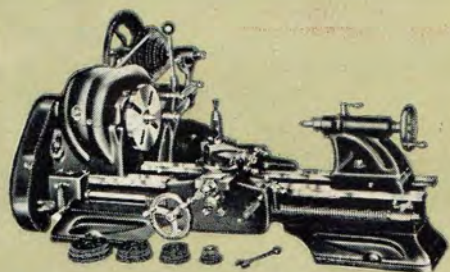


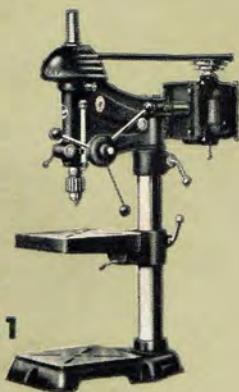
Atlas

30th Anniversary
1911-1941

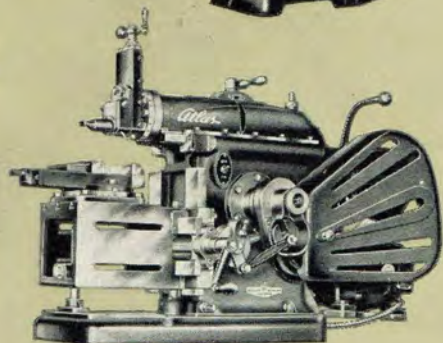
MODERN SHOP EQUIPMENT



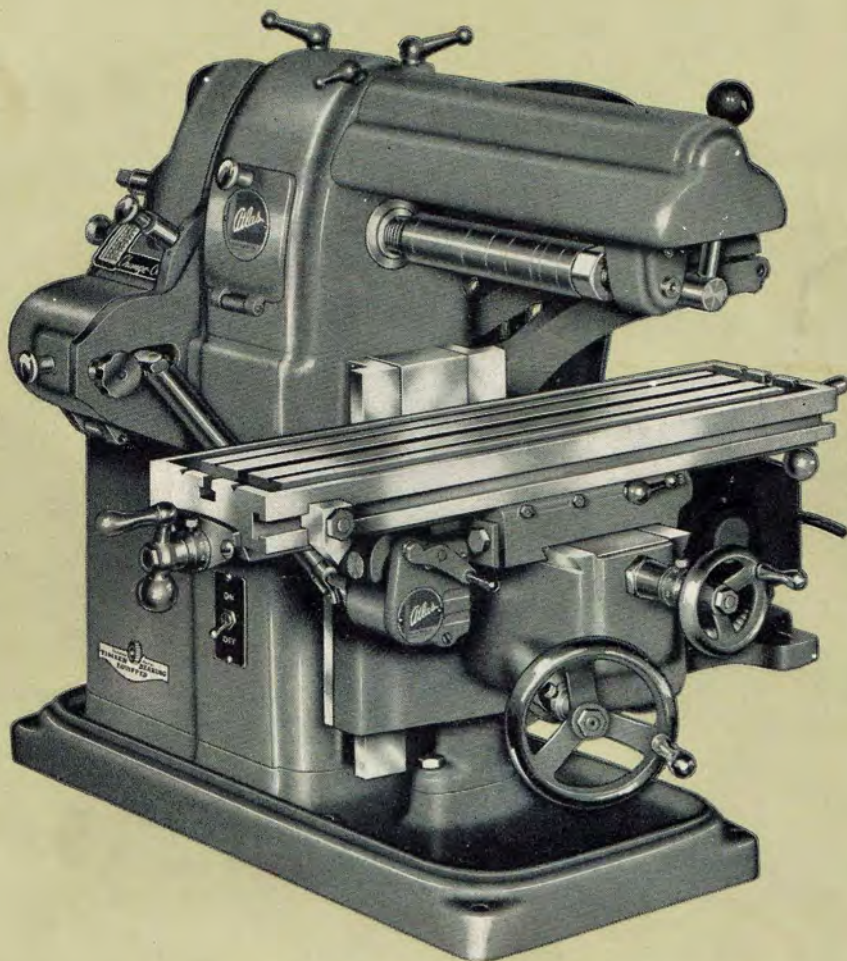
LATHES — 6" and 10" SWING
Pages 2-36



**DRILL
PRESSES**
Pages 49-61



7 INCH SHAPER
Pages 43-48



NEW BENCH MILLING MACHINE
Pages 37-42

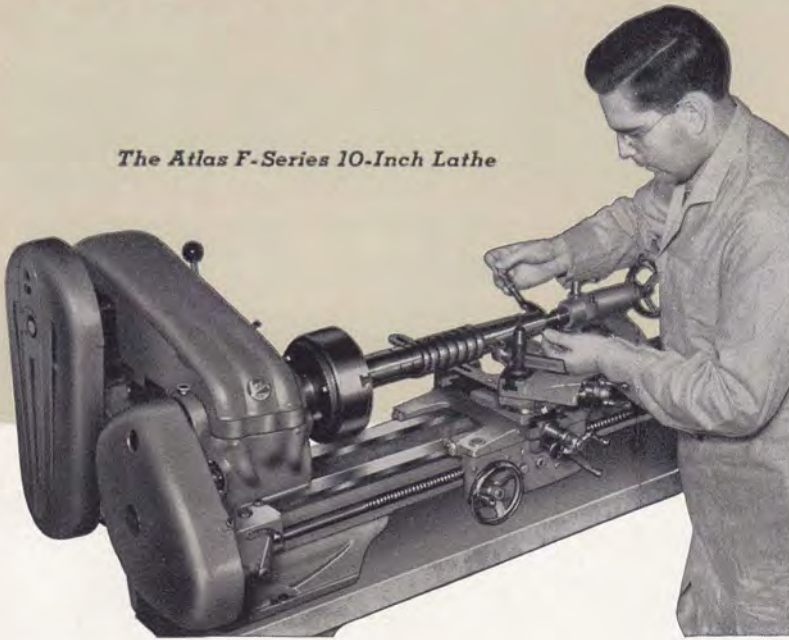


GENERAL CATALOG No. 41

"Atlas LATHE EQUIPPED..."

A BETTER EQUIPPED MODERN SHOP

The Atlas F-Series 10-Inch Lathe

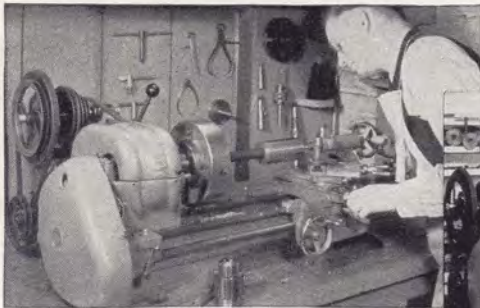


IN factories, tool and die shops, garages, schools, laboratories, experimental and model-building shops, the backgeared screw-cutting lathe is the basic multi-purpose machine tool. More operations are handled on the lathe than on any other single unit of equipment. In recent years, the rapid advances in Atlas Lathes—their accuracy, power, rugged strength, and efficiency—coupled with distinctive advanced design features, have made them the preferred lathes in shops throughout the world.

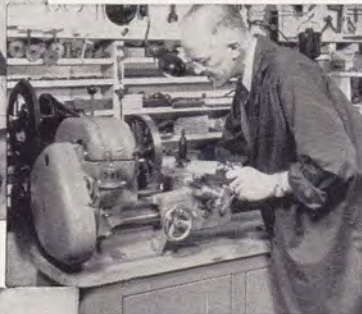


THE NEW *Atlas* F-SERIES 10-INCH LATHES

Atlas F-Series, 10-Inch Lathes are the only low-cost precision lathes with all these modern construction features—precision ground bed ways, custom-built spindle bearings, instantly reversible automatic power cross feed and longitudinal feed, complete V-belt drive, quick-change countershafts, exceptionally wide speed range and screw-cutting range, backgeared power for heavy jobs, compact controls, and rugged Zamak alloy parts.



Vocational School



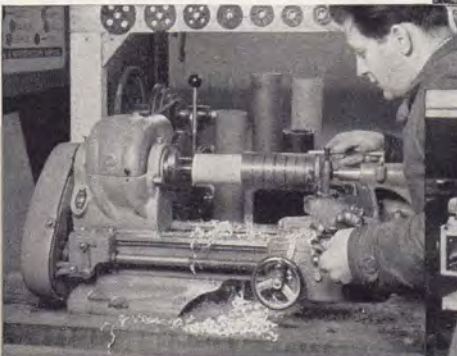
Inventor



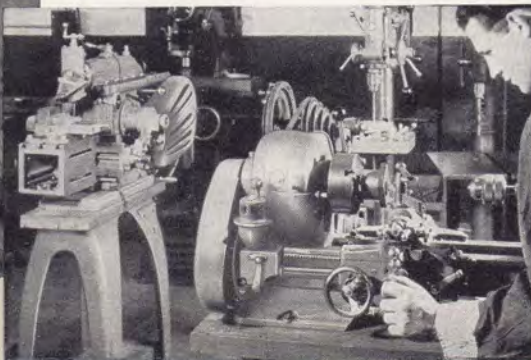
Garage



Laboratory



Production Shop (Plastics)



Tool and Die Shop

INDEX—*Atlas* LATHES

	Page
New F-Series 10-Inch Backgeared Screw-Cutting Lathes	3 to 14
10-Inch Lathe Tools and Attachments . . .	15 to 28
New 6-Inch Backgeared Screw-Cutting Lathes	29 to 32
6-Inch Lathe Tools and Attachments	34 to 36
Complete Armature Servicing Outfits . . .	33

AN Atlas LATHE

AN ATLAS LATHE meets all the requirements of the modern shop—accuracy for the finest work, strength and power for heavy jobs, rugged materials and large bearing surfaces for long service life—and in addition incorporates many modern features essential for simple, efficient operation. From its massive precision-ground bed to the convenient quick-change countershafts, each part of an Atlas lathe has been designed on these fundamental principles.

THE rigidity and strength of the Atlas lathe are the results of careful selection of materials and their scientific design. The lathe bed is a heavy, massive, close-grained, semi-steel iron casting—wide thick flat-type ways and heavy box-type cross braces resist all turning forces. This modern bed design provides a rigid foundation for the entire lathe. The lathe headstock, carriage, and tailstock are heavy, well braced, semi-steel iron castings—strong supports for work and cutting tool.

The rugged strength of the Atlas lathe bed, headstock, carriage and tailstock, plus heavy duty spindle and spindle bearings, permits a powerful backgeared V-belt drive.

Large bearings with full provision for their complete adjustment and thorough lubrication mean extra years of service with an Atlas lathe. These fine bearings reduce friction, minimize wear, maintain initial accuracy and rigidity.

The heavy duty headstock spindle bearings are high-speed babbitt of the two-piece split-cap type now used in larger machine tools and automobile engines. Laminated shims are provided for take-up. Precision grinding gives the close-grained bed ways a tough, wear-resisting surface. The carriage has six full-length bearing surfaces on the bed ways, each 9½ inches long—two on the top bed ways, two on the side ways, and two on the bottom surfaces. The bottom bearing plates have laminated shims for takeup. The lathe tailstock has four bearing surfaces on the bed—the inside bearing on the rear bed way has an adjustable gib. Unusually large carriage and tailstock bearings keep bed wear at a minimum.

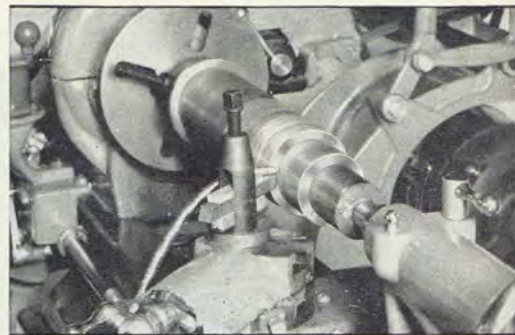
Precision lathe work requires accurate alignment of head- and tailstock spindles, carriage,

and bed ways in both horizontal and vertical planes. In the Atlas lathe, this alignment is guaranteed to be within .001 inch. To obtain this alignment accurate bed ways are the first essential.

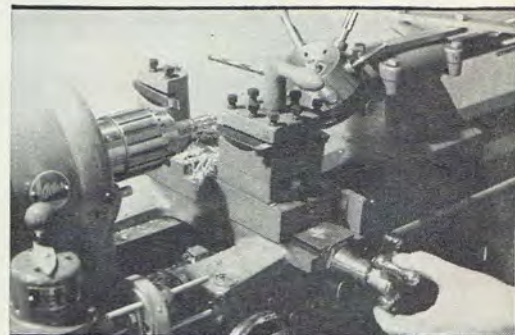
The flat-type ways of the Atlas lathe bed are precision-ground. The ways and leg pads are first rough-milled, and the bed is allowed to season naturally to prevent warping and twisting of the finished bed. After seasoning, the bed ways are accurately finish-milled on machines designed especially for the operation. The tops, bottoms, and sides of the ways are then ground and trued on special-built precision grinding machines until all eight surfaces are aligned to within .001 inch.

These precision-ground bed ways are the basis for the accuracy of the Atlas lathe. The headstock spindle bearings are accurately bored by an especially designed machine mounted in position on the bed ways after the headstock has been carefully fitted to the bed. This custom-boring method means that the spindle of each lathe is positively aligned with the ways. The carriage is hand-fitted to the bed—the tops and sides of the ways guide the carriage along the bed in alignment with the headstock spindle. The tailstock is fitted to the bed so that the tailstock and headstock spindles are aligned to within .001 inch with the bed ways and with each other.

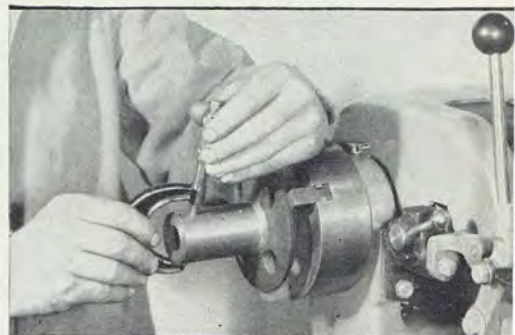
Each part for an Atlas lathe is machined on precision equipment of the latest design. Machining processes are checked with precision instruments and gauges to insure accuracy and uniformity. Further tests are made in each stage of assembly, and the completed lathe passes actual working tests for accuracy in all lathe operations. Alignment of spindles, carriage, and bed ways is carefully rechecked before shipment.



RUGGED STRENGTH



LONG SERVICE LIFE



GUARANTEED ACCURACY

FOR SIMPLE EFFICIENT OPERATION

INSTANTLY REVERSIBLE
POWER CROSS FEED

INSTANTLY REVERSIBLE
POWER LONGITUDINAL FEED

BACKGEARED POWER FOR
HEAVY JOBS

SIXTEEN SPEEDS BETWEEN
28 AND 2072 RPM

SIMPLIFIED CHANGE GEAR SET-UPS

LARGE EASY-TO-READ
THREADING CHART

60-HOLE INDEXING MECHANISM

QUICK-CHANGE COUNTERSHAFT
(Horizontal or Vertical)

WIDE THREAD-CUTTING RANGE
(4 to 96 per inch, Standard,
Metric .5 to 7mm., Standard)

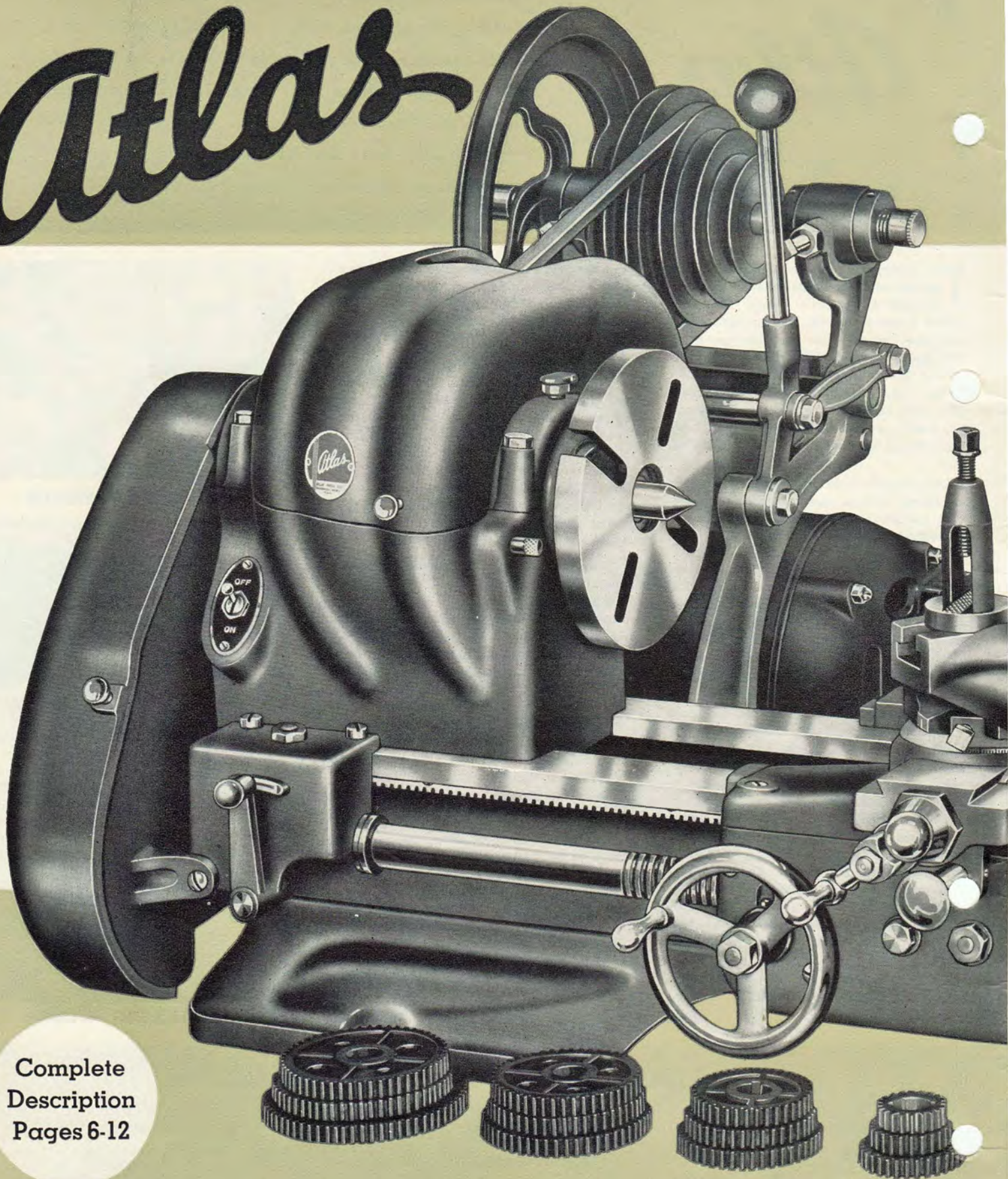
COMPLETE V-BELT DRIVE
(Motor to Countershaft to Spindle)

PRECISION LEAD SCREW—
¾" DIAMETER
(8 Acme Threads per inch)

MICROMETER-GRADUATED
STEEL FEED SCREW COLLARS

FOUR BED WIPERS ON CARRIAGE
GRADUATED TAILSTOCK RAM

Atlas



Complete
Description
Pages 6-12

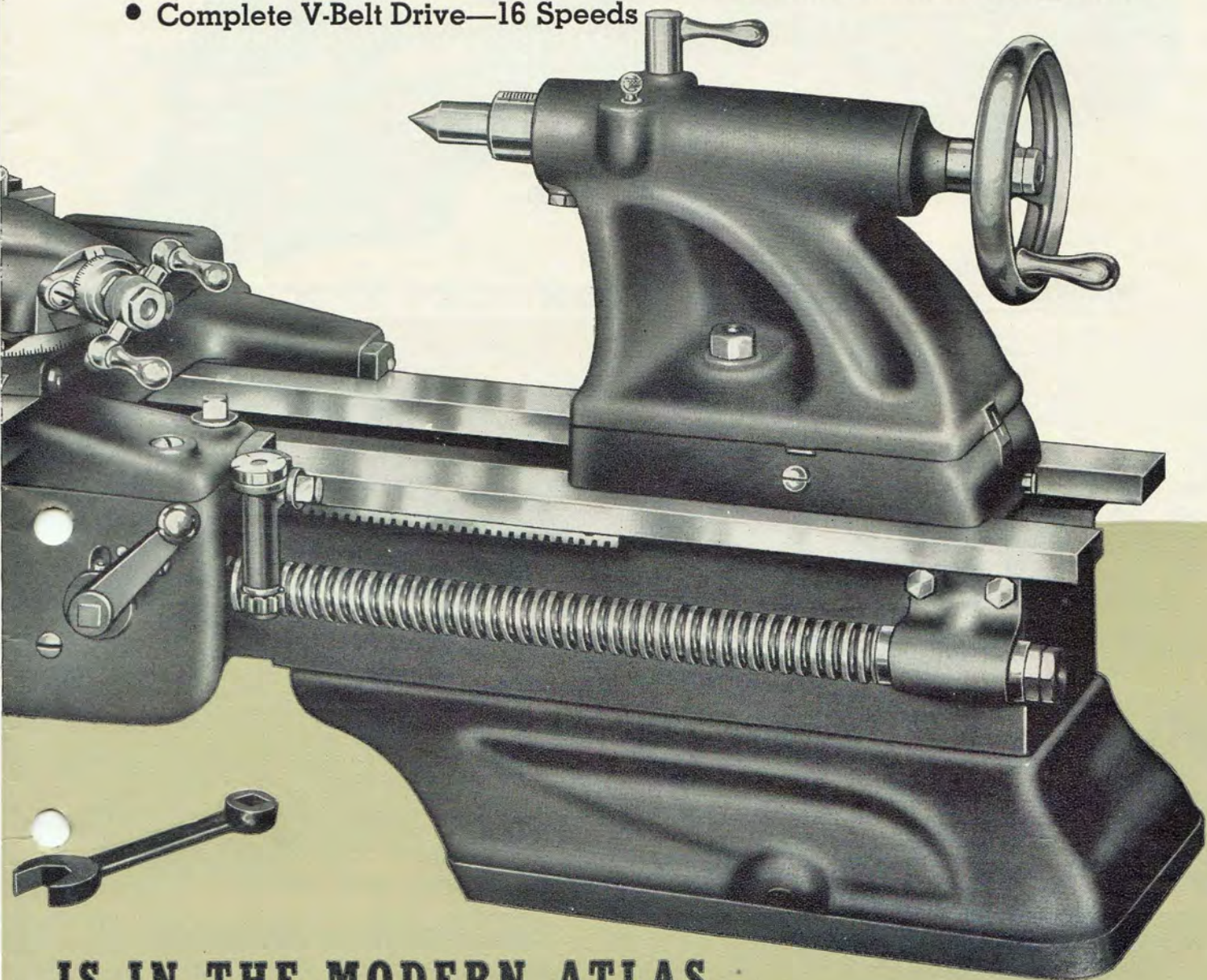
EVERYTHING YOU WANT IN A METAL LATHE

PLEASE ORDER BY
CATALOG NUMBER

F-SERIES 10-INCH BACKGEARED SCREW-CUTTING LATHES

**THE ONLY LOW COST PRECISION LATHE
WITH ALL THESE MODERN FEATURES**

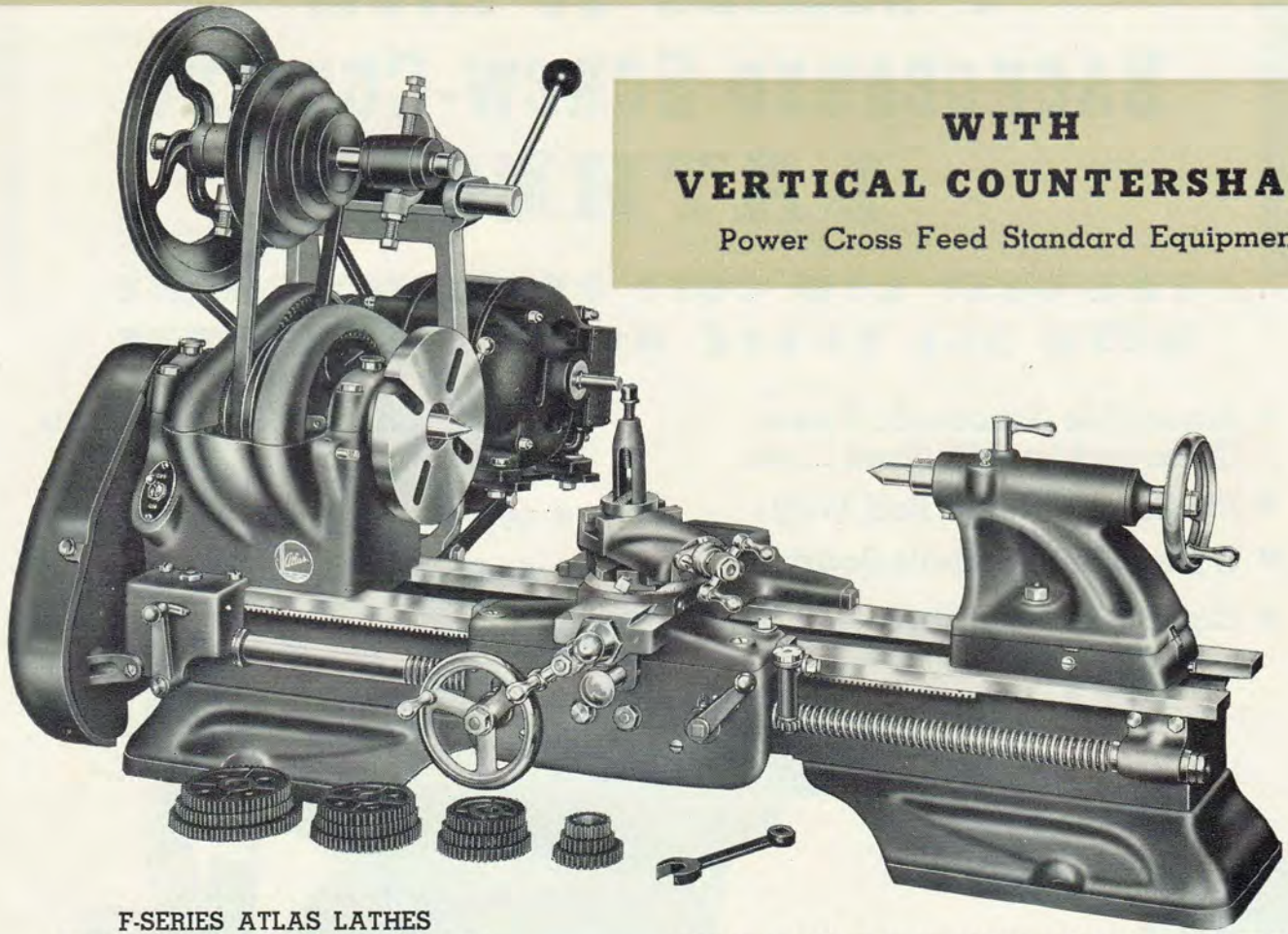
- Reversible Automatic Power Cross and Longitudinal Feeds
- Precision Ground Bed Ways
- Custom-Built Spindle Bearings
- Complete V-Belt Drive—16 Speeds
- Quick-Change Countershafts
- Extra Power for Heavy Jobs
- Wide Thread Cutting Range
- 60 Hole Indexing Mechanism



IS IN THE MODERN ATLAS

COMPLETE INDEX—
INSIDE BACK COVER

THE NEW *Atlas* F-SERIES



**WITH
VERTICAL COUNTERSHAFT**

Power Cross Feed Standard Equipment

F-SERIES ATLAS LATHES WITH VERTICAL COUNTERSHAFT

Order No.	Length of Bed	Between Centers	Overall Length	Boxed Weight less motor	Code Word	PRICE less motor
V36	36"	18"	40"	249 lb.	YEKIJ	\$107.00
V42	42"	24"	46"	261 lb.	YEKKO	114.00
V48	48"	30"	52"	269 lb.	YEKMY	123.00
V54	54"	36"	58"	274 lb.	YEKOK	132.00

All Models: Overall Depth—21", Overall Height—24".

Available with Timken Tapered Roller Bearings—See Pages 8 and 9.

No. 2480	1/3 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYIJL, wt. 28 lb.	\$14.25
No. 2490	1/2 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYILN, wt. 35 lb.	\$17.50

OTHER MOTORS—PAGE 67

No. 10-420	REVERSING SWITCH with mounting bracket, cable connections, and installation diagram (see page 26). Code word YELJE, wt. 3 1/2 lb.	\$4.50
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• VERTICAL COUNTERSHAFT

Attached directly to headstock and bed, making lathe a self-contained unit. Hyatt roller bearings, belt-stretch adjustment, quick-change belt tension lever, motor mounting bracket. Each back gear enclosed by iron safety guard.

Complete Description, Page 13

COMPLETE SPECIFICATIONS

ATLAS F-SERIES 10-INCH

CAPACITY

Swing Over Bed.....10 1/4"
Swing Over Carriage.....6 5/8"
Threading Range, 4 to 96 Standard, Right or Left Hand
—Metric, .5 to 7 mm. Standard

SPEEDS AND FEEDS

Collet Capacity.....1/2" (see page 16)
Number of Spindle Speeds—16 (8 Direct, 8 Backgeared)
Speeds.....28, 45, 70, 83, 112, 134, 164, 211,
266, 345, 418, 500, 685, 805, 1270 and 2072 R.P.M.
Feeds (Left or Right) per Revolution of Spindle.....
.0104", .0087", .0070
.0060", .0050", .0035", or .001877" (Equivalent in
threads per inch: 96, 115, 143, 167, 200, 289 or 533)
Lead Screw .3/4" Diameter, 8 Acme Threads per inch
Change Gears Furnished.....16

HEADSTOCK

Spindle Nose.....1 1/2" Diameter
8 pitch National Form Threads
Spindle Nose Taper....Bored for No. 3 Morse Taper
with reducing sleeve to take No. 2 Morse Taper
Hole Through Spindle.....25/32"
Back Gears.....12 Pitch, 7/8" Wide
Backgear Shaft Bearings.....Oilite Bronze
Backgear Ratio (approximate).....6 to 1
Spindle Gear.....16 Pitch, 32 Teeth, 7/8" Wide

CARRIAGE

Cross Feed Travel.....6 1/2"
Cross Feed Screw.....1/2" Diameter, Acme Threads
Feed Screw Collar Graduations....0 to 0.1" by .001"
Tool Post Slide Travel.....2 1/4"
Tool Post....3/8" x 7/8" slot to take 3/8" Tool Bits
or Tool Holder for 1/4" Tool Bits
Tool Post Swivel...Graduated 0 to 90° right and left

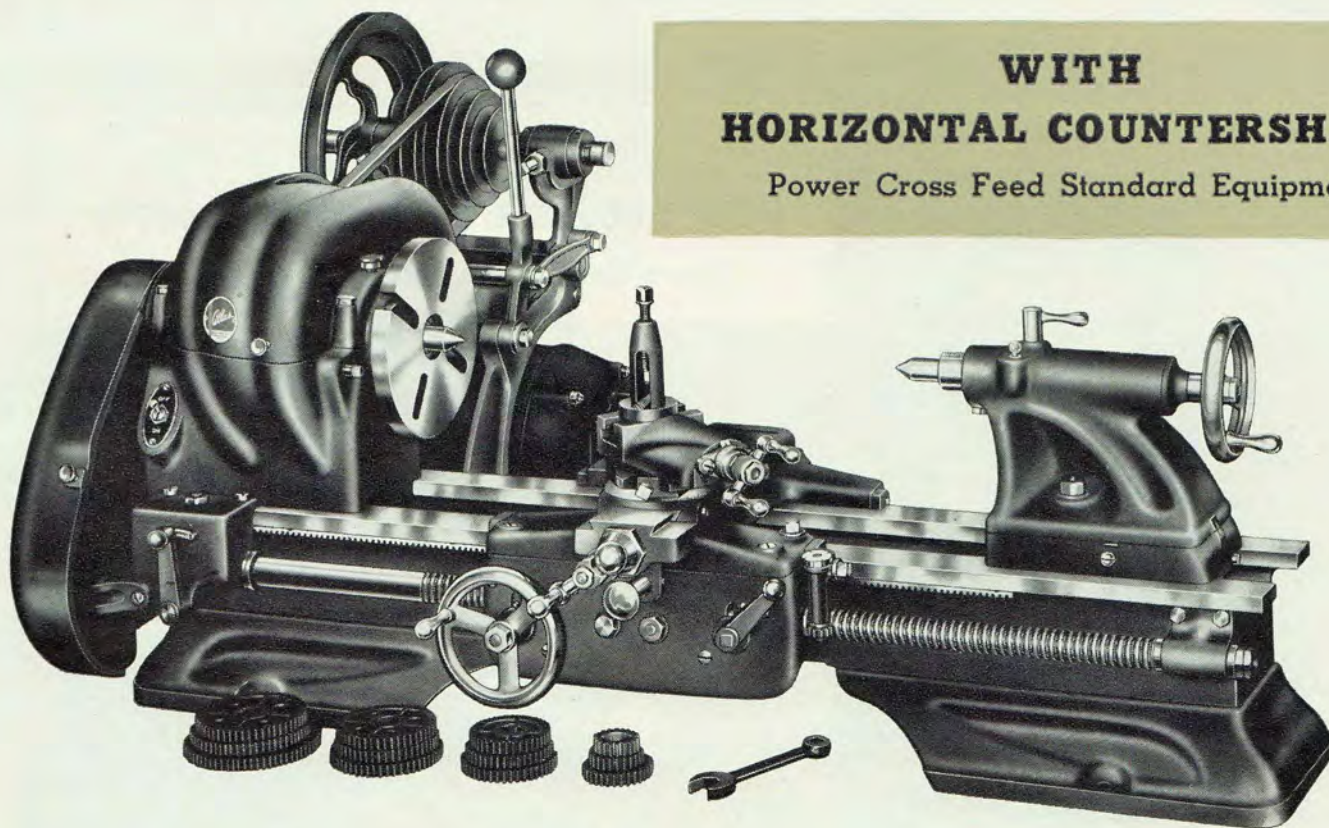
• Instantly Reversible Automatic Power Cross Feed and Longitudinal Feed

• Custom-Built Spindle Bearings
• Complete V-Belt Drive, Sixteen Speeds

PLEASE ORDER BY CATALOG NUMBER

10-INCH BACKGEARED SCREW CUTTING LATHES

**WITH
HORIZONTAL COUNTERSHAFT**
Power Cross Feed Standard Equipment



AND EQUIPMENT FURNISHED

BACKGEARED SCREW CUTTING LATHES

TAILSTOCK

Tailstock Ram.....1-1/4" Diameter
Bored for No. 2 Morse Taper
Tailstock Ram Travel.....2 3/4"
Tailstock Ram Graduations.....0 to 3" by 1/16ths
Tailstock Set-Over, Forward or Back.....3/4"

DRIVE UNIT

Motor Recommended.....1/3 or 1/2 H.P., 1740 R.P.M.
Motor Mounting.....Adjustable Base
Hole Through Motor Pulley.....1/2" Diameter
Built-in Motor Control Switch.....10 Ampere
Switch is for single phase current only
—3-phase switch is No. S7-300 (page 26)
Countershaft Spindle.....Hyatt Roller Bearings
V-Belts for Complete Drive.....1/2" Wide
Motor Pulleys.....2-step
Drive Pulleys.....4-step

Reversible Automatic Power Cross Feed and Longitudinal Feed, Quick-Change Countershaft, Complete V-Belt Drive, 60-Hole Indexing Mechanism, Chrome Plated Control Handles. Finish, Special Atlas Gray.

Atlas F-Series Lathes are available with Timken Tapered Roller Bearings for the headstock spindle. See pages 8 and 9.



EQUIPMENT FURNISHED—F-SERIES 10" LATHES

Reversible Automatic Power Cross Feed; Reversible Automatic Power Longitudinal Feed; Graduated Compound Rest; Tool Post, Ring, and Rocker; Complete Set of Change Gears to Cut Standard Threads from 4 to 96 per inch and standard metric threads from .5 to 7 mm.; Threading Chart, Threading Dial; Quick-Change Countershaft with Motor Mounting Bracket; Belts and Pulleys for Complete V-Belt Drive; Motor pulley furnished is for 1/2" diameter motor shaft—prices of pulleys for other motor shafts on request; 10-Ampere Motor Control Switch and Cord—switch is for single phase current only, 3-phase switch is No. S7-300 (page 26); 60-Hole Indexing Mechanism; 6" Face Plate; Two 60° Lathe Centers; Reducing Sleeve for Headstock Center; Combination Tool-Post and Compound Wrench, Wrenches for Socket-head Screws; Instruction Book—Atlas "Manual of Lathe Operation" (page 14).

F-SERIES ATLAS LATHES

WITH HORIZONTAL COUNTERSHAFT

Order No.	Length of Bed	Between Centers	Overall Length	Boxed Weight less motor	Code Word	PRICE less motor
H36	36"	18"	40"	259 lb.	YEKUL	\$112.00
H42	42"	24"	46"	271 lb.	YELAH	119.00
H48	48"	30"	52"	279 lb.	YELHA	128.00
H54	54"	36"	58"	284 lb.	YELIK	137.00

All Models: Overall Depth—26", Overall Height—19"

Available with Timken Tapered Roller Bearings—See Pages 8 and 9.

No. 2480	1/2 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYIJL, wt. 28 lb.	\$14.25
No. 2490	1/2 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYILN, wt. 35 lb.	\$17.50

OTHER MOTORS—PAGE 67

No. 10-420	REVERSING SWITCH with mounting bracket, cable connections, and installation diagram (see page 26). Code word YELJE, wt. 3 1/2 lb.	\$4.50
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• HORIZONTAL COUNTERSHAFT

Support-bracket is mounted on bench, a heavy rugged support for entire countershaft assembly. Hyatt roller bearings, belt-stretch adjustment, quick-change belt tension lever, motor mounting bracket. Lathe spindle pulley and back gears covered by hinged iron safety guard.

Complete Description, Page 13

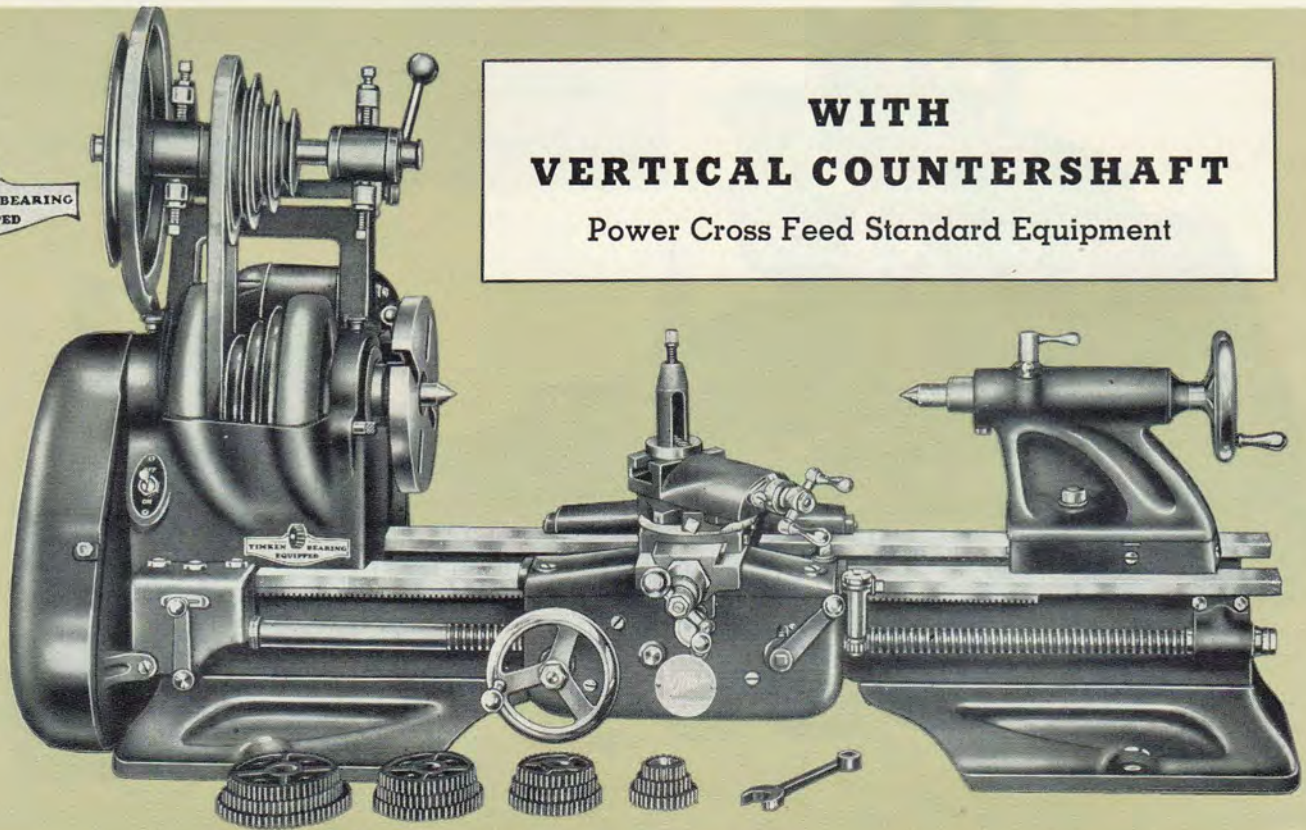


- Precision-Ground Bed Ways
- Extra Power for Heavy Jobs

- Wide Thread Cutting Range
- 60 Hole Indexing Mechanism



Atlas F-SERIES 10-INCH



**WITH
VERTICAL COUNTERSHAFT**
Power Cross Feed Standard Equipment

ATLAS TIMKEN-EQUIPPED F-SERIES 10" LATHES WITH VERTICAL COUNTERSHAFT

Order No.	Length of Bed	Between Centers	Overall Length	Boxed Weight less motor	Code Word	PRICE less motor
TV36	36"	18"	40"	249 lb.	YENON	\$124.00
TV42	42"	24"	46"	261 lb.	YENUP	131.00
TV48	48"	30"	52"	269 lb.	YEOXY	140.00
TV54	54"	36"	58"	274 lb.	YEPAL	149.00

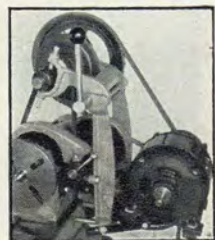
All Models: Overall Depth—21", Overall Height—24"

No. 2480 ½ H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (½" diameter), 10 ft. SJ approved extension cord and plug.
Code word WYIJL, weight 28 lb. \$14.25

No. 2490 ½ H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (½" diameter), 10 ft. SJ approved extension cord and plug.
Code word WYILN, weight 35 lb. \$17.50

OTHER MOTORS—PAGE 67

No. 10-420 REVERSING SWITCH with mounting bracket, cable connections, and installation diagram (see page 26).
Code word YELJE, weight 3½ lb. \$4.50

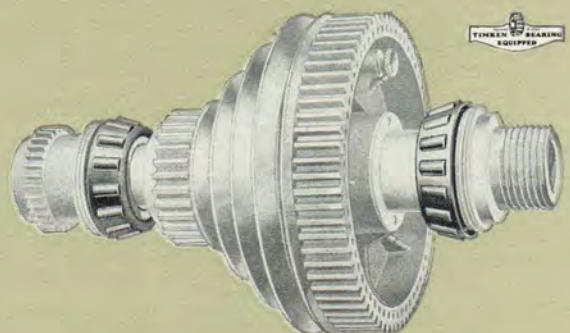


• **VERTICAL COUNTERSHAFT**

Attached directly to headstock and bed, making lathe a self-contained unit. Hyatt roller bearings, belt-stretch adjustment, quick-change belt tension lever, motor mounting bracket. Each back gear enclosed by iron safety guard.

Complete Description, Page 13

THESE Atlas F-Series Lathes are equipped with Timken tapered roller bearings for the headstock spindle. These modern anti-friction bearings have been specified for continuous production work by hundreds of the most efficient industrial plants. They are recommended whenever the



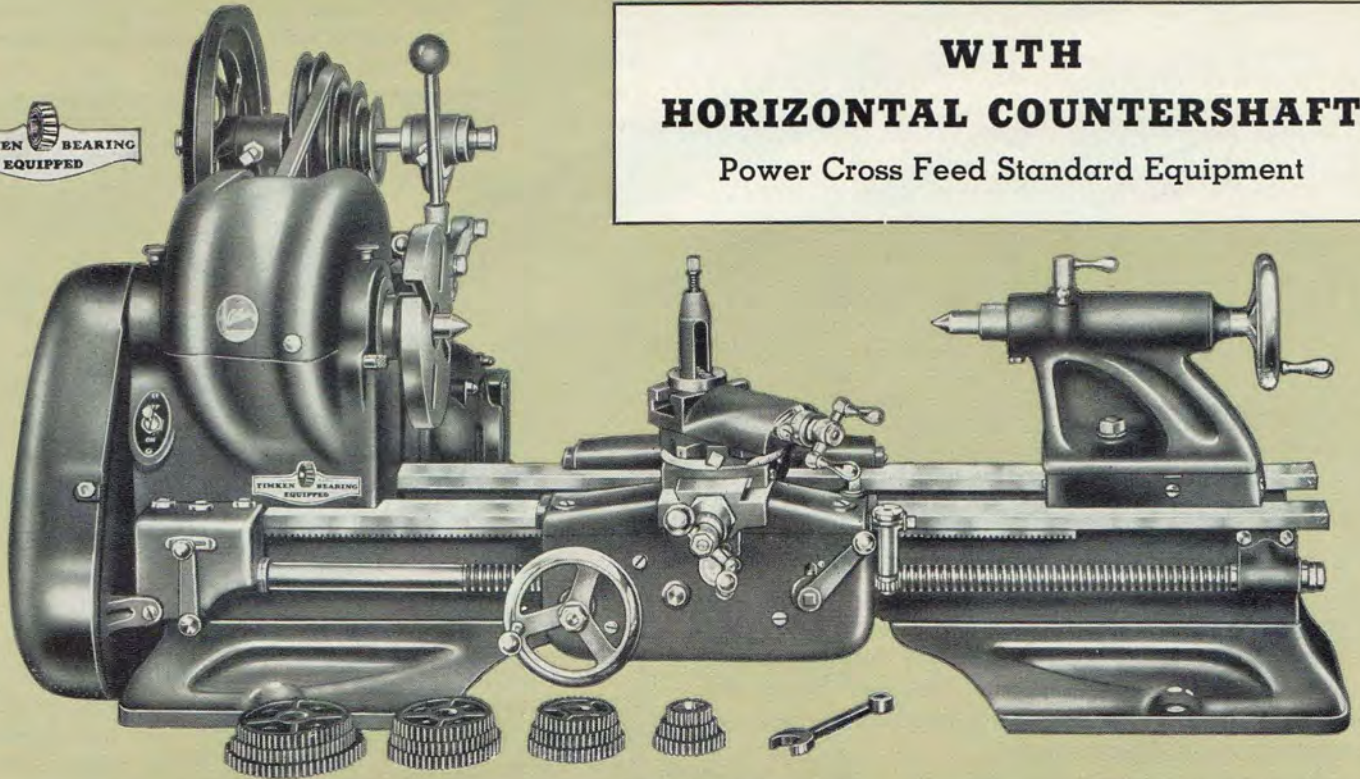
Timken-equipped lathe spindle with outer bearing races removed. tapered design and positively aligned rolls maintain spindle alignment and carry both radial and thrust loads with a minimum of friction.

• **Instantly Reversible Automatic Power Cross Feed and Longitudinal Feed**



• **Timken Tapered Roller Bearings**
• **Complete V-Belt Drive, Sixteen Speeds**

LATHES WITH TIMKEN TAPERED ROLLER BEARINGS



WITH HORIZONTAL COUNTERSHAFT

Power Cross Feed Standard Equipment

spindle speed must be exceptionally high for long intervals—ideal for metal spinning, plastics machining, and woodturning as well as the usual work at normal speeds. Construction features of the Timken-Equipped F-Series Lathes are identical with the Atlas F-Series models described on pages 6 and 7 and between pages 10 and 14.

