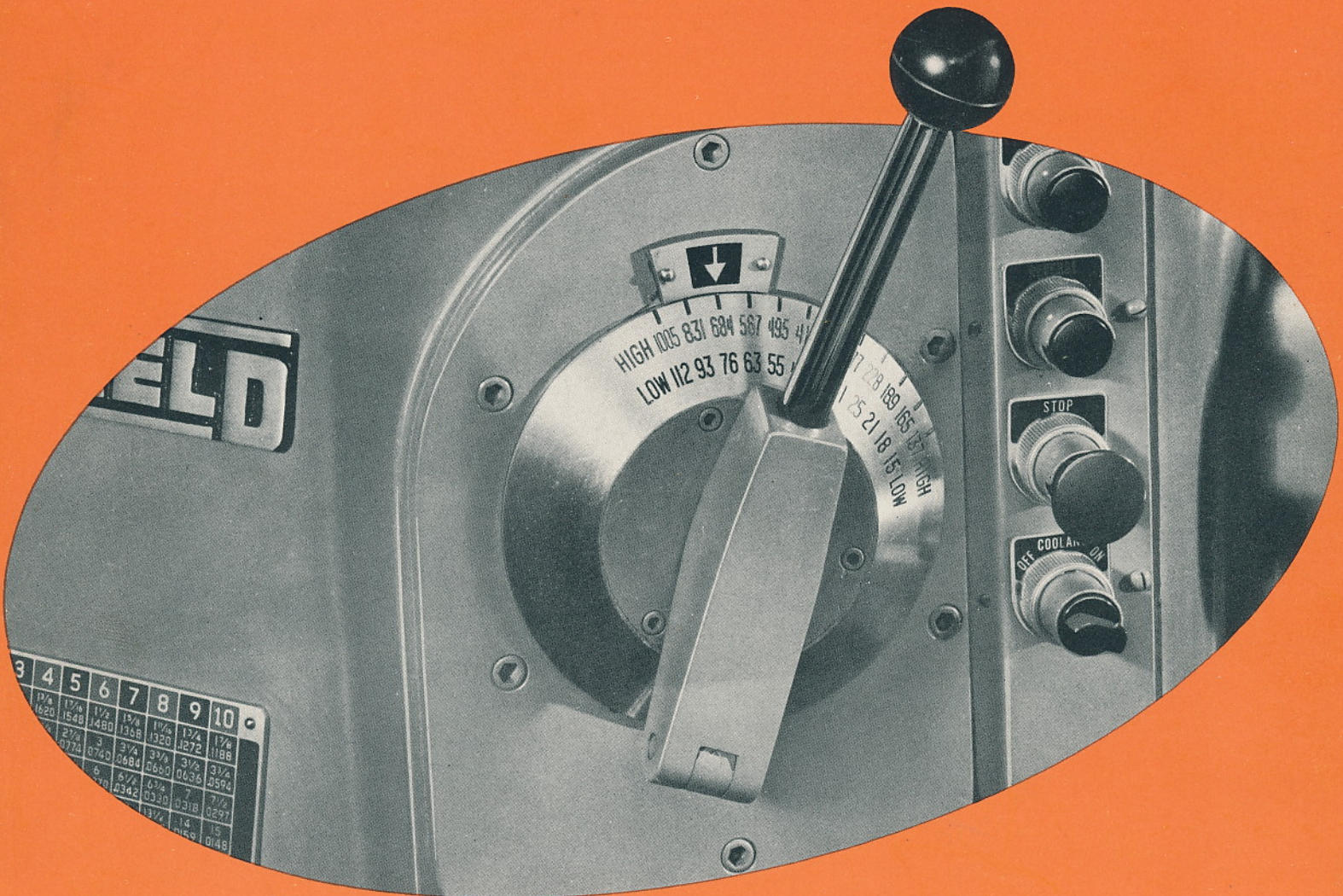


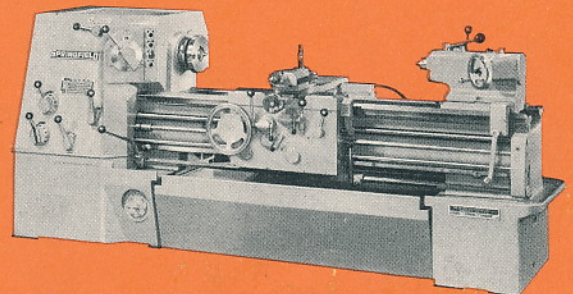
SPRINGFIELD

model "S"

Heavy Duty 16" Lathes



3	4	5	6	7	8	9	10	c
19/8	17/4	1 1/2	1 5/8	1 3/4	1 7/8	1 7/8	1 7/8	
1620	1548	1480	1368	1320	1272	1188		
27/8	3	3 1/4	3 1/2	3 3/4	4	4 1/4		
2774	2740	2684	2600	2536	2504	2594		
7/8	1 1/8	1 1/4	1 1/2	1 3/4	1 7/8	2		
1342	1320	1318	1318	1318	1318	1318		
13/4	1 1/2	1 1/4	1 1/2	1 3/4	1 7/8	2		
1159	1159	1159	1159	1159	1159	1159		



