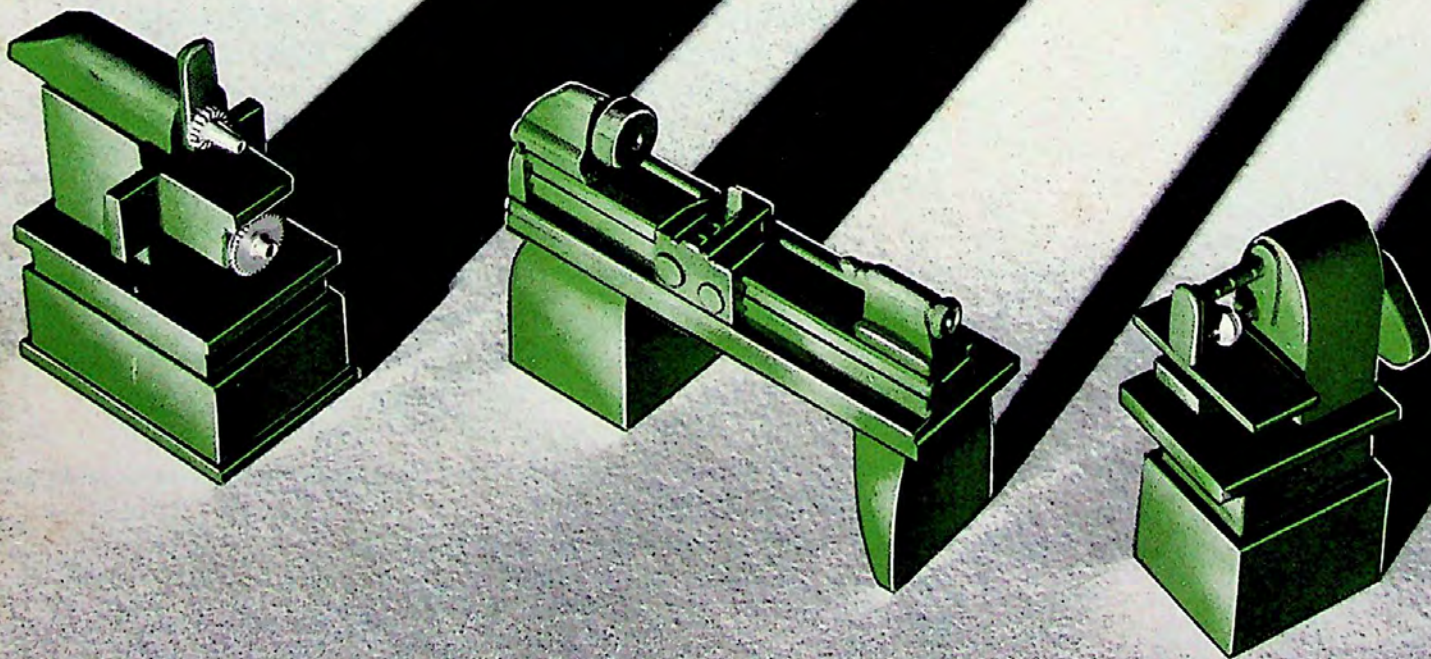


SHELDON

CHICAGO U. S. A.

Machine Tools

O'CONNELL MACHINERY CO., INC.
1635 CHESTER ST.
BUFFALO 11, NEW YORK



SHELDON MACHINE CO., INC.

4258 N. Knox Ave., Chicago 41, Illinois, U. S. A.

Buy **SHELDON LATHES** with confidence

Sheldon lathes are precision machine tools. Each lathe, from the largest to the smallest, receives the same careful and accurate workmanship. The Sheldon name is a symbol of quality in the machine tool field. Final inspection and a rigid 19-point accuracy test insure this quality. (See sample test sheet on the back cover.) An individual test sheet accompanies each lathe when shipped from the factory as your guarantee that you are receiving a precision machine tool.

Sheldon precision lathes embody new principles of design, in which strength and rigidity are obtained by the proper distribution of mass rather than through sheer bulk. As a result, they have greater capacity for size and are easier to operate than older type lathes.

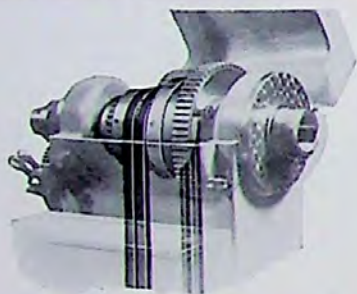
Sheldon lathes are accurate, precision tools in every detail. The construction features, parts and materials that go into them are those found in the finest machine tools.

QUALITY FEATURES FOUND ON SHELDON PRECISION LATHES



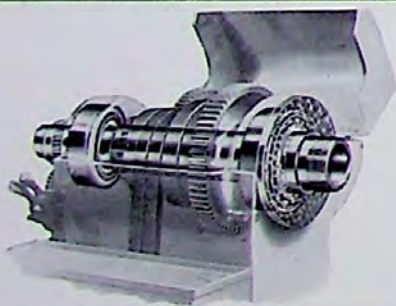
RUGGED BED

The one-piece beds are semi-steel, cast with heavy cross girths, normalized to remove inherent stresses and strains. The two V-ways and two flatways are ground and spotted. Spotting adds to the appearance and retains a protective oil film over the ways. Hardened bedways are available on 56" and 70" length beds at extra cost.



EXTRA POWER TO SPINDLE

Double V-belts to the spindle prevent slippage and assure the full power needed for heavy cutting. Sheldon users find most high speed production work can be done in direct drive. Special neoprene cog belts resist oil, heat, and static. They have greater wrap around and longer life expectancy than any other similar type belts. Sixteen spindle speeds are available through the use of a 2-speed motor with a high and low switch.



"ZERO PRECISION" TAPERED ROLLER BEARINGS

The spindle is mounted in "Zero Precision" tapered roller bearings. Even after long periods of hard and constant use at high or low speeds, these bearings retain their accuracy. They absorb both radial and end thrust and eliminate costly bearing maintenance.



HARDENED AND GROUND SPINDLE

The entire spindle, including the spindle threads, is hardened and ground to exact tolerances. L00 long taper key drive and 4" D1 camlock spindles are available at extra cost.

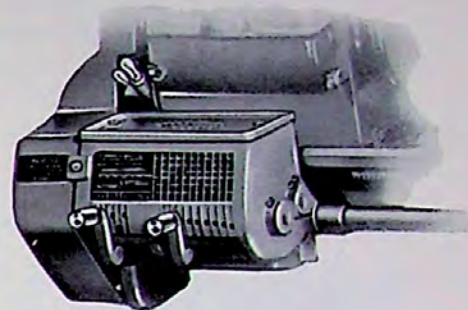


PRECISION LEAD SCREW

The lead screw is made from special stress-relieved steel. It is milled on a precision thread miller. The lead error is limited to .0004" in any 4". The lead screw threads are used only when the half-nuts are engaged for thread cutting. The carriage and apron are driven in power feeds through the use of a spline.

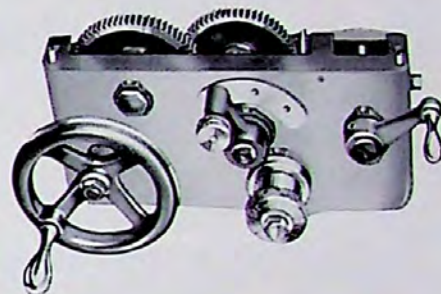
QUICK CHANGE GEAR BOX

The quick change gear box eliminates changes in end gearing and permits rapid selections of pitches and feeds while the lathe is running. The wide number of pitches available makes it possible to cut many unusual threads. In addition, through special end gears, almost any desired thread can be cut. As an accessory, the metric attachment is very simply installed for cutting metric threads.



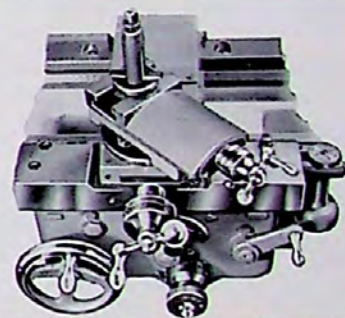
MODERN APRON

The large double-walled apron houses a new and improved friction disc type clutch for engaging both power longitudinal and power cross feeds. The half-nuts are handscraped and fitted. A built-in safety interlock prevents them from being engaged while the lathe is in power feed.



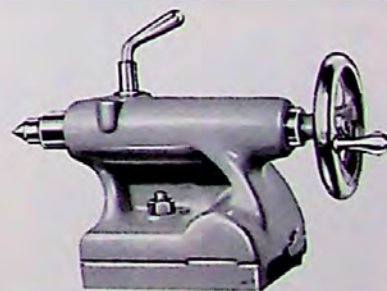
IMPROVED CARRIAGE

The carriage is handscraped and fitted so that it has bearing surface the full length of the carriage ways. All Sheldon lathes are equipped with large micrometer dials and extra large precision feed screws. Tapered gibs provide easy adjustment for wear.



TAILSTOCK

The tailstock is handscraped to the ways and is accurately aligned to the spindle. The spindle is ground and is graduated in increments of one sixteenth of an inch.



RIGID INSPECTION

Each lathe is carefully inspected and tested for 19 different accuracy checks before leaving the plant. (See test sheet on back cover.) This individual test sheet accompanies each lathe as your guarantee that it is a precision machine tool.

STANDARD EQUIPMENT

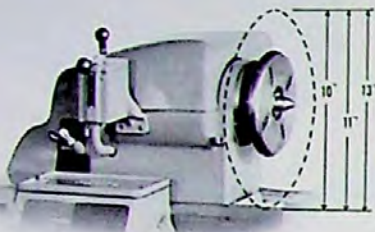
The following items are furnished as standard equipment and included in the base price of a Sheldon lathe: Necessary Belts . . . Centers . . . Center Sleeve . . . Small Dog Plate . . . Wrenches . . . Tool Post . . . Thread Chasing Dial . . . *Care and Operation of a Lathe Manual.*

SHELDON GUARANTEE

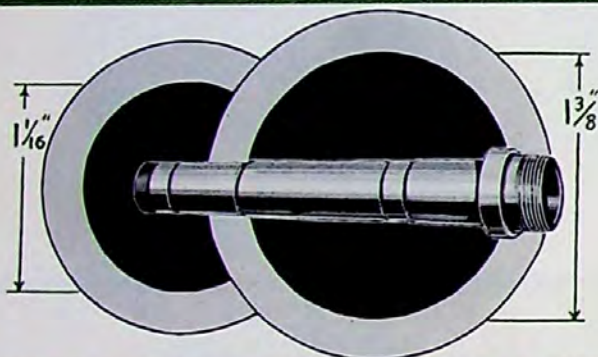
Every Sheldon machine tool is guaranteed to be accurate and mechanically correct when it leaves our factory. Any part that within one year from date of purchase is defective in workmanship or material will be repaired or replaced.

How to select your **SHELDON LATHE**

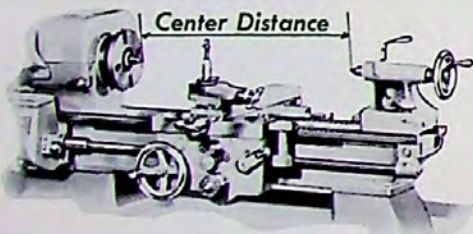
Sheldon lathes are designed to meet the varied needs of industry, shops and schools. Through experience we have found that the 16 different models illustrated and described meet the requirements of almost every type of job. To help you choose the correct machine, we suggest that you follow these steps.



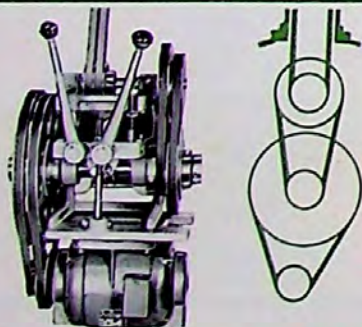
- 1. Determine the swing** required for your work. Sheldon lathes are built with a 10" (L and XL Series), 11" (S Series) and 13" (M Series) swing, because many companies have found that a large part of their work can be done on lathes of this size. This has meant a big saving in equipment and production costs either in eliminating the need for larger and more expensive machines or by freeing them for the work for which they are best suited. The same precision features are found in the headstock of all Sheldon lathes, regardless of swing.



- 2. Determine the collet capacity and the hole through the spindle** required. The large, $1\frac{3}{8}$ " hole through the spindle, 1" collet capacity, is standard on 11" and 13" swing lathes. The 10" lathes can be supplied with either the $1\frac{3}{8}$ " hole through the spindle, 1" collet capacity, (XL series) or with a $1\frac{1}{16}$ " hole through the spindle, $\frac{3}{4}$ " collet capacity, (L series).

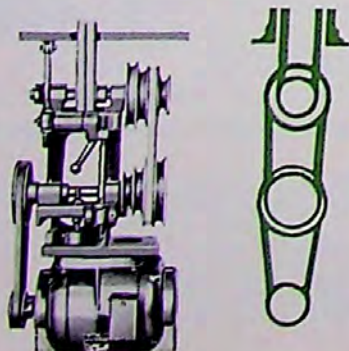


- 3. Select the center distance** you require. Sheldon 10" (L and XL series) lathes are available with 26" between centers (46" bed), and 36" between centers (56" bed). Sheldon 11" (S series) have 34" between centers (56" bed). Sheldon 13" (M series) lathes are available with 34" between centers (56" bed), and 48" between centers (70" bed). Hardened ways are available on 11" or 13" lathes with 56" or 70" beds.



- 4. Select the drive** that you would like installed in your Sheldon lathe. Sheldon builds four different V-belt drives.

- The U-type underneath drive has 8 spindle speeds from 40 to 1050 r. p. m. This drive permits instantaneous selection of spindle speeds through external shifting levers.



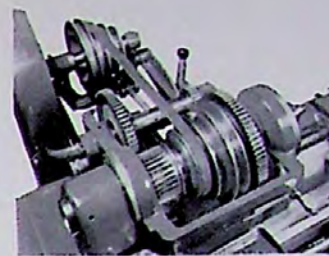
- The E-type underneath drive has 8 spindle speeds from 50 to 1355 r.p.m. The "E" drive operates from a single motor pulley to countershaft, using four-step V-belt pulleys for spindle speed changes, then to spindle with double neoprene cog belts.

- A 16-speed E-type drive from 50 to 1600 r.p.m. can be sup-

plied as optional equipment at no extra charge in place of the 8-speed E-drive. The additional speeds are obtained by a belt change between a two-step motor pulley and a two-step countershaft pulley.

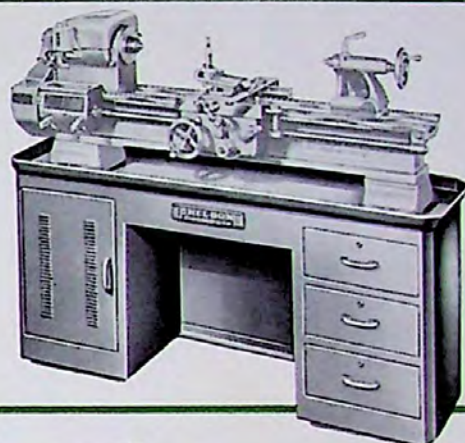
R.P.M. of Spindle, High range	
Open belt	680, 930, 1185, 1600
Back gears engaged	130, 175, 225, 300
R.P.M. of Spindle, Low range	
Open belt	270, 365, 460, 635
Back gears engaged	50, 70, 90, 120

- d. The horizontal drive has 8 spindle speeds from 59 to 1195 r. p. m. and is used on 10" bench lathes. These are lathes that can be mounted on your own work bench. The horizontal drive drives from the motor to the jackshaft to the spindle through four-step pulleys.

