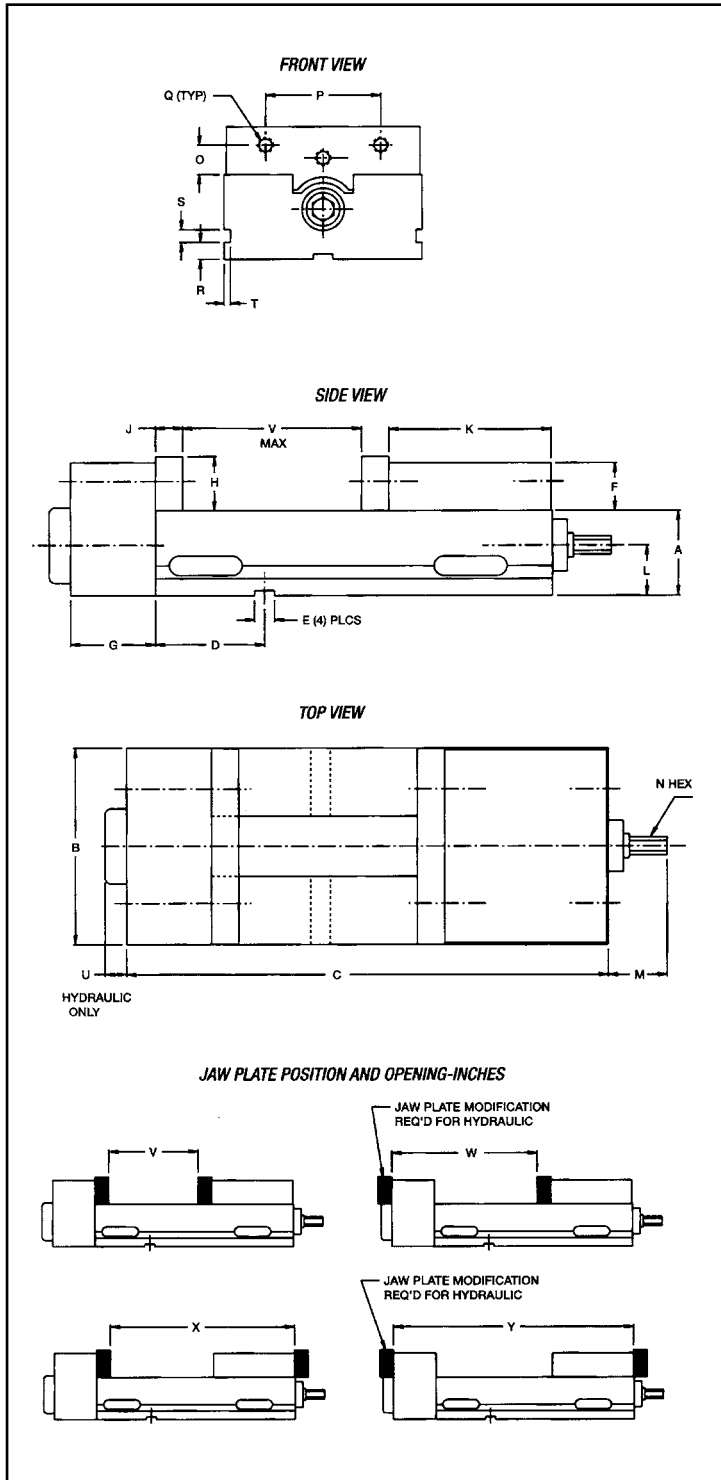
Makes a fast, easy and economical vise tombstone. Bases can be tailored for most HMC's.

ANGLOCK® PT Series Vises Manual and Hydraulic

VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	PT400A	PT800A
10	1,453	
20	2,740	1,637
30	4,090	
40	5,257	3,447
50	6,297	
60		3,895
80		4,764
100		6,065
120		8,023
140		9,947
160		10,337

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	PTH400A	PTH800A
1,400	2,380	
1,800	3,100	
2,200	3,820	
2,800	4,880	
2,900		9,100
3,000	5,240	
3,400	6,100	
3,500		11,560
4,400		14,620
5,300		17,560
6,200		20,120

DIMENSIONAL DATA				
	Manual		Hydraulic	
	PT400A	PT800A	PTH400A	PTH800A
A		2.375/3.500	2.375	3.500
B	4.093	8.156	4.093	8.156
C	11.438	19.875	11.438	19.875
D	2.750	4.500	2.750	4.500
E	0.500	0.813	0.500	0.813
F	1.115	1.985	1.115	1.985
G	2.188	3.500	2.188	3.500
H	1.235	2.200	1.235	2.200
J	0.547	1.075	0.547	1.075
K	4.000	6.690	4.000	6.690
L	1.410	2.062	1.410	2.062
M	2.060	3.120	2.060	3.120
N	9/16	7/8	9/16	7/8
O	0.687	1.220	0.687	1.220
P	2.500	4.750	2.500	4.750
Q	3/8-16	5/8-11	3/8-16	5/8-11
R	0.500	0.700	0.500	0.700
S	0.530	0.530	0.530	0.530
T	0.250	0.250	0.250	0.250
U	N/A	N/A	0.750	0.875
V	4	7-3/8	4	7-3/8
W	6-3/4	12	6-3/4	12
X	8-9/16	15-3/16	8-9/16	15-3/16
Y	11-5/16	19-13/16	11-5/16	19-13/16
Ship Wt Lbs.	32	159	46	180

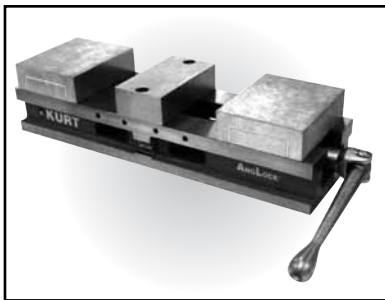




HDL AngLock® Vise (4 inch)

MANUAL & HYDRAULIC

The HDL Anglock® Vises are high density long vises with two clamping stations. They provide repeatable clamping to 0.0002" and combine high density with heavy duty features. Designed on a rugged 80,000 PSI ductile iron body with steel components, both models provide strength, rigidity and long term accuracy while absorbing machining vibration.



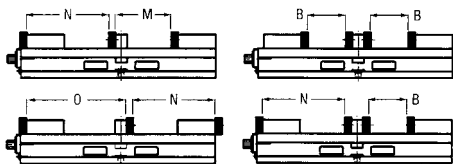
Features

1. Two clamping stations – repeatable clamping to 0.0002".
2. Full 3" opening in each station with standard hard jaw system.
3. Jaws are indexable 180 degrees.
4. Manual and hydraulic models available.
5. Fast easy conversion between manual and hydraulic models. Part # HDHLM4-3-SA-KIT.
6. Maximizes the number of parts in the work envelope.
7. Adjustable pre-load feature allows you to minimize pre-load range thus reducing the turns of the handle to open or close the vise (manual version).
8. Holding block features the ability to clamp same or dissimilar sized parts and provides pre-loading ability in the front or back jaw (manual version).
9. Lifetime Iron Clad Warranty.

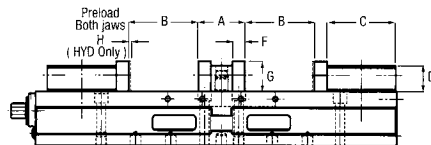
Jaws for HDL Vises are sold separately and available with the following options.

- Hard Jaws • Machinable Aluminum Jaws
- Machinable Ductile Iron Jaws
- Aluminum Fixture Plate

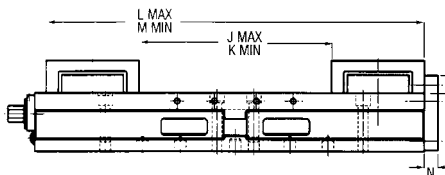
Dimensional Data High Density 4" Full Open Vise HDL Manual & Hydraulic								
	OPTIONAL HARD JAWS HDLM4J-JAWKIT Shipping Weight 4.53kgs/10lbs				Convertible OPTION HARD AND CARVABLE JAWS			
	HDLM4J		HDHLM4J		HDLM4J		HDHLM4J	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A	59.538	2.344	59.538	2.344	211.938	8.344	211.938	8.344
B	76.200	3.000	76.200	3.000	59.538	2.344	59.538	2.344
C	73.812	2.906	73.812	2.906	225.831	8.891	225.831	8.891
D	28.321	1.115	28.321	1.115	299.644	11.797	299.644	11.797
E	101.600	4.000	101.600	4.000	239.725	9.438	239.725	9.438
F	13.894	0.547	13.894	0.547	87.325	3.438	87.325	3.438
G	31.369	1.235	31.369	1.235	73.431	2.891	73.431	2.891
H	–	–	3.175	0.125	147.244	5.797	147.244	5.797
J	63.500	2.500	63.500	2.500	205.968	8.109	205.968	8.109
K	17.450	0.687	17.450	0.687	55.880	2.200	55.880	2.200
L	M10 x 1.50	M10 x 1.50	M10 x 1.50	M10 x 1.50	409.168	16.109	409.168	16.109
M	121.844	4.797	121.844	4.797	259.080	10.200	259.080	10.200
N	163.906	6.453	163.906	6.453	20.625	Hard Jaws Only 0.812	20.625	Hard Jaws Only 0.812
O	209.550	8.250	209.550	8.250	18.262	0.719	18.262	0.719
P	–	–	–	–	15.240	Hard & Soft Jaws 0.600	15.240	Hard & Soft Jaws 0.600



HARDENED JAW POSITIONS (MANUAL VISE SHOWN)

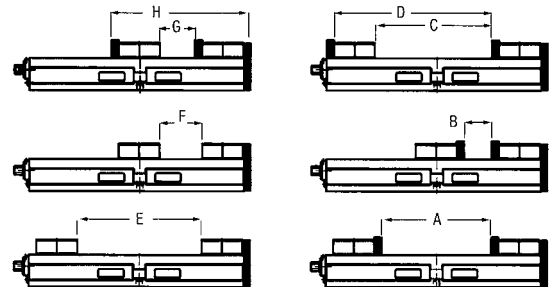


OPTIONAL HARD JAWS SHOWN (MANUAL VISE SHOWN)

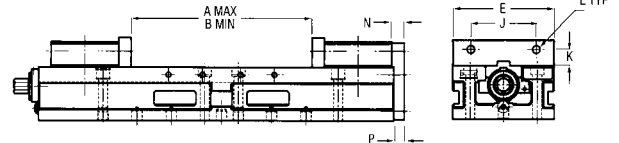


CONVERTIBLE OPTIONAL FOR CARVABLE JAWS (MANUAL VISE SHOWN)

OPTIONAL CONVERTIBLE KIT (HDL6J-CONVKIT) - JAW POSITIONS



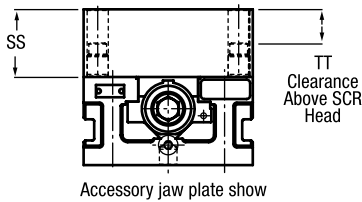
CONVERTIBLE OPTIONAL FOR HARD JAWS HDLM6J-CONVKIT (MANUAL VISE SHOWN)



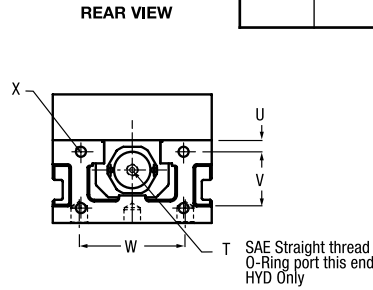
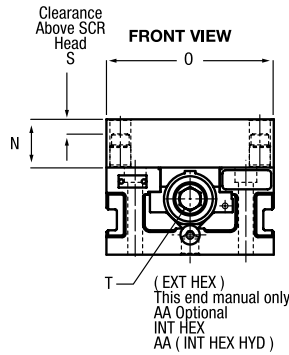
HDL AngLock® Vise (4 inch)

MANUAL & HYDRAULIC

ACCESSORY JAWKIT WITH OPTIONAL 1.9 HEIGHT JAW

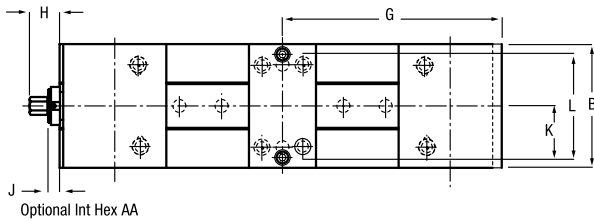


CLAMPING FORCE LBS.			
Torque-Ft. Lbs.	HDLM4	Hydraulic PSI	HDHLM4
10	1,040	1,000	775
20	2,125	1,500	1,450
30	3,140	2,000	1,900
40	4,040	2,500	2,550
50	4,980	3,000	3,100
60	5,870	3,500	3,700
		4,000	4,200
		4,500	4,800