ATLAS TIMKEN-EQUIPPED F-SERIES 10" LATHES WITH HORIZONTAL COUNTERSHAFT

Order No.	Length of Bed	Between Centers	Overall Length	Boxed Weight less motor	Code Word	PRICE less motor
TH36	36"	18"	40"	259 lb.	YEPPEM	\$129.00
TH42	42"	24"	46"	271 lb.	YEPLA	136.00
TH48	48"	30"	52"	279 lb.	YEPME	145.00
TH54	54"	36"	58"	284 lb.	YEPOP	154.00

All Models: Overall Depth—26", Overall Height—19"

No. 2480	1/2 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYJIL, weight 28 lb.	\$14.25
No. 2490	1/2 H.P. 1740 R.P.M. SINGLE PHASE MOTOR—110 volt, 60 cycle. Has ball bearing double-end shaft (1/2" diameter), 10 ft. SJ approved extension cord and plug. Code word WYILN, weight 35 lb.	\$17.50

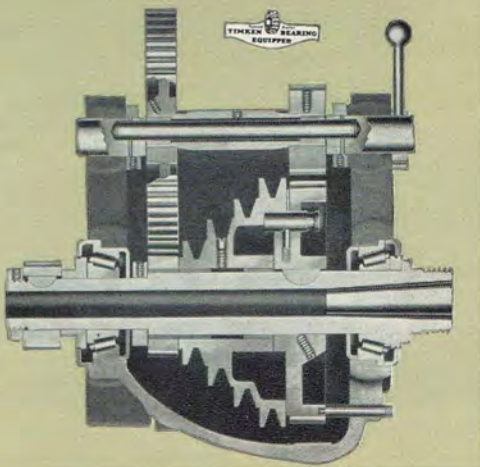
OTHER MOTORS—PAGE 67

No. 10-420	REVERSING SWITCH with mounting bracket, cable connections, and installation diagram (see page 26). Code word YELJE, weight 3 1/2 lb.	\$4.50
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• HORIZONTAL COUNTERSHAFT

Support-bracket is mounted on bench, a heavy rugged support for entire countershaft assembly. Hyatt roller bearings, belt-stretch adjustment, quick-change belt tension lever, motor mounting bracket. Lathe spindle pulley and back gears covered by hinged iron safety guard.

Complete Description, Page 13



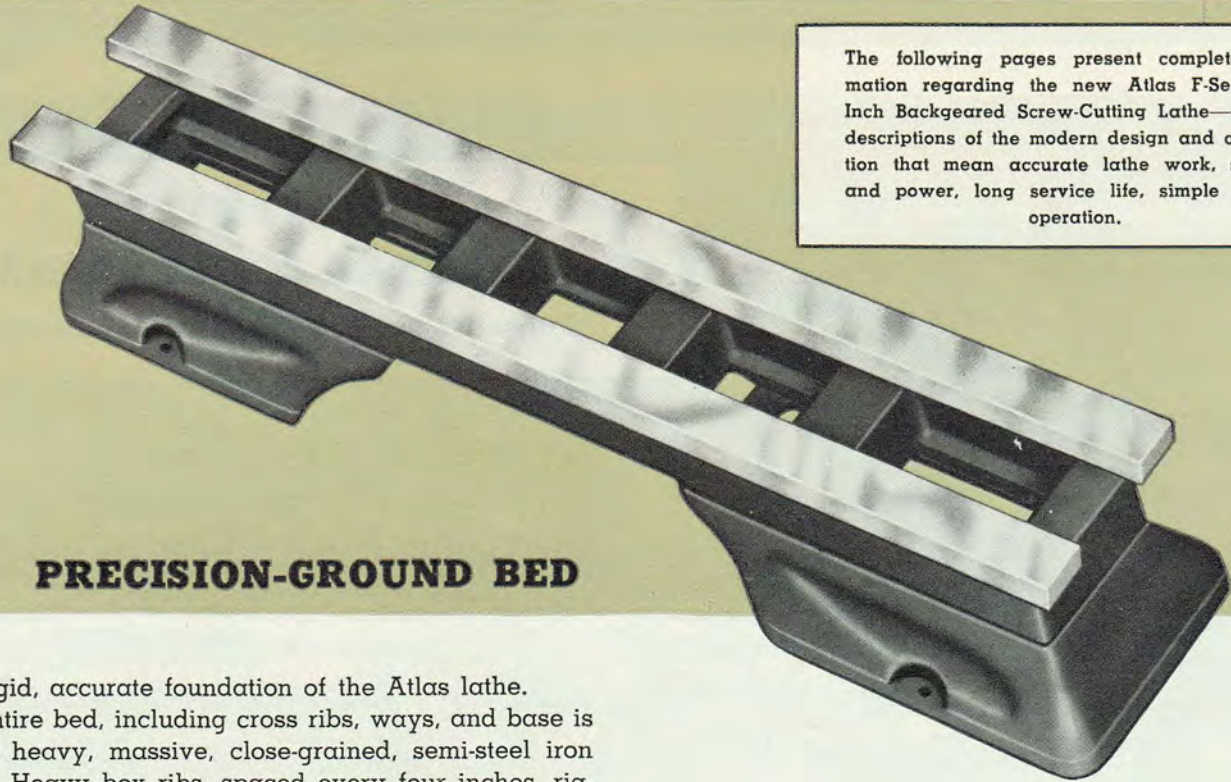
(Right) Cross section view of F-Series lathe headstock equipped with Timken tapered roller bearings for the headstock spindle. Bearing bosses are custom-bored after the headstock has been fitted to the lathe bed, insuring positive alignment with the precision-ground bed ways.

- Precision Ground Bed Ways
- Extra Power for Heavy Jobs



- Wide Thread Cutting Range
- 60 Hole Indexing Mechanism

NEW *Atlas* F-SERIES 10" BACKGEARED SCREW-CUTTING LATHES (1)



The following pages present complete information regarding the new Atlas F-Series 10-Inch Backgeared Screw-Cutting Lathe—detailed descriptions of the modern design and construction that mean accurate lathe work, strength and power, long service life, simple efficient operation.

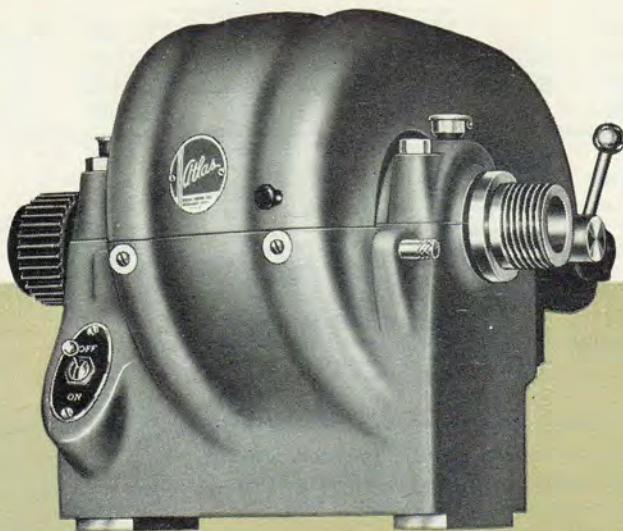
PRECISION-GROUND BED

The rigid, accurate foundation of the Atlas lathe.

The entire bed, including cross ribs, ways, and base is a single heavy, massive, close-grained, semi-steel iron casting. Heavy box ribs, spaced every four inches, rigidly brace the bed ways against heavy turning forces. The wide thick ways at the top and the inner ribs at the bottom maintain rigid alignment of headstock, carriage, and tailstock under heavy loads.

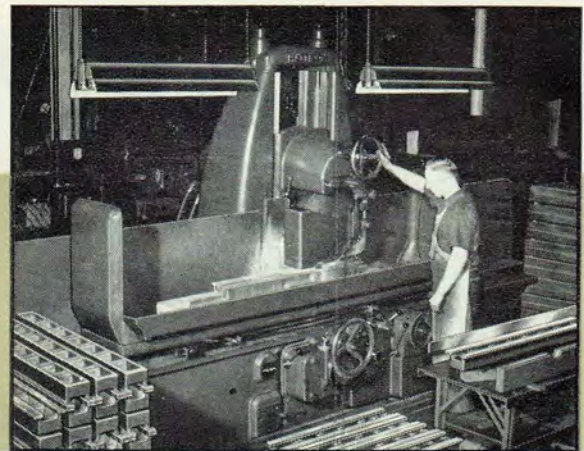
Atlas bed design furnishes the rugged strength essential for heavy duty lathe work. ↗

The flat-type bed ways are machined by the most modern precision equipment. They are first rough-milled on giant machines designed especially for the operation. The bed is then naturally seasoned for months so that warping and twisting will not occur in the finished bed. After seasoning, the bed ways are accurately finish-milled. The bed ways are given their final precision finish by special-built precision grinding machines like the one illustrated below. The bed ways are given their final precision finish by special-built precision grinding machines like the one illustrated below. The tops, bottoms, and sides are ground and trued until all eight surfaces are aligned to within .001 inch in all planes. Precision grinding gives the close-grained bed ways a tough wear-resisting surface.



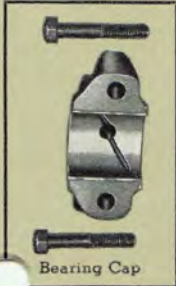
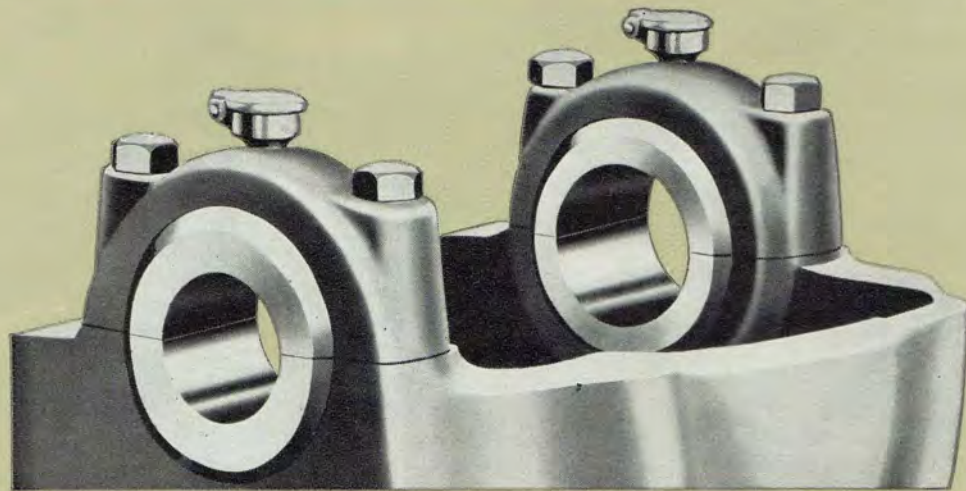
HEADSTOCK

The heavy headstock casting is ribbed and reinforced for permanent rigidity and strength. The front extends up to the bearing height, forming a rugged truss between the bearings and maintaining spindle alignment under the heaviest loads. The accurately machined base is fitted to the bed ways and solidly anchored to the bed by a steel clamp and large clamp screws. A 10 ampere motor control switch is built into the headstock casting in a convenient position.



Special-built modern grinding equipment of the type shown above gives the final precision finish to the bed ways of the Atlas lathe. These grinders incorporate the latest methods of scientific control, so that each square inch of surface is subjected to exactly the same amount of grinding pressure. By precision grinding the tops, bottoms, and sides of the ways until all surfaces are aligned to within .001 inch, these massive machines insure accuracy—the first essential of a precision lathe.

NEW Atlas F-SERIES 10" BACKGEARED SCREW-CUTTING LATHES (2)



HEADSTOCK SPINDLE BEARINGS

Custom-Bored High-Speed Babbitt

The headstock spindle bearings of the Atlas lathe are high-speed babbitt of the two-piece split cap type used in larger machine tools and automobile engines. These heavy duty bearings maintain original accuracy and alignment under heavy loads. The bearings of each lathe are accurately custom-bored by an especially designed machine mounted in position on the bed ways after the headstock has been fitted to the bed. This method insures that the spindle is positively aligned with the bed ways.

Laminated shims on each side of the bearings have five .002" laminations for take-up. Front bearing is 1 5/8" long—rear bearing is 1 3/8" long. Large capped felt-wick oil cups connect to oil grooves in bearings. Each bearing cap, removable for shim adjustment and cleaning, is locked securely to headstock with two large screws. Large caps and provision for thorough lubrication insure cool-running bearings. These fine bearings mean a smooth-running spindle and long, accurate life.



ALLOY STEEL HEADSTOCK SPINDLE

The heavy duty headstock spindle is machined from a solid bar of special fine-grained steel, accurately ground to extremely close tolerances to provide a perfect surface for the bearings. The spindle is 1 1/2" diameter, has 8 pitch National Form threads and 25/32" hole through its entire length. Spindle nose is bored for No. 3 Morse taper, and a reducing sleeve is furnished to take No. 2 Morse taper center. Ball bearing absorbs end thrust—has take-up nut and collar.



Atlas F-Series Lathes are available with Timken Tapered Roller Bearings for the headstock spindle. See pages 8 and 9.



INDEXING MECHANISM

The face of the front spindle back gear has 60 evenly spaced indexing holes for such dividing operations as fluting, reeding, serrating, sprocket- and spoke-spacing. The indexing holes are engaged by a lock pin through the headstock.



GRADUATED STEEL FEED SCREW COLLARS

Cross and compound feed screws have steel feed screw collars micrometer graduated in .001ths. A set screw permits setting the 0 position at the witness mark for accurately gauging depth of feed.

TAILSTOCK

The heavy tailstock is a strong, rigid support for all types of work. The base is accurately machined and fitted to the bed ways so that the tailstock spindle is aligned accurately with the headstock spindle at any position on the bed. The inside tailstock bearing on the rear bed way is square-gibbed for take-up. Simply setting over the tailstock compensates for this adjustment and maintains permanent alignment of the tailstock with the headstock. Tailstock slides freely along the bed ways and is locked securely in position with a large nut which tightens clamp on bottom of bed ways.

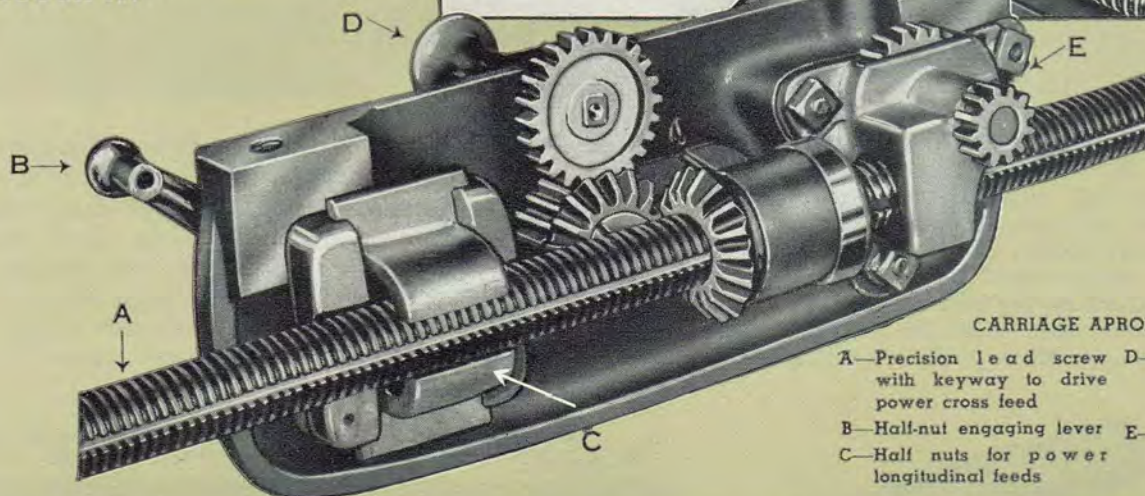
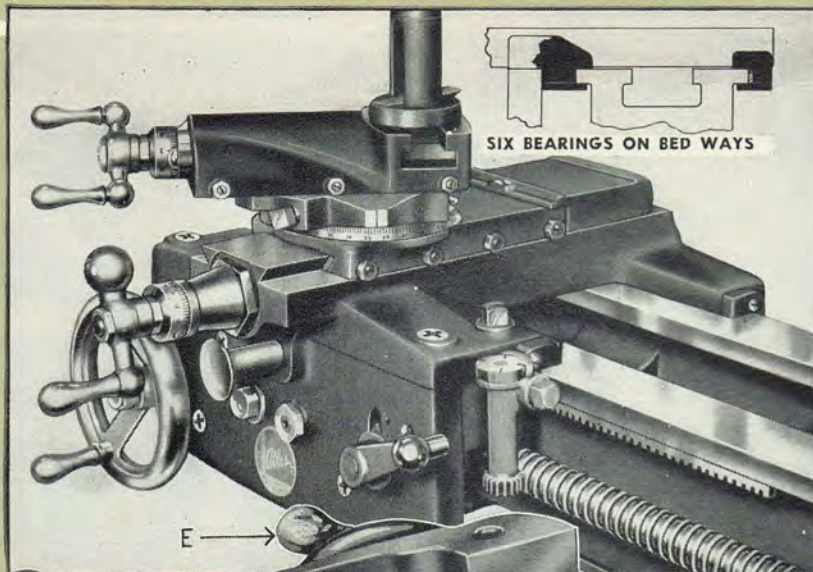
Tailstock setover for taper turning is 3/4" forward or back. The ram is accurately ground, bored for No. 2 Morse taper center, and graduated from 0 to 3" by 16ths to accurately measure depth of holes when drilling. Ram has 2 3/4" travel, 5" bearing on barrel, coordinate position lock, keyway guide, self-ejecting center, and handwheel feed control. Well and pin are provided for center lubricant.

PLEASE ORDER BY CATALOG NUMBER

NEW Atlas F-SERIES 10" BACKGEARED SCREW-CUTTING LATHES (3)

CARRIAGE AND COMPOUND REST

- POWER CROSS FEED
- POWER LONGITUDINAL FEED
- FLAT-TYPE BEARINGS AND WAYS PREVENT LIFT AND TWIST OF CARRIAGE
- 3/4" PRECISION LEAD SCREW
- UNUSUALLY LARGE BEARING SURFACES
- FOUR BED WIPERS
- MICROMETER GRADUATED STEEL FEED SCREW COLLARS
- CROSS SLIDE GRADUATED THROUGH 180°



CARRIAGE APRON DETAIL

- A—Precision lead screw
 B—Half-nut engaging lever
 C—Half nuts for power longitudinal feeds
 D—Knob controlling bevel gear drive for power cross feed
 E—Handwheel and gear for hand-feeding carriage

THE carriage of the Atlas lathe consists of two heavy castings—the saddle, a broad base and rigid mounting for the compound rest—and the apron, a rugged housing for the power feed mechanisms. The saddle has six accurately machined full-length bearing surfaces on the bed ways, each 9½" long—two on the top bed ways, two on the side ways, and two on the bottom surfaces. These unusually large bearings assure smooth carriage action and minimize wear. The bottom bearing plates have laminated shims with four .002" and two .001" laminations, and the side bearing on the rear way has an adjustable gib. These adjustments maintain accurate alignment of the carriage with headstock and tailstock. The two plates, one at each side of the saddle, bearing on the ground bottom surfaces of the flat-type bed ways, prevent lift and twist and provide the carriage and tool rigidity essential for maximum accuracy and operating efficiency.

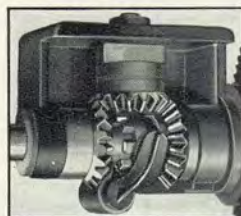
Large handwheel on apron controls reduction gears meshing with rack for hand-feeding carriage. Carriage travels full length of bed. Carriage lock tightens clamping plate on bottom of front bed way, locking carriage to the bed in any desired position. Four bed wipers, one at each corner of the carriage, have oil-resisting Neoprene pads to clean the bed ways and felt pads to hold oil.

Dovetails of the cross slide and carriage saddle are accurately machined and hand-fitted to insure accuracy on such operations as facing, milling, and face-plate grinding. The heavy compound rest has 5½" bearing surface on the cross slide—a rigid tool post support. It can be turned in a complete circle and locked quickly and securely at any angle. Two clamp screws on compound base control the plunger pins of dovetail swivel lock. Top of cross slide is machine graduated through 180°—compound base has witness mark for setting angle.

Cross feed travel is 6½"—tool post slide travel is 2¼". Dovetail ways of carriage cross slide and tool post slide have adjustable gibs for take-up—gib screws have lock nuts. Feed screws have Acme threads, ball crank controls with take-up adjustment and micrometer-graduated steel feed screw collars. Iron cover keeps cross feed screw free from dirt and chips. Milled T-slot holds drop forged tool post assembly—tool post slot takes 3/8" tool bits or holder for 1/4" bits.

INSTANTLY REVERSIBLE AUTOMATIC POWER CROSS FEED AND LONGITUDINAL FEED

The new Atlas F-series lathes are the only low-cost precision lathes with both of these efficient, time-saving features. Pulling knob control on carriage apron engages cross feed mechanism—lever at right engages longitudinal feed mechanism. Both may be reversed instantly by shifting lever on gear box at headstock end of lead screw.



←Lead screw reversing mechanism. Feed reverse lever engages shift collar with either of the two reverse gears, reversing instantly the lead screw rotation which changes travel of both cross and longitudinal power feeds.

The power cross feed speeds up all facing operations. Sliding spur gear controlled by knob engages bevel-gear drive from keyway in lead screw with gear on cross slide feed screw.

Power longitudinal feeds make quick, easy work of all turning operations and simplify cutting right or left hand threads. Dropping lever closes half nuts on lead screw.

Precision lead screw is 3/4" diameter, 8 Acme threads per inch—has keyway to drive power cross feed. Lead screw is driven by the gear train from spindle gear through reverse gear box. Rotation of lead screw can be changed instantly while lathe is running. Gear trains can be set up for dozens of different feeds—the six most frequently used are listed on the threading chart mounted on the inside of the gear train guard.

METRIC SCREWS AND COLLARS

The F-Series 10" lathes can be furnished with metric-pitch threads for cross and compound feed screws and with feed screw collars graduated in .02 mm. These metric screws and collars are supplied at no extra cost in place of standard screws and collars when ordered with lathe (specify "Metric Screws and Collars").



COMPLETE INDEX—INSIDE BACK COVER

NEW Atlas F-SERIES 10" BACKGEARED SCREW-CUTTING LATHES (4)

16 SPINDLE SPEEDS—COMPLETE V-BELT DRIVE

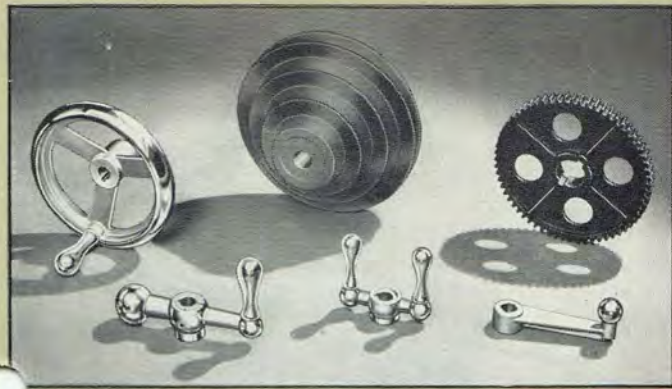
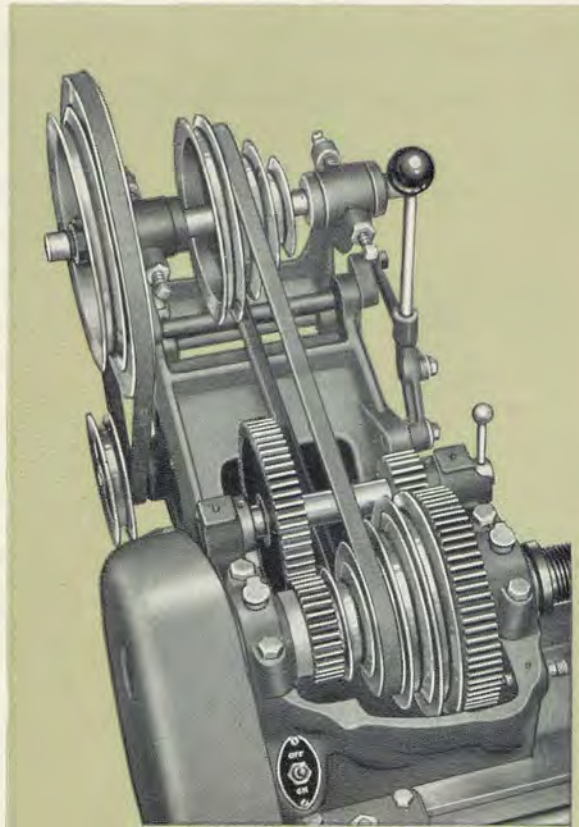
(Right) Two-step pulleys from motor to countershaft and four-step pulleys from countershaft to spindle give 16 speeds between 28 and 2072 RPM. This unusually wide range provides correct speeds for all types of modern lathe work from heavy metal turning on large diameters to light finishing cuts, polishing, woodworking, and plastics machining. 8 speeds are direct and 8 are backgeared. These speeds are obtained with a standard 1740 RPM motor.

Complete V-belt drive is furnished—from motor to countershaft, and countershaft to spindle—the standard drive furnished on all Atlas lathes. The combination of V-belts, V-pulleys, and adjustable countershaft delivers maximum power to the spindle. This type of power transmission, practically standard in all modern machine tools, results in smooth operation and low operating cost.

BACKGEARED POWER

(Right) Heavy oversized back gears reduce spindle speed and deliver the power required for heavy cuts and large diameter work. Here is an example which proves the plentiful power of the Atlas backgeared drive: The F-series lathe, in tests, reduces the diameter of a $3\frac{1}{2}$ " steel bar as much as $\frac{3}{4}$ " in a single cut. This cut is taken with the power longitudinal feed engaged. While this is more than any machine of this size should be expected to handle regularly, it is a convincing demonstration of the powerful backgeared drive and indicates the extremely rigid construction of the Atlas lathe.

Back gears are engaged quickly by eccentric lever and removal of lock pin from spindle pulley. Back gear ratio is approximately 6 to 1. Gears are $\frac{7}{8}$ " wide and have 12-pitch teeth. Spindle assembly (back-gears, spindle and pulley) is accurately balanced for smooth operation. Backgear shaft runs on oilite bronze bearings. Back gears are enclosed by iron safety guard.



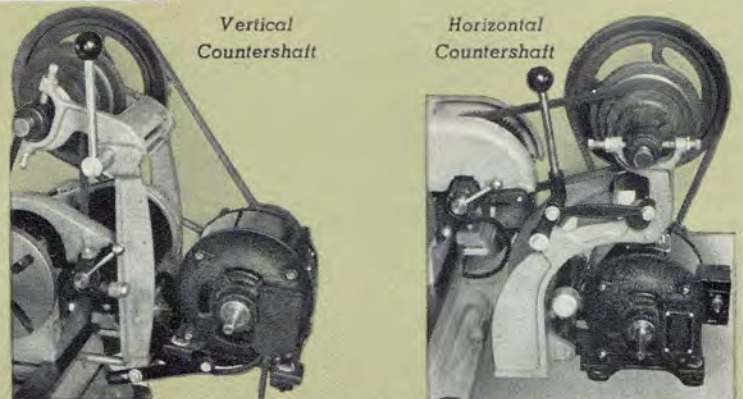
RUGGED ZAMAK ALLOY PARTS

"Zamak," a modern alloy composed of aluminum, magnesium, copper and zinc, has twice the tensile strength and four times the impact strength of cast iron. Its amazingly tough properties were developed after years of exhaustive research.

The superior wearing qualities of Zamak—used for pulleys, gears, handwheels, handles and other small parts of the Atlas lathe—have been proved by laboratory experiments and the service tests of thousands of Atlas lathe owners. After eight years of operation, for example, the back gears of an Atlas lathe showed very little wear—they were still good for years of further service. Each Zamak part is cast in a precision master die, insuring uniform accuracy.

Atlas pioneered the use of Zamak alloy in the manufacture of screw-cutting lathes. Zamak parts permit a modern compact design, eliminate idle weight, provide greater strength and longer lathe life.

PLEASE ORDER BY
CATALOG NUMBER



QUICK-CHANGE COUNTERSHAFTS

Horizontal or Vertical

Two types of countershaft are available with the Atlas F-series lathes—(1) the new horizontal bench-mounted model and (2) the vertical or built-in countershaft attached to the headstock and bed. Both are "quick-change," with the belt tension lever in easy reach for speed changes. The lever has two positions—forward to release belts for changing speeds, and back to engage belts. The countershaft spindle turns on smooth-running Hyatt roller bearings. Adjustments are provided to compensate for belt stretch. An adjustable motor bracket is attached to the countershaft support bracket.

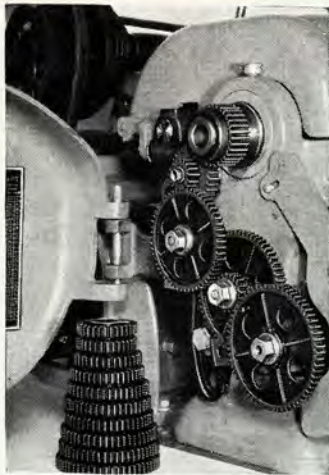
Two-step pulleys from motor to countershaft and 4-step pulleys from countershaft to spindle provide 16 speeds between 28 and 2072 RPM, 8 direct and 8 backgeared. V-pulleys are balanced, keeping vibration at a minimum. The combination of V-belts, V-pulleys, and the adjustable quick-change countershaft results in smooth efficient operation, maximum power and low operating cost.

NEW Atlas F-SERIES 10" BACKGEARED SCREW-CUTTING LATHES (5)



WIDE SCREW CUTTING RANGE

4 to 96 Per Inch, Right or Left Hand (Standard)
Metric, .5 to 7mm. Standard

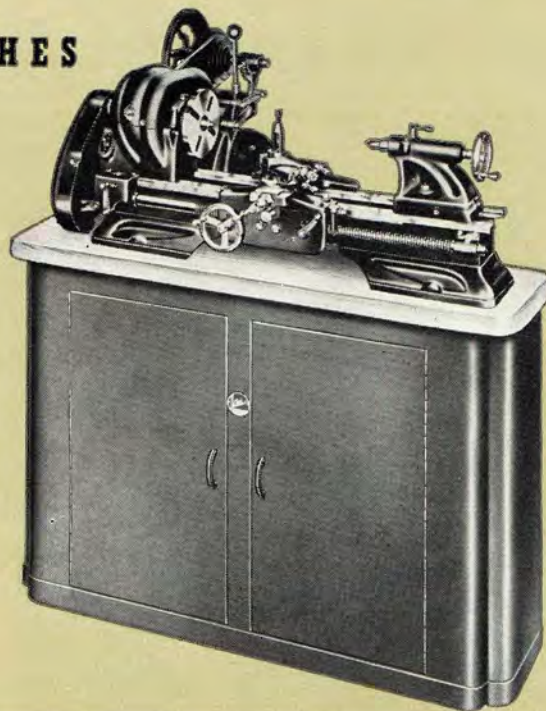
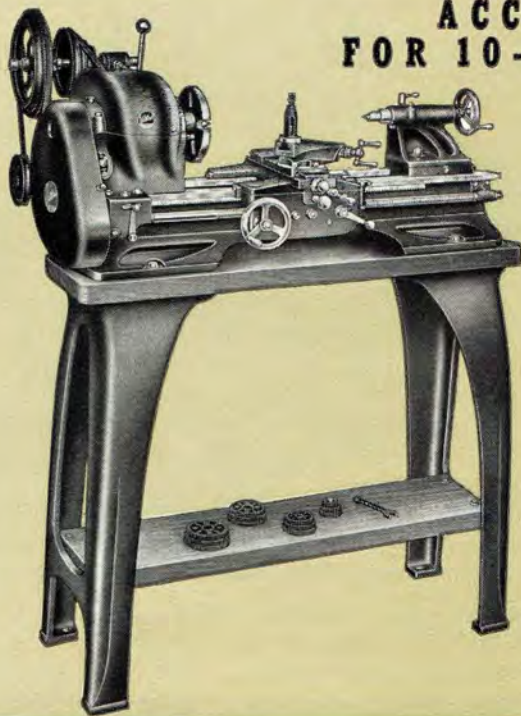


Left end of lathe with gear train guard open, showing change gears, gear train, edge of threading chart.

(Right) Threading chart for cutting all standard threads between 4 and 96 per inch and standard metric threads between .5 and 7 mm. (Actual chart is 7 1/2" high).

THREADING CHART	
FEED SCREW	STUD
1.000	1.000
1.250	1.250
1.500	1.500
1.750	1.750
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2.500	2.500
2.750	2.750
3.000	3.000
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94.750	94.750
95.000	95.000
95.250	95.250
95.500	95.500
95.7	

ACCESSORIES FOR 10-INCH LATHES



FLOOR STANDS

These floor stands furnish the rigid foundation required for accurate lathe work.

The rugged floor legs are heavy iron castings, thickly ribbed and cross-braced for maximum rigidity. *Legs alone weigh 95 pounds.* The lathe is mounted with each leg directly over a floor leg, anchoring the lathe firmly in position. Table boards are 1 5/8" thick, thoroughly seasoned, shellacked, varnished, and ready-drilled for quick assembly. Large bottom board is handy place for chucks, wrenches, gears, tools and accessories. The floor stand makes a convenient "lathe table," improving accuracy of all operations and saving valuable floor space. Height 33 3/8".

Floor Stands for 10" Lathes WITH VERTICAL COUNTERSHAFT

No.	For Lathe Nos.	Weight	Code	Price
10D-442A	V36 and TV36	150 lb.	YADYO	\$19.00
10D-442B	V42 and TV42	155 lb.	YAEBS	20.00
10D-442C	V48 and TV48	160 lb.	YAECT	21.00
10D-442D	V54 and TV54	165 lb.	YAEGY	22.00

No. 10D-441 FLOOR LEGS ONLY. Code YADVE, weight 110 lb. \$14.00

When ordering, please give lathe serial number or year purchased
—serial number is stamped on right end of front bed way.

Floor Stands for F-Series 10" Lathes WITH HORIZONTAL COUNTERSHAFT

No.	For Lathe Nos.	Weight	Code	Price
10F-442A	H36 and TH36	161 lb.	YEPP0	\$21.00
10F-442B	H42 and TH42	166 lb.	YEPRY	22.00
10F-442C	H48 and TH48	171 lb.	YEPYR	23.00
10F-442D	H54 and TH54	176 lb.	YERAN	24.00

No. 10F-441 FLOOR LEGS ONLY. Code YEVAR, weight 110 lb. \$16.00

• **INSTRUCTORS—NOTICE:** The above floor stands are available with overall height of 29 5/8" instead of the standard 33 3/8" height listed above. The 4" shorter floor legs, often desirable for junior class instruction, are supplied at no extra cost. When ordering, specify "Short Floor Legs."

FLOOR CABINETS

MODERN—ROOMY—RIGID

Here is a new cabinet that provides a rigid lathe support and has plenty of covered shelf space for tools and attachments. Its attractive modern design makes a pleasing appearance in the shop.

The heavy steel panels of the cabinet body are lapped together and strongly welded. Two inside shelves, extending the length of the cabinet and welded securely, give added bracing and provide clean, convenient storage space. Doors have full-length hinges, spring clip latches, and plastic handles. Each corner of the base has a reinforced hole for bolting the cabinet to the floor. Table board is 1 5/8" thick, seasoned, shellacked, and varnished.

These new floor cabinets are available in two sizes as listed below (shipped completely assembled). They are finished in special Atlas gray.

FLOOR CABINETS FOR 10" LATHES

No.	For Bed		Table Overall		Code	Price
	Length	Dimensions	Ht.	Weight		
W71	36" and 42"	45"x14"	32"	120 lb.	YEYHK	\$24.00
W72	48" and 54"	57"x14"	32"	145 lb.	YEYJL	28.00

SAFETY BELT GUARDS

Atlas belt guards eliminate the hazards of exposed belting by providing a safety cover for all lathe belts as required by industrial and vocational safety codes in many states. These sturdy attractive shields may be installed on any Atlas 10-inch lathe.

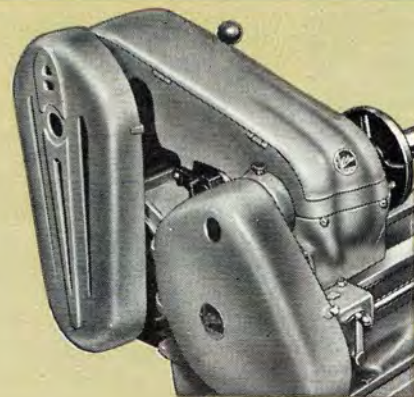
Both guards are light, durable aluminum castings with pin hinges for quick raising and speed changes. It is not necessary to remove guards to change belts. The left guard covers

the motor-to-countershaft belt and has a special inner guard for the pulley on the countershaft. The right guard covers belt from countershaft to lathe spindle. The entire assembly is ready-tapped for easy installation.

The complete transmission—pulleys, feed gears, countershaft and belting—of the Atlas lathe is fully enclosed after these safety belt guards are installed.

No. 10-720 SAFETY BELT GUARDS
for Atlas 10" lathes
with vertical countershaft. Code
YADUZ, weight 8 lb. Per set. **\$15.50**

No. 10F-720 SAFETY BELT GUARDS
for Atlas 10" lathes
with horizontal countershaft. Code
YEVSE, weight 13 lb. Per set. **\$15.50**



COLLET CHUCK ATTACHMENTS FOR 10 INCH LATHES



No. 750 Draw-in Collet Chuck Attachment in operation—collet is controlled by handwheel at left.

DRAW-IN COLLET CHUCK ATTACHMENT

The draw-in collet chuck attachment is the most accurate method for chucking work between 1/32" and 1/2" in diameter. It is used in making precision tools, instruments, gauges, and in the production of small parts requiring extreme accuracy. The attachment consists of a hollow draw-in spindle with handwheel control, tapered closing sleeve, and split holding collet.



The hollow draw-in spindle extends through the lathe headstock spindle and is threaded at the spindle nose end to hold the collets in the tapered sleeve. The hollow construction permits rods to be passed through the lathe spindle—the handwheel releases and tightens the collet on work. Tapered sleeve is ground inside and outside to insure extreme accuracy. Lathe must be stopped to open and close collet.

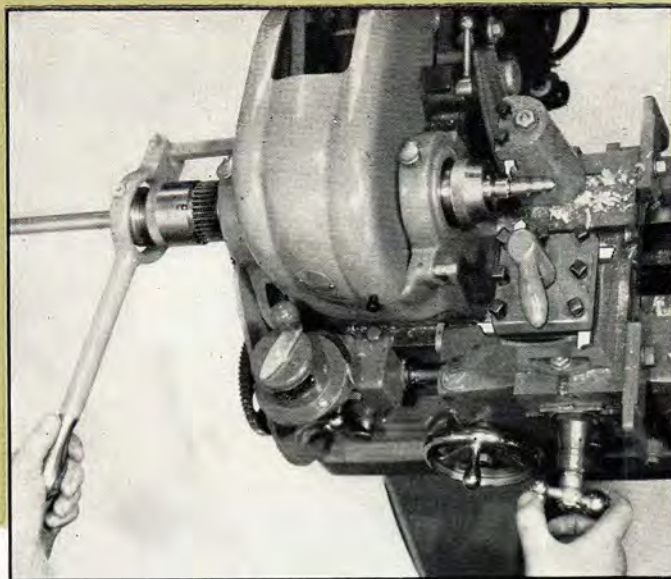
No. 750 DRAW-IN COLLET CHUCK ATTACHMENT complete. Includes draw-in spindle, tapered closing sleeve, and one split holding collet listed below—specify diameter. Code YAIRL, wt. 3 lb. **\$21.50**



No. 548 SPINDLE NOSE CAP to protect lathe spindle threads. Code word YETRE, weight 12 ounces. **\$1.90**



No. 751 SPLIT HOLDING COLLET for round work—specify diameter. Available in 32nds between 1/32" and 1/2" as follows: 1/32", 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", and 1/2". Code word YAIAZ, weight 4 ounces. each **\$4.75**



No. 900 Lever-Type Collet Chuck Attachment handling production work with turret attachments.

LEVER-TYPE COLLET CHUCK ATTACHMENT

Chucks and Releases Work with Lathe Running

This new lever-release collet attachment is the ideal chucking method for fast accurate duplicate work on stock between 1/32" and 1/2" diameter. Teamed with turret attachments (page 19), it converts the Atlas 10-inch lathe into a high-speed hand-type production screw machine.

Work may be fed through the hollow torque tube of the lever-type attachment, chucked, machined and released *without stopping the lathe*. Moving hand lever to the left tightens collet on work—collet is released by moving lever to right. Preliminary adjustment of collet is made with knurled collar at left end of torque tube—clutch tension sleeve has fifteen evenly spaced slots for fine adjustment. Tapered collet sleeve is ground inside and outside to insure concentric closing of collet. Spindle nose cap protects lathe spindle threads.

The No. 900 attachment is easy to install—there are no holes to drill or tap.

FURNISHED COMPLETE including hollow torque tube, hand lever control, tapered closing sleeve, spindle nose cap, support bracket, mounting instructions, and one split holding collet listed below—specify diameter desired.



No. 900 LEVER-TYPE COLLET CHUCK ATTACHMENT for Atlas 10" Lathes with babbitt spindle bearings. Furnished complete as shown with one split holding collet listed below—specify diameter. Code word YEYCF, weight 6 lb. **\$49.50**

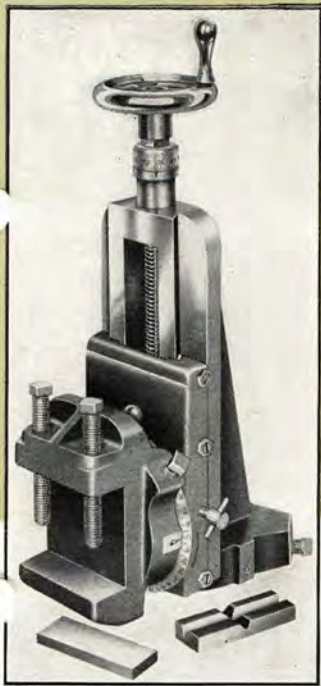
No. 900T LEVER-TYPE COLLET CHUCK ATTACHMENT for Atlas 10" Lathes with Timken tapered roller bearings. Furnished complete as shown with one split holding collet listed below—specify diameter. Code word YEZUB, weight 6 lb. **\$49.50**

SPLIT HOLDING COLLETS

For Nos. 750 and 900 Collet Chuck Attachments

Collet tool steel, heat treated and ground inside and outside for precision work. One end of the collet is threaded to fit the draw-in spindle or torque tube and the other end is ground to fit the tapered closing sleeve. Keyway prevents collet turning while in operation. These collets handle round work with diameters between 1/32" and 1/2" by 32nds (left). One collet, any fractional size as listed at left, is furnished with the No. 750 or No. 900 collet chuck attachment. Collets are available for hexagonal, square, and other special work—details on request.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



FOR ALL MILLING OPERATIONS



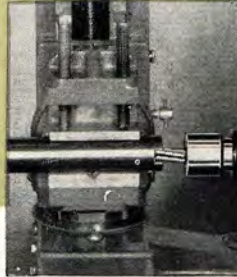
T-SLOTS



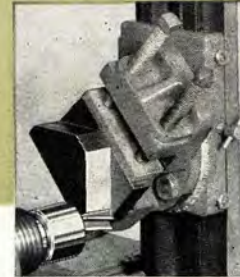
DOVETAILING



KEYWAYS



SHAFT WORK



ANGULAR (Vertical)



ANGULAR (Horizontal)

MILLING ATTACHMENT FOR 10-INCH LATHES

THIS attachment converts the Atlas 10-inch lathe into a small milling machine for face milling, cutting keyways and slots, milling dovetails, squaring shafts, making dies and moulds and a wide variety of other important operations. It is quickly and easily installed by removing the compound rest and clamping the base of the milling attachment in its place.

The milling attachment can be swivelled completely to hold work at any angle. Extra heavy castings reduce vibration—gib take-up assures permanent accuracy. The position of the vise is controlled by a feed screw with micrometer graduated collar. Two positive clamping screws lock vise to hold work firmly in position. Vise is graduated and can be

swivelled to any desired angle. For handling extra large work, clamping plate may be fastened in place of the vise (see below, left).

No. 500A MILLING ATTACHMENT. For 10-inch lathes with serial numbers following 3970. Code word YAKBA, weight 17 pounds..... **\$16.00**

FURNISHED: Complete as shown including graduated swivel vise, vertical feed screw with graduated collar, flat block, V-block for round work.
 Vertical Feed $3\frac{3}{4}$ " Jaw Depth $7\frac{7}{8}$ "
 Cross Feed 5 " Jaw Width $2\frac{1}{2}$ "
 Vise Capacity $2\frac{3}{8}$ "

For lathes with serial numbers lower than 3970—prices on request.

This set holds the milling cutter in headstock spindle. Consists of draw bar, sleeve, and one arbor for $\frac{1}{2}$ " straight shank cutters.



HOLDING COLLET SET

No. 945 HOLDING COLLET SET. Complete: draw bar, sleeve and arbor. Code YEYAT, weight 3 lb..... **\$4.50**

ANGULAR CUTTERS WITH THREADED HOLE



For face-milling, dovetailing, and cutting angles less than 90°. Included angle is 60°. Adapted to collet set with arbors listed below.

No.	Thick	Diameter	Hole	Thread	Code	Price
74A	$7/16$ "	$1\frac{1}{4}$ "	$3/8$ "	24	YALIF	\$4.10
574B	$9/16$ "	$1\frac{5}{8}$ "	$1/2$ "	20	YALJY	4.70

Weight 6 oz. each

ARBORS FOR ANGULAR CUTTERS

Required to adapt 574 angular cutters to No. 945 holding collet set. Weight 8 oz. each.

No.	For	Code	Price
572	No. 574A	YEWTE	\$1.00
567	No. 574B	YEWUX	1.00



R. H. SPIRAL STRAIGHT SHANK END MILLS

For general milling operations—slots, facing and routing, squaring and splining shafts, cutting straight keyways. Adapted to collet set with collet bushings below. 4 oz. each.

No.	Length of Flute	Diameter	Code Word	Price
576A	$5/8$ "	$1/4$ "	YAKCE	\$1.75
576B	$11/16$ "	$5/16$ "	YAKEC	1.85
576C	$3/4$ "	$3/8$ "	YAKFO	1.95
576D	$7/8$ "	$7/16$ "	YAKID	2.15
576E	$15/16$ "	$1/2$ "	YAKOF	2.35



COLLET BUSHINGS

Required to adapt 576 straight shank end mills to No. 945 holding collet set. Not required for 576E end mill.

No.	For End Mill	Diameter	Code	Price
563D	No. 576A	$1/4$ "	YAKYH	\$0.30
563C	No. 576B	$5/16$ "	YALAC	.30
563B	No. 576C	$3/8$ "	YALCA	.30
563A	No. 576D	$7/16$ "	YALDE	.30

No. 563E Set of four above bushings—Code word YALED..... 1.15

STRAIGHT SHANK WOODRUFF KEYWAY CUTTERS

Designed especially for cutting Woodruff keyways—also used for milling slots, grooves, T-slots, etc. Held directly in arbor of No. 945 collet set. Weight 6 oz. each.

No.	Diameter	Thickness	Diam. Shank	Code	Price
575A	$1/2$ "	$1/8$ "	$1/2$ "	YALUH	\$2.65
575B	$3/4$ "	$1/2$ "	$1/2$ "	YALYJ	2.85
575C	1 "	$1/4$ "	$1/2$ "	YAMAD	3.50
575D	$1\frac{1}{8}$ "	$5/16$ "	$1/2$ "	YAMDA	3.95
575E	$1\frac{1}{4}$ "	$3/8$ "	$1/2$ "	YAMEF	4.35



CLAMPING PLATE For Extra Large Work

Clamps in place of vise—capacity $2\frac{3}{4}$ " diameter. Grey iron casting with machined working surfaces and T-slot for bolt. Drop-forged clamp, bolt furnished.

No. 502B CLAMPING PLATE. Code word YEZOZ, wt. 5 lb.... **\$4.75**

IMPORTANT! Please Give Lathe Serial Number and Date Purchased.