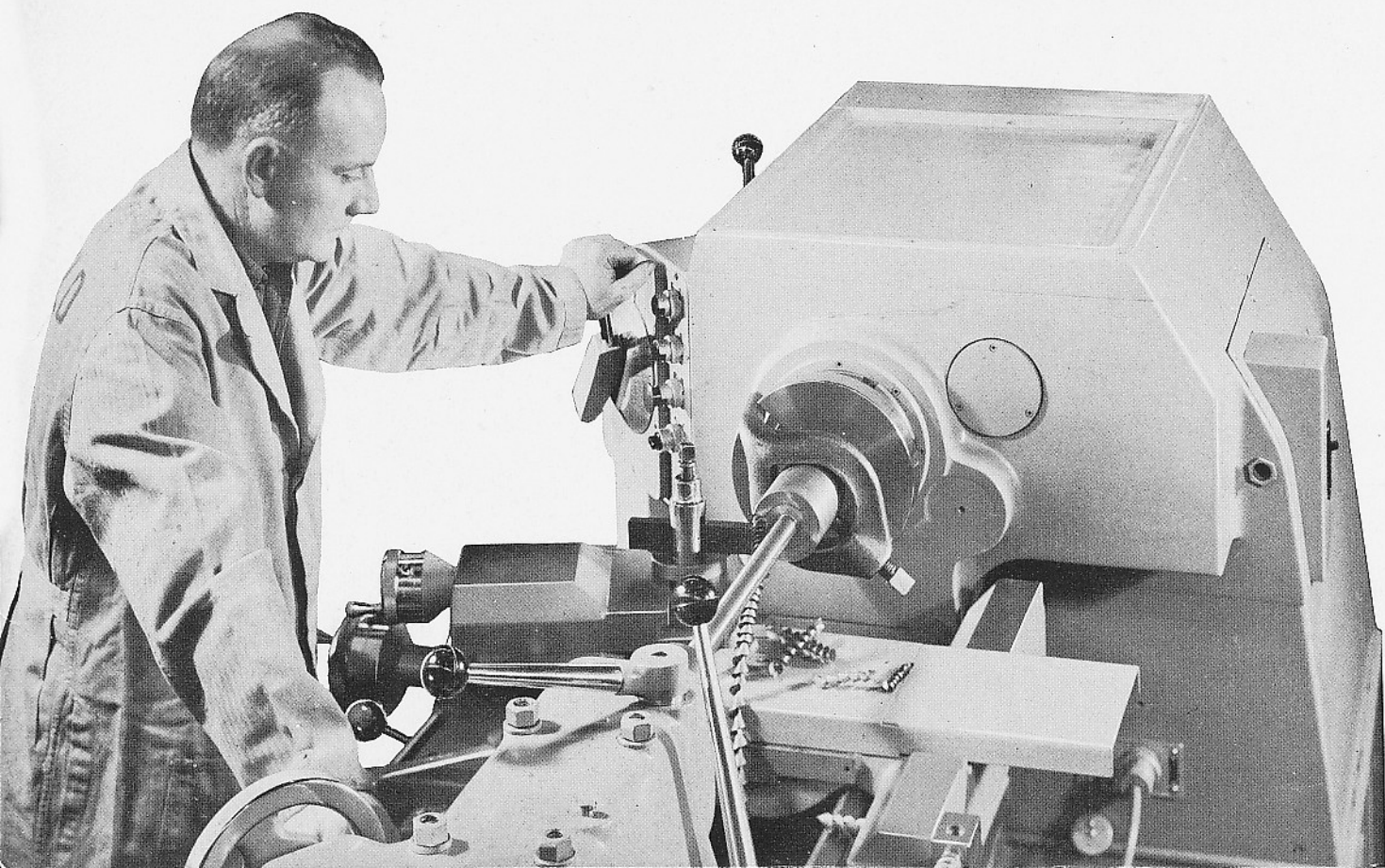
Because it's simple

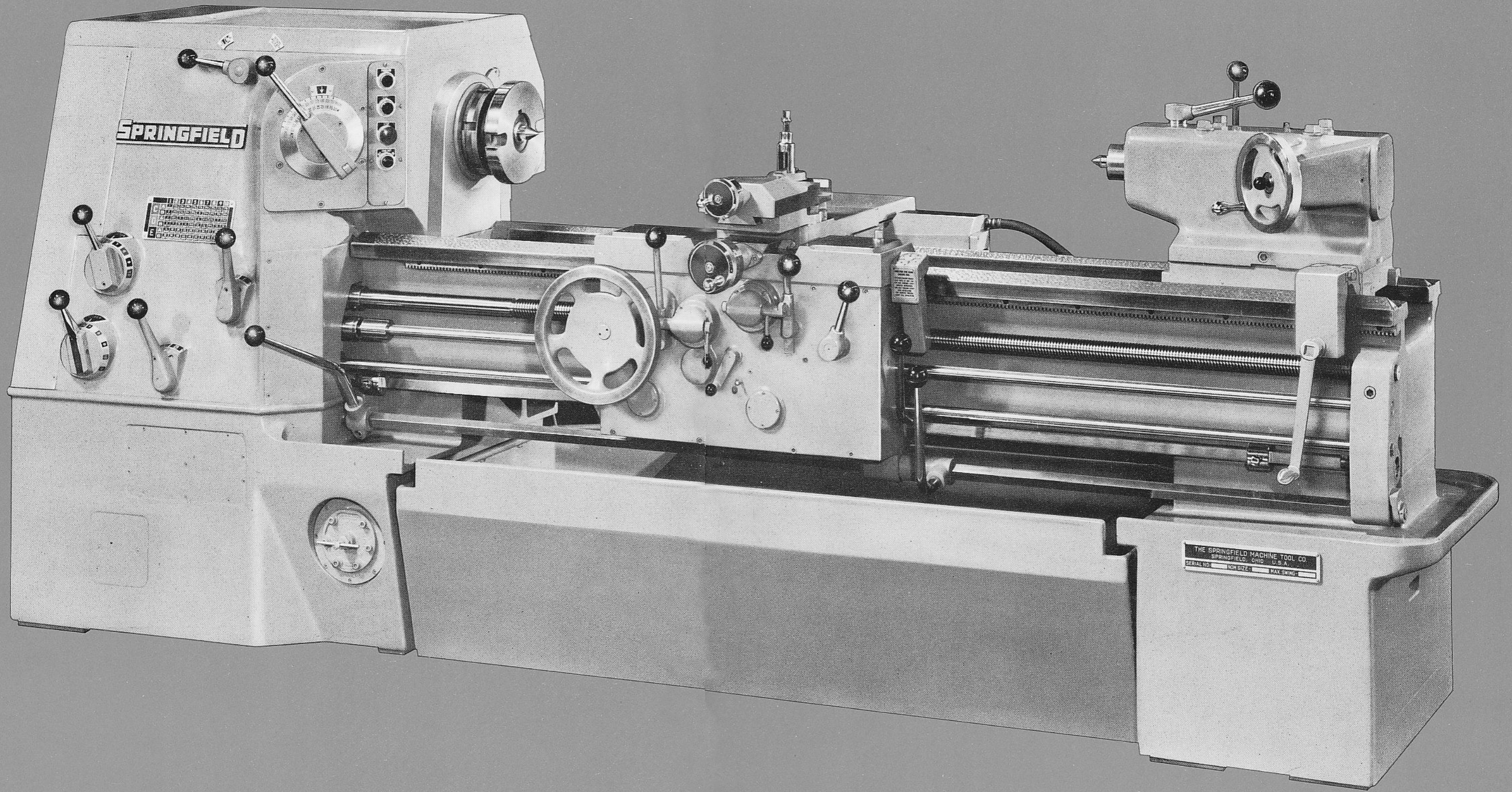
Springfield's Model "S" Lathe is simple—in engineering, in operation, in appearance.

A lifetime of building ideas into machine tools has been turned to making the Model "S" capable of more work while the operator does less—of running cooler with less heat distortion—of saving power and minimizing wear.

