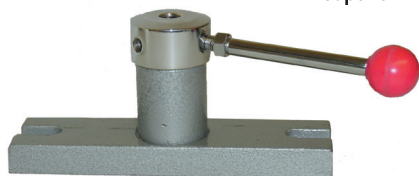


VERTICAL 5-C COLLET VISE
SERIES 344:



Specifications:
Base: 2-1/2" x 7-3/4"
Height: 4"

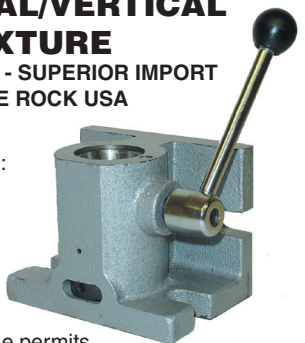
Small movement of lever opens or closes collet.

Order No. 2030000	Price	<input type="text"/>
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CAM OPERATED 5-C HORIZONTAL/VERTICAL COLLET FIXTURE



SERIES 347: MEDA - SUPERIOR IMPORT
SERIES 348: EAGLE ROCK USA



Specifications:
In horizontal position:
Base: 5" x 4"
Height: 3-5/8"

In vertical position:
Base: 5" x 3-5/8"
Height: 4"

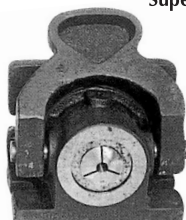
Cam operated spindle permits opening and closing of collet so that setups remain undisturbed.

MEDA - SUPERIOR IMPORT		
Order No. 2045000	Price	<input type="text"/>
EAGLE ROCK USA		
Order No. 3481210	Price	<input type="text"/>

HORIZONTAL / VERTICAL 5-C COLLET FIXTURE
SERIES 343:



Specifications:
Base: 5" x 3-5/8"
Height: 3-3/4"



Collet does not move up or down and retains positive relation to base.

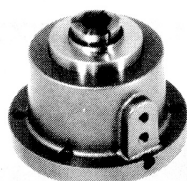
Order No. 3430000	Price	<input type="text"/>
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AIR OPERATED 5-C COLLET FIXTURE
SERIES 348:



Specifications: Base: 5-1/2" Dia.,
Height: 3-1/4"

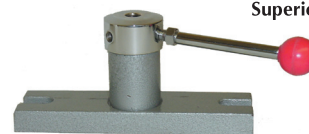
Air operated "double acting" piston provides "power" opening and closing of the collet. Collet is locked into position for positive depth location of the workpiece. Fixture is operated in conjunction with a 4-way valve and can be hooked up for hand operation, foot operation or connected to automatic equipment etc. Standard pipe thread connection for air hoses.



Order No. 2050000	Price	<input type="text"/>
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526

VERTICAL 3-C COLLET VISE
SERIES 344:

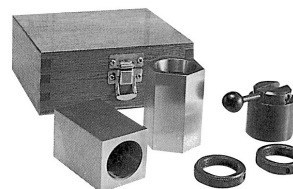


Specifications:
Base: 2-1/8" x 7-3/4"
Height: 3-1/2"

Small movement of lever opens or closes collet.

Order No. 2035000	Price	<input type="text"/>
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5-C HEXAGON AND SQUARE COLLET BLOCKS
SERIES 327:



For fast and easy setups. Made of hardened tool steel precision ground. Accuracy of parallelism, squareness and flatness within ± .0005". Includes drawbar type nut for tightening and releasing. 1/16" through 1-1/8" capacity. Cam operated quick acting closer also available.

Description	Order No.	Price
Hexagon Collet Block	1985005	
Square Collet Blocks	1985010	
Quick Acting Closer	1985015	
Complete Set (Hexagon and Square Blocks with Nuts and Quick Acting Closer).	1985020	

COLLET-MASTER INDEX FIXTURE
SERIES 641:

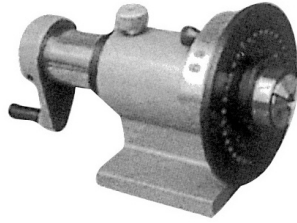


- FEATURES:**
- 48 Index positions.
 - Uses all std. 5-C Collets.
 - Two sealed, preloaded ball bearings in spindle.
 - Hardened and ground base is held square and parallel to spindle w/i 0.0002".
 - Maximum spindle runout is 0.0001".
 - Drawbar and fitted case included.
 - Optional CM-5C-FVB faceplate & v-block available for eccentric forms.