	Dimensional Data High Density 4" Full OpenVise HDL Manual & Hydraulic			
	HDLM4		HDHLM4	
	MM	Inch	MM	Inch
A	60.325	2.375	60.325	2.375
B	101.600	4.000	101.600	4.000
C	415.925	16.375	415.925	16.375
D	200.025	7.875	200.025	7.875
E	63.500	2.500	63.500	2.500
F	418.287	16.468	418.287	16.468
G	209.144	8.234	209.144	8.234
H	33.680	1.326	-	-
J	9.855	0.388	-	-
K	41.275	1.625	41.275	1.625
L	82.550	3.250	82.550	3.250
M	101.600	4.000	101.600	4.000
N	35.560	1.400	35.560	1.400
O	101.600	4.000	101.600	4.000
P	75.794	2.984	75.794	2.984
Q	65.075	2.562	65.075	2.562
R	20.625	0.812	20.625	0.812
S	7.722	0.304	7.722	0.304
T	14.275 EXT HEX	0.562 EXT HEX	7/16 - 20 UNF O-RING PORT	7/16 - 20 UNF O-RING PORT
U	9.525	0.375	9.525	0.375
V	42.875	1.688	42.875	1.688
W	63.500	2.500	63.500	2.500
X	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25
Y	-	-	3.175	0.125
Z	3.048	0.120	-	-
AA	11.099 INT HEX	0.437 INT HEX	11.900 INT HEX	0.437 INT HEX
BB	9.525	0.375	9.525	0.375
CC	34.325	1.375	34.325	1.375
DD	65.100	2.563	65.100	2.563
EE	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25
FF	19.050	0.750	19.050	0.750
GG	20.000	0.787	20.000	0.787
HH	100.000	3.937	100.000	3.937
JJ	133.350	5.250	133.350	5.250
KK	133.350	5.250	133.350	5.250
LL	100.000	3.937	100.000	3.937
MM	38.100	1.500	38.100	1.500
NN	40.000	1.575	40.000	1.575
OO	M8 SHCS	M8 SHCS	M8 SHCS	M8 SHCS
PP	5/16 SHCS	5/16 SHCS	5/16 SHCS	5/16 SHCS
QQ	15.875	0.625	15.875	0.625
RR	16.000	0.6299	16.000	0.6299
SS	48.260	1.900	48.260	1.900
TT	20.422	0.804	20.422	0.804
	34 lbs/15.42 kgs		33 lbs/14.96 kgs	
	Estimated Shipping Weight of Vise Body Only			

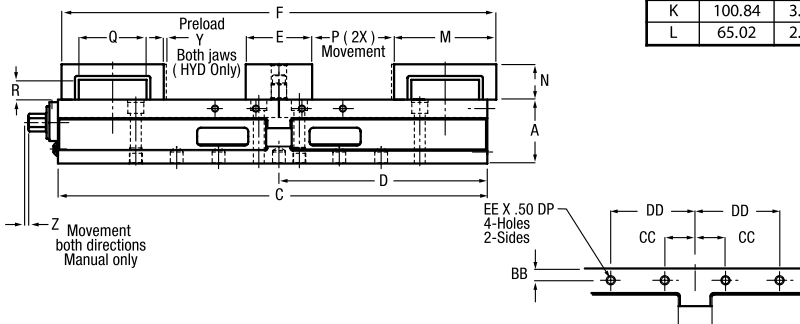
TOP VIEW



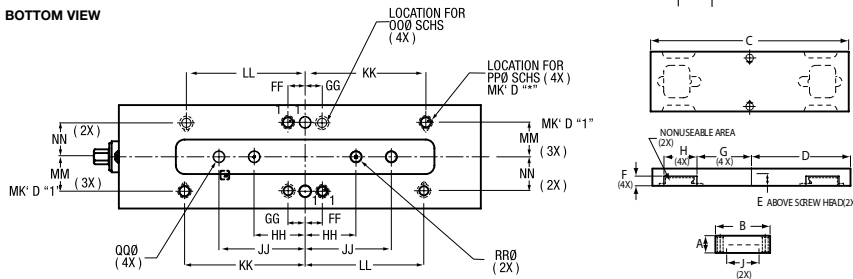
Aluminum Fixture Plate Accessory for HDLM Vise & CTHDLM Tower 4"

	HDLM4ALP419	
	mm	inch
A	48.26	1.900
B	101.60	4.00
C	393.70	15.500
D	196.85	7.750
E	40.54	1.596
F	-	-
G	-	-
H	20.57	0.810
J	65.07	2.562
K	100.84	3.970
L	65.02	2.560

SIDE VIEW



BOTTOM VIEW

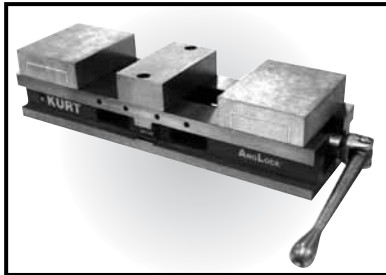




HDL AngLock® Vise (6 inch)

MANUAL & HYDRAULIC

The HDL Anglock® Vises are high density long vises with two clamping stations. They provide repeatable clamping to 0.0002" and combine high density with heavy duty features. Designed on a rugged 80,000 PSI ductile iron body with steel components, both models provide strength, rigidity and long term accuracy while absorbing machining vibration.



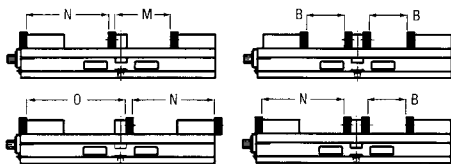
Features

- Two clamping stations – repeatable clamping to 0.0002".
- Full 4" opening in each station with standard hard jaw system.
- Jaws are indexable 180 degrees.
- Manual and hydraulic models available.
- Fast easy conversion between manual and hydraulic models. Part # HDHLM6-3-SA-KIT.
- Maximizes the number of parts in the work envelope.
- Adjustable pre-load feature allows you to minimize pre-load range thus reducing the turns of the handle to open or close the vise (manual version).
- Holding block features the ability to clamp same or dissimilar sized parts and provides pre-loading ability in the front or back jaw (manual version).
- Lifetime Iron Clad Warranty.

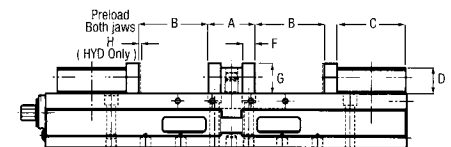
Jaws for HDL Vises are sold separately and available with the following options.

- Hard Jaws
- Machinable Aluminum Jaws
- Machinable Ductile Iron Jaws
- Aluminum Fixture Plate

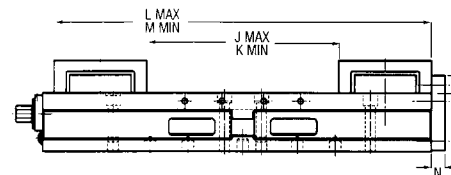
Dimensional Data High Density 6" Full Open Vise HDL Manual & Hydraulic								
	OPTIONAL HARD JAWS HDLM6J-JAWKIT Shipping Weight 11.79kgs/26lbs				Convertible OPTION HARD AND CARVABLE JAWS			
	HDLM6J		HDHLM6J		HDLM6J		HDHLM6J	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A	68.326	2.690	68.326	2.690	271.526	10.690	271.526	10.690
B	101.600	4.000	101.600	4.000	68.326	2.690	68.326	2.690
C	101.600	4.000	101.600	4.000	289.941	11.415	289.941	11.415
D	37.719	1.485	37.719	1.485	391.541	15.415	391.541	15.415
E	152.400	6.000	152.400	6.000	308.356	12.140	308.356	12.140
F	18.415	0.725	18.415	0.725	105.156	4.140	105.156	4.140
G	44.069	1.735	44.069	1.735	86.741	3.415	86.741	3.415
H	-	-	3.175	0.125	188.341	7.415	188.341	7.415
J	98.425	3.875	98.425	3.875	274.574	10.810	274.574	10.810
K	23.876	0.940	23.876	0.940	77.775	3.062	77.775	3.062
L	M12x1.75	M12x1.75	M12x1.75	M12x1.75	528.574	20.810	528.574	20.810
M	151.511	5.965	151.511	5.965	331.775	13.062	331.775	13.062
N	221.615	8.725	221.615	8.725	18.542	0.730	18.542	0.730
O	271.526	10.690	271.526	10.690	23.825	0.938	23.825	0.938
P	-	-	-	-	15.367	0.605	15.367	0.605



HARDENED JAW POSITIONS (MANUAL VISE SHOWN)

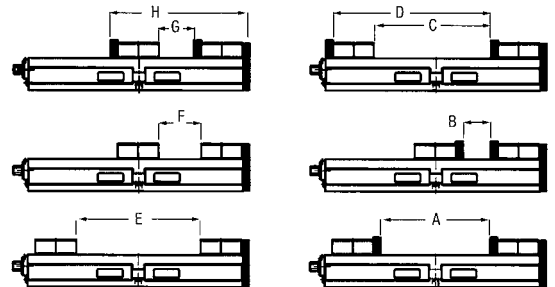


OPTIONAL HARD JAWS SHOWN (MANUAL VISE SHOWN)

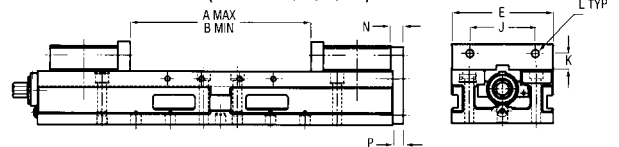


CONVERTIBLE OPTIONAL FOR CARVABLE JAWS (MANUAL VISE SHOWN)

OPTIONAL CONVERTIBLE KIT (HDL6-CONVKIT) - JAW POSITIONS

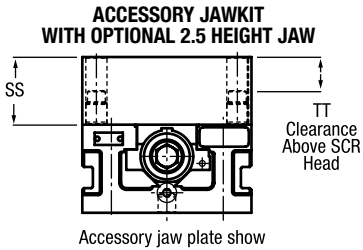


CONVERTIBLE OPTIONAL FOR HARD JAWS HDLM6J-CONVKIT (MANUAL VISE SHOWN)



HDL AngLock® Vise (6 inch)

MANUAL & HYDRAULIC

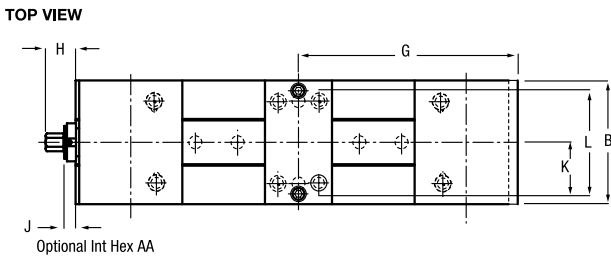
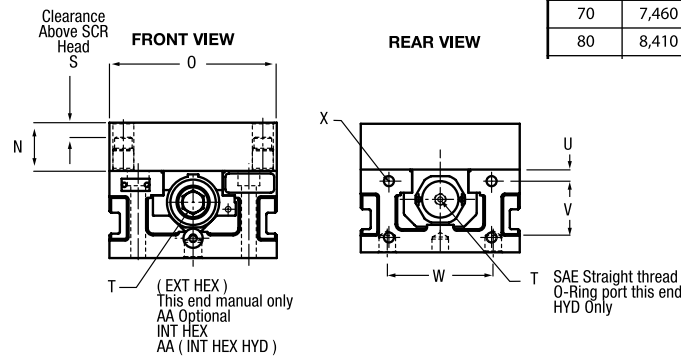


CLAMPING FORCE LBS.