PLEASE ORDER BY CATALOG NUMBER

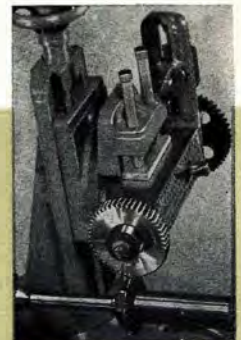
(Above) Handling long boring operation with work held in clamping plate and boring bar mounted between centers. Blueprint guide for making boring bar—No. BP-101 YEREP \$0.35.

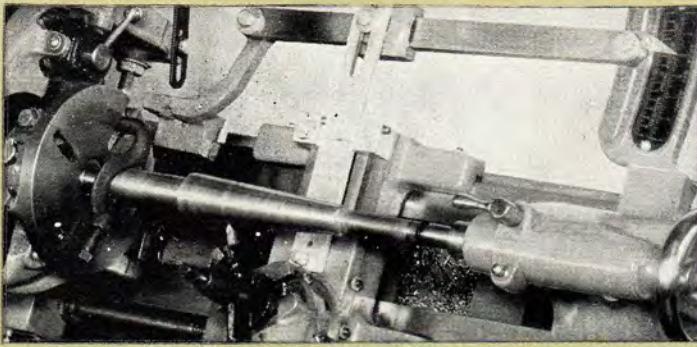


GEAR CUTTING

A blueprint is available for building the gear cutting attachment shown at the right. This attachment, mounted in the milling vise, holds the blank gear at one end and an indexing gear at the other end. Outer shank of the index shaft can be adapted to hold any indexing gear.

No. BP-102 BLUEPRINT, Gear Cutting Attachment. Code word YERNA **\$0.50**

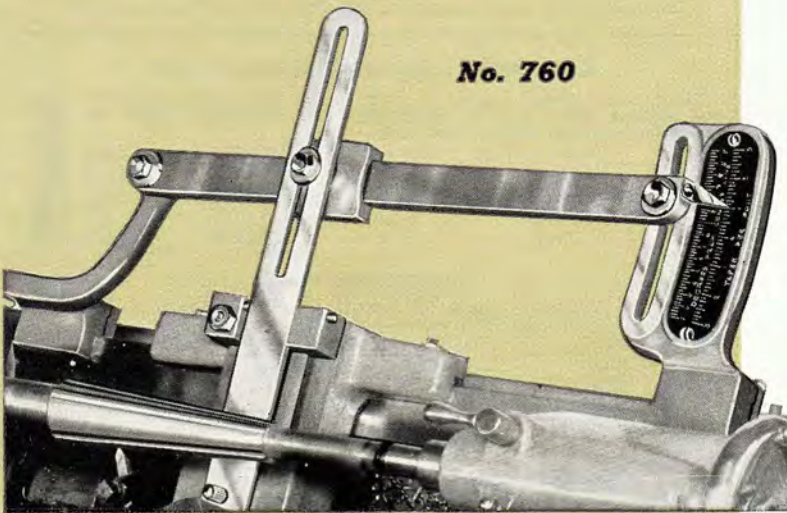




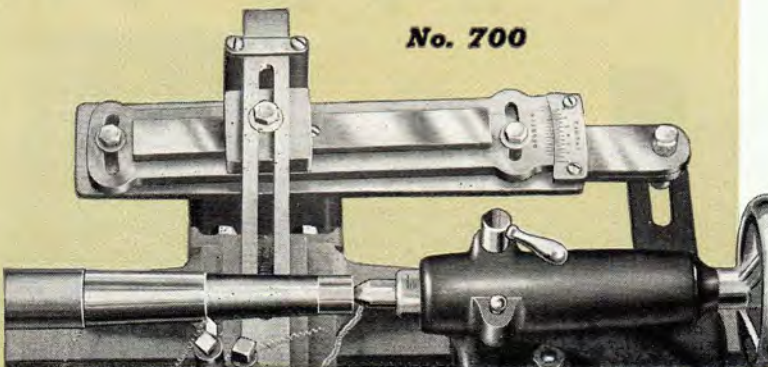
The new Atlas No. 760 taper attachment in action. Note sturdy bracket support, easy-to-read index plate.



The taper attachment makes boring an easy job. Here the No. 760 attachment is boring a tapered socket.



No. 760



No. 700

TAPER ATTACHMENTS FOR 10 INCH LATHES

For Internal and External Taper Work

THESE TAPER ATTACHMENTS ARE FOR 10-INCH LATHES ONLY. NO. M6-700 TAPER ATTACHMENT FOR 6-INCH LATHES IS DESCRIBED ON PAGE 36.

There are several reasons why experienced shop men prefer these accurate Atlas taper cutting attachments. Lathe centers are never taken out of alignment; bearing surfaces of lathe centers are not affected; duplicate tapers may be cut quickly and accurately on pieces of different lengths. Boring work, impossible with the tailstock set-over method of taper turning, is handled with these attachments fully as quickly and easily as external work. Once installed and adjusted, these taper attachments require no further attention—they may be used at any point on the lathe bed, can be quickly disconnected, and do not interfere with other lathe operations. All Atlas 10-inch lathes are ready-tapped to take the No. 700 and No. 760 taper attachments described below.

When ordering, please give serial number of lathe or year purchased—serial number is stamped on right end of front bed way.

NEW No. 760 TAPER ATTACHMENT

Hundreds of shops wanted an accurate, reasonably priced taper attachment—and Atlas engineers developed the new No. 760. Its sensational price puts this important accessory within the reach of the smallest shop.

The new Atlas taper attachment is quickly installed, simple to operate, and makes accurate taper work a fast, easy job. The rectangular slide bar has two rigid grey-iron bracket supports. A slotted draw bar connects to the carriage cross slide and feeds tool at desired taper. Easy-to-read index plate is graduated 7° and 3" both sides of center line.

No. 760 NEW TAPER ATTACHMENT for Atlas 10-inch Lathes. Code word YAJBE, weight 11 pounds **\$16.00**
 Maximum Travel One Setting.....6"
 Range Right or Left.....7° (2¹/₁₆" per foot)

TOOL ROOM TAPER ATTACHMENT

The Atlas No. 700 taper attachment is designed and recommended for tool rooms and production shops. It has the extra weight and rigidity required for extreme accuracy in production taper work.

The dovetail slide bar, installed parallel to the bed way, is accurately machined and has gib adjustment to maintain accuracy. Two sets of graduations show taper both sides of center line, one in degrees and one in inches per foot. Tool is fed by slotted draw bar attached to carriage cross slide. Sturdy clamp arm assures rigid mounting.

No. 700 TOOL ROOM TAPER ATTACHMENT for Atlas 10-inch Lathes. Code word YAJDO, weight 15 pounds..... **\$40.00**
 Maximum Travel One Setting.....6¹/₂"
 Range Right or Left.....7° 10' (3" per foot)

TURRET ATTACHMENTS FOR PRODUCTION WORK



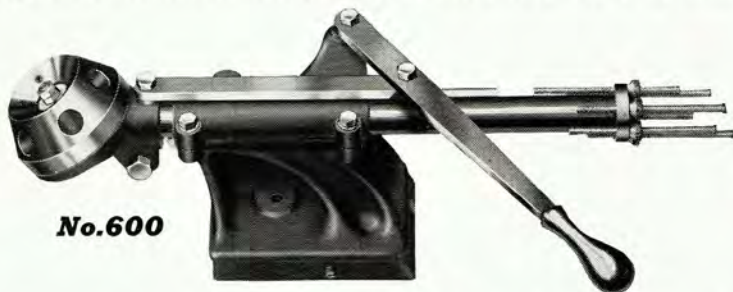
The Atlas Engineering Department is prepared to recommend proper tools and attachments for industrial turret jobs. When requesting information, please send sample parts, or sketches and principal specifications.

FOR 10-INCH LATHES



TAILSTOCK TURRET

The tailstock turret comprises the indexing head and an extra long feed ram with hand-lever control and depth stop screws—mounted in a special turret tailstock. The semi-automatic indexing head has six $\frac{3}{4}$ " bored holes for tool holders,



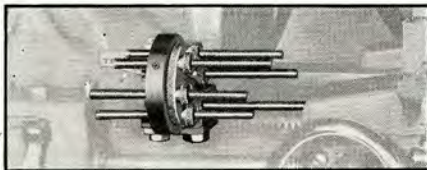
No. 600

each permitting a separate operation. The quick-acting hand-feed lever, when returned to the extreme right, automatically unlocks the turret head so that the next tool may be moved into position. Advancing the feed lever instantly locks the head in rigid position. Six adjustable stop screws at the end of the feed ram are automatically indexed with the head and accurately gauge the depth of each operation. To assure accurate alignment of the turret tools with the lathe spindle, the holes for the tool holders should be bored by the lathe on which the turret is to be operated.

- No. 600** TAILSTOCK TURRET, with head finished-bored. Complete with special tailstock, lever feed, and stops. Code YAJIC, wt. 39 lb. \$60.00
- No. 600A** TAILSTOCK TURRET, with head unbored. Complete with special tailstock, lever feed, and stops. Code YAJEB, wt. 39 lb. \$54.00

The "Multi-Stop"

Has six adjustable stop screws for accurately gauging length of cut. Each position is stamp-numbered to identify operation. Position is set by hand-operated ball-and-spring indexing mechanism. Attachment is mounted on front bed way near headstock.



- No. 690** MULTI-STOP ATTACHMENT with mounting bracket. Code YEHFE, weight 3 lb. \$16.00

CARRIAGE TURRET

The complete carriage turret consists of the double tool cross slide, four-way tool post turret, and back-slide tool post. The lathe must be equipped with the double tool cross slide, which replaces the standard compound rest assembly and adapts the turret to the carriage cross slide dovetails.

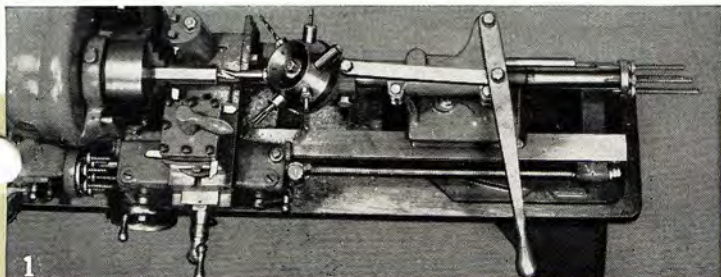
A convenient lock handle releases the turret head so that it may be rotated quickly to any one of four operating positions, automatically indexed. Tool posts take $\frac{3}{8}$ " tool bits. The back slide tool post permits a fifth operation, usually cutting off. The power cross and longitudinal feeds of the new Atlas F-series lathes speed up all five carriage operations. Adjustable stops at both front and back of the double tool cross slide may be set to gauge the correct depths of cut. No. 690 "Multi-stop" (left) is recommended for quickly gauging the length of cut.



No. 670

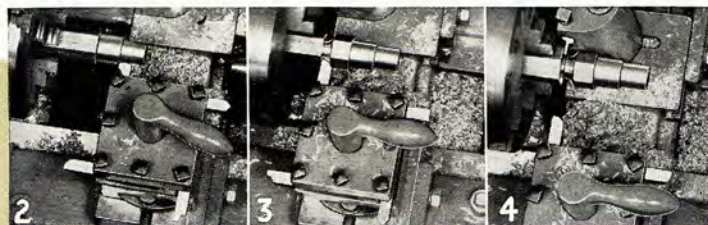
- No. 670** COMPLETE CARRIAGE TURRET—double tool cross slide, 4-way turret, and back slide tool post. Code word YAJOD, weight, 22 lb. \$47.00
- No. 671A** DOUBLE TOOL CROSS SLIDE only. Code word YAJUF, weight 10 pounds. \$17.00
- No. 673A** FOUR-WAY TURRET only. Code YAJYG, weight 9 pounds. \$24.00
- No. 676A** BACK SLIDE TOOL POST only. Code YAJZA, weight 5 pounds. \$9.00
- Cutter Bits Not Furnished

TURRET ATTACHMENTS IN OPERATION



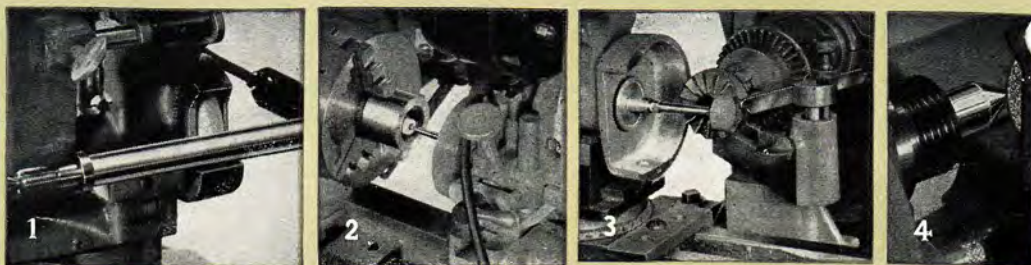
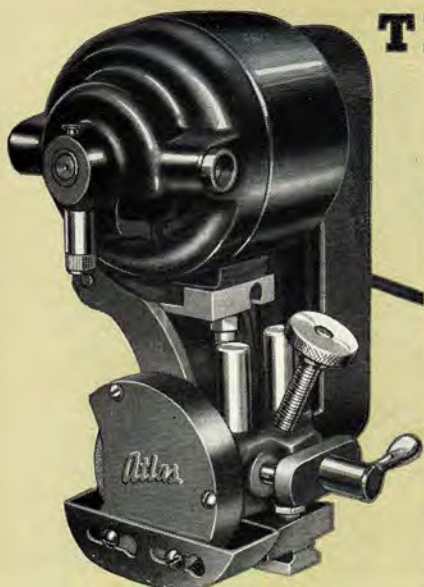
How the Atlas 10-inch lathe, equipped with turret attachments, becomes a screw machine for making small parts on a production basis and handling production jobs requiring several operations. (1)—Tailstock turret is set up for six operations: setting length of stock, countersinking, lead-hole drilling, drilling large hole, reaming, and tapping.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



(2, 3, and 4)—4-way carriage turret turns two diameters, chamfers, and forms—the back slide tool post cuts off the finished piece. Semi-automatic indexing heads put each tool in position instantly—power cross and longitudinal feeds increase output. Depth and length of cuts are accurately gauged by Multi-stop (see 1), stop screws on tailstock turret, and adjustable stops on double tool cross slide.

THE UTILITY UNIVERSAL LATHE GRINDER FOR 10-INCH LATHES



THE UTILITY IN ACTION

1. Grinding hardened spindle to close tolerance. Power longitudinal feed is being used in this operation.
2. Grinding inside of a bushing. Outer wheel guard has been removed for mounting internal quill.
3. Grinding 90° reseating cutter. Wheel is No. 477½ and index finger is portion of No. 550 attachment (below) mounted in diamond dresser holder.
4. Grinding lathe center.
5. Grinding spiral reamer. Notice No. 478 wheel and No. 535 attachment (described below).



No. 450 UTILITY UNIVERSAL LATHE GRINDER for 10" Atlas lathes.
Code word YANEG, weight 35 lb. **\$49.00**

FURNISHED: Two-step balanced pulleys, belt; No. 475 external grinding wheel and No. 477½ internal grinding wheel; quill for internal grinding; complete diamond dresser; extension cord with switch and plug.

SPECIFICATIONS—NO. 450 UTILITY UNIVERSAL LATHE GRINDER

Maximum Distance from Center of Wheel to Center of Work (with Grinder Perpendicular to Work).....5"
Grinds External Diameters up to.....7½"
Grinds Internal Diameters from.....¼" to 9¾"
Internal Wheels Grind to Depth of.....2¾"
Base Swivels for Angular Grinding.....0 to 90°
Spindle.....SKF Ball Bearing Equipped, ⅜" Diameter
Overall Height above Bed when Mounted for Operation.....13"
Motor.....Dumore Universal—Operates on 105-125 volt, 25-60 cycle AC, and 105-125 volt DC. Odd-voltage motors, prices on request.
Spindle Speeds.....6800 and 10400 RPM, Full Load

GRINDING WHEELS

For No. 450 Utility Lathe Grinder

No. 475 external wheel and No. 477½ internal wheel are furnished as standard equipment with the No. 450 Utility lathe grinder.

No.		Diam.	Wt.	Code	Price
475	External Wheel for Steel, ⅜" thick.....	2½"	1 lb.	YANFA	\$1.20
476	External Wheel for Cast Iron, ⅜" thick....	2½"	1 lb.	YANGE	1.20
477¼	Internal Wheel	1½"	2 oz.	YANJO	.80
477½	Internal Wheel	1½"	3 oz.	YANLY	.80
477¾	Internal Wheel	3¼"	3 oz.	YANOJ	.85
477-1	Internal Wheel	1"	3 oz.	YANUK	1.00
478	Special Cup Wheel for O.D. of Reamers.....	2¾"	1 lb.	YANYL	1.75
479	Special Saucer Wheel for Face of Solid Reamers.....	¾"	3 oz.	YAODY	.85

An excellent general purpose grinder for the toolmaker or machinist who must be equipped for all kinds of finishing work requiring precision and a polished surface. Typical jobs for the Utility: finishing hardened shafts, bushings, tools, dies, lathe centers, arbors, tapers, cutters, spiral, tapered or straight reamers.

The spindle is accurately ground and turns in deep-grooved SKF ball bearings sealed against dust. These bearings are properly preloaded for long, accurate service life. The entire spindle assembly is accurately fitted to the housing. Capped oilers permit thorough lubrication. Socket at end of spindle is machined to take taper and screw of quill for holding internal grinding wheels.

The Utility is powered by a Dumore motor dynamically balanced and fan-ventilated for smooth, cool operation. This fine motor is designed for 105-125 volt, 25-60 cycle AC and 105-125 volt DC. Two-step balanced pulleys provide grinding spindle speeds of 6800 RPM and 10400 RPM at full load. Motor base is hinged for belt adjustment.

Mounted quickly and easily in the tool post slide of the compound rest, the Utility grinder can be swivelled and set accurately at any angle. The vertical position is adjusted on two guide posts by raising screw and locked with clamp. Grinding wheel is completely enclosed by guard with dust catch, easily removed for mounting internal quill. Safety shield covers belt. The diamond dresser for keeping wheels true and sharp is furnished.

ATTACHMENTS FOR NOS. 450 & 10-450 LATHE GRINDERS

REVERSING SWITCH

Required for Grinding Operations



When grinding and polishing, the work held in the lathe spindle must rotate in a direction opposite that of the grinding wheel. This new No. 10-420 switch changes quickly the rotation of the lathe spindle by reversing the motor—operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead)—also both shunt-wound and compound-wound D.C. For complete description of the No. 10-420 and three-phase switches, refer to page 26.

No. 10-420 REVERSING SWITCH complete with mounting bracket, cable connections, installation diagram. Code YELJE, wt. 3½ lb. **\$4.50**

REAMER GRINDING ATTACHMENT

Required for sharpening spiral, tapered or straight reamers and side teeth of spiral or straight end mills. Includes a holding fixture, index finger guide, and spring tension clamp.

No. 535 REAMER GRINDING ATTACHMENT for Nos. 450 and 10-450 grinders. Code word YAOLG, weight 4 lb. **\$9.00**



VALVE STEM AND CUTTER GRINDING ATTACHMENT

Required for grinding valve stems, tappet screws, and valve reseating cutters. Consists of V-block for valve stems, cutter clearance gauge, index finger, and cutter arbor with centering pin for grinding reseating cutters.

No. 550 VALVE-STEM AND CUTTER GRINDING ATTACHMENT for Nos. 450 and 10-450 grinders. Code YAONJ, wt 3 lb. **\$8.00**

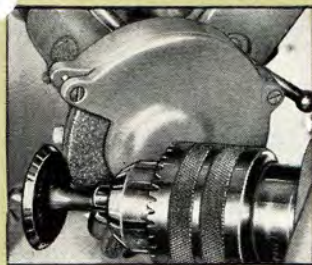
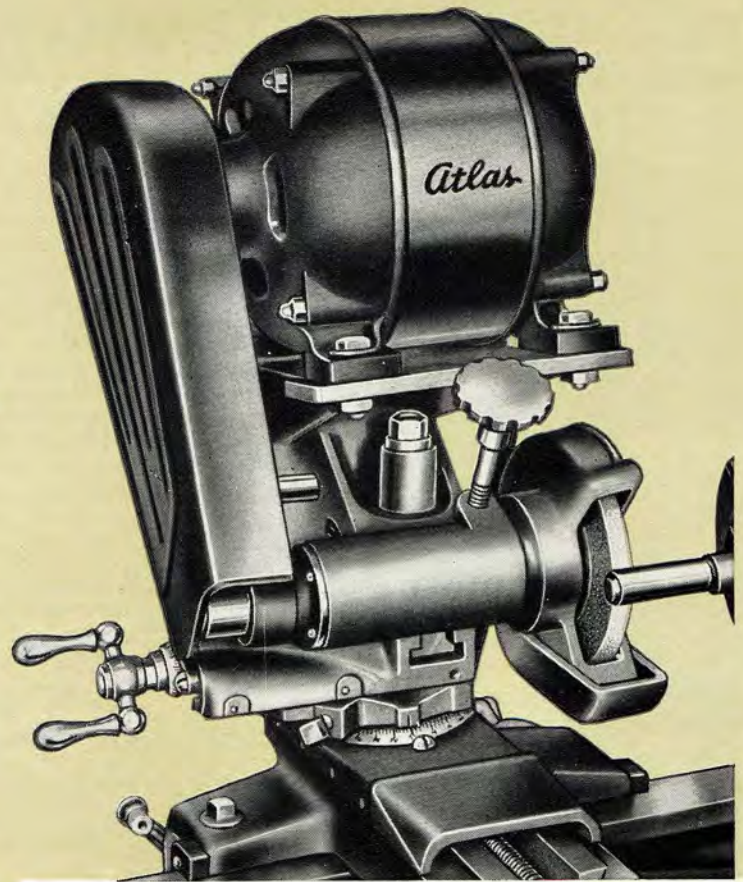


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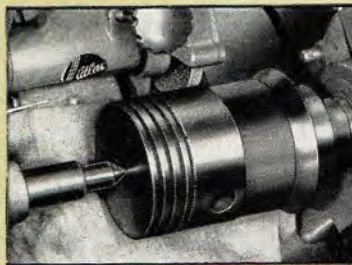
The NEW HEAVY DUTY Atlas LATHE GRINDER FOR 10-INCH LATHES



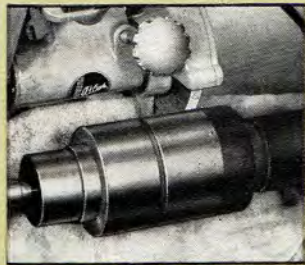
View of 10-450 heavy-duty lathe grinder with belt guard removed, showing two-step pulleys, built-in switch, and belt-tensioning screws.



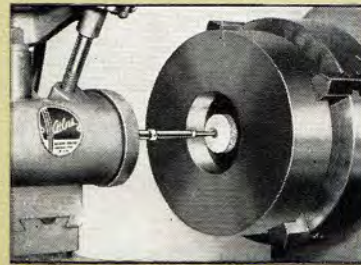
VALVES



PISTONS



EXTERNAL



INTERNAL

No. 10-450 NEW HEAVY-DUTY GRINDER for Atlas 10" lathes. Code YENLE, wt. 60 lb. **\$53.00**

FURNISHED: Two-step balanced pulleys, belt; No. 10-475 external grinding wheel and No. 477 1/2 internal grinding wheel; quill for internal work; diamond dresser; extension cord, plug.

No. 10-420 REVERSING SWITCH complete with mounting bracket, cable connections. Complete description, page 20. Code word YELJE, weight 3 1/2 lb. **\$4.50**



SPECIFICATIONS—No. 10-450 HEAVY-DUTY 10" LATHE GRINDER

Maximum Distance from Center of Wheel to Center of Work (with Grinder Perpendicular to Work) 4 1/8"
Grinds External Diameters up to 4 1/8"
Grinds Internal Diameters from 1/4" to 9 1/4"
Internal Wheels Grind to Depth of 2 3/8"
Base Swivels for Angular Grinding 0 to 90°
Spindle 5/8" Diameter, Lubricated-and-Sealed-for-Life Ball Bearings
Height above Bed when Mounted for Operation 15"
Motor 1/4 HP 3450 RPM Single Phase, 110 Volt, 60 Cycle AC, Single-End Ball Bearing Shaft, Built-in Switch
Spindle Speeds 4900 and 9100 RPM, Full Load

GRINDING WHEELS

No. 10-475 external wheel and No. 477 1/2 internal wheel are furnished as standard equipment with the 10-450 grinder.

No.	Description	Diam.	Weight	Code	Price
10-475	External Wheel for Steel, 3/8" thick	4"	1 lb.	YENKA	\$1.65
10-476	External Wheel for Cast Iron, 3/8" thick	4"	1 lb.	YENLE	1.65
477 1/4	Internal Wheel Grind to Depth of 2 3/8"	1 1/4"	2 oz.	YANJO	.80
477 1/2		1 1/2"	3 oz.	YANLY	.80
477 3/4		3/4"	3 oz.	YANOK	1.85
477-1		1"	3 oz.	YANUK	1.00
535		Reamer Grinding Attachment (page 20)	4 lb.	YAOLG	9.00
10-478	Special Cup Wheel for O.D. of Reamers	2 3/4"	8 oz.	YEVIT	1.75
479	Special Saucer Wheel for Face of Solid Reamers	3/4"	3 oz.	YAODY	.85
550	Valve Stem and Cutter Grinding Attachment (page 20)	3 lb.	YAONJ	8.00	

HERE is a new grinder with extra weight, strength and power for large heavy jobs plus the accuracy and all-round efficiency required to handle the finest internal and external grinding operations on a production basis. The 10-450 is ideal for the production shop and automotive service station.

The main frame is a heavy casting which furnishes maximum strength and rigidity for the entire attachment. The spindle housing is accurately machined to take the bearings. One end of the frame supports the motor mounted on tilting bracket adjustable for belt tension. Frame is bored for mounting post. Post is 1 3/16" diameter and has support plate and device for clamping in tool post slot of lathe compound rest. Coordinate-type clamp locks grinder securely in any vertical or radial position on mounting post. Vertical position is adjusted by raising screw with knob control.

Two lubricated-and-sealed-for-life ball bearings, properly preloaded, carry the grinder spindle. These bearings are spaced 3 1/8" apart, and the front bearing is 3/4" from the grinding wheel—this design maintains permanent spindle rigidity. The heavy-duty spindle is 5/8" diameter, accurately ground and fitted to the bearings. Spindle takes 4" external wheel and has socket machined to take taper and screw of quill for holding internal grinding wheels. External wheel is enclosed by iron guard, easily removed for mounting internal quill. Diamond dresser for keeping wheels true and sharp is furnished.

The new Atlas heavy-duty grinder is powered by a 1/4 HP 3450 RPM ball bearing motor. This fine motor furnishes a smooth, even flow of power and maintains constant spindle speed. Operates on 110 volt 60 cycle AC current. Two-step balanced pulleys provide grinding spindle speeds of 4900 and 9100 RPM at full load. Belt is completely covered by aluminum safety shield.

An Atlas lathe equipped with the 10-450 grinder becomes a profitable multi-purpose tool for garages. It makes quick work of such grinding jobs as: valves at any angle, cast iron pistons, bushings, bearings, shafts, pins.

AUTO-SERVICING ATTACHMENTS FOR *Atlas* 10-INCH LATHES

MOTOR DRIVEN MICA UNDERCUTTER

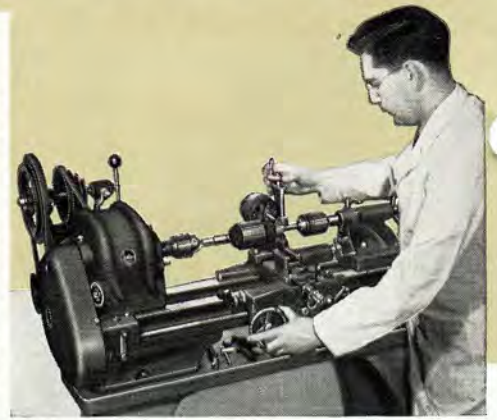
Armature servicing is one of the most profitable lathe jobs for the garage and electric shop. Only on a rigid, accurate lathe is it possible to turn out the accurate work required for today's automotive and appliance armatures.

The Atlas 10" lathe equipped with the motor driven mica undercutter takes the guess-work out of armature reconditioning and finishes the complete job in less than 10 minutes. The undercutting attachment is mounted on the back of the carriage cross slide where it can be put into action in a second or moved quickly out of the way when not in use. Height of cutter arbor is adjusted by elevation screw with handwheel control—position is set with thumb screw. Saw is fed through mica by turning lathe carriage handwheel—the new grooves are always clean, square, parallel, and uniform in depth. The saw arbor is driven by a Dumore motor.

No. 510 MICA UNDERCUTTING ATTACHMENT for Atlas 10" lathes, complete as shown. Dumore motor is 105-125 volt 25-60 cycle AC and 105-125 volt DC. Furnished: Set of 5 high speed undercutting saws (.015", .020", .025", .030", and .035"), extension cord, switch and plug. Code word YAMFE, weight 11 lb. **\$20.00**
Maximum Work Capacity Under Arbor. 5"



No. 510



No. 523A SET OF 10 HIGH SPEED SAWS (2 of each of following thicknesses: .015", .020", .025", .030" and .035"). Code YETUV, wt. 2 oz **\$3.60**
No. 386G 1/4" HIGH SPEED CUTTER BIT ready-ground for trueing armatures. Code YEVO, wt. 2 oz. **\$0.40**



NEW ARMATURE CHUCK KITS For Any Lathe with No. 1 or No. 2 Morse Taper Spindles

There's a spot for this new low-priced kit on every lathe bench. It contains a pair of Jacobs chucks designed especially to hold armature shafts rigidly and accurately during reconditioning.

Headstock (driving) chuck has heat-treated steel jaws and body—key-type wrench is furnished. Center rest chuck supports armature shaft in tailstock—adjustable durable bronze jaws form accurate bearing in which shaft rotates in exact position.

No. 9-441 CHUCK KIT for Atlas 10" lathes—arbors for No. 2 Morse taper spindles. Code YEJOJ, wt. 8 lb. **\$18.00**
No. 441 CHUCK KIT with arbors for No. 1 Morse taper spindles. Code word YEKHE, weight 8 lb. **\$18.00**
No. M6-441 CHUCK KIT for Atlas 6" lathes—headstock chuck with No. 2 MT arbor, center rest chuck with No. 1 MT arbor. Code YEJLY, wt. 8 lb. **\$18.00**

FURNISHED with above kits: Jacobs headstock and center rest chucks with recessed type Morse taper arbors. Chuck capacities—1/4" to 3/4". Metal case has attractive finish.



PISTON MACHINING EQUIPMENT

Piston work is another job handled on the Atlas lathe which would otherwise require an expensive single-purpose machine. These accessories equip the Atlas 10" lathe for accurately machining and finishing cast iron, aluminum, and alloy pistons. The complete assortment, consisting of piston driving unit, skirt reamers, and self-centering cones, handles pistons between 2 1/4" and 5 1/8" in diameter. The set-ups for centering, reaming, and finishing are simply made—it is not necessary to chuck the piston. These fixtures are recommended for finish-grinding cast iron pistons with the new Atlas heavy-duty lathe grinder (page 21).

DRIVING UNIT

Consists of: (1) Driving adapter which threads directly on lathe spindle nose—has key for holding reamers and cones; (2) Driving dog which threads on adapter—has hole for wrist pin to drive piston; (3) Driving dog extension for extra large pistons.



No. 400 PISTON DRIVING UNIT complete. Includes driving adapter, driving dog, driving dog extension. Code YAMHO, 4 lb. **\$6.75**

SKIRT REAMERS

For accurately reaming piston skirt before mounting on centering cone. Cutter blades are 1/8" high speed steel. Heavy body has keyway for adapter connection.



No.	Capacity	Wt.	Code	Price
408	2 1/4" to 3 1/4"	2 lb.	YAMIG	\$6.50
409	3 3/16" to 4 3/16"	3 lb.	YAMKY	8.35
410	4 1/8" to 5 1/8"	5 lb.	YAMOH	9.75

SELF-CENTERING CONES

For squaring skirt end of piston while drilling center hole and holding work while taking cut. Sizes correspond to skirt reamers. Entire surface is accurately ground. Has keyway for adapter connection.

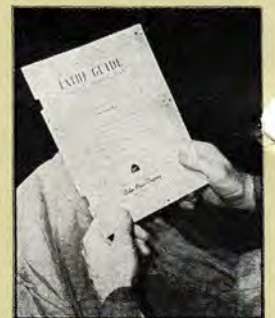


No.	Capacity	Wt.	Code	Price
405	2 1/4" to 3 1/4"	2 lb.	YAMUJ	\$2.00
406	3 3/16" to 4 3/16"	3 lb.	YAMYK	2.50
407	4 1/8" to 5 1/8"	5 lb.	YANAF	3.00

• SERVICE MEN! SEND FOR THESE FREE LATHE BOOKLETS • •

"IT PAYS to have an Atlas lathe"—and these four shop booklets tell why:

- "On the Turns."
- "Make 'Em on Your Lathe."
- "A Bench Lathe in the Electrical Department."
These three are magazine articles by nationally known service men, each with over twenty years of shop experience.
- "Lathe Guide for the Service Man."
Condenses lathe lore to 12 pages—contains bits of information that would otherwise have to be dug out from dozens of handbooks and guides, or from operating experience. Sent free on request.



Free Lathe Booklets

COMPLETE INDEX—INSIDE BACK COVER

Atlas 10" LATHE CHUCKS

FOR 10-INCH LATHES ONLY

6-Inch Lathe Chucks Are Described on Page 34.

MEDIUM DUTY INDEPENDENT CHUCKS

MEDIUM DUTY UNIVERSAL CHUCK

Atlas medium duty lathe chucks are designed to handle the chucking requirements of the average shop. High strength semi-steel bodies are scientifically proportioned and exceptionally strong. Alloy steel jaws are heat treated—have raised and ground steps. Accuracy is guaranteed within standard chuck tolerances.

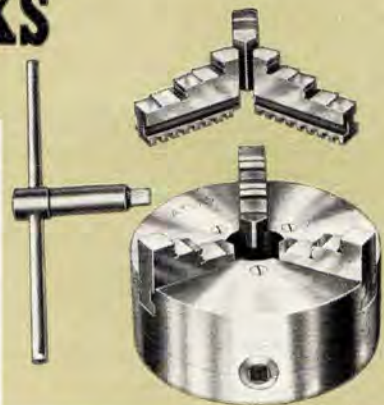
Rugged and accurately built for holding work of all shapes. One-piece body is high strength semi-steel casting—entire face and outer edge are ground. Hand fitted jaws are heat-treated alloy steel—deep shoulders have raised and ground steps for full, firm inside or outside grip. Jaws are reversible for large diameters. Screws are heat-treated alloy

Has self-centering jaws controlled by turning one screw—ideal for quickly centering round and hexagonal stock. Body is high-strength semi-steel. Scroll is special alloy metal—pinion is special alloy steel. Jaws are alloy steel heat-treated—have raised and ground steps. Furnished with two sets of jaws (inside and outside) and wrench. This chuck handles rods through headstock. Body is threaded for Atlas 10" lathe spindle—no adapter required.

No. U-370 6" MEDIUM-DUTY INDEPENDENT CHUCK complete with wrench. Body threaded for 10" lathe spindle. YIAGH, wt. 10 lb. **\$12.50**

No. U-370-8 8" MEDIUM-DUTY INDEPENDENT CHUCK complete with wrench. Body threaded for 10" lathe spindle. YIAHJ, 22 lb. **\$18.50**

steel—have socket head for wrench. Chuck bodies are threaded for 10" lathe spindle—no adapter required.



No. U-435 5" MEDIUM-DUTY UNIVERSAL CHUCK complete with 2 sets of jaws (inside and outside) and wrench. Body threaded for 10" lathe spindle. Code word YEZZO weight 7½ lb. **\$18.95**

HEAVY DUTY INDEPENDENT CHUCK

HEAVY DUTY UNIVERSAL CHUCK

These chucks have the same general design and construction as the medium duty chucks—with the extra weight and strength required for heavy-duty jobs and production work.

Heavy, rugged one-piece high-strength semi-steel body is reinforced and braced. Jaws are special alloy machinery steel, heat treated to withstand shock, strain, and wear. Jaws are hand-fitted to body and are reversible for large diameter work. Screws are heat treated alloy steel, carefully fitted to bearings and operate the jaws smoothly. Screws have mortised heads to take square-end wrench. Thrust bearings are heat treated steel tightly fitted to body.

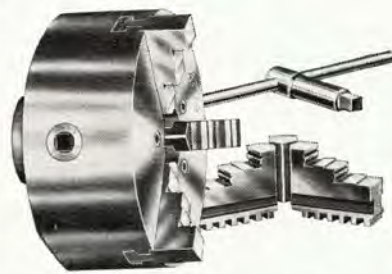
Accurate self-centering jaws are controlled by bevel gear-driven scroll. Scroll is special alloy metal. A spiral thread, with which the jaw teeth mesh, is cut on the upper side of the scroll. On the under side is the bevel gearing which meshes with the operating pinions. Pinions are special alloy steel. Hand-fitted jaws are special alloy machinery steel, heat treated to withstand shock, strain and wear. Two sets of jaws are furnished (inside and outside). Heavy rugged body is high-strength semi-steel, reinforced and braced.



No. U-765B 6" HEAVY-DUTY INDEPENDENT CHUCK complete with adapter fitted for 10" lathe spindle. Code word YEZVA, weight 20 lb. **\$28.50**

No. U-765 6" HEAVY-DUTY INDEPENDENT CHUCK only less adapter. Code YIAMN, weight 17 lb. **\$25.50**

No. U-765A ADAPTER PLATE for 6" heavy-duty independent chuck, threaded for 10" lathe spindle, face semi-finished. Code word YIANP, weight 3½ lb. **\$3.75**



No. U-770B 6" HEAVY-DUTY UNIVERSAL CHUCK complete with 2 sets of jaws and adapter fitted for 10" lathe spindle. Code word YEZWE, weight 23 lb. **\$33.00**

No. U-770 6" HEAVY-DUTY UNIVERSAL CHUCK only less adapter. Code YIARS, weight 19 lb. **\$30.00**

No. U-770A ADAPTER PLATE ONLY. Diameter 3 13/16", threaded for 10" lathe spindle, face semi-finished. Code word YIAST, weight 4 lb. **\$3.75**

JACOBS CHUCKS

For 10-Inch Lathes Only. 6" Lathe Chucks Are Described on Page 34—Armature Chuck Kits, Page 22.

HEADSTOCK CHUCKS

These Jacobs chucks are accurate and convenient for holding small-diameter work. Hollow construction permits handling long shafts through 10" lathe headstock spindle. Heat-treated steel jaws and body. Ideal for valve refacing with lathe grinders (pages 20 and 21). Both sizes thread directly on 10" lathe spindle—No. 375 can be used in tailstock with 377 arbor (below, right).



No. 375 JACOBS HEADSTOCK CHUCK capacity 1/8" to 3/8" complete with key-type wrench. Can be used in tailstock with 377 arbor. YAGYE, 4 lb. **\$12.00**

No. 377 ARBOR for 375 chuck only. Code word YAHUD, 8 ounces. **\$1.00**

No. 375B JACOBS HEADSTOCK CHUCK capacity 3/16" to 3/4" complete with key-type wrench. Code YAHCO, 5 lb. **\$14.40**

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CENTER REST CHUCK

The Jacobs center rest chuck supports armatures and shafts in the lathe tailstock. Adjustable durable bronze jaws form accurate bearing in which shaft rotates in exact position. Essential for accurate armature work. No. 377 arbor is required to adapt chuck to 10" lathe tailstock.



No. 445 JACOBS CENTER REST CHUCK capacity 1/4" to 3/4". Code word YAHOC, 3 pounds. **\$8.00**

No. 377 ARBOR required. Code word YAHUD, weight 8 oz. **\$1.00**



No. 377 ARBOR to adapt 375 or 445 chuck to 10" lathe tailstock. Code YAHUD, weight 8 oz. **\$1.00**

DRILL CHUCKS

Rugged Jacobs chucks for accurate drilling and countersinking. Heat-treated steel jaws and body. Adapted to 10" lathe headstock and tailstock spindles with No. 378 arbor (below).



No. BD1-60 JACOBS DRILL CHUCK capacity 5/64" to 1/2" complete with key-type wrench. YAHEZ, 2 lb. **\$5.75**

No. 40-60 JACOBS DRILL CHUCK capacity 0 to 1/2" complete with key-type wrench. Code YAHIB, 2 lb. **\$6.75**

No. 378 ARBOR required to adapt Jacobs drill chucks to headstock and tailstock spindles of 10" lathes. Code word YAHYA, weight 8 oz. **\$1.00**



No. 378 ARBOR to adapt BD1-60 or 40-60 chuck to 10" lathe headstock or tailstock. Code YAHYA, 8 oz. **\$1.00**

CHUCK ARBORS

Atlas 10-INCH LATHE ATTACHMENTS

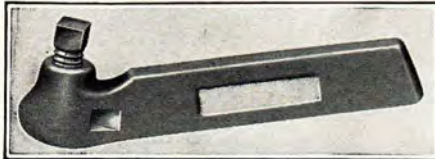
THESE ATTACHMENTS ARE FOR ATLAS 10-INCH LATHES ONLY
6" Lathe Attachments are Described on Pages 34-36

You'll do better work with Atlas lathe attachments. Each one is designed to save time and effort, do accurate work, and give long, troublefree service. Carefully selected materials, modern precision machining, and thorough working tests result in the most efficient and durable tool for any given lathe operation. You'll

save money, too! Atlas modern economical manufacturing methods supply these superior attachments at remarkably low prices.

A complete assortment insures maximum accuracy, speed, and convenience in performing important machining operations.

TOOL HOLDERS



Drop-forged special steel, accurately machined, heat treated and hardened. Set screws are alloy steel heat treated. Slot is accurately machined for 1/4" cutter bits—3/8" shank fits tool post slot. Set of 3 holders handles all turning and facing operations.

No.	Description	Weight	Code	Price
139L	LH Tool Holder	1 lb.	YAUDZ	\$1.30
139R	RH Tool Holder	1 lb.	YAUHD	1.30
139	Straight Tool Holder	1 lb.	YAUCY	1.30

LARGE FACE PLATE



8 1/2" diameter for holding large work. Threaded to fit spindle nose of Atlas 10" lathes. Accurately machined grey iron casting with 8 slots for clamping work firmly in position.

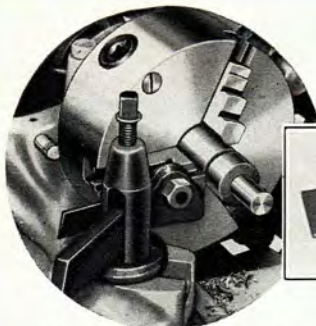
No. 365 8 1/2" FACE PLATE as shown. Code YAVSY, weight 7 lb. \$4.25

6-Inch Face Plate

6" diameter as furnished with 10" lathes—threaded for lathe spindle nose. Has 3 clamping slots and slot for lathe dog.

No. 15 6" FACE PLATE. Code word YEYMP, weight 3 lb. \$2.75

CUT-OFF TOOL

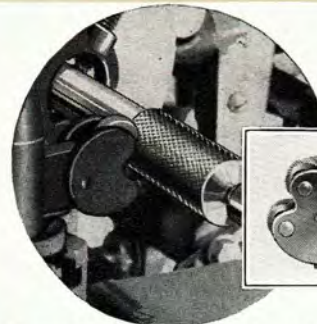


For quick, clean cutting-off. Drop-forged RH holder with 3 1/2" high-speed replaceable blade, ready-ground with correct top rake, front and side clearance—front face cuts freely without binding. Blade is resharpened by grinding front edge only. Hardened clamp locks blade rigidly.

No. 590 CUT-OFF TOOL with blade and wrench. Code word YAUJF, weight 1 pound. \$1.65

No. 592 Extra Blade. Code word YAURN, weight 4 oz. Each \$0.55

KNURLING TOOL



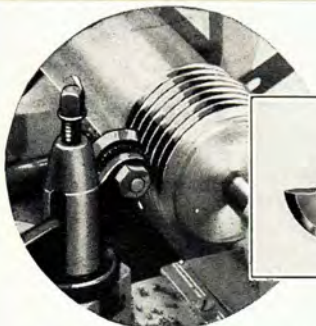
Forms gripping surface for tool handles, nuts, markers, and instruments. "Floating" construction makes rollers self-centering—thrust is transmitted to heavy steel shank. Rollers are hardened tool steel (medium diamond shape).

No. 340 KNURLING TOOL with medium diamond-shape knurls. Code word YAUSP, weight 1 lb. \$3.35

No. 343 Extra Knurls. Specify medium, coarse, or fine; and straight or diamond shape. Code YEGYI, weight 2 oz. Per pair. \$1.45



THREADING TOOL



The sides of the threading tool are ready-ground to cut 60° threads. The tool is resharpened easily and accurately by grinding the top edge only. The RH holder is a drop-forging—clamp screw holds tool rigidly.

No. 430 THREADING TOOL with wrench. Code word YAUXT, weight 1 pound. \$2.75

BORING TOOL HOLDER



Rigid support for boring tools. Drop-forged holder has reversible yoke for right or left hand work. Includes 1/4" boring tool, 1/4" cutter bit, and wrench. Capacity 1/2" diameter shank—accommodates tool-post boring tool set, page 25. **No. A2030** BORING TOOL HOLDER with 1/4" high-speed boring tool, 1/4" cutter bit, and wrench. Code word YATME, weight 1 1/2 pounds. \$3.50

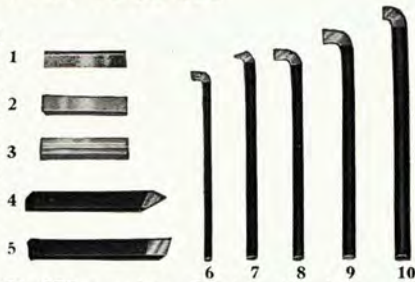
THESE ATTACHMENTS ARE FOR ATLAS 10-INCH LATHES ONLY
6" Lathe Attachments are Described on Pages 34-36

FOR 10-INCH LATHES ONLY
6" Lathe Attachments are Described on Pages 34-36

10-INCH LATHE ATTACHMENTS (2)

TOOL-POST TOOL SET

High speed ready-ground boring and turning tools—ideal for accurate jobs requiring rigid tool mounting. Solid one-piece construction eliminates extra joint of holder—held directly in tool post. Weight 2 oz. each.



No. 380 TOOL-POST TOOL SET complete: 5 internal tools, 2 heavy-duty external tools, V-block, 2 height spacers. Code word YARYP, weight 2 lb. **\$5.25**

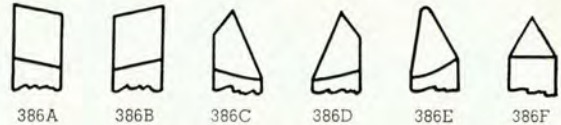
No. Above	Order No.	Description	Code	Price
(1)	383	Small Spacer	YATAL	\$0.35
(2)	382	Spacer	YATEM	.35
(3)	381	V-Block	YATLA	.45
(4)	385C	3/8" External Threading (60° V-type)	YASUP	.75
(5)	385A	3/8" External Turning	YASON	.65
(6)	393L	3/16" Boring	YASAK	.65
(7)	388B	1/4" Internal Threading (60° V-type)	YASEL	1.00
(8)	392L	1/4" Boring	YASKA	.70
(9)	391L	5/16" Boring	YASLE	1.05
(10)	390L	3/8" Boring	YASNO	1.35

CUTTER BITS



High speed 1/4" x 1/4" cutter bits ready-ground for use in Atlas tool holders on page 24. Complete set of six permits wide range of operations. Weight, 2 oz. each. 3/8" unground bits for use in tool post are also listed below.