Model No.	Center Height	Overall Height	Indexing Accuracy	Wt.	Order No.	Price
CM-5C	3-5/8"	6-1/2"	±45 Sec.	9	6410047	

Model No.	Faceplate Dia.	V-Block Capacity	Weight	Order No.	Price
CM-5C-FVB	6-1/2"	1-3/8"	15	6410161	

5-C ROTATING INDEXING FIXTURE
SERIES 351:



Specifications:
Overall Length: 9"
Base: 4" x 4"

One degree indexing over 360° using 5-C Collets, makes this tool ideal for grinding, machining, layout, inspection, etc. Hardened and ground spindle is accurate within .0004".

Order No. 2065000	Price	<input type="text"/>
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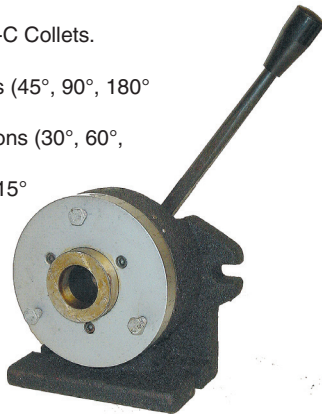
HORIZONTAL / VERTICAL 5-C RAPID INDEX
SERIES 352:



Fast and accurate indexing using 5-C Collets.

Terminal "A" provides 8,4,2 positions (45°, 90°, 180° respectively).
Terminal "B" provides 12, 6, 3 positions (30°, 60°, 120° respectively).
Terminal "C" provides 24 positions (15° each respectively).

Specifications:
Parallelism ±.00078"
Squareness ±.00078"

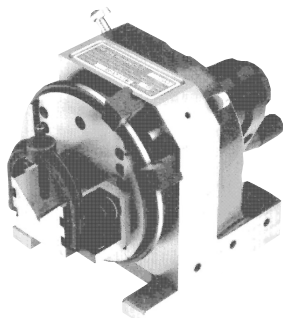


Order No. 2070500	Price	<input type="text"/>
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INDEXING FIXTURES

The Choice Is Yours!!!

MASTER-GRIND WITH "TWIN-DEX"
SERIES 641:



Model No.	V-Block Capacity	Collet Capacity	Through Hole	Center Height	Height	Lgth	Width	Weight lbs.	Order No.	Price
MG5CVS1	1-5/8	ALL 5-C	1-1/4"	3"	6"	4"	5"	22	6410046	<input type="text"/>

5-C COLLET INDEX FIXTURE
SERIES 351:



Features: 3-1/4" center height. Top ground parallel with bottom, back edge parallel with spindle nose. Spindle can be locked in any position without engaging index pin. The internal 5-C taper is hardened and ground. Can be used in vertical position with an angle plate. Supplied with a 24 hole index plate for 2, 3, 4, 6, 8, 12 and 24 divisions or 15° spacing.

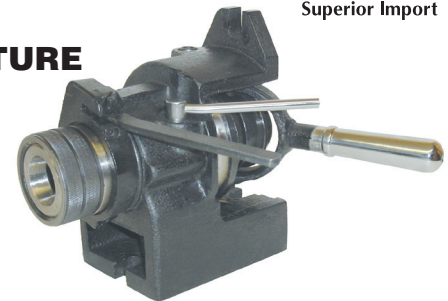


Order No. 2065500	Price	<input type="text"/>
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HORIZONTAL / VERTICAL 5-C COLLET INDEXING FIXTURE
SERIES 352:



Specifications:
Horizontal Base 4" x 8"
Vertical Base 4" x 6"
Vertical Height 8"
Swing 8"
Center Height 4"