Torque-Ft. Lbs.	HDLM6	Hydraulic PSI	HDHLM6
10	1,540	500	875
20	2,520	1000	1,600
30	3,350	1500	2,330
40	4,310	2000	3,130
50	5,750	2500	3,950
60	6,860	3000	4,750
70	7,460	3500	5,475
80	8,410	4000	6,350

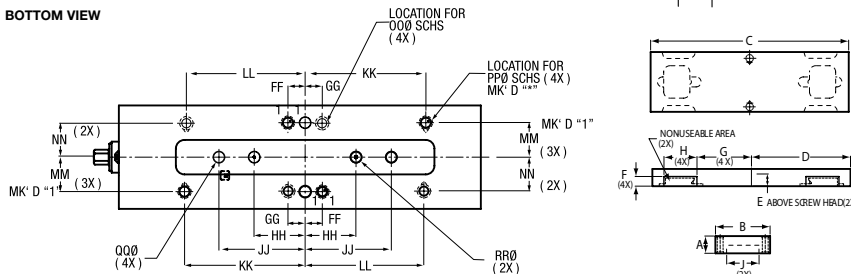
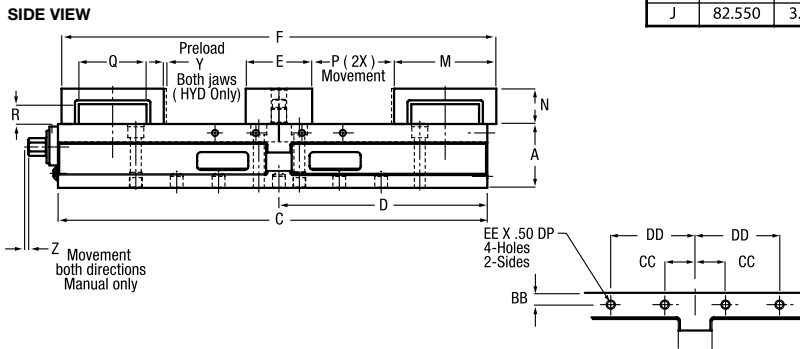
Dimensional Data
High Density 6" Full OpenVise HDL Manual & Hydraulic

	HDLM6		HDHLM6	
	MM	Inch	MM	Inch
A	79.375	3.125	79.375	3.125
B	152.400	6.000	152.400	6.000
C	533.400	21.000	533.400	21.000
D	258.877	10.192	258.877	10.192
E	82.550	3.250	82.550	3.250
F	539.750	21.250	539.750	21.250
G	269.875	10.625	269.875	10.625
H	36.830	1.450	-	-
J	21.844	0.860	-	-
K	63.500	2.500	63.500	2.500
L	127.000	5.000	127.000	5.000
M	127.000	5.000	127.000	5.000
N	43.891	1.728	43.891	1.728
O	152.400	6.000	152.400	6.000
P	101.600	4.000	101.600	4.000
Q	84.125	3.312	84.125	3.312
R	24.613	0.969	24.613	0.969
S	13.259	0.522	13.259	0.522
T	19.050 EXT HEX	0.750 EXT HEX	7/16-20 UNF O-RING PORT	7/16-20 UNF O-RING PORT
U	11.125	0.438	11.125	0.438
V	53.975	2.125	53.975	2.125
W	98.425	3.875	98.425	3.875
X	M10x1.5	M10x1.5	M10x1.5	M10x1.5
Y	-	-	3.175	0.125
Z	3.962	0.156	-	-
AA	15.875 INT HEX	0.625 INT HEX	15.875 INT HEX	0.625 INT HEX
BB	11.125	0.438	11.125	0.438
CC	28.575	1.125	28.575	1.125
DD	79.375	3.125	79.375	3.125
EE	M8x1.25	M8x1.25	M8x1.25	M8x1.25
FF	25.400	1.000	25.400	1.000
GG	25.000	0.984	25.000	0.984
HH	75.000	2.9528	75.000	2.9528
JJ	127.000	5.000	127.000	5.000
KK	177.800	7.000	177.800	7.000
LL	175.000	6.890	175.000	6.890
MM	50.800	2.000	50.800	2.000
NN	50.000	1.969	50.000	1.969
OO	M12 SHCS	M12 SHCS	M12 SHCS	M12 SHCS
PP	1/2 SCHS	1/2 SCHS	1/2 SCHS	1/2 SCHS
QQ	15.875	0.625	15.875	0.625
RR	16.000	0.6299	16.000	0.6299
SS	60.960	2.400	60.960	2.400
TT	30.328	1.194	30.328	1.194
	32.21 kgs/71 lbs		31.75 kgs/70 lbs	



Aluminum Fixture Plate Accessory for HDLM Vise & CTHDL Tower 6"

	HDL6ALP619-239	
	mm	inch
A	48.260	1.900
B	152.400	6.000
C	508.000	20.000
D	254.000	10.000
E	30.988	1.220
F	24.613	0.969
G	138.938	5.470
H	84.125	3.312
J	82.550	3.250



CARVLOCK™ CLUSTERTOWER™

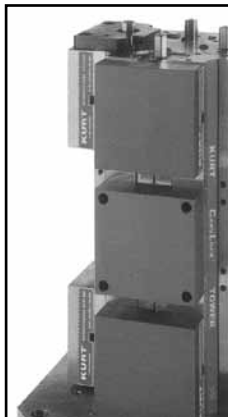


CTU6™ Shown with DLU6ALU Jaw Kit Assembly

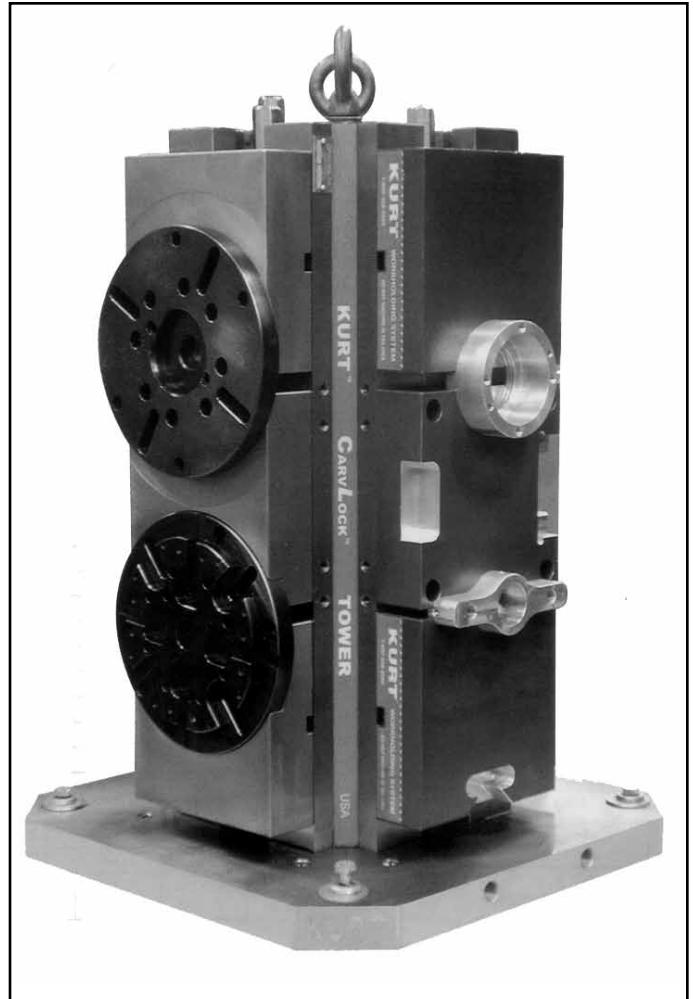
CTU4300
CTU4400
CTU4500
CTU6400
CTU6500
CTU6630



Fast. Change all three jaws in a minute.



CTU6 shown with conversion kit (CTCU6-KIT) assembly for single station vise application.



ClusterTower provides flexible holding options as shown in photo. Jaws on right are machinable aluminum, on left are machinable ductile iron.

Features:

- Cast iron integral vise tower - highly rigid to achieve workpiece immobility and to dampen cutter induced vibration. Ideal for today's high speed spindles.
- The most versatile high density tower system in the market.
- Four different jaw systems available - machinable aluminum or ductile iron jaws (in three heights), EZLock quick-change jaw plate system, and standard hard jaw plates.
- Center clamping area is fully covered 100% of the time.
- Famous Anglock design - minimizes movable jaw lift.
- Stationary and movable jaws repeatable to .001".
- Change jaw set in 1 minute.
- Hold multiple parts in eight clamping stations. Increase your part volume.
- Three standard base sizes. Custom bases available.
- Optional 4" conversion kit. (CTCU4-Kit)
- Optional 6" conversion kit. (CTCU6-Kit)
- Optional internal hex available.
- Metric version available.

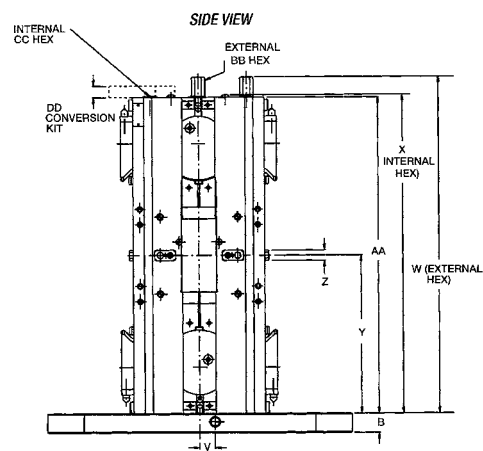
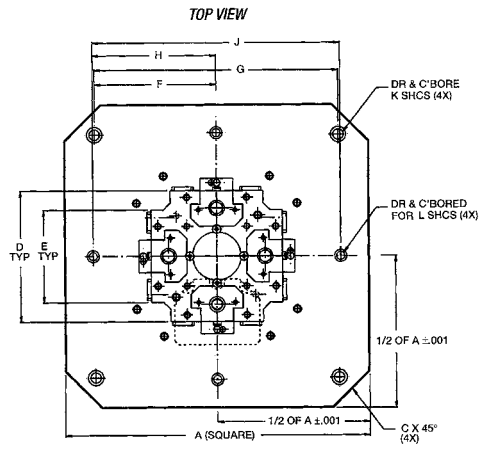
CARVLOCK™ CLUSTERTOWER™

VICE CLAMPING FORCE - LBS.

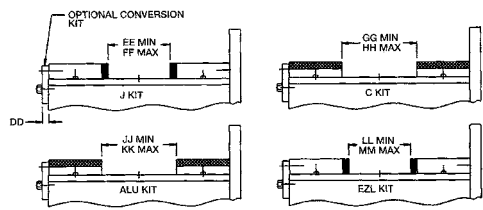
Torque Ft.-Lbs.	CTU4300	CTU4400	CTU4500
10	1,039	1,039	1,039
20	2,147	2,147	2,147
30	3,018	3,018	3,018
40	3,943	3,943	3,943
50	4,709	4,709	4,709
60	5,694	5,694	5,694

DIMENSIONAL DATA

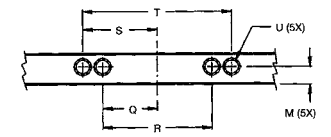
	CTU4300	CTU4400	CTU4500
A	300MM	400MM	500MM
B	1.000	1.250	1.250
C	0.790	1.970	2.360
D	6.250	6.250	6.250
E	4.000	4.000	4.000
F	5.000	6.299	7.874
G	10.000	12.598	15.748
H	N/A	6.250	8.000
J	N/A	12.500	16.000
K	1/2	5/8	5/8
L	N/A	1/2	1/2
M	0.590	0.708	0.708
N	1.575	N/A	N/A
O	3.150	N/A	N/A
P	1/2-13	N/A	N/A
Q	N/A	2.165	2.165
R	N/A	4.330	4.330
S	N/A	2.953	2.953
T	N/A	5.906	5.906
U	N/A	5/8-11	5/8-11
V	N/A	.984	.984
W	16.240	16.240	16.240
X	15.200	15.200	15.200
Y	7.532	7.532	7.532
Z	0.562	0.562	0.562
AA	15.063	15.063	15.063
BB	9/16	9/16	9/16
CC	7/16	7/16	7/16
DD	0.600	0.600	0.600
EE	2.094	2.094	2.094
FF	5.844	5.844	5.844
GG	3.188	3.188	3.188
HH	7.079	7.079	7.079
JJ	3.188	3.188	3.188
KK	7.063	7.063	7.063
LL	2.124	2.124	2.124
MM	5.816	5.816	5.816
Est Ship Wt. Lbs	350	395	515



CONVERSION KIT JAW POSITIONS



400 & 500 BASE PLATE ONLY



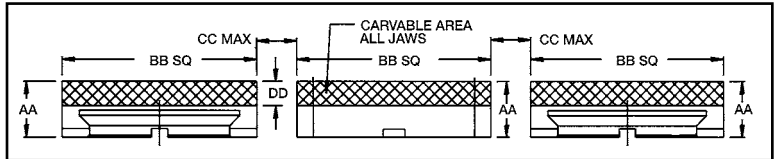
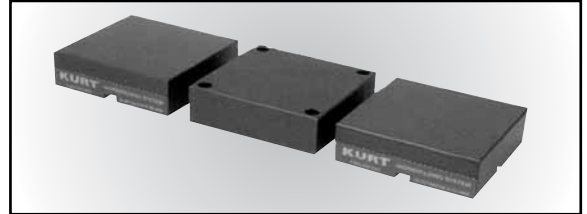
630 BASE PLATE ONLY



JAW KITS for CARVLOCK™ TOWER™

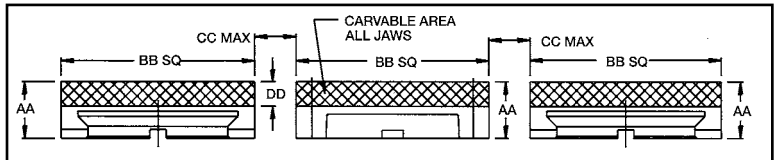
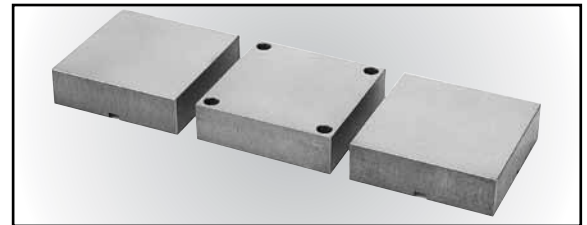
DLU4ALU - Jaw Kit
DLU6ALU - Jaw Kit
Quick Change, Machinable Soft Jaws