No. 386 SET OF 6 FORMED CUTTER BITS 1/4" x 1/4". Includes bits shown. Code YARJA, wt. 1 pound.... **\$1.75**



No.	Description	Code	Price
386A	1/4" RH Turning	YAPMY	\$0.30
386B	1/4" LH Turning	YAPOK	.30
386C	1/4" RH Facing	YAPUL	.30
386D	1/4" LH Facing	YARAJ	.30
386E	1/4" Round Nose Turning	YAREK	.30
386F	1/4" Threading (60° V-type)	YARIL	.40
386S	Set of 6 Unground 1/4" cutter bits	YARKE	.95
386T	Set of 12 Unground 1/4" cutter bits	YARMO	1.80
386S	Set of 6 Unground 3/8" cutter bits	YARPY	2.30

CLAMP-TYPE DOGS



For holding square, rectangular, hexagonal, or round work. Mounted without removing work from lathe centers. Clamp bars are steel forgings carefully machined and hardened—screws are heat treated.

No. 741 CLAMP-TYPE DOG. Opens 2 1/4". Code word YAPGA, weight 1 lb. **\$3.30**

No. 742 CLAMP-TYPE DOG. Opens 3 1/2". Code word YAPHE, weight 2 1/2 lb. **\$6.40**

LATHE DOGS

Drop-forged steel, new lightweight design—hold the work firmly and transmit maximum power from the lathe spindle. Set screws are heat-treated. Four sizes.

No. 142A SET OF 4 LATHE DOGS to handle diameters up to 1 1/2". Code word YAPAG, weight 2 lb. **\$2.75**

No.	Opening	Weight	Code	Price
142	1/2"	4 oz.	YAOPK	\$0.55
143	3/4"	5 oz.	YAORM	.65
144	1"	7 oz.	YAOWR	.75
145	1 1/2"	10 oz.	YAOZT	.85



STEADY REST

For Supporting Long Work



(Right) Steady rest supporting axle for turning and shaft for facing end.



The Atlas steady rest, clamped to the bed ways, serves as a rigid work support to insure accuracy in turning, boring, and threading long pieces. Frame and base are strong iron castings. Bronze jaws prevent scoring work. Each jaw can be adjusted easily and locked in exact position to provide proper work bearing. Top is hinged so that work may be inserted or removed without unclamping rest.

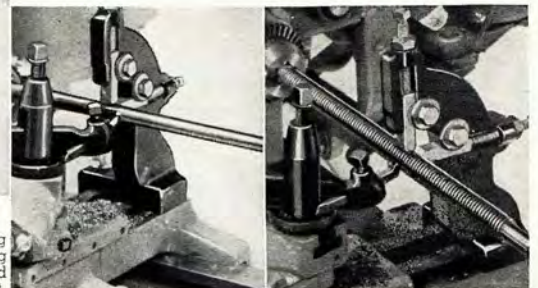
No. 10-325A STEADY REST FOR 10" lathes—capacity 2 7/8" diameter. Code YIAWY, wt. 5 lb. **\$5.25**

FOLLOWER REST

Braces Slender Rods



(Right) Turning and threading slim rods braced by follower rest.



The Atlas follower rest insures accurate work on long slender rods. It is mounted quickly and easily on the back of the carriage dovetail slide, follows the cutting tool, and holds the work in rigid position. Ruggedly built—hardened steel jaws quickly adjusted and locked.

No. 425 FOLLOWER REST for 10" lathes. Code word YAVNE, weight 3 pounds. **\$3.50**

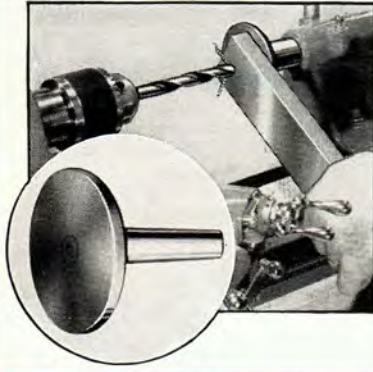
THESE ATTACHMENTS ARE FOR ATLAS 10-INCH LATHES ONLY

6" Lathe Attachments are Described on Pages 34-36

10-INCH LATHE ATTACHMENTS (3)

FOR 10-INCH LATHES ONLY
6" Lathe Attachments are Described on Pages 34-36

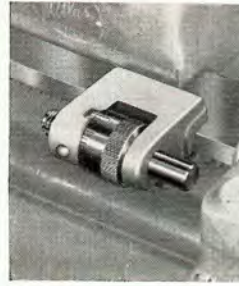
DRILL PAD



The drill pad, mounted in the tailstock ram, serves as a rigid support for drilling flat or square work with drill held in headstock. Ground steel shank is No. 2 Morse taper.

No. 360 DRILL PAD, No. 2 MT shank. 3 1/8" diameter face. Code word YATOP, weight 1 1/2 lb..... **\$1.65**

MICROMETER CARRIAGE STOP



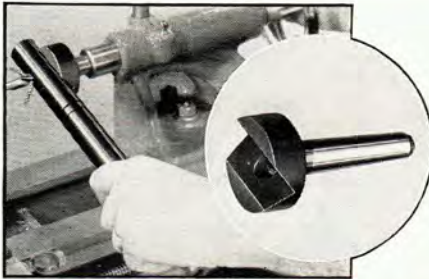
The Atlas carriage stop has micrometer adjustment to indicate the proper stopping point of carriage when turning, boring, or facing — simplifies accurate duplicate work. Clamps securely on front bed way. *Will not automatically stop carriage.*

No. 10-315 CARRIAGE STOP. Code word YIAZB, weight 2 pounds..... **\$3.50**

CROTCH CENTER

The crotch center automatically centers round work in the tailstock ram for accurate cross-drilling. V-slot is carefully machined — ground steel shank is No. 2 Morse taper. 2" diameter, 1" slot.

No. 356 CROTCH CENTER. Code YATRY, weight 1 lb..... **\$1.65**



CROSS SLIDE STOP

The cross slide stop indicates the proper depth at which to stop the cross feed for accurate duplicate work. It clamps to the cross slide dovetail — has adjustable screw and lock nut. *Will not automatically stop cross feed.*

No. 725 CROSS SLIDE STOP. Code word YAIBT, weight 8 oz..... **\$2.45**



60° COUNTERSINK DRILLS



For accurately centering work to be mounted between lathe centers — provides proper bearing for center.

No.	Drill Size	Body Diameter	Length	Wt.	Code	Price
395	1/16"	13/64"	1 7/8"	2 oz.	ZAURI	\$0.65
395A	1/8"	.300"	2 1/4"	2 oz.	ZAUSK	.70

NEW REVERSING SWITCH

A dependable reversing switch is essential to reverse the rotation of motor and lathe spindle for grinding, tapping, nut-setting, and fine metal and wood finishing.



THE NEW NO. 10-420 REVERSING SWITCH is mounted on the reverse gear box — a handy, easy-to-reach position. It is a drum-type switch with knobbed lever control easily shifted to forward, off, or reverse position. Durable contacts are hard rolled copper. The No. 10-420 operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead) — also both shunt-wound and compound-wound DC.

No. 10-420 REVERSING SWITCH complete with mounting bracket, cable connections, installation diagram. Code YELJE, wt. 3 1/2 lb..... **\$4.50**



60° LATHE CENTERS

Hardened and ground high-carbon tool steel with No. 2 Morse taper shank for headstock or tailstock.

No. 9-88 60° LATHE CENTER. Code word YAVAM, wt. 8 oz..... **\$1.35**

No. 138 REDUCING SLEEVE, No. 3 to No. 2 Morse taper (as furnished with 10" lathes). Code YEYLN, wt. 6 oz..... **\$1.20**

BALL BEARING TAILSTOCK CENTER

Center point rotates on enclosed ball bearing — recommended for high-speed operations.

No. 348 BALL BEARING CENTER, No. 2 Morse taper shank. Code YEMMO, weight 1 lb..... **\$10.50**

THREE PHASE REVERSING SWITCH

The No. 420D reversing switch is designed for three phase current. Construction features are the same as those of No. 10-420 above.

No. 420D THREE PHASE REVERSING SWITCH with mounting bracket and connections. Code YEMYD, wt. 4 lb..... **\$13.50**

THREE PHASE MOTOR CONTROL SWITCH



No. S7-300 is required with a three phase motor. It is a thermal overload 3-pole manual starter for three phase circuits. Mounting bracket and flexible cable-covered motor connection cord are furnished.

No. S7-300 THREE PHASE CONTROL SWITCH with mounting bracket and connections. Code word ZEBAR, wt. 6 lb..... **\$13.50**



CENTER EJECTOR BAR

This new ejector removes center from spindle without burring center and sleeve, which may happen when using makeshift bar. Steel shaft has knurled ball grip — guide collar keeps shaft aligned as it passes through spindle. Brass head cannot damage center, sleeve, or spindle.

No. 790 CENTER EJECTOR BAR. Length 13 1/2". Code word YEMPY, weight 2 pounds..... **\$1.25**

THESE ATTACHMENTS ARE FOR ATLAS 10-INCH LATHES ONLY

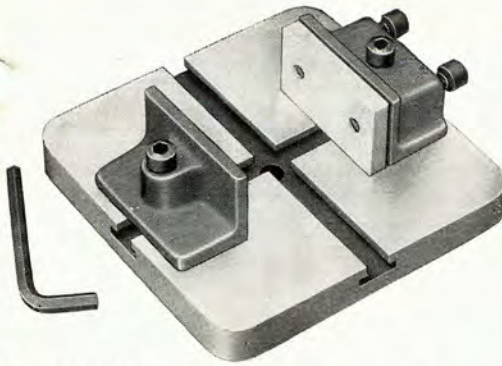
6" Lathe Attachments are Described on Pages 34-36

FOR 10-INCH LATHES ONLY

6" Lathe Attachments are Described on Pages 34-36

10-INCH LATHE ATTACHMENTS (4)

BORING TABLE AND VISE



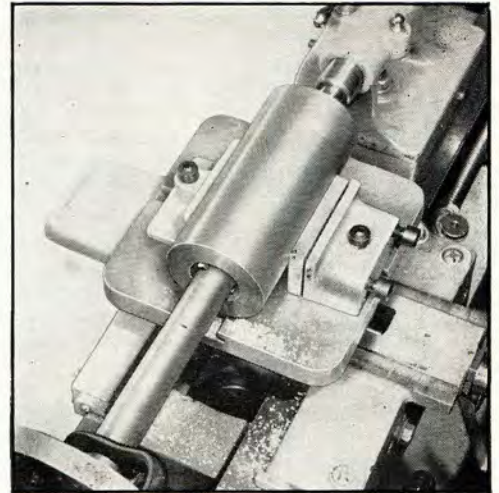
No. W68-2A BORING TABLE for 10" lathes, complete with vise and wrench. Code ZEFZO, wt. 12 lb. **\$10.50**
 Size of Table.....7" x 7" Jaw Opening45/8"
 W Width3" Jaw Height15/8"

This new fixture permits boring and threading long holes with maximum accuracy—holds work rigidly while cut is taken with boring bar. It is easily installed, replacing lathe compound rest.

The table working surface is machine ground. Two socket head cap screws lock table to lathe cross slide. Four T-slots for positioning and locking vise jaws extend from center of table to edges. Each vise jaw is locked by a socket-head cap screw. One jaw can be swiveled to grip irregular work—the other has a moveable face which is tightened upon the work after both jaws have been clamped to the table.

No. W8V V-Block Jaw for holding round work in vise jaws. Code word ZADSO, weight 10 oz. **\$0.75**

No. BP-101 Blueprint Guide for Making Boring Bar shown at right. Code YEREP. **\$0.35**

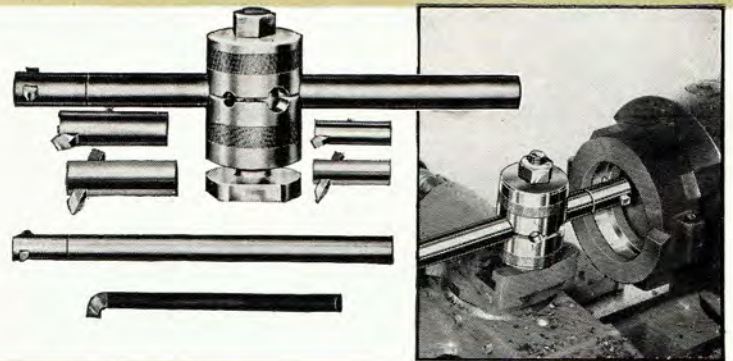


TURRET-TYPE BORING SET

A production boring tool set which provides maximum rigidity for every job. Steel turret head has heavy clamp screw for locking bars in rigid position—replaces standard lathe tool post. Three boring bars furnished are special bar steel—3/8" bar is solid high-speed steel—1/2" and 3/4" bars have 3 end-caps for holding cutters at 30°, 45°, and 90°. Six high-speed cutters and three wrenches are furnished.

No. 668 TURRET-TYPE BORING SET complete as shown. Code word YELNY, weight 8 lb. **\$16.00**

FURNISHED: Turret head, 3 wrenches, 3/4" x 11" boring bar and 3 end caps with 1/4" high-speed cutters; 1/2" x 8" boring bar and 3 end caps with 3/16" high-speed cutters; 3/8" x 7" solid high-speed boring tool.



COIL WINDING ATTACHMENT

Simplifies accurate coil winding. Replaces tool post—has fibre wire-guide and spring adjustment on spool for correct tension. Quickly mounted and removed.

No. 780 COIL WINDING ATTACHMENT. Code word YAWEP, weight 2 lb. . **\$3.25**



Feeds are available on the Atlas lathe to match the diameter of B&S magnet wire in sizes between 12 and 40, using bare or insulated wire. Feeds are also available for spring making, wire wrapping, and coil winding with steel and iron wire in various gauges. Gear train setups are given in detail in the Atlas "Manual of Lathe Operation" (page 14).

PIPE CENTERS

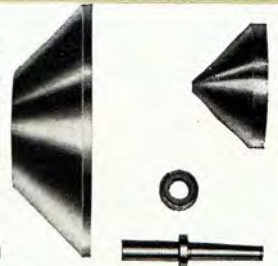
For supporting pipe in tailstock for machining or cutting pipe-type threads with taper attachment (page 18). Accurately ground centering cones turn with work and are supported in tail-stock by arbor with No. 2 Morse Taper shank. Thrust is absorbed by ball bearing.

No. 755 SET OF PIPE CENTERS as shown. Code YAWAN, wt. 12 lb. **\$19.00**

No. 757 PIPE CENTERING CONE, Capacity: 4" to 8". Code word YEYTA, weight 9 lb. **\$10.00**

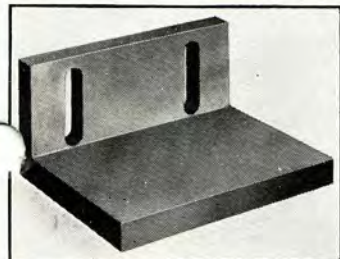
No. 756 PIPE CENTERING CONE, Capacity: 1/4" to 4". Code word YEYUZ, weight 3 lb. **\$8.00**

No. 758A TAILSTOCK ARBOR AND THRUST BEARING. Code word YEYVE, weight 2 lb. **\$3.00**

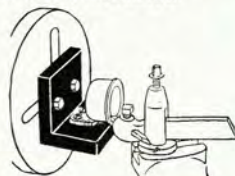


ANGLE PLATE

The angle plate is bolted to any point on the face plate for machining irregular shapes and for off-center drilling and boring. The heavy grey iron casting is machined to a right angle. The shorter side has two 1/2-inch slots for bolting to face plate. The 5-inch horizontal face may be drilled to serve as a clamping base for the piece to be machined.



No. 740 ANGLE PLATE. Code YAVYS, wt. 10 lb. . **\$4.00**



LATHE LAMP

Correct lighting means accurate lathe work. The Atlas lathe lamp improves the operator's vision by throwing plenty of light directly on the work—eye glare is eliminated by proper deflection.

The 15" flexible cable allows bulb and shade to be moved easily and kept in any desired position. 11" rigid post has mounting bracket which clamps at base of bed. Adjustable ball joint in shade—convenient push-thru switch—6-foot rubber cord and plug. Attractively finished in satin-chrome plate with polished shade.



No. 745 LATHE LAMP. Code YAIKD, wt. 3 lb. **\$3.00**

THESE ATTACHMENTS ARE FOR ATLAS 10-INCH LATHES ONLY—

6" Lathe Attachments are Described on Pages 34-36

WOODWORKING ATTACHMENTS FOR 10" LATHES

Rigid construction of headstock and tailstock and a wide range of spindle speeds make the Atlas lathes ideal for woodworking operations as well as machining all types of metals and plastics.



WOODTURNING CHISELS

Professional-type chisels with tool-steel blades, scientifically heat treated. Extra long handles are polished maple with strong brass ferrules. Approximate length 14". Weight 1 lb. each.

No. W13A SET OF 8 WOODTURNING CHISELS as shown above and listed below. YAZWY, 6 lb. **\$9.25**

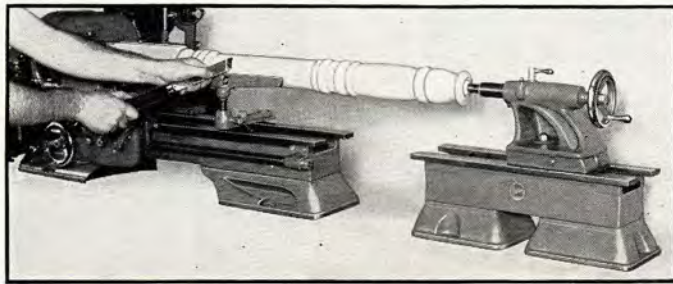
No.	Code	PRICE	No.	Code	PRICE
1/4" Gouge	W13-1 YAYPA	\$1.25	1" Skew	W13-5 YAZER	\$1.60
1/2" Gouge	W13-2 YAYSO	1.30	1/2" Rd. Nose	W13-6 YAZRE	1.10
1" Gouge	W13-3 YAYUT	1.75	1/2" Spear Pt.	W13-7 YAZTO	1.10
1/2" Skew	W13-4 YAYVY	1.10	1/2" Parting	W13-8 YAZUV	1.20

HAND REST SWIVEL

The hand rest swivel clamps to carriage in place of compound rest—can be turned and locked at any angle. Furnished complete with 4", 8", and 12" T-rests. When ordering, please give lathe serial number or year purchased.



No. W27 HAND REST SWIVEL complete with 4", 8", and 12" T-rests. Code YAWRO, wt. 4 lb. **\$4.50**



EXTENSION BED

For handling extra long woodwork. Machined and finished to same specifications as lathe bed. Bolts to bench—overall length 18".

No. 1-18 EXTENSION BED for woodworking only. Code word YAILF, weight 40 lb. **\$10.00**



SPUR CENTER

For driving work mounted between centers. Ground and hardened steel with replaceable center point—No. 2 Morse taper shank.

No. 350 SPUR CENTER. Code YAWTY, weight 8 oz. **\$1.10**

No. L3-147 EXTRA CENTER POINT. Code word YEWIV, weight 2 oz. **\$0.35**



CUP CENTER

Supports work in tailstock. Ground and hardened steel with replaceable center point—No. 2 Morse taper shank.

No. 351 CUP CENTER. Code YAWUS, weight 8 oz. **\$1.10**

No. L3-147 EXTRA CENTER POINT. Code word YEWIV, weight 2 oz. **\$0.35**



SCREW CENTER

For facing and hollowing operations. Special steel with replaceable center. No. 2 Morse taper. Diameter 2".

No. 352 SCREW CENTER. Code word YAWYT, wt. 1 lb. **\$1.65**

No. 355 EXTRA CENTER POINT for No. 352. Code YEYEV, wt. 2 oz. **\$0.35**

HAND REST

Clamps to bed and furnishes rigid support for chisel. Has sliding clamp plate to protect bed. T-rest can be swivelled to any position and locked securely with hand clamp screw. 4" and 12" T-rests are furnished.



No. 330 WOODWORKING HAND REST complete with 4" and 12" T-rests. Code YAWOR, weight 6 lb. **\$3.00**

FACE PLATES FOR WOODWORKING



(Left) No. L5-365 is an 8 1/2" diameter combination face plate for both wood and metal operations. Threads directly on 10" lathe spindle nose—has holes for wood screws and four 1/2" slots for metal work.

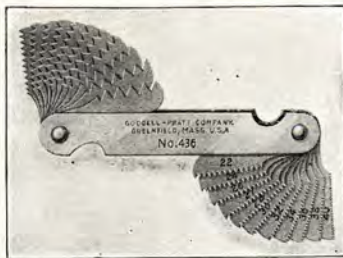
No. L5-365 COMBINATION FACE PLATE. Code word YAVUR, weight 8 lb. **\$4.25**

(Right) No. L4T-15 is a 3 1/2" face plate for woodworking. Threads directly on spindle nose and has three holes for wood screws.

No. L4T-15 WOODWORKING FACE PLATE. Code word YELOL, weight 2 lb. **\$1.60**



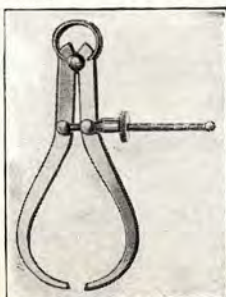
Atlas MACHINISTS TOOLS



SCREW PITCH GAUGE

By comparing the pitches on the leaves of this gauge, by contact, the pitch of a V-thread screw or nut is quickly and positively determined. There are thirty leaves with the following pitches: 4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40 and 42 teeth per inch. Weight 6 oz.

No.	No. Leaves	Length Leaves	Code Word	Price
MF436	30	1 1/8"	WYCGO	\$1.45



OUTSIDE CALIPERS

5" Capacity
No. MF503 Code word WYBID **\$1.20**
Wt.—6 oz.



INSIDE CALIPERS

5" Capacity
No. MF509 Code word WYBUG **\$1.20**
Wt.—6 oz.

MICROMETERS



The accuracy of these micrometers is guaranteed. They measure by 1/1000ths of an inch. Anvil, spindle, barrel, and thimble are beautifully polished. Frame black enameled. Quick, positive adjustment for wear is provided.

No.	Capacity	Wt.	Code	Price
No. MF821	0 to 1"	1 lb.	WUYVY	\$ 6.50
No. MF822	1" to 2"	1 lb.	WUZER	7
No. MF21R	2" to 3"	2 lb.	WUZRE	11
No. MF22R	3" to 4"	2 lb.	WUZTO	12.50

CENTER GAUGE

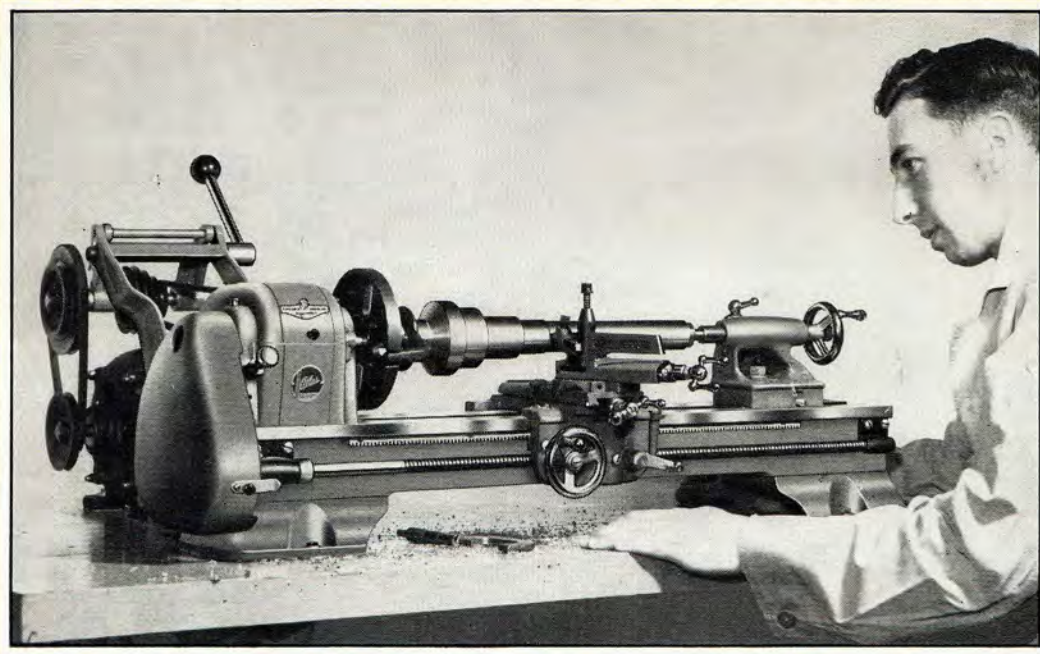


For setting 60° threading tool at exact right angle to work—edges graduated threads per inch.

No. MF438 CENTER GAUGE. Code WYCIF, weight 2 oz. **\$0.55**

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Atlas SIX-INCH BACKGEARED SCREW-CUTTING LATHES



Complete
Description
Page 32

• TIMKEN BEARING EQUIPPED • 16 SPEEDS • REVERSIBLE AUTOMATIC LONGITUDINAL POWER FEEDS • TWO BED LENGTHS

THIS rugged Atlas machine tool is the first precision-built small lathe at a popular price. These are some of the features of its modern compact design: Timken-equipped backgeared headstock, V-belt drive, precision-ground bed, 16 spindle speeds, reversible automatic power feed, wide thread cutting range. The following description explains all the construction details furnishing the ac-

curacy, versatility, strength, and power that result in efficient performance and long service life. Behind this exceptional lathe value is the story of modern Atlas manufacturing methods—special-built machinery; rigid inspections at each stage of part-machining; efficient line production assembly; and thorough performance tests of the completed machine.

CONSTRUCTION FEATURES

COMPLETE SPECIFICATIONS.....PAGES 30 AND 31
COMPLETE DESCRIPTIONPAGE 32
ATTACHMENTS AND ACCESSORIES.....PAGES 34 TO 36

Precision lathe work requires accurate alignment of the spindle, tailstock, carriage, and bed ways in both horizontal and vertical planes. In the Atlas 6-inch lathe, this alignment is guaranteed to be within .001 inch. To obtain such alignment a rigid, accurate lathe bed is the first essential.

The entire bed of the Atlas 6-inch lathe, comprising cross ribs, ways, and base, is one heavy massive casting of close-grained semi-steel iron. The box-type cross ribs and wide thick ways resist all turning and twisting forces. This modern scientific bed design provides a strong, rigid foundation for the entire lathe.

The Atlas lathe bed is machined by the most modern precision equipment. The ways and leg pads are first rough-milled and the casting is allowed to season naturally to prevent warping and twisting of the finished bed. After seasoning, the bed ways are accurately finish-milled on machines designed especially for the operation. The tops, bottoms, and sides are then ground and trued on special-built grinding machines until all eight surfaces are aligned to within .001 inch in all planes. Precision grinding gives the bed ways a tough, wear-resisting surface. At the assembly line the headstock, tailstock, and carriage are hand-fitted to the bed ways so that headstock and tailstock spindles are aligned to within .001 inch with the bed ways and with each other.

Large bearing surfaces and provision for their complete adjustment and lubrication minimize wear and maintain the accuracy of the Atlas lathe. The carriage has six full-length bearings on the bed, each 5 inches long—two on the top ways, two on the side ways, and two on the bottom surfaces. The bottom bearing plates have shims with four .002 inch laminations and two .001 inch laminations for take-up—the side bearing on the rear bed way has an adjustable gib. Cross-slide and compound-slide dovetails are gibbed for adjustment.

The tailstock has four full-length bearing surfaces each 3½ inches long—two on the top bed ways and two on the inside bed ways. A gib at the inside tailstock bearing on the rear bed way provides adjustment for take-up—simply setting over the tailstock compensates for this adjustment and maintains alignment of tailstock with headstock.

Each part of an Atlas lathe is machined on production equipment of the latest design. Machining operations are checked with precision instruments and gauges to insure uniformity and accuracy. Further tests are made in each stage of assembly. The completed lathe passes actual working tests for accuracy in all lathe operations. Alignment of spindles, carriage, and bed ways in all planes is carefully rechecked before shipment.

The modern construction features of the Atlas

6-inch lathe maintain accuracy and rigidity, increase versatility, and simplify operation. Timken headstock bearings carry all spindle loads with minimum of friction and permit an unusually wide range of spindle speeds. Sixteen speeds are available between 54 and 3225 R.P.M. with a standard 1740 R.P.M. motor, providing correct speeds for all types of metal turning, polishing, and finishing; woodworking and plastics machining. The back-geared drive, powered completely by V-belts, delivers a smooth, even flow of power. The adjustable countershaft is mounted on bench, within easy reach for speed changes. Half nuts are engaged with lead screw for longitudinal power feed by a convenient lever on the carriage apron. Direction of feed is changed by shifting tumbler lever at headstock—five feeds are available. 60 holes in the front spindle gear provide a convenient indexing mechanism for dividing operations. Threading dial, gears, and chart are furnished for cutting all standard threads between 8 and 96 per inch.

AN IDEAL COMBINATION LATHE

Timken bearings, rigid construction of headstock and tailstock, and a wide range of spindle speeds make the Atlas 6-inch lathes ideal for woodworking operations as well as machining all types of metals and plastics. Attachments for woodworking are shown on page 36.

The Atlas 6-inch lathe is available with 12 or 18 inch capacity between centers. For complete specifications, equipment furnished, and motors recommended see pages 30 and 31. Lathe tools and attachments are shown on pages 34, 35, and 36. Construction details are completely described and pictured on page 32.

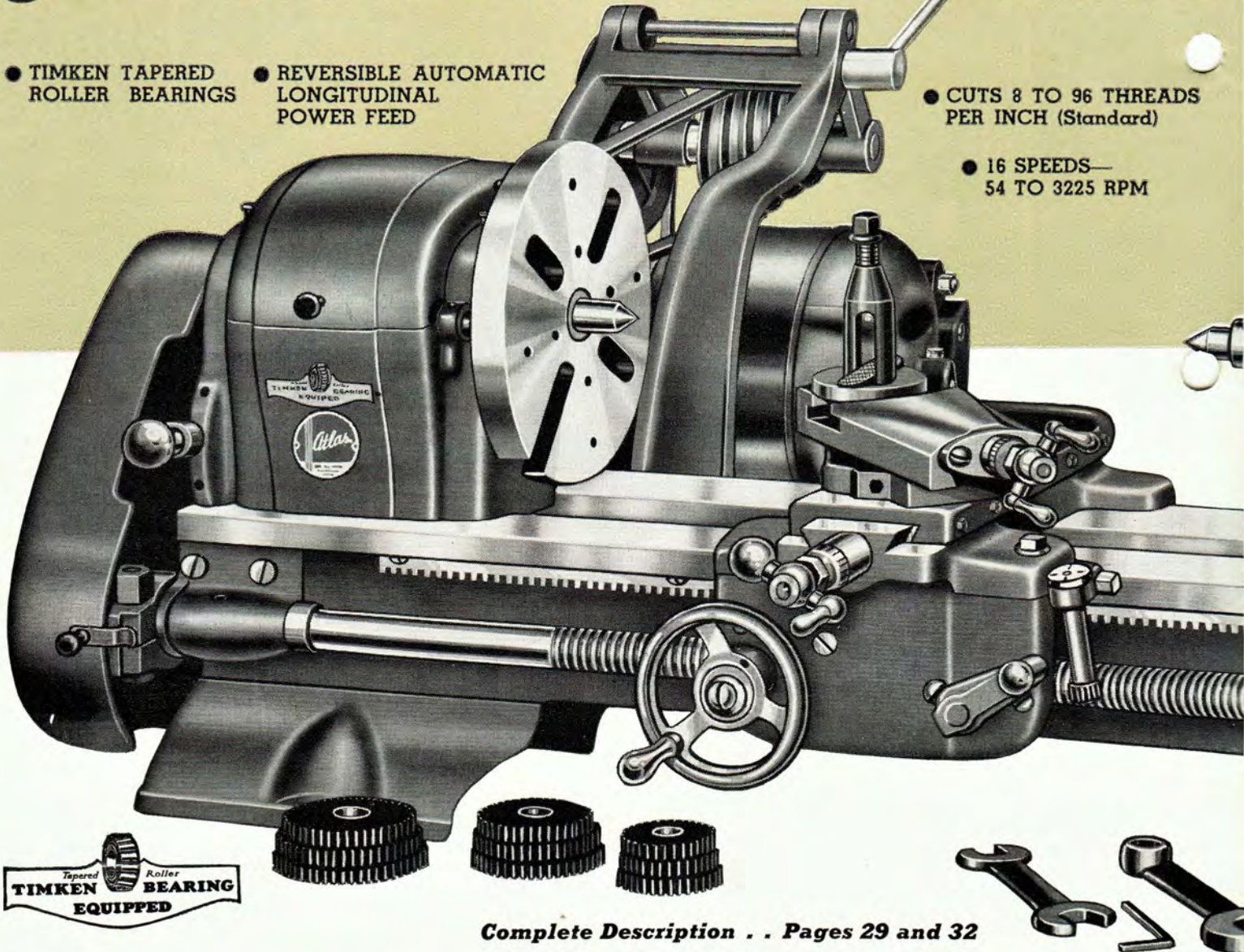
The NEW Atlas SIX INCH

● TIMKEN TAPERED ROLLER BEARINGS

● REVERSIBLE AUTOMATIC LONGITUDINAL POWER FEED

● CUTS 8 TO 96 THREADS PER INCH (Standard)

● 16 SPEEDS—
54 TO 3225 RPM



Complete Description . . . Pages 29 and 32

COMPLETE SPECIFICATIONS

CAPACITY	Swing Over Bed..... 6"	HEADSTOCK	Spindle Bearings..... Timken Tapered Roller Bearings with Thrust Take-Up Collar and Nut
	Swing Over Carriage..... 4 1/2"		Spindle Nose..... 1" Diameter, 10 Pitch National Form Threads
	Threading Range . . . 8 to 96 Standard, Right or Left Hand —Metric, .5 to 3 mm. Standard		Spindle Nose Taper..... No. 2 Morse Taper
OVERALL DIMENSIONS	Collet Capacity..... 9/32" (see page 34)	Hole Through Spindle..... 17/32"	Back Gears..... 20 Pitch, 3/8" Wide
	Overall Length..... No. 612, 28 1/2"—No. 618, 33 1/2"	Backgear Shaft Bearings..... Oilite Bronze	Spindle Gear..... 24 Pitch, 32 Teeth, 7/16" Wide
	Overall Depth..... 27"	Overall Height..... 12"	Back Gear Ratio (approximate)..... 6 1/2 to 1
SPEEDS AND FEEDS	Number of Spindle Speeds, 16 (8 Direct, 8 Backgeared)	CARRIAGE	Cross Feed Travel..... 4 3/4"
	Speeds..... 54, 82, 122, 140, 187, 287, 317, 365, 481, 550, 820, 940, 1250, 1925, 2125, 3225 R.P.M.		Cross Feed Screw..... 3/8" Diameter, Acme Thread
	Feeds (Left or Right) per Revolution of Spindle..... .0104", .0078", .0048", .0039" or .0024" (Equivalent in threads per inch: 96, 128, 208, 256 or 417)		Feed Screw Collar Graduations..... .001"
DRIVE UNIT	Lead Screw..... 1/2" Diam., 16 Acme Threads per inch	TAILSTOCK	Tool Post Slide Travel..... 1 3/4"
	Change Gears Furnished..... 14		Tool Post..... 3/8" x 3/4" slot to take 3/8" bits or tool holder for 3/16" bits
	Motor Recommended..... 1/4 H.P., 1740 R.P.M.		Tool Post Swivel—Graduated 0 to 90° right and left
	Motor Mounting..... Bench		Tailstock Ram, 3/4" Diam. Bored for No. 1 Morse Taper
	Hole Through Motor Pulley..... 1/2" Diameter		Tailstock Ram Travel..... 1 1/4"
	Countershaft Spindle Bearings..... Oilite Bronze		Tailstock Ram Graduations..... 0 to 1 1/2" by 1/16ths
	V-Belts for Complete Drive..... 1/2" Wide		Tailstock Set-Over, Forward or Back..... 9/16"
	Motor Pulleys..... 2 Step		
	Drive Pulleys..... 4-Step		

Reversible Automatic Power Feed, Complete V-Belt Drive, 60-Hole Indexing Mechanism, Chrome Plated Control Handles. Finish—Special Atlas Gray.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

BACK GEARED SCREW-CUTTING

LATHES

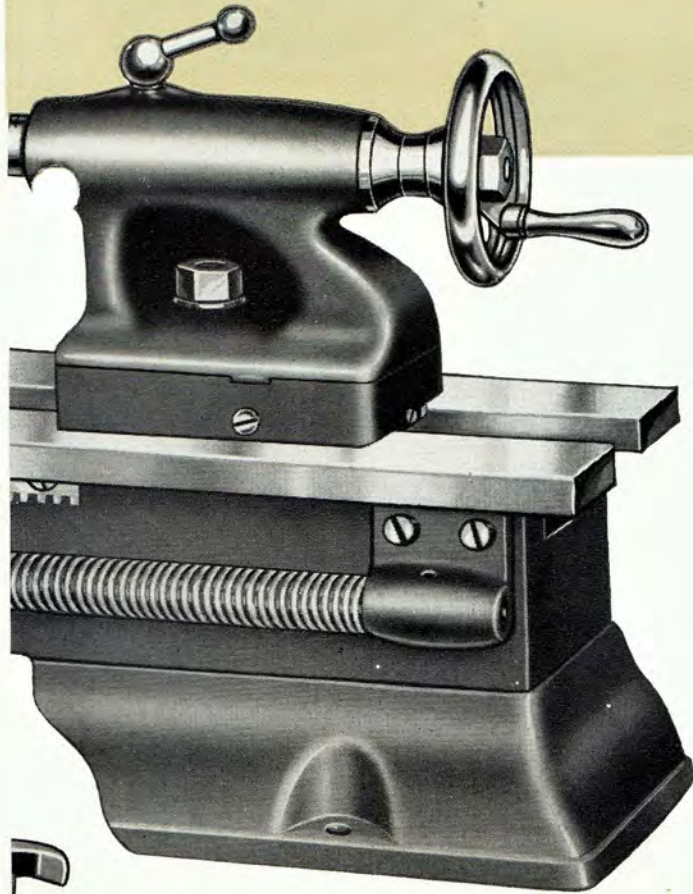
THE FIRST PRECISION-BUILT SMALL LATHE AT A POPULAR PRICE

● QUICK-CHANGE
COUNTERSHAFT

● COMPLETE
V-BELT DRIVE

● PRECISION-GROUND
BED WAYS

● 60-HOLE INDEXING
MECHANISM



No. 612 6" BACK-GEARED SCREW-CUTTING LATHE. Complete as shown, less motor, with equipment listed above. Code word YEDOD, shipping weight, 92 lb. **\$66.50**

Capacity between centers.....12"
Bed length24"
Overall length28½"

No. 618 6" BACK-GEARED SCREW-CUTTING LATHE. Complete as shown, less motor, with equipment listed above. Code word YEDUF, shipping weight 100 lb. **\$68.50**

Capacity between centers.....18"
Bed length30"
Overall length33½"

PLEASE ORDER BY
CATALOG NUMBER

EQUIPMENT FURNISHED

Reversible Automatic Power Longitudinal Feed; Graduated Compound Rest; Tool Post, Ring and Rocker; ⅜" Tool Bit; Complete Set of Change Gears to cut standard threads between 8 and 96 per inch; Threading Chart, Threading Dial; Quick-Change Countershaft; Complete V-Belt Drive; Motor Pulley furnished is for ½" diameter motor shaft—prices for other size motor shafts on request; 5¼" Combination Metal and Woodworking Face Plate; Two 60° Lathe Centers—No. 2 Morse Taper for headstock, No. 1 Morse Taper for tailstock; 3 Wrenches; Instruction Booklet.

MOTORS

These ¼ H.P. motors are recommended for use with the Atlas 6" lathes. Both motors are 110 volt, 60 cycle—have phosphor bronze bearings, single-end ½" shaft. Other motors, page 67.

No.	HP	RPM	Weight	Code	Price
2470	¼	1740	21 lb.	WYORV	\$8.25
2460B	¼	1740	26 lb.	ZEDAT	9.75

METRIC SCREWS AND COLLARS

Atlas 6-inch lathes can be furnished with metric-pitch threads for cross and compound feed screws and with feed screw collars graduated in .04 mm. These metric screws and collars are supplied at no extra cost in place of standard screws and collars when ordered with lathe (specify "With Metric Screws and Collars").



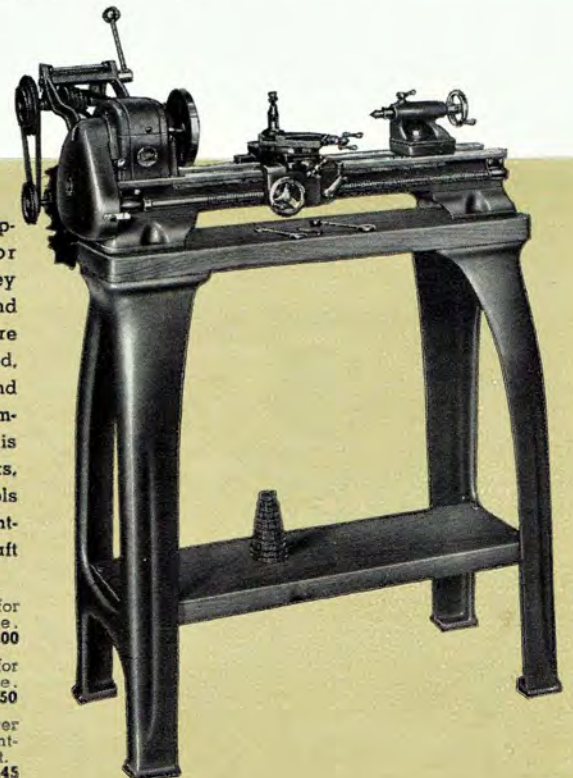
FLOOR STANDS

Permanently rigid lathe support—saves valuable floor space. Legs are heavy grey iron castings, thickly ribbed and cross braced. Table boards are 1½" thick, thoroughly seasoned, shellacked, varnished, and ready-drilled for quick assembly. Large bottom board is convenient for holding chucks, wrenches, gears, and other tools and accessories. Motor mounting bracket and countershaft support are furnished.

No. M6-800 FLOOR STAND for No. 612 lathe. Code YELUM, wt. 135 lb. **\$18.00**

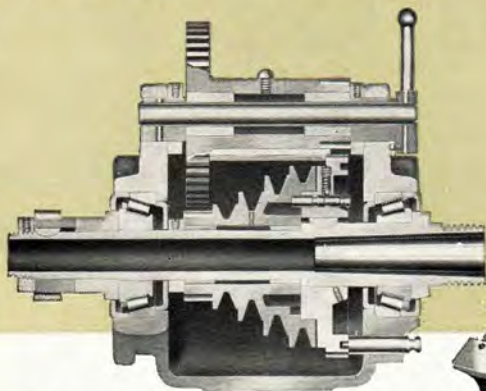
No. M6-800A FLOOR STAND for No. 618 lathe. Code YELYN, wt. 140 lb. **\$18.50**

Lathes with serial number lower than M1975 require special countershaft bracket and spindle belt. **No. M6-810** YEVOV, 10 lb. **\$2.45**



Atlas SIX-INCH BACKGEARED SCREW-CUTTING LATHES

CONSTRUCTION FEATURES



TIMKEN SPINDLE BEARINGS

Cross section view of Atlas 6" lathe headstock showing Timken tapered roller bearings for the headstock spindle. The tapered design and positively aligned rolls maintain accurate spindle alignment and carry both radial and thrust loads with a minimum of friction. Each bearing is lubricated through a large capped felt-wick oil cup. Simple take-up adjustment is provided. These fine bearings permit the wide range of spindle speeds essential for handling all types of lathe work.

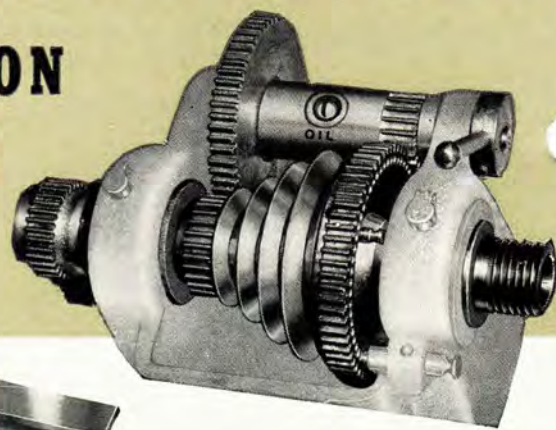


PRECISION-GROUND BED

Seasoned, milled, ground, and ready for the assembly line—the foundation of the accuracy and rigidity of the Atlas 6-inch lathe. Tops, sides, and bottoms of bed ways have been ground and trued until all eight surfaces are aligned in all planes to within .001 inch. Precision grinding gives the bed ways a tough wear-resisting surface. Entire lathe bed is a massive semi-steel iron casting—notice wide thick ways and box-type cross ribs.

V-BELT COUNTERSHAFT

The modern V-belt drive from motor to countershaft to spindle, standard equipment on all Atlas lathes, transmits maximum power to the spindle with a smooth, even action at all speeds. 2-step pulleys from motor to countershaft and 4-step pulleys from countershaft to spindle provide 16 speeds—8 direct and 8 backgeared. The belt tension lever is in a convenient position for changing speeds. Countershaft spindle turns on oilite bronze bearings. Countershaft support bracket and motor are mounted on bench.



BACK GEARS

The Atlas backgeared drive reduces the spindle speed for heavy cuts and large diameter work, providing 8 speeds between 54 and 481 R.P.M. The back gears are engaged by advancing the eccentric lever and removing lock-pin from spindle pulley. Gears are $\frac{3}{8}$ " wide, 20 pitch—headstock guard provides safety covering. Backgear ratio is approximately $6\frac{1}{2}$ to 1. Backgear shaft runs on oilite bronze bearings.



• **HEADSTOCK**—Rigid support for spindle and work—grey iron casting ribbed and reinforced. Base is accurately machined, fitted to bed ways, and bolted securely to bed. Iron safety guard, hinged for easy raising, covers entire spindle assembly. 60 evenly spaced holes on face of front spindle gear, engaged by pin through headstock, provide a convenient indexing mechanism.

• **HEADSTOCK SPINDLE**—Spindle is machined from a solid bar of special fine-grained steel, accurately ground—1 inch diameter, 10-pitch National Form threads, and $\frac{1}{16}$ " hole through entire length. Spindle nose is bored for No. 2 Morse taper center furnished. Reducing sleeve to hold No. 1 Morse taper center is available—No. M6-138, Code YEHO—\$1.20. No. 1 Morse taper center—No. L2-80—Code YAVN—\$1.00.



• **TAILSTOCK**—The tailstock provides a strong, rigid work support—base is accurately machined and fitted to bed ways, maintaining accurate alignment of tailstock center with headstock center. Ram is special steel, finish-ground, accurately reamed for No. 1 Morse taper center and graduated in $\frac{1}{16}$ ths. Ram has co-ordinate position lock, keyway guide, self-ejecting center, and handwheel control. Tailstock can be set over $\frac{3}{16}$ " for taper turning. Inside tailstock bearing surface on the rear bed way has adjustable gib to maintain permanent alignment with headstock.



• **COMPOUND REST**—Compound rest base is a grey-iron casting machine-graduated through 180° —compound feed can be swivelled in a complete circle so that cuts may be taken at any angle. Two socket-head lock screws control dovetail swivel lock. Dovetail ways of cross slide and tool post slide have adjustable gibs—gib screws have lock nuts. Milled T-slot holds tool post assembly. Tool post slide has $1\frac{3}{4}$ " travel—slot is $\frac{3}{8}$ " x $\frac{3}{4}$ " to take $\frac{3}{8}$ " cutter bits or holder for $\frac{3}{16}$ " bits. Compound feed screw has micrometer-graduated steel collar.



• **WIDE SCREW CUTTING RANGE**—All standard threads, either right or left hand, from 8 to 96 per inch in the following standards can be cut with change gears and feed gears furnished: National Form including National Coarse (USS) and National Fine (SAE), Acme, Square, and Whitworth. Self-locking iron safety guard completely encloses the gear train—threading chart is mounted on inside of guard. An attachment to cut standard metric threads from .5 to 3 mm. is available—No. M6-735, Code YEJGE—\$1.65. (Metric screws and collars, page 31.)

