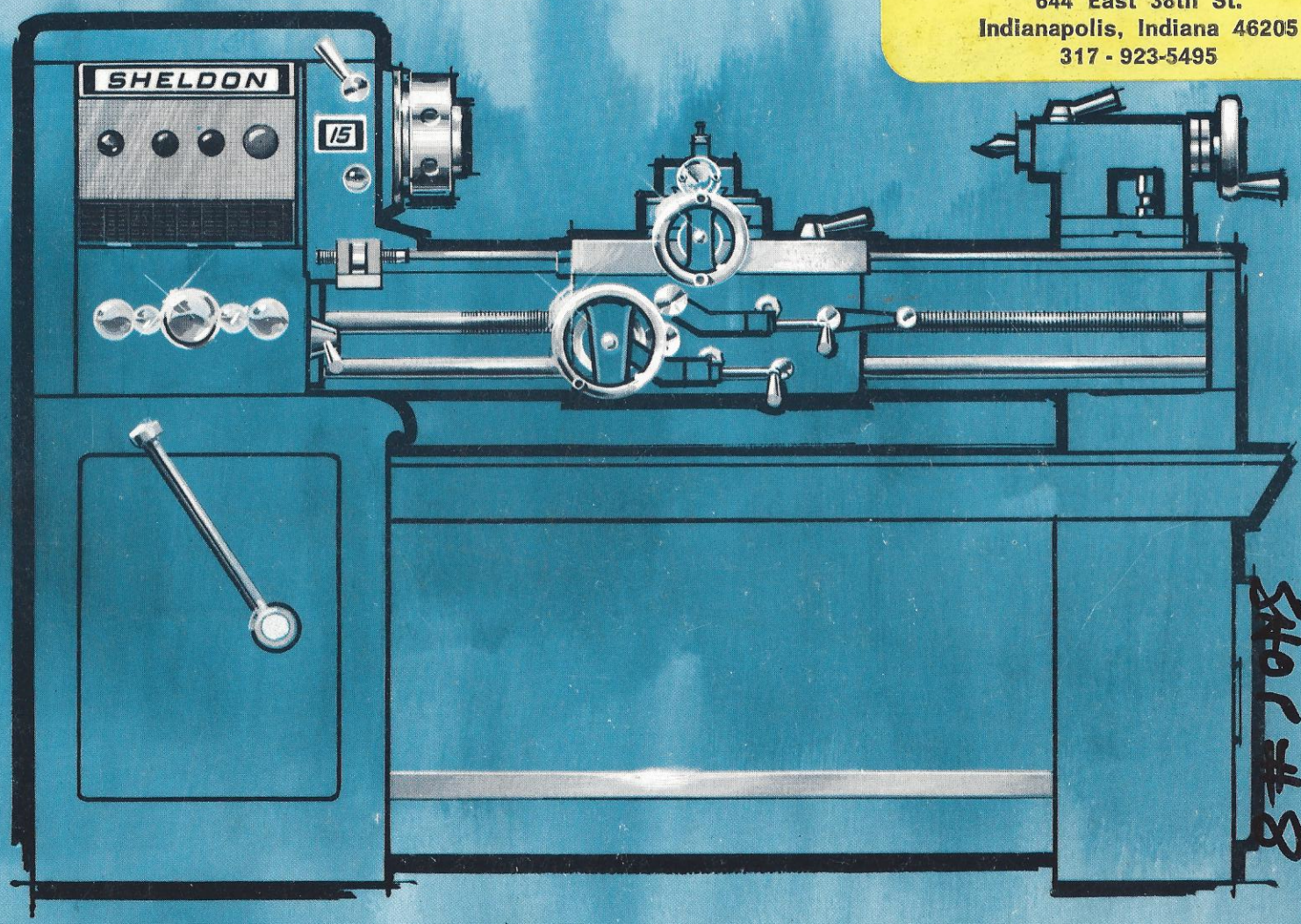


LATHE P.O. # 11
SHELDON

13

15

17

PRECISION LATHES BY SHELDON

Modern turning technology requires the application of many types of turning machines to produce parts of varying quantities, sizes and shapes. That is why we build so many different turning machines, with each one designed to provide its own advanced method of turning metal at a profit.

This gives you the opportunity to select the most profitable turning method for machining your specific parts, as well as the exact type of Sheldon turning machine required . . . whether an automatic lathe, turret lathe, hand chucking machine, tracer lathe, automatic chucking machine or . . .

the unique versatility of

SHELDON

13 15 17

LATHES

6 important and exclusive reasons why these lathes make the *profitable difference* when turning in the 13″, 15″ and 17″ range are fully described in this catalog.

Each of these features has been designed to provide you with a significant advantage in turning . . . either to give you greater accuracy, or more power, or a wider thread and feed range, or larger spindle capacity or increased operator convenience and confidence.

However, it is the total combination of all six of these features that gives these Sheldon lathes their *unique versatility.*

. . . versatility to handle almost any turning requirement whether single piece prototype work or high production quantities.

. . . versatility and ease in tooling to meet the challenge of even the most complex part.

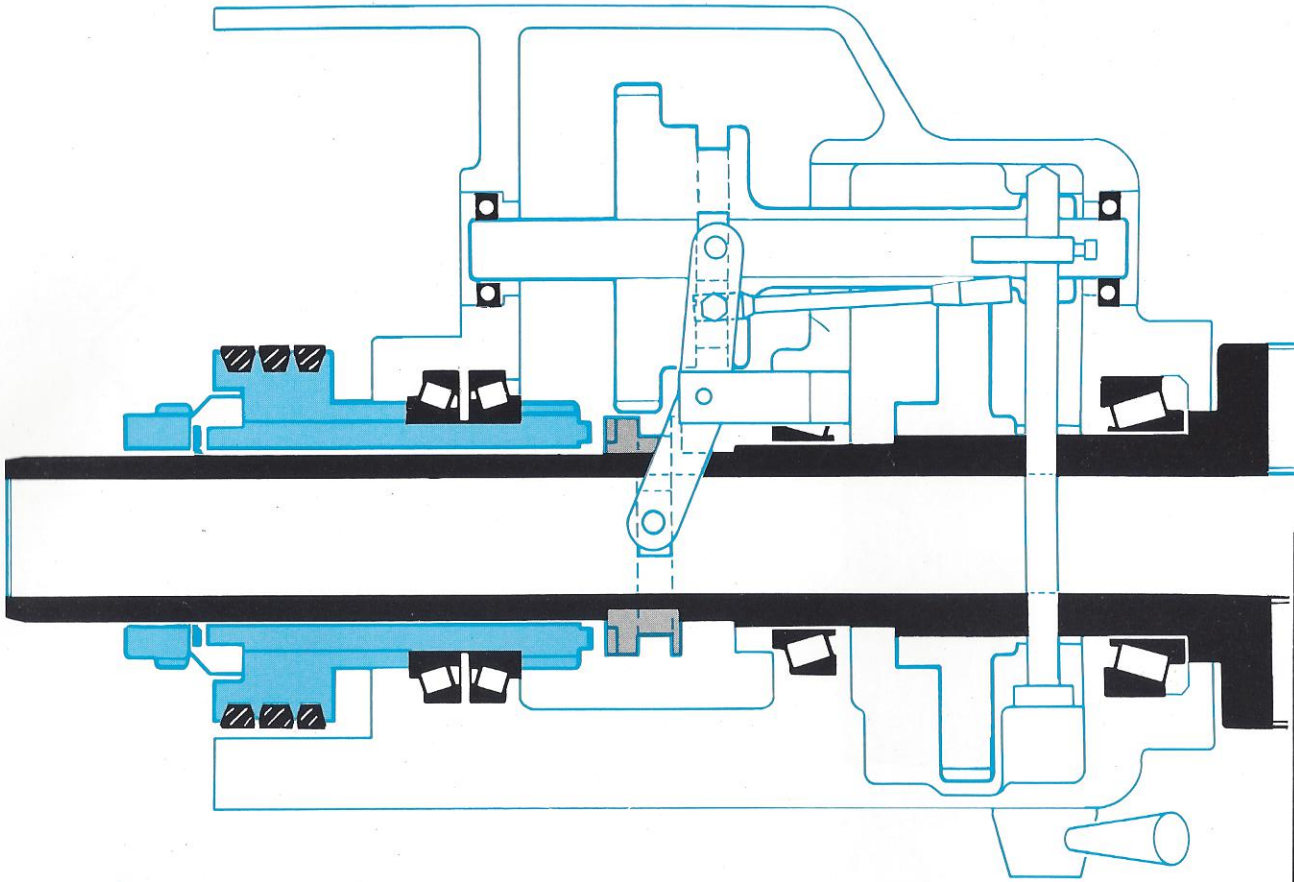
. . . versatility to make the profitable difference whether for use in the toolroom, production line, research laboratory, maintenance department or job shop.

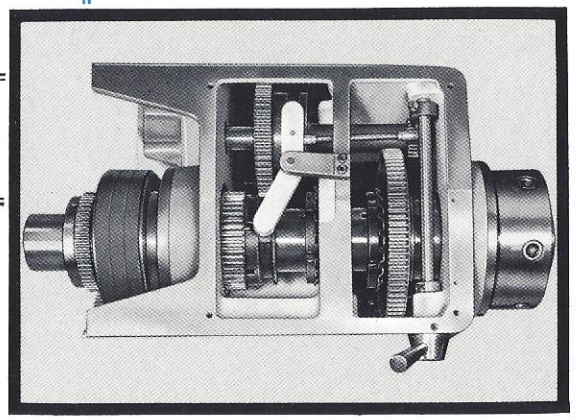
5 YEAR GUARANTEE

A five year guarantee bearing the corporate seal and official signature is sent with each Sheldon machine tool. This guarantee against defective material and workmanship is the result of using the best grades of material in our machine tools and our knowledge that they are built better.

TEST SHEET

"Accuracy in Turning" is our business. That's why with each lathe we ship, there is a test sheet showing its individual indicator and alignment tests together with a test bar on which the final turning tests were performed.