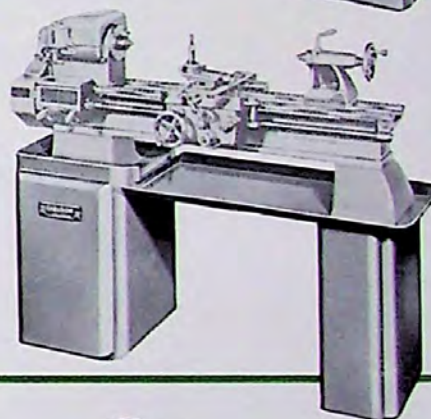


5. Select the type of mounting, from the three different mountings built.

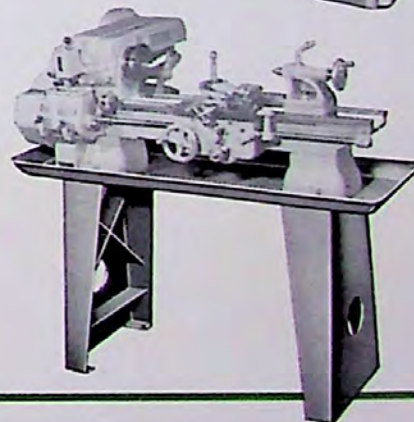
- a. The cabinet type mounting for underneath "E" or "U" type drives. The cabinet is rigidly braced, encloses the motor and drive, and has easy-sliding roller drawers for convenient storage of tools, chucks and accessories. The top of the cabinet acts as an oil and chip pan.



- b. The new pedestal type mounting is also for underneath "E" or "U" type drives. It is made of heavy cast iron, fully encloses the motor and drive. There is a unique storage space in the pedestal leg for tools and accessories. Although normally purchased with all lathes, the chip pan is supplied at extra cost.



- c. There is a floor leg and chip pan assembly for horizontal drive lathes. This is an optional accessory at extra cost.



6. Sheldon lathes are grouped into four series:

- a. "L" series: 10 $\frac{1}{8}$ " swing, $\frac{3}{4}$ " collet capacity.
- b. "XL" series: 10 $\frac{1}{8}$ " swing, 1" collet capacity.
- c. "S" series: 11 $\frac{1}{4}$ " swing, 1" collet capacity.
- d. "M" series: 13 $\frac{1}{8}$ " swing, 1" collet capacity.

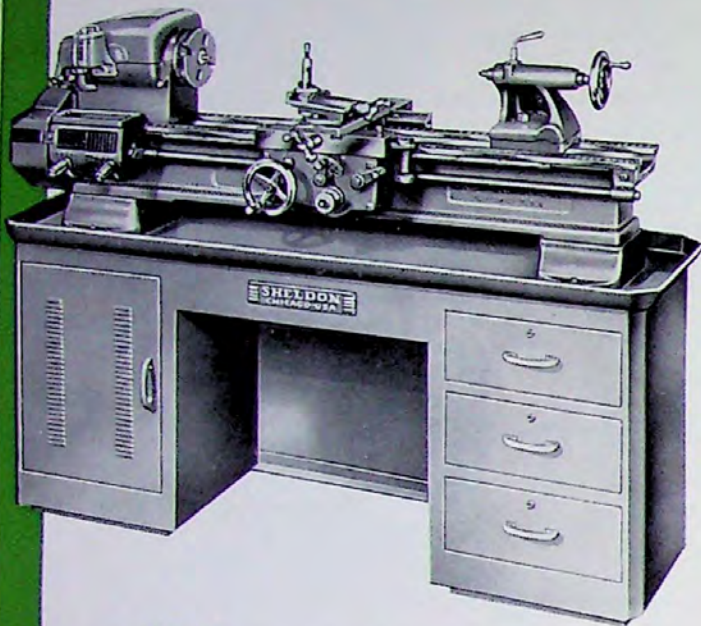
The letter "E" or "U" before the series letter indicates the type of drive. Numerals after series letter indicate the bed length. The letters "P" or "B" after the bed length tell whether the lathe

is mounted on a pedestal or cabinet. Thus, an EM56P has an "E" drive, 13 $\frac{1}{8}$ " swing, 56" bed length, and is mounted on a pedestal.

If none of the 16 models on the following pages fit your needs, call on your local Sheldon distributor or write for information on special models. You can readily see that the combination of drives, bed lengths, and mountings make a large number of variations possible.

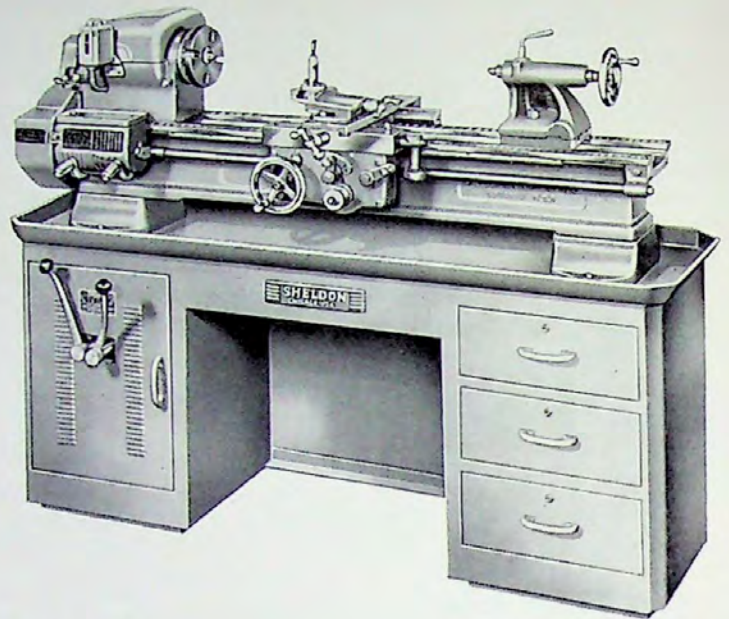
SHELDON

"M" SERIES 13" LATHES



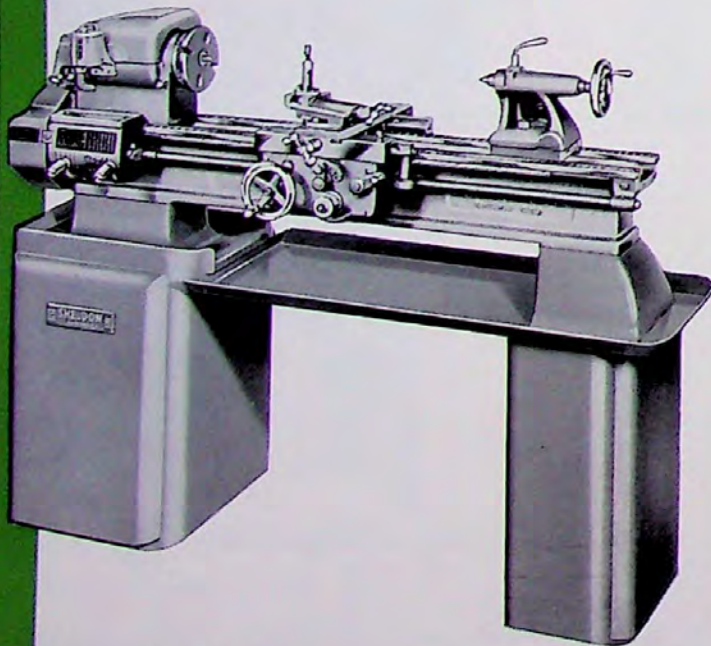
EM56B

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 34" between centers. An extremely compact unit, this all purpose lathe answers the need for easy storage facilities required in toolrooms and shops. All Sheldon lathes are built to the same toolroom accuracy standards.



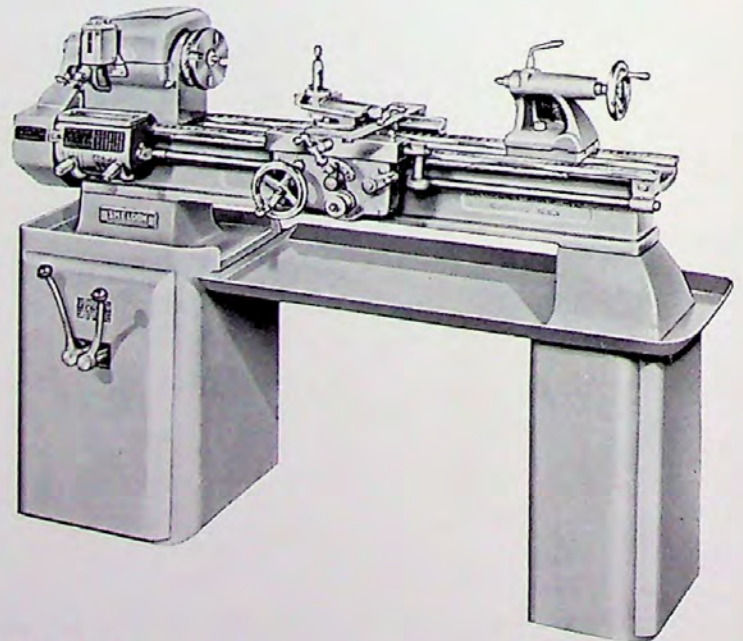
UM56B

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 34" between centers. With sufficient center distance to handle most jobs in schools, toolrooms and shops, this lathe features the combination of rapid spindle speed changes through the "U" drive as well as the convenience of the large storage space in the three drawers.



EM56P

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 34" between centers. Especially suited for production, school and toolroom use, this lathe features the new pedestal mounting with the large storage space in the tailstock leg.

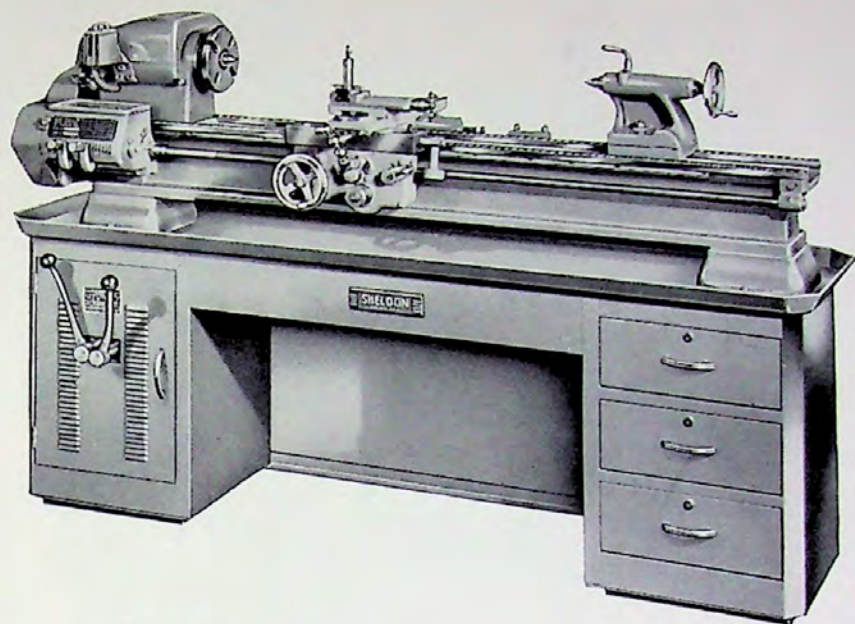


UM56P

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 34" between centers. The combination of rapid spindle speed changes through the "U" drive and the new pedestal mounting makes this lathe a favorite for production, toolroom and school work.

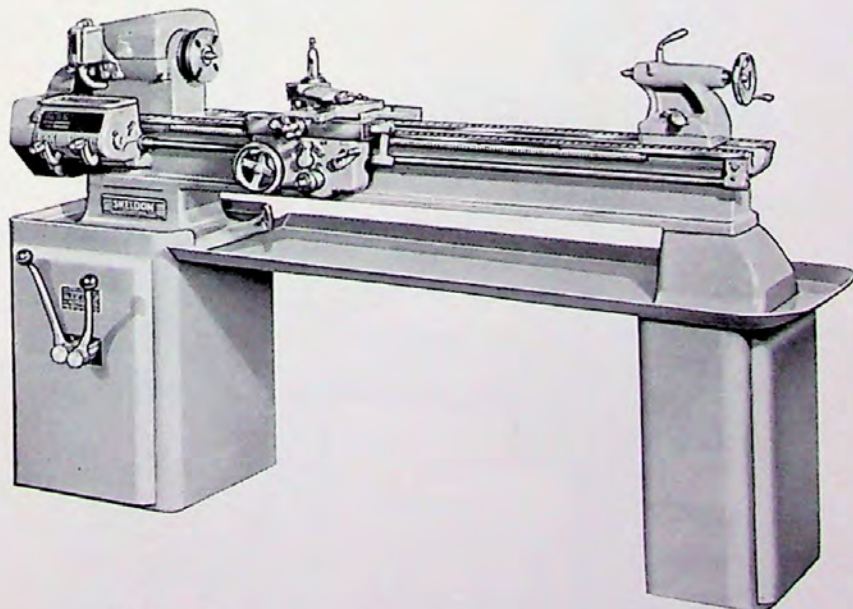
SHELDON

Specifications



UM70B

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 48" between centers. An ideal machine for toolroom use where long pieces are turned between centers. The "U" drive permits rapid shifting of spindle speeds while the lathe is in operation. The cabinet drawers provide storage space for tools and accessories.



UM70P

Swings $13\frac{1}{8}$ ", has a large, $1\frac{3}{8}$ " hole through the spindle and 48" between centers. Where long work is being turned and the "U" drive advantages are desired in a pedestal mounting, this powerful lathe is a good selection.

CAPACITY AND CLEARANCES

Swing over bed	13 $\frac{1}{8}$ "
Swing over cross-slide	9"
Distance between centers	34", 48"
Carriage length	13"
Carriage bridge width	4 $\frac{1}{2}$ "
Bed length	56", 70"
Bed width	8"
Bed height	7 $\frac{3}{4}$ "

HEADSTOCK

Hole through spindle	1 $\frac{3}{8}$ "
Maximum collet capacity—drawbar type	1"
Maximum collet capacity—spindle nose type	1 $\frac{3}{8}$ "
Front spindle bearing I.D.	2.250"
O.D.	4.125"
Rear spindle bearing I.D.	2.000"
O.D.	3.625"
Headstock spindle taper—Morse	No. 5
Size of center—Morse taper	No. 3
Spindle nose diameter and T.P.I.	2 $\frac{1}{4}$ " x 8
Ratio of back gears	5.4—1
Size and number of spindle V-belts	(2) B section
Large face plate diameter	12"
Small face plate diameter	5 $\frac{7}{8}$ "

COMPOUND REST

Cross slide travel	7"
Angular feed of cross slide	3 $\frac{1}{2}$ "

TOOL POST

Size of opening for tool holder shank	$\frac{5}{8}$ " x 2 $\frac{1}{2}$ "
Size of cutter bit tool holder takes	$\frac{5}{16}$ "

TAILSTOCK

Size of Morse taper center	No. 3
Spindle travel	3 $\frac{1}{2}$ "
Spindle diameter	1 $\frac{7}{16}$ "
Tailstock graduations	$\frac{1}{16}$ "
Tailstock set over	1"

THREADS AND FEEDS

Thread pitches available	54
Longitudinal feeds through friction clutch	.0009 to .0535
Cross feeds through friction clutch	.0008 to .049
Lead screw diameter and T.P.I.	$\frac{7}{8}$ " x 8
Screw threads per inch	4, 4 $\frac{1}{2}$, 5, 5 $\frac{1}{2}$, 5 $\frac{3}{4}$, 6, 6 $\frac{1}{2}$, 6 $\frac{3}{4}$, 7, 8, 9, 10, 11, 11 $\frac{1}{2}$, 12, 13, 13 $\frac{1}{2}$, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.

SPINDLE SPEEDS

E-type underneath motor drive	
R.P.M. of spindle, open belt	280 482 788 1355
R.P.M. of spindle, back gears engaged	50 87 142 244
16 speed E-type underneath motor drive (see page 4)	
U-type underneath motor drive	
R.P.M. of spindle, open belt	245 445 600 1050
R.P.M. of spindle, back gears engaged	40 75 100 175

MOTOR

*Horsepower recommended	1 H.P.
R.P.M. recommended	1725 R.P.M.

*For extra power use 1 $\frac{1}{2}$ H.P., 1725 R.P.M. Motor.