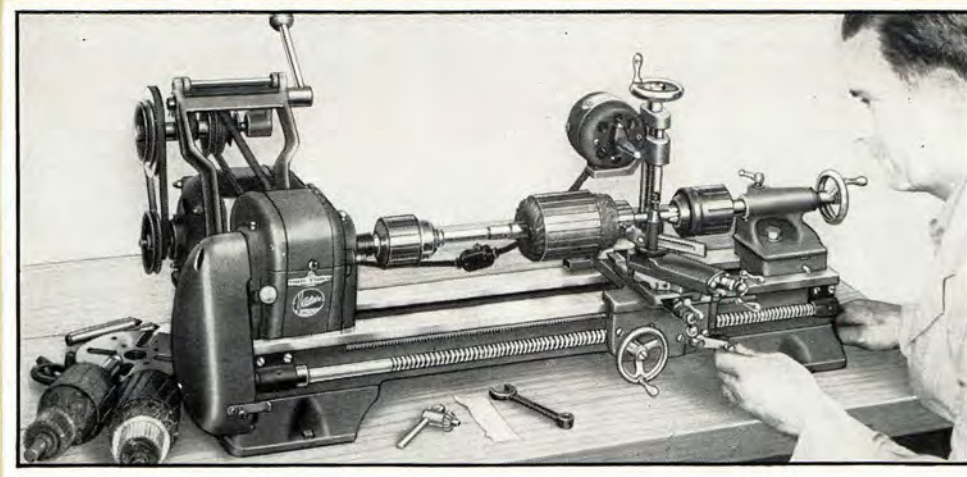
• **ZAMAK ALLOY PARTS**—Pulleys, gears, handwheels, handles, and other small parts are made of Zamak, a rugged metal alloy with twice the tensile strength and four times the impact strength of cast iron. Each Zamak part is made in an extremely accurate master die, insuring uniform accuracy. Zamak parts permit a compact modern design, eliminate idle weight, provide greater strength and longer lathe life.



• **CARRIAGE**—Six large full-length bearings on bed reduce wear to a minimum and assure smooth carriage action. Side bearing on the rear bed way has adjustable gib. Cross-feed screw has Acme threads, ball crank control with take-up adjustment, and micrometer-graduated steel collar. Handy clamp locks carriage in position. Hand-wheel controls reduction gears meshing with rack for hand-feeding carriage. Carriage travels full length of the bed. Threading dial simplifies thread cutting operations.

• **AUTOMATIC POWER FEED**—Reversible power feed speeds up all longitudinal operations and permits cutting right or left hand threads. Feed direction lever on headstock has three positions: right, neutral, and left. Lever on carriage apron engages two half nuts with lead screw. Lead screw is accurately machined and has 16 Acme threads per inch. Standard feeds per spindle revolution: .0024", .0039", .0048", .0078", or .0104".

Atlas ARMATURE SERVICING OUTFITS



For Quick, Easy, Accurate Armature Work

AN ATLAS outfit puts the full armature profit in your own pocket. In less than 10 minutes it finishes the complete job—trueing, undercutting, and polishing. It's always ready to run, and just one set-up handles any armature, centered or centerless . . . quickly, easily, accurately.

Only on a rigid accurate lathe is it possible to turn out accurate armature work. The Atlas outfits are built around

the 618 lathe—a rugged, precision-built machine tool. The armature, held in Jacobs chucks, is trued on its bearings—the motor-driven undercutter cuts clean, square, parallel grooves of uniform depth. Result—a perfect contact for the brushes.

Equipment furnished includes everything you need to start work at once: lathe, undercutter, chucks, tools, motors.

LATHE—The Atlas 618 is sturdy, powerful, and accurate—alignment of headstock, carriage, and tailstock is guaranteed to within .001 inch. Timken-equipped backgeared headstock, complete V-belt drive, rugged precision-ground bed, 16 spindle speeds, 18" centers, wide thread cutting range—these are some of the features of its modern compact design fully described between pages 29 and 32. Automatic power feed for the carriage permits a smooth, fast trueing cut.

UNDERCUTTER—The motor-driven undercutting attachment is mounted on the back of the carriage cross slide where it can be put into action in a second or moved quickly out of the way when not in use. Furnished: Dumore motor, five high-speed saws for slots between .015 and .035 inch, extension cord with push-thru switch and plug.

TOOLS AND MOTOR—The Atlas armature outfits include a 1-inch drop-forged lathe dog, LH offset tool holder, 3/16" high speed cutter bit ready-ground for trueing armatures. The Atlas No. 2470 1/4 H.P. motor (furnished) is 1740 R.P.M., 110 volt, 60 cycle; has phosphor-bronze bearings, 1/2-inch diameter single-end shaft.

CHUCK KIT—Jacobs headstock and bearing chucks provide a quick accurate method for holding centered or centerless armature shafts. Both chucks are 1/4" to 3/4" capacity and are furnished with recess-type arbors. The headstock (driving) chuck has heat treated jaws and body. The bearing or center rest chuck supports the armature in the tailstock—its adjustable, durable bronze jaws form an accurate bearing in which the shaft rotates in exact position.

No. 15A ATLAS ARMATURE OUTFIT COMPLETE. Code YEJUK, wt. 138 lb. \$115.00

FURNISHED: Atlas 618 lathe with 1/4 H.P. 1740 R.P.M. motor . . . complete ready to run; motor driven undercutting attachment with quill, 5 saws (.015, .020, .025, .030, and .035 inch); cord, switch, and plug; complete armature chuck kit with instructions (page 22); LH tool holder, 3/16" high speed armature bit, 1" lathe dog.

No. 16A (Same as No. 15A, less motor.) Code YEJYL, weight 117 lb. . . \$106.75

No. 11A ATLAS ARMATURE OUTFIT COMPLETE. Code YEIZY, wt. 140 lb. \$121.00

FURNISHED: Atlas 618 lathe with 1/4 H.P. 1740 R.P.M. motor . . . complete ready to run; motor driven undercutting attachment with quill, 5 saws (.015, .020, .025, .030, and .035 inch); cord, switch, and plug; complete armature chuck kit with 4" universal chuck in place of Jacobs headstock chuck and arbor; LH tool holder, 3/16" high speed armature bit, 1" lathe dog.

No. 12A (Same as No. 11A, less motor.) Code YEJEG, weight 119 lb. . . \$112.75

Above four outfits are standard—prices for other outfits on request.

UNIVERSAL CHUCK

4" Diameter

Furnished with 11A and 12A Outfits in place of Jacobs headstock chuck and arbor. Complete description page 34. Refer to No. U6-437.



ARMATURE CHUCK KIT—Purchased Separately

For Atlas 6" Lathes

No. M6-441 ARMATURE CHUCK KIT for Atlas 6" lathes—Jacobs headstock chuck with No. 2 Morse taper arbor, Jacobs center rest chuck with No. 1 Morse taper arbor for tailstock. Code word YEJLY, weight 8 lb. \$18.00

FURNISHED: Jacobs headstock chuck and center rest chuck with recessed type Morse taper arbors—chuck capacities 1/4" to 3/4". Metal case has attractive finish. Description, page 22.



ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

6-INCH LATHE ATTACHMENTS (1)

FOR 6-INCH LATHES ONLY
10' Lathe Attachments are Described on Pages 15-28



4-JAW INDEPENDENT CHUCK

For holding work of all shapes. One-piece body is high-strength semi-steel casting—entire face and outer edge are ground. Hand-fitted jaws are special alloy machinery steel, heat treated—have raised and ground steps and are reversible for large work. Screws are heat treated alloy steel—have socket head for wrench. Body is threaded for spindle nose of Atlas 6-inch lathes.

No. U6-439 4-JAW INDEPENDENT CHUCK, 4" diameter. Body threaded for Atlas 6" lathe spindle. Wrench furnished. Code word YIALM, weight 6 lb. **\$8.75**

3-JAW UNIVERSAL CHUCK

The Atlas universal chuck has self-centering jaws controlled by turning one screw. Ideal for quickly centering round and hexagonal work. Body is high-strength semi-steel. Jaws are alloy steel heat treated—have raised and ground steps. Scroll is special alloy metal—pinion is special alloy steel. Handles 1/2" rods through headstock.



No. U6-437 4" 3-JAW UNIVERSAL CHUCK complete with 2 sets of jaws (inside and outside) and wrench. Body threaded for 6" lathe spindle. Code YIAJK, wt. 9 lb. **\$14.95**

STEADY REST

The Atlas steady rest, clamped to the bed ways, serves as a rigid work support to insure accuracy in turning, boring, and threading long pieces. Frame and base are strong grey iron castings. Bronze jaws prevent scoring work. Each jaw can be adjusted easily and locked in exact position for proper work bearing.



No. M6-325 STEADY REST for Atlas 6" lathes, capacity 2 3/8" diameter. Code word YEFHY, weight 3 lb. **\$3.75**

FOLLOWER REST

The Atlas follower rest insures accurate work on long slender rods. It is mounted quickly and easily on the back of the carriage dovetail slide, follows the cutting tool, and holds the work in rigid position. Ruggedly built—hardened steel jaws quickly adjusted and locked.



No. M6-395 FOLLOWER REST for Atlas 6" lathes. Code word YEFID, weight 2 lb. **\$2.75**

MILLING ATTACHMENT

With this milling attachment clamped in place of the compound rest, the new Atlas 6" lathe becomes a small milling machine for face-milling and routing, cutting keyways and slots, milling dovetails, squaring and splining shafts, making dies and molds, and many other important operations. Quickly and easily installed.



The milling attachment can be swivelled to hold work at any angle. The vise slide is gibbed for adjustment. A micrometer-graduated feed screw controls the position of the vise—clamping screws hold vise and work firmly in position. Vise slide is graduated in degrees, and vise can be swivelled to any angle.

No. M6-500 MILLING ATTACHMENT. Complete with graduated swivel vise, vertical feed screw with graduated collar, flat block, V-block. Code YEILK, wt. 8 1/2 lb. **\$13.00**
Vise Capacity 2" Jaw Width 2"
Jaw Depth 3/4" Vertical Feed 1 3/4"
Cross Feed 3/8"



HEADSTOCK CHUCK

This Jacobs chuck is accurate and convenient for holding small work. Note construction permits handling long shafts through headstock. Heat treated steel jaws and body. Threads directly on 6-inch lathe spindle.

No. M6-375 JACOBS HEADSTOCK CHUCK capacity 0 to 17/32", complete with key-type wrench. Code word YEEBY, weight 3 lb. **\$9.60**

DRILL CHUCKS

Rugged Jacobs chucks for accurate drilling and countersinking. Heat-treated steel jaws and body. Arbors listed below are required. Furnished with key-type adjusting wrench.

No.	Capacity	Weight	Code	PRICE
BDI-60	5/64 to 1/2"	2 lb.	YAEHZ	\$5.75
40-60	0 to 1/2"	2 lb.	YAHIB	6.75
L2-378	Arbor (tailstock)	8 oz.	YECOC	1.00
378	Arbor (headstock)	8 oz.	YAHYA	1.00



CENTER REST CHUCK

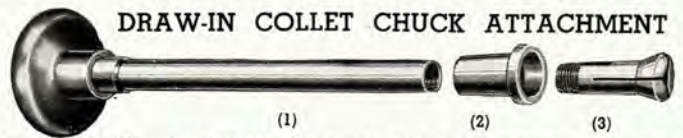
The Jacobs center rest chuck supports armatures and shafts in lathe tailstock. Adjustable durable bronze jaws form accurate bearing in which shaft rotates in exact position.

No. 445 JACOBS CENTER REST CHUCK, capacity 1/4" to 3/4", Code word YAHOC, weight 3 lb. **\$8.00**
No. M6-377 ARBOR (Required). Code word YEELJ, weight 8 oz. **\$1.00**



Armature Outfits, Page 33—Chuck Kits, Page 22

DRAW-IN COLLET CHUCK ATTACHMENT



For chucking diameters between 1/32" and 9/32" when maximum accuracy is required. Consists of (1) hollow draw-in spindle which extends through the lathe spindle, (2) tapered closing sleeve and (3) split holding collets.

The draw-in spindle is threaded to hold the collet in tapered sleeve. Hollow construction permits rods to be passed through lathe spindle—handwheel control releases and tightens collet on work. Closing sleeve is ground inside and outside to insure maximum accuracy. Lathe must be stopped to open and close collet.

Atlas split collets are collet tool steel, heat-treated and ground inside and outside. One end threads on draw-in spindle, and other end is ground to fit tapered sleeve. Keyway prevents collet from turning. Collets are available in 1/32nds between 1/32" and 9/32"—one collet is furnished with collet attachment (any size in 1/32nds between 1/32" and 9/32").

No. M6-750 DRAW-IN COLLET CHUCK ATTACHMENT Complete: draw-in spindle, tapered closing sleeve, and one split holding collet listed below—specify diameter. Code word YEYHK, weight 2 lb. **\$19.50**

No. M6-751 SPLIT HOLDING COLLET—Specify diameter. Available in 32nds between 1/32" and 9/32" as follows: 1/32", 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4" and 9/32". Code word YEIBZ, weight 4 oz., each. **\$4.50**

No. M6-548 SPINDLE NOSE CAP to protect lathe spindle threads (6" lathes). Code YELLO, weight 8 oz. **\$1.65**

R. H. SPIRAL END MILLS

For general milling operations—slots, facing and routing, squaring and splining shafts, cutting straight keyways. Straight shank—adapted to collet set with collet bushings below at right. Wt. 4 oz. each.



No.	Lqth.	Flute	Diam.	Code	PRICE
576A	5/8"	1/8"	1/4"	YAKCE	\$1.75
576B	1 1/16"	3/16"	5/16"	YAKEC	1.85
576C	3/4"	3/8"	3/8"	YAKFO	1.95
576D	7/8"	7/16"	7/16"	YAKID	2.15
576E	1 5/16"	1/2"	1/2"	YAKOF	2.35

WOODRUFF KEYWAY CUTTERS

For cutting Woodruff keyways—also used for milling slots, grooves, T-slots. 1/2" straight shank—held in collet arbor.

No.	Diam.	Thick	Code	PRICE
575A	1/2"	1/8"	YALUH	\$2.65
575B	3/4"	3/16"	YALYJ	2.85
575C	1"	1/4"	YAMAD	3.50
575D	1 1/8"	5/16"	YAMDA	3.95
575E	1 1/4"	3/8"	YAMEF	4.35

Wt. 6 oz. each.



ANGULAR CUTTERS

For face-milling, dovetailing, and cutting angles less than 90°. Threaded hole—adapted to collet draw-bar with arbors listed at right. Wt. 6 oz. each.

No.	Thick	Diam.	Hole	Thread	PRICE
574A	7/16"	1 1/8"	3/8"	24 YALIF	\$4.10
574B	9/16"	1 5/8"	1/2"	20 YALJY	4.70



HOLDING COLLET SET

This set holds milling cutter in headstock spindle. Consists of draw bar, sleeve, and one arbor for 1/2" straight shank cutters.

No. M6-945 HOLDING COLLET SET. Complete: draw bar, sleeve, and one arbor. Code YEYBD, 2 lb. **\$4.00**

COLLET BUSHINGS

Required to adapt 576 straight shank end mills to M6-945 holding collet set. Not required for No. 576E 1/2" diameter end mill.

No.	For End Mill	Code	PRICE
563D	No. 576A	YAKYH	\$.30
563C	No. 576B	YALAC	.30
563B	No. 576C	YALCA	.30
563A	No. 576D	YALDE	.30
563E	Set of 4		
	Above Bushings	YALDE	1.15



ARBORS FOR ANGULAR CUTTERS

Required to adapt No. 574 angular cutters to M6-945 holding collet set. Wt. 8 oz. each.

No.	For No.	Code	PRICE
572	574A	YEWTE	\$1.00
567	574B	YEWUX	1.00

THESE ATTACHMENTS ARE FOR ATLAS 6-INCH LATHES ONLY—

10' Lathe Attachments are Described on Pages 15-28

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

LATHE DOGS



Drop-forged steel, new lightweight design—hold the work firmly and transmit maximum power from the lathe spindle. Set screws are heat-treated. Four sizes.

No.	Opening	Weight	Code	PRICE
142	1/2"	4 oz.	YAOPK	\$.55
143	3/4"	5 oz.	YAORM	.65
144	1"	7 oz.	YAOWR	.75
145	1 1/2"	10 oz.	YAOZT	.85

CLAMP-TYPE DOG

Holds square, rectangular, hexagonal, or round work. Mounted without removing the work from lathe centers. Clamp bars are steel forgings carefully machined and hardened—screws are heat treated.



No. 741 CLAMP-TYPE DOG. Opens 2 1/4 inches. Code YAPGA, weight 1 lb. **\$3.30**



BORING TOOL HOLDER
Drop forged holder for boring tools. Includes high speed 1/4" boring tool, 3/16" cutter bit, and wrench—capacity 3/8".

No. M6-760 BORING TOOL HOLDER with 3/16" boring tool, 3/16" cutter bit, and wrench. YEFUG, weight 1 lb. **\$2.85**



THREADING TOOL
Sides are ready-ground to cut 60° threads—easily and accurately resharpened by grinding the top edge only. LH holder is a drop-forging—clamp screw holds tool rigidly.

No. M6-430 THREADING TOOL with wrench. Code word YEFFO, wt. 8 oz. **\$2.85**



KNURLING TOOL

Forms gripping surface for tool handles, nuts, markers, and instruments. "Floating" construction makes rollers self-centering—thrust transmitted to heavy steel shank. Rollers are hardened tool steel (medium knurl).

No. M6-340 KNURLING TOOL with medium diamond-shape knurls. Code YEFEC, wt. 8 oz. **\$3.00**

No. 343 Extra Knurls. Specify medium, coarse or fine, and straight or diamond-shape. YEGYJ, 2 oz.per pair **\$1.45**



CUT-OFF TOOL

For quick, clean, cutting-off. Drop-forged holder with 3 1/4" high-speed replaceable blade, ready-ground with correct top rake, front and side clearance. Front face cuts freely without binding—blade resharpened by grinding front edge only. Hardened clamp locks blade rigidly.

No. M6-590 CUT-OFF TOOL with blade and wrench. Code YEFCE, 8 oz. **\$1.65**

No. M6-592 Extra Blades. Code word YEHDA, weight 4 oz.each **\$0.55**



REVERSING SWITCH

Essential for grinding, tapping, nut-setting, finishing. The M6-420 is a dependable drum-type switch with durable contacts of hard-rolled copper. It is furnished with mounting bracket which places knobbed lever control in handy position.

Operates on single phase, capacitor and 3-lead repulsion-induction motors (not 4-lead)—also both shunt-wound and compound-wound DC. Prices for 3-phase on request.

No. M6-420 REVERSING SWITCH complete with mounting bracket, cable connections and installation diagram. Code YEYOY, wt. 5 lb. **\$4.75**

CUTTER BITS

High speed 3/16"x3/16" cutter bits ready-ground for use in Atlas tool holders below. Complete set of six handles wide range of operations. Identify by letters. 3/8" unground cutter bits for use in tool post are also listed below. Wt. 2 oz. each.



No. M6-386 SET OF 6 FORMED CUTTER BITS 3/16"x3/16". Includes bits shown above. Code word YEGCA, weight 1 pound. **\$1.45**

Key (above)	No.	Description	Code	PRICE	
A	M6-386A	3/16" RH Turning	YEGDE	\$.25	
B	M6-386B	3/16" LH Turning	YEGED	.25	
C	M6-386C	3/16" RH Facing	YEGGO	.25	
D	M6-386D	3/16" LH Facing	YEGIF	.25	
E	M6-386E	3/16" Round Nose Turning	YEGJY	.25	
F	M6-386F	3/16" Threading (60° V-type)	YEGOG	.35	
No. M6-386S Set of Six 3/16" Unground Bits				YEZAV	.45
No. M6-386T Set of Twelve 3/16" Unground Bits				YEZIX	.85
No. 385S Set of Six 3/8" Unground Cutter Bits				YARPY	2.30

TOOL HOLDERS

Drop-forged special steel, accurately machined, heat treated and hardened. Set screws are alloy steel heat treated. Slot is accurately broached for 3/16" cutter bits—3/8" shank fits tool post slot. Set of 3 holders handles all turning and facing operations.



No.	Description	Weight	Code	PRICE
M6-139L	LH Tool Holder	4 oz.	YEFAB	\$1.20
M6-139R	RH Tool Holder	4 oz.	YEFBA	\$1.20
M6-139S	Straight Tool Holder	4 oz.	YEEWT	\$1.20

Furnished with one 3/16" unground cutter bit.

TOOL-POST TOOL SET

High speed ready-ground boring and turning tools, ideal for accurate jobs requiring rigid tool mounting. Solid one-piece construction eliminates extra joint of holder—held directly in tool post.



No. M6-380 TOOL-POST TOOL SET complete: 5 internal tools, 2 heavy-duty external tools, V-block, height spacer. Code word YEFYH, weight 2 lb. **\$5.40**

No. Above	No.	Description	Code	PRICE
(1)	382	Spacer	YATEM	\$.35
(2)	M6-381	V-Block	YEEGD	.45
(3)	385C	3/8" External Threading (60° V-type)	YASUP	.75
(4)	385A	3/8" External Turning	YASON	.65
(5)	393L	5/16" Boring	YASAK	.65
(6)	388B	1/4" Internal Threading (60° V-type)	YASEL	1.00
(7)	392L	1/4" Boring	YASKA	.70
(8)	391L	5/16" Boring	YASLE	1.05
(9)	390L	3/8" Boring	YASNO	1.35

GRINDER FOR 6-INCH LATHES

The M6-450 grinder equips the Atlas 6" lathe for all types of internal and external grinding jobs requiring precision and a polished surface. It handles hardened shafts, bushings, tools, dies, lathe centers, arbors and tapered sockets.

The spindle is accurately ground and runs on lubricated-and-sealed-for-life ball bearings, properly pre-loaded. Grinder takes 2 1/2" diameter external wheel—guard and wheel are removed easily for attaching quill to hold internal grinding wheels. The motor is a powerful Dumore—two-step balanced pulleys provide spindle speeds of 6800 and 10400 RPM at full load. Motor is hinged for belt adjustment. The grinder is mounted in the tool post slide. Raising screw and clamp adjust vertical position.



GRINDING WHEELS

No. 475 external wheel and No. 477 1/2 internal wheel are furnished as standard equipment with the No. M6-450 lathe grinder.

No.	Diameter	Code	PRICE
475	External Wheel for Steel	YANFA	\$1.20
476	External Wheel for Cast Iron	YANGE	1.20
477 1/4	Internal Wheel	YANJO	.80
477 1/2	Internal Wheel	YANYL	.80
477 3/4	Internal Wheel	YANOJ	.85
477-1	Internal Wheel	YANUK	1.00

Grind to Depth of 2 3/8"

No. M6-450 LATHE GRINDER for 6" lathes. Code word YEMAJ, wt. 20 lb. **\$46.00**

Specifications

- Maximum Distance from Center of Wheel to Center of Work (with Grinder Perpendicular to Work) 2 7/8"
- Grinds External Diameters to 3 1/4"
- Grinds Internal Diameters from 1/4" to 5 1/2"
- Internal Wheels Grind to Depth of 2 3/8"
- Base Swivels for Angle Grinding 0 to 90°
- Spindle ... Lubricated-and-sealed-for-life Ball Bearings, 3/8" Diameter
- Height above Bed when Mounted 15"
- Motor ... Dumore Universal—Operates on 105-125 Volts, 25-60 cycle AC, and 105-125 Volt DC. Odd-voltage motors, prices on request.
- Spindle Speeds, ... 6800 and 10400 RPM, Full Load



FURNISHED: Two-step balanced pulleys, belt; No. 475 external grinding wheel and No. 477 1/2 internal grinding wheel; quill for internal grinding; complete diamond dresser; extension cord with switch and plug.

THESE ATTACHMENTS ARE FOR ATLAS 6-INCH LATHES ONLY—

6-INCH LATHE ATTACHMENTS (3)

FOR 6-INCH LATHES ONLY
10" Lathe Attachments are Described on Pages 15-28

MICA UNDERCUTTER

Garages and service stations! The new Atlas 618 lathe can be equipped for armature reconditioning at reasonable cost. For complete information on special outfits see page 33—armature chuck kits, page 22.

The No. M6-510 motor-driven undercutting attachment makes short work of mica undercutting and puts real profit in armature jobs. It is mounted quickly on the carriage cross slide and moved easily out of the way when not in use.

No. M6-510 MICA UNDERCUTTER for 6" lathes.
Code YEEVS, weight 9 lb. **\$18.00**
Maximum working diameter.....4"

FURNISHED: Dumore motor 105-130 volt A.C. or D.C. 25-60 cycle. Set of 5 high speed saws (.015", .020", .025", .030", .035"), extension cord, switch and plug.

No. 523A SET OF 10 HIGH SPEED SAWS (2 each of following thicknesses: .015", .020", .025", .030", and .035"). Code YETUV... **\$3.60**

No. M6-386G 3/16" HIGH SPEED CUTTER BIT ready-ground for truing armatures. Code word YEWAS, weight 2 oz. **\$0.35**



LATHE LAMP

For 6-inch Lathes

Throws plenty of light on work. Has 14" flexible cable and ball joint at shade. Mounting bracket clamps at base of bed. Attractively finished in satin-chrome plate with polished shade. 6 ft. rubber cord and plug furnished.

No. M6-745 6" LATHE LAMP.
Code word YEERP, weight 2 lb. **\$2.85**



COIL WINDER



Simplifies accurate coil winding. Replaces tool post—has fibre wire guide and spring adjustment on spool for correct tension. Quickly mounted and removed.

No. M6-780 COIL WINDER.
YEMIL, wt. 1 1/2 lb. **\$3.25**



CARRIAGE STOP

Clamps to bed way and indicates accurately stopping point of carriage.

No. 10-315
Code YIAZB, wt. 1 lb. **\$3.50**

CROSS SLIDE STOP

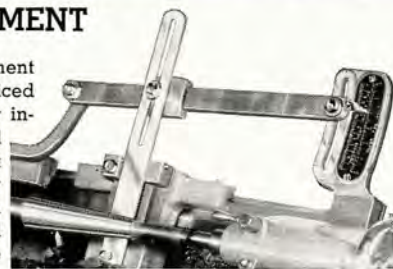
Clamps to cross slide dovetail and sets depth of duplicate cuts.

No. M6-725 Code YEMKE, wt. 8 oz. **\$2.45**



TAPER ATTACHMENT

Another new Atlas development—the first accurate, sensibly priced taper attachment. It is quickly installed, simple to operate, and makes accurate taper work a fast, easy job. The rectangular slide bar has rigid grey-iron bracket supports. A slotted draw bar connects to carriage cross slide and feeds tool at desired taper. Easy-to-read index plate is graduated 7° and 3" both sides of center line.



No. M6-700 TAPER ATTACHMENT for Atlas 6" lathes.
Code YEITS, weight 4 1/2 lb. Maximum travel one setting 7/32". Range right or left 7° (2 15/16" per foot)... **\$15.00**

DRILL PAD

The drill pad, mounted in the tailstock ram, serves as a rigid support for drilling flat or square work with drill held in headstock. Ground steel shank is No. 1 Morse taper.

No. L2-360 DRILL PAD, No. 1 Morse taper shank. 3 1/8" diam. face. Code word YATPO, weight 12 oz. **\$1.65**



CROTCH CENTER

The crotch center automatically centers round work in the tailstock ram for accurate cross-drilling. V-slot is accurately machined—ground steel shank is No. 1 Morse taper.

No. L2-356 CROTCH CENTER, No. 1 Morse taper shank. 2" diameter, 1" slot. Code YATYR, wt. 12 oz. **\$1.65**



60° LATHE CENTERS

Hardened and ground high-carbon tool steel. Weight 8 oz.

No.	Morse Taper	Code	PRICE
L2-80	No. 1	YAVEN	\$1.00
9-88	No. 2	YAVAM	1.35
M6-138	No. 2 to 1 Sleeve	YEHHO	1.20

BALL BEARING TAILSTOCK CENTER

Center point rotates on enclosed ball bearing—recommended for high speed operations.

No. M6-348 BALL BEARING CENTER No. 1 Morse taper. Code YEYJO, wt. 8 oz. **\$10.50**



CENTER EJECTOR BAR

Removes center from spindle without burring center or sleeve. Steel shaft has knurled ball grip—brass head cannot damage center sleeve, or spindle.

No. M6-790 CENTER EJECTOR BAR. Length 10". Code word YETWY, weight 1 1/2 lb. **\$1.10**



WOODWORKING ATTACHMENTS

FOR 6-INCH LATHES

Sturdy, rigid construction and an exceptionally wide range of spindle speeds make the new Atlas 6-inch lathe an ideal machine for woodworking as well as machining all types of metals and plastics.



WOODTURNING CHISELS

Professional-type chisels with tool steel blades scientifically heat treated. Extra long handles are polished maple with strong brass ferrules. Approximate length, 14".

No. W13A SET OF 8 CHISELS as shown. Code word YAZWY, weight 6 pounds. **\$9.25**

Chisel	No.	Code	PRICE
1/4" Gouge	W13-1	YAYPA	\$1.25
1/2" Gouge	W13-2	YAYSO	1.30
3/4" Gouge	W13-3	YAYUT	1.75
1" Skew	W13-4	YAYVY	1.10
1 1/4" Skew	W13-5	YAZER	1.60
1/2" Round Nose	W13-6	YAZRE	1.10
1/2" Spear Point	W13-7	YAZTO	1.10
1/2" Parting	W13-8	YAZUV	1.20

Weight 1 lb. each



SPUR CENTERS

For driving work mounted between centers. Ground and hardened steel with replaceable center point. Morse taper shanks.

No.	Shank	Wt.	Code	PRICE
350	No. 2 Morse Taper	1 lb.	YAWTY	\$1.10
L2-16	No. 1 Morse Taper	8 oz.	YEAZD	.85
M6-138	No. 2 to No. 1 Sleeve	6 oz.	YEHHO	1.20
L3-147	Extra Point for No. 350.		YEWIV	.35
147	Extra Point for No. L2-16.		YEWSA	.25

CUP CENTER

Supports work in tailstock. Ground and hardened steel with replaceable center point—No. 1 Morse taper shank.

No. L2-17 CUP CENTER. Code word YEACY, weight 8 oz. **\$0.85**
No. 147 EXTRA CENTER POINT. Code YEWSA, wt. 2 oz. **\$0.25**



SCREW CENTER

For facing and hollowing operations. Alloy steel with replaceable center. Morse taper shank. Diameter 2".

No.	Shank	Wt.	Code	PRICE
352	No. 2 Morse Taper	1 lb.	YAWYT	\$1.65
L2-352	No. 1 Morse Taper	8 oz.	YEAHD	1.65
M6-138	No. 2 to No. 1 Sleeve	6 oz.	YEHHO	1.20
355	Extra Center Point	2 oz.	YEYEV	.35



EXTENSION BED

For handling extra long wood work. Machined and finished to same specifications as lathe bed. Overall length 16 1/2 inches.

No. M6-1E EXTENSION BED for wood-working only. Code YEMEK, weight 24 lb. **\$7.00**

HAND REST

Clamps to bed and furnishes rigid support for chisel. Has sliding clamp plate to protect bed. T-rest can be swivelled to any position and locked securely with hand clamp. 4" and 8" T-rests are furnished.

No. M6-330 WOODWORKING HAND REST complete with 4" and 8" T-rests. Code YEFOF, wt. 3 lb. **\$2.75**



THESE ATTACHMENTS ARE FOR ATLAS 6-INCH LATHES ONLY—

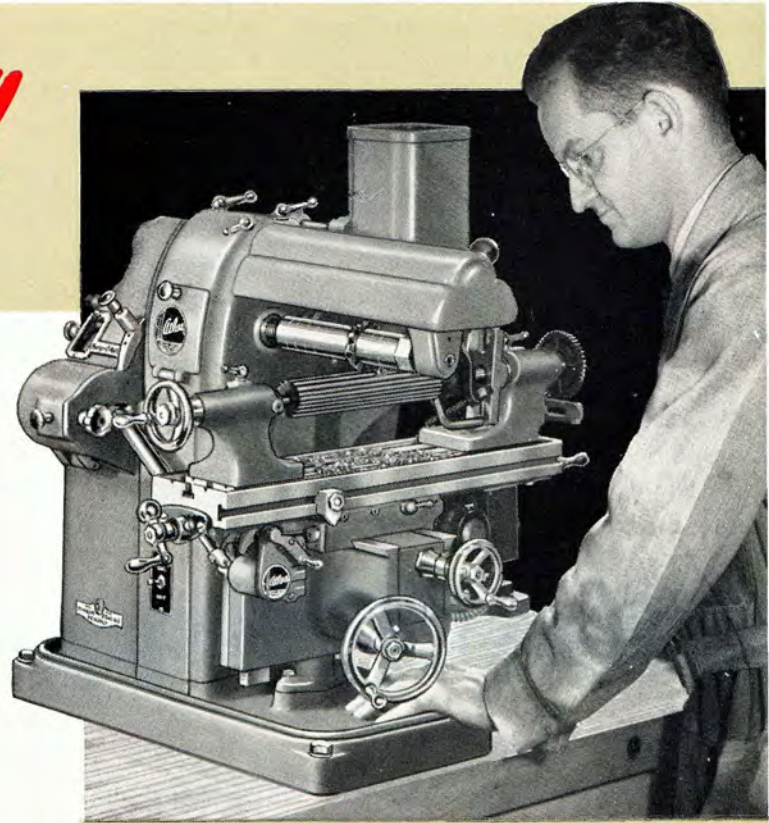
10" Lathe Attachments are Described on Pages 15-28

Presenting

The New

Atlas

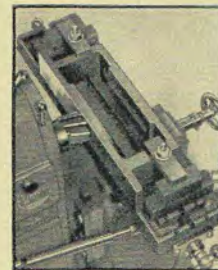
MILLING MACHINE



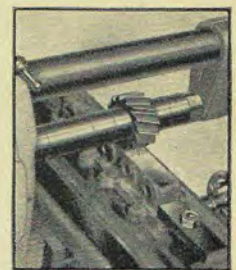
THERE are spots for this handy milling machine in every shop and tool room with any volume of small-part milling. It has been designed after years of research with this one idea in mind—to eliminate the wasted time and effort involved in setting up and operating a large, expensive miller for small pieces of work.

The new Atlas Milling Machine will cut your costs on the full range of milling—from slabbing and facing cuts to end milling, keyways, finishing and layout work. The compact Atlas is rugged, accurate, and efficient—economical in investment cost and economical in operation.

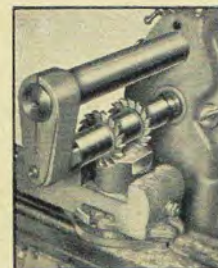
Investigate the possibilities for the Atlas Milling Machine in your shop. Arrange today for a working demonstration. The modern Atlas construction features and complete specifications are presented on the following pages.



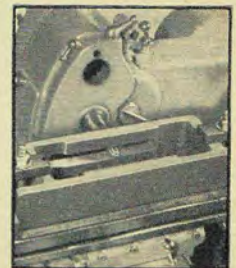
FACING



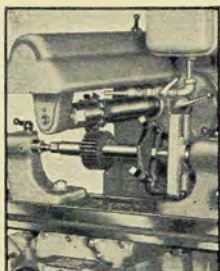
SLABBING



STRADDLE



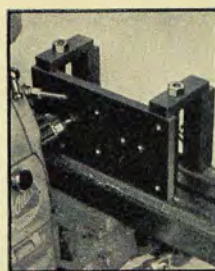
SLOTTING



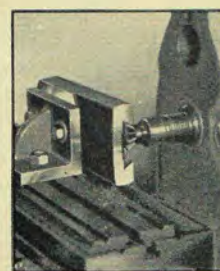
GEAR CUTTING



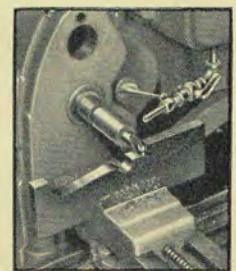
BORING



DRILLING—LAYOUT



DOVETAILING

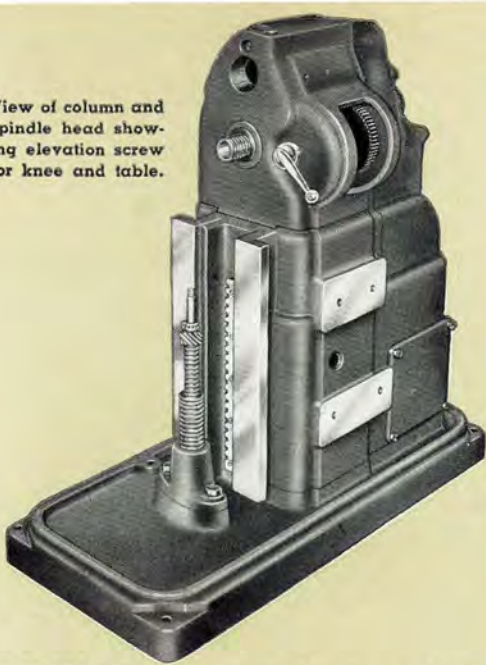


PROFILING

THE NEW Atlas

THE FIRST LOW-COST PRECISION

View of column and spindle head showing elevation screw for knee and table.



COLUMN—A massive thick-walled grey iron casting, ribbed and reinforced to provide a rigid support for the spindle head, knee, and countershaft. Ways for the knee bearings, each 1½" wide and ½" thick and cast integrally with the column, are precision ground for smooth, accurate knee and table action. Four large cap screws and two dowel pins hold the column securely to the base casting, a broad and heavy foundation for the entire machine. Front of base is shaped to retain oil, and portion below column forms a reservoir for automatic coolant system (page 42). Column bearing surfaces for base, spindle head, and countershaft are all accurately machined. A single phase on-off switch (10 amperes at 110 volt) is built into the column casting. Three phase switch is listed on page 40.

SPINDLE HEAD—A heavy well-braced iron casting anchored rigidly to the column by four large cap screws. Accurate line boring of bearing bosses for spindle bearings, backgear shaft, and overarm insures positive alignment. Spindle head houses the spindle, bearings, pulley and backgears and provides a rugged support for overarm and cutter guard. An iron guard at the rear of the spindle head covers the spindle gear and has an opening for operating the draw-in bar.

THESE descriptions explain how every construction detail of the new Atlas Milling Machine has been designed to meet these modern machine tool requirements: **rigidity** and rugged strength essential for the firm support of cutter and work; **accuracy** of construction for accuracy in operation, plus provisions to maintain that accuracy; **power** for heavy cuts—a wide range of spindle speeds for all types of cutters and work; **operating efficiency** to reduce set-up and machining time.

● **RIGIDITY**—Heavy semi-steel iron castings are used for the columns, base, spindle head, knee, saddle, table, and arbor supports. These castings are scientifically proportioned, rib-braced and reinforced, and have large bearing surfaces. Overarm is a solid bar of stress-proof steel, 1½" in diameter. The extra weight of all of these parts is the foundation for smooth, accurate cutting action and long service life.

● **ACCURACY**—The new Atlas miller is *entirely precision-machined*. Jigs and fixtures hold each part in exact position during machining, and each operation is inspected for uniformity and accuracy with precision tools and master gauges.

The wide, thick column ways for the knee bearings are precision-ground smooth, accurate movement of knee and table. Dovetail slides of knee, saddle, and table are accurately machined and hand fitted. Table top and sides are precision ground. Bearing bosses for the spindle bearings, backgear shaft, and overarm are accurately line bored for positive alignment. Precision ground spindle turns on Timken tapered roller bearings. Full provision is made for thorough lubrication and complete adjustment of all bearings.

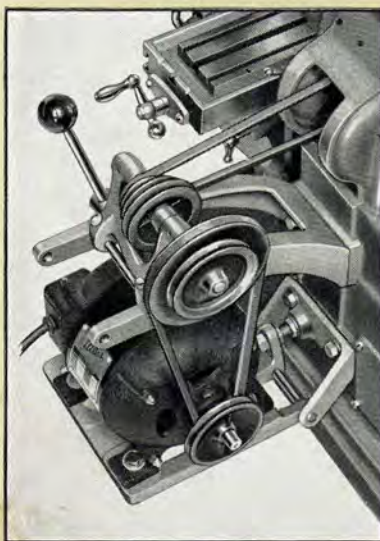
Careful inspection at every stage of assembly and thorough working tests of the completed machine insure accuracy in handling the full range of milling operations.

● **POWER**—The Atlas backgeared drive, powered completely by V-belts, plus the Timken bearing equipped spindle, transmits maximum power to the cutter with a smooth, even action. This modern design permits the use of an economically operated ⅓ HP motor.

● **OPERATING EFFICIENCY**—All controls are within easy reach. Sixteen spindle speeds between 54 and 3225 RPM provide correct surface speeds for all types of work and cutters. Correct spindle speed is obtained quickly by referring to easy-to-read chart for belt positions. Turning a socket-head screw releases arbor support for changing cutters, and the overarm can be easily removed when mounting cutter on spindle. A convenient 10 ampere 110 volt on-off switch is built into the column.

Three types of table controls are available: hand-operated screw feed, rapid-production lever feed, and the new Atlas "Change-O-Matic" for instant selection of reversible automatic longitudinal table feeds between 0.162" and 9.125" per minute.

Attachments are described on page 42.



Side view of new Atlas milling machine showing V-belt countershaft attached to column. Two-step pulleys from motor to countershaft and four-step pulleys from countershaft to spindle. Notice handy position of countershaft lever.

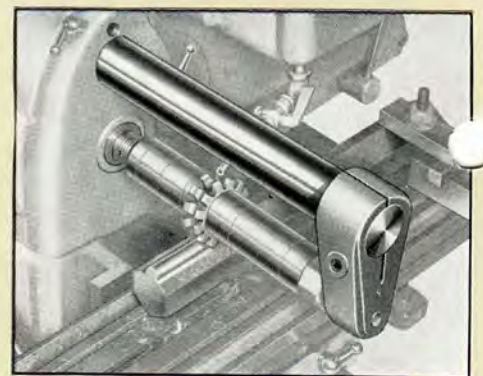
OVERARM AND ARBOR SUPPORT →

The overarm is a solid bar of stress-proof steel, 1½" in diameter—a rugged brace for the arbor support at its outer end. It insures accurate work by maintaining the rigid horizontal position of the arbor and cutters. Bearing bosses for the overarm, on each end of the spindle head casting, are accurately line bored for positive alignment with the spindle. Two coordinate-type clamps lock the overarm rigidly in the spindle head. Arbor is described on page 42.

The grey iron arbor support has a split compression-type bearing which clamps tightly to the overarm—socket head screw releases bearing for changing cutters. Arbor bearing is oilite bronze, lubricated through a ball oiler. Overarm, arbor support, and arbor are covered by an iron safety guard. Overarm and guard can be easily removed.

← **INTEGRAL V-BELT COUNTERSHAFT**—Support brackets for the countershaft and motor base are attached directly to the column, making the Atlas milling machine a compact, self-contained unit. Countershaft is "quick-change" type with belt tension lever in easy reach for speed changes. Lever has two positions—forward to release belts, and back to engage them. Countershaft spindle turns on oilite bearings.

The modern V-belt drive from motor to countershaft to spindle transmits maximum power to the spindle with a smooth, even action at all speeds. Sixteen spindle speeds are available between 54 and 3225 RPM—an easy-to-read chart is furnished listing spindle speeds for the various belt positions.



Overarm and Arbor Support

MOTOR DATA—The new Atlas milling machine is designed to be operated from a ⅓ HP 1740 RPM motor (see page 40). Motor bracket support is attached directly to column. On-off switch built into left side of column is 10 ampere at 110 volts, single phase only (3 phase motor and switch, page 40). A flexible conduit is furnished to cover portion of switch-to-motor cord between machine and motor.

MILLING MACHINE

BENCH MILLING MACHINE



TABLE—The table is a solid grey iron casting 18" long, 4½" wide and 1¾" thick—a massive work support with the extra weight essential for maximum rigidity.

All table surfaces are accurately machined, and the top and sides are precision ground. The table top has a T-slot in the center for bolting work and attachments—V-groove on each side of this T-slot simplifies the firm gripping of bar stock. An adjustable dog-type stop in the front table T-slot can be set to stop longitudinal table travel at any point.

Table dovetail bearing on the saddle is accurately machined and carefully fitted. This bearing is equipped with an adjustable gib—gib screws have lock nuts. A gib lock sets the table rigidly at any point on the saddle. A sloping recess around the table working surface removes oil and cutting compound.

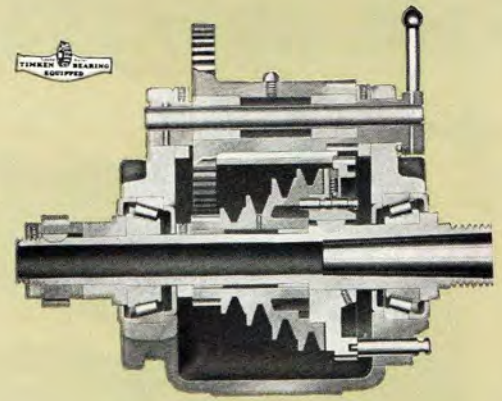
TABLE CONTROLS—The table feed screw for longitudinal travel has a ball crank at each end for hand-feeding the table—screw is supported at each end by an oilite bearing. Vertical travel of the knee and table is controlled by the large front handwheel which operates a telescoping screw with acme threads—ball bearing absorbs end thrust. [Note: Model MH (page 40) has hand lever controls for rapid movement of table vertically and longitudinally.] Table cross feed screw is controlled by the small handwheel in front—cover keeps screw free from dirt and chips. All table feed screws have acme threads. Steel feed screw collars are micrometer graduated in .001ths and have a knurled screw which permits setting the 0 position at the witness mark for accurately gauging feed.



Graduated Feed Screw Collar

Three types of table controls are available: hand-operated screw feed, rapid-production lever feed, and the new Atlas "Change-O-Matic" for instant selection of reversible automatic longitudinal table feeds between 0.162" and 9.125" per minute. These controls are described on pages 40 and 41.

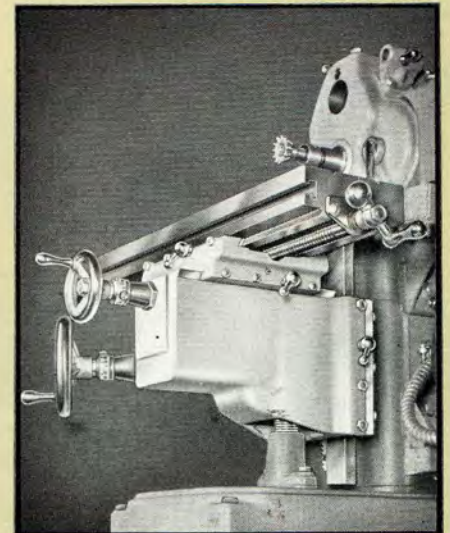
PLEASE ORDER BY
CATALOG NUMBER



SPINDLE AND BEARINGS—The spindle is machined from a solid bar of special fine-grained steel, accurately ground—is 1" diameter, has 10-pitch NF threads and 17/32" hole through entire length. Spindle nose is bored for No. 2 Morse taper.

Timken tapered roller bearings maintain accurate spindle alignment and carry both radial and thrust loads with a minimum of friction. Each bearing is lubricated through a large capped felt-wick oil cup. Simple take-up adjustment is provided. These fine bearings permit the wide range of spindle and surface speeds essential for all types of work and cutters.

BACKGEARED POWER—The Atlas backgeared drive, powered completely by V-belts, reduces the spindle speed for slabbing and facing, and work requiring large diameter cutters. The back gears, completely housed by the spindle head, are engaged by advancing eccentric lever and shifting pulley lock pin. Pulley and gears are accessible through a door in the left side of the spindle head. Backgears are ¾" wide, 20 pitch, and have ratio of about 6½ to 1. Backgear shaft turns on oilite bronze bearings.



KNEE AND SADDLE—The heavy knee casting travels vertically on the ground column ways and is supported rigidly by full 5½"-long bearings on the ways and by the telescoping elevation screw. Top of knee has an accurately machined dovetail for the saddle. Column bearing plates with laminated shims and an adjustable gib maintain a firm fit between knee and column ways—gib screws have lock nuts. Gib lock permits setting knee rigidly at any height.

The thick heavy saddle casting has dovetail bearings 5" long on the knee and 6" long on the table—forms a rigid table support. Dovetail ways are accurately machined and carefully fitted for smooth table travel. Bearings are equipped with adjustable gibs—gib screws have lock nuts. Gib lock permits setting saddle securely at any point on the knee.