Yet there is a further gain. Clean, simple design encourages good shop practices and better maintenance. It builds pride in workmanship.

Turn these pages for details of the simplicity built into this modern version of man's oldest machine tool.



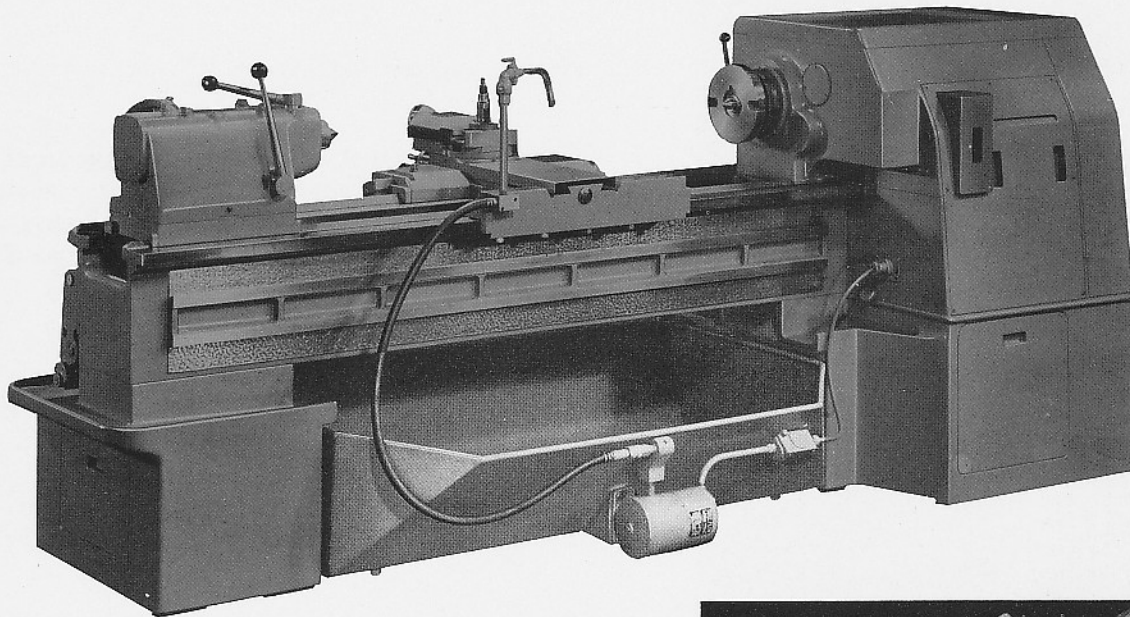
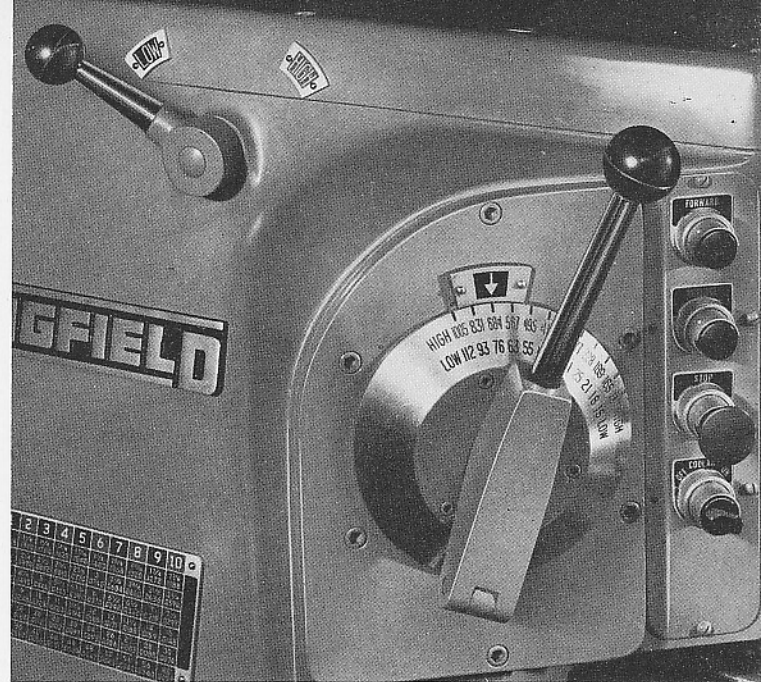


