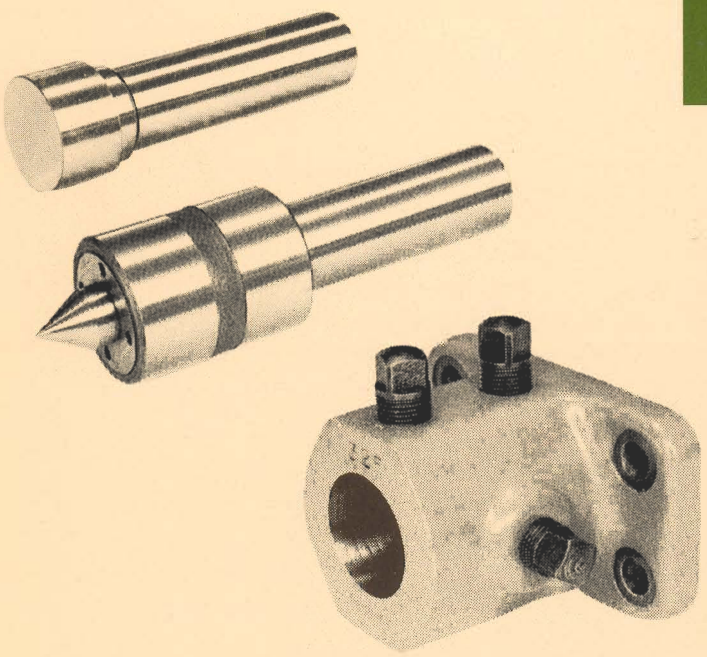
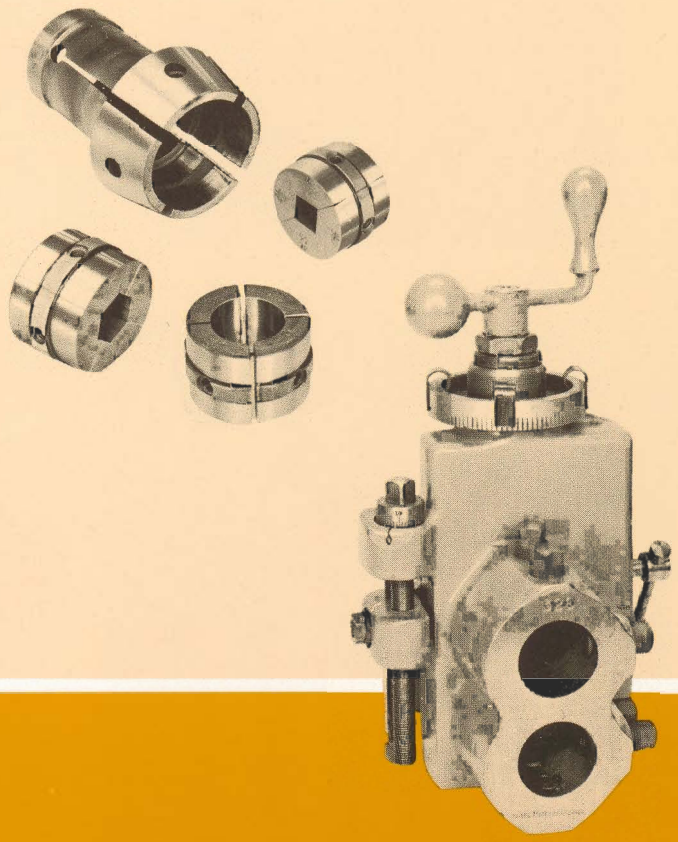


BARDONS & OLIVER



TURRET LATHE TOOLS

BARDONS & OLIVER, INC.

EFFICIENT TOOLING OF A TURRET LATHE

is of vital importance in the realization of the inherent possibilities for increased production and lower cost.

Many new and outstanding features have been incorporated. The tool bodies are of steel, alloy malleable iron or other high tensile strength material. Cutter holder shanks and boring bars are hardened and ground.

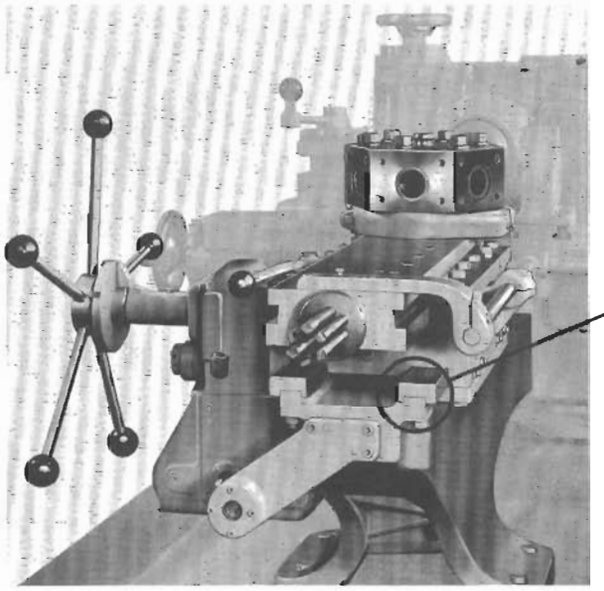
The versatility of this comprehensive line of tools enhances the efficiency of a turret lathe, on small as well as large lot production on both bar and chucking work. The selection of the most efficient tooling for a job is of great importance and should be given careful consideration.

How to Order

A. Determine the size machine tool is to be used on.

B. Order tool by "number".

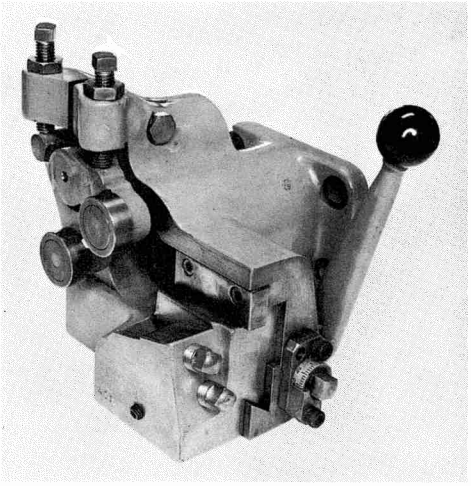
C. Furnish the serial number of your Bardons & Oliver machine.



SERIAL NUMBER LOCATION

BARDONS & OLIVER, INC.
1133 West 9th Street
Cleveland, Ohio 44113
Phone: (216) 621-0195
Telex 98-0660

INDEX



Single Cutter Turner

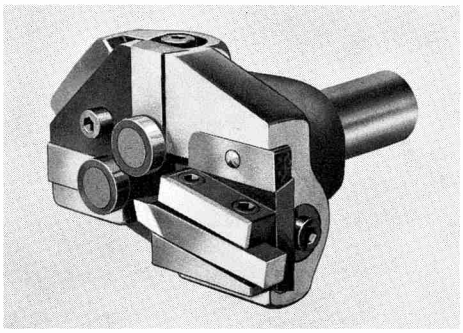
WITH TOOL RELIEF

Size and finish are maintained piece to piece by the inherent rigidity of the roller turner tool.