THE NEW *Atlas* MILLING MACHINE - -



NUMBER M1

NEW ATLAS MILLING MACHINE WITH HAND-OPERATED TABLE CONTROLS

No. M1-G NEW ATLAS MILLING MACHINE, complete with safety belt guards and hand-operated table controls, less motor. Code word ZEVNE, net weight 179 pounds, shipping weight 229 pounds. **\$216.50**

No. M1 NEW ATLAS MILLING MACHINE, with hand-operated table controls, less safety belt guards and motor. Code ZESAK, net weight 174 lb., shipping weight 224 lb. **\$205.00**

COMPLETE SPECIFICATIONS—THE NEW

FEED RANGE	Longitudinal Table Travel with "Change-O-Matic".....	10"
	Longitudinal Power Feeds with "Change-O-Matic": Per Revolution of Spindle.....	0.003", .006", .0125", or .025" Range.....
	Longitudinal Table Travel with Hand-Operated Controls.....	12"
	(Nos. M1 and M1-G).....	
TABLE	Maximum Longitudinal Travel at One Setting.....	5 1/2"
	(Lever-Control Models, Nos. MH and MH-G).....	3 1/2"
	Cross Table Travel, Hand-Operated (all models).....	6"
	Vertical Table Travel with Hand-Operated Controls.....	2"
SPINDLE AND ARBOR	(Nos. M1, M1-G, MF, and MF-G).....	
	Maximum Vertical Travel at One Setting.....	6"
	(Lever-Control Models, Nos. MH and MH-G).....	2"
	Center of Spindle to Table in Lowest Position.....	6"
V-BELT DRIVE UNIT	Working Surface, Precision Ground.....	4 1/2" x 18"
	Overall Table Dimensions.....	4 1/2" x 18" x 1 3/8" thick
	T-Slots, Side and Top of Table.....	3/8" x 3/8" x 18"
	Longitudinal Table Feed Screw.....	1/2" diameter, acme threads
SPINDLE AND ARBOR	Telescoping Elevation Screw.....	1/2" and 5/8" diameter, acme threads
	Sixteen Spindle Speeds between.....	54 and 3225 R.P.M.
	Spindle Bearings.....	Timken Tapered Roller Bearings with thrust take-up nut and collar
	Spindle.....	1" diameter, 10-pitch National Form threads, 17/32" hole through entire length, nose bored for No. 2 Morse Taper Arbor (see No. M1-560 below).....
V-BELT DRIVE UNIT	Center of Arbor to Underside of Overarm.....	7/8" diameter
	Back Gears.....	20 pitch, 3/8" wide
	Backgear Ratio (approximate).....	6 1/2 to 1
	Backgear Shaft Bearings.....	oilite bronze
Overall Dimensions	Countershaft and Spindle Pulleys.....	4-step, V-type
	Countershaft Spindle Bearings.....	oilite bronze
	Motor Recommended.....	1/2 H.P. 1740 R.P.M.
	Overall Dimensions.....	25 1/2" x 32 1/2" x 22" high
Base Dimensions (Bench Space Required), including motor bracket. 20 1/2" x 18 1/2"		

FURNISHED: Integral V-Belt Countershaft; Belts and Pulleys for Complete V-belt Drive; Motor pulley furnished is for 1/2" diameter motor shaft—prices of pulleys for other motor shafts on request; Motor Mounting Bracket; 10-Ampere Motor Control Switch and Cord with 18" Flexible Conduit Covering—switch is for single phase current only, 3-phase switch is No. S7-300 below, Operating Instructions.



NUMBER MH

NEW ATLAS MILLING MACHINE WITH RAPID-PRODUCTION LEVER CONTROLS

No. MH-G NEW ATLAS MILLING MACHINE, complete with safety belt guards and rapid-production lever controls, less motor. Code word ZEVUR, net weight 183 pounds, shipping weight 243 pounds. **\$221.50**

No. MH NEW ATLAS MILLING MACHINE, with rapid-production lever controls, less safety belt guards and motor. Code ZESKA, net weight 178 pounds, shipping weight 228 pounds. **\$210.00**

No. MH NEW ATLAS MILLING MACHINE WITH RAPID-PRODUCTION LEVER CONTROLS

The MH models have quick-acting lever controls to speed up longitudinal and vertical table movement for production milling operations. One setting of the lever at the left permits 5 1/2" longitudinal travel of the table—second lever moves table 2" vertically at one setting.

Each lever operates a rack-and-pinion feed—lever shafts have squared ends for quick table positioning with crank handle (furnished). Adjustable stops are furnished to set limits of table travel as desired. Dog-type stop in front table T-slot has a set screw for close adjustment of longitudinal travel. A screw anchored securely to the base casting has two sets of lock nuts to set upper and lower limits of vertical table travel. A heavy boss on the miller knee travels between these stops.

MOTORS AND ACCESSORIES FOR THE

SINGLE PHASE MOTORS

No. 2480 1/3 H.P. 1740 R.P.M. SINGLE PHASE BALL BEARING MOTOR. 110 volt, 60 cycle, 1/2" double-end shaft, built-in switch, 10 ft. SJ approved cord and plug. Code WYJL, 28 lb. **\$14.25**

No. 2520 1/3 H.P. 1740 R.P.M. SINGLE PHASE CAPACITOR-START BALL BEARING MOTOR. 110/220 volt, 60 cycle, 1/2" double-end shaft, built-in switch, 10 ft. SJ approved cord and plug. Code WYJL, weight 33 lb. **\$20.50**

No. 2485B 1/3 H.P. 1740 R.P.M. SINGLE PHASE BRONZE BEARING MOTOR. 110 volt, 60 cycle, 1/2" single-end shaft, 10 ft. SJ approved cord and plug. Code ZEBIT, weight 28 lb. **\$11.00**

THREE PHASE MOTOR

No. 2630 1/3 H.P. 1740 R.P.M. THREE PHASE BALL BEARING MOTOR. 220 volt, 60 cycle, 1/2" double end shaft, BX connector in terminal box. Does not have switch, cord or plug. Code WYKAK, weight 28 lb. **\$21.00**

No. S7-300 THREE PHASE SWITCH for Atlas milling machine. Code word ZEBAR, weight 6 lb. **\$13.50**

(A thermal overload 3-pole manual starter. Mounting bracket and flexible cable-covered motor cord are furnished.)



CUTTER ARBOR—Stressproof steel, ground all over—has full-length keyway and No. 2 Morse taper shank for spindle. Driver furnished is threaded for spindle nose. Collars are precision ground. No. M1-576 draw-in bar is required.

No. M1-560 CUTTER ARBOR for Atlas milling machine, complete with nut, 5 collars and driver. Code ZETYR. Weight 5 lb. **\$18.00**

Diam. Arbor... 7/8" Shank, No. 2 Morse taper Diam. Collars. 1 3/8" Length Shoulder to Nut 6 1/4" Collars Furnished: two 2", one 1", one 3/4", one 1/2"



DRAW-IN BAR—Required to hold M1-560 cutter arbor and M1-577 shank cutter adapter (page 42) in spindle taper.

No. M1-576 DRAW-IN BAR. Code word ZEVAM, weight 1 1/2 lb. **\$2.00**

No. S7-100 CRANK HANDLE for No. M1-576. Code word ZEVYS, weight 1 1/2 lb. **\$2.25**

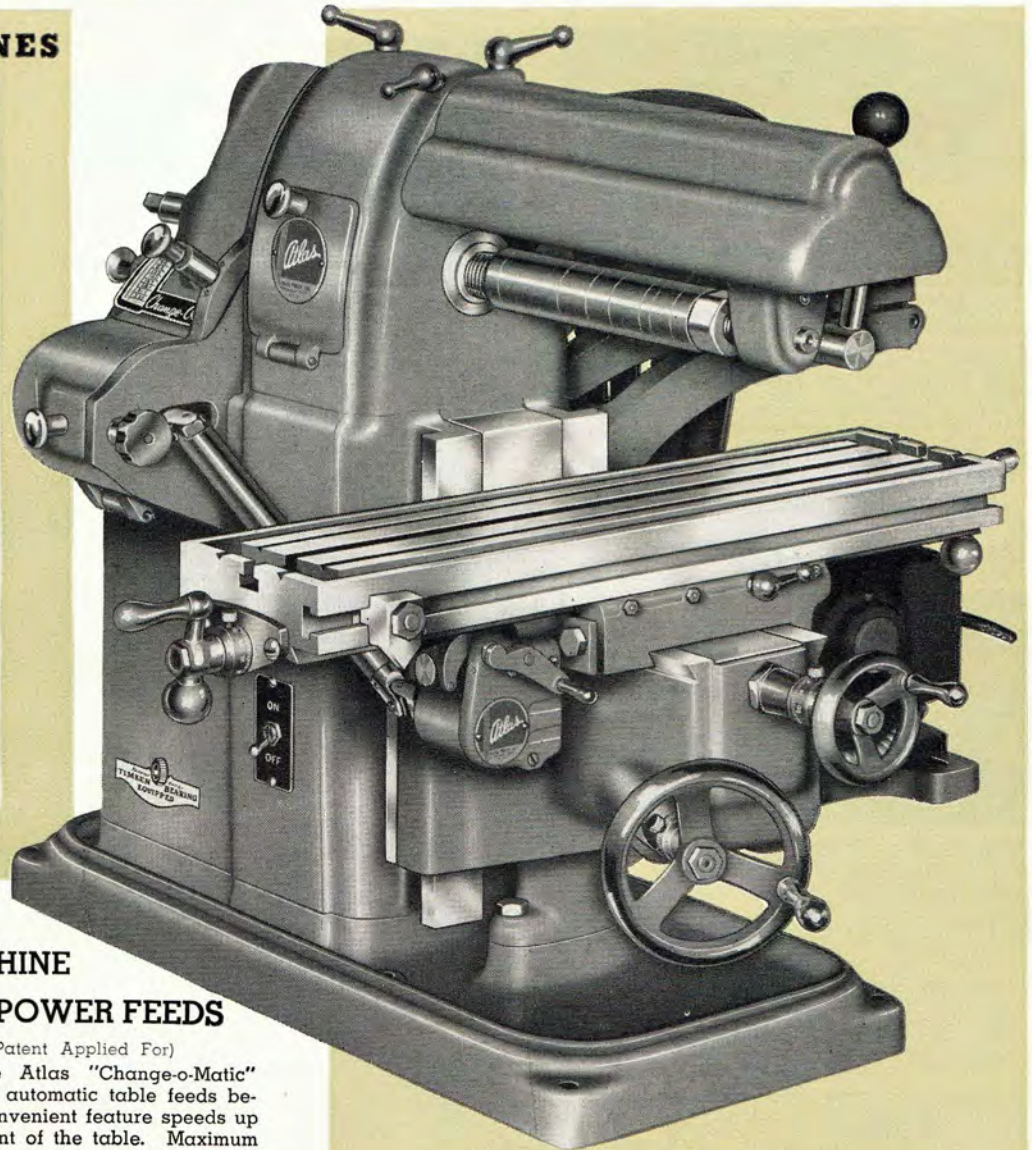
ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS AND ORDERING INFORMATION

Atlas MILLING MACHINES

- **Precision-Ground Table**
4½"x18", Three Types of Controls Available
- **Backgeared Power**
- **Complete V-Belt Drive**
- **Sixteen Spindle Speeds**
54 to 3225 RPM

EQUIPPED WITH
TIMKEN TAPERED ROLLER BEARINGS



NUMBER MF NEW ATLAS MILLING MACHINE WITH *Change-O-Matic* POWER FEEDS

FOR LONGITUDINAL TABLE TRAVEL (Patent Applied For)

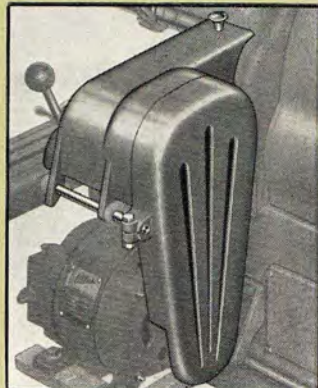
The MF models are equipped with the Atlas "Change-o-Matic" mechanism for instant selection of reversible automatic table feeds between 0.162" and 9.125" per minute. This convenient feature speeds up all operations requiring longitudinal movement of the table. Maximum table travel with the Change-o-Matic is 10".

No. MF-G NEW ATLAS MILLING MACHINE, complete with safety belt guards and "Change-O-Matic" power feeds, less motor. Code ZEVSY, net weight 190 lb., shipping weight 240 lb. **\$236.50**

No. MF NEW ATLAS MILLING MACHINE with "Change-O-Matic" power feeds, less safety belt guards and motor. Code ZEL, net weight 185 lb., shipping weight 235 lb. **\$225.00**

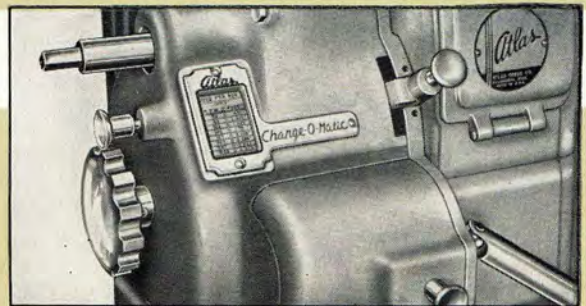
NEW Atlas MILLING MACHINES SAFETY BELT GUARDS

Eliminate hazards of exposed belting by providing safety cover as required by industrial and vocational safety codes. Light, durable castings with pin hinges, ready-tapped for easy installation. Vertical guard covers motor-to-countershaft belt—horizontal guard covers belt from countershaft to spindle.



No. M1-400 SAFETY BELT GUARDS for Atlas milling machine. Code ZESUP, wt. 7 lb. **\$11.50**

PLEASE ORDER BY CATALOG NUMBER



THE *Change-O-Matic*

(Patent Applied for)

The Change-o-Matic controls are pictured above. Simply turning the large knob engages the spindle gear with a gear train which drives the telescoping universal bar. This bar controls bevel-gear drive to keyway in table feed screw. Four feeds are available for each of eight spindle speeds—32 table feeds in all. As a gear train is engaged, a chart appears through the small window and shows the table feed selected (.003", .006", .0125" or .025" per revolution of spindle). Below this figure is listed the equivalent in inches per minute for each of eight spindle speeds.

Direction of the table feed is reversed instantly by shifting the tumbler lever at the right of the Change-o-Matic chart window. Lever has neutral position to disengage power feed, so that table may be fed by hand. A dog in the side T-slot of the table can be set to automatically stop the power feed at any point by tripping a lever on the table feed-gear case. This lever can also be disengaged by hand.

ATTACHMENTS FOR THE NEW *Atlas* MILLING MACHINE



INDEX CENTERS

For dividing operations required in such work as splining, fluting, gear cutting, and squaring shafts. Headstock and tailstock are heavy well-braced castings, locked with bolts to table T-slot—both have keys at each end to maintain alignment with table T-slot. Centers may be positioned for work lengths up to 9 inches and locked with coordinate clamps. Headstock spindle nose is threaded for double-end dog driver or chucks listed below—outer end of spindle accommodates index gear and lock nut. Lock pin support bracket is adjustable for various gear diameters. Tailstock center has handwheel control.

No. M1-200 INDEX CENTERS for Atlas milling machine. Code ZESLE, weight 15 lb.\$28.50
Maximum distance between centers.....9"
Maximum swing6"

Furnished: Nine indexing gears (36, 40, 44, 46, 48, 52, 54, 56, and 64 teeth); 1 1/2" dog, driver, bolts. The following chucks are threaded to fit the headstock spindle nose of the M1-200 attachment—Nos. U6-437, U6-439, M6-375 (Details, page 34).



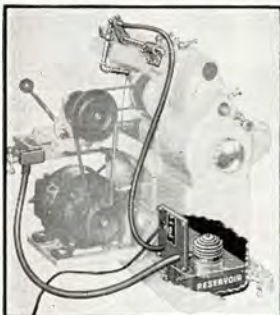
ANGLE PLATE

The angle plate holds irregular shapes which cannot be gripped in the No. M1-300 vise or bolted to the table. It is a solid well-braced iron casting, accurately machined to a right

angle and precision ground on the outer faces. Working face has four holes for bolting work. Base has two holes for bolting to T-slot in the milling machine table. Base and face each measure 2 1/2"x4"x7/16".

No. S7-430 ANGLE PLATE with bolts. Code word ZEHUD, weight 3 lb.\$5.00

COOLANT FLUIDS protect the milling cutter and improve work finish by carrying off heat generated at the tool edge. Coolants are required when milling steel, and for maximum accuracy on high speed operations with such materials as brass and plastics.



Automatic COOLANT SYSTEM

Recommended for production milling. Pump and motor unit is installed in 3-pint reservoir compartment in base casting. Delivery and return hoses are oil-resisting Neoprene. Delivery hose has sliding support arm, and nozzle is adjustable so that flow of coolant can be directed to any point on the cutter arbor. Valve regulates flow—nozzle is tipped with oil-resisting Neoprene. Coolant is filtered twice: once in a cup at table outlet, and again by 40-mesh screen enclosing the pump unit. Pump is automotive gear type with a capacity of 1/2 pint per minute—pump motor has on-off switch built into cover plate.

No. M1-600 AUTOMATIC COOLANT SYSTEM for Atlas milling machine, as shown. Code ZETEM, weight 8 lb.\$19.50

COOLANT TANK

A gravity-flow tank of approximately one quart capacity. Sliding support arm and adjustable nozzle permit directing flow of coolant to any point on the cutter arbor. Valve regulates flow. Nozzle is tipped with oil-resisting Neoprene—will not be injured if it comes in contact with revolving cutter.

No. M1-550 COOLANT TANK, capacity approx. 1 quart. Code ZETAL, weight 8 lb.\$5.00



ROTARY INDEX TABLE

Holds work for accurate angular indexing and spacing. Table is precision ground on all surfaces and has three T-slots for positioning and locking work—can be swiveled to any angle and locked to base with two bolts. Holes spaced around table side permit indexing table rigidly every 30° with plunger and knob. Base is graduated 0 to 90° both ways.

No. M1-350 ROTARY INDEX TABLE for Atlas Miller, with two base-clamping bolts and wrench. Code ZESNO, wt. 15 lb.\$27.50
Table Diameter5 1/2"
Height to Top of Table.....1 7/8"



SWIVEL VISE

Grips work rigidly at any angle. Vise and base are heavy, accurately machined castings—base has machined bolt slot at each end and 3 1/2" long key in bottom to maintain alignment with table T-slot. Vise can be turned in a complete circle and locked in any position—base is graduated from 0 to 90° left and right. Jaws are 3" wide, 7/8" high, open 3 1/8", and have steel insert plates. Acme-thread screw has tobins bronze nut, take-up adjustment, and crank control.

No. M1-300 SWIVEL VISE with crank, 2 clamping bolts. Code ZESON, weight 15 lb.\$16.75

Overall height with base 3 1/8". Vise may be removed from base and used alone as plain vise.

HIGH SPEED MILLING CUTTERS

CUTTER ARBOR



Holds cutter for slabbing, straddle cutting, slitting, forming, etc. Arbor is stressproof steel, ground all over—has full-length keyway and No. 2 Morse taper shank for spindle. Driver furnished is threaded for spindle nose. Collars are precision ground. No. M1-576 draw-in bar is required.

No. M1-560 CUTTER ARBOR for Atlas milling machine, complete with nut, five collars and driver. Code ZETYR, wt. 5 lb.\$18.00
Diam. Arbor.....7/8" Length Shoulder to Nut 6 1/4"
Diam. Collars. 1 3/8" Shank...No. 2 Morse taper
Collars Furnished: two 2", one 1", one 3/4", one 1/2"

SLAB MILLING CUTTER

For plain surfacing—has RH spiral teeth. Held on M1-560 arbor. Wt. 2 lb., hole 7/8".

No. Diam. Face Code PRICE
M1-580 2 1/4" 1" ZETLA \$6.00



ANGULAR CUTTERS

For face-milling and dovetailing. Threaded hole—adapted to No. M1-577 shank-cutter adapter with arbors listed below. Wt. 6 oz. each.

No. Thick Diam. Hole Thread Code PRICE
574A 7/16" 1 1/4" 3/8" 24 YALIF \$4.10
574B 9/16" 1 5/8" 1/2" 20 YALY 4.70



ARBORS FOR ANGULAR CUTTERS

Required for holding No. 574 angular cutters in No. M1-577 Shank-Cutter adapter. Wt. 8 oz. each.

No. For No. Code PRICE
572 574A YEWTE 1.00
567 574B YEWUX 1.00

R. H. SPIRAL END MILLS

For general milling operations—slots, facing and routing, squaring and splining shafts, cutting straight keyways. Straight shank—held in No. M1-577 Shank-Cutter adapter with bushings below. Wt. 4 oz. each.

No. Lgth. Flute Diam. Code PRICE
576A 5/8" 1/4" YAKCE \$1.75
576B 11/16" 5/16" YAKEC 1.85
576C 3/4" 3/8" YAKFO 1.95
576D 7/8" 7/16" YAKID 2.15
576E 15/16" 1/2" YAKOF 2.35

END MILL BUSHINGS

Required to adapt 576 straight shank end mills to No. M1-577 Shank-Cutter adapter. Not required for No. 576E 1/2" diameter end mill.

No. For End Mill Code PRICE
563D No. 576A YAKYH \$ 30
563C No. 576B YALAC .30
563B No. 576C YALCA .30
563A No. 576D YALDE .30
563E Set of 4 Above Bushings YALED 1.15



SIDE MILLING CUTTER

For slotting, grooving, keyways, etc.—used in pairs for straddle milling. Teeth have cutting edges on three sides. Held on M1-560 arbor.

No. Diam. Face Hole Code Wt. PRICE
M1-591 2 1/2" 1/4" 7/8" ZETME 1 lb. \$5.40



METAL SLITTING SAWS

For slitting and slotting, cutting small keyways, and cut-off operations. Sides taper-ground for proper clearance. Held on M1-560 arbor. 7/8" hole, wt. 8 oz. each.

No. Diam. Thickness Code PRICE
M1-582 2 1/2" 1/32" ZETPO \$2.80
M1-583 2 1/2" 1/16" ZETPO 2.80
M1-584 2 1/2" 1.8" ZETRY 2.90

DRAW-IN BAR

Required to hold M1-560 cutter arbor and M1-577 shank-cutter adapter in spindle taper.

No. M1-576 DRAW-IN BAR. Code word ZEVAN, weight 1 1/2 lb.\$2.00
No. S7-100 CRANK HANDLE required for No. M1-576. Code ZEVYS, weight 1 1/2 lb.\$2.25



SHANK-CUTTER ADAPTER

Holds 1/2" straight shank cutters (angular cutters, end mills, Woodruff keyway cutters). Has No. 2 Morse taper shank and is held in milling machine spindle with M1-576 draw-in bar (required).

No. M1-577 SHANK CUTTER ADAPTER. Code word ZEVEN, weight 1 lb.\$3.00



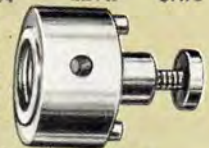
RH SPIRAL SHELL END MILL

For wide facing cuts, surfacing, and end milling—recommended for heavy-duty work. Has RH spiral teeth. Back of cutter is slotted to fit driving pins of M1-570 driver (required). Wt. 2 lb.

No. Diam. Thickness Hole Code PRICE
M1-585 2" 1 3/8" 3/4" ZEVIP \$7.70

SHELL END MILL DRIVER

Required for No. M1-585 end mill. Is threaded for spindle nose and has two driving pins for slot in back of cutter, ground pilot for cutter hole, and large retainer screw.



No. M1-570 SHELL END MILL DRIVER required for No. M1-585 shell end mill. Code word ZEVMA, weight 2 lb.\$7.50

WOODRUFF KEYWAY CUTTERS

For cutting Woodruff keyways—also used for milling slots, grooves, T-slots, etc. Straight shank—held directly in No. M1-577 shank-cutter adapter. 6 oz. each.

No. Diam. Thick Code PRICE
575A 1/2" 1/8" YALUH \$2.65
575B 3/4" 3/16" YALYI 2.85
575C 1" 1/4" YAMAD 3.50
575D 1 1/4" 5/16" YAMDA 3.95
575E 1 1/2" 3/8" YAMEF 4.35



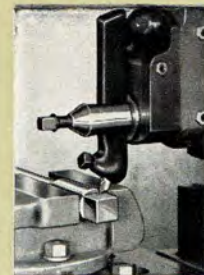
PLEASE ORDER BY CATALOG NUMBER

ON DOZENS OF SMALL JOBS YOU'LL save

WITH AN *Atlas*



ANGULAR CUTS



SQUARING SHAFTS



V-CUTS

ARE you operating a large shaper for small jobs—tying up a big investment and paying high costs for set-up and operation—when the greater portion of your work requires a stroke of 7 inches or less?

This new Atlas handles such jobs quickly, easily, and economically. It's compact—it's easy to set up and get in motion—it's fast, powerful, and accurate. The initial investment is extremely low and the 1/2 HP motor keeps operating costs at a minimum.

Here is a machine tool with all of the accuracy, power, strength, and versatility of larger shapers built down to scale for machining small work. Over two years were spent in designing the Atlas shaper, selecting the materials for its construction and testing it in operation. Today hundreds of shop men report its remarkable efficiency on small work.

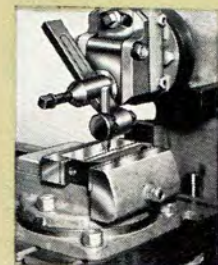
We believe you will find many ways to put this new economical shaper profitably at work in your plant, either in the tool room or on production work where shaping is indicated. The following pages present complete construction details and specifications.



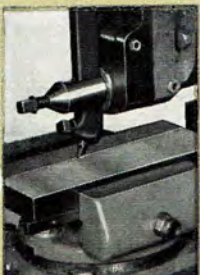
INTERNAL



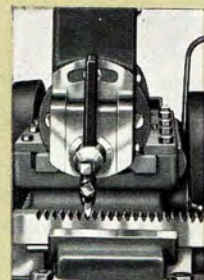
VERTICAL CUTS
(Work in Vise)



WEDGES AND TAPERS



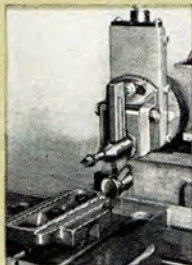
HORIZONTAL CUTS
(Work in Vise)



CUTTING RACK TEETH



DOVETAILING



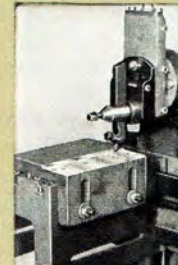
HORIZONTAL CUTS
(Work Bolted to Table Top)



KEYSEATING



VERTICAL CUTS
(Work Bolted to Table Side)

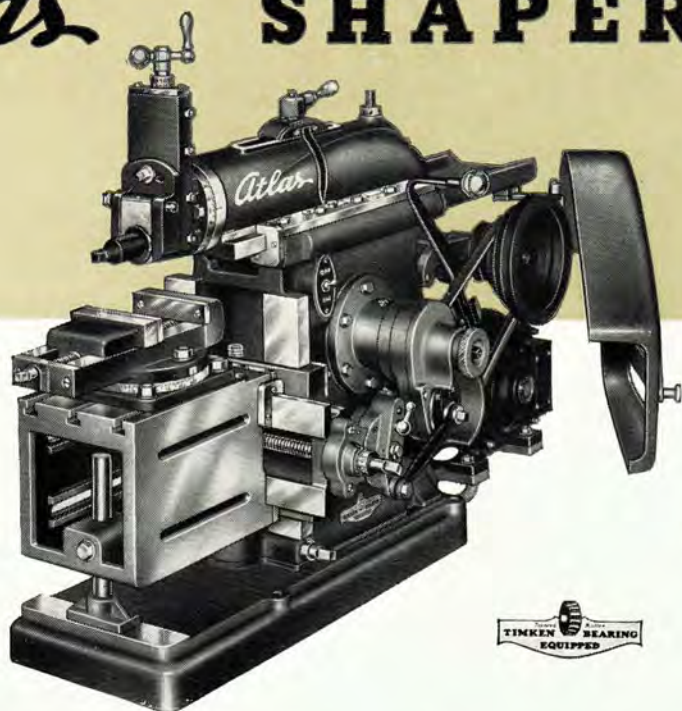


HORIZONTAL CUTS
(Work Bolted to Table Side)



DOVETAILING

The NEW *Atlas* SHAPER



CONSTRUCTION FEATURES

THE new Atlas Shaper incorporates the fundamental requirements of modern shaper design and construction—rigidity, accuracy, and power—and includes many features which insure working efficiency and ease of operation. The following description explains construction features. Notice that bearing surfaces are

unusually large with full provision for thorough lubrication and complete adjustment, and that carefully selected bearings are provided for all shafts. These fine bearings mean efficient, accurate performance, and long service life.

RIGIDITY To provide rigidity, the first shaper fundamental, heavy semi-steel iron castings are used for column, base, ram, tool head, cross rail, table and vise. Each of these parts is designed with adequate bracing, proper weight distribution, and extremely large bearing surfaces. This construction gives the Atlas shaper the rigidity and strength essential for durability and smooth performance.

ACCURACY The accuracy of the Atlas shaper is the result of modern Atlas methods of machining, assembling, and testing. Each part is machined on precision equipment of the latest design. Jigs and fixtures hold the part in exact position during machining, and each operation is inspected for uniformity and accuracy with precision tools and master gauges.

The ram bearing surfaces on the column guides and the cross rail ways bearing on the table are precision-ground and hand-fitted. The unusually large dimensions of these bearings plus provision for thorough lubrication serves to minimize wear. To maintain accuracy and rigidity these bearings have adjustable gibs, and bearing plates have shims with four .002" and two .001" laminations.

Careful inspection at every stage of assembly and thorough working tests of the completed shaper assure accuracy in handling the full range of shaper work.

POWER The crank-type ram-driving mechanism, powered completely by V belts from motor to bull-gear pinion shaft and provided with heavy-duty bearings for all shafts, transmits maximum power to the ram with a smooth even action at all speeds. This modern design permits use of a ½ HP motor with resultant savings in operating costs.

EASE OF OPERATION 4-step pulleys for countershaft and pinionshaft provide four speeds between 45 and 200 strokes per minute. The adjustable countershaft saves time in selecting and changing speeds. It is attached directly to the column within easy reach. The combination belt tension lever and brake permits stopping the ram without stopping the motor. A 15 ampere 110 volt on-off switch is built into the column casting in a handy position.

The stroke-length adjusting mechanism is operated easily with the hand crank and set with a grip-lock. The stroke-positioning control is conveniently located at the top of the ram. The length of stroke in inches is shown by an indicator on a graduated index plate. Direction of the automatic cross feed is shifted with a toggle pawl—five feeds between .005" and .025" per stroke are available in either direction. The crank handle furnished operates all controls; vise jaws, table elevation (with extension furnished), hand cross feed, feed adjustment, stroke-length adjustment, and stroke positioning.

CLOSE-UP VIEWS



COLUMN

The massive box-type column of the Atlas shaper is heavily ribbed and braced. The cross rail ways and guides for the ram ways are cast integral with the column. The heavy base casting is ribbed and reinforced, and has a ground bearing for the table brace pin. Cross rail ways are precision ground. Bearing bosses for the bull-gear pinion and crank-lever link shafts are bored and line-reamed. The fully enclosed ram-driving mechanism is easily accessible for lubrication through a panel on the left side of the column. A convenient on-off switch (15 ampere, 110 volt) is built into the column casting. Wipers at the front of the column keep ram ways clean at all times. Flexible metal conduit and motor connector cord are furnished. Special switch is required for 3-phase current—see page 48.



RAM

The massive streamlined ram is unusually heavy. The ram ways are wide and thick, bearing on the tops, sides, and bottoms of the guides. They are precision ground and hand-fitted. Oil grooves in the column guides form a reservoir assuring thorough lubrication of the ram ways through their entire length. An oil pan is provided to catch drippings from ram ways. The length of stroke in inches is shown by an indicator on a graduated index plate. Stroke-positioning control at the top of the ram operates screw through two mitre gears—a thrust collar provides full take-up. Lock handle and clamp secures ram to crank-lever yoke.



RAM DRIVING MECHANISM →

Leverage design assures maximum power. The bull gear is semi-steel iron with 10 pitch teeth and 1 inch face. Crank arm is special nickel-chrome-vanadium alloy steel, milled and parallel-ground on outer surfaces and milled and lapped on the inner "slide." Upper crank pin runs on oilite bronze bearings. The stroke-positioning screw, crank pin, and slide are lubricated through a wick oiler in the ram clamp screw handle. Block is wear-resisting super-oilite.

The bull gear is supported by two heavy-duty Timken tapered roller bearings, one housed in the cast iron flange adjacent to the bull gear and the other at the outer end of the bull gear sleeve. These fine bearings take extremely heavy radial loads and absorb all end thrust. An oiler at the top of the flange permits thorough lubrication.

The large housing for the bullgear spindle is bored, counterbored, line-reamed, and faced—six large cap screws hold it securely to the column. Each end of the bullgear pinion shaft runs on a Timken tapered roller bearing lubricated through capped grease cups. Crank-lever link shaft bearing and crank-lever link pin bearings are oilite bronze.



DETAILS OF CONSTRUCTION

COUNTERSHAFT. The adjustable V-belt countershaft and the motor base are attached directly to the column, making the Atlas shaper a single compact unit. The countershaft bracket is slotted for belt stretch adjustment. Hardened and ground countershaft spindle turns on roller bearings.

An extra V-drum on the countershaft pulley and a brake shoe at the end of the adjusting lever converts this lever into a combination belt tension lever and brake to stop the ram without stopping the motor. All belts and pulleys are fully enclosed with modern aluminum safety guards. Pulleys are balanced.

V-BELT DRIVE. Complete V-belt drive from motor to pinion shaft. 4-step countershaft and pinion-shaft pulleys provide four speeds between 45 and 200 strokes per minute (3½ and 116 surface feet per minute).

STROKE-LENGTH ADJUSTMENT. Hand crank controls the tobin bronze 45° spiral or helical gears operating the stroke-adjusting screw (Acme thread). A tobin bronze nut on this screw adjusts the position of the crank throw-block. Mechanism is set with griplock.

TOOL HEAD. The tool head is locked rigidly to the accurately machined ram head. The special locking mechanism consists of a steel anchor and anchor disc, pivoted on an over-sized steel stud clamped to the tool post swivel with two cap screws. The base of the tool post is graduated 0 to 50° both ways. The tool post slide has dovetail ways with full gib adjustment—gib screws have lock nuts. The vertical feed screw has Acme threads, ball crank control, and micrometer-graduated collar with take-up adjustment. The clapper head can be swivelled both ways to provide proper tool clearance—tapered mounting pin simplifies take-up for wear.

CROSS RAIL. The large cross-rail way guides bearing on the column are accurately machined and hand-fitted. The ways bearing on the table are precision ground and hand-fitted. Both bearing surfaces have full take-up adjustment by means of gibs and laminated shims—gib screws have lock nuts.

TABLE AND VISE. The box-type table is supported rigidly by the large square ways of the cross rail and a ¾" brace pin at the outer end. This pin can be adjusted and locked securely to brace the table at any height—a ground "runner pad" on the base casting provides a smooth bearing surface when table is fed horizontally. It has three T-slots in its top for the vise or work and two slots in each side for bolting work—interiors of the side slots are ribbed to prevent bolt-turning. The top of the table is given its final finish cut by the shaper itself—table sides are precision ground. Table elevating screw, operated by the crank control, has Acme thread, tobin bronze spiral or helical gears, and tobin bronze nut. Two wipers, one at each side of the table, have Neoprene pads to clean the ways and felt pads to hold oil.

The base of the vise is machined for accurate alignment with the ram ways. It can be swivelled and locked at any angle and is graduated 0 to 90° both ways. The vise jaws have steel insert plates. The vise screw has Acme threads, tobin bronze nut, and take-up adjustment. Vise is furnished as standard equipment.

AUTOMATIC CROSS FEED. The automatic cross feed is engaged by a toggle pawl controlling a fully enclosed steel ratchet gear. Five feeds are available in either direction: .005, .010, .015, .020, and .025 inches per stroke. The complete cross feed mechanism consists of a feed gear on the bull-gear spindle, a slotted gear for adjusting feed per stroke, and the ratchet gear connected through two pitman rods to the cross slide feed gear. The feed screw has Acme threads, micrometer graduated collar, and runs on oilite bearings.

The crank handle furnished operates all controls: vise jaws, table elevation, hand cross feed, feed adjustment, stroke length adjustment, and stroke positioning. All controls are within easy reach. Motor mounting base has adjustment for belt tension.

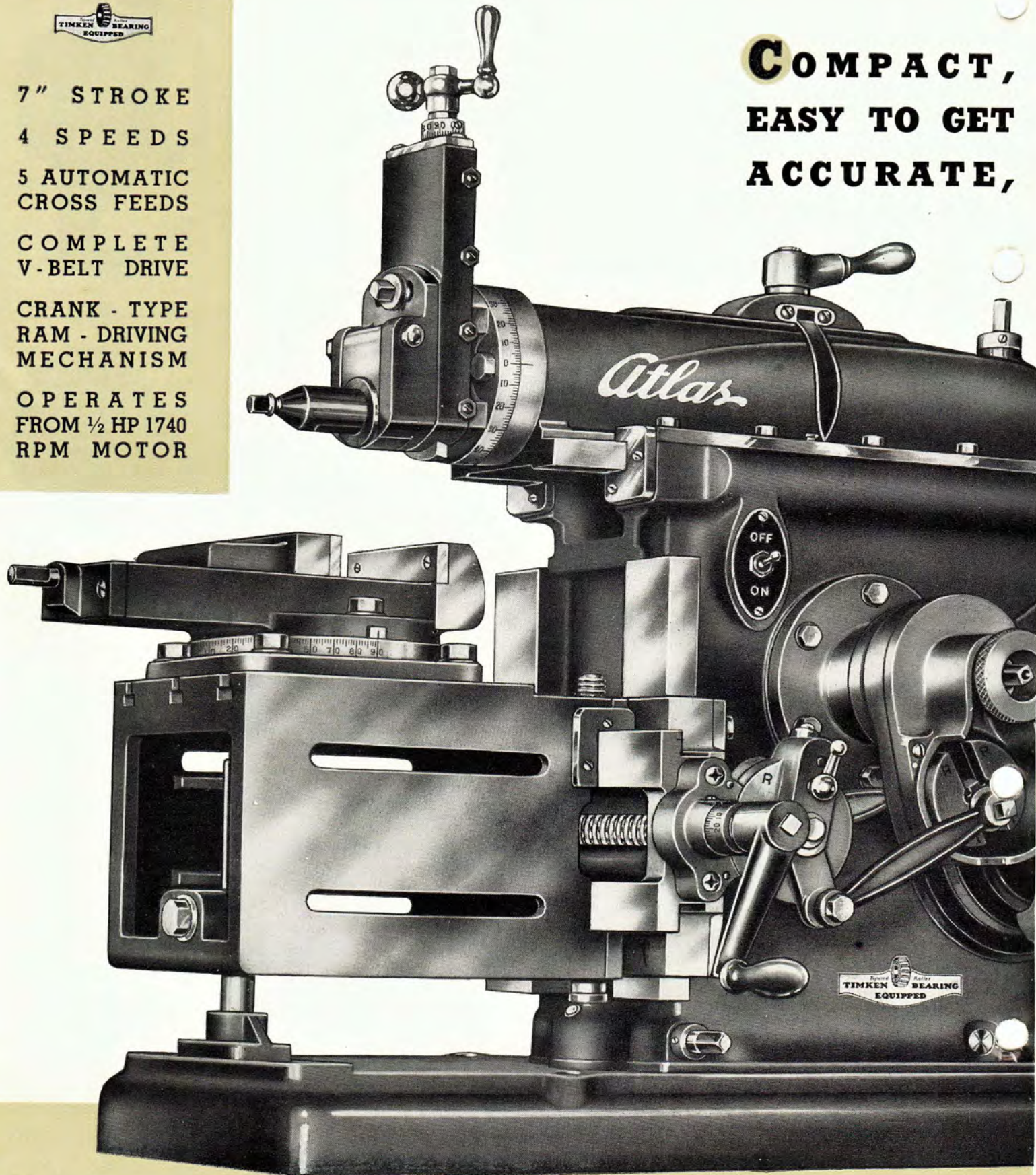
The Atlas shaper is designed to be run from a ½ HP 1740 RPM motor. (Page 48)

The NEW Atlas



7" STROKE
4 SPEEDS
5 AUTOMATIC
CROSS FEEDS
COMPLETE
V-BELT DRIVE
CRANK - TYPE
RAM - DRIVING
MECHANISM
OPERATES
FROM 1/2 HP 1740
RPM MOTOR

**COMPACT,
EASY TO GET
ACCURATE,**



7 - INCH SHAPER

**RUGGED,
IN MOTION,
POWERFUL**



COMPLETE SPECIFICATIONS

Length of Ram Stroke.....	1/2" to 7"
Strokes per Minute.....	45-78-122-200
Cutting Speeds, Feet per Minute.....	3 1/2 to 116
Horizontal Table Travel.....	9 3/8"
Vertical Table Travel.....	4 7/8"
Maximum Distance Table to Ram.....	5 1/2"
Minimum Distance Table to Ram.....	5/8"
Length Overall.....	36"
Width Overall.....	17"
Height Overall from Bench Base.....	26"
Floor Space with Stand (page 48).....	15" x 34"
Height Overall with Stand.....	60"

RAM	Length, less Tool Head.....	17"
	Bearing in Column, total length.....	24"
	Bearing in Column, total width.....	3 3/4"
	Position Range.....	4-3/16"

TOOL HEAD	Diameter.....	4"
	Length Feed.....	3"
	Tool Post... 7/16" x 1 1/8" slot to take 3/8" tool bits or holder for 1/4" tool bits (page 48)	
	Graduated 0 to 50° right and left—Collar graduated in .001ths — Swivel Clapper.	

DRIVE UNIT	V Belt.....	1/2" wide
	Gear Ratio.....	5 1/3 to 1—1" Face
	Pinion Shaft and Countershaft V-Pulleys.....	4-step
	Switch Built in Column.....	15 ampere at 110 volts
		Switch is for single-phase current only—3-phase current requires No. S7-300 switch (see page 48)

CROSS FEED	Reversible—Power and Hand.	
	Feeds Available, Both Directions... .005, .010, .015, .020, .025 inches per stroke	
	Crank Slot Adjustment for Setting Feeds.	

CROSS RAIL	Table Bearing, total length.....	12"
	Table Bearing, total width.....	4 1/2"
	Bearing on Column, total length.....	12"
	Bearing on Column, total width.....	6"

TABLE	Travel.....	9 3/8" horizontal, 4 7/8" vertical
	Overall Length.....	8 3/4"
	Finished Surface, length.....	7"
	Width.....	6"
	Depth.....	6"
	3 T-Slots on Top.....	3/8" x 5/8" x 7"
2 Clamping Slots on each side.....	13/32" x 5 1/2"	

VISE	Jaw Length.....	4"
	Jaw Depth.....	7/8"
	Vise Opens.....	4"
	Screw Diameter.....	1/2"
	Swivel Base Graduated 0 to 90° Right and Left. 4 Bolts for Table T-slots; Key for Center T-slot.	

No. 7B NEW ATLAS SHAPER Complete As Shown Including Safety Guards, less Motor. Shipping Weight, 360 Pounds. Net Weight, 260 Pounds. Code word ZEIBT..... **\$265.00**

No. 7AB NEW ATLAS SHAPER as Shown but Without Safety Guards and less Motor. Shipping Weight, 355 Pounds. Net Weight, 255 Pounds. Code word ZEIFY..... **\$250.00**

FURNISHED WITH ATLAS SHAPER: Vise, Countershaft, Complete V-belt Drive, Crank Handle and Extension, Wrenches, Instruction Booklet.

No. S7-442C FLOOR STAND for New Atlas Shaper (Page 48). Weight 135 Pounds. Code word ZEHEZ..... **\$20.00**

No. S7-139 SHAPER TOOL HOLDER with Bit (Page 48). Weight 1 Pound. Code word WYVZO..... **\$4.15**

No. 2530A 1/2 HP CAPACITOR-START BALL BEARING MOTOR, 110/220 Volt, 60 Cycle, 1740 R.P.M. (Other Motors Page 48.) WYVIC, 38 lb..... **\$23.75**

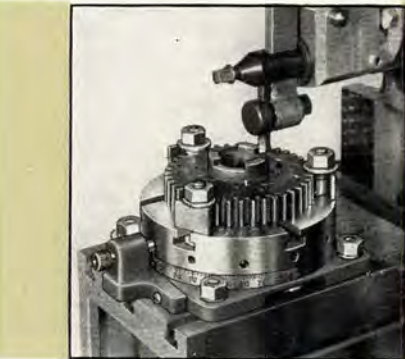
ATTACHMENTS FOR THE *Atlas* SHAPER



FLOOR STAND

The Atlas shaper stand provides the rigid machine foundation required for accurate shaper work. The legs are massive iron castings with heavy cross braces—legs alone weigh 95 pounds. Table boards are 1 5/8" thick, thoroughly seasoned, shellacked and varnished—the bottom board has plenty of space for tools and wrenches. Stand is shipped completely assembled. Height 33 1/2".

No. S7-442C FLOOR STAND FOR SHAPER. Complete, assembled—floor legs and table boards. Code ZEHEZ, weight 135 lb. **\$20.00**



ROTARY INDEX TABLE

For quick, accurate spacing and dividing operations. Table is precision ground and has three T-slots for positioning and locking work—can be swivelled to any angle and locked with two bolts to circular T-slots in base. Holes spaced around side permit indexing the table rigidly every 30° with plunger and knob. Swivel base is graduated 0 to 90° both ways.

No. S7-420 ROTARY INDEX TABLE for Atlas shaper, with four base-clamping bolts and wrench. Code word ZEHOC, weight 12 lb. **\$27.50**
 Table Diameter 5 1/2"
 Height to Top of Table 17 5/8"

MOTORS

The 1/2 HP 1740 RPM motors listed below are recommended for the Atlas shaper. Both are single phase, 60 cycle—have SKF ball bearings, 10 ft. cord and plug. No. 2530A is 110/220 volt capacitor start, developing full power instantly under load without drawing excess current.

No.	Type	Weight	Code	Price
2490	Single Phase	35 lb.	WYILN	\$17.50
2530A	Capacitor Start	38 lb.	WYZIC	23.75

Shaft diameter—1/2"
 No. 2490 has double-end shaft—No. 2530A, single.

THREE PHASE MOTOR

The Atlas 2620 motor is 1/2 HP 1740 RPM designed for three phase current. It is 220 volt, 60 cycle—has SKF ball bearings, double-end shaft, BX connector in terminal box. Does not have switch, cord, or plug.
No. 2620 THREE PHASE MOTOR. Code word WYKEL, weight 35 lb. **\$24.75**

THREE PHASE SWITCH

No. S7-300 thermal overload 3-pole manual starter switch is required for 3-phase circuits. Mounting bracket and flexible cable-covered motor cord furnished.
No. S7-300 THREE PHASE SWITCH. Code word ZEBAR, weight 6 lb. **\$13.50**

FOR COMPLETE DESCRIPTION OF ALL ATLAS MOTORS, SEE PAGE 67. PRICES OF DC MOTORS ON REQUEST.



No. S7-139 SHAPER TOOL HOLDER with 1/4" tool bit, wrench. WYVZO, wt. 2 lb. **\$4.15**

TOOL HOLDER

A rigid holder for working at all angles. The head can be swivelled to any one of 8 positions and locked with the extra large clamp screw—correct clearance is provided with head in any position. Furnished with one high speed 1/4" cutter bit, wrench.



EXTENSION TOOL

Designed especially for the Atlas shaper—furnishes extra clearance required for internal keyways, splines, grooves, shoulders, straight work. Furnished: drop-forged holder, 1/2" diameter polished steel bar with broached hole for cutter bit, 3/16" high-speed cutter bit, wrench. Internal key-seating capacity: 5 1/2" (Atlas shaper).