THE SPRINGFIELD MACHINE TOOL CO.
SPRINGFIELD, OHIO U.S.A.
SERIAL NO. _____ NON SIZE _____ MAX SWING _____

Simple Controls:

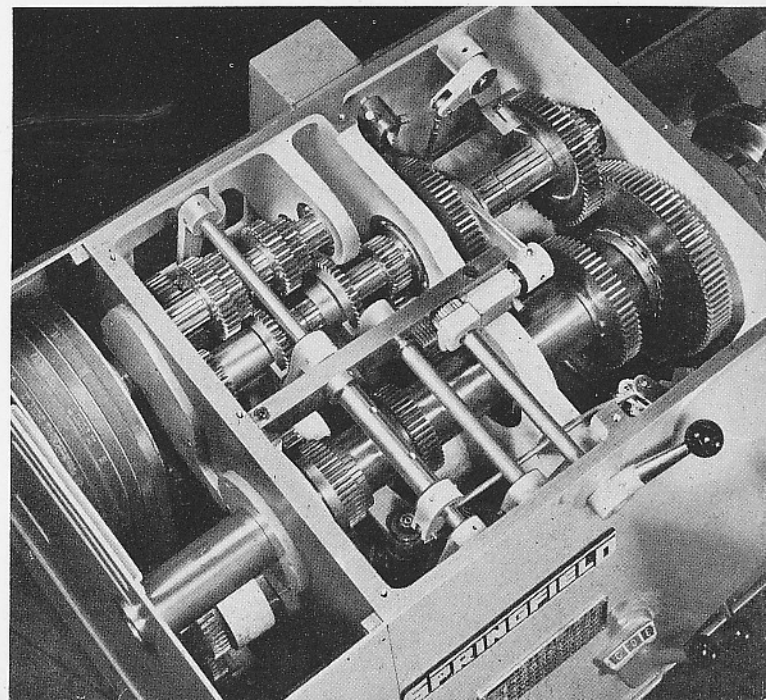
These two-lever, color-coded gear controls are grouped with power controls, including a large emergency stop button, within easy reach of the operator's left hand. No "pass-through" gears slow shifting.

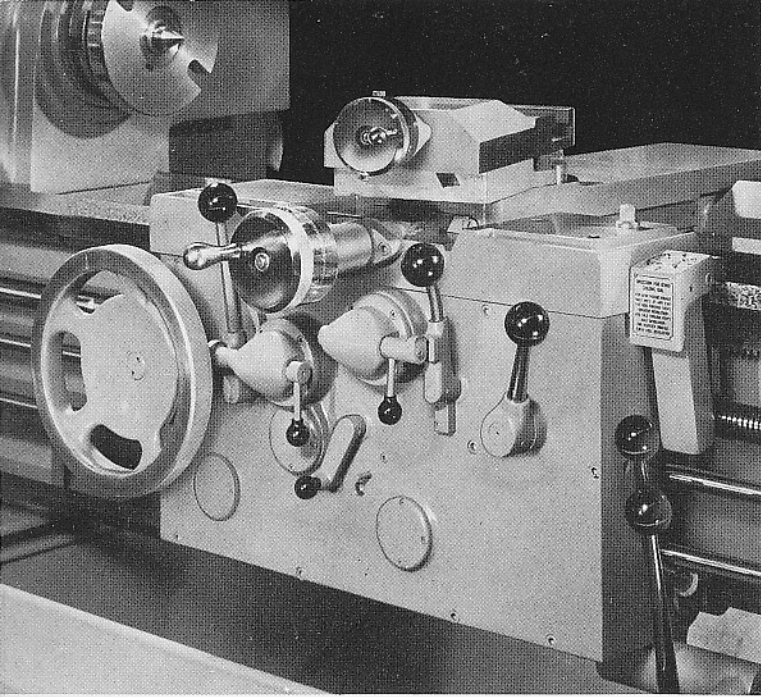
Rear view of lathe showing the large chip pan, standard on tool room models. It is mounted on ball casters, with a quick disconnect coolant hose and electrical connections, for convenient positioning and easy cleaning.