- Features:**
- 90 degree indexable soft jaws (6061 - T6 Aluminum) can be machined to fit the shape of your part for inexpensive dedicated fixturing.
 - Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
 - Stationary jaws are keyed to the vise base for repeatability within .001"



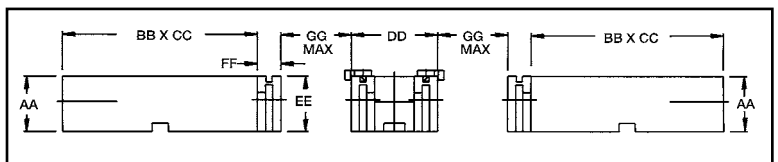
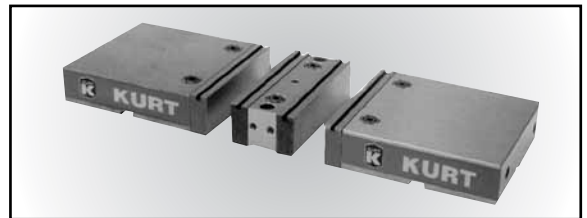
DLU4C - Jaw Kit
DLU6C - Jaw Kit
Quick Change, Machinable Ductile Iron Jaws

- Features:**
- Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
 - Movable and stationary jaws may be heat treated for longer life.
 - Stationary jaws are keyed to the vise base for repeatability within .001"



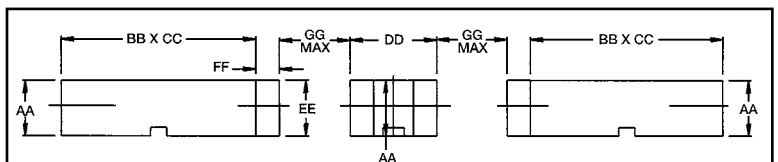
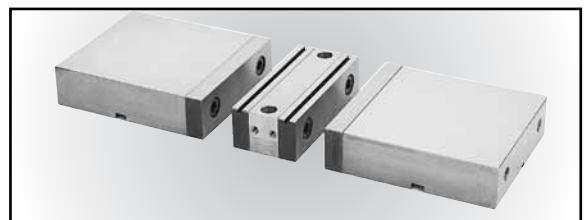
DLU6EZL - Jaw Kit
New EZLock Quick Change Jaw Plate System

- Features:**
- Jaws utilize EZLock quick change jaw plates.
 - Unique jaw plate locating groove assures repeatability of .0005" or less in repeat set-ups.
 - Jaw plates lock/unlock from top of vise
 - EZLock jaw plates will accept new Groove Lock workstops.
 - Stationary jaws are keyed to the vise base for repeatability within .001"



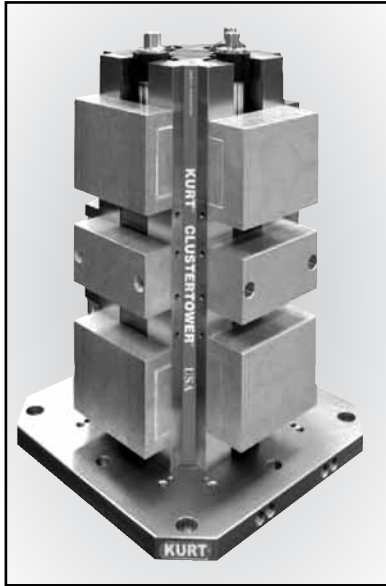
DLU6J - Jaw Kit
Standard Jaws

- Features:**
- Hardened steel jaw plates.
 - Stationary and movable jaws 1.78" high. Extra height allows higher clamping with less jaw deflection.
 - Stationary jaws are keyed to the vise base for repeatability within .001"

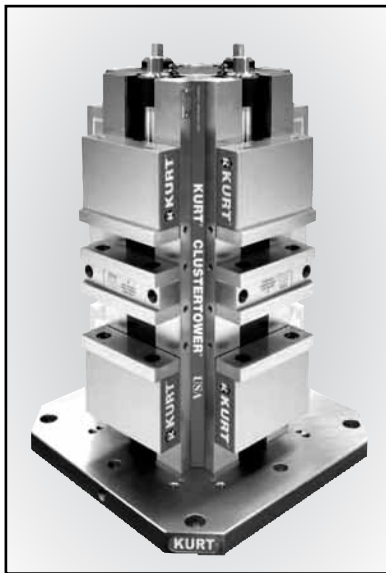


HDL CARVLOCK™ TOWER™ (4 inch)

Models: CTHDLM443, CTHDLM444, CTHDLM445



CTHDLM444AL
(shown with optional
machinable aluminum jaws)



CTHDLM444AL
(shown with optional
machinable aluminum jaws)

This manually operated, eight station HDL Cluster Tower system features a ductile iron integral vise tower. Designed for use on mid-size and larger machining centers including horizontal and vertical machining centers with a fourth axis and indexable tables. This workholding system achieves workpiece immobility while damping cutter induced vibration.

Features:

- High density vise tower system. Hold multiple parts in eight clamping stations. Increase part volume.
- Repeatable clamping to 0.0002". Each station delivers up to 5,870 lbs. of clamping force at 60 ft lbs of torque.
- Self-adjusting holding block of either front or back jaw for clamping the same or dissimilar sized parts. To further enhance fast operation, an adjustable pre-load feature reduces handle turns for opening and closing clamping stations.
- Ductile iron column insures strength, rigidity and long term accuracy.
- Jaw options available to fit your application. Select from Hard jaws, Machinable aluminum jaws, Machinable ductile Iron jaws.
- Jaws are indexable 180 degrees.
- Base sizes available include: 300mm, 400mm, 500mm.
- Elevated column makes clearing chips and contaminants fast and easy.
- Lifetime Iron Clad Warranty.

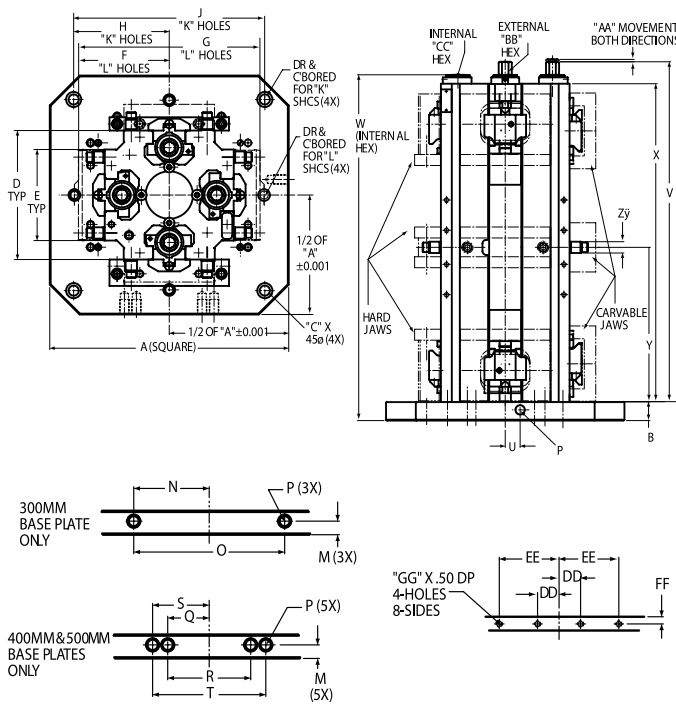
CLAMPING FORCE LBS.			
Torque-Ft. Lbs.	HDLM4	Hydraulic PSI	HDHLM4
10	1,040	1,000	775
20	2,125	1,500	1,450
30	3,140	2,000	1,900
40	4,040	2,500	2,550
50	4,980	3,000	3,100
60	5,870	3,500	3,700
		4,000	4,200
		4,500	4,800

Jaws for HDL Towers are sold separately and available with the following options.

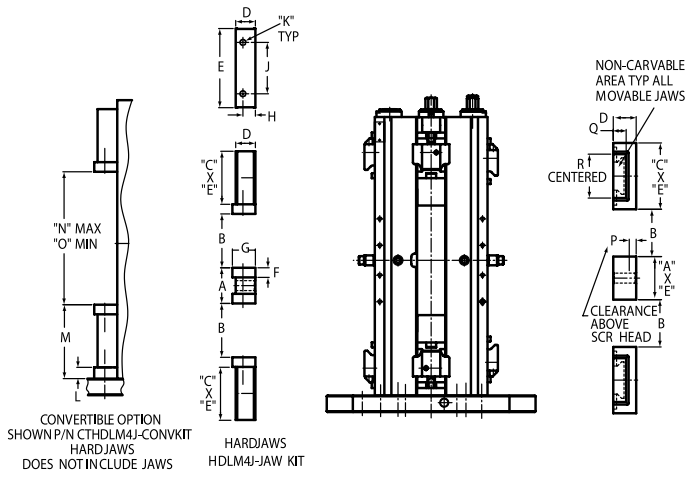
- Hard Jaws
- Machinable Aluminum Jaws
- Machinable Ductile Iron Jaws
- Aluminum Fixture Plate



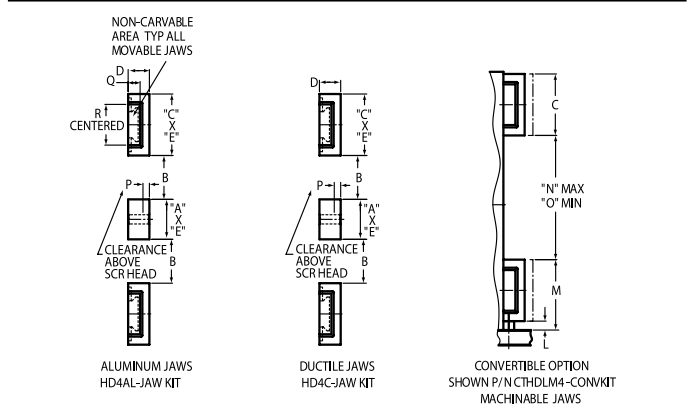
HDL CARVLOCK™ TOWER™ (4 inch)



Dimensional Data HDL Long Cluster Tower						
	CTHDLM443		CTHDLM444		CTHDLM445	
	MM	Inch	MM	Inch	MM	Inch
A	300.00	11.811	400.00	15.748	500.00	19.685
B	25.40	1.000	31.750	1.250	31.75	1.250
C	20.00	0.790	50.00	1.970	60.00	2.360
D	158.75	6.250	158.75	6.250	158.75	6.250
E	101.60	4.000	101.60	4.000	101.60	4.000
F	158.75	6.250	203.20	8.000	203.20	8.000
G	-	-	317.50	12.500	406.40	16.000
H	127.00	5.000	160.00	6.299	200.00	7.874
J	254.00	10.000	320.00	12.598	400.00	15.748
K	M12SHCS	1/2 SHCS	M16SHCS	5/8 SHCS	M16SHCS	5/8 SHCS
L	-	-	M12SHCS	1/2 SHCS	M12SHCS	1/2 SHCS
M	15.00	0.590	18.000	0.709	18.000	0.709
N	40.00	1.575	-	-	-	-
O	80.00	3.150	-	-	-	-
P	M12 x 1.75	-	M16 x 2.0	-	M16 x 2.0	-
Q	-	-	55.00	2.165	55.00	2.165
R	-	-	110.00	4.330	110.00	4.330
S	-	-	75.00	2.953	75.00	2.953
T	-	-	150.00	5.906	150.00	5.906
U	00.00	0.000	25.00	0.984	25.00	0.984
V	449.60	17.701	449.60	17.701	449.60	17.701
W	451.18	17.763	457.53	18.013	457.53	18.013
X	415.92	16.375	415.92	16.375	415.92	16.375
Y	200.03	7.875	200.03	7.875	200.03	7.875
Z	15.00	0.590	15.00	0.590	15.00	0.590
AA	3.05	0.120	3.05	0.120	3.05	0.120
BB	14.28	0.562	14.28	0.562	14.28	0.562
CC	11.10	0.437	11.10	0.437	11.10	0.437
DD	34.92	1.375	34.92	1.375	34.92	1.375
EE	65.10	2.563	65.10	2.563	65.10	2.563
FF	9.53	0.375	9.53	0.375	9.53	0.375
GG	M8 x 1.25	-	M8 x 1.25	-	M8 x 1.25	-