The roller turner is especially suited for long cuts where the piece extends a good distance from the collet.

The needle bearing roll assemblies are supported by adjustable arms that support the work opposite the cutter. Arms may be adjusted longitudinally and positioned ahead or behind the cutter. A micrometer type dial allows fine adjustment of the cutting tool.

The cutter is held in a tool slide and may be relieved by the lever. This prevents marking the work upon withdrawal of the cutter.

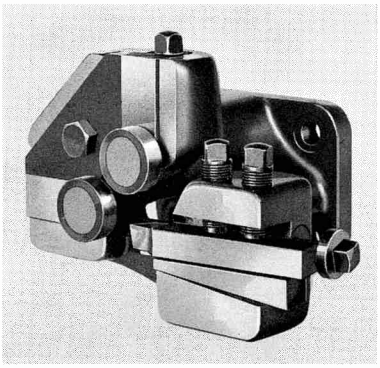


WITHOUT TOOL RELIEF

Rigidity under heavy load coupled with ease of adjustment for size of work are features embodied in this tool. The cutter is held in a slide, the quick setting of which is facilitated by a fine pitch screw. Rollers mounted on slides, clamped to the tool body, support the work.

These tools are designed for smaller sizes of stock. They are of the shank type and may be readily adapted to turning small diameters in the larger turret lathes.

	With Tool Relief				No Relief
Machine No.	2	3	4 & 5	6 & 7	2
Tool No.	201	301	501	701	2201
Shank Diameter	—	—	—	—	1-1/4
Maximum Capacity	1-1/8 x 5-1/2	1-7/8 x 5-1/2	2-3/8 x 6-3/4	3 x 6-1/2	1 x 3-1/2
Min. Diam. Turned	5/16	5/16	1/2	1/2	1/4
Clearance Hole	1	1-1/2	1-3/4	1-15/16	5/8
Size Cutter	3/4 x 3/4	3/4 x 3/4	1 x 1	1 x 1	1/2 x 1/2

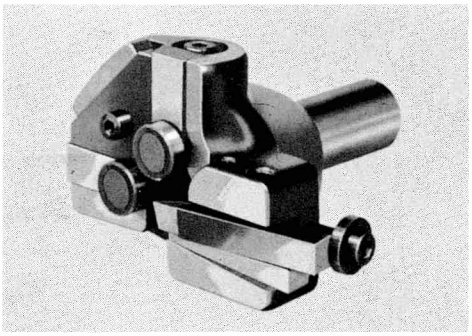


Single Cutter Turner and End Facing Tool

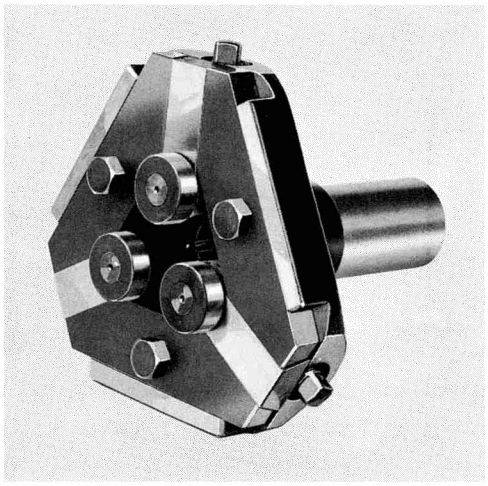
Simple turning as well as end facing and forming cuts can be taken to advantage. The cutter is rigidly held in place by two set screws and mounted on a taper wedge to obtain the correct height. It is backed by an adjusting screw to aid in obtaining the correct radial position.

Two rollers on adjustable slides support the work. These are clamped directly to the rigid tool body.

The smallest size is of the shank type and can readily be adapted for use with the larger machines.



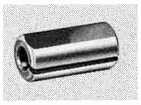
Machine No.	2	3	4 & 5	6 & 7
Tool No.	203	303	503	703
Shank Diameter	1-1/4	—	—	—
Maximum Capacity	1 x 2-3/4	1-1/2 x 3-1/2	2 x 4	2-1/2 x 4-1/4
Min. Diam. Turned	3/16	1/4	5/16	3/8
Size Cutter	1/2 x 1/2	5/8 x 5/8	3/4 x 3/4	3/4 x 3/4



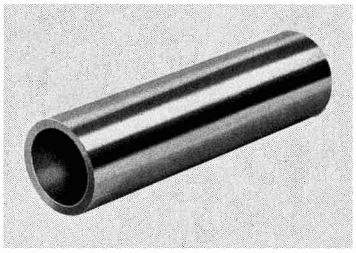
Center Drilling Tool and Tool Bushing

For the operation of center drilling, the work is accurately located and supported by three adjustable roller slides clamped to the tool body. The center drill is held in a small removable tool bushing, that is included.

This tool will also serve as an excellent steady rest in connection with cross slide operations.



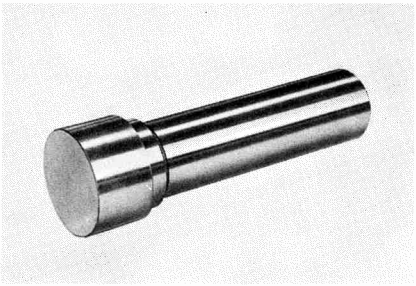
Machine No.	2	3	4 & 5	6 & 7
Tool No.—Complete	205	305	505	705
Tool No.—Bushing	205-A	305-A	505-A	705-A
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Maximum Capacity	1	1-1/2	2	2-1/2
Bushing Diameter	5/8	3/4	1	1
Bushing Length	1-1/4	1-1/2	2	2



Stop Gauge and Centering Plug

The flat end provides a stop for many types of work held in the collet. The cupped or centering plug end is used for centering or supporting light bars or castings.

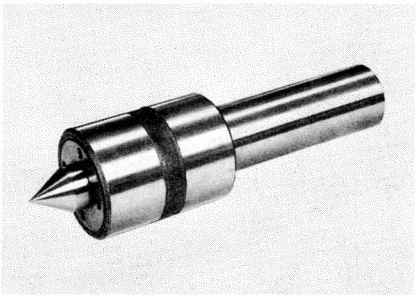
Machine No.	2	3	4 & 5	6 & 7
Tool No.	206	306	506	706
Diameter	1-1/4	1-1/2	1-3/4	2
Length	4-1/2	6	7	8



Revolving Bar Stop

Bars can be fed through a collet to the Revolving Stop while the spindle is rotating, thereby, reducing machine handling. The ball bearing head cannot gall or score while the bar is rotating.