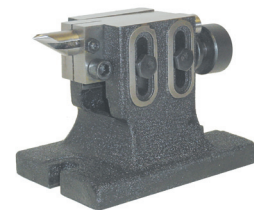


For rapid indexing in both vertical and horizontal positions using 5-C collets. 2-1/4" - 8 threaded spindle nose for use with lathe chucks. Instant opening and closing of collets is accomplished by a lever having a leverage ratio of 100 to 1. Rapid rotation of spindle nose is accomplished through a ratchet device on the front of the spindle. Supplied with a 24 hole index plate for 2, 3, 4, 6, 8, 12 and 24 divisions or 15° spacing. Index plate is supplied with screws for masking holes not in use.

Order No. 2070000	Price	<input type="text"/>
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Screw fed tailstock available.

Order No. 2070001	Price	<input type="text"/>
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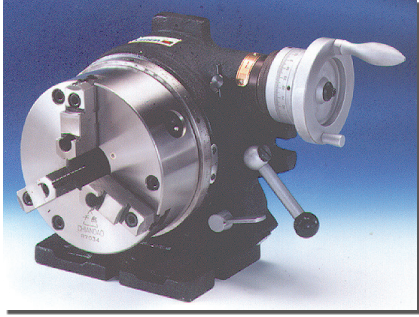
FEATURES:

- "TWIN-DEX"™ Combination 5-C COLLET and V-BLOCK in one fixture
- Horizontal or Vertical V-Block mounting
- 72 position index plate for hard index every five degrees
- Two heavy duty 4" dia. tapered roller bearings in spindle
- Extra large 1-5/8" V-Block capacity
- Built in sine bar for setting angles between hard index locations
- Square and parallel within .0002"
- Spindle runout .00005"
- Sine Set® compatible
- Fitted wooden case included

Accessories available: Motor Drive Kit, Baseplate and Tailstock; please inquire.

HORIZONTAL / VERTICAL 
“SUPER” INDEXING FIXTURES

SERIES 353:



These indexes combine the advantages of the other Series 353 indexes with those of a worm-gear index. They carry out single-purpose indexing and indirect indexing using the worm-drive mechanism as well as “simple” indexing.

- For milling, drilling, jig boring, and many common shop applications.
- 24 Position hardened and ground index plate (15° increments), satin chrome dial, 360° graduated ring and adjustable 10 second vernier.
- Fast and simple indexing of 2, 3, 4, 6, 8, 12 and 24 divisions.

Specifications	Maximum Variation
Parallelism of table surface to base per 12"	.0006"
True running of axial movement of table surface	.0006
True running of center boss	.0004
Squareness of base to angle face per 12"	.0008
True running of chuck center	.0012
Dividing accuracy individual spacing error	0° 45'

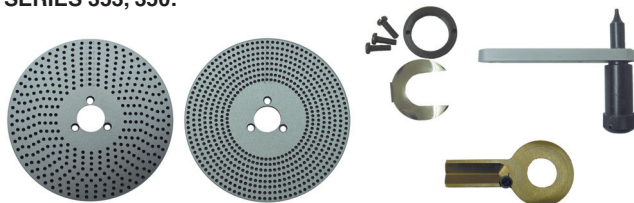
Model No.	Size of Chuck	Description	Weight	Thru* Hole Dia.	Order No.	Price
CS6	6"	Indexing Unit Complete with 3-Jaw chuck, 6 masking plates, & faceplate**	106 lbs.	1-23/32	2075106	
CS8	8"		167 lbs.	2-15/32	2075108	

* Chuck

** CS6 comes with 8" Faceplate, CS8 comes with 10" Faceplate

OPTIONAL ACCESSORIES FOR H/V INDEXING FIXTURES AND H/V ROTARY TABLES (Page 526)

SERIES 353, 350:



Dividing Plates Model No.	For Use With	Order No.	Price
DP1	HVRT6	3500001	
DP2	HVRT8	3500002	
DP3	HVRT10, HVRT12, HVRT14	3500003	
DP4	CS6, CS8	3500004	

HORIZONTAL / VERTICAL 
INDEXING FIXTURES

SERIES 353:

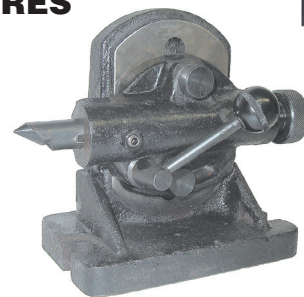


- Designed for milling, drilling, jig boring, and many other shop applications.
- Hardened and ground 24 Position index plate (15° increments).
- 360° satin chrome graduated ring with 5 minute adjustable vernier plate insures accurate readings.
- Fast and simple indexing of 2, 3, 4, 6, 8, 12 and 24 divisions.