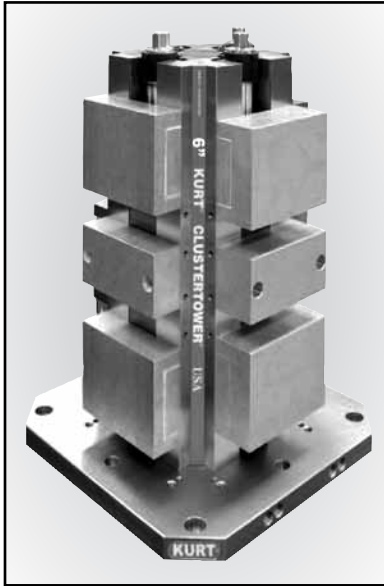
Jaw Accessories						
	HARD JAWS		ALUMINIUM JAWS			
	MM	Inch	HDLM4J-Jaw Kit	HDLM4L-Jaw Kit	HDLM4L1.9-Jaw Kit	
A	59.538	2.344	63.500	2.500	63.500	2.500
B	76.200	3.000	66.675	2.625	66.675	2.625
C	73.812	2.906	101.600	4.000	101.600	4.000
D	28.321	1.115	35.560	1.400	48.260	1.900
E	101.600	4.000	101.600	4.000	101.600	4.000
F	13.894	0.547	-	-	-	-
G	31.369	1.235	-	-	-	-
H	17.450	0.687	-	-	-	-
J	63.500	2.500	-	-	-	-
K	M10 x 1.50	-	-	-	-	-
L	-	-	-	-	-	-
M	-	-	-	-	-	-
N	-	-	-	-	-	-
O	-	-	-	-	-	-
P	-	-	7.722	0.304	20.422	0.804
Q	-	-	20.625	0.812	20.625	0.812
R	-	-	65.075	2.562	65.075	2.562



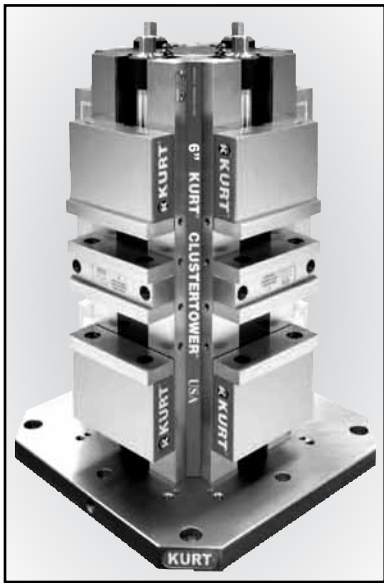
Jaw Accessories Convertible Options						
	DUCTILE JAWS		HARD JAWS		CARVABLE JAWS	
	MM	Inch	CTM4300-230	CTHDLM443-338	MM	Inch
A	63.500	2.500	-	-	-	-
B	66.675	2.625	-	-	-	-
C	101.600	4.000	-	-	-	-
D	35.560	1.400	-	-	-	-
E	101.600	4.000	-	-	-	-
F	-	-	-	-	-	-
G	-	-	-	-	-	-
H	-	-	-	-	-	-
J	-	-	-	-	-	-
K	-	-	-	-	-	-
L	-	-	13.894	0.547	13.874	0.547
M	-	-	101.600	4.000	115.494	4.547
N	-	-	196.850	7.750	169.060	6.656
O	-	-	57.150	2.250	57.150	2.250
P	7.722	0.304	-	-	-	-
Q	20.625	0.812	-	-	-	-
R	65.075	2.562	-	-	-	-

HDL CARVLOCK™ TOWER™ (6 inch)

Models: CTHDLM644, CTHDLM645, CTHDLM646



CTHDLM644AL
(shown with optional machinable aluminum jaws)



CTHDLM644AL
(shown with optional machinable aluminum jaws)

This manually operated, eight station HDL Cluster Tower system features a ductile iron integral vise tower. Designed for use on mid-size and larger machining centers including horizontal and vertical machining centers with a fourth axis and indexable tables. This workholding system achieves workpiece immobility while damping cutter induced vibration.

Features:

- High density vise tower system. Hold multiple parts in eight clamping stations. Increase part volume.
- Repeatable clamping to 0.0002". Each station delivers up to 5,870 lbs. of clamping force at 70 ft lbs of torque.
- Self-adjusting holding block of either front or back jaw for clamping the same or dissimilar sized parts. To further enhance fast operation, an adjustable pre-load feature reduces handle turns for opening and closing clamping stations.
- Ductile iron column insures strength, rigidity and long term accuracy.
- Jaw options available to fit your application. Select from Hard jaws, Machinable aluminum jaws, Machinable ductile Iron jaws and Aluminum fixture plate.
- Jaws are indexable 180 degrees.
- Base sizes available include: 400mm, 500mm, 630mm.
- Elevated column makes clearing chips and contaminants fast and easy.
- Lifetime Iron Clad Warranty.

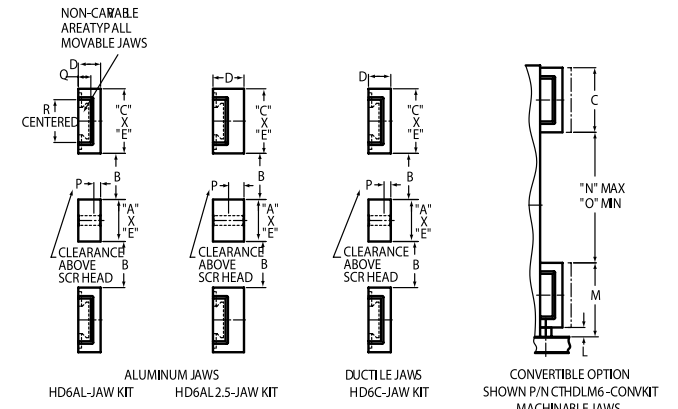
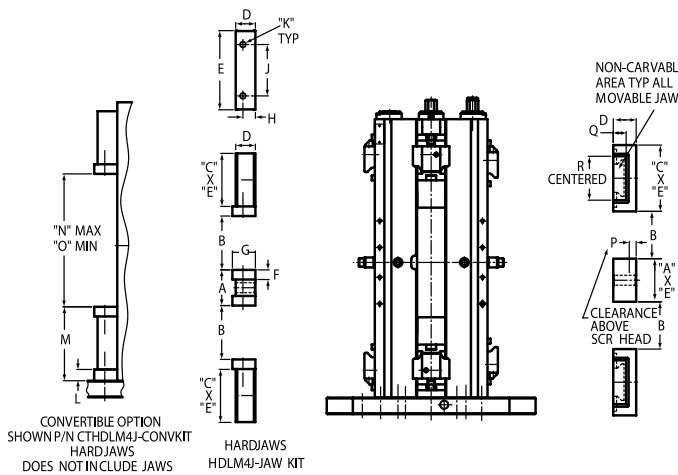
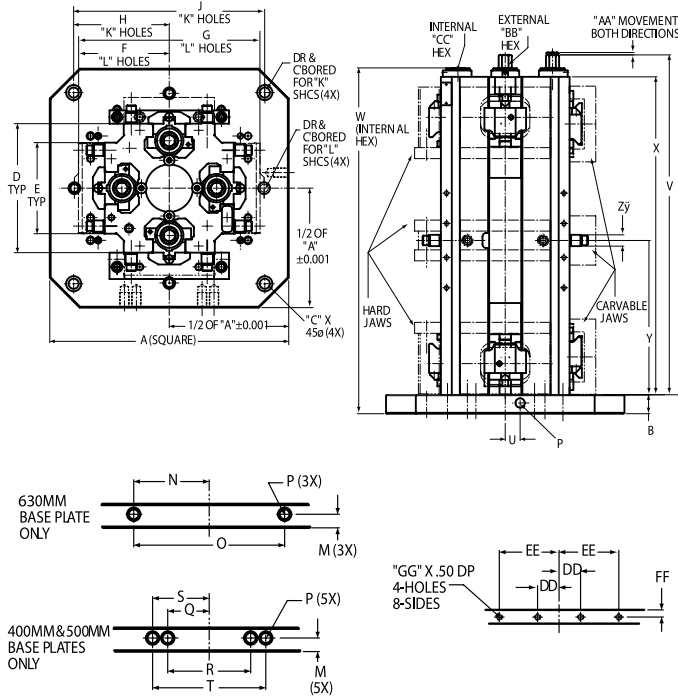
CLAMPING FORCE LBS.			
Torque-Ft. Lbs.	HDLM6	Hydraulic PSI	HDHLM6
10	1,540	500	875
20	2,520	1000	1,600
30	3,350	1500	2,330
40	4,310	2000	3,130
50	5,750	2500	3,950
60	6,860	3000	4,750
70	7,460	3500	5,475
80	8,410	4000	6,350
90	9,790	4500	7,100
		Hyd. Displacement 1.08 cubic inches	

Jaws for HDL Towers are sold separately and available with the following options.

- Hard Jaws
- Machinable Aluminum Jaws
- Machinable Ductile Iron Jaws
- Aluminum Fixture Plate



HDL CARVLOCK™ TOWER™ (6 inch)



Dimensional Data HDL Long Cluster Tower						
	CTHDLM644		CTHDLM645		CTHDLM646	
	MM	Inch	MM	Inch	MM	Inch
A	400.000	15.748	500.000	19.685	630.000	24.803
B	31.750	1.250	31.750	1.250	38.100	1.500
C	50.000	1.970	60.000	2.360	70.000	2.760
D	215.900	8.500	215.900	8.500	215.900	8.500
E	152.400	6.000	152.400	6.000	152.400	6.000
F	158.750	6.250	203.200	8.000	254.000	10.000
G	317.500	12.500	406.400	16.000	508.000	20.000
H	160.000	6.299	200.000	7.874	250.000	9.842
J	320.000	12.598	400.000	15.748	500.000	19.685
K	M16SHCS	5/8 SHCS	M16SHCS	5/8 SHCS	M16SHCS	5/8 SHCS
L	M12SHCS	1/2 SHCS	M12SHCS	1/2 SHCS	M12SHCS	1/2 SHCS
M	18.000	0.709	18.000	0.709	18.000	0.709
N	-	-	-	-	100.000	3.937
O	-	-	-	-	200.00	7.874
P	M16 x 1.75	-	M16 x 2.0	-	M16 x 2.0	-
Q	55.000	2.165	55.000	2.165	-	-
R	110.000	4.330	110.000	4.330	-	-
S	75.0000	2.953	75.00	2.953	-	-
T	150.000	5.906	150.00	5.906	-	-
U	25.000	0.984	25.00	0.984	25.00	0.984
V	548.380	22.450	570.230	22.450	570.230	22.450
W	548.380	21.590	548.380	21.590	548.380	21.590
X	533.400	21.000	533.400	21.000	533.400	21.000
Y	258.880	10.192	258.880	10.192	258.880	10.192
Z	19.050	0.750	19.50	0.750	19.050	0.750
AA	3.960	0.156	3.960	0.156	3.960	0.156
BB	19.050 EXT HEX	0.750 EXT HEX	19.050 EXT HEX	0.750 EXT HEX	19.050 EXT HEX	0.750 EXT HEX
CC	15.875 INT HEX	0.625 INT HEX	15.875 INT HEX	0.625 INT HEX	15.875 INT HEX	0.625 INT HEX
DD	28.580	1.125	28.580	1.125	28.580	1.125
EE	79.380	3.125	79.380	3.125	79.380	1.125
FF	9.530	0.375	9.530	0.375	9.530	0.375
GG	M8 x 1.25	-	M8 x 1.25	-	M8 x 1.25	-

Jaw Accessories						
	HARD JAWS		ALUMINIUM JAWS			
	MM	Inch	HD6AL-Jaw Kit	HD6L2.5-Jaw Kit	MM	Inch
A	68.326	2.690	82.550	3.250	82.550	3.250
B	103.170	4.062	90.630	3.568	90.630	3.568
C	101.600	4.000	127.000	5.000	127.000	5.000
D	37.719	1.485	43.890	1.728	60.960	2.400
E	151.610	5.968	152.400	6.000	152.400	6.000
F	18.415	0.725	-	-	-	-
G	44.069	1.736	-	-	-	-
H	23.876	0.940	-	-	-	-
J	98.425	3.875	-	-	-	-
K	M10 x 1.50	-	-	-	-	-
L	-	-	-	-	-	-
M	-	-	-	-	-	-
N	-	-	-	-	-	-
O	-	-	-	-	-	-
P	-	-	13.260	0.522	30.330	1.194
Q	-	-	24.640	0.969	24.640	0.969
R	-	-	84.120	3.312	84.120	3.312

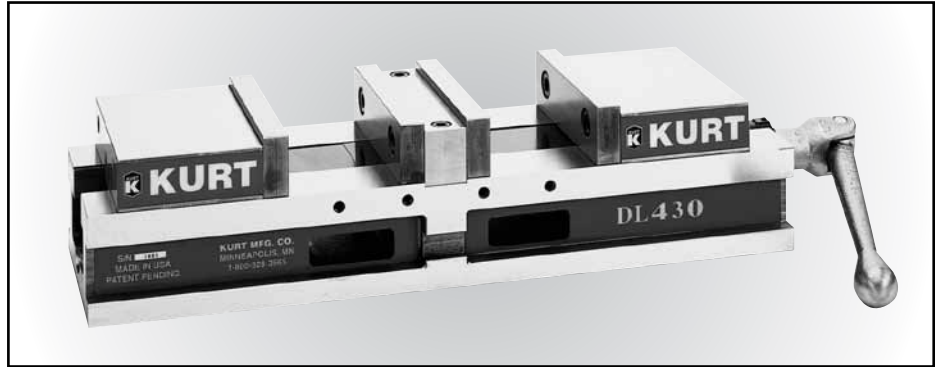
Jaw Accessories Convertible Options						
	DUCTILE JAWS		HARD JAWS		CARVABLE JAWS	
	MM	Inch	CTHDLM6J-CONVKIT	CTHDLM6-CONVKIT	MM	Inch
A	82.550	3.250	-	-	-	-
B	90.630	3.568	-	-	-	-
C	127.000	5.000	-	-	-	-
D	43.891	1.728	-	-	-	-
E	152.400	6.000	-	-	-	-
F	-	-	-	-	-	-
G	-	-	-	-	-	-
H	-	-	-	-	-	-
J	-	-	-	-	-	-
K	-	-	-	-	-	-
L	-	-	21.590	0.850	18.415	0.725
M	-	-	141.605	5.575	145.415	5.725
N	-	-	254.640	10.025	256.540	10.100
O	-	-	68.326	2.690	79.760	3.140
P	13.260	0.522	-	-	-	-
Q	24.610	0.969	-	-	-	-
R	84.120	3.312	-	-	-	-

DOUBLELOCK[®] VISES

DL430[™]
DL800

The DL430, DL640 and DL800 DoubleLock vises offer cost saving productivity by maximizing the number of parts in the work envelope.