SHELDON

Specifications

CAPACITY AND CLEARANCES

Swing over bed	11 1/4"
Swing over cross-slide	8"
Distance between centers	34"
Carriage length	13"
Carriage bridge width	4 1/2"
Bed length	56"
Bed width	8"
Bed height	7 3/4"

HEADSTOCK

Hole through spindle	1 3/8"
Maximum collet capacity—drawbar type	1"
Maximum collet capacity—spindle nose type	1 3/8"
Front spindle bearing I.D.	2.250"
O.D.	4.125"
Rear spindle bearing I.D.	2.000"
O.D.	3.625"
Headstock spindle taper—Morse	No. 5
Size of center—Morse taper	No. 3
Spindle nose diameter and T.P.I.	2 1/4" x 8
Ratio of back gears	5.4—1
Size and number of spindle V-belts:	(2) B section
Large face plate diameter	11"
Small face plate diameter	5 7/8"

COMPOUND REST

Cross slide travel	7"
Angular feed of cross slide	3 1/2"

TOOL POST

Size of opening for tool holder shank	1/2" x 2"
Size of cutter bit tool holder takes	1/4"

TAILSTOCK

Size of Morse taper center	No. 3
Spindle travel	3 1/2"
Spindle diameter	1 7/16"
Tailstock graduations	1/16"
Tailstock set over	1"

THREADS AND FEEDS

Thread pitches available	54
Longitudinal feeds through friction clutch	.0009 to .0535
Cross feeds through friction clutch	.0008 to .049
Lead screw diameter and T.P.I.	7/8" x 8
Screw threads per inch	4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.

SPINDLE SPEEDS

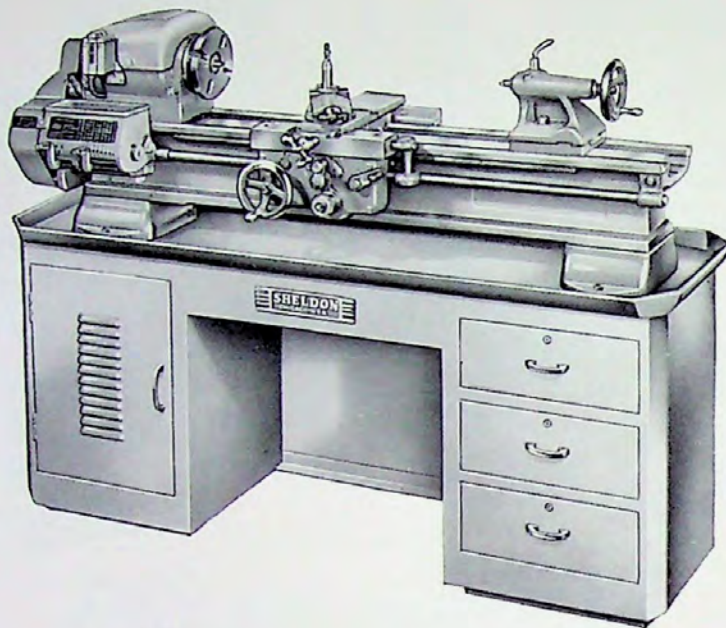
E-type underneath motor drive	
R.P.M. of spindle, open belt	280 482 788 1355
R.P.M. of spindle, back gears engaged	50 87 142 244
16 speed E-type underneath motor drive (see page 4)	

MOTOR

*Horsepower recommended	1 H.P.
R.P.M. recommended	1725 R.P.M.

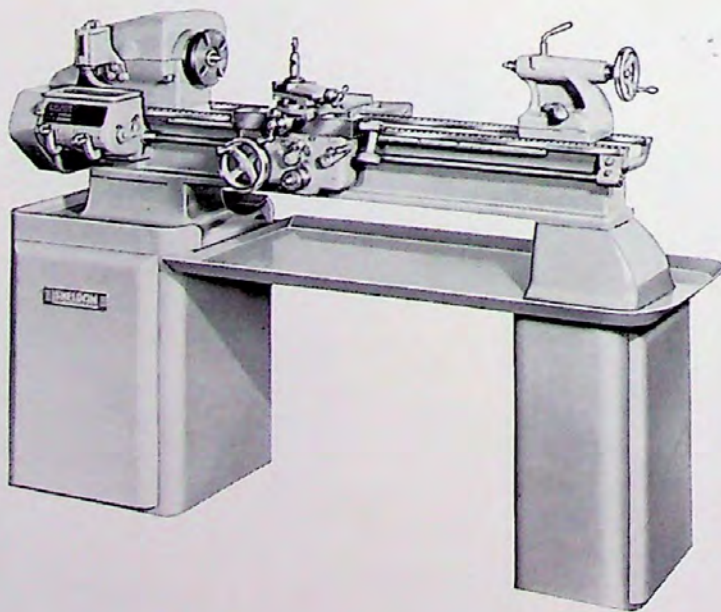
*For extra power use 1 1/2 H.P., 1725 R.P.M. Motor.

"S" SERIES 11" LATHES



ES56B

Swings 11 1/4", has large, 1 3/8" hole through the spindle and 34" between centers. With cabinet and "E" drive this powerful lathe has found wide acceptance in toolrooms and shops.

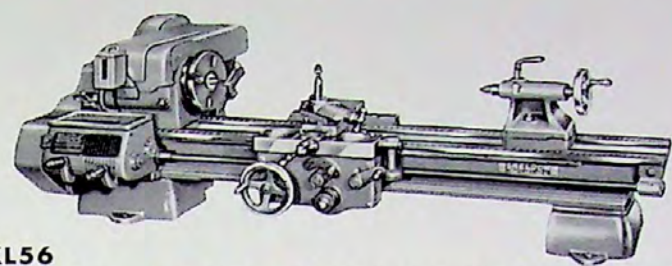


ES56P

Swings 11 1/4", has a large, 1 3/8" hole through the spindle and 34" between centers. You will like the new stream-lined pedestal with extra storage space.

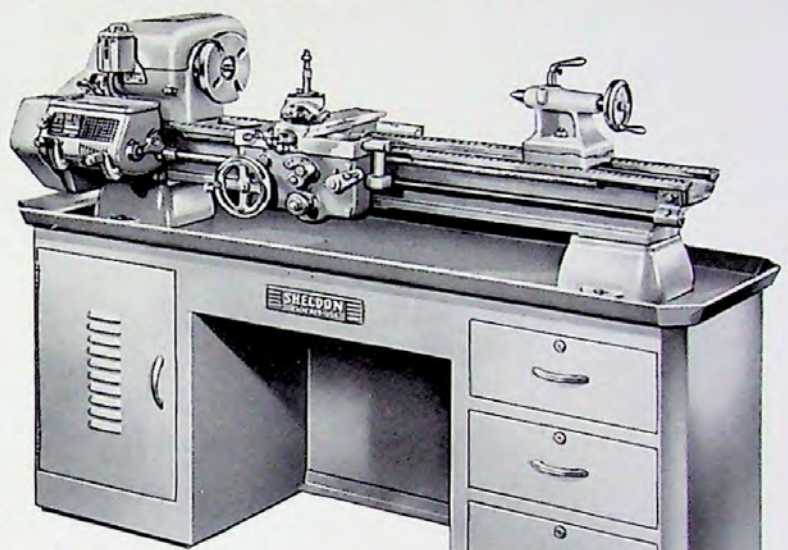
"XL" SERIES 10" LATHES

SHELDON



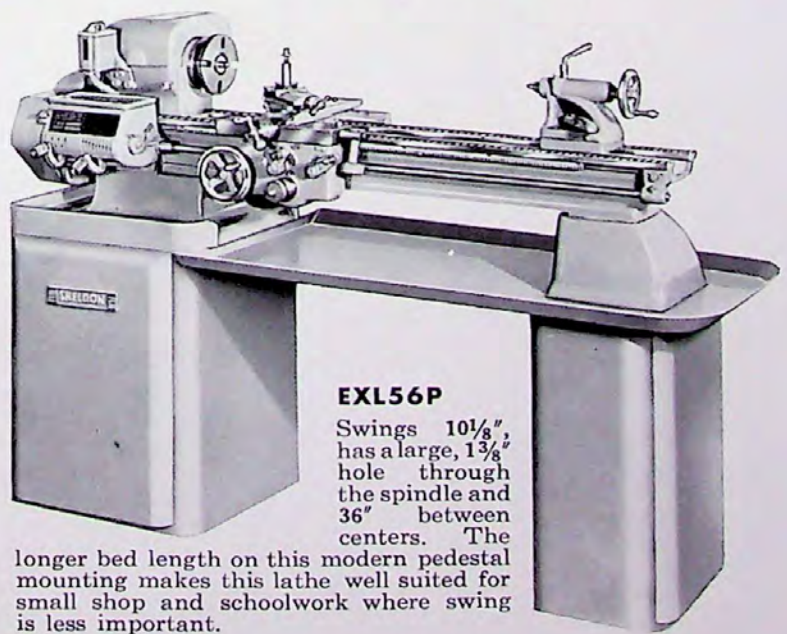
XL56

Swings 10 1/8", has a large, 1 3/8" hole through the spindle and 36" between centers. This is ideal for the shop or school that needs a lathe that can be mounted on their own bench and still retain the feature of the large spindle capacity. The only model of its kind.



EXL56B

Swings 10 1/8", has a large, 1 3/8" hole through the spindle and 36" between centers. This is an ideal lathe for schools and shops. Although not included on the machines illustrated, the "U" drive can be installed in all pedestal and cabinet models.



EXL56P

Swings 10 1/8", has a large, 1 3/8" hole through the spindle and 36" between centers. The

longer bed length on this modern pedestal mounting makes this lathe well suited for small shop and schoolwork where swing is less important.

EXL46P

Swings 10 1/8", has a large 1 3/8" hole through the spindle and 26" between centers. This is similar in appearance to the lathe illustrated above except for the shorter distance between centers.

Specifications

CAPACITY AND CLEARANCES

Swing over bed	10 1/8"
Swing over cross-slide	6 1/16"
Distance between centers	26", 36"
Carriage length	11"
Carriage bridge width	3 3/4"
Bed length	46", 56"
Bed width	7"
Bed height	5 1/2"

HEADSTOCK

Hole through the spindle	1 3/8"
Maximum collet capacity—drawbar type	1"
Maximum collet capacity—spindle nose type	1 3/8"
Front spindle bearing I.D.	2.250"
O.D.	3.843"
Rear spindle bearing I.D.	1.750"
O.D.	3.031"
Headstock spindle taper—Morse	No. 5
Size of center—Morse taper	No. 2
Spindle nose diameter and T.P.I.	2 1/4" x 8
Ratio of back gears	5.4—1
Size and number of spindle V-belts:	
Horizontal	1, B section
Underneath	2, B section
Large face plate diameter	10"
Small face plate diameter	5 7/8"

COMPOUND REST

Cross slide travel	6 7/8"
Angular feed of cross slide	2 1/4"

TOOL POST

Size of opening for tool holder shank	1/2" x 1 1/8"
Size of cutter bit tool holder takes	1/4"

TAILSTOCK

Size of Morse taper center	No. 2
Spindle travel	2 1/2"
Spindle diameter	1 1/8"
Tailstock graduations	1/16"
Tailstock set over	7/8"

THREADS AND FEEDS

Thread pitches available	54
Longitudinal feeds through friction clutch	.0009 to .0535
Cross feeds through friction clutch	.0008 to .049
Lead screw diameter and T.P.I.	3/4" x 8
Screw threads per inch	
4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.	

SPINDLE SPEEDS

E-type underneath motor drive	
R.P.M. of spindle, open belt	280 482 788 1355
R.P.M. of spindle, back gears engaged	50 87 142 244
16 speed E-type underneath motor drive (see page 4)	
Horizontal motor drive	
R.P.M. of spindle, open belt	316 491 755 1195
R.P.M. of spindle, back gears engaged	59 91 140 222

MOTOR

Horsepower recommended	3/4 H.P.
R.P.M. recommended	1725 R.P.M.

SHELDON

Specifications

CAPACITY AND CLEARANCES

Swing over bed	10 $\frac{1}{8}$ "
Swing over cross-slide	6 $\frac{3}{8}$ "
Distance between centers	26", 36"
Carriage length	11"
Carriage bridge width	3 $\frac{3}{4}$ "
Bed length	46", 56"
Bed width	7"
Bed height	5 $\frac{1}{2}$ "

HEADSTOCK

Hole through the spindle	1 $\frac{1}{16}$ "
Maximum collet capacity—drawbar type	$\frac{3}{4}$ "
Maximum collet capacity—spindle nose type	1"
Front spindle bearing I.D.	1.75"
O.D.	3.34"
Rear spindle bearing I.D.	1.43"
O.D.	2.83"
Headstock spindle taper—Morse	No. 4
Size of center—Morse taper	No. 2
Spindle nose diameter and T.P.I.	1 $\frac{3}{4}$ " x 8
Ratio of back gears	5.4—1
Size and number of spindle V-belts:	
Horizontal	1, B section
Underneath	2, B section
Large face plate diameter	9"
Small face plate diameter	5 $\frac{7}{8}$ "

COMPOUND REST

Cross slide travel	6 $\frac{3}{8}$ "
Angular feed of cross slide	2 $\frac{1}{4}$ "

TOOL POST

Size of opening for tool holder shank	$\frac{1}{2}$ " x 1 $\frac{7}{8}$ "
Size of cutter bit tool holder takes	$\frac{1}{4}$ "

TAILSTOCK

Size of Morse taper center	No. 2
Spindle travel	2 $\frac{1}{2}$ "
Spindle diameter	1 $\frac{1}{8}$ "
Tailstock graduations	$\frac{1}{16}$ "
Tailstock set over	$\frac{7}{8}$ "

THREADS AND FEEDS

Thread pitches available	48
Longitudinal feeds through friction clutch	.0005 to .026
Cross feeds through friction clutch	.0008 to .024
Lead screw diameter and T.P.I.	$\frac{3}{4}$ " x 8
Screw threads per inch	
	4, 4 $\frac{1}{2}$, 5, 5 $\frac{1}{2}$, 5 $\frac{3}{4}$, 6, 6 $\frac{1}{2}$, 7, 8, 9, 10, 11, 11 $\frac{1}{2}$, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112, 128, 144, 160, 176, 184, 192, 208, 224.

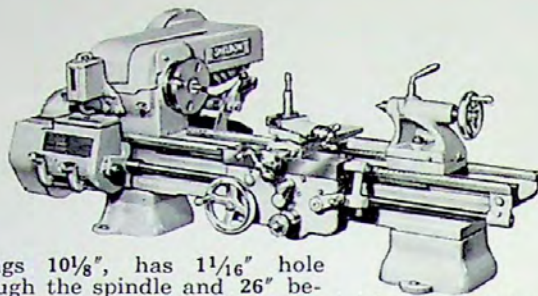
SPINDLE SPEEDS

E-type underneath motor drive	
R.P.M. of spindle, open belt	280 482 788 1355
R.P.M. of spindle, back gears engaged	50 87 142 244
16 speed E-type underneath motor drive (see page 4)	
Horizontal motor drive	
R.P.M. of spindle, open belt	316 491 755 1195
R.P.M. of spindle, back gears engaged	59 91 140 222

MOTOR

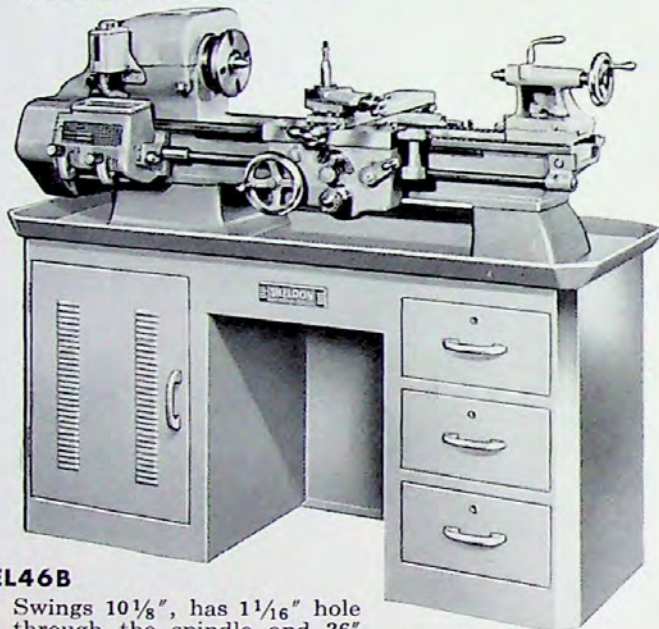
Horsepower recommended	$\frac{3}{4}$ H.P.
R.P.M. recommended	1725 R.P.M.