Specifications	Maximum Variation
Parallelism of table surface to base per 12"	.0006"
True running of axial movement of table surface	.0006
True running of center boss	.0004
Squareness of base to angle face per 12"	.0008
True running of chuck center	.0012
Dividing accuracy individual spacing error	0° 45'

Model No.	Size of Chuck	Description	Wt.	Thru* Hole Dia.	Order No.	Price
CC6	6"	Indexing Unit complete with 3-Jaw chuck & 6 masking plates.	72 lbs.	1-23/32	2075206	
CC8	8"		110 lbs.	2-15/32	2075208	

*Chuck



Tailstock Model No.	For Use With	Center Height (Low/High)	Order No.	Price
TS1	HVRT4, HVRT6	3.81 / 4.76"	3530001	
TS23	CC6, CC8, CS6, CS8, HVRT8, HVRT10, HVRT12	5.23 / 8.26"	3530003	
TS4	HVRT14, HVRT16	8.26 / 11.81"	3530004	

SUPER SPACERS

SERIES 353:



HORIZONTAL - VERTICAL

H/V Super Spacers are designed for milling, drilling, jig boring and related machining operations. Fixtures are also used to index parts which are being inspected. High accuracy, versatility, a wide range of accessories and long life make this fixture invaluable in the work shop and indispensable in the tool room. They significantly increase productivity by reducing the time required to position the workpiece on the machine. Bison H/V Super Spacers are provided with different lathe chucks.

Type 5842 is furnished with 3-jaw, self-centering, precision lathe chuck with forged steel body, Type 3575.

- a) **Angular indexing:** can be performed through the graduated ring from 0° to 360° in increments of 1°.
 - b) **Direct indexing:** is done by means of a special dividing mechanism. This permits divisions in 2, 3, 4, 6, 8, 12 & 24 without any disassembly operations.
 - c) **Special Indexing:** To obtain divisions not listed above, the manufacturer offers an additional blank dividing plate which can be machined according to user demand.
- All Super Spacers are furnished with a special sleeve with MT & 5C sockets which allows use of additional accessories with MT & 5C shanks like 5C Collets, lathe chucks or face drivers.

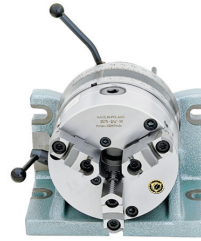
Accuracy:

- Maximum total spacing error..... 0° 2'
- Squareness (base to chuck)0008" max.
- Parallelism over face0008" max.
- Chuck concentricity: 58420015" TIR
5846 and 58490009" TIR
- Center hole concentricity0008" TIR
- Mounting flange concentricity0008" TIR

Chuck Dia.	Thru Hole Dia. d	Wt. lbs.	Type 5842	
			Order No.	Price
6-1/4"	1.653	72	7609006	
8"	2.165	127	7609008	
12-1/2"	4.055	317	7609012	

Standard Accessories:

2 mounting bolts with T-nuts, 2 hex wrenches, 1 chuck wrench, 2 eye bolts and 2 locating keys, sleeve with MT and 5C sockets.