Headstock Gear Box:

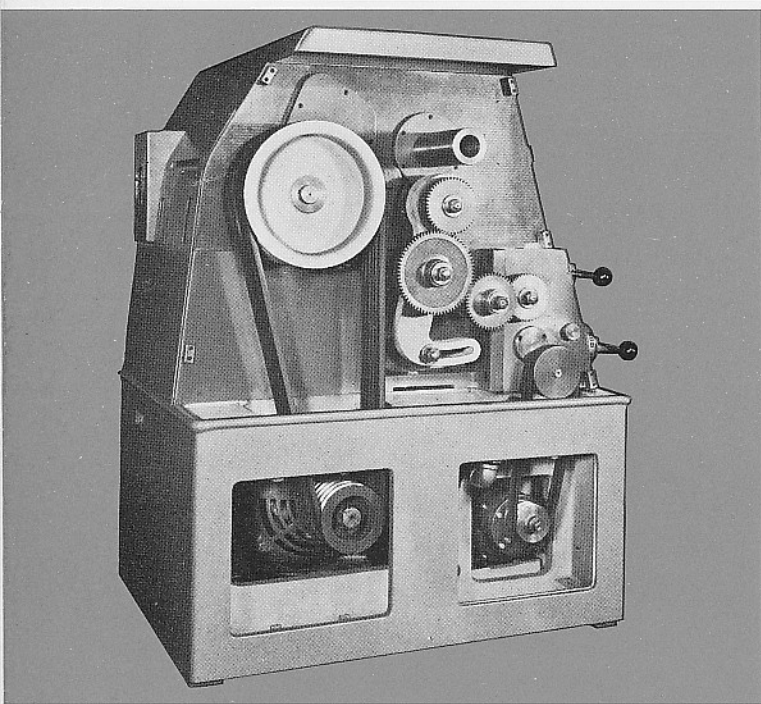
The simple gearing of the Model "S" Lathe is shown here. Since fewer of the hardened, high alloy steel gears are in mesh at any time, there is less friction and wasted power. Only those gears necessary to produce a given speed are engaged. The spindle turns on two Timken tapered roller bearings, and one cylindrical roller bearing, or, if desired, two precision ball bearings and one cylindrical roller bearing.





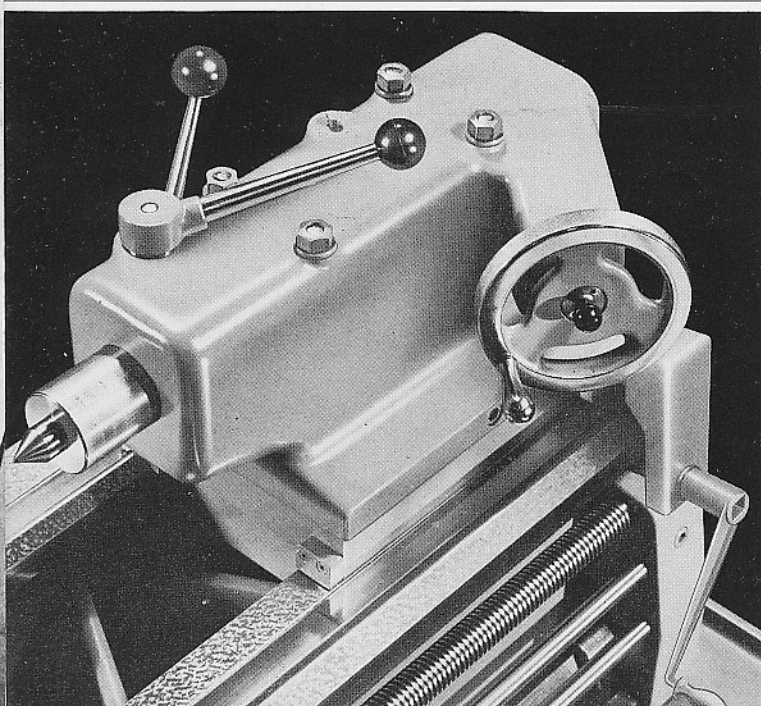
The Apron:

Functional control is provided at the apron, with positive friction feed clutches, safety interlocks, anti-friction bearings, oil sump and automatic constant pressure lubrication to bed ways and cross-slide. The totally enclosed apron mechanism runs in oil. The chasing dial is large and easily read. Interlocked power rapid traverse to carriage and cross-slide is available.



Enclosed Motor Cabinet:

The motor cabinet base, drive, and quadrant gearing are completely enclosed for operator safety and for protection against dirt. There are four gears in the heavy quadrant. Quick conversion is possible to metrics, modules, or special pitch ranges.