"L" SERIES 10" LATHES



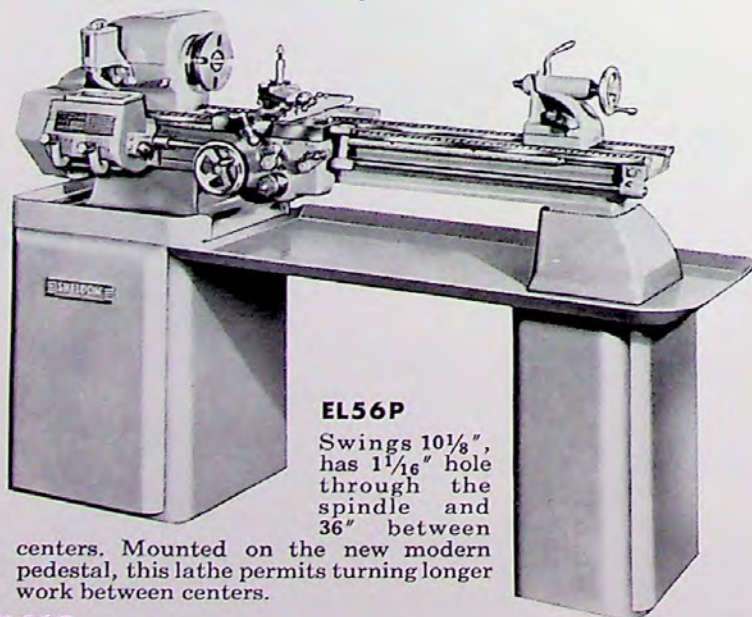
L46

Swings 10 $\frac{1}{8}$ ", has 1 $\frac{1}{16}$ " hole through the spindle and 26" between centers. This new horizontal drive model meets the needs of schools and industry for a low cost lathe with big lathe performance that can be mounted on a workshop bench. This bench model lathe can also be mounted on a special floor leg and chip pan assembly. (See accessory pages.)



EL46B

Swings 10 $\frac{1}{8}$ ", has 1 $\frac{1}{16}$ " hole through the spindle and 26" between centers. Mounted on sturdy cabinet base, this lathe, like all Sheldon lathes, must conform to the rigid 19-point test sheet that accompanies each lathe when it leaves the factory.



EL56P

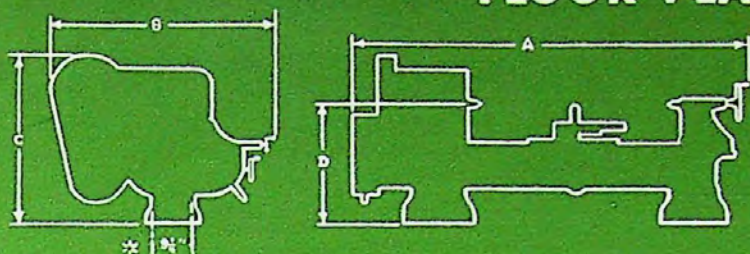
Swings 10 $\frac{1}{8}$ ", has 1 $\frac{1}{16}$ " hole through the spindle and 36" between

centers. Mounted on the new modern pedestal, this lathe permits turning longer work between centers.

EL46P

Swings 10 $\frac{1}{8}$ ", has a 1 $\frac{1}{16}$ " hole through the spindle and 26" between centers. This lathe is similar to the one illustrated above except for the shorter center distance.

FLOOR PLAN DIMENSIONS



Model No.	A	B	C	D
L46	51"	32"	20½"	14¾"
XL56	63"	32"	20½"	14¾"

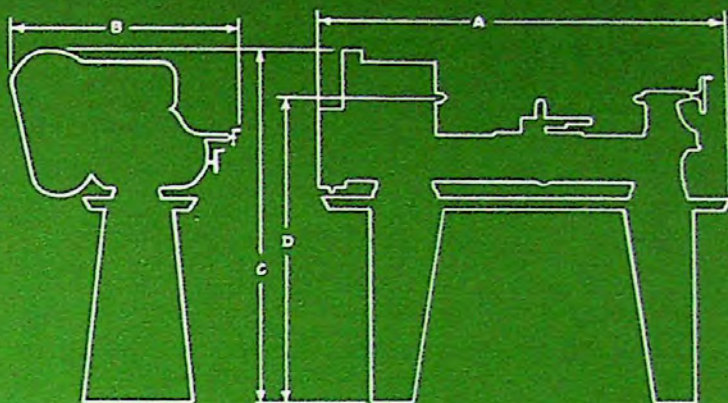
In addition to the actual requirements for floor space shown in these lathe floor plan dimensions, it is necessary to allow extra space around the machine for its operation.

40" to 48" should be allowed for the operator to work in front of the machine.

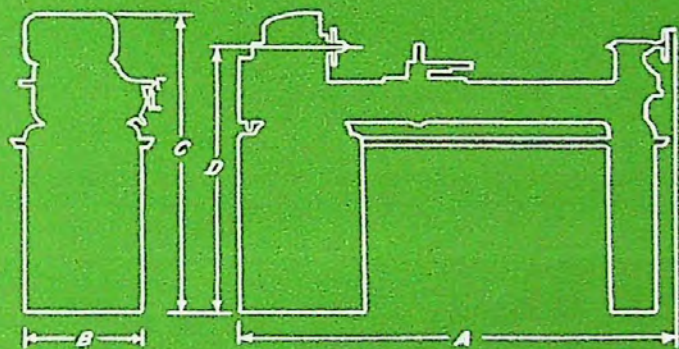
4½" should be allowed behind the lathe if the lathe is, or is to be, equipped with a taper attachment.

15" should be allowed at the headstock end of the lathe so that the end gear guard will open all the way.

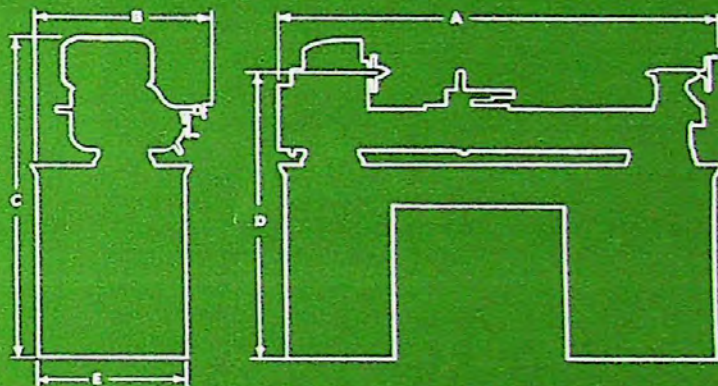
If long bar stock is to be fed through the spindle, additional space will be required at the headstock end.



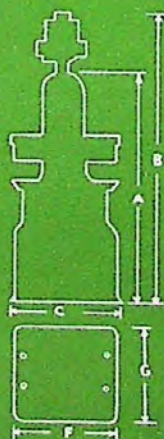
Model No.	A	B	C	D
L46 & A2049	56"	32"	48½"	42¾"
XL56 & A2050	66"	32"	48½"	42¾"



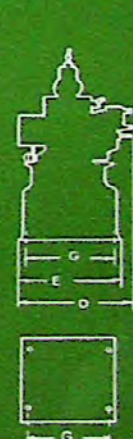
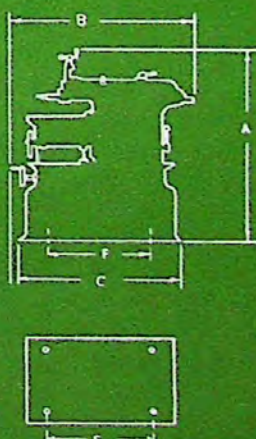
Model No.	A	B	C	D
EL46P	60"	24"	45"	39½"
EL56P	66"	24"	45"	39½"
EXL44P	60"	24"	45"	39½"
EXL56P	66"	24"	45"	39½"
ES56P	66"	24"	47"	42"
EM56P	66"	24"	48"	43"
UM56P	66"	24"	48"	43"
UM70P	79"	24"	47"	42"



Model No.	A	B	C	D
EL46B	54¾"	17"	47"	42½"
EXL56B	66¾"	17"	47"	42½"
ES56B	66¾"	17"	49"	45½"
EM56B	66¾"	17"	50"	46½"
UM56B	66¾"	17"	50"	46½"
UM70B	79"	17"	49"	45½"



A	63"
B	75"
C	22"
D	31"
E	39"
F	22"
G	27"
H	20¼"
I	15¾"



A	59"
B	50"
C	44½"
D	31"
E	29"
F	22"
G	27½"

IMPORTANT: Lathe must be accurately leveled.

SHELDON

CHICAGO U. S. A.

BENCHES, Lathe

No. S1367, for 44" Bed, All Series Lathes, weight 300 lbs.
No. S1366, for 56" Bed, All Series Lathes, weight 330 lbs.
No. S1368, for 70" Bed, All Series Lathes, weight 360 lbs.

The steel lathe bench is of the latest design with improved bracing and securely welded joints to give solid support to the lathe. The top of the bench is of heavy steel plate and serves as a chip pan. Suitable foot pads with bolt holes are furnished for anchoring the bench securely to the floor. Three large bench drawers that can be independently locked provide ample storage space for tools and work in progress.

BOOK, Care and Operation of a Lathe

Standard equipment with new lathes.



CENTER, Crotch

No. K223A, No. 2 Morse Taper, for L & XL Series Lathes, weight 1 lb.
No. S1446, No. 3 Morse Taper, for S & M Series Lathes, weight 1 lb.



Used in tailstock as a "V" block support for drilling round stock. Width of "V" on face $1\frac{1}{8}$ " by 90° angle; diameter of face, $1\frac{3}{4}$ "; overall length 4".

CENTERS, Cup, Set

No. A2024, (No. 2 Morse Taper), for L & XL Series Lathes, weight 4 lbs.
No. A2025, (No. 3 Morse Taper), for S & M Series Lathes, weight 4 lbs.



For turning armatures on shafts that have no centers. Set provides one live cup center for tailstock, one solid cup center for the headstock.

CENTER, Drill Pad

No. K221A, No. 2 Morse Taper, for L & XL Series Lathes, weight 3 lbs.
No. S1447, No. 3 Morse Taper, for S & M Series Lathes, weight 3 lbs.



Used in tailstock as a supporting face for drilling miscellaneous flat stock. Face diameter 4", width $\frac{1}{2}$ ", overall length $3\frac{3}{4}$ ".

CENTER, Female

No. K274, No. 2 Morse Taper, for L & XL Series Lathes, weight $\frac{1}{2}$ lb.
No. S1450, No. 3 Morse Taper, for S & M Series Lathes, weight 1 lb.



Used to support conical or pointed work, or stock with integral male centers. Drilled and countersunk with standard center drill.

CENTER, Half-male

No. S82, No. 2 Morse Taper, for L & XL Series Lathes, weight 1 lb.
No. S1449, No. 3 Morse Taper, for S & M Series Lathes, weight 1 lb.



Standard 60° center partially cut away as illustrated for use in tailstock spindle for facing and squaring ends of stock supported between centers.

CENTER, Headstock Sleeve

No. K278, 4—2 Morse Taper, for L Series Lathes, weight $\frac{1}{2}$ lb.
No. KB465, 5—2 Morse Taper, for XL Series Lathes, weight $\frac{1}{2}$ lb.
No. 1529, 5—3 Morse Taper, for S & M Series Lathes, weight 1 lb.



Center sleeve is precision ground to fit taper bore of headstock spindle nose. Tapered hole in sleeve has standard No. 2 Morse Taper for L and XL series lathes, standard No. 3 Morse Taper for S and M series lathes. Standard equipment with new lathes.

LATHE ACCESSORIES

CENTER, Live, Toolmaker's Set

No. A2085-2, No. 2 Morse Taper, for L & XL Series Lathes, weight 5 lbs.
No. A2085-3, No. 3 Morse Taper, for S & M Series Lathes, weight 5 lbs.

Set includes six interchangeable points to support a variety of work. Packed in wooden box.



CENTER, Live

No. A1908, No. 2 Morse Taper, for L & XL Series Lathes, weight 1 lb.
No. A2007, No. 3 Morse Taper, for S & M Series Lathes, weight 1 lb.



The anti-friction live center is designed to permit deeper cuts at higher spindle speeds, to turn heavier loads with greater safety, to save operating time and the cost of replacing and reconditioning worn out solid centers. Has 60° male point.

CENTER, Male

No. K42, No. 2 Morse Taper, for L & XL Series Lathes, weight $\frac{1}{2}$ lb.
No. S1448, No. 3 Morse Taper, for S & M Series Lathes, weight 1 lb.



Standard 60° center for supporting stock between the headstock and the tailstock. Centers are made from steel, hardened, and ground. Available with No. 2 or No. 3 Morse Taper shank for tailstock spindles and interchangeable with respective size of Morse Taper hole in headstock spindle sleeves. Two centers (one for headstock, one for tailstock) furnished as standard equipment with new lathes.

CENTER, Pipe

No. K270A, With No. 2 Morse Taper, for L & XL Series Lathes, weight 3 lbs.
No. K270B, With No. 3 Morse Taper, for S & M Series Lathes, weight 3 lbs.



Pipe center has $\frac{1}{2}$ " to 3" capacity, $6\frac{3}{4}$ " overall length. Used in tailstock spindle for supporting pipe and tubing in general turning operation.

CHUCK, Drill, 3-Jaw

No. 34, 0- $\frac{1}{2}$ " capacity with No. 2 Morse Taper Arbor for L & XL Series Lathes, weight 2 $\frac{1}{2}$ lbs.



No. 34C, 0- $\frac{1}{2}$ " capacity with No. 3 Morse Taper Arbor for S & M Series Lathes, weight 3 lbs.

No. 36, $\frac{3}{16}$ - $\frac{3}{4}$ " capacity with No. 2 Morse Taper Arbor for L & XL Series Lathes, weight 4 lbs.

No. 36C, $\frac{3}{16}$ " to $\frac{3}{4}$ " capacity with No. 3 Morse Taper Arbor for S & M Series Lathes, weight 4 $\frac{1}{2}$ lbs.

Used in tailstock spindle for general drilling, reaming, etc., and in headstock spindle for centering stock, miscellaneous drilling, etc. The chuck jaws are made of high tempered steel and are moved by strong, forceful screw action capable of a powerful grip. The chuck is furnished complete with a key and an arbor.

CHUCK, Center Rest, $\frac{1}{4}$ " to $\frac{3}{4}$ " Capacity

No. 100, No. 2 Morse Taper, for L & XL Series Lathes, weight 3 $\frac{1}{2}$ lbs.
No. 100C, No. 3 Morse Taper, for S & M Series Lathes, weight 4 lbs.



The center rest chuck is mounted in the tailstock of the lathe and permits the turning of round work without the use of a center support. The bronze chuck jaws are adjustable to the appropriate diameter for the stock and can be locked in position to provide a steady bearing support.

ACCESSORIES

CHUCK, Independent, 4-jaw

No. 64—6" Weight 17 lbs.
No. 84—8" Weight 32 lbs.
No. 104—10" Weight 65 lbs.

The jaws are set independently for round or irregular work, either concentric or eccentric with lathe spindle. When ordering chucks for lathes already in service, include serial number of lathe and specify whether for 1 3/4" or 2 1/4" diameter threaded spindle. All chucks are supplied fitted for your lathe.



Light Duty 4-jaw Chucks

No. 604—6" Weight 9 1/2 lbs. for L Series Lathes only
No. 1064—6" Weight 18 lbs.
No. 1284—8" Weight 32 lbs.
No. 1104—10" Weight 43 lbs.