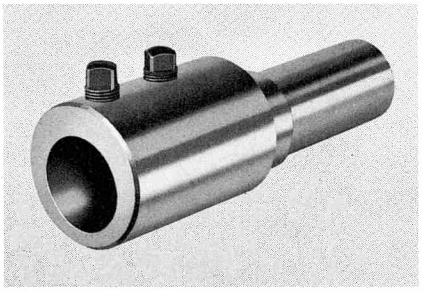
Machine No.	2	3	4 & 5	6 & 7
Tool No.	206A	306A	506A	706A
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Stop Diameter	1-5/8	2	2-3/16	2-3/16
Overall Length	6-3/8	6-3/4	7	8



Ball Bearing Center

Rigid work support at high speeds while taking cuts from the cross slide is afforded. Two preloaded and grease packed ball bearings lend rigidity to the hardened and ground alloy steel live center.

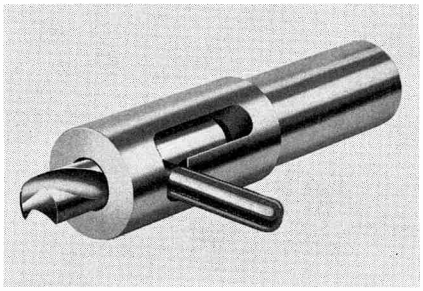
Machine No.	3	4 & 5	6 & 7
Tool No.	307-B	507-B	707-B
Shank Diameter	1-1/2	1-3/4	2



Floating Reamer Holder

A small amount of float or free movement of the tool body is permitted. This allows the reamer to center itself in the drilled or bored hole, thus improving the accuracy and finish. Split bushings are used with straight shank reamers and drill sockets with taper shank reamers.

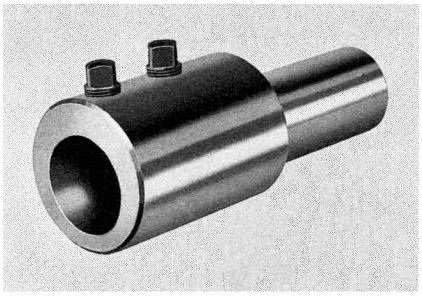
Machine No.	2	3	4 & 5	6 & 7
Tool No.	210	310	510	710
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Hole Diameter	1-1/4	1-1/2	1-3/4	2
Hole Depth	2	2-3/8	3-1/8	3-3/8



Combination Stock Stop and Starting Drill

One turret station serves the purpose of two with this dual purpose tool. This means a saving in indexing time. It is of special value when all other turret faces have tools mounted on them. The drill may be moved back until the point comes below the surface of the stock stop face.

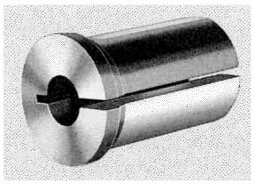
Machine No.	2	3	4 & 5	6 & 7
Tool No.	211	311	511	711
Stop Diameter	1-1/4	1-1/2	1-3/4	2
Drill Diameter	1/2	3/4	3/4	3/4
Length of Stop	4-5/8	7-1/2	8	9



Plain Tool Holder

An extension for bringing drills, counterbores, or reamers closer to the work or for lining them up with other turret tools. A variety of bushings or adapters may be used.

Machine No.	2	3	4 & 5	6 & 7
Tool No.	212	312	512	712
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Hole Diameter	1-1/4	1-1/2	1-3/4	2
Hole Depth	2	2-3/8	3-1/8	3-3/8

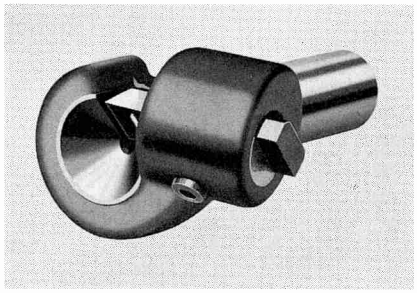


Tool Holder Bushings

The bushings adapt various tools and cutters to the hole in turret or to certain tool holders.

The split bushing has a straight round hole, the size of which must be specified when ordering.

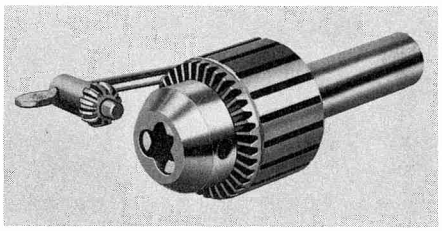
Mach. No.	Split		Diam.	Length
	Tool No.	Max. Hole		
2	212-A	1	1-1/4	2-1/8
3	312-A	1-1/4	1-1/2	3
4 & 5	512-A	1-1/2	1-3/4	3
6 & 7	712-A	1-3/4	2	3



Chamfering Tool

Chamfering the ends of bars to assure a true start when using single or multiple turners is the purpose. A hardened steel bell-mouthed bushing supports the end of the bar during the cut.

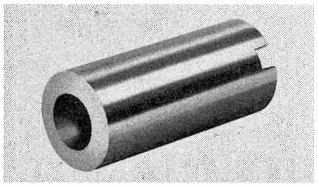
Machine No.	2	3	4 & 5	6 & 7
Tool No.	213	313	513	713
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Maximum Capacity	1-1/4	1-3/4	2-1/8	2-1/2
Size Cutter	3/8 x 7/8	9/16 x 1-1/8	5/8 x 1-3/8	5/8 x 1-1/2



Drill Chuck

This is convenient for holding drills and various other tools and cutters having straight shanks.

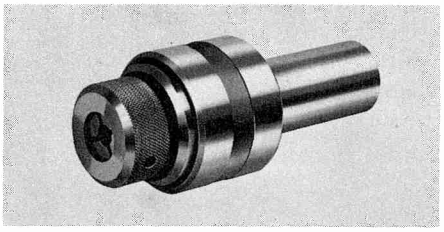
Machine No.	2	3	4 & 5	6 & 7
Tool No.	214	314	514	714
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Chuck Capacity	1/2	3/4	3/4	3/4

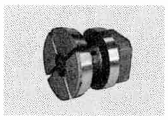


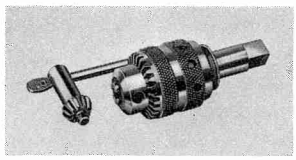
Drill Socket

These are made to fit directly in the turret holes and in the various tool holders. The number of Morse taper desired must be specified when ordering.