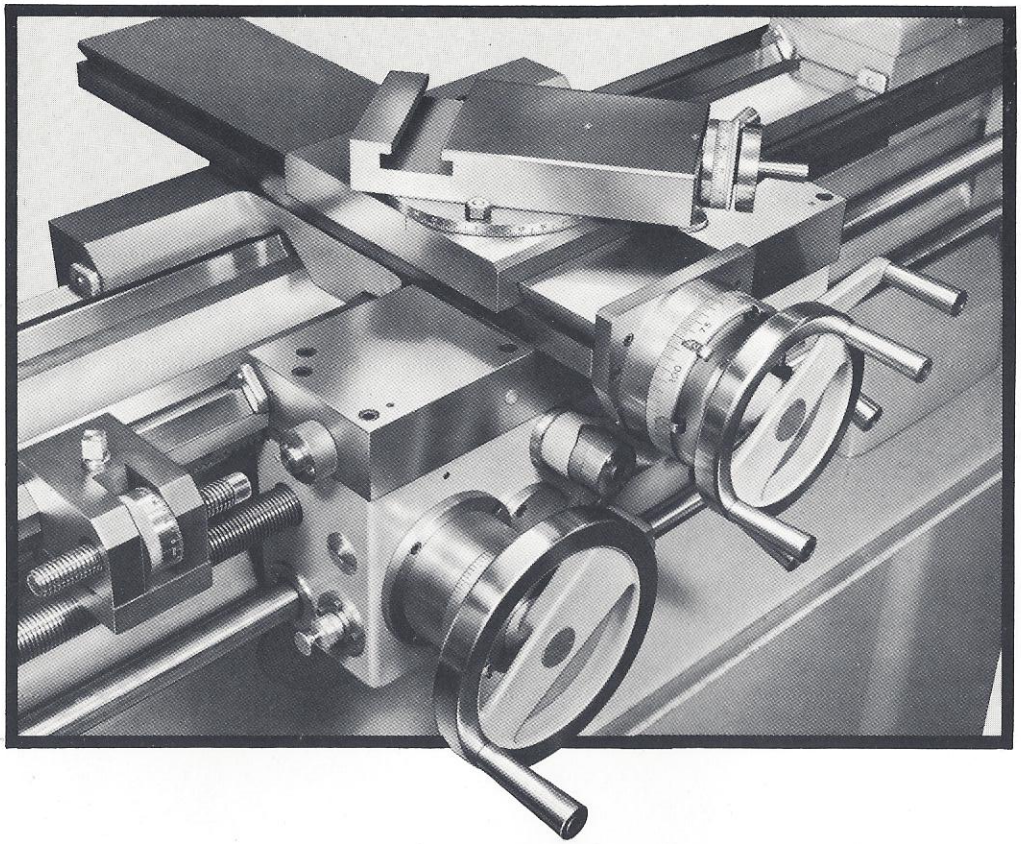


1 SHELDON HIGH TORQUE HEADSTOCK (Patented)

Work finish free of gear marks . . . the elimination of spindle deflections caused by drive or gear pressures to obtain true and round spindle rotation . . . and the ability to utilize the full horsepower of the drive for maximum metal removal at high speeds are THREE important benefits provided by the *patented* Sheldon headstock design. High torque turning power is transmitted from a geared motor drive in the pedestal, direct to the spindle input assembly. Supported by its own set of bearings in the rear headstock wall, this assembly rotates around the spindle without touching it. Power, as a high torque, rotating force, free of radial or side pressures is then transmitted to the spindle through a jaw clutch. The result is an extremely accurate, true running spindle that provides both roundness and low micro inch finish for precision turning and boring operations. The headstock, fully enclosed and running in oil, also incorporates a geared range for lower speed, heavy duty metal removal. Thus, the high torque capabilities of gearing from both the drive and headstock are available for maximum turning performance at all speeds.

Inside view of headstock shows massive spindle assembly, thick walled headstock casting and wide faced gearing. Spindle is rigidly supported by "Zero Precision" bearings with exceptionally large radial and thrust load capacities. Fully hardened and ground spindles have cam lock noses for maximum safety and rigidity in holding chucks and other spindle nose accessories.

Combination of Sheldon patented headstock with low .0005" feed rate of gear box provides added versatility for precision boring operations.



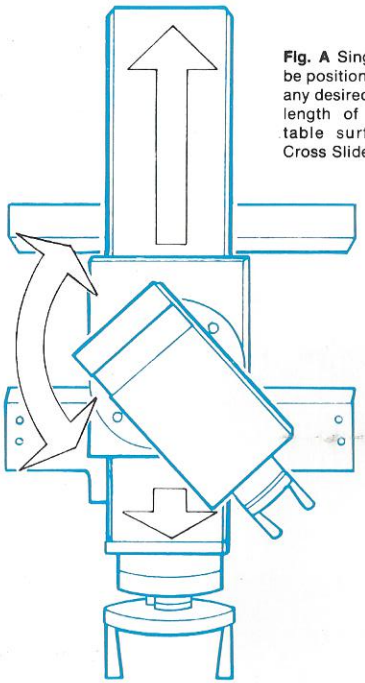


Fig. A Single compound can be positioned and swiveled to any desired angle over full 26" length of precision ground table surface of Sheldon Cross Slide.

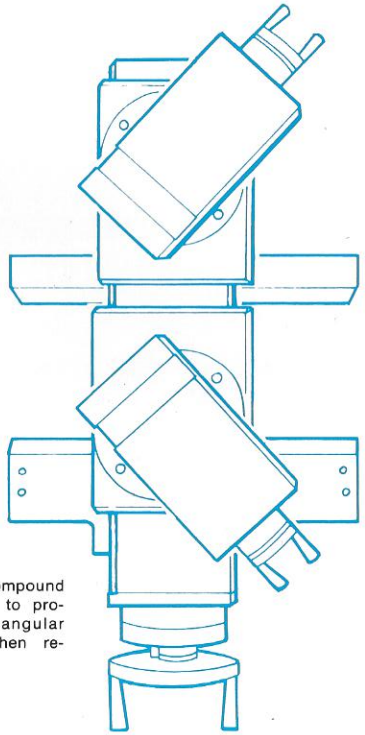


Fig. B Second compound easily mounted to provide additional angular tool station when required.

2 THE SHELDON CROSS SLIDE (An Exclusive Sheldon Feature, Patent Pending)

New dimensions in tool positioning are now possible with the "Sheldon Cross Slide." This unique concept combines a full travel production type cross slide with a compound that is positionable at any desired place on the cross slide.

The cross slide is fully machined and precision ground over its entire length. It incorporates two dovetail ways for accurate clamping and positioning of the compound.

YOUR BENEFIT? You can now set tools at any angle, at any place, at any time, and in any combination over the entire 26" table surface of the cross slide. You also get greater rigidity and accuracy than with conventional lathe cross slides, because the *Sheldon slide always utilizes the full supporting length of the saddle ways.* In addition, the ways are covered at all times to protect them from the accuracy destroying effects of chips and other abrasive materials.

Single Compound Application (Figure A) The ability to move the compound over the full length of the table surface of the cross slide, and swiveling it to any desired angle is shown above. This permits the compound to be positioned for maximum carriage support and helps eliminate excessive overhang when turning large diameters. Where parts are more conveniently machined from the rear side, the compound can be easily moved into place.

Double Compound Application (Figure B) A second compound can be added at any time when both a front and rear tool station are required. Both stations can then be swiveled to any required angle for threading or taper turning, and both can be tooled with any desired combination of standard lathe compound tooling.

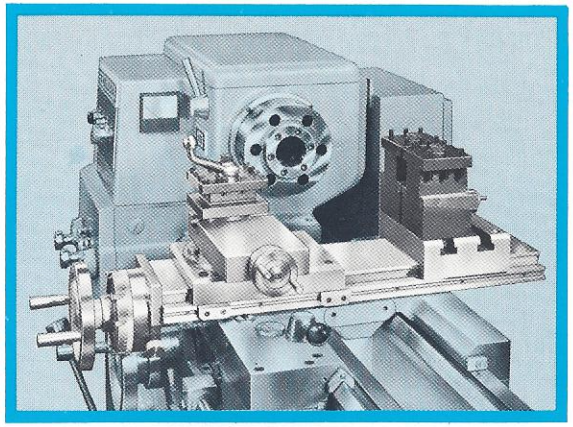
An important time saving advantage of the Sheldon Cross Slide is that tool clearance between multiple tool stations is positionable so that only the minimum amount of slide travel is required.

NEW

PROFIT DIMENSIONS IN

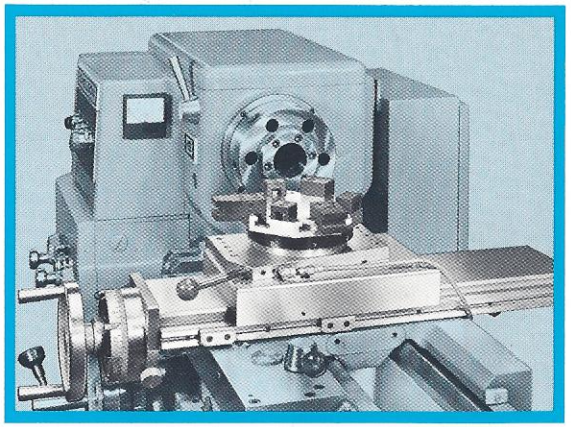
CROSS SLIDE TOOLING . . .

Four profit possibilities are illustrated at the right to show the versatility of the Sheldon Cross Slide and its adaptability in machining a wide variety of work pieces. These and other standard tooling components are readily available for factory or field installation.

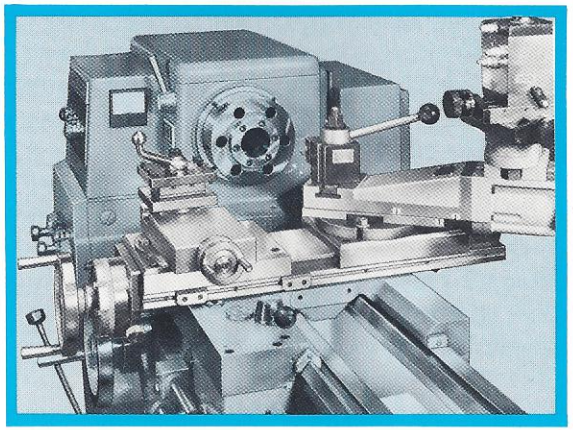


Multiple Station Tooling. The extra long, precision ground table surface of the Sheldon Cross Slide lends itself to a wide variety of multiple station tooling methods. This illustration shows a four way tool post mounted on a compound in front with a rear mounted T-slot block holding two tool blocks with tapered wedges for adjusting proper tool heights.