These chucks can be used on lathes where cuts are not excessively heavy. They will hold work with a high degree of accuracy. Chucks have reversible jaws.

CHUCK, Universal, 3-Jaw, Scroll Operated

No. 53—5" Weight 14 lbs.
No. 63—6" Weight 20 lbs.
No. 83—8" Weight 36 lbs.

This chuck is recommended for general lathe work, as it is automatically self-centering. It is furnished with two sets of solid jaws for inside and outside chucking. When ordering chucks for lathes already in service, include serial number of lathe and specify whether for 1 3/4" or 2 1/4" diameter threaded spindle. All chucks are supplied fitted for your lathe.



Light Duty, 3-jaw Chucks

No. 503—5" Weight 8 lbs. for L Series Lathes only
No. 603—6" Weight 11 lbs. for L Series Lathes only
No. 5340—5" Weight 13 lbs.
No. 5406—6" Weight 19 lbs.

These chucks can be used where cuts are not heavy, and they will hold work with a high degree of accuracy. Chucks have two sets of jaws for inside and outside chucking.

CHUCKS, Adjust-Tru

No. 3634, 6" 3 Jaw Adjust-Tru Chuck



The Adjust-Tru chuck is a universal scroll chuck. After work is gripped, 4 opposed screws near the back of the chuck are used to move the chuck on the adapter to bring work to true alignment.

CHUCK, Spindle (Hollow Arbor)

No. 18-4, No. 4 Morse Taper, for L Series Lathes, weight 3 1/4 lbs.
No. 18-5, No. 5 Morse Taper, for XL, S & M Series Lathes, weight 3 1/4 lbs.



This chuck is fitted to a hollow arbor that replaces the headstock spindle sleeve and center to permit machining of long bars, rods, etc., that extend through the hollow arbor and lathe spindle. When ordering, include serial number of lathe and specify whether No. 4 or No. 5 Morse Taper arbor.

COLLET CHUCK, Spindle Nose Type Handwheel Type (Jacobs Rubberflex)

L91A6T for L Series Lathes, weight 19 lbs.
S91A6T for XL, S, and M Series Lathes, weight 19 lbs.

The entire chuck body, including back mounting surface and collet seating cone, is machined from a single alloy steel forging, hardened and precision ground throughout. The great gripping area of this collet provides a rigid, yet gentle, hold on the work because the pressure is equal at all points. This chuck is particularly adapted for holding thin-walled parts.

Uses special collets as follows:

J900 Set of 11 collets covers complete range of sizes from 1/16" to 1 3/8" and can also be used for metric stock. Weight 6 lbs.



COLLET CHUCK, Spindle Nose Type Handwheel Operated (Sjogren)

No. A2112, 1" capacity, for L Series Lathes, weight 26 lbs.
No. A2113, 1" capacity, for XL, S & M Series Lathes, weight 26 lbs.
No. A2115, 1 3/8" capacity, for XL, S & M Series Lathes, weight 26 lbs.

This spindle nose type collet chuck attachment permits use of collets to the capacities shown. Quick turn of handwheel automatically opens or closes collet. A2112 and A2113 use style 5C collets. A2115 uses collets as follows:

2JR, round collets, 1/8" to 1 3/8", weight 1 lb. each.
2JS, square collets, 1/4" to 3/32", weight 1 lb. each
2JH, hexagon collets, 1/4" to 1 3/8", weight 1 lb. each
See price list for 2JR11 and 2JR21 collet sets.



COLLET CHUCK, Spindle Nose Type Handlever Operated

No. A2020, 1" capacity, for L Series Lathes, weight 38 lbs.
No. A2021, 1 1/2" capacity, for XL, S & M Series Lathes, weight 38 lbs.

The lever operated spindle nose collet chuck can be operated without stopping the spindle. The positive lock of the closing collar holds the work firmly in position while in operation. Exact amount of pressure for any type of work can be set and maintained, providing powerful grip under heavy cut, but firm gentle grip for fragile work. These attachments use special collets as listed:

For A2020:

A2120, round, 1/8" to 1", weight, 1 lb. each.
A2121, hexagon, 3/16" to 7/8", weight 1 lb. each
A2122, square, 3/16" to 3/32", weight 1 lb. each

For A2021:

A2123, round, 3/16" to 1 1/8", weight 1 lb. each
A2124, hexagon, 1/4" to 1 9/32", weight 1 lb. each
A2125, square, 1/4" to 1 1/16", weight 1 lb. each



COLLET CHUCK ATTACHMENT, Handwheel Drawbar Type

No. L462A—3/4" Cap., for L Series Lathes, weight 10 lbs.
No. XL462A, 1" Collet Cap., for XL Series Lathes, weight 10 1/2 lbs.
No. SM462A, 1" Collet Cap., for S & M Series Lathes, weight 10 1/2 lbs.

The standard handwheel type draw-in collet attachment is useful for general precision work on a variety of sizes of standard bar stock which can be fed through hollow drawbar. The complete attachment includes the hollow drawbar with handwheel, hardened and ground collet adaptor sleeve, thrust bearing, spacer sleeve, spindle nose cap, and spanner wrench. L462A uses style 4C Collets. XL462A and SM462A use style 5C Collets.



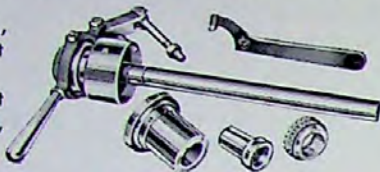
ACCESSORIES

COLLET CHUCK ATTACHMENT, Handlever Drawbar Type

No. L1585, $\frac{3}{4}$ " Collet Cap., for L Series Lathes, weight 11 lbs.

No., XL1591 1" Collet Cap., for XL Series Lathes, weight 11½ lbs.

No. SM1590, 1" Collet Cap., for S & M Series Lathes, weight 11½ lbs.



The standard handlever type draw-in collet attachment is useful for rapid repetitive manufacture of duplicate parts from standard bar stock or rod. Collet is released, stock fed by hand through spindle and collet tightened without stopping the lathe. The grip of the collet can be adjusted by regulating the main body sleeve of the adjustable chuck closer. Attachment No. L1585 uses style 4C collets. Attachments No. XL1591 and SM1590 use style 5C collets. The complete attachment includes the lever attachment, hollow drawbar, hardened and ground collet adaptor sleeve, spindle nose cap, and spanner wrench.

COLLETS, (Standard)

For L462A and L1585 ($\frac{3}{4}$ " capacity)

No. 4CR Round Collets, $\frac{1}{16}$ " to $\frac{3}{4}$ ", weight 1 lb.

No. 4CRX Round Collets, $\frac{1}{4}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", weight 1 lb.

No. 4CH Hexagon Collets, $\frac{1}{8}$ " to $2\frac{1}{2}$ ", weight 1 lb.

No. 4CS Square Collets, $\frac{1}{8}$ " to $1\frac{1}{2}$ ", weight 1 lb.



For XL462A, XL1591, SM462A, SM1590, A2112 and A2113 (1" capacity)

No. 5CR Round Collets, $\frac{1}{16}$ " to 1", weight 1 lb.

No. 5CRX Round Collets, $\frac{1}{4}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", weight 1 lb.

No. 5CH Hexagon Collets, $\frac{1}{8}$ " to $\frac{7}{8}$ ", weight 1 lb.

No. 5CS Square Collets, $\frac{1}{8}$ " to $\frac{3}{4}$ ", weight 1 lb.

Round Collets in Sets

No. 5CR8, Set of 8 Collets, $\frac{1}{8}$ " to 1" by 8ths, wt. $4\frac{1}{4}$ lbs.

No. 5CR16, Set of 16 Collets, $\frac{1}{16}$ " to 1" by 16ths, wt. $8\frac{1}{2}$ lbs.

No. 5CR31, Set of 31 Collets, $\frac{1}{16}$ " to 1", by 32nds, wt. $16\frac{1}{2}$ lbs.

No. 5CR61, Set of 61 Collets, $\frac{1}{16}$ " to 1" by 64ths, wt. $32\frac{1}{4}$ lbs.

Standard collets for use with standard handwheel or handlever type collet attachments are available in model 4C for the $\frac{3}{4}$ " collet capacity lathe and in model 5C for the 1" collet capacity lathe. The collets are accurately made from high grade tool steel hardened and ground inside and outside. When ordering collets, specify style (4C or 5C) and specific size desired. Special size collets can also be furnished, with prices on request.

COLLET RACK, Metal

No. 1527-1 for 5C Collets, weight 8 lbs.

No. 1526-1 for 4C Collets, weight 8 lbs.

This collet rack provides a convenient holder for collets, lathe center, and spindle sleeve. The rack is easily mounted on the back way of any lathe bed. Space is provided for sixteen collets, headstock and tailstock centers, and one spindle sleeve.



COOLANT SYSTEM

No. A2079-1, 110 volt, 1-phase, for all Series Lathes, weight 50 lbs.

No. A2079-3, 220 volt, 3-phase, for all Series Lathes, weight 50 lbs.



Attachment consists of a large coolant reservoir with chip strainer, $\frac{1}{8}$ h.p. motor, switch, centrifugal type circulating pump, and all necessary fittings, and is mounted on machine. Coolant system is recommended for lathes set up for production work. Other voltages available. Coolant spout is 15" long.

DOGS, BENT TAIL, Drop Forged, (Safety Type)

No. 101, $\frac{3}{8}$ " capacity, weight $\frac{1}{2}$ lb.

No. 201, $\frac{1}{2}$ " capacity, weight $\frac{1}{2}$ lb.

No. 301, $\frac{3}{4}$ " capacity, weight $\frac{1}{2}$ lb.

No. 401, 1" capacity, weight $\frac{1}{2}$ lb.

No. 501, $1\frac{1}{4}$ " capacity, weight 1 lb.

No. 601, $1\frac{1}{2}$ " capacity, weight $1\frac{1}{2}$ lbs.



Improved design, finest quality, drop forged from special open hearth steel. These dogs are heat treated to extreme toughness, with alloy steel set screws.

DOGS, Clamp Type

No. 11, $1\frac{3}{4}$ " capacity, weight 1 lb.

No. 12, $2\frac{1}{4}$ " capacity, weight 1 lb.

As a clamp or a lathe dog, this drop forged steel clamp dog, properly heat-treated, securely grips a variety of shapes of stock. Construction of upper bar allows for considerable tilting without bending screws.



LAMP

No. A1909, weight 2 lbs.

Adjustable lamp is attractively finished in chrome and clamps on the machine. It is furnished complete with 6 ft. oil-resistant cord and two-prong plug for operation on 110 Volts. Maximum size of bulb 60 Watts. Bulb not included.



LEG ASSEMBLY

No. A2049, for L46 & XL46, weight 142 lbs.

No. A2050, for L56 & XL56, weight 147 lbs.

Floor leg assembly for horizontal drive machines includes two floor legs and chip pan. These can be ordered with a new lathe or for lathes already in service. When ordering, include serial number of lathe.



METRIC TRANSPOSING ATTACHMENT

No. LMB, for L Series Lathes, weight 10 lbs.

No. XMB, for XL Series Lathes, weight 10 lbs.

No. SM16, for S Series Lathes, weight 10 lbs.

No. MM16, for M Series Lathes, weight 10 lbs.

The metric transposing attachment consists of a compound gear and six standard change gears. The attachment provides for cutting 33 standard threads from 0.20 to 6.0 mm. pitch. For complete information, send for bulletin No. 101851.



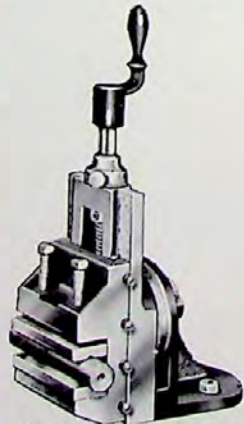
MILLING AND KEYWAY CUTTING ATTACHMENT

No. L411A, for L & XL Series Lathes, weight 19 lbs.

No. K411A, for S Series Lathes, weight 21 lbs.

No. M411A, for M Series Lathes, weight 21 lbs.

A handy and economical attachment that is ideal for shops not having enough work for a regular milling machine or to relieve the milling machine when additional facilities are needed. The attachment is mounted on the lathe saddle, and swivels 360° in the horizontal plane and 90° either side of the center in the vertical plane. The vertical travel of the slide is 3". The vertical adjusting screw is furnished with a micrometer graduated collar. Width of vise jaws, $3\frac{1}{2}$ "; depth of jaws, $1\frac{1}{8}$ "; opening of vise jaws without jaw plates, $1\frac{3}{4}$ "; with jaw plates in position, 1". Jaw plates have $\frac{3}{8}$ " by 90° V-way. When ordering, include serial number of lathe.



ACCESSORIES

MILLING ARBOR for Milling Attachment

No. **KM352**, with No. 4 Morse Taper for L Series Lathes, weight 4 lbs.
No. **SM352**, with No. 5 Morse Taper for XL, S & M Series Lathes, weight 4 lbs.



One inch arbor accurately machined, hardened, and ground, has two $\frac{1}{2}$ " spacers and two $\frac{1}{4}$ " spacers. Capacity between shoulder and tightening nut, $1\frac{3}{4}$ ". When ordering, include serial number of lathe and size of Morse Taper required.

PAN, Chip and Oil

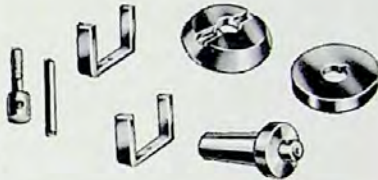
No. **L1867-2** for 46" bed, all Series Lathes, weight 34 lbs.
No. **L1867-3** for 56" bed, all Series Lathes, weight 39 lbs.
No. **L1867-5** for 70" bed, S & M Series Lathes, weight 52 lbs.



Chip and oil pans are used on pedestal mounted, under-drive lathes. Pans are made of heavy gauge steel with rolled rim and welded corners. These catalogue numbers apply to chip pans for complete lathes shipped from the factory. When pan is ordered for lathe already in service, send serial number of lathe and ask for quotation. For chip pans for horizontal drive lathes, see "Leg Assembly" accessory.

PISTON TURNING FIXTURE

No. **L1346**, for L Series Lathes with No. 4 Morse Taper Arbor, weight 10 lbs.
No. **S1346**, for XL, S, M Series Lathes with No. 5 Morse Taper Arbor, weight 10 lbs.



A convenient self-chucking attachment for turning pistons from $2\frac{1}{2}$ " to 4" outside diameter. The unit consists of two cone rings, one flat centering ring, one arbor, a large and a small driving dog (only one illustrated.) Tapered arbor fits in spindle nose. When ordering, include serial number of lathe and size taper arbor required.

PLATE, Chuck

No. **S-306S** Semi-Fitted, for all Series Lathes, weight 4 lbs.

Chuck plates are threaded and fitted to spindle nose. When ordering, include serial number of lathe, outside diameter required ($8\frac{1}{4}$ " maximum), and whether for $1\frac{3}{4}$ " or $2\frac{1}{4}$ " spindle nose diameter.



PLATE, Dog

No. **LTKT 182**, $5\frac{7}{8}$ " diameter

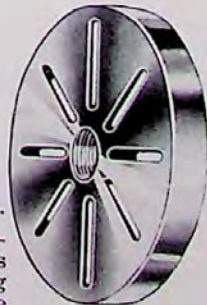
Small semi-steel face plate designed to drive lathe dog when supporting work between centers. Has two clamp slots and two aligned holes. Accurately machined and threaded to fit lathe spindle nose thread. When ordering, include serial number of lathe and whether for $1\frac{3}{4}$ " or $2\frac{1}{4}$ " threaded diameter spindle. Standard equipment with new lathes.



PLATE, Large Face

No. **KT185**, 12" for M Series Lathes, weight 17 lbs.
No. **LT183**, 11" for S Series Lathes, weight 14 lbs.
No. **XL1546**, 9" for XL Series Lathes, weight 14 lbs.
No. **K183**, 9" for L Series Lathes, weight 9 lbs.