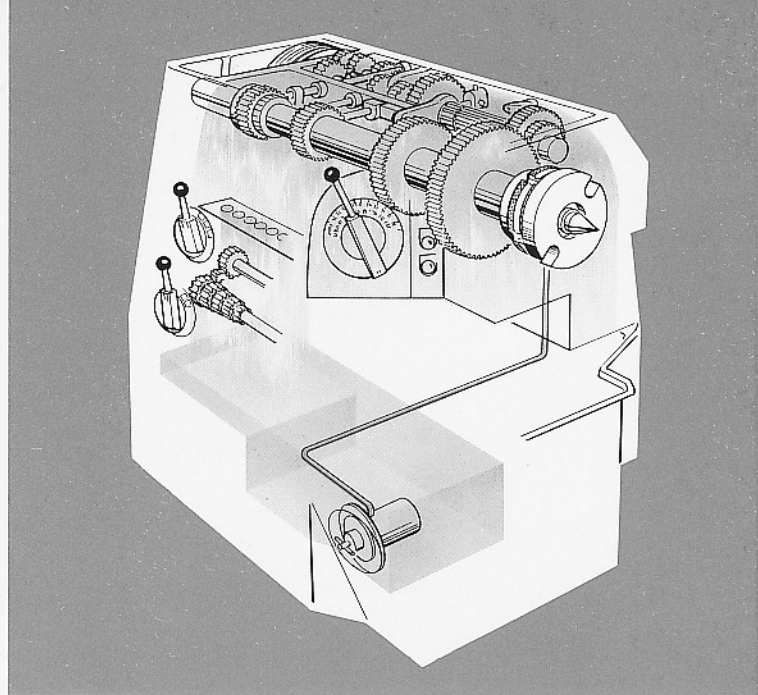


Accessible Tailstock:

The offset handwheel puts the tailstock within quick reach of the operator. The graduated barrel has two speeds. A quick action medium duty clamp and a four-bolt heavy duty clamp are provided. An oil sump lubricates the barrel, nut, and bed-ways. The spindle is equipped with a tang.

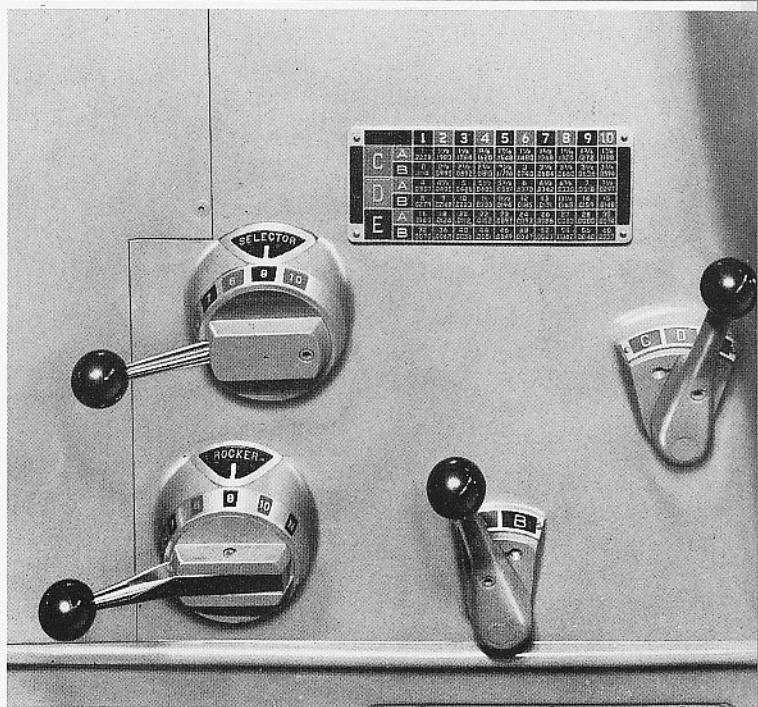
Double-action Lubrication:

High pressured filtered oil mist reaches all gears and bearings in the headstock. A cascade of oil lubricates the feed box. A large baffled oil sump in the cabinet base dissipates heat, thus minimizing distortion of spindle as machine warms up.



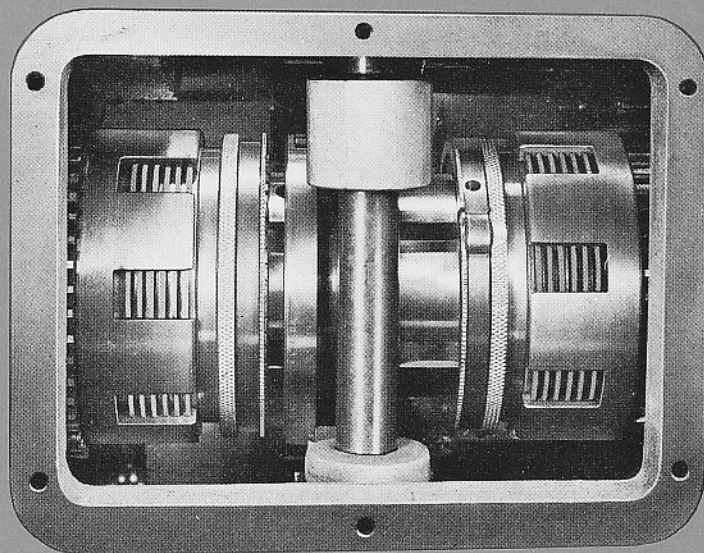
Thread & Feed Selectors:

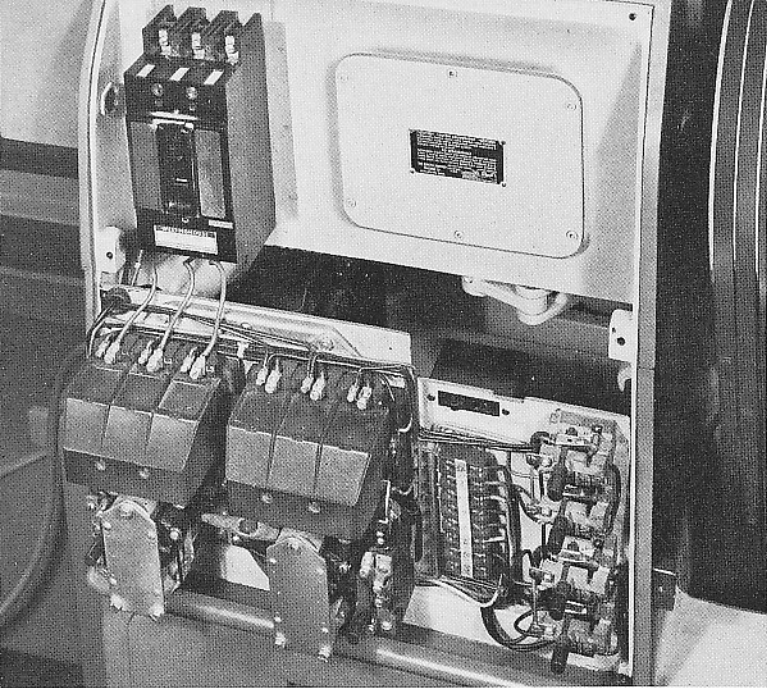
Sixty feeds and threads are quickly available through color-coded selectors. All standard pitches are included. Fully enclosed, with anti-friction bearings and flood lubrication to assure efficient operation.



Friction Clutch:

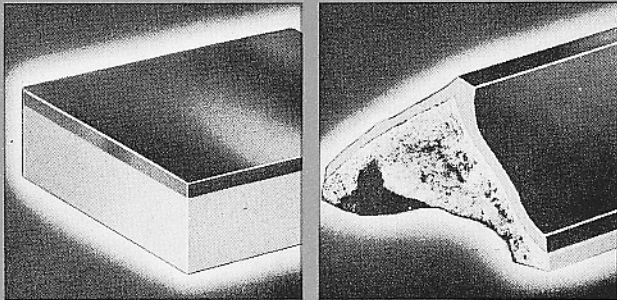
The enclosed multiple disc friction clutch, running in oil and easily adjusted, provides forward and reverse at apron.





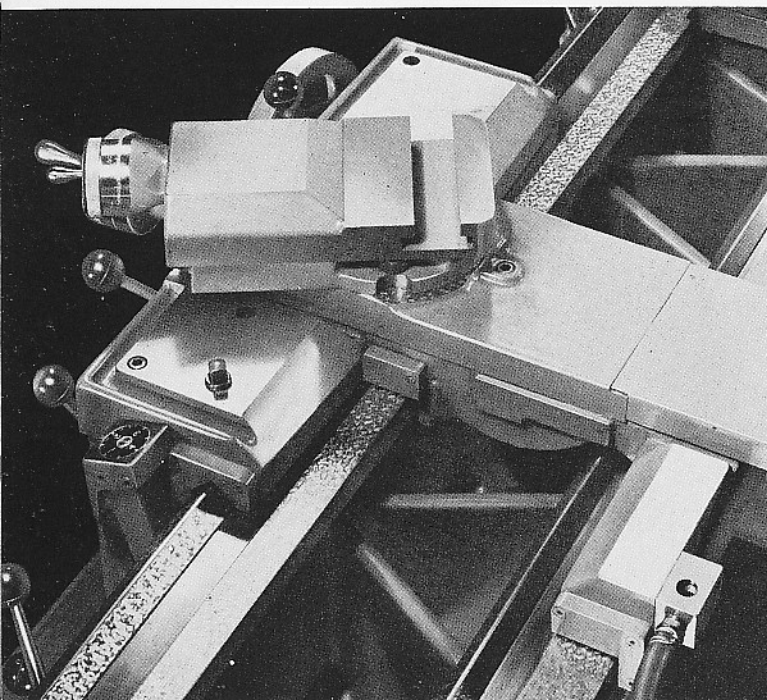
Electrical System:

The enclosed unit type electrical control panel, with terminal block wiring, eliminates standard enclosure boxes.



Hardened Bedways:

Replaceable hard tool steel faced ways are standard equipment.



Bed Girthing:

Equilateral triangular bed girthing gives unusual rigidity and adequate chip clearance throughout the extreme way areas. The rigid carriage has three bearings on the bed. Other features include large bridge cross-section, universal compound, and maximum tool load support.

Standard Equipment

all models:

Compound rest.
Steady rest.
Thread chasing dials.
Round tool post.
Tang tailstock spindle.
Necessary wrenches.
Replaceable hard tool steel faced ways.

engine lathes:

Lead screw and feed rod
reverse control on headstock.
Small face plate.
Feed rod stop.
Micrometer thread depth stop.

tool room lathes:

Oil and chip pan.
Lead screw and feed rod
reverse on apron.
Automatic stops
in either direction.
Feed rod stops for
feeds at high speed.
Micrometer depth stop
for cross feed.