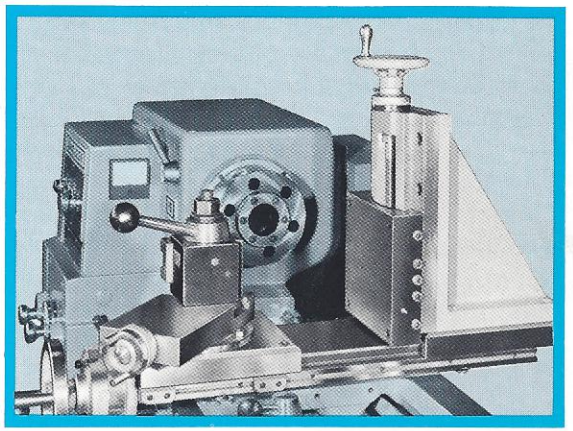
As a result, versatile tool blocks replace accessory type cross slides with their fixed tooling dimensions. There is no loss of swing over cross slide and tooling is positionable for maximum productivity.



8 Station Chucking Operations. An eight station super precision turret is easily mounted on the cross slide to quickly convert the lathe for multiple station chucking and turning operations. Turret is locked by air and features indexing accuracy of 50 millionths. Because the turret can be positioned at any place over the 26" table surface of the cross slide, it can handle much larger parts than conventional hand chucking machines. This large table surface further allows the turret to be used in conjunction with the lathe compound or other tooling stations.



Tracer Application. Mounted at the rear of the cross slide table, a hydraulic tracer adds greatly to the versatility of the lathe for contour turning and facing operations, yet leaves the front tool station free for standard turning, grooving and threading operations. Start, stop and feed controls are front mounted for operator convenience. Tracer can be easily mounted or removed to accommodate changing job requirements. It can also be supplied for front mounting, if desired, since it simply replaces the standard lathe compound.



Fixture Plates. One of the unusual and versatile features of the Sheldon Cross Slide is its unique ability to utilize fixture plates for either work holding or special tooling. Illustrated here is a vertical slide mounted on a fixture plate to provide height adjustment for boring. By using standard quick change tool holders in the spindle a wide variety of parts can be machined to extremely close tolerances. The operation can be reversed so that preset tooling in a fixture block can perform multiple turning, chamfering drilling and boring operations.

3 THE SHELDON DIAL GEAR BOX (Patent Pending)

The advanced design of the Sheldon gear box makes selection of proper threads and feeds, rapid and effortlessly easy.

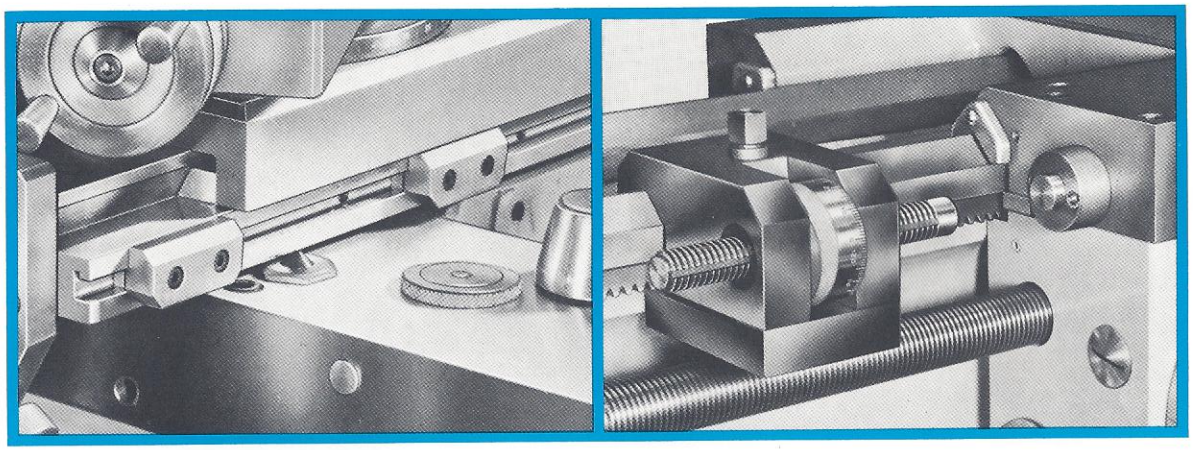
It's simply a matter of revolving two control handles and watching the feed dial turn to the setting desired.

Control handles can be revolved in both directions, either individually or simultaneously.

80 different threads and feeds are available including such important threads as 4, 6, 7½, 11½, 27 and 30 as well as the complete American Standard Unified thread series from 4-80.

Ultra precision feeds rates as low as .0005″ are provided for close tolerance boring and finishing operations.

The gear box is fully enclosed and runs in oil. It incorporates a built-in reverse lever for both lead screw and feed rod that can be shifted while the lathe is running.



4 AUTOMATIC FEED STOPS (Exclusive with Sheldon)

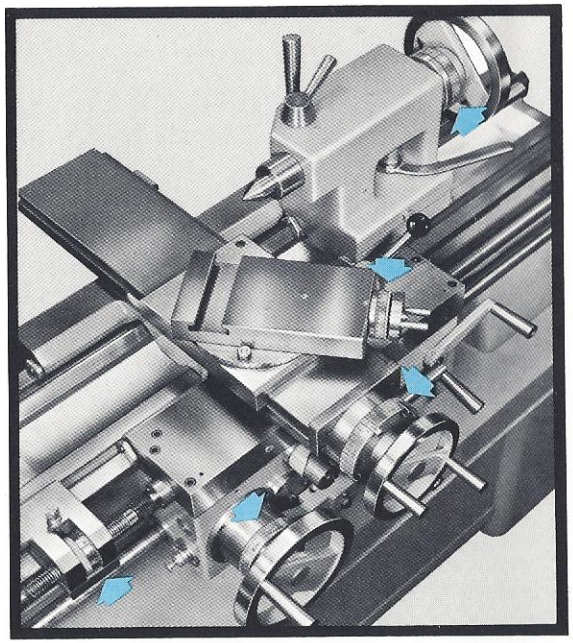
Automatic feed stops are built into both the carriage and cross slide for automatic disengagement of power longitudinal and power cross feeds during repetitive turning, facing and forming operations.

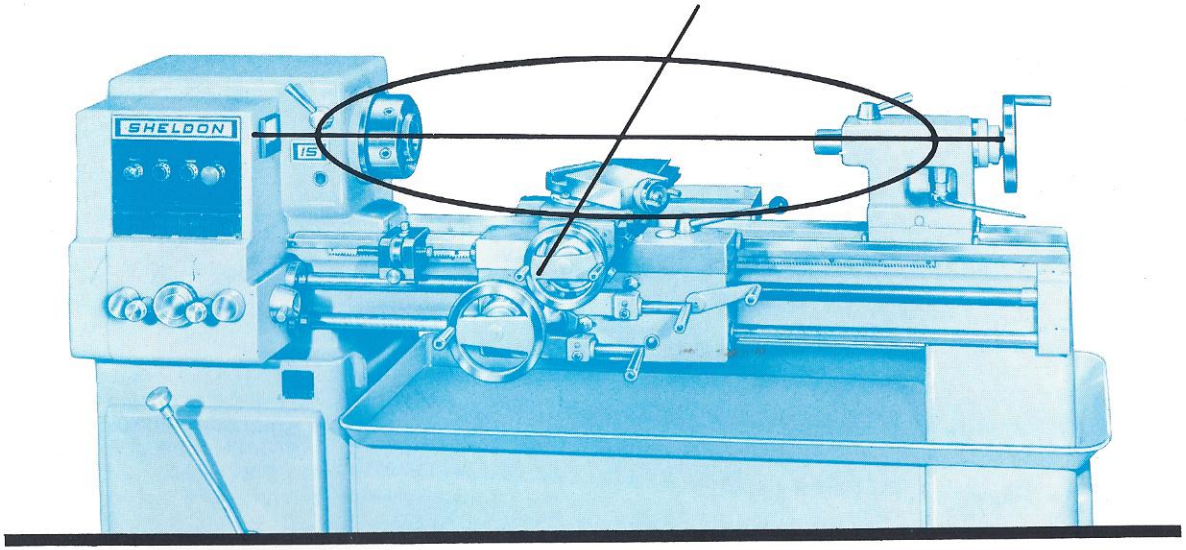
They provide increased production by permitting higher feed rates through the elimination of operator guesswork and *fear of over-travel.* As a result, scrap is eliminated and operators can turn with full confidence at maximum production rates.

In addition to operator convenience, increased production and repetitive accuracy, the stops also act as an important *safety device* since they can be used to limit the maximum travel of the carriage or cross slide.

The cross slide has adjustable trip dogs which can be positioned as desired along its full length T slot rail. Additional dogs can easily be installed if required.

The carriage feed is disengaged automatically when the feed cam is depressed by the micrometer carriage stop. The stop is positionable along the bed and is positively locked in place by the bed rack. Its satin chrome micrometer dial is graduated in thousandths and there is a 4″ travel to the stop rod.





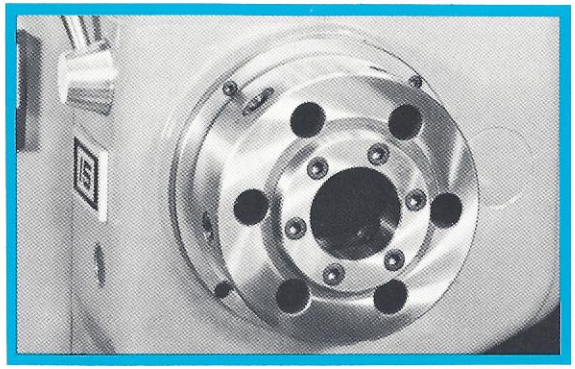
5 THE SHELDON VISUAL GROUP (Exclusive with Sheldon)

Extra large satin chrome micrometer dials make the job of precision tool positioning easy and errorless. Each feed motion of the lathe has a micrometer dial; the apron handwheel and the carriage micrometer stop for length, the cross feed hand wheel for depth, the compound for accurate angular feeds and the tailstock for precision drilling and boring. The cross feed dial is direct reading and is equipped with *six* station sequence clips to assist in turning multiple diameters. All other dials are graduated to show direct linear motion.