Large face plate can be used for supporting and revolving flat stock or jigs and fixtures for miscellaneous machining operations. These face plates are made of semi-steel with ribbed, re-inforced back. They have eight clamp slots and are accurately threaded to fit the lathe spindle nose. When ordering, include serial number of lathe.



REST, FOLLOWER 2-Jaw

No. **L209A**, for L & XL Series Lathes, weight 6 lbs.
No. **K209A**, for S Series Lathes, weight 6 lbs.
No. **M209A**, for M Series Lathes, weight $6\frac{1}{2}$ lbs.

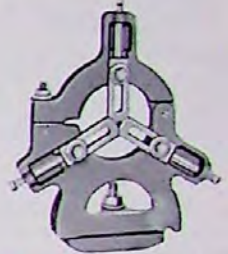
The follower rest is attached to and moves with the lathe carriage saddle to support long, flexible, and slender shafts in proper position to the cutting tool to insure accurate results during miscellaneous machining operations. The machined adjustable jaws can be set by adjustable screws and locked in place for any desired diameter of bar stock within the range of $\frac{3}{16}$ " to $3\frac{1}{2}$ " capacity. When ordering, give serial number of lathe.



REST, STEADY, (Center) Hinged Type

No. **L575A**, for L & XL Series Lathes, weight 11 lbs.
No. **K575A**, for S Series Lathes, weight $11\frac{1}{2}$ lbs.
No. **M575A**, for M Series Lathes, weight $13\frac{1}{2}$ lbs.

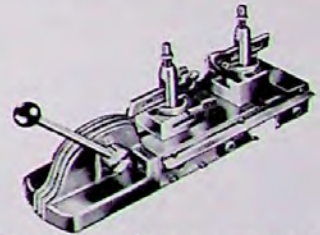
The steady rest is mounted at any desirable place on one "V" way and one flat way of the bed and is used to support long, flexible shafts, rods, and tubes for machining operations such as turning, boring, threading, etc. The steady rest is furnished with three quickly adjustable machined jaws that can be set by adjustable screws and locked in position for any desired diameter of stock within the range of $\frac{3}{16}$ " to $3\frac{1}{2}$ " capacity. The top of the steady rest is hinged to facilitate quick and easy insertion and removal of stock. When ordering, give serial number of lathe.



SLIDE, Double Tool Post Cross, Lever Operated

No. **L664A**, for L & XL Series Lathes, weight 25 lbs.
No. **K664A**, for S Series Lathes, weight 40 lbs.
No. **M664A**, for M Series Lathes, weight 40 lbs.

The double tool post attachment provides a two-way, front and back tool post operation that cuts job time in half. Attachment is equipped with adjustable stops for both front and back tools. Recommended for forming, rounding, knurling, cutting off, etc., of duplicate parts. Include serial number of lathe with order. Tool holders shown are extra.



STOP, Carriage, Micrometer

No. **ASL1825**, for all series lathes, weight 2 lbs.

A precision stop with micrometer screw adjustment that clamps at any point on the front "V" way of the bed with a 1" screw travel to the right or to the left. Include serial number of lathe with order.



STOP, Carriage, Plain

No. **K908A**, for L, XL, and S Series Lathes, weight 3 lbs.
No. **M908A**, for M Series Lathes, weight 3 lbs.

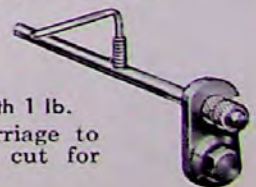
An efficient carriage stop that clamps to the lathe bed at any point on the front "V" way to indicate the stopping point on facing, boring operations, etc.



STOP, Thread-Cutting, Adjustable

No. **K870A**, for all Series Lathes, weight 1 lb.

Can be mounted on lathe carriage to regulate predetermined depth of cut for turning or cutting screw threads.



ACCESSORIES

TAILSTOCK, Lever Operated

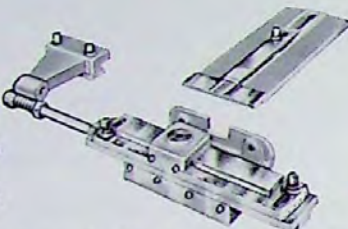
No. L72HA, for L & XL Series Lathes, weight 35 lbs.
No. K72HA, for S Series Lathes, weight 35 lbs.
No. M72HA, for M Series Lathes, weight 35 lbs.



The handlever operated tailstock is primarily a production accessory designed for production drilling, reaming, etc. Tailstock spindle can be controlled by either lever or wheel of tailstock. Maximum spindle travel is $2\frac{3}{4}$ ".

TAPER ATTACHMENT, Plain

No. LT210A, for L & XL Series Lathes, weight 20 lbs.
No. KT210A, for S Series Lathes, weight 20 lbs.
No. MT210A, for M Series Lathes, weight 20 lbs.

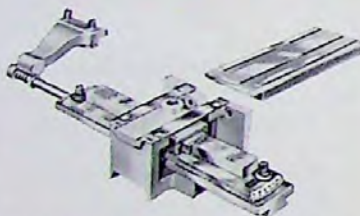


Taper attachments are an important accessory for turning and boring long tapers or where repetitive taper turning or boring is necessary. Accurate performance is obtained through simplicity of design and sturdy construction.

The plain taper attachment is easy to mount and fit on any Sheldon lathe carriage. The swivel bar is graduated in inches per foot on one end and in degrees on the other end. The attachment permits turning or boring tapers up to 3" per foot, $7\frac{1}{2}$ " in length, at any one setting.

TAPER ATTACHMENT, Telescopic

No. LTT210A, for L & XL Series Lathes, wt. 42 lbs.
No. KTT210A, for S Series Lathes, weight 42 lbs.
No. MTT210A, for M Series Lathes, weight 42 lbs.



The telescopic taper attachment is furnished with a telescopic cross feed screw that eliminates the necessity of disengaging the cross feed screw nut as required on the plain taper attachment. This attachment has tapered gibs for adjusting the slide saddle for quick and even adjustment of attachment. The swivel bar is graduated in inches per foot on one end and in degrees on the other end. Tapers up to $3\frac{1}{2}$ " per foot and $9\frac{1}{2}$ " in length may be turned or bored at any one setting.

THREAD CHASING DIAL (Thread Dial Indicator)

No. L890A, for L & XL Series Lathes, weight 1 lb.
No. K890A, for S & M Series Lathes, weight 1 lb.



Eliminates need for reversing lathe when cutting threads. All even threads start on any dial graduation. Odd threads start on any numbered graduation. Half threads start on odd number graduations. Standard equipment with new lathes.

TOOL POST, 4-Way 12 Position

No. A1967, for L & XL Series Lathes, weight 7 lbs.
No. A1968, for S Series Lathes, weight 7 lbs.
No. A1969, for M Series Lathes, weight 7 lbs.



This production accessory fits into the tool post T-slot of the compound rest. It has 12 indexing positions (3 working positions for each tool). The cam locking handle locks turret block securely in place. Unlocking, indexing, relocking can be done with one hand. Holds No. 2393 cutter bits ($\frac{1}{2}$ " square).

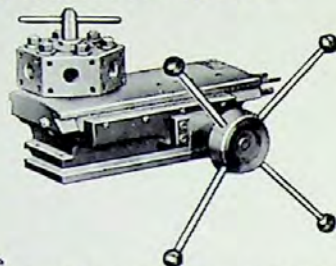
TOOL POST, 4-Way Screw Type

No. A2087, for L & XL Series Lathes, weight 9 lbs.
No. A2088, for S Series Lathes, weight 9 lbs.
No. A2089, for M Series Lathes, weight 9 lbs.



Turret mounts four different tools which are rapidly indexed. Each tool mounted has three working positions. Turret fits on compound and uses No. 2393 cutter bits ($\frac{1}{2}$ " square).

TURRET, BED, Handwheel Operated



With $4\frac{1}{4}$ " stroke

No. A1970, for L & XL Series Lathes, weight 110 lbs.
No. A1971, for S Series Lathes, weight 115 lbs.
No. A1972, for M Series Lathes, weight 115 lbs.

With $6\frac{1}{2}$ " stroke

No. A2010, for L & XL Series Lathes, weight 120 lbs.
No. A2011, for S Series Lathes, weight 125 lbs.
No. A2012, for M Series Lathes, weight 125 lbs.

Designed for rapid and accurate machining of duplicate parts, including such operations as turning, drilling, reaming, counterboring, threading, knurling, etc. The turret head automatically registers one-sixth of a turn with each complete back movement of the wheel. Length of tool operations is regulated by adjustable stops provided for each of the six indexed positions of the turret head. Suitable take-up gibs assure lasting accuracy. Turret takes 1" standard diameter shank screw machine tools.

TOOL HOLDERS

BORING TOOLS

No. 2080D for L and XL Series Lathes



Light duty, Style D boring tool for boring and internal threading. Uses solid bars from $\frac{1}{4}$ " to $\frac{1}{2}$ " diameter. Has reversible bar clamp. Tool is boxed with $\frac{1}{4}$ " x 5" high-speed boring bar and wrench. Uses No. 8142 boring bars.

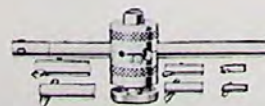
No. 8 for L, XL, and S Series Lathes
No. 9 for M Series Lathes

Boring tool consists of a holder which fits in tool post of lathe and boring bar with three end caps— 90° , 45° , and 30° . The end caps lock the cutters rigidly under screw which cannot loosen when tool is cutting, yet instantly releases the cutter when not in use. Each tool includes holder and bar, end caps, three high speed cutters, and double head wrench.

No.	Size of Shank	Size Cutter Square	Diameter of Bar
8	$\frac{3}{8} \times \frac{7}{8}$	$\frac{3}{16}$	$\frac{9}{16}$
9	$\frac{1}{2} \times 1\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{4}$

BORING TOOL, 3-Bar

This boring tool holder takes the place of the tool post in boring operations. Tool comes complete with one solid type bar, two bars with 90° , 45° , and 30° end caps, six high speed cutters, and three wrenches. A slight turn of one nut releases bar for instant change.



No.	Diameter Bars	Length of Bars	Size Cutters Square	Series Lathes
OBB	$\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$	7, 8, 11	$\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$	L, XL
1B	$\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{8}$	8, 11, 16	$\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$	S, M

* $\frac{3}{8}$ " bar is solid.

ACCESSORIES

CUTTING OFF TOOLS



The cutter is adjustable to any desired clearance and is given greatest possible support under all conditions. Cutter blades of high speed steel are beveled on both sides and are held at an angle to give side clearance and top rake necessary to obtain clean, smooth cut. Each tool is boxed separately and includes wrench and one high speed cutter blade.

No.	Size of Shank	Cutter Size	Series Lathes
Straight Shank			
20	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{3}{32} \times \frac{3}{8}$	L, XL, S
21	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{1}{8} \times \frac{3}{4}$	M
Left Hand			
30L	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{3}{32} \times \frac{3}{8}$	L, XL, S
31L	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{1}{8} \times \frac{3}{4}$	M
Right Hand			
30R	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{3}{32} \times \frac{3}{8}$	L, XL, S
31R	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{1}{8} \times \frac{3}{4}$	M

KNURLING TOOLS



This knurling tool is self-centering. The knuckle or joint has ample bearing to resist the severe strains of both end and side thrust. The tool is furnished with one set of diamond pattern medium knurls. Other style knurls available.

No.	Size of Holder	Dimen. of Knurls			Knurling Capacity	Series Lathes
		Diam.	Face Std.	Hole		
OK	$\frac{3}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{7}{32}$	$\frac{1}{8}$ up	L, XL, S
1K	$\frac{1}{2} \times 1\frac{1}{8} \times 6\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{16}$ up	M

KNURLING TOOLS, Revolving Head



Self-centering head takes three pairs of knurls at one time to save time in changing from one grade or style of knurls to another. Tool is furnished with standard face diamond knurls. Other style knurls available.

No.	Size of Holder	Dimen. of Knurls			Knurling Capacity	Series Lathes
		Diam.	Face Std.	Hole		
3K0	$\frac{3}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{7}{32}$	$\frac{3}{16}$ up	L, XL, S
3K1	$\frac{1}{2} \times 1\frac{1}{8} \times 6\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$ up	M

KNURLS

No. 8221 for No. 2040, OK, and 3K0

No. 8222 for No. 1K and 3K1

Knurls are individually hob-cut to produce precision work in close limits of accuracy. They are cut from extra high carbon tool steel, heat treated, tempered and tested. Knurls are furnished in pairs in two patterns—diamond and straight line. When ordering extra knurls, specify pattern and pitch.

THREADING TOOLS

No. 50 for L, XL and S Series Lathes

No. 51 for M Series Lathes



Each tool is drop forged from special steel. Tool is boxed separately and includes wrench and one high speed sharp V-thread cutter. To sharpen, the cutter requires grinding on the top edge only and always remains true to form with correct angle.

THREADING CUTTERS

No. 8151 for No. 50 Tool, Pitches 6 to 20, inclusive

No. 8153 for No. 51 Tool, Pitches 5 to 20, inclusive

These formed threading cutters are made from selected high speed steel. Cutting edge is in a horizontal position or parallel to edge of holder. Cutters can be supplied for cutting Sharp V, American Standard coarse, American Standard fine, and Whitworth Standard threads. If pitch is not specified, Sharp V type will be supplied.



THREADING TOOL, Light Duty

No. 2050 Complete with wrench and one high speed, 60° Sharp V cutter, ground for use. Uses No. 8160 cutters, available also in American National coarse or modified Whitworth form.



TURNING TOOLS

Each turning tool is boxed separately and includes wrench and one high speed cutter bit.

No.	Size of Holder	Size of Cutter Square	Series Lathes
Straight Shank			
OS	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{1}{4}$	L, XL, S
1S	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{3}{16}$	M
Left Hand Offset			
OL	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{1}{4}$	L, XL, S
1L	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{3}{16}$	M
Right Hand Offset			
OR	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{1}{4}$	L, XL, S
1R	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{3}{16}$	M

TURNING TOOLS, Light Duty

No. 2010S, Straight Shank, with $\frac{1}{4}$ " bit.

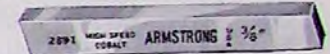
No. 2010R, Right Hand, with $\frac{1}{4}$ " bit.

No. 2010L, Left Hand, with $\frac{1}{4}$ " bit.

Use No. 2389 or No. 0136 bits.

Finished Form Cutters, ground to shape, set

No. 0136 Set of 6 high speed, form cutters ground to shape, $\frac{1}{4}$ " square by $2\frac{1}{2}$ " for 2010L, 2010R, 2010S, OL, OR, and OS turning tool holders.

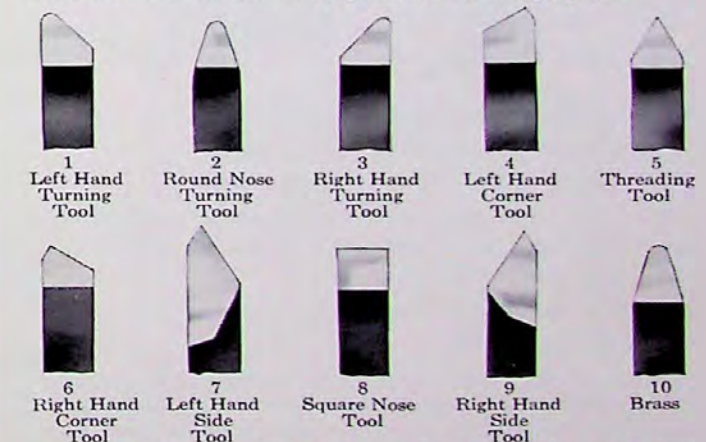


Ground Tool Bits, High Speed Cobalt Steel

No. 2389 $\frac{1}{4}$ " x $\frac{1}{4}$ " x $2\frac{1}{2}$ " High speed cobalt bits, for 2010L, 2010R, 2010S, OL, OR, OS tool holders.

No. 2390 $\frac{5}{16}$ " x $\frac{5}{16}$ " x $2\frac{1}{2}$ " High speed cobalt bits, for 1L, 1R, and 1S tool holders.