Machine No.	2	3	4 & 5	6 & 7
Tool No.	215	315	515	715
Diameter	1-1/4	1-1/2	1-3/4	2
Morse Taper Nos.	1-2-3	1-2-3-4	1-2-3-4-5	1-2-3-4-5







Releasing Tap Holder, Tap Collet and Tap Chuck

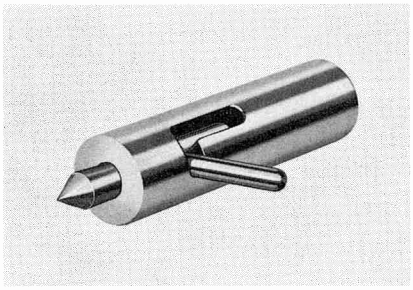
A positive drive, a sensitive release for either right or left hand tapping, and sufficient float to align the tap with the hole, these are the outstanding features of this tap holder. The tap is held in a split collet with the square on the shank fitting a square hole.

Small size taps are held in a positive drive tap chuck. The front jaws center the tap by the shank and the back jaws drive from the square. The chuck shank is similar to that of a ¾ inch tap.

One collet is included with the tap holder. Unless otherwise specified the ¾ inch tap collet will be furnished.

Releasing Tap Holder			Tap Collets												Tap Chuck	
Tool No.	Machine No.	Shank Dia.	Tool No.	Tap Sizes Available											Tool No.	Tap Capacity
216	2	1-1/4	216-A	5/16	3/8*	7/16	1/2	9/16	5/8	11/16	3/4				216-B‡	0—1/4
316	3	1-1/2	316-A	5/16	3/8*	7/16	1/2	9/16	5/8	11/16	3/4	7/8	1		316-B‡	0—1/4
516	4 & 5	1-3/4	516-A†	1/2	9/16	5/8	11/16	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	516-B§	#10—1/2
716	6 & 7	2	716-A†	1/2	9/16	5/8	11/16	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	716-B§	#10—1/2

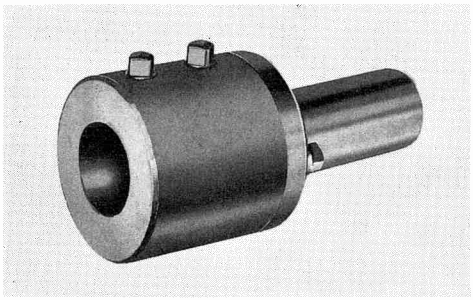
*Available for .275 or .381 Dia. Shank. † ‡ § Interchangeable.



Combination Stock Stop and Center

One turret station serves the purpose of two with this dual purpose tool. Indexing time is saved. It is of special value when all other turret faces have tools mounted on them. The center recedes until the point comes below the stock stop face.

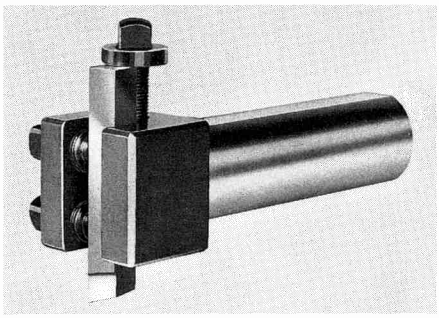
Machine No.	2	3	4 & 5	6 & 7
Tool No.	217	317	517	717
Stop Diameter	1-1/4	1-1/2	1-3/4	2
Center Diameter	1/2	3/4	3/4	3/4
Length of Stop	4-5/8	7-1/2	8	9



Adjustable Tool Holder

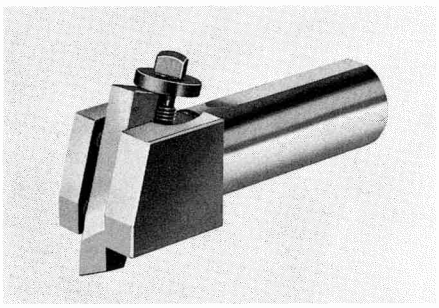
Reamers and other tools that must be accurately aligned to the work may be held. The front section, carrying the tool, may be adjusted to the desired position and clamped in place. Bushings and drill sockets fit the hole.

Machine No.	3	4 & 5	6 & 7
Tool No.	318	518	718
Shank Diameter	1-1/2	1-3/4	2
Hole Diameter	1-1/2	1-3/4	2
Hole Depth	1-1/4	1-1/2	1-3/4



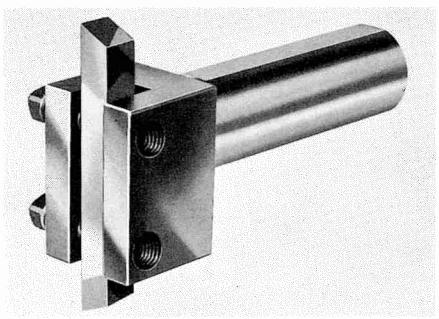
Straight Cutter Holder

This is used for taking heavy turning and boring cuts by the various turning heads. The cutter is backed up by an adjusting screw for quickly changing the setting and held in place by set screws.



Angle Cutter Holder

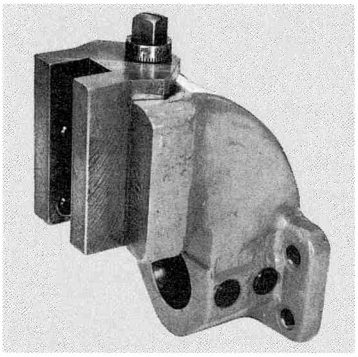
Excellent for taking heavy turning and boring cuts close to shoulders by the various turning heads. The cutter is backed up by an adjusting screw for quickly changing the setting and secured by set screws.



Reversible Cutter Holder

For taking heavy turning or boring cuts. Flat cutters may be used for slabbing cuts. Different cutter angles are obtainable to suit the work. The head is offset to reduce cutter overhang and may be mounted in either direction.

Machine No.	Straight		Angle		Reversible		Shank Dia.
	Tool No.	Size Cutter	Tool No.	Size Cutter	Tool No.	Size Cutter	All Holders
4 & 5	521-A	3/4 P&J	521-B	3/4 P&J	521-J	3/4 x 3/4	1-3/4
6 & 7	721-A	3/4 P&J	721-B	3/4 P&J	721-J	3/4 x 3/4	2

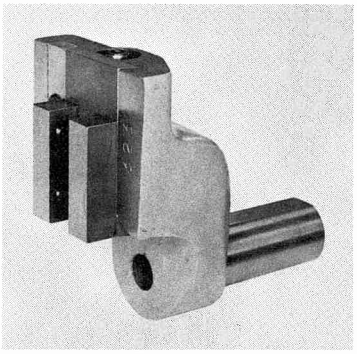


Single Turning Head

A knee type flange mounted tool with a hole to accept drills or other cutting tools.

A micrometer type dial allows fine adjustment of the cutting tool.