Accessories see pages 5-130 through 5-132



Use your DoubleLock vise to it's full capacity with the DoubleLock convertible kit. The kit is available for the DL430 and DL800 vises. 1 year limited warranty.

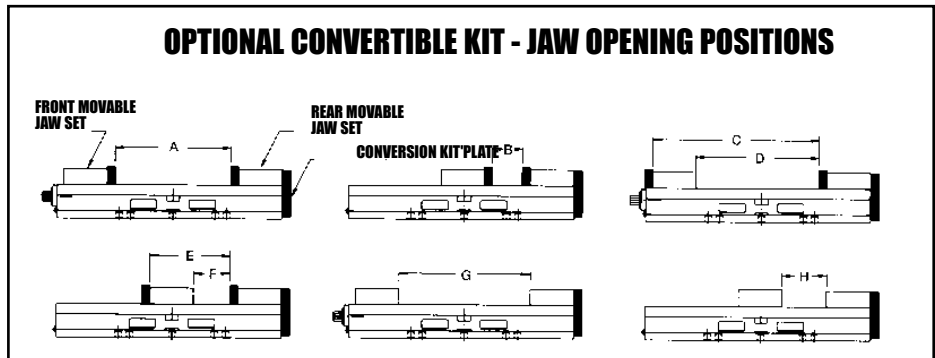


Shown with optional convertible kit.

Features:

- Large Capacity
 - DL430 3" X 4" each station.
 - DL800 6" X 8" each station.
- Productivity – multiple part workholding for better spindle utilization, reduced tool change time, and reduced machine travel from part to part.
- Accuracy – repeatable clamping to .0002".
- Durability – 80,000-PSI ductile iron body and steel components provide strength, rigidity and long term accuracy while absorbing machining vibration.
- Self-adjusting over the entire clamping range.
- Metric version available.
- Optional internal hex screw available.
- 10 year limited warranty.

OPTIONAL CONVERTIBLE KIT - JAW OPENING POSITIONS



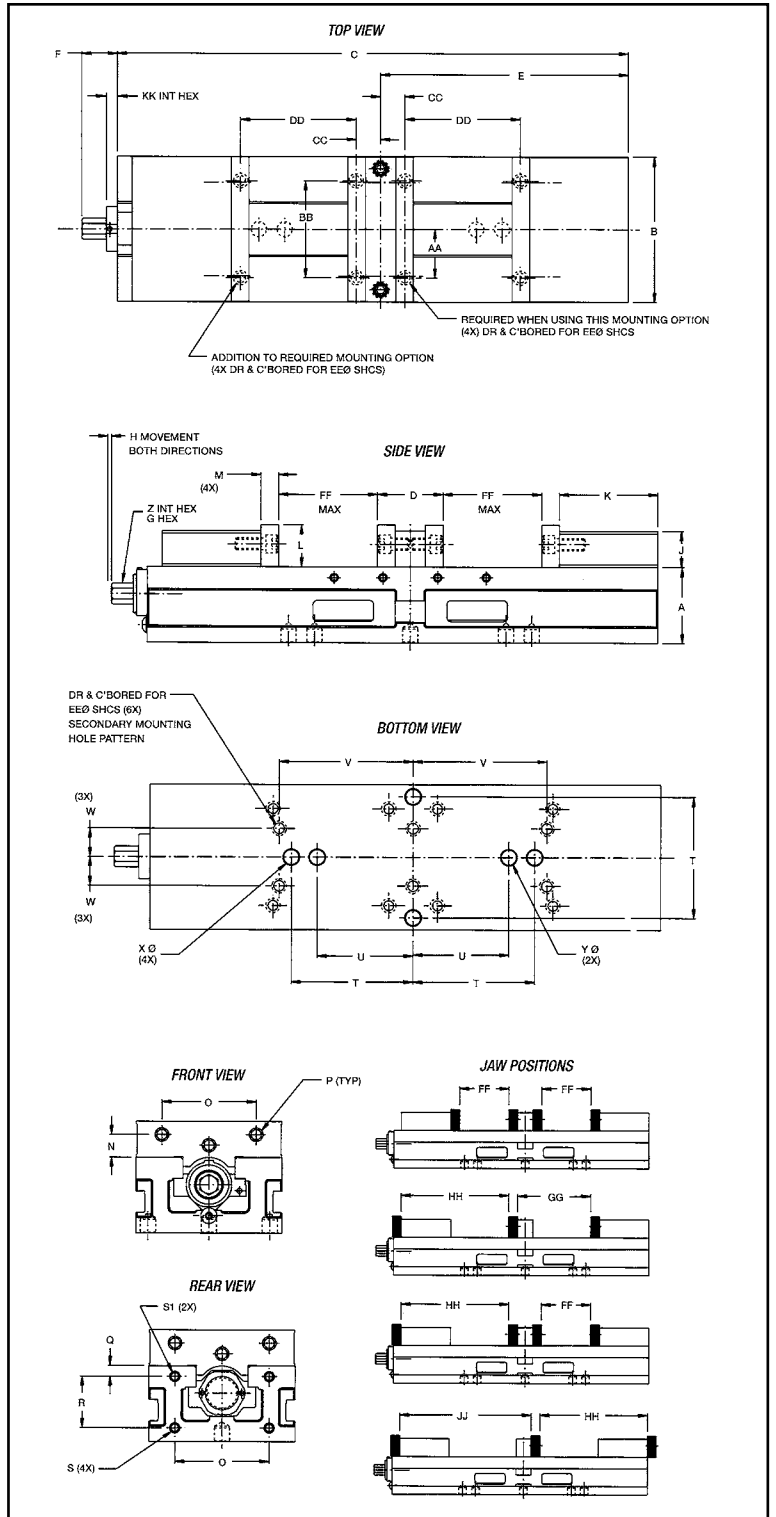
Optional Convertible kit - Jaw opening positions											
	A	B	C	D	E	F	G	H	D (A+D)	C (A)	Ship Wt. Lbs
DLC430 - KIT	8.094	2.094	11.730	8.640	5.731	2.641	9.188	3.188	-	-	2
DLC800 - KIT	8 to 12	12 to 16	17 to 21	22 to 26	24 to 28	-	-	-	18 to 22	15 to 19	20

DOUBLELOCK VISES®

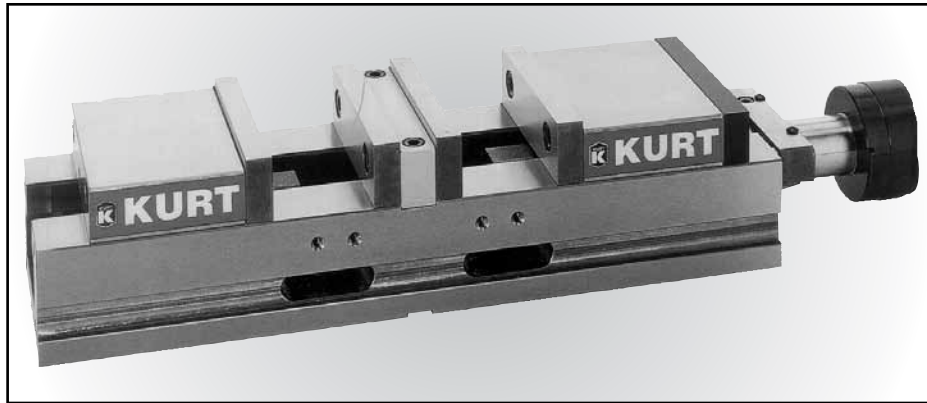
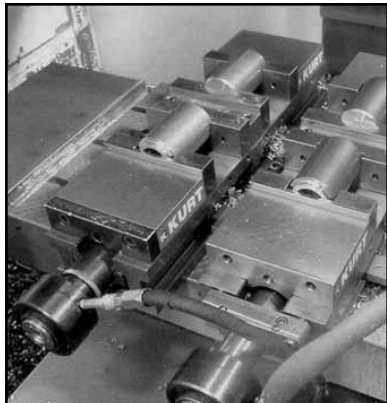
Manual

VISE CLAMPING FORCE - LBS.		
Manual Torque Ft.-Lbs.	DL430	DL800
10	1,046	
20	1,980	2,023
30	2,832	
40	3,740	3,578
50	4,523	
60		5,136
70		
80		6,883
100		8,997
120		9,817

DIMENSIONAL DATA		
	DL430	DL800
A	2.375	3.750
B	4.000	8.060
C	16.125	30.000
D	2.094	4.000
E	7.750	15.000
F	1.340	4.250
G	5/8	7/8
H	0.120	0.190
J	1.115	1.965
K	3.090	6.000
L	1.235	2.200
M	0.547	1.075
N	0.687	1.220
O	2.500	4.750
P	3/8-16	5/8-11
Q	0.375	0.750
R	1.688	2.375
S	5/16-18	1/2-13
S1	N/A	5/8-11
T	5.000	7.000
U	3.937	N/A
V	3.750	8.000
W	0.813	3.625
X	0.625	0.750
Y	0.6299	N/A
Z	7/16	N/A
AA	1.500	2.500
BB	3.000	5.000
CC	0.781	1.000
DD	3.625	7.500
EE	5/16	1/2
FF	3.000	6.000
GG	4.547	8.925
HH	6.637	13.075
JJ	8.184	16.000
KK	0.400	N/A
Ship Wt	45	250



DOUBLELOCK[®] VISES



HYDRAULIC

DLH430
DLH640
DLH800

The DLH430, DLH640 and DLH800 hydraulic DoubleLock vises from Kurt offer two clamping stations with a part capacity of 3" x 4" (DLH430), 4" x 6" (DLH640), and 6" x 8" (DLH800). The hydraulic DoubleLock vise provides repeatable clamping for high accuracy machining and handles a higher horsepower cut than the manual version. The compact design features a wide range of clamping forces up to 12,600 lbs.

1/4" stroke – 1/8" per side

- Productivity – multiple part workholding for better spindle utilization, reduced tool change time, and reduced machine travel from part to part.
- Durability – 80,000-PSI ductile iron body and steel components provide strength, rigidity and long term accuracy while absorbing machining vibration.
- 10 year limited warranty.