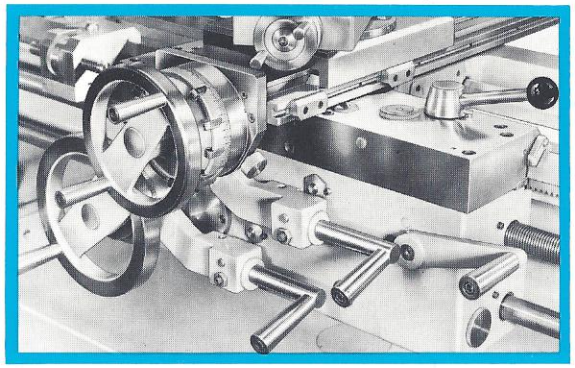
6 SUSTAINED ACCURACY GROUP (Exclusive with Sheldon)

This is an exclusive group of features designed to maintain the accuracy of both the longitudinal and cross slide motions . . . to give you the ability to *turn straight* and *face square,* even after highly repetitive production operations. This group consists of (1) flame hardened and precision ground bed ways, (2) hardened compound and cross feed screws, (3) hardened carriage cross slide dovetails and ways and (4) an adjustable compensating cross feed nut for maintaining sensitive and accurate positioning of cutting tools.

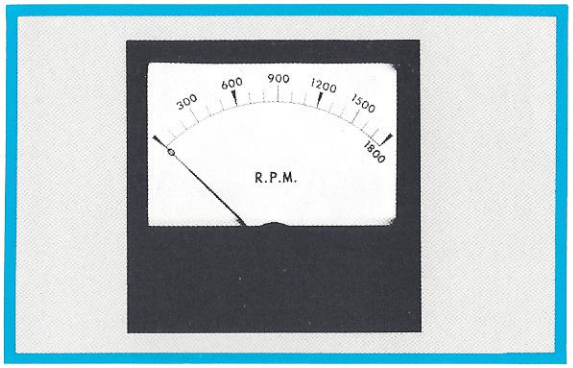
The V ways and flat ways for both the carriage and tailstock are deep flame hardened to provide a guaranteed minimum hardness of 500 Brinnell. The hard chrome cross slide ways provide a hardened wear surface of 70 Rockwell C, and their low friction characteristics make cross slide movements extremely smooth and effortless. The hardened compound and cross feed screws have precision lead acme threads, with greater load bearing abilities and larger wear areas. The cross feed screw has tapered roller thrust bearings and is fitted with a compensating nut, an anti-backlash device, that is easily adjusted to maintain a close fit between the nut and screw threads.



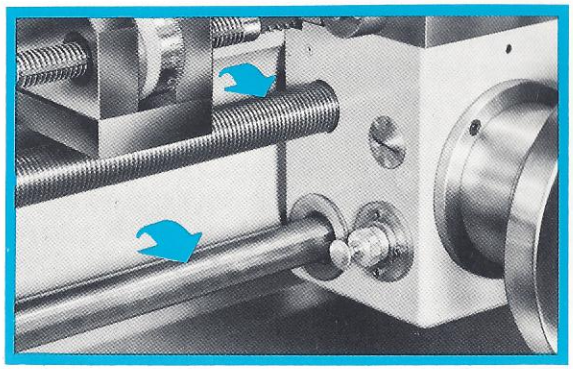
Heavy Duty Spindles. The 2¼" hole through the spindle on Sheldon 15" and 17" lathes and the 1½" hole on 13" lathes, gives you the capacity to handle the large diameter bars and tubes that formerly had to be machined on larger lathes. Made of forged steel, *these spindles are extremely massive.* Designed as large capacity spindles, they have heavy, thick walls. The entire spindle, including the spindle nose, is completely hardened and precision ground. Spindles are accurately supported by "Zero Precision" tapered bearings having unusually large radial and thrust load capacities.



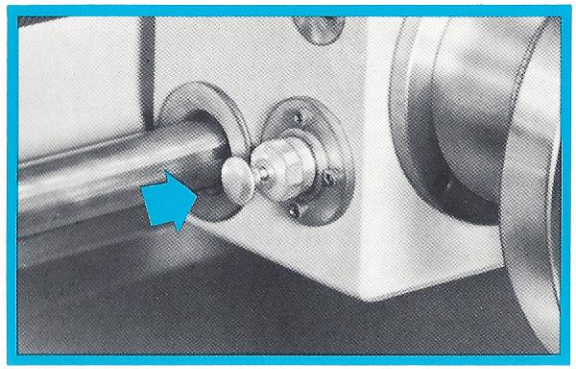
Modern Apron and Carriage. The one piece apron is fully enclosed and runs in oil. It has two independent disc type clutches that may be engaged individually or simultaneously when selecting power feeds. Clutch tension is easily adjusted from the front so it can be set to act as a safety overload device or varied for different work loads. Tapered clutch handles are offset for greater operator convenience. Balanced hand-wheels with swivel handles provide additional ease of operation. Half nuts are gibbed and ride in dovetail ways. A built-in safety interlock prevents simultaneous engagement of lead screw and feed rod. Massive carriage provides *extra large bearing support* on bed ways. It houses a built-in thread chasing dial which may be removed and stored in the apron cavity when not used for threading.



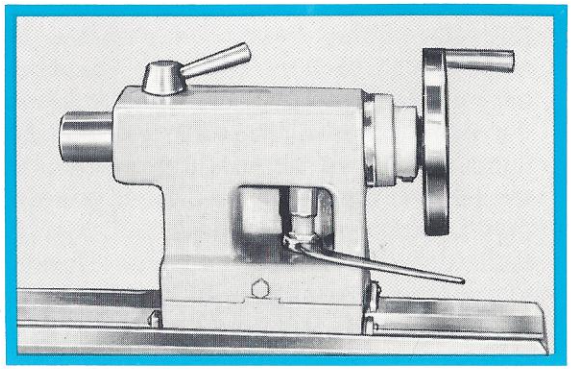
Electric Tachometer and Controls. An electric tachometer built into the headstock provides quick visual indication of spindle speeds. Controls are built to NMTBA standards and include a single speed, size 1 magnetic starter, mounted in a Nema 12, oil tight enclosure with a built-in fusible disconnect switch. Control provides protection against overload, low voltage, stalled rotor and single phasing. Pushbutton stations are oil tight, conveniently built into the headstock panel and for safety, operate on 110 volts.



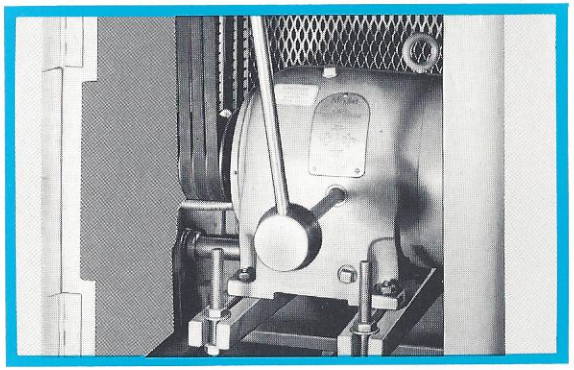
Tool Room Precision. Every Sheldon lathe is built to meet or surpass the NMTBA standards for toolroom lathes. These standards require a spindle with a T.I.R. of .0003" or less and a precision lead screw with lead error limited to .0004" in any 4 inches and .001" per foot. Lead screw is made of special stress relieved steel and is used only for thread cutting. Power feeds are transmitted to the apron through a separate feed rod. Both have large diameters. To prevent end play they are supported by adjustable precision tapered roller bearings in the gear box.



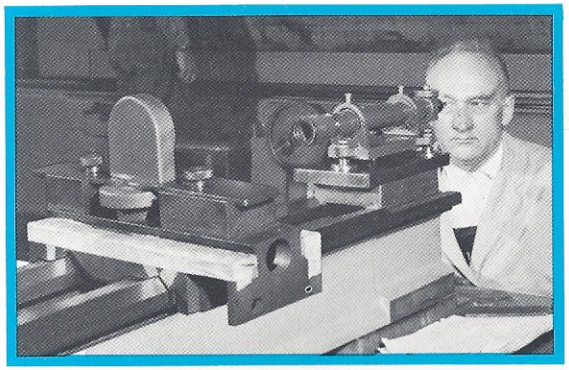
Lubrication. For lasting accuracy and ease of maintenance all major working parts have their own built-in lubrication system. Headstock, gearbox and apron are all totally enclosed and run in oil. Important wear surfaces are lubricated by a built-in one shot pressure system from the apron reservoir. This system supplies oil to the bed, carriage and cross slide ways as well as to the cross feed anti-backlash nut.



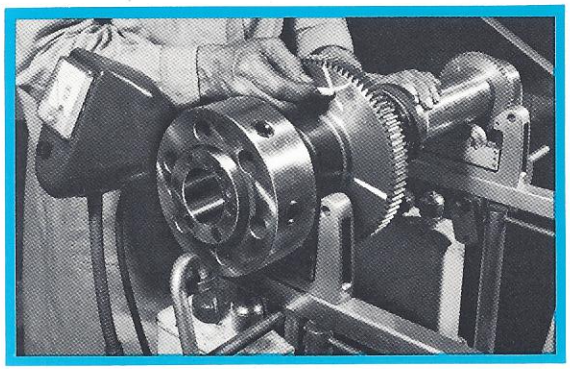
Heavy Duty Tailstock. The heavy, massive tailstock provides rigid support for turning between centers, as well as unusual capacity for tailstock drilling and boring operations. The spindle has a large 2¼" diameter and is equipped with a tang slot and automatic center ejector. Both a quick acting cam-action lock as well as a wrench lock are provided. 13" lathes have a # 3 M.T. center while 15" and 17" lathes have # 4 M.T. centers.



Powerful Drive. The high torque geared motor drive with its four speed transmission is enclosed in the pedestal base to isolate motor vibration and provide protection from dirt, chips and oil. It drives direct to the headstock through 3V belts to deliver its full work driving capacity. Standard motor is a single speed, open drip-proof type but when ordered from the factory can be supplied with such options as: brake, two speed, totally enclosed or in special voltages. The R15 and R17 lathes are equipped with a 5 h.p. motor while 3 h.p. is used on the R13.