Machine No.	3
Tool No.	372R
Maximum Capacity	4
Diameter Hole	1-1/2
Size Cutter	3/4 x 3/4



KNEE TYPE

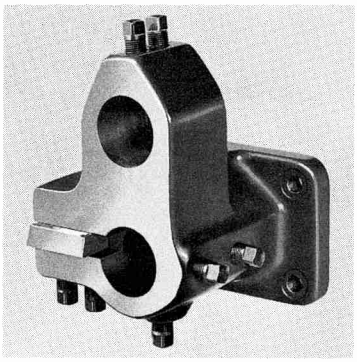
Single Turning Head

A large variety of small chucking work can be handled efficiently. Smaller tools are of the knee type and large ones of the cutter holder type.

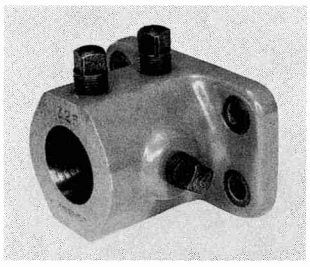
With the knee type, a single diameter is turned by a cutter held in a slide equipped with a fine pitch screw for adjustment. These have shanks and are mounted in the turret holes.

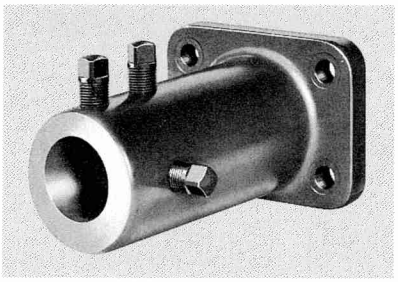
The cutter holder type may be used for taking two cuts simultaneously with drills, counterbores, or boring bars held in the center hole. Cutter holders of several styles fit in the other hole. A slot for flat cutters is provided.

Machine No.	2	3	4 & 5	6 & 7
Tool No.	223	323	523	723
Type	KNEE	KNEE	HOLD.	HOLD.
Shank Diameter	1-1/4	1-1/2	—	—
Maximum Capacity	2	4	4-1/4	4-3/4
Diam. Hole(s)	5/8	3/4	1-3/4	2
Size Cutter	1/2 x 1/2	5/8 x 5/8	1/2 TH.	5/8 TH.



CUTTER HOLDER TYPE



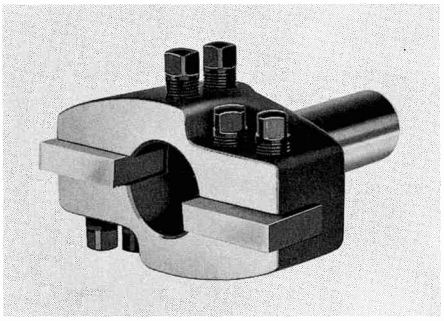


Flanged Tool Holder

The need for an extension holder to support the tool closer to the work frequently arises. Flanged tool holders fill this need. They are available in two lengths for each size, to better suit the requirements of differing conditions.

The holder bolts to the turret face, with a short pilot fitting the turret hole counterbore. Tools and cutters are held direct or with drill sockets, bushings, or adapters.

Mach. No.	Short Tool		Long Tool		Hole Dia. Both Holders
	Tool No.	Overall Length	Tool No.	Overall Length	
2	225	2-3/4	2225	4-3/4	1-1/4
3	325	3	3325	5-3/4	1-1/2
4 & 5	525	3-1/2	5525	6-3/4	1-3/4
6 & 7	725	4	7725	7-1/4	2

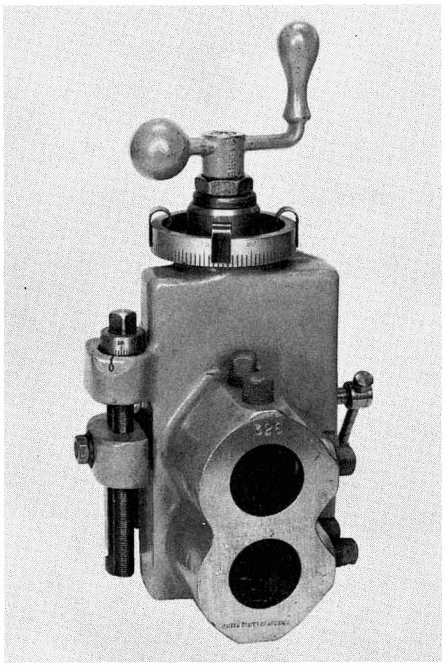


Facing Tool

Balanced facing and forming cuts can be taken to advantage with flat cutters placed on opposite sides. The center hole will hold tools direct, drill sockets, bushings, or adapters.

This tool may be used instead of special facing or forming heads. The entire tool, including cutters, may be removed and kept intact.

Machine No.	3	4 & 5	6 & 7
Tool No.	327	527	727
Shank Diameter	1-1/2	1-3/4	2
Width of Head	5-1/4	5-5/8	5-5/8
Hole Diameter	1-1/2	1-3/4	2
Cutter Thickness	3/8	1/2	1/2



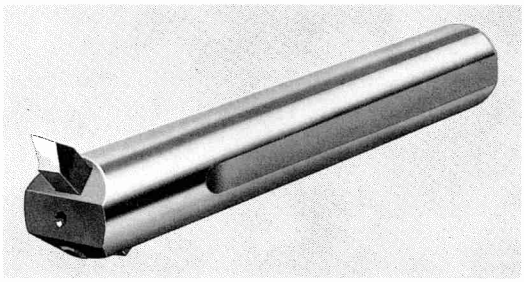
Vertical Slide Tool

For small and medium lot production this tool is a great time saver, and is also valuable on large runs of work. It is used for boring, internal necking, recessing and facing.

Quick and accurate setting of size is facilitated by the large micrometer dial equipped with observation clips. The two holes, for adequate reach and capacity, will receive stub boring bars, cutter holders, bushings, or adapters.

The slide may be clamped at any desired position—excellent for small lot boring when using a standard stub boring bar.

Machine No.	2	3	4 & 5	6 & 7
Tool No.	228	328	528	728
Diameter of Holes	1-1/4	1-1/2	1-3/4	2
Depth of Holes	2	2-3/4	3-1/4	4-1/8
Hole Spacing	1-5/8	2	2-1/2	2-3/4
Slide Movement	2-1/4	2-3/4	3-1/4	4-1/2

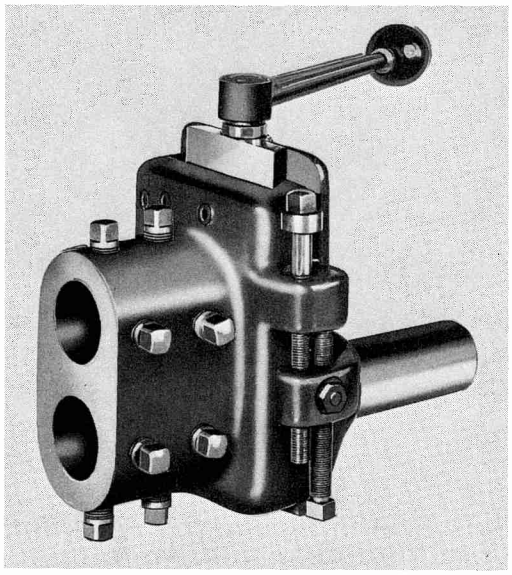


Stub Boring Bar

The standard stub boring bar is a very useful general purpose tool. It may be held either directly in the turret or in any of a number of turret tools. Small bars may be used in large machines with split bushings or in connection with the boring bar sleeve.