No. S7-315 EXTENSION TOOL with cutter bit and wrench. Code WYZZA, wt. 2 lb. **\$5.00**
No. M6-386S SIX EXTRA 3/16" CUTTER BITS unground. Code word YEZAV, wt. 1 lb. **\$0.45**



A Few Shapes Cut with the Extension Tool

CUTTER BITS



High speed steel 1/4"x1/4" cutter bits ready-ground for use in tool holder above. Complete set of seven handles wide range of operations. Identify by letters. 3/8" unground bits for shaper tool post are also listed below. Weight 2 oz. each.

No. S7-386 SET OF 7 FORMED CUTTER BITS 1/4"x1/4". Includes shapes shown above. Code word ZEDEV, weight 1 lb. **\$2.50**

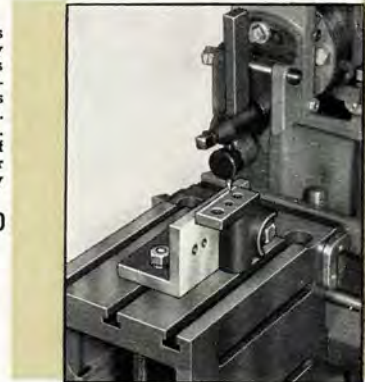
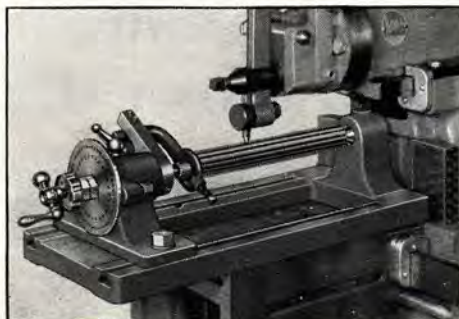
Letter	No.	Description	Code	Price
A	S7-386A	Roughing, Rd. Nose	ZEDYO	\$4.40
B	S7-386B	Offset Roughing, RH	ZEDTA	.40
C	S7-386C	Offset Roughing, LH	ZEDUZ	.40
D	S7-386D	Broad Finishing	ZEDVE	.40
E	S7-386E	Bottom Roughing, RH	ZEDYO	.40
F	S7-386F	Bottom Roughing, LH	ZEEBS	.40
G	S7-386G	Narrow Dovetailing	ZEECT	.40

No.	Size	No. of Cutter Bits		Code	Price
		in Set	Wt. (set)		
386S	1/4"	6	8 oz.	YARKE	\$0.95
386T	1/4"	12	1 lb.	YARMO	1.80
385S	3/8"	6	12 oz.	YARPY	2.30

INDEX CENTERS

(Below) For dividing operations required in such work as splining, fluting, gear cutting, and squaring shafts. Heavy base casting is held to table T-slots by socket-head cap screws—support for inner center is cast with base. Outer center support may be positioned for work up to 8 inches long and is locked securely by bolts which travel in two T-slots of base. Adjustable center is operated by screw with ball crank. Two index plates are furnished, each with two circles of indexing holes engaged by a lock pin through the center support. Center and index plate are locked in position by coordinate clamp.

No. S7-400 INDEX CENTERS for Atlas shaper. Code word ZEHIE, weight 21 lb. **\$32.50**
 Maximum distance between centers 8"
 Maximum swing 5 1/2"
 Base dimensions 11 1/4"x6"x7/8" thick
 FURNISHED: Two index plates (30 and 36 holes, 28 and 48 holes), 1 3/4" clamp dog, dog driver, bolts.



ANGLE PLATE

The angle plate holds irregular shapes which cannot be gripped in the shaper vise or bolted to the table. It is a solid well-braced iron casting, accurately machined to a right angle and precision ground on the outer faces. Working face has four holes for bolting work. Base has two holes for bolting to one of the T-slots in the shaper table—holes are spaced to permit bolting also in two table slots at right angle to ram stroke. Base and face each measure 2 1/2"x4"x7/16".

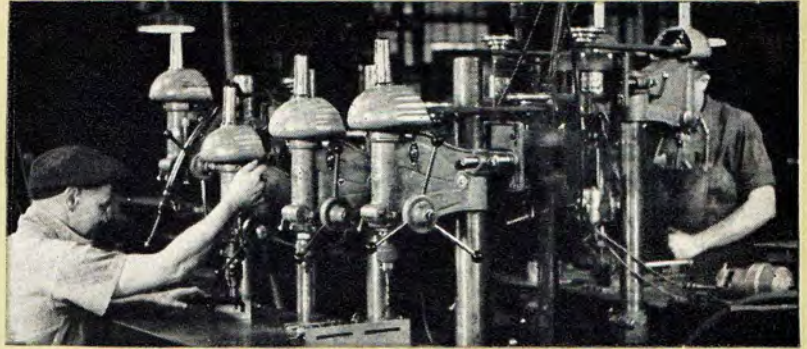
No. S7-430 ANGLE PLATE with bolts. Code word ZEHUD, wt. 3 lb. **\$5.00**

Atlas DRILL PRESSES

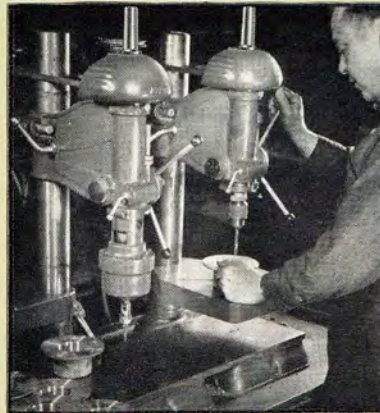
Bench and Floor-Type

INDEX—ATLAS DRILL PRESSES

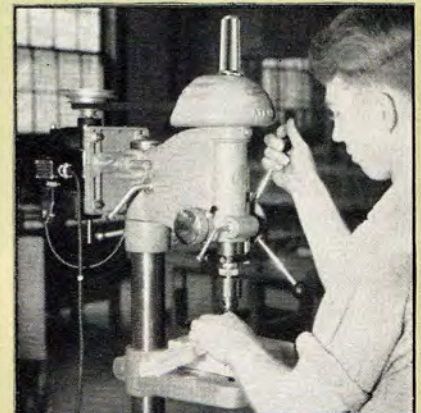
No. 73—15-inch Heavy Duty Floor-Type Drill Press.....Pages	50-52
No. 63—15-inch Heavy Duty Bench-Type Drill Press.....Pages	50, 51, 53
New Multiple Spindle Drilling Machines	Page 55
No. 52—12¾-inch Bench-Type Drill Press	Page 57
No. 42—12-inch Bench-Type Drill Press	Page 58



This battery of seven Atlas No. 73 drill presses cost less to install and operate than ONE larger machine—output of small parts has been tripled!



Reducing drilling and tapping costs on cast iron part for blower unit. Special table plate has been installed over drill press bases.

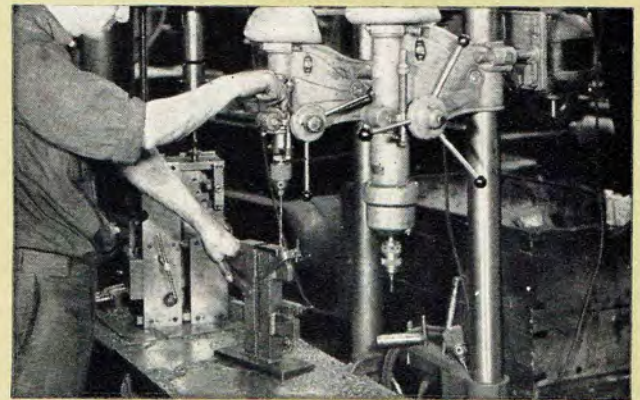


Atlas No. 73 drill presses are standard equipment in the industrial arts department of this prominent vocational school.

Atlas DRILL PRESSES occupy an important place in modern industry. Their records in hundreds of the largest, most efficient production plants tell the big story—"More drilled and tapped holes per hour and—lower cost per hole!"

These "Atlas" economies are the results of design based on sound engineering principles and years of experience in building machine tools. Rugged Atlas drill presses give long, accurate service under the most severe operating conditions. They are compact, self-contained units handling the full range of drill press work quicker and easier—at lower initial cost and lower operating expense.

Cabinet and pattern shops, vocational schools, laboratories and experimental shops—all types of industry and enterprise—find Atlas drill presses ideal multi-purpose machines for general shop use. The following pages give complete specifications and details of construction.



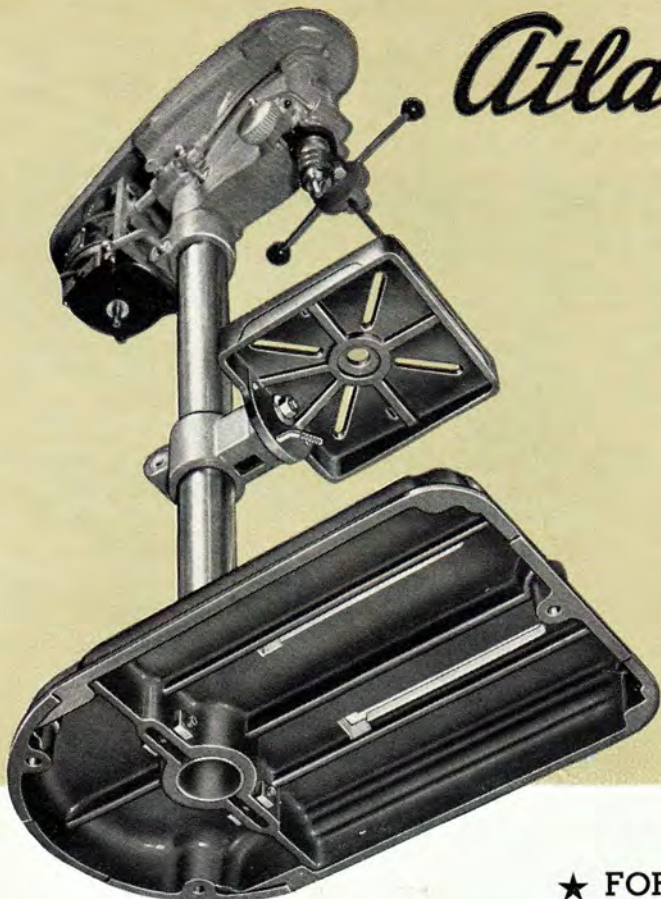
This operator drills and taps two extra holes and has plenty of time to keep the radial drill press in action.



This new Atlas W-83 three spindle drilling machine has reduced costs by 40%. Each control plate requires over 100 holes (3 sizes).

Atlas NOS. 63 AND 73

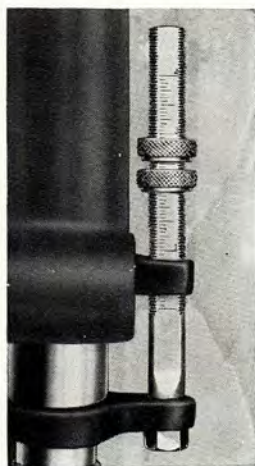
15-INCH HEAVY-DUTY



★ HEAVY, MASSIVE BASE, TABLE AND HEAD

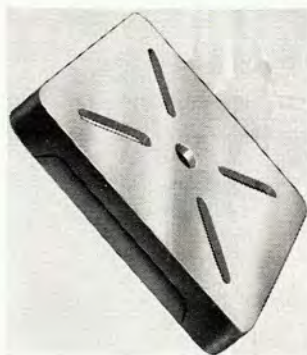
The drill press base, table, and head are massive iron castings, extra heavy and scientifically rib-braced for maximum rigidity, inside and outside. The base casting forms a solid foundation for the entire drill press. The thickly ribbed table is a rigid, accurate working surface. The heavy well-braced head casting is a strong, rigid, fully enclosed housing for the spindle-bearing assembly.

★ FOR EFFICIENCY AND CONVENIENCE . . .



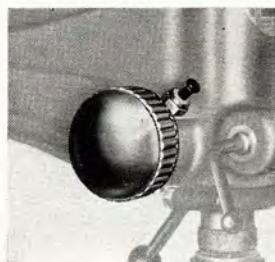
DEPTH INDICATOR

Graduated in 1/16ths. Has two knurled feed-stop nuts. Design eliminates rotational play in drill press quill.



FULL-TILTING TABLE

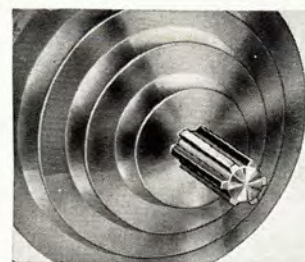
Heavy, well-braced, machine ground casting—a rigid, accurate working surface. May be tilted to any desired angle, right or left, and locked securely. 90° and horizontal positions are indexed. Table support casting is line-bored to fit column, accurately machined and fitted to table.



ADJUSTABLE FEED TENSION

Provides any desired feed tension. Heavy-duty spring housed in cap shown above controls tension on feed pinion shaft. Tension is set by turning ratchet device, released with button.

Pinion gear, controlled by 3-spoke feed wheel, meshes with quill rack, advancing spindle to work. Accurately machined teeth and adjustable spring mechanism give feather-touch feeding.



6-SPLINED SPINDLE AND PULLEY

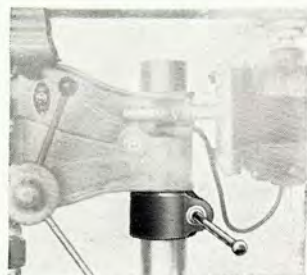
Maintain spindle alignment and transmit maximum power to the drill without whip or backlash. Spindle is special alloy steel ground to extremely close tolerances.

Matched and balanced pulleys, combined with splined drive, practically eliminate vibration. Removable cap and iron safety guard cover spindle and pulley.



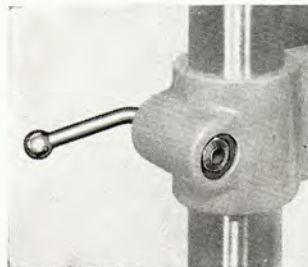
PRECISION JACOBS CHUCK

Accurate spindle alignment plus precision Jacobs chucks, the finest available, means maximum accuracy at the drill point. Capacity 0 to 1/2". No. 1 Morse taper spindle is available—see pages 52 and 53.



COLUMN COLLAR

Furnished with Nos. 63 and 73 drill presses. Simplifies raising and lowering head and permits swinging head for drilling at different points on large, heavy work. Lock is coordinate type (description at right).



COORDINATE CLAMP LOCKS

For head, column collar, table support and quill. Ball handle tightens and releases two clamping wedges simultaneously. Permits quick, rigid positioning without scoring or distorting quill or column.



MOTOR CONTROL SWITCH

Built into head at convenient position near feed wheel within easy reach. Switch is 10 ampere at 110 volt, toggle type.

DRILL PRESSES

★ RUGGED, ACCURATE SPINDLE-HEAD BEARING CONSTRUCTION

TO handle production drilling and tapping and give long, accurate service at high speeds, today's drill press requires a rugged and accurate spindle-head bearing construction. The cross-section views on this page show in detail how Atlas Nos. 63 and 73 heavy-duty drill presses meet this requirement.

The drill press head is a heavy, well braced casting—a strong, rigid, fully enclosed housing for the entire spindle-bearing assembly comprising spindle, quill, spindle-driving unit, and feed-control mechanism. The three quill guides and two drive-bearing housings are precision-bored for perfect concentricity of the quill with the drive unit for accurate spindle alignment. By boring holes for the column at the same setting, accurate alignment with the column is obtained.

Spindle drive unit—consisting of the six-splined pulley mounted on an independent tubular steel spindle supported in the head by large deep-grooved SKF ball bearings—IS ENTIRELY

SEPARATE FROM THE DRILL PRESS SPINDLE. This floating drive transmits turning power only to the spindle—all belt pull is taken to the head through the drive unit.

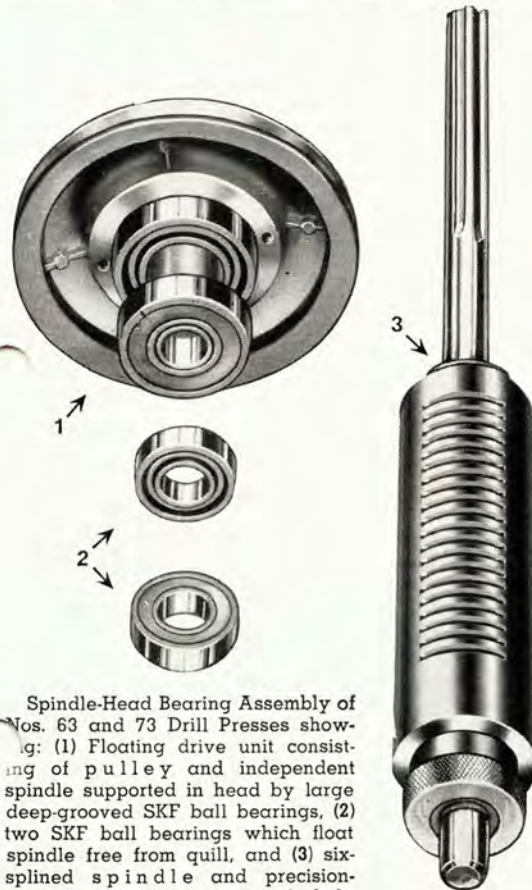
The steel quill is precision ground. Two SKF ball bearings float the spindle free from the quill. The accurately bored quill guides provide three widely spaced supports to maintain quill alignment through its full travel.

The spindle is supported firmly at widely separated points—by the six-splined drive pulley at one end, the lower quill bearing at the other, and between these by upper quill bearing. This design maintains alignment as spindle is advanced into work, eliminates spindle whip, assures sensitive feeding, smooth accurate performance.

The heavy massive base casting is a rigid foundation for the entire drill press. It provides an auxiliary table for extra long work. The rugged ground steel column maintains accurate alignment of head, table, and base.



Above: Spindle-Head Bearing Construction of Nos. 63 and 73 Drill Presses from left side. Notice four large deep-grooved SKF ball bearings, floating-drive design, splined spindle and drive pulley, precision-bored quill guides and drive-bearing housings. Dotted line indicates drill press spindle.



Spindle-Head Bearing Assembly of Nos. 63 and 73 Drill Presses showing: (1) Floating drive unit consisting of pulley and independent spindle supported in head by large deep-grooved SKF ball bearings, (2) two SKF ball bearings which float spindle free from quill, and (3) six-splined spindle and precision-ground quill. Notice accurately hobbled teeth in quill which form rack meshing with pinion feed gear.

PLEASE ORDER BY CATALOG NUMBER

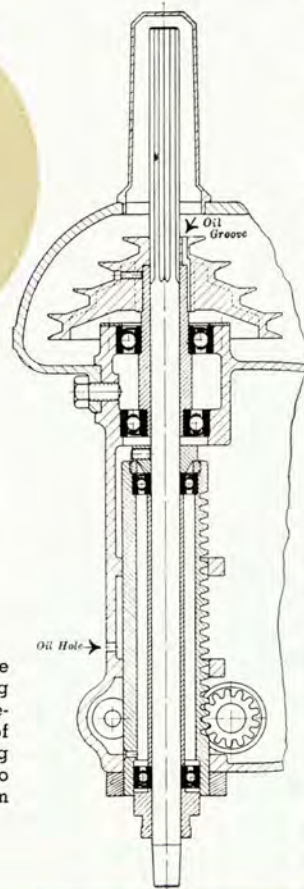
Details of

Atlas

4 SKF BEARING "Floating Drive" Spindle Design



Cross-section view of large deep-grooved SKF ball bearing used in Nos. 63 and 73 spindle-head bearing design. Two of these bearings support floating spindle drive unit in head—two more float the spindle free from the quill.



Left: Cross-section drawing showing right side of Nos. 63 and 73 spindle-head bearing construction. All details of design are completely described on this page—floating spindle drive unit, six-splined spindle and drive pulley, precision-bored quill guides and drive-bearing housings. Drawing shows how pinion gear meshes with quill rack-teeth, advancing spindle to work.

LONG, Accurate SERVICE SEVERE OPERATING

No. 73

15-INCH HEAVY DUTY FLOOR-TYPE DRILL PRESS

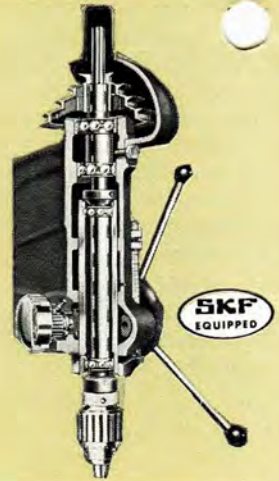
The Atlas No. 73 has a rugged floor-type mounting, 40½" capacity over table and 46" capacity over base. Spindle-head bearing design with floating-drive, splined spindle and drive pulley, adjustable feed return, precision Jacobs chuck, full-tilting table—all the modern construction features of the 73 are fully described on pages 50 and 51.

Equipped with the No. W33 foot-lever feed control (page 54), the 73 drill press is an ideal machine for repetitive drilling and tapping operations. Other production attachments are also shown on page 54. Accessories for shaping, mortising, routing, carving, sanding, etc., are described between pages 58 and 61.

No. 73 15" HEAVY-DUTY FLOOR TYPE DRILL PRESS WITH 0 to ½" JACOBS CHUCK complete as shown with belt and motor pulley, less motor. Code ZECIV, wt. 175 lb. **\$47.00**

No. 73-1M 15" HEAVY-DUTY FLOOR TYPE DRILL PRESS WITH NO. 1 MORSE TAPER in place of chuck. Complete with belt and motor pulley, less motor. Code word ZECUX, weight 175 lb. (5/8" diameter spindle—39¾" capacity over table). **\$47.00**

Morse taper spindle does not accommodate standard drill press attachments.



SKF
EQUIPPED

Equipped with
SKF
Ball Bearings



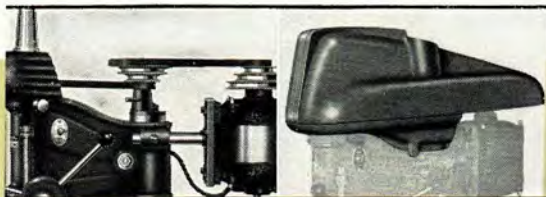
No. 1
MORSE
TAPER

Details
at Right

SPECIFICATIONS—NO. 73 DRILL PRESS

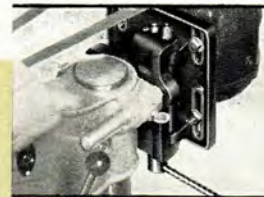
Drills to Center of Circle.....	15" diameter
Chuck Capacity	½"
Spindle Travel	4"
Maximum Distance Table to Chuck.....	40½"
Maximum Distance Base to Chuck.....	46"
Table Travel	40½"
Size of Table	10" x 10"
9 Speeds between.....	600 and 5200 R.P.M.
With Hi-Lo Speed Attachment (below).....	Low Speed 200 R.P.M.
Ground Steel Column.....	2¾" diameter
Overall Height	71"
Overall Width	14"
Overall Depth with Motor.....	30"
Shipping Weight less Motor.....	175 pounds
Motor Recommended.....	½ or ¾ H.P. 1740 R.P.M. Ball Bearing
Built-in Switch Furnished.....	10 Ampere at 110 volts.
Switch is for single phase current only . . .	3 phase controls, page 54.
Motor pulley furnished is for ½" diameter motor shaft	
—prices of pulleys for other motor shafts on request.	

ATTACHMENTS AND ACCESSORIES Nos. 63 AND 73 DRILL PRESSES



SPEED ATTACHMENT
Provides low speed of 200 RPM and higher than standard speeds.
See page 56.
W15 HI-LO ATTACHMENT for 60 and 70-series drill presses. Code ZAFTO, wt. 6 lb. **\$6.25**

SAFETY GUARD
Covers belt, pulleys, and spindle—easily raised to change speeds.
See page 54.
SAFETY GUARD ordered with 63 or 73-series drill press. Extra... **\$10.00**



QUICK-CHANGE BELT RELEASE
Speeds up belt changes—complete description on page 56.
QUICK-CHANGE RELEASE ordered with 63 or 73-series drill press. Extra... **\$2.75**



OIL TABLE
For production work. Has 10½" x 16½" surface. See page 54.
OIL TABLE ordered with 63 or 73-series drill press in place of standard full-tilting table. Extra **\$10.50**

2 ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

UNDER THE MOST CONDITIONS . . .

No. 63 15-INCH HEAVY DUTY BENCH-TYPE DRILL PRESS

Pages 50 and 51 describe in detail the construction which has made the Atlas 63 preferred by manufacturers for high speed production drilling and tapping. The superior spindle-head bearing design means increased output and long service life. Initial cost is extremely low and the $\frac{1}{3}$ or $\frac{1}{2}$ H.P. motor requirement keeps operating expense at a minimum. The face of the base is ground to serve as an auxiliary table for long work. Production oil table, tapping attachments, and safety belt guard are completely described on page 54.

All-around utility makes the No. 63 a favorite in every type of shop. It handles quickly and easily such operations as: shaping, mortising, routing, carving, sanding, and general drilling in metal and wood. Pages 58-61 show the accessories recommended for these jobs.



Equipped with
SKF
Ball Bearings

No. 1
MORSE
TAPER
•
Details
at Left

← SPINDLE-HEAD BEARING DESIGN

Nos. 63 and 73 Drill Presses

Complete Description, Page 51

(Left) Cross section view showing spindle-head bearing construction of Nos. 63 and 73 heavy-duty drill presses. Spindle driving unit is entirely separate from drill press spindle. Notice four deep-grooved SKF ball bearings, splined spindle and drive pulley, precision-bored quill guides and drive-bearing housings.

No. 63 15" HEAVY-DUTY BENCH TYPE DRILL PRESS WITH 0 to $\frac{1}{2}$ " JACOBS CHUCK complete as shown with belt and motor pulley, less motor. Code word ZEBSE, weight 125 lb. **\$42.00**

No. 63-1M 15" HEAVY-DUTY BENCH TYPE DRILL PRESS WITH NO. 1 MORSE TAPER in place of chuck. Complete with belt and motor pulley, less motor. Code word ZECAS, weight 125 lb. ($\frac{5}{8}$ " diameter spindle—11 $\frac{1}{4}$ " capacity over table). **\$42.00**

Morse taper spindle does not accommodate standard drill press attachments.



MOTORS

SKF ball bearings, double-end shaft, cord and plug. Operate in any position. See page 67.

No.	HP	Wt.	PRICE
2480	$\frac{1}{3}$	28 lb.	\$14.25
2490	$\frac{1}{2}$	35 lb.	17.50

ATTACHMENTS FOR NO. 63 AND 73 DRILL PRESSES

SPECIFICATIONS—NO. 63 DRILL PRESS

Drills to Center of Circle	15" diameter
Chuck Capacity	$\frac{1}{2}$ "
Spindle Travel	4"
Maximum Distance Table to Chuck	12"
Maximum Distance Base to Chuck	16"
Table Travel	12"
Size of Table	10" x 10"
9 Speeds between	600 and 5200 R.P.M.
With Hi-Lo Speed Attachment (left)	Low Speed 200 R.P.M.
Ground Steel Column	$\frac{3}{4}$ " diameter
Overall Height	41"
Overall Width	12"
Overall Depth with Motor	24"
Shipping Weight less Motor	125 pounds
Motor Recommended	$\frac{1}{3}$ or $\frac{1}{2}$ H.P. 1740 R.P.M. Ball Bearing

Built-in Switch Furnished 10 Ampere at 110 volts.
Motor pulley furnished is for $\frac{1}{2}$ " diameter motor shaft—prices of pulleys for other shafts on request.

Switch is for single phase current only.
For 3-phase controls, see page 54.

PRODUCTION ATTACHMENTS

FOR NOS. 63 AND 73
DRILL PRESSES

Pictured at the right is the Atlas 73 drill press equipped to handle high-speed production operations. The complete machine includes No. 73 drill press with:

- No. 61-2S.....Production Oil Table
- No. W33.....Foot Lever Feed Control
- No. W39A.....Tapping Attachment
- No. 62-7A.....Safety Belt Guard

These accessories are fully described on this page.

DRILL PRESS HEADS

Atlas drill press heads may be purchased separately for special industrial applications. Refer to page 55.

THREE PHASE MOTORS

The motors listed below are designed for use with three-phase current. Both motors are 220 volt, 60 cycle—have SKF ball bearings, double-end shaft. Furnished with BX connector in terminal box—do not have switch, cord, or plug. Shaft diameter 1/2". For complete information on all Atlas motors, see pages 66 and 67.

No.	HP	RPM	Wt.	Code	Price
2630	1/3	1740	28 lb.	WYKAK	\$21.00
2620	1/2	1740	35 lb.	WYKEL	24.75

THREE PHASE SWITCH



No. W67 switch is required with a 3-phase motor. It is a thermal overload 3-pole manual starter for 3-phase circuits. Mounting bracket and flexible cable-covered motor connection cord are furnished.

No. W67 THREE PHASE SWITCH with mounting bracket and connections. Code ZECET, wt. 6 lb..... \$13.50



Atlas TAPPING ATTACHMENTS

For High-Speed Production Tapping

Atlas tapping attachments convert any 60 or 70 series drill press into a sensitive high-speed production tapping machine. They meet the modern demand for a light, compact, accurate tapper.

The lightweight durable aluminum housing encloses a 3-point balanced, heat-treated gear reversing mechanism which distributes pull to three gears, minimizing wear and eliminating torsion. New improved head design—chuck rotates in tapping direction when idling. This construction means a more sensitive head and increases tap life. Reverse speed is twice forward speed. Double-cone friction clutch has cork facing—spindle turns on ball bearings.

These tapping attachments have tapered socket for drill press spindle and cover which clamps directly to quill. No adapters necessary. Atlas tapping attachments are available for drill presses with Morse taper spindles—details on request.

No. W39A TAPPING ATTACHMENT complete with "Tru-Grip" tap holder and 7 collets for following taps: Nos. 8, 9, 10, 1/4", 5/16", 3/8" (shank diameter .381"), 1/2", and 5/8". CAPACITY: No. 8 tap to 3/16" in steel, 3/8" in cast iron, 1/2" in brass. Code word ZAERF, weight 10 lb..... \$60.00

No. W39 TAPPING ATTACHMENT complete with "Tru-Grip" tap holder and 4 collets for following taps: Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, and 1/4". CAPACITY: up to 3/16" in steel, 1/4" in brass and cast iron. Code ZAEMZ, wt. 5 lb..... \$45.00

SAFETY GUARD

for Belt, Pulleys and Spindle

This light, durable aluminum shield provides a safety cover for the complete drill press drive mechanism, as required by industrial and vocational safety codes in many states. Pin hinges permit quick raising for speed changes—it is not necessary to remove guard to change belts. Spring clip holds guard closed.

SAFETY GUARD ordered with 63 or 73 series drill press. Extra..... \$10.00

No. 62-7A DRILL PRESS SAFETY GUARD for 60 and 70 series drill presses, ordered separately. Ready tapped for easy installation. Code ZABSJ, wt. 7 lb..... \$11.00

TAPPING ATTACHMENTS

See Complete Description Below

Available in two sizes: No. W39A to tap up to 5/16" in steel, 3/8" in cast iron, and 1/2" in brass; and No. W39 to tap up to 3/16" in steel, and 1/4" in brass and cast iron.

PRODUCTION OIL TABLE

For production work with jigs and fixtures. Can be furnished with Nos. 63 and 73 drill presses in place of standard full-tilting table.

Has 10 1/2" x 16 1/2" ground working surface and drain channel to remove oil or cutting compound. Held firmly in position by coordinate clamp lock. Extra weight and proper bracing assure maximum rigidity and accurate work.

PRODUCTION OIL TABLE ordered with No. 63 or No. 73 series drill press in place of standard table. Extra..... \$10.50

No. 61-2S PRODUCTION OIL TABLE for 60 and 70 series drill presses. Ordered separately—Code ZABUR, 65 lb..... \$13.00

FOOT-LEVER FEED CONTROL

Speeds up any repetitive operation. Accuracy is improved because the operator has both hands free to hold and guide the work.

Includes draw rod mounted between two arms, one for foot pedal and one for drill press spindle. Heavy-duty return spring has 3 positions on spindle arm and tension nut for quick adjustment. Draw rod can be bolted at any one of 4 positions on foot lever arm.

No. W33 FOOT LEVER FEED CONTROL for 70-series drill presses complete as shown. Code word ZAETH, weight 31 lb..... \$16.00

Note: No. W33 is not recommended for production mortising. Please specify if foot lever feed control will be used on drill press equipped with Hi-Lo speed attachment (page 56).



"TRU-GRIP" TAP HOLDER

The "Tru-Grip" tap holder furnished with Atlas tapping attachments is light in weight, accurate and has no delicate parts to cause trouble. Spring collets are furnished—both holder and collets are hardened and ground.



THE NEW *Atlas* MULTIPLE SPINDLE DRILLING MACHINES

Any part requiring a series of drilled and tapped holes can be manufactured more economically with these new Atlas drilling machines. Complete descriptions and specifications are given in Bulletin MS1, available on request.

● **Rugged Table and Floor Legs**—Massive precision ground oil table provides plenty of "elbow room" for the smooth movement of large heavy jigs and fixtures. Floor legs (furnished) are heavy solid well-braced iron castings. Wood shelf provides a convenient place for tools and jigs.

● **Floating Drive Spindle Design**—These machines incorporate the famous Atlas heavy duty SKF-equipped spindle bearing construction (pages 50-51). This fine head design accounts for new operating records set by Atlas drill presses in many of the largest, most efficient production plants.

● **New Head Positioning Mechanism**—Saves time in making work set-ups. Drilling head is raised or lowered by simply turning crank handle. See description below at right.

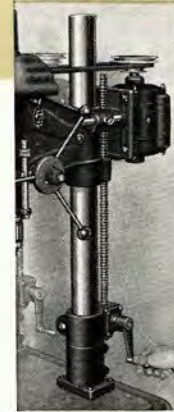
Specifications—*Atlas* Multiple Spindle Drilling Machines

Number of Spindles.....	4	3	2
Center to Center of Spindles.....	13"	18"	15"
Spindle Travel.....	4"	4"	4"
Table Working Surface.....	21"x54"	21"x54"	21"x30"
Overall Height.....	79½"	79½"	79½"
Overall Depth with Motors.....	31¼"	31¼"	31¼"
Overall Width.....	58"	58"	34"
Floor to Top of Table.....	32"	32"	32"
Shipping Weight (Approximate).....	1405 lb.	1300 lb.	850 lb.
Order Number with Jacobs 0-½" Chucks.....	W84	W83	W82
PRICE Including Floor Legs, less Motor, with Jacobs 0-½" Chucks.....	\$350.00	\$310.00	\$195.00
Order No. with No. 1 Morse Taper Spindles..	W84-1M	W83-1M	W82-1M
PRICE Including Floor Legs, less Motor, with No. 1 Morse Taper Spindles in Place of Chucks.....	\$350.00	\$310.00	\$195.00

For Complete Specifications, Ask for Bulletin MS1.



No. W84
Four Spindle
Drilling Machine



NEW HEAD POSI- TIONING MECHANISM (Patent Applied For)

Simply turning crank handle raises or lowers drill head, a unique design which reduces set-up time to a minimum. Elevating screw controls column collar below drill head—screw has ball thrust bearing at lower end. Head clamping lock is coordinate type for quick, rigid positioning without scoring column.



Atlas DRILL PRESS HEADS

SIMPLIFY PERPLEXING DRILLING PROBLEMS

The installation pictured below is just one of hundreds where Atlas drill press heads have solved difficult production set-ups—what was an expensive awkward operation now is making real money. The possibilities for multiplying drilling efficiency with these heads are practically unlimited.

Atlas drill press heads often eliminate the need for a costly special drilling machine or intricate fixture. They are compact, portable, easily adapted to

the job, and may be operated in any position. Atlas SKF ball bearing spindle-head design insures long, accurate service at high speeds. Their cost is a small fraction of special drilling units, and the ½ or ⅓ HP motor requirement keeps operating expense at a minimum.

Atlas drilling heads are available in two sizes: the 15" 63-Series and 12¾" 52-Series—complete specifications below at left. Note: We do not manufacture special drilling machines.

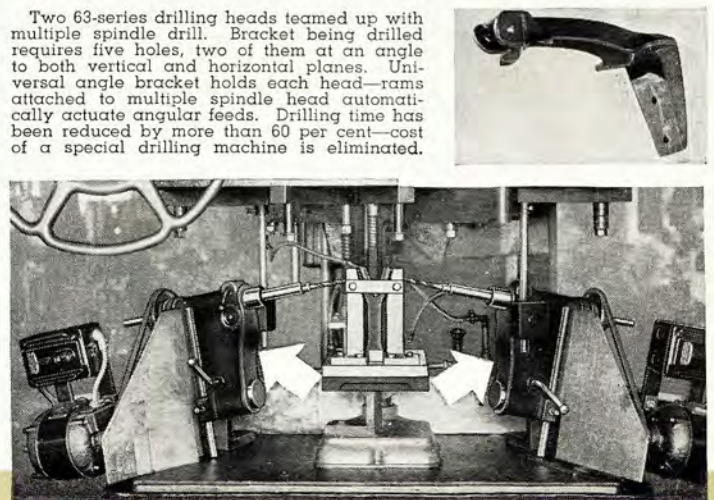
SPECIFICATIONS

	63 Series	52 Series
Drills to Center of Circle..15"	15"	12¾"
Spindle Travel.....	4"	3"
Column Bore.....	2¾"	2¼"
Chuck Capacity.....	½"	½"
Speed Range.....	600 to 5200 RPM	
Number SKF Ball Bearings	4	3

FURNISHED: Complete as shown with motor mounting bracket, belt and pulley; less motor and column. Motor control switch furnished is 10 ampere at 110 volt single phase only—three phase switch, page 54. Motor pulley furnished is for ½" diameter motor shaft—prices of pulleys for other motor shafts on request.

No.	Series	With	Bearing Design	Code	Weight	Price
63-1V	63	0-½" Jacobs Chuck	Page 51	ZAHET	60 lb.	\$33.00
63-1Z	63	No. 1 Morse Taper	Page 51	ZAHUX	60 lb.	33.00
52-1X	52	0-½" Jacobs Chuck	Page 57	ZAHWO	45 lb.	27.00

ALL PRICES SUBJECT TO
CHANGE WITHOUT NOTICE



ATTACHMENTS FOR *Atlas* DRILL PRESSES



NEW Head and Table POSITIONING MECHANISM

For 60- and 70-Series
Drill Presses

New No. W76 positioning mechanism mounted on column of No. 73 drill press. Notice convenient location of crank handle.

This new time saver with its handy crank control makes fast, easy work of raising or lowering the drill press head or table. It can be quickly installed on any Atlas 60- or 70-series drill press.

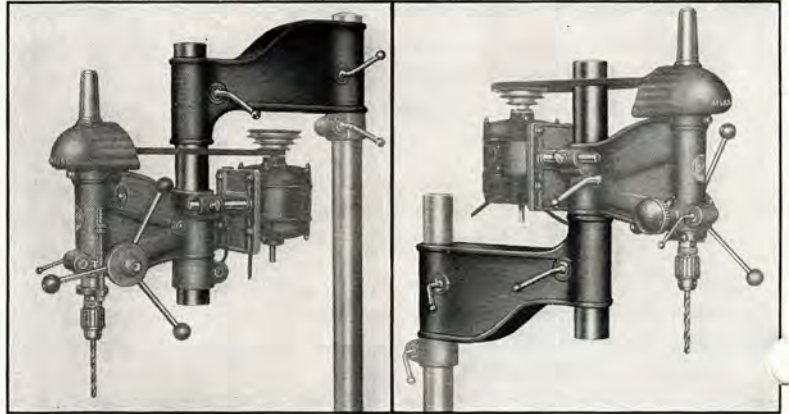
The W76 mechanism consists of support collars for the drill head and table, positioned by an acme-thread lift screw with bevel-gear drive controlled by the crank handle. Both support collars are equipped with coordinate clamp locks which permit rigid positioning without scoring the drill press column. When the head support collar is tightened, the lower collar may be loosened for raising or lowering the table. In a similar manner, the table collar when tightened serves as a support for positioning drill press head.

One revolution of the crank gives $\frac{1}{8}$ " travel—maximum travel at one setting is 12". Two bevel gears, thrust bearing and crank shaft are housed in the gear case cast integrally with the upper support collar. Ball thrust bearing takes load on screw, so that crank handle turns freely.

No. W76 HEAD AND TABLE POSITIONING MECHANISM for 60- and 70-series drill presses.
Code word ZAIRG, weight 18 lb. **\$9.95**

NEW 24" RADIAL ARM

For 60- and 70-Series Drill Presses



Radial Arm Inverted

Radial Arm Upright

This rugged arm converts any Atlas 60- or 70-series drill press into a small radial drilling machine with a work range which permits drilling of extra large pieces. It increases chuck-to-column capacity to a full 24", and the auxiliary column furnished adds 15" to chuck-to-base capacity. Pictures above show how the radial arm can be mounted in an upright or inverted position, whichever is most convenient for the operations being handled.

The massive arm casting is ribbed and reinforced to maintain rigidity at the drill point. Holes for drill press column and auxiliary column are precision bored at the same setting to insure positive alignment. Arm has 8" bearing on the drill press column and 7" bearing on the auxiliary column. Coordinate clamp locks permit quick, rigid positioning of head and arm.

The 19" auxiliary column is $2\frac{3}{4}$ " diameter ground steel tubing and allows travel of the drill head up to $6\frac{1}{2}$ "—also permits drill head to be mounted above or below arm. No. 61-75A column collar (Code ZEHYA, \$0.95) is recommended as support for drill head on auxiliary column.

No. W79 24" RADIAL ARM for 60- and 70-Series drill presses. Code word ZAJAT, weight 46 lb. **\$11.75**

No. 61-75A COLUMN COLLAR for supporting drill head on auxiliary column with radial arm inverted. Code ZEHYA, weight $3\frac{1}{2}$ lb. **\$0.95**



U. S. Patent 2073704

"HI-LO" SPEED ATTACHMENT

- Increases Speed Range
- Easily Installed
- SKF Ball Bearing Equipped

The "Hi-Lo" provides a low speed of 200 RPM for heavy metal work and higher than standard speeds for woodworking. This wide range is obtained with a standard 1740 RPM motor.

The "Hi-Lo" can be mounted or removed in less than three minutes. The base is accurately machined to fit inside the top of the drill press column. Pulley is balanced and runs on a large double-row SKF ball bearing—pulley is mounted eccentric with the base, permitting quick release of belt tension for speed changes.

Order No.	Atlas Drill Press	Column Size Inside Diameter	Code Word	PRICE
W-32	40-Series	$1\frac{1}{8}$ "	ZAEWK	\$6.25
W-14	50-Series	$1\frac{1}{8}$ "	ZAFER	6.25
W-14A	52-Series*	2"	ZAFRE	6.25
W-15	60 and 70-Series	$2\frac{1}{2}$ "	ZAFTO	6.25



QUICK-CHANGE BELT RELEASE



The Quick-Change attachment speeds up belt changes. Handle brings motor toward drill press head, releasing belt tension in an instant.

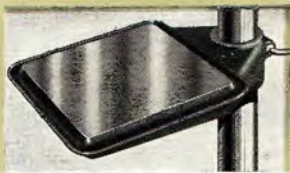
It is easily installed, replacing standard drill press motor bracket. The position of the hinged motor base is shifted by a hardened rocker-shaft with ball handle control, assuring correct belt tension at all times.

QUICK CHANGE RELEASE ordered with No. 52, 63, or 73 drill press. Extra. **\$2.75**

No. 52-50A QUICK CHANGE RELEASE for 60 and 70-series drill presses, ordered separately. V-belt furnished. Code ZECWO, weight $12\frac{1}{2}$ lb. **\$4.50**

No. 52-50B QUICK CHANGE RELEASE for 50-series drill presses, ordered separately. V-belt furnished. ZECZY, $12\frac{1}{2}$ lb. **\$4.50**

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



OIL TABLE

production work. Has 9 1/4" x 5 1/4" ground working surface. PRODUCTION OIL TABLE ordered with 52 drill press in place of standard full-tilting table. Extra.....\$8.00
 Ordered separately, No. 52-2S. Code word ZAA SF, weight 55 lb.\$10.00



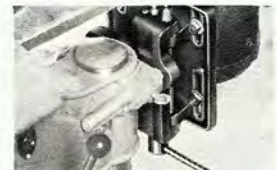
COLUMN COLLAR

Simplifies raising, lowering, moving drill press head. No. 52-75A COLUMN COLLAR. Code word ZEHZE, weight 3 1/2 lb.\$0.95



SPEED ATTACHMENT

Provides low speed of 200 RPM and higher than standard speeds. V-belts furnished—see page 56. No. W14A HI-LO SPEED ATTACHMENT for 52 drill press. Code word ZAFRE, weight 6 lb.\$6.25



BELT RELEASE

Speeds up belt changes—complete description page 56. V-belt furnished. QUICK-CHANGE BELT RELEASE ordered with 52 or 52A drill press. Extra....\$2.75



MOTORS

SKF ball-bearings, double-end shaft, cord and plug. Operate in any position—see page 67.

No.	HP	Weight	Price
2480	1/3	28 lb.	\$14.25
2490	1/2	35 lb.	17.50

Atlas No. 52

12 3/4" BENCH TYPE DRILL PRESS

THE No. 52 drill press is an excellent general purpose machine for the average shop. It drills to the center of a 12 3/4" circle, has 3" spindle travel, takes 9 3/4" over table, and comes equipped with precision Jacobs chuck. It handles the full range of drill press operations—mortising, shaping, sanding, carving, and routing.

The spindle-head bearing construction of the 52 is the same as Nos. 63 and 73 heavy duty models except that the floating-drive bearing is a single large deep-grooved ball bearing mounted in the pulley. Two more bearings float the spindle free from the quill. This design means smooth, accurate performance at all speeds and long service life.

The No. 52 drill press head is a heavy, accurately machined casting—a strong, fully enclosed housing for the spindle and bearings. Matched and balanced pulleys, combined with splined drive, practically eliminate vibration. Precision Jacobs chucks, graduated depth indicator, three-spoke feed wheel, built-in 10 ampere motor control switch, and adjustable motor mounting bracket are furnished. Drive pulley and splined spindle are completely enclosed by iron guard and cap. Clamp locks for head, quill, and table support are coordinate type. Full tilting table is accurately ground. Heavy base is a rugged support—face is ground to serve as table for long work. Column is 2 1/4" ground steel.



ORDERING INFORMATION BELOW

SPECIFICATIONS NO. 52 DRILL PRESS

Drills to Center of Circle.....12 3/4" diameter
 Chuck Capacity 1/2"
 Spindle Travel 3"
 Maximum Distance Table to Chuck..... 9 3/4"
 Maximum Distance Base to Chuck..... 13 1/2"
 Table Travel 9 3/4"
 Size of Table..... 8" x 9"
 9 Speeds between..... 600 and 5200 RPM

With Hi-Lo Speed Attachment (left) ..Low Speed 200 RPM
 Ground Steel Column..... 2 1/4" diameter
 Overall Height 36"
 Overall Width 11"
 Overall Depth with Motor..... 24"
 Shipping Weight Less Motor..... 95 lb.
 Motor Recommended
 1/3 or 1/2 HP 1740 RPM Ball Bearing

ORDERING INFORMATION

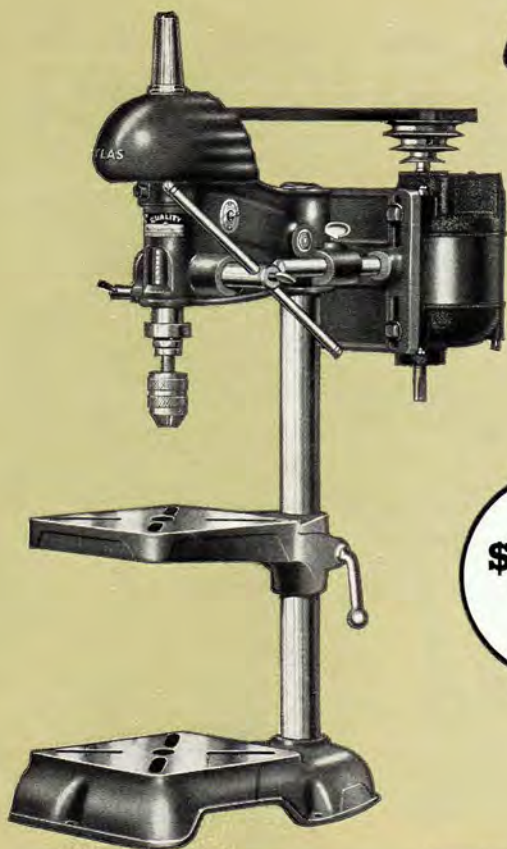
No. 52 12 3/4" BENCH TYPE DRILL PRESS WITH 0 to 1/2" JACOBS CHUCK complete as shown with belt and motor pulley, less motor. Code word ZAAHS, shipping weight 95 pounds\$36.00

No. 52A 12 3/4" BENCH TYPE DRILL PRESS WITH 5/64" to 1/2" JACOBS CHUCK complete as shown with belt and motor pulley, less motor. Code word ZAAJT, shipping weight 95 pounds.....\$35.00

Built-in Switch Furnished . . . 10 Amp. at 110 volt. Switch is for single phase current only. 3-phase controls, page 54.
 Motor pulley furnished is for 1/2" diameter motor shaft—prices of pulleys for other motor shafts on request.