Optional Accessories:



76101 Tailstock



Super Spacer with mounted faceplate

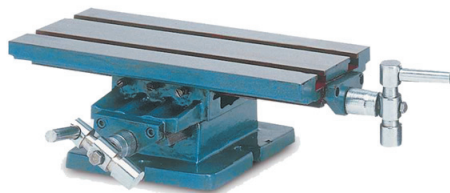


76105 Faceplate

For use with Chuck Dia.	Tailstocks		Faceplates	
	Order No.	Price	Order No.	Price
6-1/4"	7610106		7610506	
8"	7610108		7610508	
12-1/2"	7610112		7610512	

MILLING AND DRILLING (COMPOUND SLIDING) TABLES

SERIES 426:

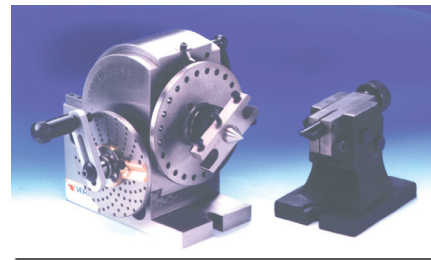


Suitable for all kinds of precision machining operations. Easy to read dials are graduated in .001". Dovetail slides have adjustable steel gibs to compensate for wear. T-slots are 5/8" wide x 7/16" deep.

Order No.	2425077	2425612
Price		
Size	7 x 7" (Rotatable 360°)	5-1/2 x 12"
Height	4-1/8"	4-1/2"
Travel	4" on each axis	8" Longitudinal / 5" Transverse
Base Size	4-5/8" diameter	8 x 9" oval
Mounting	1-1/8" Long Base Bolt	U Slots for up to 5/8" Bolts

DIVIDING HEADS

SERIES 425:



Precision made units for producing accurate indexing and dividing quickly and easily. Headstock swivels from 10° below horizontal to 90° vertical. 24 hole direct indexing plates for numbers 2, 3, 4, 6, 8, 12, and 24. 3 additional dividing plate for indexing all numbers from 2 to 50 and most numbers up to 380. 1 : 40 gear ratio. Hardened and ground spindles are threaded for use with chucks. **Model No. DH2 is a Universal Type Head and is supplied with a full set of gears enabling differential dividing and spiral work.** The following accessories are included with every Dividing Head : Headstock, Adjustable Tailstock, Centers, Dog, Threaded Backplate for mounting lathe chucks, 3 Dividing Plates.

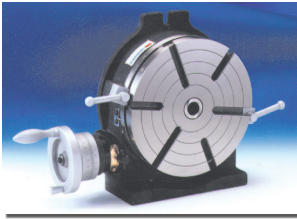
Model No.	Hgt. of Head	Hgt. of Ctr.	Head-stock Taper	Spindle Thread	Weight	Order No.	Price
DH0	6-7/8	4	B&S 7	1-1/2-8	49 lbs.	2420000	
DH1	8-3/4	5-1/8	B&S 9	1-1/2-8	80 lbs.	2420001	
DH2	9-3/8	5-1/4	B&S 10	2-1/4-8	117 lbs.	2420002	

**HORIZONTAL/VERTICAL
ROTARY TABLES**



SERIES 350:

Suitable for use with dividing plates. Precision ground top plate and general careful construction ensure highest accuracy. Table graduated 360°. Worm gear reduction ratio is 1 : 90 and the gear can be quickly disengaged for rapid indexing. One turn of the handle moves the table through 4°. Micro collar is graduated in steps of 1 minute. Vernier scale makes settings down to 10 seconds possible.



Model No.	Dia.	Center Hole	Weight	Order No.	Price
HVRT4	4	MT1	20 lbs.	2061004	
HVRT6	6	MT2	28 lbs.	2061006	
HVRT8	8	MT3	69 lbs.	2061008	
HVRT10	10	MT3	107 lbs.	2061010	
HVRT12	12	MT4	170 lbs.	2061012	
HVRT14	14	MT4	211 lbs.	2061014	
HVRT16	16	MT4	297 lbs.	2061016	

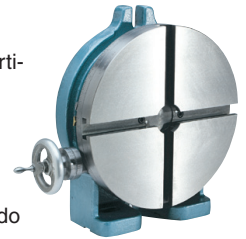
For optional tailstocks & dividing plates see page 528.