Quality Controlled Manufacturing. All lathe beds are precision ground on a horizontal way grinder that is used only for grinding bed ways. Beds are individually checked for straightness and parallelism with a micropTic auto-collimator. These and other quality oriented and controlled manufacturing techniques are built-in values that guarantee the long life accuracy of Sheldon lathes.



Balancing. All rotating assemblies are precision balanced, both *dynamically* and *kinetically*, for vibration free operation. This permits the use of higher spindle speeds, faster metal removal and the maintenance of desired surface finish. Illustrated above is the large spindle assembly for the R-15 lathe as it is being precision balanced to less than .0003 inch ounces.

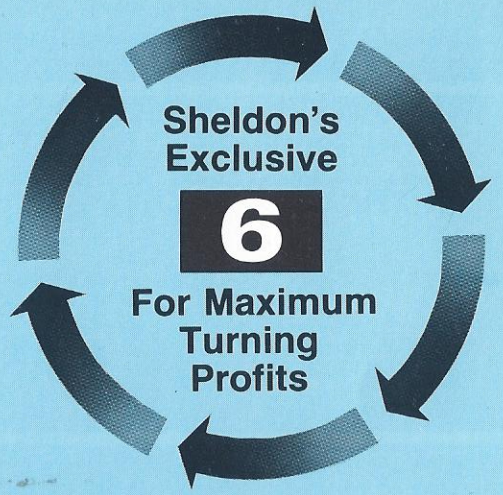
OPERATOR CONVENIENCE

Sheldon R lathes have been designed for maximum operator convenience and confidence in turning precision parts quickly and profitably.

The overall ground finish of carriage wings, cross slide and compound gives the operator an immediate visual impression of built-in accuracy, while functionally providing accurate bases for mounting indicators, gauges and other instruments.

Controls are centrally grouped and are designed for simplicity and ease of operation. Control handles are tapered to fit the natural grasp of the operator's hands . . . handwheels are balanced and have swivel handles . . . and, large glare-free satin chrome micrometer dials make tool positioning easy and accurate.

Further conveniences are provided by the whisper silent power of the drive and gear trains, the elimination of almost all manual lubrication operations, and in the building of the lathe center line at a height comfortable to the operator through all hours of the working day.



1 **Sheldon High Torque Headstock**

2 **Sheldon Cross Slide**

3 **Sheldon Dial Gear Box**

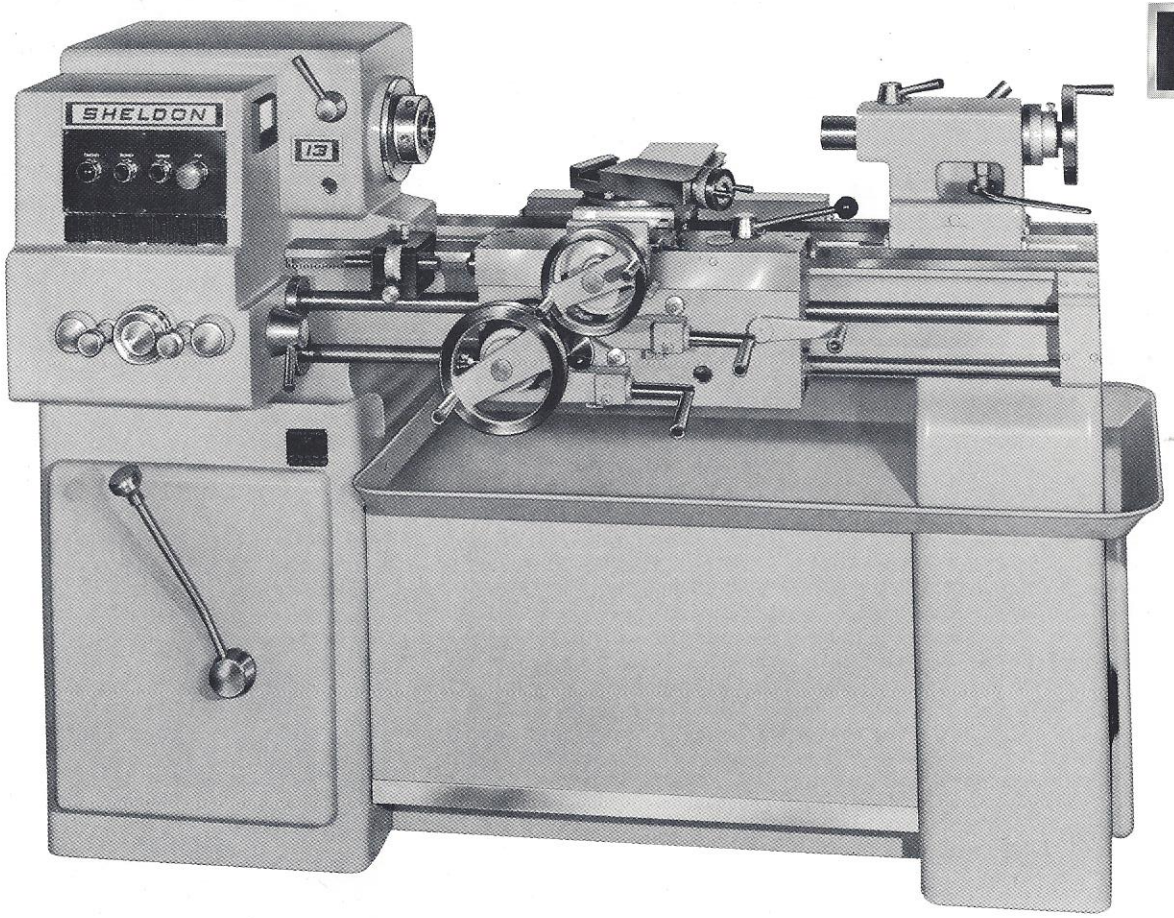
4 **Sheldon Automatic Feed Stops**

5 **Sheldon Visual Group**

6 **Sheldon Sustained Accuracy Group**

These are the *six* important design features to remember and to specify when ordering your next lathe . . . the extra *six* reasons why turning on a Sheldon lathe is more profitable . . . the *six* compelling advantages of turning to Sheldon for your turning needs.

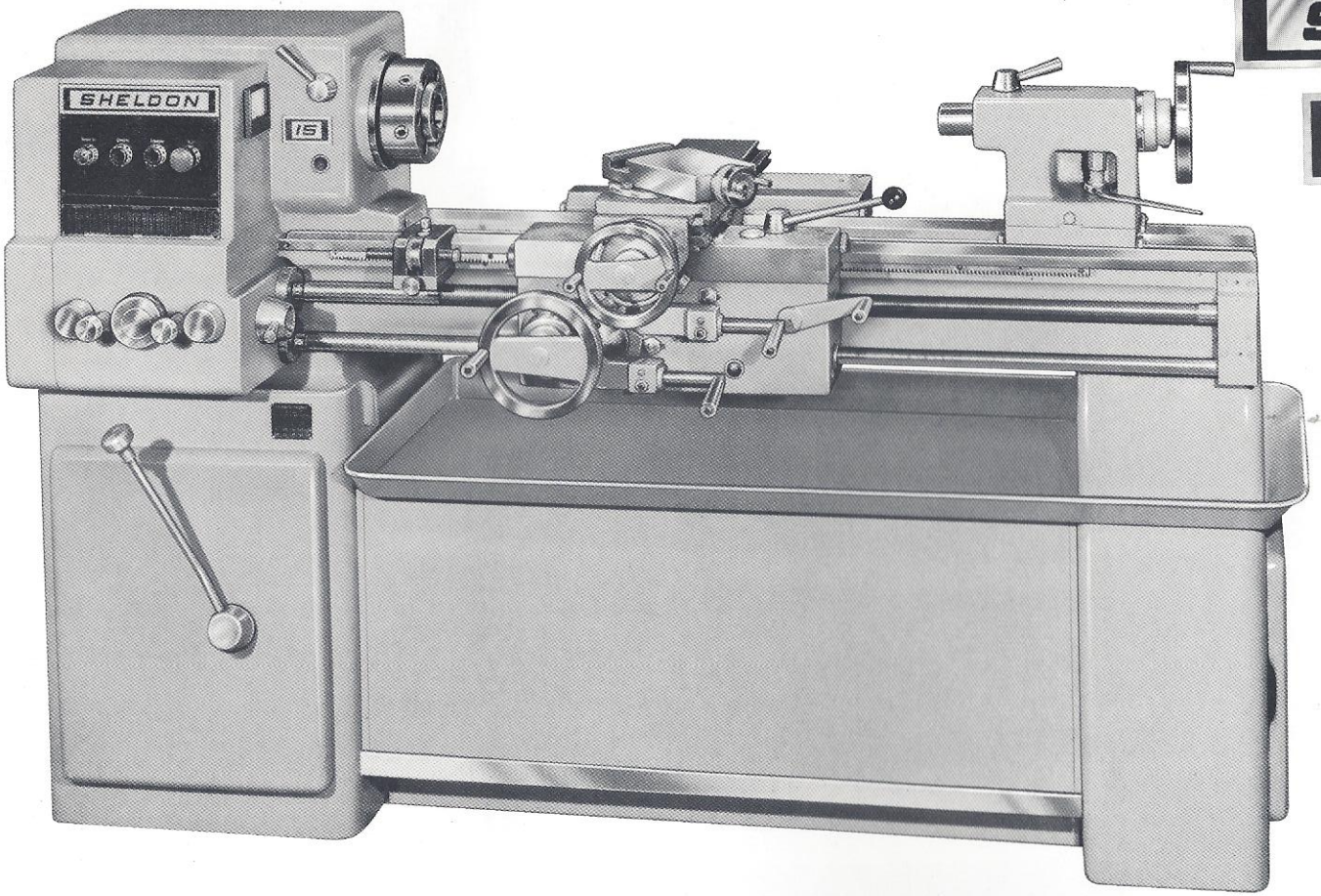
All six are found on Sheldon R13, R15, R17 and VR lathes illustrated on the following pages.