Finished Form Cutters, ground to shape, set



No. 0415 Set of 10, $\frac{1}{4}$ " square by $2\frac{1}{2}$ " high speed steel formed tool bits for L, XL, and S series lathes.

No. 0405 Set of 10, $\frac{5}{16}$ " square by $2\frac{1}{2}$ " high speed steel formed tool bits for M series lathes.

Carbide Tool Holders

No. T1S straight shank for M Series lathes.

No. T1L left hand offset for M Series lathes.

No. T1R right hand offset for M Series lathes.

Carbide Tipped Cutters

All carbide tipped cutters are grade 78B, $\frac{5}{16}$ " square. Used with No. T1S, T1L, and T1R Carbide Tool holders.

No. A2160 (AL5) left hand (form 7)

No. A2161 (AR5) right hand (form 4)

No. A2162 (C5) square nose, (form 1)

No. A2163 (D5) 80° (form 12)

No. A2164 (E5) 60° (form 15)



ELECTRICAL EQUIPMENT FOR SHELDON LATHES



R 22



R 44



J 2

REVERSING DRUM SWITCHES

No. R22 for 110/220 volts, 1-phase current (1 h.p. max.)

No. R44 for 220/440 volts, 3-phase current (1 h.p. max.)

No. J2 for 110 to 550 volts, 1 to 3 h.p. maximum

Reversing drum switch, manually operated, with three positions for forward, reverse, and stop operation.



A 1714



A 1715

No. A1714 for 1-phase current

No. A1715 for 3-phase current

This reversing drum switch has an extra box containing thermal overload protection to protect motor in case of overheating. The A1715 has a built in thermal overload and does not require a separate control box.



MAGNETIC REVERSING STARTERS

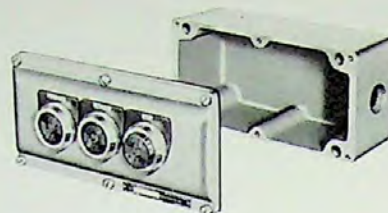
No. A1710 for 110/220 volts, 1-phase current

No. A1711 for 220/440 volts, 3-phase current

Magnetic reversing starter with overload and low voltage protection with three pushbuttons for forward, reverse, and stop operation.

No. A1712 for 220/440 volts, 3-phase current
(110 volts at controls)

Magnetic reversing starter with overload and low voltage protection and extra feature of 110 volts at the pushbuttons. Transformer protects operator from high voltage. Provided with three pushbuttons for forward, reverse, and stop operation. Both the switch and control for the No. A1710, A1711 and A1712 are similar in appearance.



CONTROLS FOR J. I. C.

No. A1706 Non-fusible Controls for J.I.C.

These controls are designed to meet Joint Industry Committee of Automotive Industry requirements. Magnetic reversing starter is housed in box containing unfused disconnect switch (does not require fuses) and 440-220/110 volt transformer with overload and low voltage protection. Power must be turned off before control box can be opened. Control has three pushbuttons for forward, reverse, and stop operation mounted in oiltight enclosure.

No. A1707 Fusible Controls for J.I.C.

These controls are also designed to meet Joint Industry Committee of Automotive Industry requirements. Magnetic reversing starter in box containing fusible (requires fuses) 440 volt, 30 ampere, disconnect switch, and 440-220/110 volt fused transformer. In addition to low voltage protection, starter protects against short circuits. This starter and switch, like No. A1706, insure that control box cannot be opened without turning off power. Control box has three pushbuttons for forward, reverse, and stop operation, mounted in oiltight enclosure. Both the No. A1706 and A1707 are similar in appearance.

CONTROLS FOR TWO-SPEED MOTORS

No. A1716 Magnetic Reversing Starter

This starter is used with a four-button oiltight control having one pushbutton for forward high, one forward low, one reverse, and one stop. Starter has overload and low voltage protection. Available for constant torque motors with horsepower up to 2 h.p. maximum.



No. A1718 Manual Reversing Drum Switch

This switch provides two forward speeds — high and low — one low reverse speed, and stop. Available for constant torque motor of not more than 2 h.p. on three-phase current.



MOTORS

Motors are included with all Sheldon machine tools but are not included in the base price. Stock motors have standard frame and are ball bearing, reversing, drip proof open type with 1725 r.p.m., manufactured by dependable manufacturers, in alternating current of 110/220 volts, 60 cycle, 1-phase or in 220/440 volts, 60 cycle, 3-phase. In addition, motors can be supplied with odd voltages, direct current, or other special requirements on request.

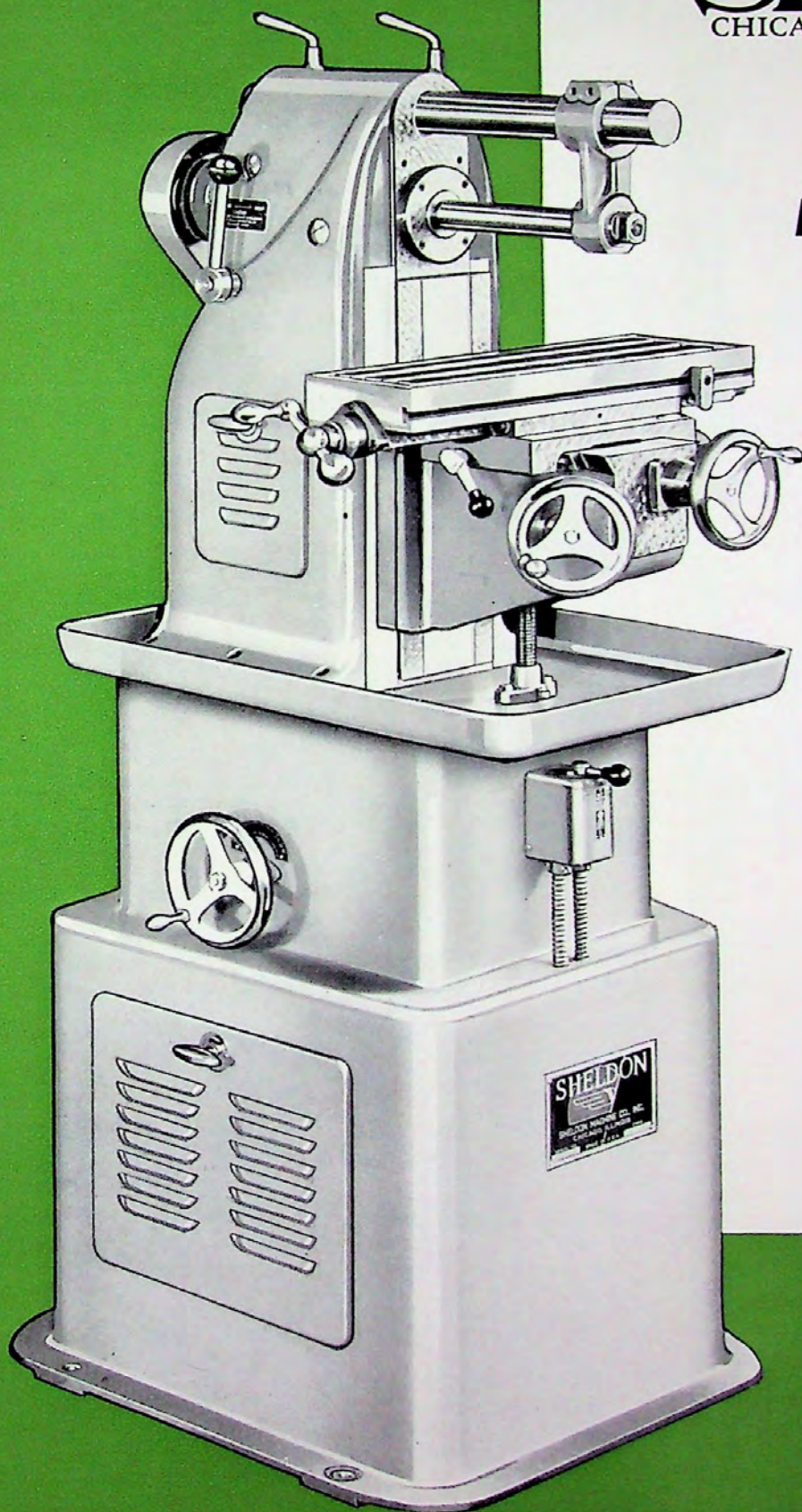
Motors ordered with the machine are fitted and wired at the factory at no additional cost. Motors shipped to the factory by the customer or dealer will be fitted and wired at a flat additional price, regardless of type or size.

When ordering motors for machines, be sure to include voltage, phase, and cycle required, in the horsepower recommended on the catalogue pages and price sheet.

SHELDON

CHICAGO U. S. A.

HORIZONTAL MILLING MACHINE



The Sheldon Horizontal Milling Machines are modern, low priced units of compact design for general purpose or production work. They are capable of producing a large variety of accurately machined parts with a minimum of set-up and operation time. Thus they relieve larger and more expensive machines for jobs in line with their capacities and expense.

SHELDON

HORIZONTAL MILLING MACHINE

Specifications:

SPINDLE

Size of taper No. 9 B&S
Hole through spindle $\frac{9}{16}$ "

SPEEDS

3000P, with low speed pulley . . . 125 to 550 r. p. m.
with high speed pulley 225 to 1100 r. p. m.
3000PQ (including speeds of 3000P
with additional speeds in back gear)
with low speed pulley 25 to 100 r. p. m.
with high speed pulley 36 to 198 r. p. m.
Both pulleys are supplied with both
machines as standard equipment.

FEEDS

Longitudinal (with handscrew) 12"
Cross $5\frac{1}{2}$ "
Vertical (maximum distance from
table top to center line of spindle) $9\frac{1}{4}$ "
Longitudinal power feed providing
table feeds per spindle revolution of
3000PQ .0008", .0016", .0032", and .0064"
3000P .003", .005", and .008"

TABLE

Size $5\frac{1}{2}$ x $22\frac{1}{8}$ "
Number of T-slots 3
Width of T-slots $\frac{7}{16}$ "

WISE

Width of jaws 5"
Depth of jaws $1\frac{1}{4}$ "
Opens with steel jaws 3"
Opens without steel jaws $3\frac{1}{2}$ "
Overall height with swivel base $3\frac{1}{2}$ "
Overall height as plain vise $2\frac{3}{4}$ "

MOTOR

Horsepower recommended 1 h. p.
R. P. M. recommended 1725

DIMENSIONS AND WEIGHTS

Height overall, without vertical attachment . . . 62"
with vertical attachment (9041) $72\frac{1}{2}$ "
Floor space required 29" by 39"
Dimensions of base 18" by 24"
Net weight—domestic 800 lbs.
export 370 Kilos.
Shipping weight—domestic 900 lbs.
boxed for export 455 Kilos.

STANDARD EQUIPMENT

Machine is mounted on pedestal, completely equipped with motor drive with necessary belts and pulleys. Motors and switch are included with all Sheldon machine tools but are not included in the base price. Export boxing is extra charge.

Features:

SPINDLE

Heat-treated ground spindle mounted in tapered roller bearings.

OVERARM

Large diameter with two piece brass clamps for locking.

OVERARM BRACKET

Adjustable to increase arbor rigidity.

TABLE

Table top has 3 T-slots and coolant trough on each side and ends. T-slot in front of table serves as a guide for adjustable longitudinal table stop.

SADDLE AND KNEE

Accurately machined and ground with hand-scraped bearing areas.

GIBS

Tapered gibs throughout insure permanent accuracy.

SCREWS

Cross, longitudinal, and elevating screws are accurately thread milled. Cross and longitudinal screws are supported and mounted on ball bearings. The end thrust exerted by load of table saddle and knee is absorbed by an extremely large ball thrust bearing, permitting easy movement by the elevating screw.

DIALS

Large micrometer dials graduated in thousandths.

DRIVE

Enclosed variable speed V-belt drive with hand-wheel control.

BACK GEARS

Optional additional equipment for low speeds and added power.

POWER FEED ASSEMBLY

Power feeds are obtained through V-belt drive from spindle pulley to universal pulley, through telescopic drive shaft and universal joint, by worm shaft and worm gear attached to longitudinal screw. Table stop has adjustment for longitudinal travel.

QUICK CHANGE GEAR BOX

Furnished only on No. 3000PQ machine. Permits varying rates of table feeds through tumbler gear which meshes with a cluster of gears in the gear box, in addition to quick reverse of table feeds.

COLUMN AND BASE ASSEMBLY

Columns and base are two pieces braced and assembled with integral steel chip pan.

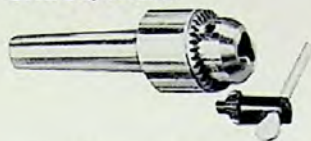
SHELDON MILLING MACHINE ACCESSORIES

ARBORS



wrench. One drawbar is used for tightening any collet within the spindle.

CHUCK, DRILL



valuable for drilling accurately spaced holes and is handy for roughing out cavities to be finished by straight and rose type end mills.

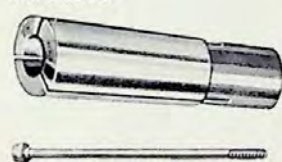
CHUCK, UNIVERSAL



No. 53DH, 5" 3-jaw Universal, weight 17 lbs.

Self-centering chuck shown fitted to the $1\frac{3}{4}$ " by 8 t. p. i. spindle nose of the universal dividing head. The chuck is furnished with two sets of jaws for inside and outside chucking and a wrench. The thin body assures maximum capacity between dividing head and footstock.

COLLETS



are drawn into place and tightened by standard drawbar which is furnished with the horizontal arbors.

No. 9025A, $\frac{1}{8}$ " to $\frac{3}{4}$ " in 32nds, weight 1 lb.

No. 9025A-1, $\frac{1}{16}$ " only, weight 1 lb. These collets are used in the horizontal spindle of the mill, in the A9033 vertical milling attachment, and the 9039 dividing head. They are spring type and have a No. 9 B&S taper. Collets

COOLANT SYSTEM

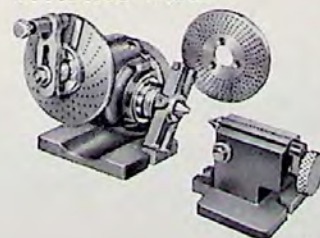


No. A2079-1M with single-phase motor, weight 45 lbs.

No. A2079-3M with three-phase motor, weight 45 lbs.

Attachment consists of a large coolant reservoir with chip strainer, $\frac{1}{8}$ h. p. motor, switch, centrifugal type circulating pump, and all necessary fittings, and is mounted to pedestal base and column of the machine.

DIVIDING HEAD



No. 9039, 6" diameter swing, weight 28 lbs.

A sturdy, universal dividing head unit, complete with footstock, two standard index plates having 15 to 20, 21 to 33, and 37 to 49 hole circles. Dividing head is graduated in degrees and can be set and locked at any angle from 10° below horizontal to 10° beyond the perpendicular. The spindle has a $1\frac{3}{4}$ " by 8 t. p. i. spindle nose, a No. 9 B&S tapered hole, and a $\frac{7}{8}$ " diameter hole through the spindle. This dividing head can use the 9025A collets, the 9039-28 drawbar or 53DH chuck.

No. A1909, weight 2 lbs.

Adjustable lamp is attractively finished in chrome and clamps on the machine. It is furnished complete with 6 ft. oil-resistant cord and two-prong plug for operation on 110 Volts. Maximum size of bulb 60 Watts. Bulb not included.



LAMP

OILER, DRIP POT



No. A9014, weight 6 lbs.

Oiler consists of an ample coolant container, petcock, flexible hose, and bracket which mounts on the column of the machine for use in short run work. Container unit is detachable from bracket for easy filling and cleaning.

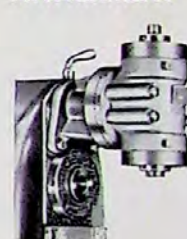
ROTARY TABLE



No. 9023, 7" diameter, weight 25 lbs.