The square cutter is mounted at an angle with the bar to facilitate boring up to a shoulder or in a blind hole. The bar is hardened and ground.

Tool No.	0032	032	132	232	332	532	732
Diameter	1/2	3/4	1	1-1/4	1-1/2	1-3/4	2
Length	6	7	8	9	10	11	11
Size Cutter	3/16 x 3/16	5/16 x 5/16	3/8 x 3/8	3/8 x 3/8	1/2 x 1/2	1/2 x 1/2	5/8 x 5/8

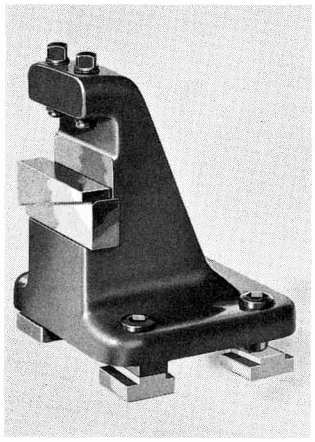


Quick-Acting Slide Tool

Back facing, internal necking and recessing operations are performed with accuracy and ease. Standard stub boring bars, forged cutters or special facing bars can be readily adapted.

The convenient hand lever lends to the tool slide a correct feeding rate and a quick return. An accurately adjustable screw stop at each and of the stroke predetermines size and facilitates ease of handling.

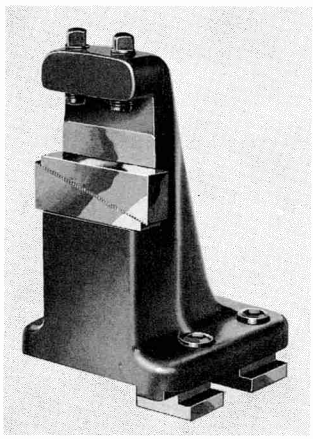
Machine No.	2	3	4 & 5	6 & 7
Tool No.	236	336	536	736
Shank Diameter	1-1/4	1-1/2	1-3/4	2
Diameter of Holes	1-1/4	1-1/4	1-3/4	1-3/4
Depth of Holes	2	2	3-1/4	3-1/4
Hole Spacing	1-5/8	1-5/8	2-1/2	2-1/2
Slide Movement	1-3/4	1-3/4	2-3/4	2-3/4



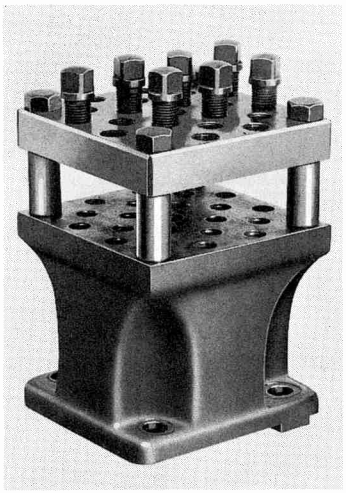
Front and Rear Cross Slide Tool Posts

These are primarily used for facing and cutting off; however, they serve equally well for turning and forming. All tool posts are made of high grade alloy malleable iron. Bases are wide and there is more than ample strength throughout to provide the maximum rigidity necessary for the heaviest cuts.

In case of the No. 1 and No. 2 tool posts, the cutter is mounted on a single taper wedge backed up by an adjusting nut. This provides a simple means of setting the cutter to correct height. On the larger size tool posts, the cutter rests on two serrated taper wedges providing height adjustment. Cutters are clamped in place by two set screws. The rear tool posts may be placed in different cross slide slots, and in different positions on that slot. Varying conditions thus can be accommodated.



Machine No.	Tool No. Single Cutter Tool Post		Size Cutter
	Front	Rear	
2	246	241	1/2 x 1/2
3	346	341	1/2 x 1
4 & 5	546	541	5/8 x 1-1/4
6 & 7	746	741	5/8 x 1-1/4

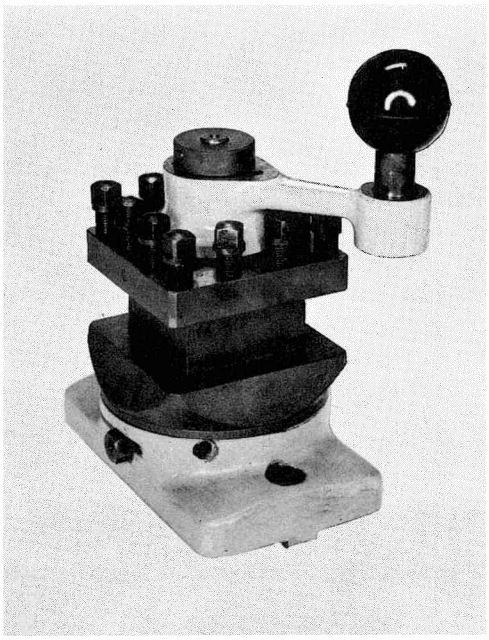


Rear Cross Slide Cutter Block

Extremely flexible and versatile in their use, this block is a real time saver for a large variety of work. Multiple facing and forming cuts can be taken. Limits between the machined faces are held without individual carriage stops.

Cutters of all shapes can be used and mounted at any angle with the work. Because of this, two or more closely adjacent faces can be machined at one time. The top plate is held down by tie screws and spacers. They can be placed in any available position, allowing use of the full width of the tool.

Machine No.	2	3	4 & 5	6 & 7
Tool No.—Rear Block	242	342	542	742
Width of Block on Top	4-1/4	4-1/4	5-3/8	6
Height of Cutter	1/2	1	1-1/4	1-1/4



Square Turret

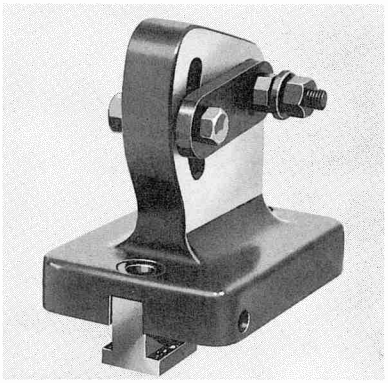
Four cutters can be held in the square turret and each cutter indexed to the cutting position in sequence, according to the job requirements.