SHELDON 13 LATHE

■ *The Sheldon R13 lathes open new profit possibilities in the productive turning of small parts. They provide a powerful, 3 h.p. high torque drive for maximum metal removal at all speeds, a large 1½" hole through the spindle, and the many exclusive Sheldon features designed for increased versatility and precision.*

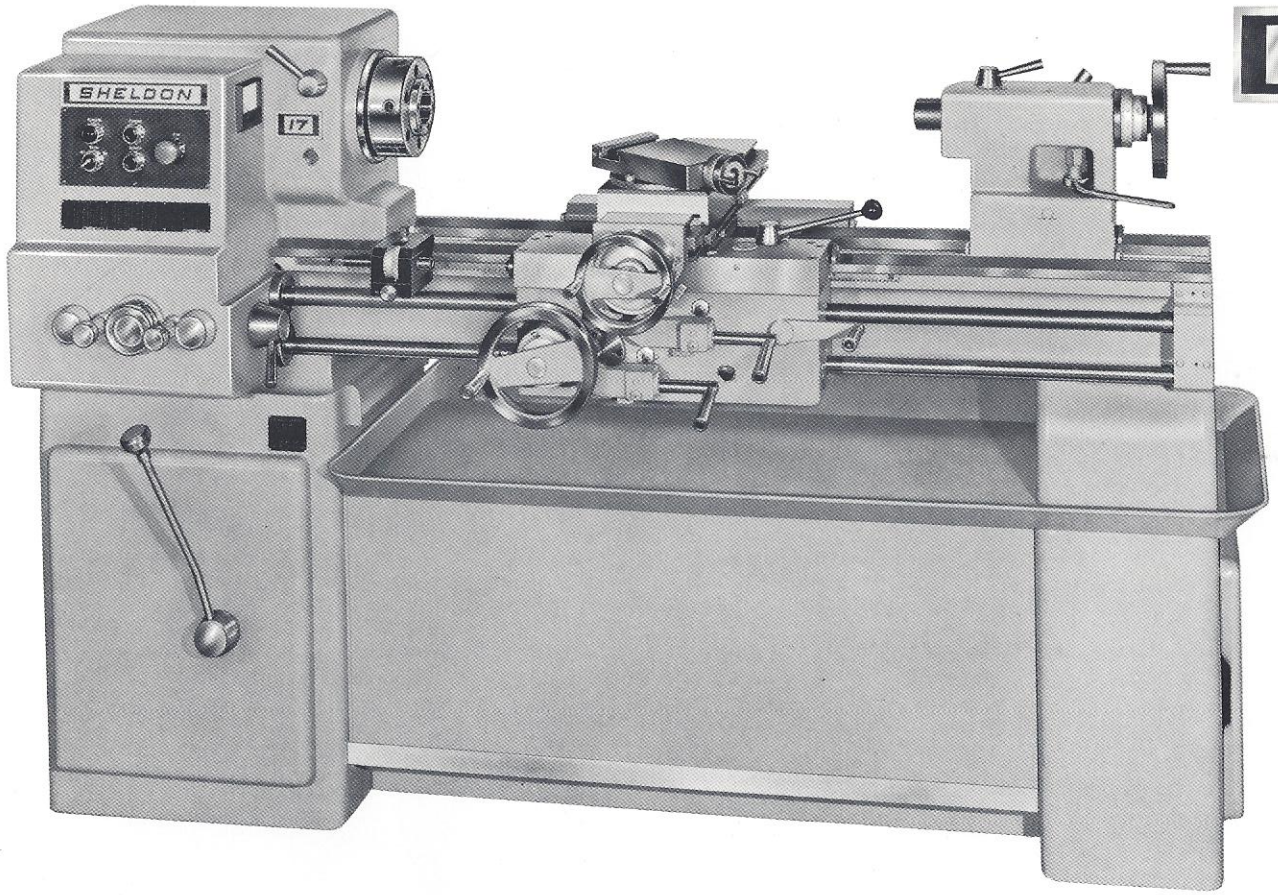
The following items are furnished as **standard equipment** included in the base price of the lathe: 3 h.p. single speed motor, 208/416, or 220/440, or 550 volts, 50—60 cycle with integral 4 speed geared transmission; size 1 combination magnetic reversing starter in Nema 12 enclosure with built-in door type fusible disconnect switch, external manual reset and control transformer providing 110 volts at oil tight push button stations; power on light; D1-4" camlock spindle nose with 1½ through hole; electric tachometer; Sheldon Cross Slide with positionable compound; Sheldon Visual Group of satin-chrome micrometer dials for carriage stop, and tailstock, apron, compound and cross feed handwheels; Sheldon sustained accuracy group of flame hardened beds with all V-ways and flat ways hardened, hard chrome cross slide dovetails and ways, hardened cross feed and compound screws, anti-backlash compensating nut; cross slide lock; carriage lock; one-shot lubrication system for bed, carriage and cross slide ways, and cross feed nut; automatic feed stops for power longitudinal and power cross feeds; micrometer carriage stop; dial gear box with built-in reverse lever that provides 80 power longitudinal and power cross feeds from .0005" to .120" through feed rod and 80 different thread pitches through precision lead screw; chip pan; front kick pan; small dog plate; centers; center sleeve; tang drive in tailstock spindle; thread chasing dial; tool post assembly; leveling bolts; necessary wrenches; parts and operation manual.



SHELDON 15 LATHE

■ *The Sheldon R15 lathes are designed for large capacity, full power turning to tool-room tolerances. They incorporate new concepts in errorless turning, ease of operation, versatility of tooling, and sustained precision.*

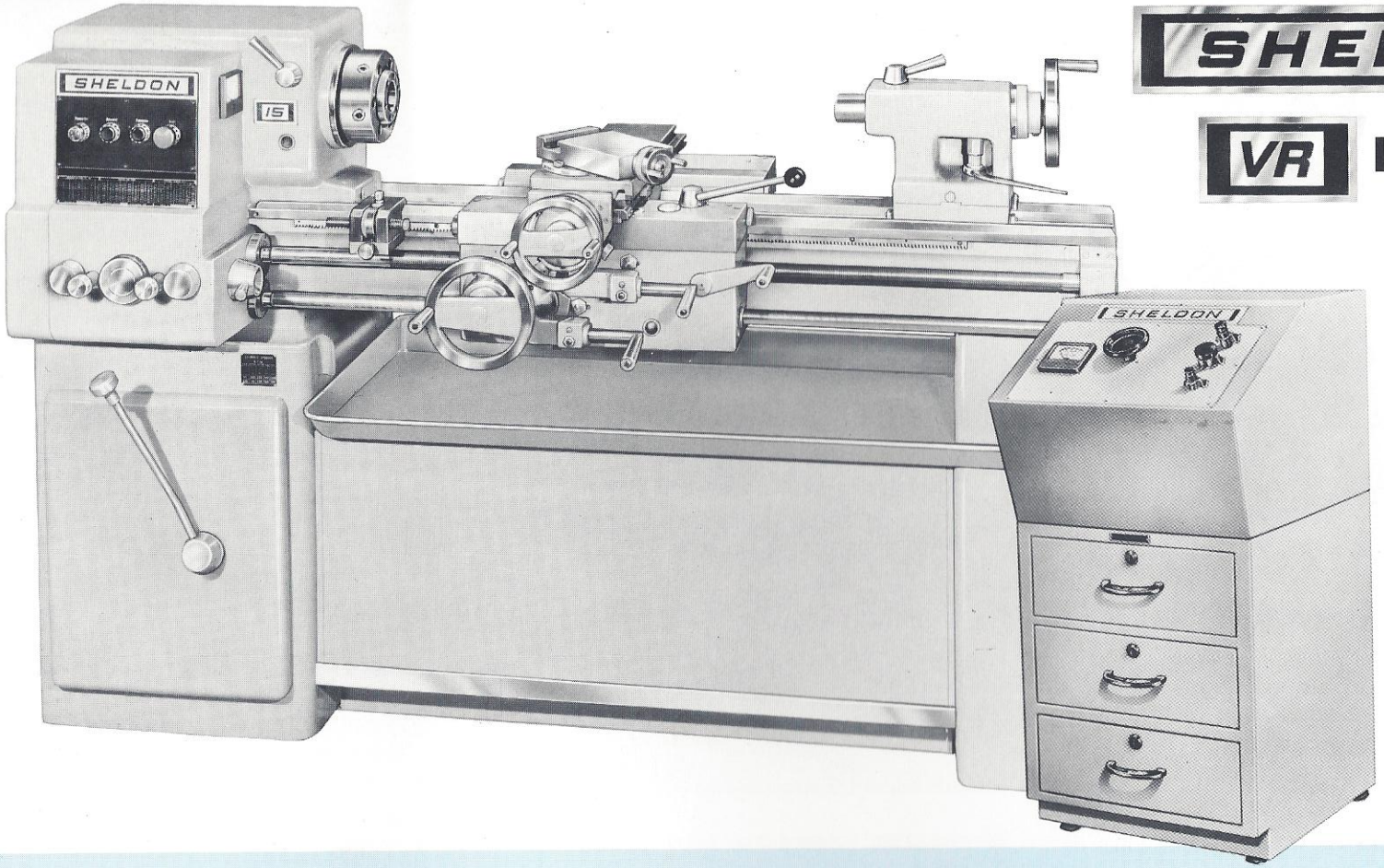
The following items are furnished as **standard equipment** included in the base price of the lathe: 5 h.p. single speed motor, 208/416, or 220/440, or 550 volts, 50—60 cycle with integral 4 speed geared transmission; size 1 combination magnetic reversing starter in Nema 12 enclosure with built-in door type fusible disconnect switch, external manual reset and control transformer providing 110 volts at oil tight push button stations; power on light; D1-6" camlock spindle nose with 2¼" through hole; electric tachometer; Sheldon Cross Slide with positionable compound; Sheldon Visual Group of satin-chrome micrometer dials for carriage stop, and tailstock, apron, compound and cross feed handwheels, Sheldon sustained accuracy group of flame hardened beds with all V-ways and flat ways hardened, hard chrome cross slide dovetails and ways, hardened cross feed and compound screws, anti-backlash compensating nut; cross slide lock; carriage lock; one-shot lubrication system for bed, carriage and cross slide ways, and cross feed nut; automatic feed stops for power longitudinal and power cross feeds; micrometer carriage stop; dial gear box with built in reverse lever that provides 80 power longitudinal and power cross feeds from .0005 to .120 through feed rod and 80 different thread pitches through precision lead screw; chip pan; front kick pan; two driving studs; centers; center sleeve; tang drive in tailstock spindle; thread chasing dial; tool post assembly; leveling bolts, necessary wrenches; parts and operation manual.