An accurate, precision ground, heavily ribbed rotary table, complete with keys in base, conveniently located crank handle, lock, and eccentric throwout device for worm. Provision is made for take-up due to wear. Table is graduated 0° to 90° in each quadrant by degrees. Crank handle is graduated in 240 minutes by minutes, with a 90:1 worm and wheel ratio. The table has two $\frac{5}{8}$ " T-slots at right angles to each other for $\frac{3}{8}$ " T-bolts. Overall height of table is $2\frac{3}{4}$ ".

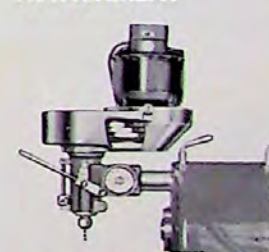
VERTICAL MILLING ATTACHMENT



No. 9033, weight 48 lbs.

This attachment provides for vertical and angular milling operations. It is mounted in the overarm holes and is driven from the rear by a pulley arrangement and an "A" section belt connected to the main spindle. This attachment uses 9025A collets (described under "Collets") and has a capacity of $\frac{3}{4}$ ". Center line of the vertical spindle will trace a rectangular pattern $5\frac{1}{8}$ " by $11\frac{1}{2}$ " on the table top.

VERTICAL MILLING ATTACHMENT



No. 9041, Independent Motor Drive, weight 60 lbs.

This attachment clamps easily on the overarm and can be fixed to work at any angle in the plane parallel to the face of the mill or in the plane perpendicular to the face. Power is supplied by a $\frac{1}{4}$ h. p. 115 volt, reversible motor. Spindle speeds: 380, 700, 1200, 2500, or 5200 r. p. m. It uses A9041-Y1 or A9041-Y2 collets and has a capacity of $\frac{1}{2}$ ". The center line of the vertical spindle will trace a rectangular pattern $5\frac{1}{8}$ " by $11\frac{1}{2}$ " on the table top. Standard equipment includes a $\frac{3}{8}$ " A9041-Y1 collet.

VICE, SWIVEL BASE



No. A9042, 5" diameter, weight 29 lbs.

This sturdy vise is especially designed to give maximum vise capacity to Sheldon mills. Vise is graduated 180° and can be swiveled and locked at any angle. Other dimensions: width of jaws, 5"; depth of jaws, $1\frac{1}{4}$ "; maximum opening with steel jaws, 3"; without steel jaws, $3\frac{1}{2}$ "; overall length, 11"; overall height, $3\frac{1}{2}$ ".

SHELDON

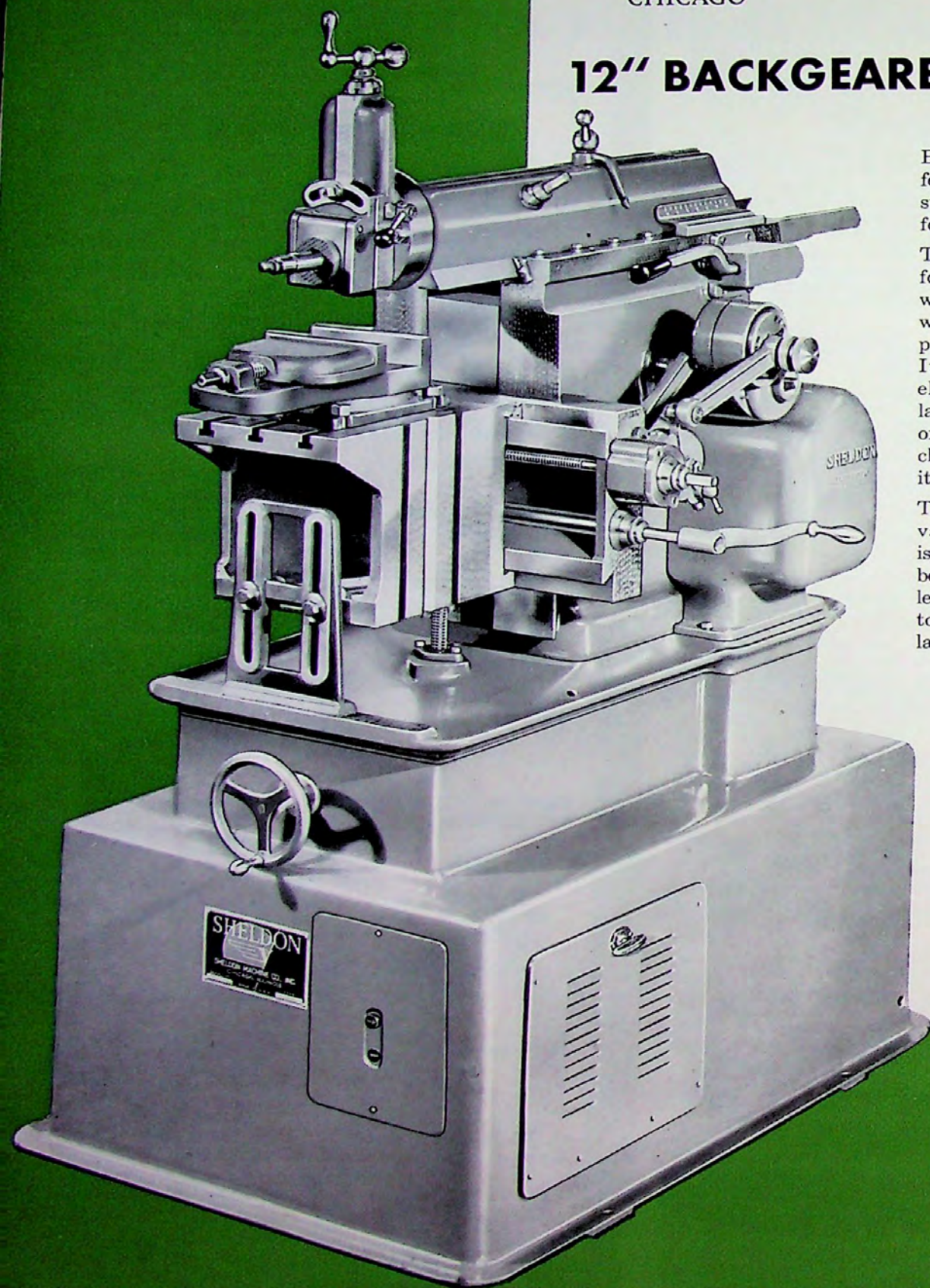
CHICAGO U. S. A.

12" BACKGEARED SHAPER

Big-shaper accuracy and features on the Sheldon 13½" stroke shaper make it ideal for industry and schools.

The Sheldon shaper is ideal for shops and toolrooms where a large percentage of work done is within the capacity of this machine tool. It saves money either by eliminating the need for a larger, much costlier shaper or by freeing a larger machine for the work within its capacity.

This powerful, backgeared, variable speed drive shaper is an important training aid because it helps students learn on the same machine tool that they will be using later on in industry.



Features

SHAPER TABLE AND CROSS RAIL

The table is accurately machined and has three "T" slots on top and two "T" slots on each side. There is a "V" slot on the side for holding bars. The swivel table is standard equipment on the 8000S shaper. The 8000P has the plain table. The cross rail is stress-ribbed and has tapered gibs to provide compensation for any wear.

FEED HOUSING

Automatic cross feeds are available in both directions. A ratchet lever controls the direction of table travel.

FEED ADJUSTMENT

Feed is controlled by a large feed adjustment knob which can be quickly set for varying amounts of feed between .0025" and .0175" per stroke.

BACK GEARS

Back gears for added power are quick-setting type and are controlled by the backgear lever which is located safely near the rear of the shaper.

RAM AND ROCKER ARM

The ram is heavily ribbed and provides a minimum of 60% bearing surface on ways at all times. The manganese bronze sliding block is handscraped and fitted in the rocker arm.

TOOL HEAD

The tool head can be swiveled and locked at any desired angle. Tapered gibs provide take-up to assure permanent accuracy.

COLUMN AND PEDESTAL

The pedestal fully encloses the variable speed motor drive, eliminating the dangers of exposed pulleys and belts. The column is rigidly designed and reinforced to withstand extreme thrust and torsional strain.

BULL GEAR

The bull gear is mounted in tapered roller bearings. It is a large helical type gear that is adjustable for wear.

CLUTCH ASSEMBLY

The clutch is of the latest design and is operated by a clutch lever. This enables the operator to stop all mechanical motion of the shaper without turning off the electrical current.

MOTOR DRIVE ASSEMBLY

The flush mounted manual starter with overload protection is conveniently located on the front of the pedestal. The variable speed drive operates the ram from 12 to 35 strokes per minute in back gear and 60 to 180 strokes per minute in direct drive. Speed changes can be made instantly while the machine is in operation.

WISE

Single screw swivel base vise has 7" wide jaws which open to 6". Graduations on the base of the vise are machine cut for accuracy.

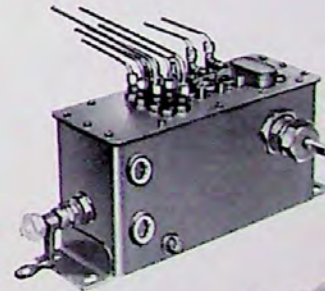
Specifications

Maximum length of ram stroke	13 1/2"
Length of ram	30 1/2"
Length of ram bearing in column	22 1/4"
Width of ram bearing	7 1/4"
Strokes per minute—minimum	12
maximum	180
Vertical travel of head	4"
Diameter of head	6 1/2"
Vertical travel of table	7"
Dimensions of table top	10" by 12"
Height of table	10"
Cross feed of table (with not less than 6 automatic feeds in either direction)	12"
Range of feeds (infinite within range)	.0025" to .0175"
Width of vise jaws	7"
Depth of vise jaws	1 1/2"
Opening of vise jaws	6"
Floor space	27" by 44 1/4"
Maximum width	31"
Maximum length	51"
Net weight—domestic	1600 lbs.
export	730 Kilos
Shipping weight—domestic	1800 lbs.
export	820 Kilos
Size of export box	62" by 62" by 38"
Motor recommended	1 1/2 h. p.—1725 r. p. m.

Standard Equipment

Two Wrenches Swivel Vise
Crank Handle Tool Post

Accessories



No. A2056 Automatic Oiling System
This unit must be ordered with the shaper and fitted at the factory.



No. 8006-25 Shaper Vise Standard Equipment



No. 40 Shaper Tool



No. 47 Extension Shaper Tool

Each Sheldon Lathe
must pass this
Rigid Test

TEST SHEET


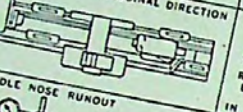
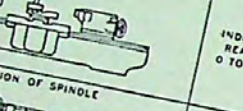




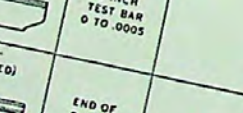



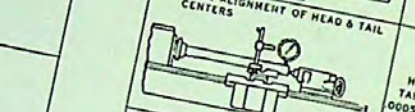
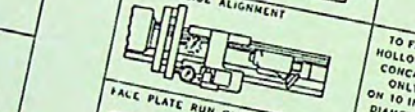
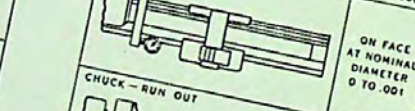

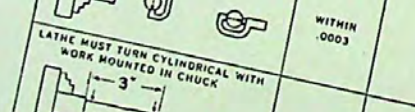

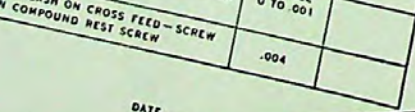

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
4358 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.

NOTE: Before running lubricate lathe with No. 10 non-additive oil

ORDER NO. _____

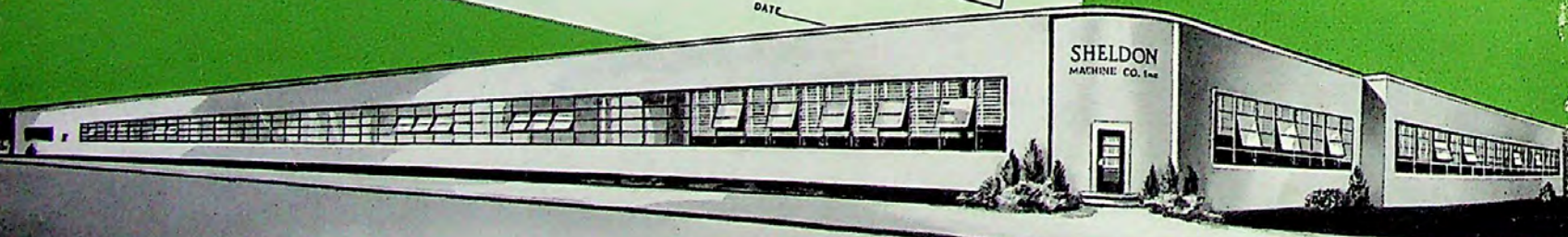
LATHE SERIAL NO. _____

MOTOR SERIAL NO. _____

TEST	LIMIT	ACTUAL
 BED LEVEL—TRANSVERSE DIRECTION <small>WHEN USING PRECISION LEVEL BOTH READINGS TO BE WITHIN .0005 IN 12 INCHES</small>		
 BED LEVEL—LONGITUDINAL DIRECTION <small>WHEN USING PRECISION LEVEL ALONG BDD MAXIMUM READING TO BE WITHIN .001 IN 12 INCHES</small>		
 SPINDLE NOSE RUNOUT <small>INDICATOR READING 0 TO .0003</small>		
 CAM ACTION OF SPINDLE <small>INDICATOR READING 0 TO .0005</small>		
 SPINDLE TAPER RUNOUT <small>TOTAL INDICATOR READING AT END OF 12 INCH TEST BAR 0 TO .0006 AT END OF SPINDLE NOSE 0 TO .0003</small>		
 HEADSTOCK ALIGNMENT—VERTICAL <small>HIGH AT END OF 12 INCH TEST BAR 0 TO .0005</small>		
 HEADSTOCK ALIGNMENT—HORIZONTAL <small>AT END OF 12 INCH TEST BAR 0 TO .0003</small>		
 TAILSTOCK TAPER ALIGNMENT—VERTICAL (SPINDLE RETRACTED) <small>HIGH AT END OF 8 INCH TEST BAR 0 TO .0005</small>		
 TAILSTOCK TAPER ALIGNMENT—HORIZONTAL (SPINDLE RETRACTED) <small>END OF 8 INCH TEST BAR 0 TO .0005</small>		
 TAILSTOCK TAPER ALIGNMENT—VERTICAL (SPINDLE EXTENDED) <small>HIGH AT END OF 8 INCH TEST BAR 0 TO .0005</small>		
 TAILSTOCK TAPER ALIGNMENT—HORIZONTAL (SPINDLE EXTENDED) <small>END OF 8 INCH TEST BAR 0 TO .0005</small>		
 VERTICAL ALIGNMENT OF HEAD & TAIL CENTERS <small>HIGH AT TAILSTOCK .0005 TO .001</small>		
 CROSS SLIDE ALIGNMENT <small>TO FACE HOLLOW OR CONCAVE ONLY ON 10 INCH DIAMETER 0 TO .0008</small>		
 FACE PLATE RUN OUT <small>ON FACE AT NOMINAL DIAMETER 0 TO .001</small>		
 CHUCK—RUN OUT <small>BAR TEST 3" FROM END OF JAW BAR DIA SAME AS HOLE .003 SUBJECT TO CHUCK INACCURACY</small>		
 LATHE MUST TURN ROUND WITH WORK MOUNTED IN CHUCK <small>WITHIN .0003</small>		
 LATHE MUST TURN CYLINDRICAL WITH WORK MOUNTED IN CHUCK <small>WITHIN .0003</small>		
 COLLET CHUCK—RUN OUT <small>ONE INCH FROM SPINDLE 0 TO .001</small>		
 BACK LASH ON CROSS FEED—SCREW ON COMPOUND REST SCREW <small>.004</small>		

INSPECTED _____
APPROVED _____

DATE _____



SHELDON MACHINE CO., INC. 4258 North Knox Avenue
Chicago 41, Illinois
Builder of Sheldon Lathes, Milling Machines, Shapers and Sebastian Lathes

O'CONNELL MACHINERY CO., INC.
1605 CENISE ST
BUFFALO 11, NEW YORK

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Printed in U.S.A.