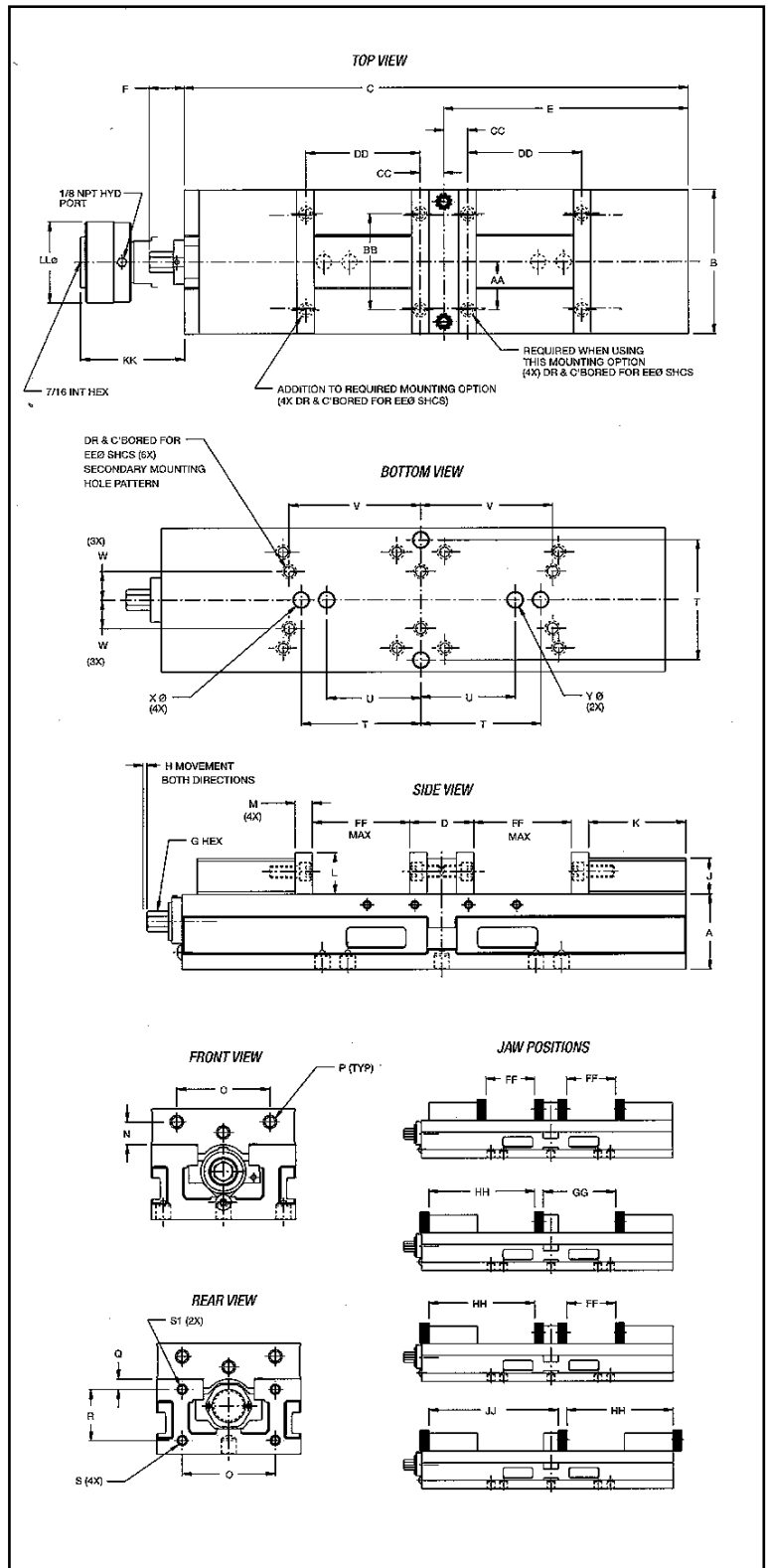
Intensifier, APD50-112, available in either hand (APD50-112-Hand) or foot (APD50-112-Foot) option. Purchase separately for the DLH430 and DLH640 models only. Consult factory for the DLH 800 model.

DOUBLELOCK VISES®

Hydraulic

VISE CLAMPING FORCE - LBS.			
Hydraulic PSI	DLH430	DLH640	DLH800
400	1,310	1,575	1,575
800	2,600	3,150	3,150
1200	3,900	4,725	4,725
1600	5,200	6,300	6,300
2000	6,550	7,875	7,875
2400	7,850	9,450	9,450
2800	9,150	11,025	11,025
3200	10,500	12,600	12,600

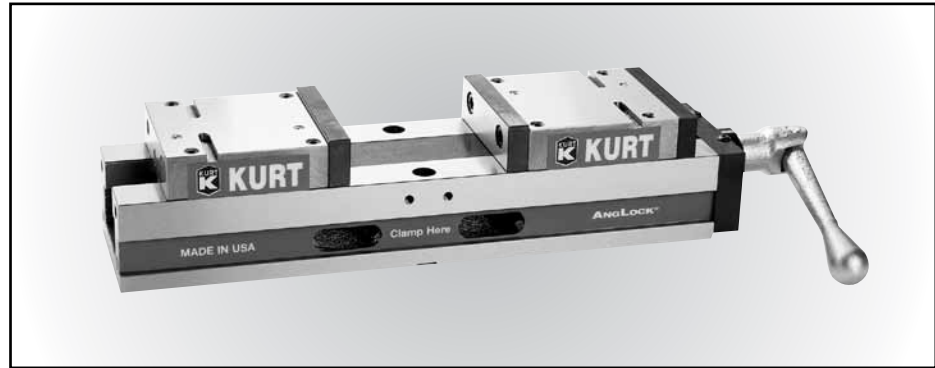
DIMENSIONAL DATA			
	DLH430	DLH640	DLH800
A	2.375	3.125	3.750
B	4.000	6.000	8.060
C	15.812	21.000	30.000
D	2.094	2.690	4.000
E	7.750	10.192	15.000
F	N/A	N/A	N/A
G	N/A	N/A	N/A
H	0.160	0.093	0.190
J	1.115	1.485	1.965
K	3.090	4.060	6.000
L	1.235	1.735	2.200
M	0.547	0.725	1.075
N	0.687	0.940	1.220
O	2.500	3.875	4.750
P	3/8-16	1/2-13	5/8-11
Q	0.375	0.438	0.750
R	1.688	2.125	2.375
S	5/16-18	3/8-16	1/2-13
S1	N/A	N/A	5/8-11
T	3.000	5.000	7.000
U	3.937	3.937	N/A
V	3.750	5.500	8.000
W	0.813	1.188	3.625
X	0.625	0.625	0.750
Y	0.6299	0.6299	N/A
AA	1.500	2.000	2.500
BB	3.000	4.000	5.000
CC	0.781	1.000	1.000
DD	3.625	4.750	7.500
EE	5/16	3/8	1/2
FF	3.000	4.000	6.000
GG	4.547	5.710	8.925
HH	6.637	8.780	13.075
JJ	8.184	10.500	16.000
KK	5.150	5.250	6.240
LL	2.938	3.325	3.375
Ship Wt	50	115	260



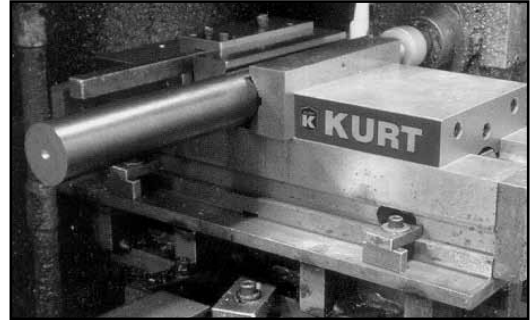
Self-Centering Vise

SCD430
SCD640

Accessories see pages
5-130 through 5-132



Kurt has two Self-Centering vises, a four inch jaw width (SCD430) and a six inch jaw width (SCD640). Jaw opening on the four inch model is 6.25", and 8" on the six inch. Centering accuracy from minimum to maximum opening is .0006" with .0002" repeatability. Both movable jaws are Anglock design with zero lift. With optional V-Jaws, the SCD640 can clamp a 6" diameter and the SCD430 can clamp a 4" diameter. A unique feature is an adjustment that allows the centerline of the jaws to be set. This is especially important when mounting several vises on one machine and all centerlines must match.



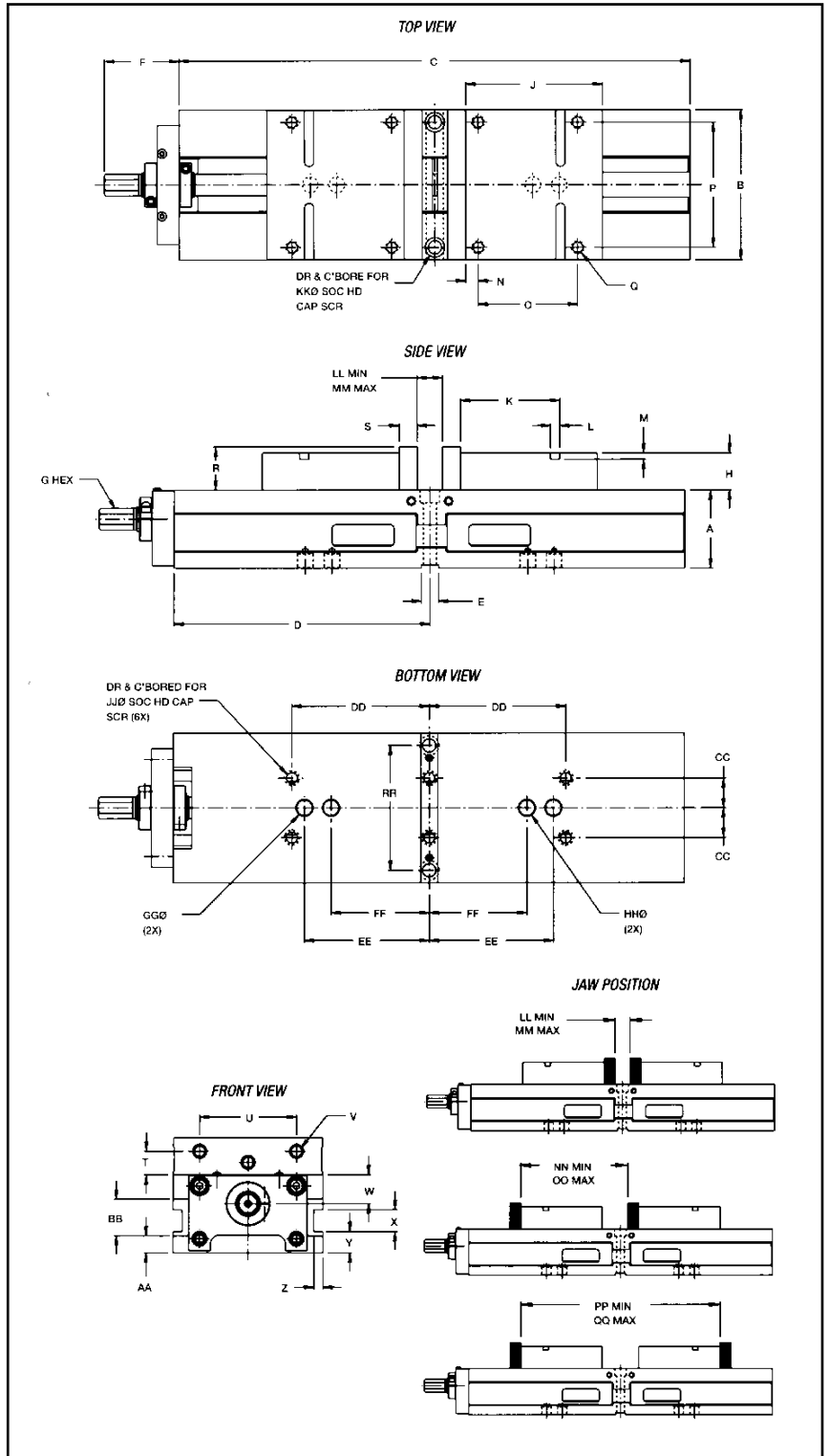
Features:

- Lip seals on main screw.
- Chip guards.
- Hardened jaws.
- Hardened bed ways.
- 80,000-PSI ductile iron construction.
- 10 year limited warranty.

Self-Centering Vises

WISE CLAMPING FORCE-LBS.		
Torque	SCD430	SCD640
10	912	985
20	1,757	1,760
30	2,410	2,576
40	2,935	3,770
50	3,549	4,382
60	4,902	5,764

DIMENSIONAL DATA		
	SCD430	SCD640
A	2.375	3.125
B	4.000	6.000
C	15.000	20.500
D	7.750	10.250
E	0.5005	0.6880
F	2.440	3.000
G	9/16	3/4
H	1.115	1.485
J	4.000	5.500
K	3.000	4.000
L	0.250	0.375
M	0.188	0.250
N	0.312	0.500
O	3.000	4.000
P	3.312	5.000
Q	5/16-18	1/2-13
R	1.235	1.735
S	0.547	0.725
T	0.687	0.940
U	2.500	3.875
V	3/8-16	1/2-13
W	0.871	1.156
X	0.690	0.880
Y	0.700	0.850
Z	0.250	0.360
AA	0.550	0.690
BB	1.000	1.470
CC	0.813	1.188
DD	3.750	5.500
EE	5.000	5.000
FF	3.937	3.937
GG	0.625	0.625
HH	0.630	0.630
JJ	5/16	3/8
KK	3/8	3/8
LL	1.000	1.000
MM	6.250	8.000
NN	5.540	7.240
OO	10.790	14.240
PP	10.090	13.470
QQ	15.340	20.470
RR	3.000	5.000
Ship Wt Lbs	40	100



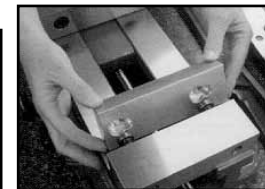
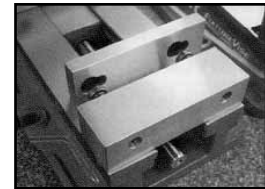
Vise Accessories

INNERLOCK™ & STANDARD VISE JAW PLATES



INNERLOCK Jaw Plates

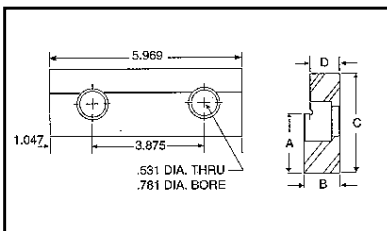
With the InnerLock jaw plates, it takes only 40 seconds to change. By minimizing down-time, the unique reversible feature saves you money on the jaw plates. Each jaw plate can be mounted in two directions, giving you two jaw plates for the price of one. For instance, the plain jaw plate when in the inverted position has a step for holding small parts closer to the spindle. Our small through-hole design allows for greater gripping surface.