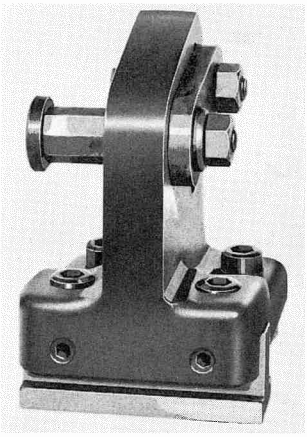
The turret is indexed and clamped accurately by a single lever. A taper lock bolt and bushing accurately locate the turret in each position.

All square turrets have flat seats suitable for either carbide or high speed steel cutting tools.

Square turrets should be ordered by machine size.

Machine No.	2	3	4 & 5	6 & 7
Width	4	4	5	5-3/4
Cutter Height	3-3/8	3-7/8	4-5/8	5-1/2
Size Cutter	1/2 x 1/2	1/2 x 1	5/8 x 1-1/4	5/8 x 1-1/4

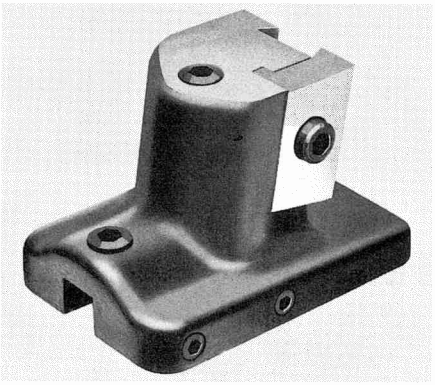


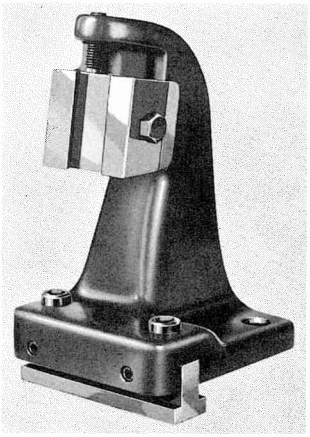


Front and Rear Circular Forming Cutter Holders

The cutter used with these tools has an octagonal through hole and bears on the cutter stud for the entire length. By means of a swinging arm the cutter edge is quickly adjusted and slippage during heavy cuts is prevented. Both the arm and cutter can be clamped to either side of the holder. There is a lateral adjustment provided in the wide base of these tools.

Machine No.	2	3	4 & 5	6 & 7
Tool No.—Front Tool	248	348	548	748
Tool No.—Rear Tool	244	344	544	744
Max. Diameter Cutter	3	3-1/2	4-1/2	4-1/2
Max. Width Cutter	1-1/8	1-1/4	1-3/4	1-3/4

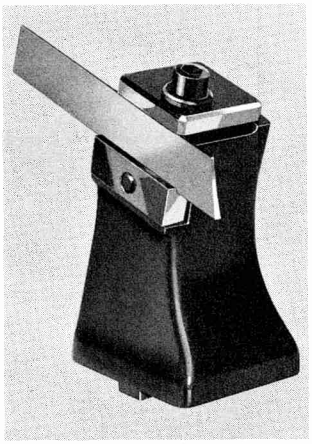




Front and Rear Straight Forming Cutter Holders

Wide cutters can easily take heavy cuts with these rigid holders. A strap and bolt on one side hold the dovetail cutter firmly, while a backing screw supports and adjusts it to the correct height. There is no slippage under heaviest cuts. Lateral adjustment is provided in the wide base.

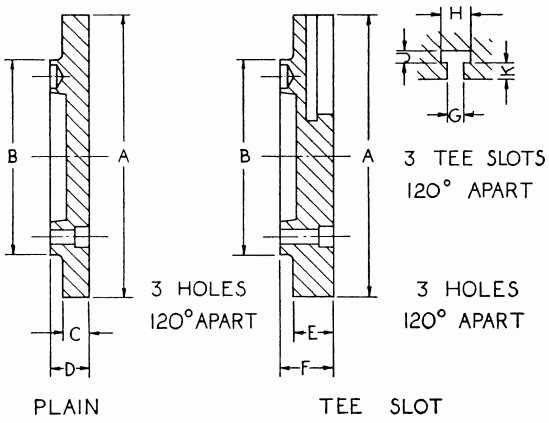
Machine No.	2	3	4 & 5	6 & 7
Tool No.—Front Tool	249	349	549	749
Tool No.—Rear Tool	245	345	545	745
Width of Dovetail	1-1/4	1-1/2	1-1/2	1-3/4
Depth of Dovetail	3/8	3/8	3/8	3/8
Max. Length Cutter	2-3/4	3	3-1/2	3-3/4



Cutting-Off Blade Holder

This very useful tool is made to mount on the rear of the cross slide. It takes standard size high speed steel beveled cutting-off blades. As the cutter becomes dull, the end only needs grinding. The design of this tool permits cutting off very close to the chuck.

Machine No.	2	3	4 & 5	6 & 7
Tool No.	250	350	550	750
Size Blade	1/8 x 7/8	1/8 x 1	3/16 x 1-1/4	3/16 x 1-1/4

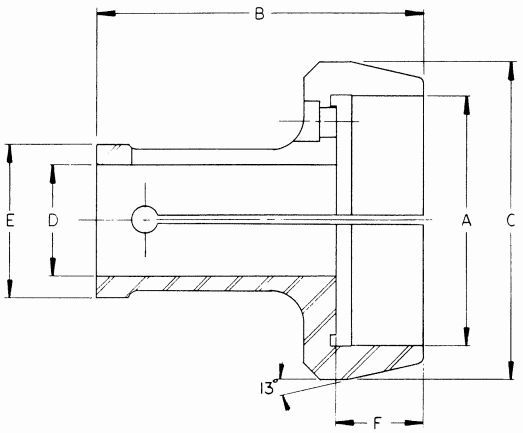


Face Plates

Face plates are made in two styles, the plain type and the tee slot type. The plain type provides a flat surface suitable for mounting special fixtures, while the tee slot face plate has the added advantage of three tee slots for handling odd-shaped pieces not suited to a chuck.

All face plates are made of high tensile strength alloy cast iron. They mount directly on the American Standard Flanged Spindles.

Machine No.	Spindle Nose	Plain				Tee Slot							
		A	B	C	D	A	B	E	F	G	H	J	K
2	5 In.	8	5-1/4	5/8	1-1/8								
3	6 In.	10	6-1/2	7/8	1-3/8	10	6-1/2	1-1/2	2	9/16	15/16	3/8	5/8
4 & 5	8 In.	12	8-1/4	1-1/8	1-5/8	12	8-1/4	1-11/16	2-1/4	11/16	1-7/32	15/32	11/16
6 & 7	8 In.	15	8-1/4	1-3/8	1-7/8	15	8-1/4	1-11/16	2-1/4	11/16	1-7/32	15/32	11/16



Extra-Capacity Collets

Second operation and small chucking work can be handled easily and quickly. It is usual practice to bore the false jaws to fit the work.