**VERTICAL/HORIZONTAL
ROTARY INDEXING TABLES**



SERIES 444:

- 360° index rotation.
- Tables are for use in either the horizontal or vertical position.
- Table top and vertical and horizontal bases ground for overall squareness.
- Keyway and bolt lugs are provided on both mounting surfaces.
- Heavy handles permit smooth movement and do not extend below the base.
- Table top center bore is 1-5/8".
- Graduated dials with thumbscrews for easy "0" setting.



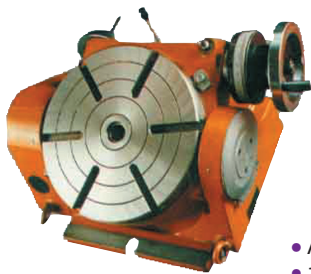
Model 1062

LIFETIME GUARANTEE

Model	Table Dia.	Height at 0°	Base	Gear Ratio	Weight	Order No.	Price
862	8"	3-15/16"	12"x9-1/2"	40:1	44 lbs.	32806	
1062	10"	3-7/8"	12"x9-1/2"	40:1	52 lbs.	34105	

PRECISION TILTING ROTARY TABLES

SERIES 350:



Description	Order No.	Price
10" Tilting Rotary Table	3500010	
12" Tilting Rotary Table	3500012	
Dividing Plates (10", 12")	3500013	
Adjustable Tailstock 10"	3500110	
Adjustable Tailstock 12"	3500112	

Specifications	Maximum Variation (inches/second)
Clamping surface flatness (concave)	.0006"
Cylindrical center bore concentricity	.0008"
Taper center bore concentricity	.0008"
Surface to base parallelism	.0008"
Surface to angle face parallelism	.0004"
Surface to center slot squareness	.0008"

- Accuracy: 45 seconds
- 10 second vernier reading
- Gear ratio 90:1
- Extra deep coolant channel.
- Dual positive action locks
- Low table profile
- Satin chrome dials
- Gear drive immersed in oil
- Optional dividing plates and tailstock

Table Outer Dia.	Table Height	Center Height	Base	Taper Hole	Weight	Order No.
9.81	8.07	5.51	10 x 12	MT-3	172	3500010
12.6	10.04	6.89	13 x 15	MT-4	293	3500012

**CROSS SLIDE
ROTARY TABLES**

SERIES 444:



- Accurately index work on the X and Y axis as well as 360° of rotation.
- Slides have adjustable gibs to maintain accuracy.
- Tops ground to 0.001" total indicator reading.
- Heavy handles permit smooth movement and do not extend below the base.
- 83, 183, 1583 have 5/8" x 1" T-slots.
- 8" and 10" diameter tables have four 1/2" bolt lugs and 5/8" keyways.
- 15" tables have 5/8" bolt lugs and 11/16" keyways.
- Graduated dials with thumbscrews for easy "0" setting.



Model 83

LIFETIME GUARANTEE

Model	Table Dia.	Ht.	Table Trvl. (X x Y)	Base (L x W)	Gear Ratio	Net Wt.	Order No.	Price
83	8"	5-1/2"	4"x4"	6-5/8"x7-5/8"	40:1	40 lbs.	32803	
183	10"	5-5/8"	4"x4"	6-3/8"x7-5/8"	40:1	52 lbs.	34102	

**TILTING CROSS SLIDE
ROTARY TABLES**

SERIES 444:



- Accurately index work on the X and Y axis as well as 360° of rotation.
- Tilt is from 0° to 90°; Angle is held by four screws in two sturdy side plates.
- Heavy handles permit smooth movement and do not extend below the base.
- T-slots are 5/8" x 1".
- Table tops are precision ground flat to within 0.001".
- Center bore is 1-5/8" diameter.
- Bolt lugs are 1/2" and base keyways are 5/8".
- Slides have adjustable gibs to maintain accuracy.
- Gear Ratio 40:1



Model 84

LIFETIME GUARANTEE

Model	Table Dia.	Height at 0°	Table Trvl. (X x Y)	Base (L x W)	Net Weight	Order No.	Price
84	8"	5"	4"x4"	5"x9"	45 lbs.	32804	
184	10"	5-3/4"	4"x4"	5"x9"	54 lbs.	34103	