Individual Jaws	4" Vise		6" Vise		8" Vise	
	Part #	Ship Wt.	Part #	Ship Wt.	Part #	Ship Wt.
SINGLE STEP	AJ400-32	1 LB.	AJ600-32	2 LBS.	AK800-32	6 LBS.
DOUBLE STEP	AJ400-326	1 LB.	AJ600-326	2 LBS.	AK800-326	5 LBS.
ALUMINUM	AJ400-234	1 LB.	AJ600-234	1 LB.	AK800-234	2 LBS.
SEMI HARD STEEL	AJ400-235	1 LB.	AJ600-235	3 LBS.	AK800-235	7 LBS.
SERRATED	AJ400-47	1 LB.	AJ600-47	2 LBS.	AK800-47	6 LBS.
V JAW HARDENED & GROUND	AJ400-237	2 LBS.	AJ600-237	5 LBS.	AK800-237	10 LBS.
DISPLAY BOARD	AJ400-238	11 LBS.	AJ600-238	11 LBS.	AK800-238	11 LBS.
BOLTS-D (4) PIECES	00-3353		00-3417		00-3481	
BOLTS-PT (4) PIECES	00-3353		00-3417		00-3481	
BOLTS-DL (4) PIECES	00-3348		00-3417			
BOLTS-DL (4) PIECES	00-3353		00-3417			

	Aluminum		Soft Steel			Plain & Step				Double Step				Serrated			V-Jaw						
	W	L	H	W	L	H	W	L	H	STEP	W	L	H	ST1	ST2	W	L	H	W	L	H	SM ø	LG ø
AJ400	0.730	3.969	1.374	0.730	3.969	1.374	0.547	3.969	1.374	0.125	0.547	3.969	1.374	0.250	0.500	0.547	3.969	1.374	1.125	3.969	1.374	0.100	1.500
AJ600	0.980	5.969	1.880	1.125	5.969	1.880	0.725	5.969	1.880	0.188	0.735	5.969	1.880	0.375	0.750	0.725	5.969	1.880	1.880	5.969	1.880	0.125	3.000
AJ800	1.230	7.969	2.440	1.230	7.969	2.440	1.075	7.969	2.440	0.250	1.075	7.969	2.440	0.500	1.000	1.075	7.969	2.440	2.375	7.969	2.440	0.150	4.500

Standard Individual Vise Jaw Plates



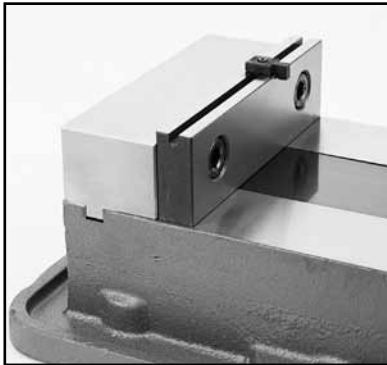
Jaw Type	3" Vise		4" Vise		5" Vise		6" Vise		8" Vise		10" Vise	
	Part #	Wt.	Part #	Wt.	Part #	Wt.	Part #	Wt.	Part #	Wt.	Part #	Wt.
HARDENED	D30-7	1 LB.	D40-7	1 LB.	D50-7	2 LBS.	D60-7	2 LBS.	D80-7	5 LBS.	D100-7	6 LBS.
SOFT	D30-7 SOFT	1 LB.	D40-7-SOFT	1 LB.	D50-7-SOFT	2 LBS.	D60-7-SOFT	2 LBS.	D80-7-SOFT	5 LBS.	D100-7-SOFT	6 LBS.
STEPPED	D30-32	1 LB.	See InnerLock		D50-32	2 LBS.	See InnerLock		See InnerLock		D100-7	6 LBS.
SERRATED	D30-47	1 LB.	See InnerLock		D50-47	2 LBS.	See InnerLock		See InnerLock		D100-47	6 LBS.

Part#	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Description
60-32-1	1.693	.725	1.880	.610	STEPPED JAW
60-236-1	1.505	.725	1.880	.610	STEPPED JAW
60-236-2	1.130	.725	1.880	.610	STEPPED JAW
*60-234-1	NONE	.980	1.880	.980	ALUMINUM
*60-235-1	NONE	1.125	1.880	1.125	STEEL
60-237-1	NONE	1.875	1.635	1.875	V JAW
LP60-32	1.469	.725	1.635	.610	STEPPED JAW
*60-47-1	NONE	.725	1.735	.725	SERRATED JAW
*60-47-2	NONE	.725	1.880	.725	SERRATED JAW

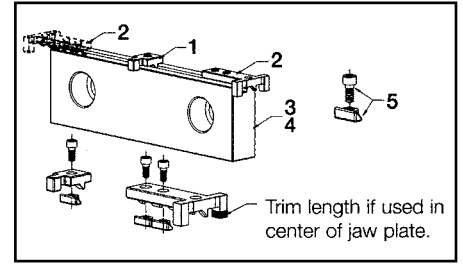
- *60-234-1 is a carve your own pocket jaw plate.
- *60-235-1 is a carve your own pocket jaw plate.
- *60-47-1 Serrations are aggressive, cut to points will mark part
- *60-47-2 Serrations in both directions to .050 flats

Vise Accessories

WORKSTOPS



GROOVE LOCK™

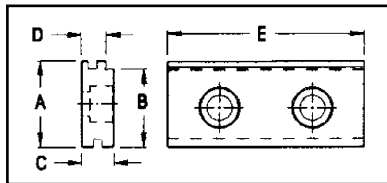


Features:

- Simple, functional, integral workstop system
- Workstop does not interfere with part or spindle.
- Single bolt design for tightening workstop.
- Multiple parts can be located on the same jaw plate.

GROOVE LOCK WORKSTOP		
1	WSRL46	Workstop assembly, suitable to use with 2" thru 6" jaw plates
2	WSRLE46	Extended length workstop assembly, suitable to use with 4" thru 6" jaw on outside. Can be used on right or left end of jaw. Note: To use in center of jaw length, locating ear must be shortened to clear the top of the stationary jaw area.
3	D60-315	6" Groove Lock jaw plate (Not Reversible)
4	D40-315	4" Groove Lock jaw plate (Not Reversible)
5	WSRL46-86-SA	Replacement clamp assembly

GROOVE LOCK Reversible Style Step Jaw Plates



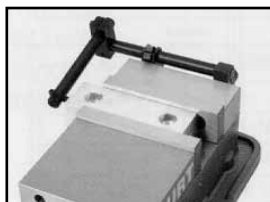
REVERSIBLE STYLE STEP JAW PLATES						
Vise Size	Part #	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Dim "E"
2"	CL2-316	.740	.615	.647	.547	1.950
4"	D40-316	1.374	1.250	.672	.547	3.969
6"	D60-316	1.880	1.700	.735	.547	5.969



360PWS

Versatile, quick mounting workstops will work above jaws when gang mounting vises and space for a workstop does not exist. These Kurt workstops permit fast, accurate positioning and repetitive work. They team up with your AngLock precision vise for accurate parts production.

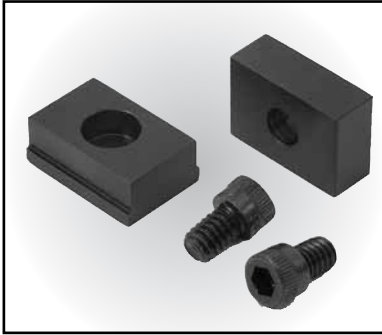
ANGLOCK VISE WORK STOPS	
Part #	Vise Size
D30-45	4" Vises
360PWS	6" Vises
D80WS	8" Vises
D100-45	10" Vises



ANGLOCK® Workstop

Vise Accessories

WISE KEYS



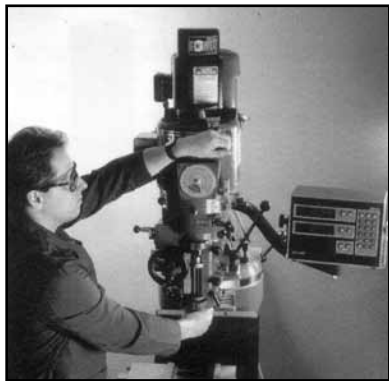
Hardened vise keys are used to align your Kurt vise to your milling machine table. Step keys are used when the keyway in the vise is different than that of the machine T-slot. Standard keys are used when they are the same width.

HARDENED STEP KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vises	1/2 x 5/8	D30-33A
	1/2 x 7/16	D30-33B
	1/2 x 3/8	D30-33C
6" Vises	11/16 x 5/8	D50-33A
	11/16 x 13/16	D50-33B
	11/16 x 3/4	D50-33C
	11/16 x 9/16	D50-33D
8" - 10" Vises	11/16 x 1/2	D50-33E
	13/16 x 7/8	D80-33A
	13/16 x 11/16	D80-33B
	13/16 x 3/4	D80-33C
	13/16 x 5/8	D80-33D

HARDENED STANDARD KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vises	1/2 x 1/2	D30-50
6" Vises	11/16 x 11/16	D50-50
8" - 10" Vises	13/16 x 13/16	D80-50

HARDENED METRIC KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vises	1/2 X 14 MM	D30-33M14
4" Vises	1/2 X 18 MM	D30-33M18
6" Vises	11/16 X 18 MM	D50-33M18
8" - 10" Vises	13/16 X 18 MM	D80-33M18

POWERLOCK™ Drawbar



Automatic and Mechanical Drawbar

PowerLock Drawbar is available for these popular mills:

Atrump, Acer, Acramill, Alliant, Anilam, Bridgeport, Chevalier, Clausing/Kondia, Comet, DoAll, Enco, Euro Source, Exa, Ex-Cell-O, Fortune, Fryer, Hurco, Jet, Kent, Klim, Dondia, Lagun, Lilian, Mega, Mighty, Millport, Milltronic, MSC, Robo Tool, Royal rutland, Seiki, Sharp, Shizouka, Siber-Hegner, South Bend, Southwestern, Supermax, Topwell, Tri-Onics, Webb, Wells-Index, Willis



Automatic and Mechanical PowerLock Drawbars

Available for most manual & CNC mills with standard R-8 collets or 30 or 40 taper tool holders. Automate your present "Knee-Type" milling machines by installing a Kurt PowerLock Drawbar. PowerLock Drawbars reduce tool change time and allow more cutting time in the cycle. This eliminates waste. The whole process using the Kurt automatic or mechanical PowerLock Drawbar cuts the tool change time to one-fourth the time required to change tools manually with wrenches. An added benefit is consistent torque on the drawbar rod. When you multiply the time savings for every tool change on all of your mills, it can really add up.

Feature:

- Easy installation - operator can install with no special tools (instructions provided).
- Reduces operator fatigue - improves productivity and safety.
- Eliminates drawbar tapping to free tool in collet - reduces operator abuse.
- Convenient control - eliminates operator stretching to reach the drawbar.
- Assures uniform collet tightening - prevents under tightening and tool slip or over tightening and drawbar breakage.
- Operates on shop air supply - filter/lubricator, regulator and gauge included with most units. Provides clean oiled air to ensure long life.
- Safety interlock on automatic models prevents accidental engagement.
- Used with present tooling - operates R-8, #30 & #40 taper tool holders. Additional special tool holders not needed.
- Machine your own Drawbar Kits. Available for R-8 collets, #30 or #40 taper tool holders.
- 1 year limited warranty.*

Note: All machines that have Erickson Quick Change Spindle, and are converted to a Power Drawbar will have sharp threads and drive keys exposed near the spindle nose. We recommend the installation of a 194-00 SA Erickson Spindle Nose Guard.



195-050 Drive Key Safety Collar

- For 40 taper machines, eliminates pinching between tool holder and face of spindle.
- Use with V-flange tool holders (not LT-Flange)
- Requires slot thru tool holder flange.



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