SHELDON 17 LATHE

■ *The Sheldon R17 lathes provide the extra swing and clearance required for larger work diameters, as well as the many exclusive Sheldon features designed for increased versatility and sustained precision.*

The following items are furnished as **standard equipment** included in the base price of the lathe: 5 h.p. single speed motor, 208/416, or 220/440, or 550 volts, 50—60 cycle with integral 4 speed geared transmission; size 1 combination magnetic reversing starter in Nema 12 enclosure with built-in door type fusible disconnect switch, external manual reset and control transformer providing 110 volts at oil tight push button stations, power on light; D1-6″ camlock spindle nose with 2¼ through hole; electric tachometer; Sheldon Cross Slide with positionable compound; Sheldon Visual Group of satin-chrome micrometer dials for carriage stop, and tailstock, apron, compound and cross feed handwheels; Sheldon sustained accuracy group of flame hardened beds with all V-ways and flat ways hardened, hard chrome cross slide dovetails and ways, hardened cross feed and compound screws, anti-backlash compensating nut; cross slide lock; carriage lock; one-shot lubrication system for bed, carriage and cross slide ways, and cross feed nut; automatic feed stops for power longitudinal and power cross feeds; micrometer carriage stop; dial gear box with built-in reverse lever that provides 80 power longitudinal and power cross feeds from .0005″ to .120″ through feed rod and 80 different thread pitches through precision lead screw; chip pan; front kick pan; two driving studs; centers; center sleeve; tang drive in tailstock spindle; thread chasing dial; tool post assembly; leveling bolts; necessary wrenches; parts and operation manual.



SHELDON

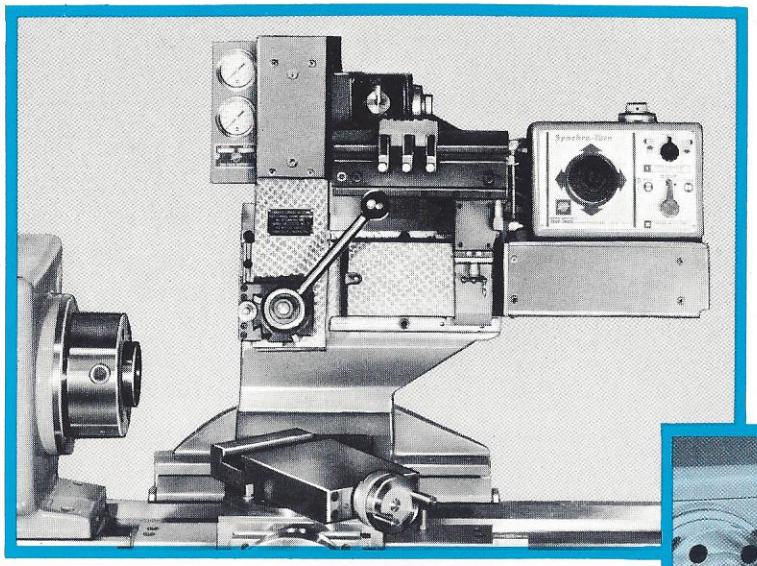
VR LATHES

■ New Sheldon VR13, VR15 and VR17 lathes are designed to provide "high torque" turning over a wide, infinite speed range at super precision tolerances. This new series provides infinite spindle speeds from 0 to 2500 r.p.m. through a 5 h.p., d.c. solid state motor drive with dynamic braking. Maximum pulling power is maintained throughout this complete range by a series of gear reductions to provide maximum torque in each of the following 8 ranges, 0 to 110, 0 to 230, 0 to 300, 0 to 400, 0 to 650, 0 to 1300, 0 to 1950, and 0 to 2500. As a result, there is plenty of power, formerly not available, for those low r.p.m. turning and threading operations. Motor load indicator on the headstock visually shows the operator when to change to a different geared range for varying work loads and maximum productivity.

A convenient control console houses a potentiometer dial and electric tachometer for instant selection and readout of actual spindle speeds. Speeds can be preselected or they can be changed while the lathe is running. The control console also contains a dual set of motor pushbutton controls for extra operator flexibility.

Extremely accurate, the Sheldon VR lathes have a guaranteed total indicator runout of the spindle nose of .0001". In addition, both the vertical and horizontal alignment of the headstock measured at the end of a 12" test bar are held within .0003".

These lathes have the same **standard equipment** as R13, R15 and R17 lathes with the exception of the spindle tolerance, motor drive and electrical controls. VR lathes are equipped with a 5 h.p., direct current motor with dynamic braking coupled to a 4 speed geared transmission . . . main line extra heavy duty solid state control with magnetic reversing for connecting to 220 volts, 50–60 cycle current through main line fused disconnect . . . motor load indicator . . . headstock control panel with forward, reverse and stop push buttons and power on light . . . console unit with dual set of motor pushbuttons, electric tachometer, potentiometer dial and 3 drawers for tool storage . . . precision spindle with .0001" T.I.R.

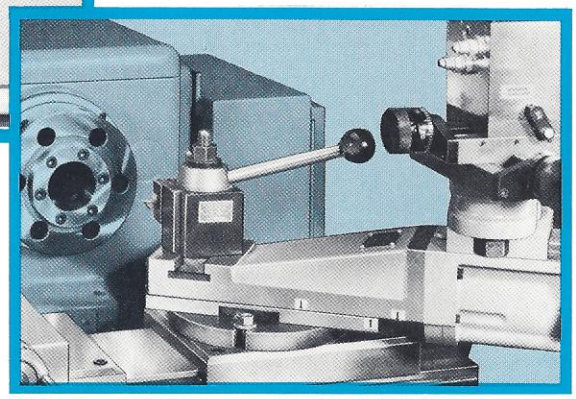


Two Axis 90° Tracing System

For additional versatility in accurate repetitive duplicating of both internal and external contours, Sheldon lathes can be equipped with a two axis 90° tracing system. This tracing system is capable of duplicating opposed 90° shoulders as well as any combination of grooves, radii, forms, tapers and diameters—all in one continuous cut.

Fundamental to the unique versatility of the tracing system is the ability of Sheldon lathes to provide the rigidity, spindle accuracy and wide speed range required for modern tracing operations.

Mounted to the lathe carriage, the all hydraulic tracer has its own separate carriage and cross slide. These are simultaneously controlled for precision tracing of opposed 90° square shoulders, in addition to any other forms or contours desired. The need to reverse the work piece to finish trace the back side of a contour as is often required in a single axis system is eliminated. Tracer has a longitudinal stroke of 6½" and a cross stroke of 3½".



Single axis tracers are readily mounted on Sheldon lathes for rapid, accurate machining of duplicate parts. They can be supplied for mounting on either the front or rear of the lathe cross slide. Front mounted, the tracer replaces the lathe compound and is operated by convenient controls on the tracer valve. Rear mounted tracers are supplied with their own swivel base and are operated by convenient front mounted controls. Template rails for rear mounted tracers run the full length of the lathe bed. Front mounted units have either a 14" or 48" template rail that clamps to the lathe bed and can be positioned as desired. All require tool holders with adjustable center heights. See illustrated accessory catalog for complete specifications.

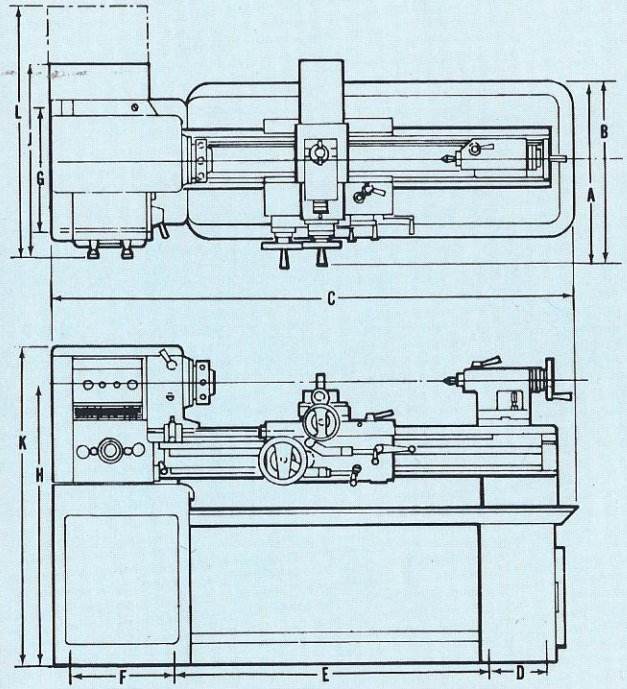
COMPLETE RANGE OF ACCESSORIES FOR YOUR TOOLING CONVENIENCE

Availability of proper tooling is an important convenience in the profitable operation of machine tools. That is why we build and catalog a complete and full range of accessories and attachments . . . not only to meet your initial needs, but to be able to be of help when your job requirements change.

These catalog items include a full range of work holding devices such as standard 3 and 4 jaw chucks, collet chucks, collet attachments and face plates . . . a wide variety of tool post turrets, tool holders, coolant systems, live centers and other miscellaneous types of tooling.

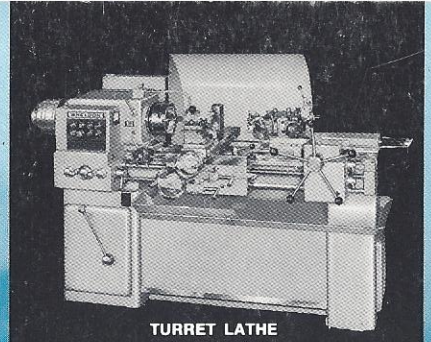
Write for this complete accessory catalog containing complete specifications, illustrations and ordering information.