The hardened and precision ground hood and ring are adapted for mounting direct on the spindle nose.

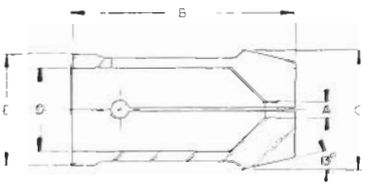
Mach. No.	2	3	4 & 5	6 & 7
A	2-3/8	3-1/4	3-3/4	5
B	3-1/2	4-1/4	5-1/2	6-3/4
C	2-15/16	4-1/8	4-25/32	6-1/4
D	7/8	1-3/8	1-15/16	2-1/4
E	1-3/8	1-15/16	2-5/8	3-1/8
F	7/8	1-1/8	1-1/4	2

Collets

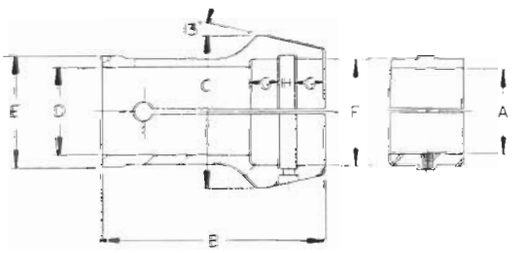
Collets are made of high quality alloy steel correctly heat treated and accurately ground.

Dimension "A" is the maximum capacity available in each case.

When changing collet pads in the master collets it is not necessary to remove the collet from the machine. In ordering, specify the size of machine, collet pad number and hole desired.



SOLID COLLET



MASTER COLLET & PADS

Solid Collets

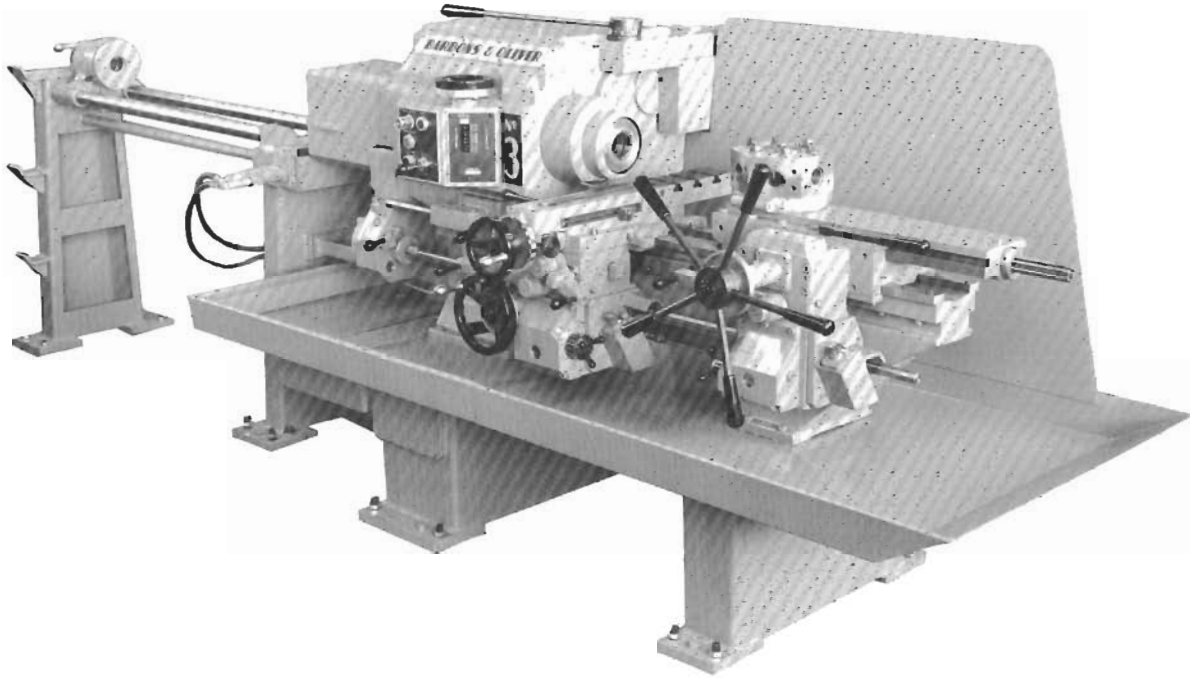
Machine No.	1	2	2
Collet No.	1	4	4-1/2
No. of Slots	3	3	3
A Round	13/16	1	1-1/4
Hexagon	11/16	7/8	1-1/16
Square	9/16	11/16	7/8
B	2-3/4	3-1/2	3-1/2
C	1-5/16	1-5/8	1-13/16
D	27/32	1-3/32	1-5/16
E	1-1/8	1-3/8	1-3/4

Master Collets and Pads

Machine No.	3	3-4-5	4-5-7	6-7	6
Collet Pad No.	5	7	9	10	6UTL-5"
No. of Slots	4	4	4	4	6
A Round	1-1/2	2	2-1/2	3	5
Hexagon	1-5/16	1-3/4	2-1/8	2-9/16	4-5/16
Square	1-1/16	1-7/16	1-3/4	2-1/8	3-1/2
B	4-3/4	5-1/4	6-3/4	6-1/2	10-1/2
C	2-5/8	3-5/8	4-13/32	5	8-3/8
D	1-17/32	2-1/16	2-9/16	3-1/8	5-3/16
E	1-15/16	2-5/8	3-1/8	3-7/8	6
F	1-3/4	2-1/2	3-1/8	3-5/8	6
G	15/32	11/16	13/16	31/32	1-5/16
H	5/16	3/8	3/8	7/16	5/8

BARDONS & OLIVER

Ram Type UNIVERSAL TURRET LATHES



	NO. 3 UNIVERSAL TURRET LATHE	NO. 6 UNIVERSAL TURRET LATHE	
	2″	3″	5″
Swing over bedways	16″	21″	21″
Swing over carriage guides	14″	19½″	19½″
Swing over cross slide	7⅝″	11″	11″
Bar capacity round	2″	3″	5″
Bar capacity hexagon	1¾″	2⁹⁄₁₆″	4⁵⁄₁₆″
Bar capacity square	1⁷⁄₁₆″	2⅛″	3½″
Hole in collet chuck plunger	2¹⁄₁₆″	3⅛″	5¼″
Chuck size medium duty steel body	8″	12″	15″
Spindle nose	8″-A1	8″-A2	11″-A2
Spindle hole diameter	2⅜″	3⁷⁄₁₆″	5¾″
Spindle speeds, number	12	12	12
Spindle speed range	30-1600	30-1300	25-950
	39-2000	37-1600	31-1170

BA

1133 W

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