Optional Equipment

Metric lead screw and change gear box.
Metric cross feed and compound rest screws and dials.
Metric graduations on taper attachment if ordered.
Cam lock spindle nose.

Accessories

Chucks, manual and power.
Collet chucks, spindle nose
and draw bar types.
Face plates.
Special fixtures.

Work rests.
Guide rests.
Follow rests.
Box rests.
Steady rests.

European-type tool posts.
Turret tool posts.
Compound tool holders.
Back slide rests.
Connected front and back
rests all combinations.

Ball stop on cross feed.
Micrometer carriage stop.
Multiple longitudinal
automatic stops.
(Except toolroom model)
Multiple dial indicator-
type carriage stops.

Special higher and lower
spindle speed ranges.
Sub-heads.
Oil and chip pans.
Coolant systems.

Special feed ranges.
Metric transposition gears.
Power rapid traverse to
carriage only.
Power rapid traverse to
carriage and cross slide.

Taper attachments.
Plain relieving attachments.
Universal relieving attachments.

Air or hydraulic actuated tailstock.
Removable live tailstock centers.
Built-in anti-friction bearing
live tailstock centers.

Hydraulic contouring attachment for semi-automatically
contouring work pieces from templates.

Hydraulic reproducing attachment for plain and compound
three dimensional profiling from templates or samples.

Variable speed electrical drives interlocked with
tool slides to give constant peripheral speed to
work on facing, contouring, and similar operations.

Special accessories, tooling, controls, drives. Applications developed.

Specifications / model "S" / 16" Lathe

Capacity

Swing over Bed	18 1/2"
Swing over Cross Slide	10 5/8"
Distance between Centers, Base Machine	30"

Dimensions

Bed Length, actual, Base Machine	7'6"
Bed, Width and Depth	17" x 12 3/4"
Height, Floor to Centers	44"
Overall Floor Space including Oil Pan	48 1/2" x 8'7"

Headstock

No. Spindle Speeds	24
Optional Spindle R.P.M. Ranges:	
Low Range: 10, 12, 14, 17, 21, 25, 31, 37, 41, 51, 62, 75, 91, 110, 126, 152, 185, 237, 274, 330, 378, 456, 554, 670.	
Standard Range: 15, 18, 21, 25, 31, 37, 46, 55, 63, 76, 93, 112, 137, 165, 189, 228, 277, 355, 411, 495, 567, 684, 831, 1005.	
High Range: 22, 27, 31, 37, 46, 55, 69, 82, 94, 114, 139, 168, 205, 247, 283, 342, 415, 532, 616, 742, 850, 1026, 1246, 1507.	
Recommended Motor H.P. and Speed—Low	10-1200
—Medium	15-1200
—High	20-1800
Spindle Bearings	2 Timken Taper Bearings, 1 Cylindrical Roller Bearing
Spindle Nose Long Taper Key Drive	No. 1
Spindle Hole, diameter	1 3/4"
Centers, Morse Taper	No. 4
Length, Bearing on Bed	29 5/8"

Feeds and Threads

No. Feeds and Threads	60
Standard Range:	
Feeds:0037"—.2228"
Threads: 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 11/16, 1 3/4, 1 7/8, 2, 2 1/4, 2 1/2, 2 3/4, 2 5/8, 3, 3 1/4, 3 3/8, 3 1/2, 3 3/4, 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 7 1/2, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 15, 16, 18, 20, 22, 23, 24, 26, 27, 28, 30, 32, 36, 40, 44, 46, 48, 52, 54, 56, 60.	

Optional Range:

Feeds:0018"—.1114"
Threads: 2, 2 1/4, 2 1/2, 2 3/4, 2 7/8, 3, 3 1/4, 3 3/8, 3 1/2, 3 3/4, 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 7 1/2, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 15, 16, 18, 20, 22, 23, 24, 26, 27, 28, 30, 32, 36, 40, 44, 46, 48, 52, 54, 56, 60, 64, 72, 80, 88, 92, 96, 104, 108, 112, 120.	
Lead Screw, Diameter and Pitch	1 1/2" x 4P

Carriage

Length, Bearing on Ways	25 3/4"
Area, Bearing on Ways	161 sq. in.
Bridge, Width	8"
Cross Slide Travel	13"
Top Side Width	7"
Top Side Travel	3 1/2"
Tool Size	5/8" x 1 3/8"

Tailstock

Length, Bearing on Ways	15 1/4"
Spindle Diameter	3"
Spindle Travel	9"
Maximum Set Over	1"

Accessories

Taper Attachment Turns, 3" per foot for length of	20"
Draw Bar, Collet, Maximum Capacity (Standard Spindle Hole)	1 1/4"
Follow Rest Capacity, Standard	1/2" to 4"
Steady Rest Capacity, Standard	1/2" to 6"
Steady Rest Capacity, Oversize No. 1	6" to 10"

Weights

Domestic Shipping Weight including Oil Pan	8165 lbs.
Additional 2 ft.	450 lbs.
Export Shipping Weight including Oil Pan	9365 lbs.
Additional 2 ft.	705 lbs.
Export Box, Cu. Ft.	238
Additional Export Box per 2 ft.	cu. ft. 43

Represented by