SPECIFICATIONS	R-13	VR-13	R-15	VR-15	R-17	VR-17
CAPACITY AND CLEARANCES						
Swing over bed and carriage wings	13⅝″	13⅝″	15¼″	15¼″	17¼″	17¼″
Swing over cross slide	7⅞″	7⅞″	9⅛″	9⅛″	10⅜″	10⅜″
Bed lengths available	5′, 6′, 8′	5′, 6′, 8′	5′, 6′, 8′	5′, 6′, 8′	5′, 6′, 8′	5′, 6′, 8′
Center distances for above beds	30″, 42″, 66″	30″, 42″, 66″	30″, 42″, 66″	30″, 42″, 66″	30″, 42″, 66″	30″, 42″, 66″
Follow rest capacity	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″
Steady rest capacity	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″	⅜″ to 4″
Steady rest capacity (oversize)	4″ to 8″	4″ to 8″	4″ to 8″	4″ to 8″	4″ to 8″	4″ to 8″
HEADSTOCK						
Size cam lock spindle	4″ D1	4″ D1	6″ D1	6″ D1	6″ D1	6″ D1
Hole through spindle (clearance)	1½″	1½″	2¼″	2¼″	2¼″	2¼″
Collet Capacity—drawbar type (5C collet)	1⅛″	1⅛″	1⅛″	1⅛″	1⅛″	1⅛″
Collet Capacity—spindle nose type	1½″	1½″	2¼″	2¼″	2¼″	2¼″
Spindle Bearings—type	Tapered	Tapered	Tapered	Tapered	Tapered	Tapered
Spindle Bearings—class	"0"	"0"	"0"	"0"	"0"	"0"
FRONT BEARING						
Outside Diameter	4.724″	4.724″	6.000″	6.000″	6.000″	6.000″
Radial Load at 100 r.p.m.	7,780 lbs.	7,780 lbs.	12,562 lbs.	12,562 lbs.	12,5621 bs.	12,562 lbs.
Thrust Load at 100 r.p.m.	5,868 lbs.	5,868 lbs.	10,941 lbs.	10,941 lbs.	10,941 lbs.	10,941 lbs.
CENTER BEARING						
Outside Diameter	4.250″	4.250″	5.250″	5.250″	2.250″	5.250″
Radial Load at 100 r.p.m.	6,046 lbs.	6,046 lbs.	8,672 lbs.	8,672 lbs.	8,672 lbs.	8,672 lbs.
Thrust Load at 100 r.p.m.	5,446 lbs.	5,446 lbs.	7,538 lbs.	7,538 lbs.	7,538 lbs.	7,538 lbs.
REAR BEARING						
Outside Diameter	6.250″	6.250″	6.250″	6.250″	6.250″	6.250″
Radial Load at 100 r.p.m.	12,935 lbs.	12,935 lbs.	12,935 lbs.	12,935 lbs.	12,935 lbs.	12,935 lbs.
Thrust Load at 100 r.p.m.	7,699 lbs.	7,699 lbs.	7,699 lbs.	7,699 lbs.	7,699 lbs.	7,699 lbs.
Spindle Nose I.D. Taper	#5 M.T.	#5 M.T.	#6 M.T.	#6 M.T.	#6 M.T.	#6 M.T.
Spindle Nose Center Adaptor	5 to 3 M.T.	5 to 3 M.T.	6 to 4 M.T.	6 to 4 M.T.	6 to 4 M.T.	6 to 4 M.T.
Size of Centers	#3 M.T.	#3 M.T.	#4 M.T.	#4 M.T.	#4 M.T.	#4 M.T.
SPINDLE SPEEDS						
No. Spindle speeds	8	Infinite	8	Infinite	8	Infinite
Speed Range (Standard) r.p.m.	45-1250	0-2500	45-1250	0-2500	45-1250	0-2500
Actual speeds	45 120 160 200 300 630 940 1250		45 120 160 200 300 630 940 1250		45 120 160 200 300 630 940 1250	
Speed Range (Optional) r.p.m.	75-1800		75-1800		75-1800	
Actual Speeds	75 140 212 300 400 885 1330 1800		75 140 212 300 400 885 1330 1800		75 140 212 300 400 885 1330 1800	
CROSS SLIDE AND COMPOUND						
Carriage bridge width	5¹³⁄₁₆″	5¹³⁄₁₆″	7″	7″	7″	7″
Size of lead screw	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″
Size of feed rod	1⅛″	1⅛″	1⅛″	1⅛″	1⅛″	1⅛″
Length of carriage on bed	21″	21″	21″	21″	21″	21″
Cross slide travel	8¼″	8¼″	8¼″	8¼″	9¾″	9¾″
Cross slide table surface	5⅛″ x 26″	5⅛″ x 26″	5⅛″ x 26″	5⅛″ x 26″	5⅛″ x 26″	5⅛″ x 26″
Compound placement	Positionable	Positionable	Positionable	Positionable	Positionable	Positionable
Compound travel	3⅜″	3⅜″	3¾″	3¾″	3¾″	3¾″
Size of tool post opening	1¹⁄₁₆″	1¹⁄₁₆″	1¹⁄₁₆″	1¹⁄₁₆″	1¹⁄₁₆″	1¹⁄₁₆″
Size of tool holders	½″ x 1¼″	½″ x 1¼″	⅝″ x 1½″	⅝″ x 1½″	⅝″ x 1½″	⅝″ x 1½″
THREADS AND FEEDS						
Feed Changes	80	80	80	80	80	80
Feed Range per revolution	.0005 to .120	.0005 to .120	.0005 to .120	.0005 to .120	.0005 to .120	.0005 to .120
Thread range	4-960	4-960	4-960	4-960	4-960	4-960
Threads per inch—	4, 4.5, 5, 5.5, 5.75, 6, 6.5, 6.75, 7, 7.5, 8, 9, 10, 11, 11.5, 12, 13, 13.5, 14, 15, 16, 18, 20, 22, 23, 24, 26, 27, 28, 30, 32, 38 40, 44, 46, 48, 52, 54, 56, 60, 64, 72. 80, 88, 92, 96, 104, 108, 112, 120, 128, 144, 160, 176, 184, 192, 208, 216, 224, 240, 256, 288, 320, 352, 368, 384, 416, 432, 448, 480, 512, 576, 640, 704, 736, 768, 832, 864, 896, 960					
TAILSTOCK						
Spindle diameter	2¼″	2¼″	2¼″	2¼″	2¼″	2¼″
Spindle travel	5½″	5½″	5½″	5½″	5½″	5½″
Center	3 M.T.	3 M.T.	4 M.T.	4 M.T.	4 M.T.	4 M.T.
Set over right and left	¾″	¾″	¾″	¾″	¾″	¾″
MOTOR HORSEPOWER	3 h.p.	5 h.p. D.C.	5 h.p.	5 h.p. D.C.	5 h.p.	5 h.p. D.C.
SHIPPING WEIGHTS (6′ bed)						
Net Weight, approx.	3100 lbs.	3550 lbs.	3250 lbs.	3700 lbs.	3400 lbs.	3850 lbs.
Domestic Shipping Weight, approx.	3470 lbs.	4100 lbs.	3620 lbs.	4250 lbs.	3770 lbs.	4400 lbs.
Export Shipping Weight, approx.	3970 lbs.	5020 lbs.	4120 lbs.	5170 lbs.	4270 lbs.	5320 lbs.
Size of Export Box	45″ x 58″ x 108″	45″ x 58″ x 125″	45″ x 60″ x 108″	45″ x 60″ x 125″	45″ x 62″ x 108″	45″ x 62″ x 125″

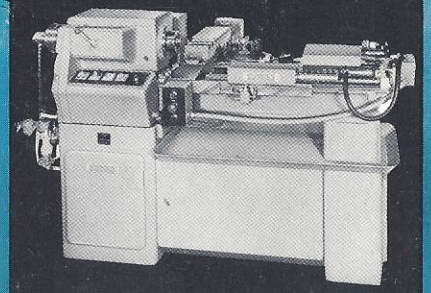


	R-13 & VR-13*	R-15 & VR-15*	R-17 & VR-17*
A	28	28	28
B	37½	37½	37½
**C	73¼ 85¼	73¼ 85¼	73¼ 85¼
	109¼	109¼	109¼
D	5¾	5¾	5¾
**E	41⅝ 53⅝	41⅝ 53⅝	41⅝ 53⅝
	77⅝	77⅝	77⅝
F	15¾	15¾	15¾
G	16¼	16¼	16¼
H	44¹⁵⁄₁₆	45¹⁵⁄₁₆	47⅛
J	25½	25½	25½
K	51	51¹¹⁄₁₆	52⅞
L	44³⁄₁₆	44³⁄₁₆	44³⁄₁₆

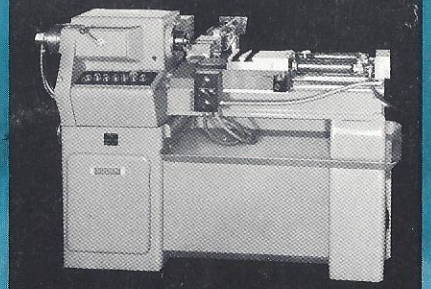
*Add 20″ to overall length plus floor space for control console.
**Depending on bed length: 5, 6, 8 foot beds optional.



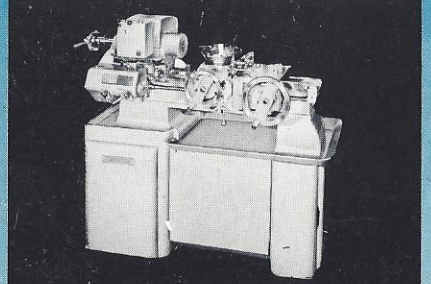
TURRET LATHE



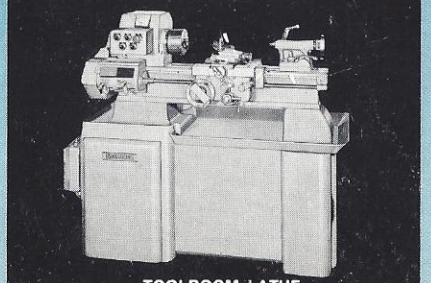
AUTOMATIC CHUCKING LATHE



AUTOMATIC LATHE



HAND CHUCKING LATHE



TOOLROOM LATHE

OTHER SHELDON MACHINE TOOLS

Sheldon builds a wide range of machine tools designed for generating an unlimited number of different kinds of piece parts. In addition to the 13″, 15″ and 17″ positionable compound lathes described in this catalog Sheldon builds standard 10″, 11″ and 13″ lathes, variable speed lathes, automatic lathes, turret lathes, high precision hand chucking machines, automatic chucking machines, tracing lathes and toolroom milling machines and shapers. Write for catalogs on these other Sheldon machine tools.

SHELDON MACHINE CO., INC.

Builders of precision machine tools

4258 N. KNOX AVENUE • CHICAGO, ILLINOIS 60641

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