Atlas No. 42 DRILL PRESS

• 1/2" Chuck Capacity • Drills to Center of 12" Circle • 7 Speeds, 700 to 4000 RPM
• 11 1/2" Capacity Over Base • 8 1/4" Capacity Over Table



\$18⁰⁰
LESS
MOTOR



SPEED ATTACHMENT

Provides low speed of 260 RPM and higher than standard speeds. V-belts furnished—see page 56. No. W32 HI-LO SPEED ATTACHMENT for 40-series drill presses. Code ZAEWK, wt. 6 lb.\$6.25



JACOB CHUCKS

The 42 Drill Press is available with precision Jacobs Chucks in two sizes: 1/8" to 1/2" and 0 to 1/2" (No. 70 Drill to 1/2"). Furnished with key-type adjusting wrench. See Order Nos. 42A and 42B at right.



MOTORS

SKF ball bearings, 10 ft. approved SJ extension cord and plug. See page 67. No. 2480 1/2 HP Single-Phase \$14.25 No. 2520 1/3 HP Capacitor Start\$20.50 Other Attachments for No. 42 Drill Press—Pages 59-61.



COLUMN COLLAR

Simplifies raising, lowering and moving drill press head. No. 42-75 COLUMN COLLAR. Code word ZADYV, wt. 4 lb.\$0.95

A SENSATIONAL VALUE!

ATLAS volume production makes possible this outstanding drill press value. Construction, performance, and all-round utility make the 42 an ideal multi-purpose machine for the small shop. In addition to general drilling of metal and wood, it handles such operations as: mortising, shaping, carving, sanding, routing.

The spindle of the Atlas No. 42 runs on two heavy-duty oilite bronze bearings—a ball bearing absorbs end thrust. Belt pull is taken on the spindle sleeve and transmitted to the head through a special oilite bronze bearing. Alloy steel spindle is accurately ground and furnished with taper for Jacobs chucks or threaded to take standard chuck. Quill is accurately ground and graduated in 16ths for gauging depth of feed—rack and pinion mechanism controls feed. Stop collar on spindle can be set to stop feed at any depth. Spindle and drive-pulley have six splines, minimizing vibration—are completely enclosed by cap and iron guard. Motor base is adjustable for belt tension—motor control switch is built into head in easy-to-reach position. Clamp locks are coordinate type.

Base casting can be used as support for long work. Column is ground steel. Solid table has accurately machined face, diagonal slots for clamping. Full-tilting table is available at \$4.00 when ordered with drill press in place of solid table. When ordered separately: No. 40-2A, wt. 12 lb., \$5.00.

All Atlas drill press attachments and accessories may be used with the 42 drill press.

- No. 42** 12" BENCH TYPE DRILL PRESS WITH 1/2" THREADED CHUCK complete as shown with belt and motor pulley, less motor. Code word ZACTY, weight 67 lb. **\$18.00**
- No. 42A** 12" BENCH TYPE DRILL PRESS with 1/16" TO 1/2" JACOBS CHUCK complete with belt and motor pulley, less motor. Code word ZACYT, weight 67 lb. **\$22.00**
- No. 42B** 12" BENCH TYPE DRILL PRESS WITH 0 TO 1/2" JACOBS CHUCK complete with belt and motor pulley, less motor. Code word ZACUS, weight 67 lb. **\$23.00**

SPECIFICATIONS—42-SERIES DRILL PRESSES

Drills to Center of Circle.....	12" diameter
Chuck Capacity.....	1/2"
Spindle Travel.....	3"
Maximum Distance Table to Chuck.....	8 1/4"
Maximum Distance Base to Chuck.....	11 1/2"
Table Travel.....	8 1/4"
Size of Table.....	7 1/2" x 7 1/2"
9 Speeds between.....	700 and 4000 RPM
With Hi-Lo Speed Attachment (left).....	Low Speed 260 RPM
Ground Steel Column.....	1 1/8" diameter
Overall Height.....	31"
Overall Width.....	10"
Overall Depth with Motor.....	24"
Shipping Weight, Less Motor.....	67 lb.
Motor Recommended.....	1/2 HP 1740 RPM Ball Bearing

Built-in Switch Furnished—10 Amp. at 110 volt. Switch is for single phase current only—3-phase controls, page 54. Motor pulley furnished is for 1/2" diameter motor shaft—prices of pulleys for other motor shafts on request.

DRUM SANDER FOR ALL ATLAS DRILL PRESSES

The Atlas drum sanding attachment saves time and effort on fine wood and metal finishing work. Abrasive sleeves are available in fine, medium, and coarse garnet for wood finishing and aloxite for metal work.

The drum sander is adapted to the Atlas drill press spindle by the Jacobs spindle adapter W6-6A listed below. No adapter is necessary for the No. 42 drill press with threaded spindle. Drum sander is 2-3/16" diameter, 3" long.

ABRASIVE SLEEVES

Six Sleeves per Set

No.		Code	Wt.	Price
W6-2F	Set of six FINE GARNET abrasive sleeves.	ZAKZO	4 oz.	\$1.00
W6-2M	Six MEDIUM GARNET abrasive sleeves.	ZALBO	4 oz.	1.00
W6-2C	Six COARSE GARNET abrasive sleeves.	ZALIZ	6 oz.	1.00
W6-2A	Six ALOXITE abrasive sleeves for metal.	ZALOB	8 oz.	1.00



No. W6-6A JACOBS SPINDLE ADAPTER for drum sander, complete with nut, washer and tapered wedge. Code word ZALUC, weight 7 oz. **\$1.80**

No. 42 drill press with threaded spindle does not require adapter.

A TIME SAVER

No. W6A DRUM SANDER complete with one medium garnet abrasive sleeve. Code ZAKWE, 2 lb. **\$1.75**

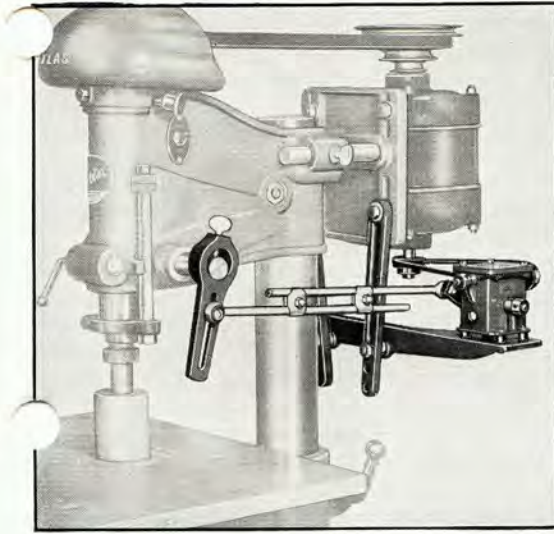
Using shaping extension table (page 60) to support large work for sanding.



ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Atlas DRILL PRESS ATTACHMENTS

NEW OSCILLATING SANDER ATTACHMENT



No. W75 NEW OSCILLATING SANDER ATTACHMENT as shown with belt and motor pulley, less drum sander and table. Code ZAJEV, weight 10 lb. **\$13.85**
Specify bore of motor pulley— $\frac{1}{2}$ ". Prices of pulleys for other motor shafts on request.

No. W6A SANDING DRUM only with one medium garnet abrasive sleeve (see page 58). Code ZAKWE, weight 2 lb. **\$1.75**

No. W7T EXTENSION TABLE only (see page 60). Code ZAGIT, wt. 7 lb. **\$3.75**

Drum Sander, Abrasive Sleeves, Spindle Adapter—Page 58.

For Production Sanding

This new oscillator converts any drill press into a production sander for fast, smooth finishing of woods, metals, and plastics. It gives the rotating spindle an up-and-down motion which makes easier work of sanding and insures a smooth finish. The mechanism can be installed in a few minutes and disengaged easily without removing from the drill press.

The W75 attachment is driven from the lower end of the drill press motor shaft. Its gear reduction unit is supported from the motor bracket by an adjustable arm. An adjustable connecting rod from a crank on the gear reducer drives the spindle rocker arm, which is tightened by a thumb screw on the drill press spindle feed shaft. Loosening this thumb screw and disengaging the drive belt leaves the drill press free for other operations. Mechanism can be used in inverted position.

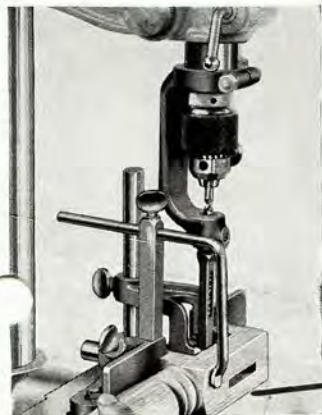
SPECIFICATIONS

Stroke Adjustable between..... $\frac{1}{4}$ " and $\frac{3}{8}$ "
Strokes per Minute
(with 1740 R.P.M. motor)..... 100
Working Strokes per Minute
(with 1740 R.P.M. motor)..... 200
Motor Pulley Furnished.....2-step
(Ordering Information at Left)

Equipped with various accessories, the Atlas Drill Press becomes a versatile combination machine for such operations as shaping, mortising, routing, carving and sanding. Atlas spindle-head bearing construction provides the essential rigidity and accuracy, and the spindle design simplifies mounting of the accessories. All attachments are held securely on standard spindle by threaded collar and spindle taper. In this way, original spindle accuracy and rigidity are retained permanently.

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MORTISING ATTACHMENT

For Accurate Mortising

The W1B mortising attachment converts any Atlas drill press into a mortising machine for cutting clean, accurate mortise-and-tenon joints. It saves time and gives a much closer fitting joint than is possible by hand methods—essential for joint work on such projects as tables, chairs, bookcases, cabinets and window screens.

The fence of the W1B may be adjusted after the table bracket has been bolted to the drill press table—an exclusive feature. This permits adjusting work so that mortises larger than the regular range of a chisel may be cut accurately. For example: a $\frac{7}{16}$ " mortise may be cut with a $\frac{1}{4}$ " chisel by moving the fence $\frac{3}{16}$ " after the first cut. This mortise will be uniform in width through its entire length—the fence always moves absolutely parallel to the sides of the chisel.

The hold-down foot is quickly adjustable for work between $\frac{1}{2}$ " and 6" high. Capacity between fence and side-clamp arm is $\frac{5}{8}$ ". Clamp arm may be turned out of the way for wider work.



No. W1B MORTISING ATTACHMENT complete as shown including chisel socket. Code ZALWA, wt. 10 lb. **\$5.25**

No. W1F MORTISING HOLD-DOWN AND FENCE ATTACHMENT ONLY. Code word ZALYE, weight 8 lb. **\$3.40**

No. W1-4 MORTISING CHISEL SOCKET ONLY—for all Atlas drill presses. Code ZAMAY, weight 3 lb. **\$2.20**

PROFESSIONAL MORTISING CHISELS



Atlas professional chisels are ideal for production mortising. Select high-carbon steel, carefully heat-treated, means long life and superior cutting qualities. Weight 4 oz. each.

No.	Size	Depth of Mortise	Code	Price
W1-16P	$\frac{1}{4}$ "x $\frac{1}{4}$ "	$1\frac{7}{8}$ "	ZAMEZ	\$4.75
W1-17P	$\frac{3}{8}$ "x $\frac{3}{8}$ "	$3\frac{1}{4}$ "	ZAMIB	5.75
W1-18P	$\frac{1}{2}$ "x $\frac{1}{2}$ "	$3\frac{1}{4}$ "	ZAMOC	6.50

STANDARD MORTISING CHISELS



Atlas standard mortising chisels are designed for the shop with an occasional mortising job. They produce a smooth, sharp-cornered, square mortise. Weight 4 oz. each.

No.	Size	Depth of Mortise	Code	Price
W1-16	$\frac{1}{4}$ "x $\frac{1}{4}$ "	$1\frac{7}{8}$ "	ZAMUD	\$1.65
W1-17	$\frac{3}{8}$ "x $\frac{3}{8}$ "	$3\frac{1}{4}$ "	ZAMYA	1.65
W1-18	$\frac{1}{2}$ "x $\frac{1}{2}$ "	$3\frac{1}{4}$ "	ZAMZE	1.65

MORTISING CHISEL BITS



Atlas mortising chisel bits remove stock quickly and cleanly when used with either the Professional or Standard chisel. These bits are made of special alloy steel carefully heat treated. They are held in the drill press chuck—no special bushings or adapters required.

Weight 3 oz. each.

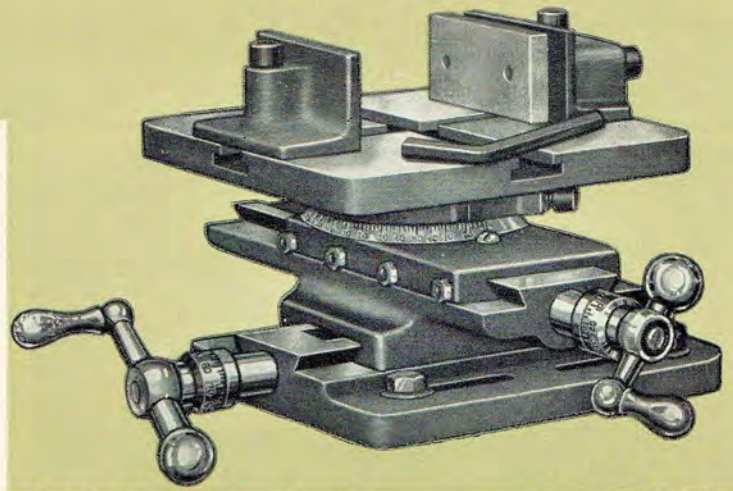
No.	Size	Diameter Shank	Code	Price
W1-19	$\frac{1}{4}$ "	$3/16$ "	ZANAZ	\$1.65
W1-20	$\frac{3}{8}$ "	$19/64$ "	ZANBE	1.65
W1-21	$\frac{1}{2}$ "	$19/64$ "	ZANDO	1.65

NEW UNIVERSAL COMPOUND VISE

This new versatile fixture handles all types of accurate indexing, layout, and spacing work—straight lines, radial, circular—and is built rigidly to permit adapting the Atlas drill press to light milling operations. It can also be used with shaper, milling machine, lathe, and grinder for any jobs which require accurate feeds in two directions.

The rugged base casting is a rigid accurate foundation for the entire attachment—bottom is machine-ground. Four flanged slots permit bolting or clamping to the drill press table or base. Upper slide is graduated through 180° (90° right and left) so that the vise table may be rotated to any angle and set accurately. The transverse (upper) and cross (lower) slides travel on dovetail ways carefully machined and hand-fitted—full length gib plates with screws and lock nuts provide means for take-up. Feed screws have Acme threads, ball crank controls with take-up, and steel collars graduated in thousandths.

The machine-ground table casting is locked to the upper slide by two socket-head cap screws. Four T-slots for positioning and locking vise jaws extend from center of table to edges. Each vise jaw is locked by a socket-head cap screw. One jaw can be swiveled to grip irregular work—the other has a movable face which is tightened upon the work after both jaws have been clamped to the table. Table can be used alone to hold long work for boring on Atlas 10" lathes, replacing the lathe compound rest (refer to page 27).



No. W68 NEW UNIVERSAL VISE complete as shown with wrench and bolts. Code word ZEFWE, weight 23¾ lb. **\$19.95**

SPECIFICATIONS

Cross Feed (lower slide).....6½"	Jaw Width.....3"
Transverse Feed (upper slide).....5½"	Jaw Opening.....4⅝"
Size of Base.....6"x7"	Jaw Height.....1⅝"
Size of Table.....7"x7"	Height: Base to Table.....4¼"

No. W68-2A TABLE ONLY for boring on Atlas 10" metal lathes (see page 27), complete with vise and wrench. Code word ZEFWS, weight 12 lb..... **\$10.50**

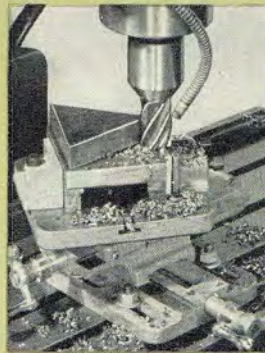
No. W8V V-BLOCK JAW for holding round work in vise jaws. Code word ZADSO, weight 10 oz..... **\$.75**



A typical spacing job for the W68 vise—drilling holes at 60° intervals around center of drill jig.



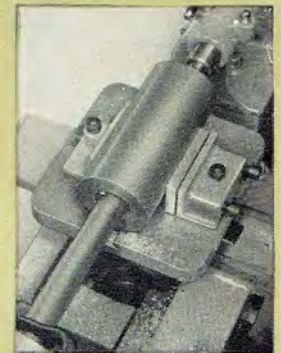
The W68 vise simplifies many jobs in the pattern shop. Above, routing angular slots.



Machining triangular punch press die on milling machine with vise table at 60°.



Magnetic chuck of grinder holds W68 vise while sides of triangular die are finish-ground.



Vise table alone (No. W68-2A) holding long piece for boring in Atlas 10" lathes.

ROUTER BITS

Alloy steel ready-ground to shape. Complete set equips drill press for accurate carving, inlaying, round-end mortising, dovetailing, reeding, round edging, boring and general routing. Shank 1" long, ⅜" diam. Wt. 2 oz. each. Used with No. W31 Adapter below.

No. W4B SET OF 11 ROUTER BITS shown. ZANGY, 2 lb..... **\$11.00**



No. W5-2, ¾" Carving ZANIC \$1.30
No. W5-1, ½" Carving ZANOD \$1.30
No. W2-12, ⅜" Dovetailing ZANUF \$1.00
No. W2-13, ½" Dovetailing ZANYG \$1.00
No. W2-11, ¼" Dovetailing ZANZA \$1.00



No. W4-8, 1" Mortising ZAODS \$1.30
No. W4-5, ⅝" Mortising ZAOFT \$1.25
No. W4-4, ½" Mortising ZAOWM \$1.25
No. W4-3, ⅜" Mortising ZAPAB \$1.00
No. W4-2, ¼" Mortising ZAPBA \$1.00
No. W4-1, ⅛" Mortising ZAPCE \$1.00



ROUTER BIT ADAPTER
 Fits drill press spindle in place of Jacobs chuck. Has ⅜" hole for router bits above. Wedge furnished.

No. W31 ROUTER BIT ADAPTER. Code ZANEB, wt. 8 oz.....\$1.50

PLEASE ORDER BY CATALOG NUMBER

60° COUNTERSINK DRILLS
 For accurately centering work in lathe or drill press.

No.	Size	Wt.	Code	Price
395	1/16" x 1 1/8"	2 oz.	ZAURJ	\$.65
395A	1/8" x .300"	2 oz.	ZAUSK	.70

DRILL PRESS VISE

Assures accuracy by taking firm grip on work and holding it in rigid position during operation. Grey iron jaws are 2½" wide and open to 3½"; jaw height over guide rods, 1½". Steel guide rods keep jaws in accurate alignment and form level work support—base casting is accurately machined. Ample clearance is provided so that drill point will not gouge table when breaking through. Recesses permit clamping vise to table.



No. W8 DRILL PRESS VISE as shown above. Code word ZADPA, weight 5 pounds..... **\$3.75**



No. W8V V-Block JAW for holding round work in drill press vise. Code ZADSO, weight 10 oz..... **\$.75**

No. W8S SWIVEL JAW for holding tapered and irregular work. Code ZADUT, wt. 8 oz..... **\$.75**

SLEEVE SOCKET

Used in lathe or drill press. No. 2 Morse taper outside, No. 1 Morse taper hole.

No. CD-104 SLEEVE SOCKET. Code word ZAVJE, 6 oz..... **\$1.10**

MORSE TAPER SOCKETS

For holding taper shank drills. Fit taper end of drill press spindle.

No.	M.T. Socket	Code	Price
W9-1	No. 1	ZAVLO	\$2.50
W9-2	No. 2	ZAVNY	2.50

CENTER KEY

For removing drills from Morse Taper sockets.

No. W9-3 CENTER KEY. Code word ZAVOL, wt. 4 oz..... **\$0.55**

DRILL PRESS LAMP

Assures accurate work. 15-inch flexible cable, universal mounting bracket with clamp screws, fits almost any make drill press, satin-chrome finish, "push-thru" switch.



No. W38 DRILL PRESS LAMP with mounting bracket, 6 ft. rubber cord, switch, plug. Code ZAFUV, 2 lb... **\$.275**

Atlas DRILL GRINDING ATTACHMENT



Overall Length
from Face of
Wheel11"

No. W30 DRILL GRINDING ATTACHMENT complete as shown. Code word WUVNE, weight 7 pounds **\$21.75**

FOR ANY GRINDER AND WHEEL THICKNESS

Fast, clean, accurate drilling is an easy job when the drill point has been sharpened on the Atlas drill grinder. This attachment soon pays for itself by resharpening drills quickly and accurately, with none of the uncertainty and waste of hand work.

It takes just two minutes to sharpen any drill between 3/32" and 1/2" in diameter, and both lips are always ground identically, insuring maximum accuracy and prolonging drill life. Novel chuck and V-block center the drill—shank stop, micrometer graduated feed, and special lip stop assure accurate rechucking for grinding second lip. Radial movement of chuck provides scientific lip clearance. Swivel base allows wide range: 40° to 80° (80° to 160° included angle)—59° and 41° positions are indicated. Easily adaptable to any grinder and any wheel thickness.

THE PROPERLY GROUND DRILL

As Sharpened with the No. W30 Attachment

Lips Identical

A drill point with both lips ground identically. Lips are of equal length, clearance and angle—the resulting hole will be exactly the proper size. In addition, the properly ground drill will outlast the one with a poorly ground point.



Proper Angle Between Point and Lip

A view directly into the drill point showing the proper angle between point and lip. This angle must be between 120° and 135° in order to provide correct lip clearance at the center of the drill.



Proper Lip Clearance

Another view of the point showing the proper lip clearance at the circumference of the drill. For correct drilling, this angle must be between 12° and 15°. Too much clearance makes a weak point resulting in rapid wear and chipping—too little clearance makes the drill cut slowly, requiring greater power.

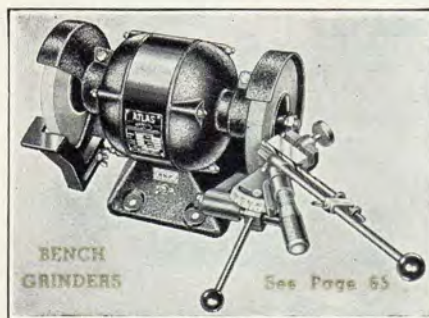


DIAMOND POINT FOR DRESSING WHEEL

Trues face of grinding wheel for maximum accuracy. Held in chuck of drill grinding attachment.

No. W30-35A DIAMOND POINT ZEERK, wt. 4 oz.. **\$5.50**

Atlas GRINDERS



BENCH GRINDERS

See Page 65

An Atlas heavy-duty grinder, equipped with the W30 drill grinding attachment, is an ideal machine for accurate, efficient drill grinding. 1/4, 1/3, and 1/2 HP—3450 RPM SKF ball bearing motor—rugged, powerful, fast, and smooth-running. See page 65.



FLOOR GRINDERS

See Page 65

No.		Diam. Wheels	PRICE
2505	1/4 HP Single Phase.....	6"	\$19.50
2500	1/3 HP Single Phase.....	6"	28.75
2570	1/2 HP Full Capacitor.....	7"	41.50
2575B	1/2 HP 3-Phase	7"	41.50

SKF ball bearing equipped
Complete descriptions, page 65.



RECESS WHEELS For Drill Grinding Recessed One Side

No. W30-40	\$3.55
Diameter	6"
Diam. Hole	1/2"
Code	WUVSY
Weight.....	.2 lb.
No. W30-41	\$4.60
Diameter	7"
Diam. Hole	5/8"
Code	WUVUR
Weight.....	.2 1/2 lb.

Atlas MACHINISTS VISES

These rugged vises have a 30-year reputation for "standing the gaff." Extra weight and scientific design furnish maximum strength—weight has been distributed to the points where it counts most.

Body, base, sliding jaw and beam are tough close-grained Rimcoloy. Replaceable jaws are high-carbon Maxel tool steel, expertly heat-treated, machined to a perfect fit, and mechanically serrated. Oversized screw and screw-head are steel—main nut is malleable iron.

Accurate machining of each part assures maximum rigidity and accurate alignment. Beam is rough-milled and finish-milled—hole for beam is accurately broached. Body and jaw castings are accurately machined after assembly. Screw is protected from dirt and chips by apron on jaw casting. Jaw faces, beam and handle are ground smooth. All corners and edges are round and smooth—body and base have durable, attractive finish.

RIMCOLOY CASTINGS

The tough, close-grained castings used in Atlas vises are made by a formula developed and perfected during 30 years of research and practical experience. These superior Rimcoloy castings mean greater strength and longer life on the job. For many years railroad shops, government departments, and heavy industries have specified these rugged vises for all types of general shop work.

570-SERIES MACHINISTS VISES (Swivel Base)

Order No.	Jaw Width	Jaw Opens	Weight	Code Word	Price
RI-571	3 "	4 "	28 lb.	WYOWB	\$13.00
RI-572	3½"	5 "	38 lb.	WYOZD	15.00
RI-573	4 "	6 "	51 lb.	WYPAP	17.00
RI-574	4½"	6½"	74 lb.	WYPIR	20.00
RI-575	5 "	7½"	95 lb.	WYPOS	30.00
RI-576	5½"	8½"	122 lb.	WYPPA	38.00
RI-577	6 "	10 "	147 lb.	WYPSO	52.00

590-SERIES MACHINISTS VISES (Stationary Base)

Order No.	Jaw Width	Jaw Opens	Weight	Code Word	Price
RI-591	3 "	4 "	22 lb.	WYPUT	\$10.00
RI-592	3½"	5 "	31 lb.	WYRAR	11.25
RI-593	4 "	6 "	42 lb.	WYRIT	12.75
RI-594	4½"	6½"	62 lb.	WYROV	15.50
RI-595	5 "	7½"	77 lb.	WYRRA	20.00
RI-596	5½"	8½"	102 lb.	WYRSE	30.00
RI-597	6 "	10 "	130 lb.	WYRVO	39.00

HEAVY CHIPPING VISES

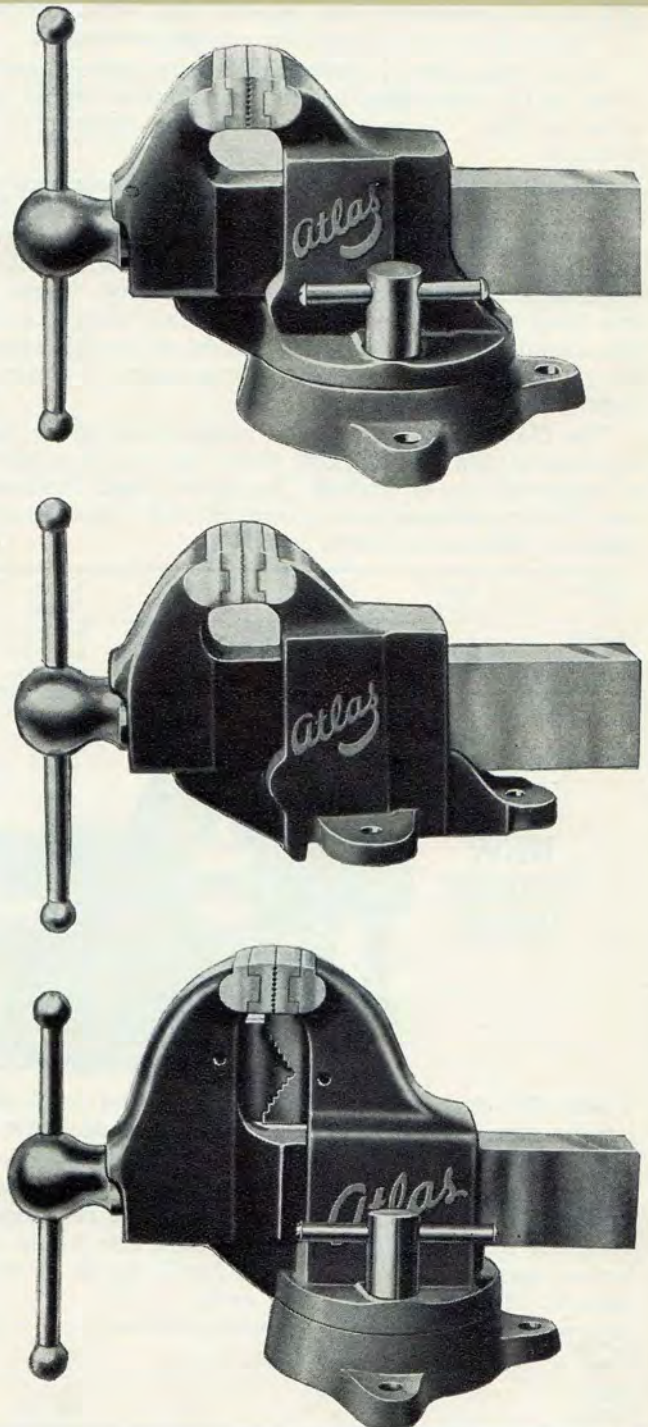
These heavy-duty vises are similar in every detail to the Machinists Vises but have high-carbon steel jaws molded rigidly into place. Added weight and reinforcements give the additional strength required for the heaviest types of mill and back-shop service.

Order No.	Base	Jaw Width	Jaw Opens	Weight	Code Word	Price
RI-598	Stationary	7 "	12 "	218 lb.	WYSAS	\$55.00
RI-567	Stationary	8 "	12½"	285 lb.	WYSET	75.00
RI-578	Swivel	7 "	12 "	248 lb.	WYSIV	70.00
RI-568	Swivel	8¾"	14 "	345 lb.	WYSSA	105.00

COMBINATION PIPE VISES

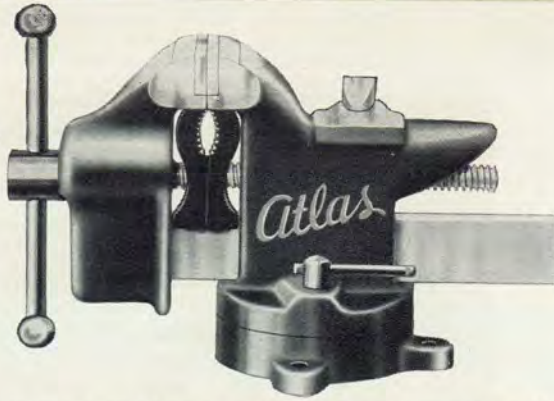
Excellent utility tools for pipe work, all-around shop and garage use as well as general vise operations. Construction is identical to machinists vises—pipe jaws are Maxel tool steel.

Order No.	Jaw Width	Jaw Opens	Capacity Pipe	Weight	Code Word	Price	Extra Pipe Jaw Front	Back
RI-541B	3½"	4¾"	½" to 2"	56 lb.	WYSTE	\$17.50	\$1.20	\$1.50
RI-542B	4¼"	5½"	½" to 3"	73 lb.	WYSUX	24.00	1.50	1.90
RI-543B	5 "	6¾"	½" to 4"	117 lb.	WYSWO	38.00	1.70	2.35
RI-544B	6 "	8¾"	½" to 6"	189 lb.	WYTAT	60.00	2.35	3.00



GENERAL-PURPOSE VISES

"DELUXE" SERIES



ATLAS General-Purpose Vises handle pipe and anvil work, cut-off operations and general vise work. Unusually low prices are the result of modern volume production.

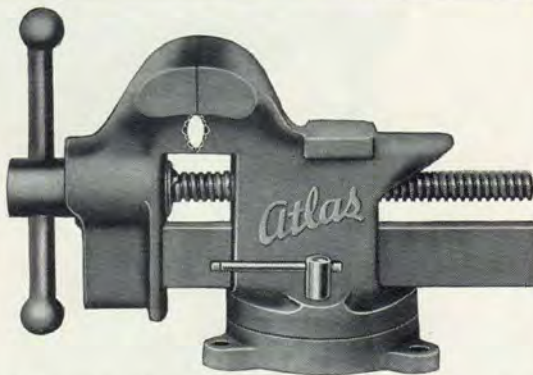
A new-type swivel base with 3-point contact permits these vises to be completely rotated and locked rigidly in any desired position. Base is reinforced and ribbed for maximum strength.

Rimcoloy body and jaw are heavily reinforced—replaceable jaws are hardened steel with serrated faces. Removable pipe jaws are Rimcoloy—take pipe up to 1½" diameter. The steel beam has rounded edges and square-cut end, providing rigid support when opened to full capacity. Beam and body are fitted by an exclusive process which assures accurate jaw alignment and quick action. Screw is machine-forged steel, very tough and wear-resisting—apron on jaw casting keeps screw clean.

The General-Purpose Vises have anvil backs for forming operations. On the "Deluxe" vises, the machined anvil top has a removable cut-off swivel. The screw head, handles and pad are highly polished and protected with clear lacquer. Pipe jaws are finished in black.

Order No.	Jaw Width	Jaw Opening	Weight	Code Word	Price
RI-503A	3 "	3½"	15 lb.	WYTYO	\$3.00
RI-504A	3½"	4 "	20 lb.	WYUCH	4.50
RI-505A	4 "	4½"	28 lb.	WYUFK	7.50

NEW UTILITY VISES



Nos. 703 and 704 are ideal vises for the small shop—they handle pipe and anvil work as well as general vise jobs.

Base, body, and moving jaw are Rimcoloy—jaw faces are chilled and accurately finished. Pipe jaws are cast with moving jaw and body. Beam is steel; oversize screw-head and ½" diameter screw are forged steel. Base can be swivelled and locked securely through 180°. Anvil top is accurately machined. Steel handle has ball ends.

Order No.	Jaw Width	Jaw Opening	Weight	Code Word	Price
RI-703	3 "	3½"	11 lb.	ZACPE	\$2.50
RI-704	3½"	4 "	15 lb.	ZACRO	3.50

WOODWORKERS VISES

NOS. 461 and 465 QUICK-ACTING VISES



No. RI-461

Nos. 461 and 465 heavy-duty quick-acting woodworkers vises handle every vise requirement of the commercial woodworking shop, manual training or trade school shop. Sturdy, simple construction with minimum of working parts assures long, efficient service. Furnished with adjustable lug to hold wide, flat work on top of bench. Rimcoloy castings—steel screw and slide rod—malleable nut and wood handle.

No. RI-461 WOODWORKERS' VISE as shown above.
Size of jaw 7"x4", opens 9". Code word WYUVB, weight 28 lb. **\$8.80**

No. RI-465 WOODWORKERS' VISE as shown above.
Size of jaw 10"x14", opens 12". Code word WYUXD, weight 33 lb. **\$10.40**

NO. 265 VISE—QUICK-ACTING—LUG-EQUIPPED

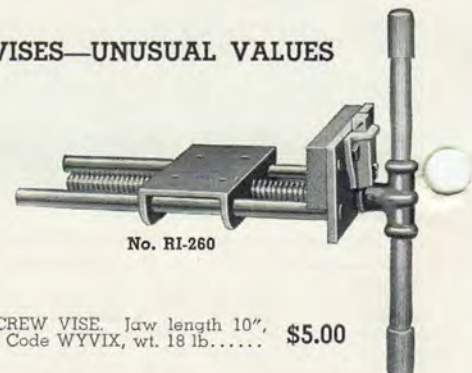


No. 265 vise has steel sliding jaw—jaws are smooth-ground on faces, top, and sides. Nut is heat-treated tool steel; handle is hickory. An ideal vise for the small shop.

No. RI-265 WOODWORKERS VISE as shown.
Jaw length 10", jaw width 4", open 10". Code WYVOZ, weight 21 lb. **\$7.00**

PLAIN SCREW VISES—UNUSUAL VALUES

No. RI-260
PLAIN SCREW VISE. Jaw length 7", opens 9". Code WYVAV, weight 16 pounds **\$3.65**



No. RI-260

No. RI-261 PLAIN SCREW VISE. Jaw length 10", opens 9". Code WYVIX, wt. 18 lb. **\$5.00**

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Atlas HEAVY DUTY GRINDERS

1/4, 1/3, AND 1/2 HP—3450 RPM BALL BEARING MOTOR

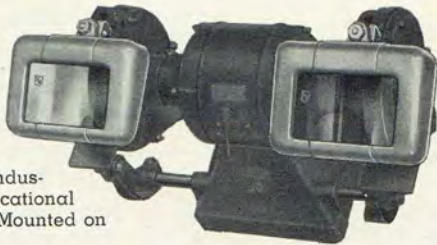
RUGGED, powerful, fast, and smooth-running—these Atlas grinders meet every need of the modern shop. They are built around a 3450 RPM cool-running ball bearing motor with precision balanced rotor. Shaft turns on oversized SKF ball bearings, sealed against wheel dust. The motors of the 1/3 and 1/2 HP grinders are completely enclosed—1/4 HP grinder is partially enclosed. One wheel

is for roughing, the other for finishing. All grinders are equipped with adjustable work rests and adjustable safety wheel guards.

Atlas grinders can be equipped with floor pedestal and eyeshields—details below at left. The No. W30 drill grinding attachment (page 62) converts the Atlas grinder into an accurate, efficient drill grinding machine.

SAFETY EYE-SHIELDS

Special shatterproof glass protects operator's vision as required by industrial and vocational safety codes. Mounted on wheel guards.



No. W37-5A SAFETY EYE-SHIELDS for 1/4 HP grinders. Code word WYMEN, wt. 5 lb. Per pair **\$6.50**

No. W37-5B SAFETY EYE-SHIELDS for 1/3 and 1/2 HP grinders. (Give year purchased.) Code word WYMIP, wt. 5 lb. Per pair **\$6.50**

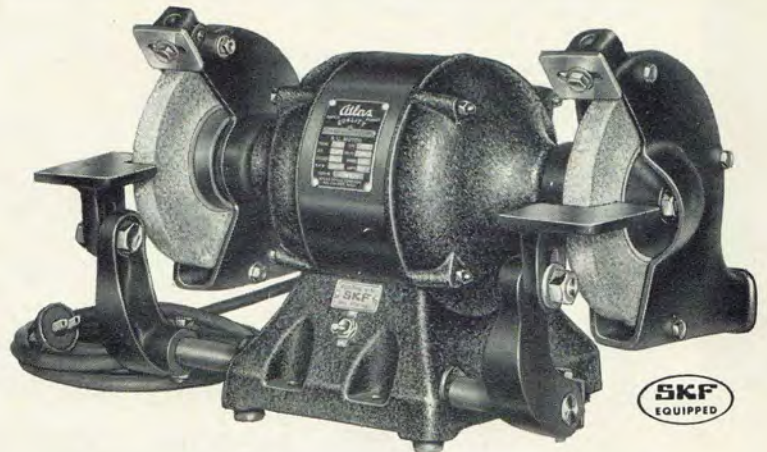
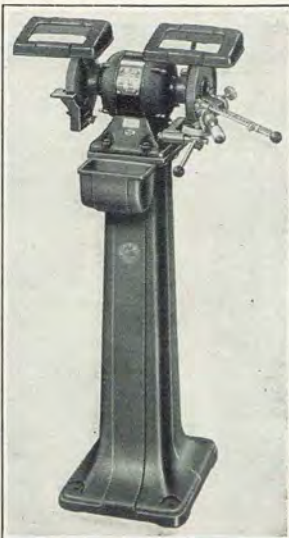
FLOOR PEDESTALS

A rugged floor mounting for grinder. Heavy grey iron casting is scientifically designed and braced for maximum rigidity. Pedestal is 12" wide, 16" deep, 34 1/2" high, overall.

No. W37-1A FLOOR PEDESTAL for 1/4 HP grinders, complete with grinder table and water pot. Code word WYLPO, wt. 110 lb. **\$15.25**

No. W37-1C FLOOR PEDESTAL for 1/3 HP grinders. (Give year purchased.) Complete with grinder table and water pot. Code word ZEEPH, wt. 115 lb... **\$16.25**

No. W37-1B FLOOR PEDESTAL for 1/2 HP grinders, complete with grinder table and water pot. Code word WYAMM, weight 115 lb. **\$16.25**



1/3 AND 1/2 HP GRINDERS

These rugged grinders are handling roughing and finishing in thousands of industrial plants. They are designed for continuous heavy-duty work. SKF ball bearings, completely enclosed 3450 R.P.M. motor, adjustable work rests and wheel guards. Base of wheel guards form chute openings for removal of dust. Crackle finish with black enamel motor band.

1/3 HP SINGLE PHASE 110 VOLT GRINDER

No. 2500 1/3 HP BENCH GRINDER—6" wheels (3/4" thick), 1/2" shaft. Overall: 18" x 10" x 11" high. MOTOR: Single phase, 110 volt, 60 cycle, 3450 RPM. SKF ball bearings, built-in switch, cord and plug. Code word WYLEM, weight 72 lb. **\$28.75**

1/2 HP SINGLE PHASE 110 VOLT GRINDER

No. 2570 1/2 HP BENCH GRINDER—7" wheels (1" thick), 5/8" shaft. Overall: 20 1/2" x 11 1/2" x 12" high. MOTOR: Single phase full capacitor, 110 volt, 60 cycle, 3450 RPM. SKF ball bearings, built-in switch, cord and plug. Code word WYLLA, weight 100 lb. **\$41.50**

1/2 HP THREE PHASE 220 VOLT GRINDER

No. 2575B 1/2 HP THREE PHASE BENCH GRINDER—7" wheels (1" thick), 5/8" shaft. Overall: 20 1/2" x 11 1/2" x 12" high. MOTOR: 3 phase, 220 volt, 60 cycle, 3450 RPM. SKF ball bearings, BX connector in terminal box. Code word WYMMMA, weight 100 lb. **\$41.50**

1/4 H.P. GRINDER

AN OUTSTANDING VALUE!



\$19⁵⁰

As Shown
No. 2505

Here's a bargain—a sturdy smooth-running 3450 R.P.M. grinder with SKF ball bearings, 6-inch wheels, and built-in switch. Work rests and safety wheel guards are adjustable. Finished attractively in black lacquer. Its sensationally low price puts the No. 2505 within reach of the smallest shops.

No. 2505 1/4 HP SINGLE PHASE 110 VOLT GRINDER 1/4 HP BENCH GRINDER—6" wheels, (9/16" thick), 1/2" shaft. Overall: 14" x 8" x 9 1/2" high. MOTOR: Single phase, 110 volt, 60 cycle, 3450 RPM. SKF ball bearings, built-in switch, cord and plug. Code ZEBOV, wt. 50 lb. **\$19.50**



SEE PAGE 66 FOR WHEELS AND ATTACHMENTS

Atlas HEAVY-DUTY MOTORS

IT PAYS to buy a dependable Atlas motor—you will be sure to get exceptional power, smooth, cool, quiet operation, low power cost, and long service life.

Atlas motors are designed and built to meet the rigid specifications demanded by Atlas engineers. Windings are well-insulated and protected for durability—careful provision is made for thorough ventilation—rotor is static-

ally and dynamically balanced. Ball bearing motors have SKF bearings—heavy phosphor-bronze bearings are supplied on sleeve-bearing motors.

Before shipment Atlas motors must pass thorough factory tests for full-rated horsepower, electrical characteristics, and satisfactory mechanical condition. No expense is spared to supply a truly superior, modern motor.

MOTOR RECOMMENDATIONS—Atlas MACHINE TOOLS

	Average Duty	Heavy Duty
NEW F-SERIES 10-INCH LATHES..... Nos. V36, V42, V48, V54 (page 6) Nos. H36, H42, H48, H54 (page 7) Nos. TV36, TV42, TV48, TV54 (page 8) Nos. TH36, TH42, TH48, TH54 (page 9)	Use No. 2480, 2485B or 2520 1/3 HP motor—No. 2630 3-phase motor.	Use No. 2490, 2530 or 2530A* 1/2 HP motor—No. 2620 3-phase motor. * Horizontal Countershaft Models Only.
NOS. 612 AND 618 SIX-INCH LATHES (page 31).....	Use No. 2470 or No. 2460B 1/4 HP motor.	Use No. 2480, 2485B or 2520 1/3 HP motor — No. 2630 3-phase motor.
NOS. M1, MF, AND MH MILLING MACHINES (pages 40, 41) ..	Use Nos. 2480, 2485B, or 2520 1/3 HP motor, or No. 2630 three-phase motor.	
NOS. 63 AND 73 DRILL PRESSES (pages 52, 53)..... (And Multiple Spindle Drilling Machines, page 55)	Use No. 2480 or No. 2520 1/3 HP motor—No. 2630 3-phase motor.	Use No. 2490, 2530 or 2530A 1/2 HP motor — No. 2620 3-phase motor.
NOS. 52 and 42 DRILL PRESSES (pages 57, 58).....	Use No. 2480 or 2520 1/3 HP motor—No. 2630 three-phase motor.	
NOS. 7B and 7AB SHAPERS (page 47).....	Use No. 2530A 1/2 HP motor, or No. 2620 three-phase motor.	

Atlas MOTORS—COMPLETE SPECIFICATIONS

Order No.	Horse Power	Voltage	Cycle	RPM	Bearings	Phase Type	Shaft	Cord and Plug	Switch	Weight	Code	PRICE
2460B	1/4	110	60	1740	Bronze	Single	1/2" Single-end	Yes	No	26 lb.	ZEDAT	\$ 9.75
2470	1/4	110	60	1740	Bronze	Single	1/2" Single-end	No	No	21 lb.	WYORV	8.25
2480	1/3	110	60	1740	SKF Ball	Single	1/2" Double-end	Yes	Yes	28 lb.	WYIJL	14.25
2485B	1/3	110	60	1740	Bronze	Single	1/2" Single-end	Yes	No	28 lb.	ZEBIT	11.00
2490	1/2	110	60	1740	SKF Ball	Single	1/2" Double-end	Yes	Yes	35 lb.	WYILN	17.50
2510	1/4	110-220*	60	1740	SKF Ball	Single Phase Capacitor Start	1/2" Single-end	Yes	Yes	31 lb.	WYJEK	16.00
2520	1/3	110-220*	60	1740	SKF Ball	Single Phase Capacitor Start	1/2" Double-end	Yes	Yes	33 lb.	WYJIL	20.50
2530	1/2	110-220*	60	1740	SKF Ball	Single Phase Capacitor Start	1/2" Double-end	Yes	Yes	38 lb.	WYJJA	24.75
2530A	1/2	110-220*	60	1740	SKF Ball	Single Phase Capacitor Start	1/2" Single-end	Yes	No	38 lb.	WYZIC	23.75
2540B	1/2	110-220	60	3450	SKF Ball	Single Phase Capacitor Start	1/2" Double-end	Yes	No	35 lb.	ZEELD	24.75
2550B	3/4	110-220	60	3450	SKF Ball	Single Phase Capacitor Start	5/8" Single-end	Yes	No	40 lb.	ZEEMF	31.50
2620	1/2	220	60	1740	SKF Ball	Three	1/2" Double-end	No	No	35 lb.	WYKEL	24.75
2630	1/3	220	60	1740	SKF Ball	Three	1/2" Double-end	No	No	28 lb.	WYKAK	21.00

*See page 67 if ordering motor to operate on 220 volt current with No. 10-420 or M6-480 reversing switch.

WHEELS AND ATTACHMENTS FOR Atlas HEAVY DUTY GRINDERS (PAGE 65)



WIRE BRUSHES AND SECTIONS

For rough buffing and cleaning. 6" diameter. 3 sections may be mounted at once.

- No. W58A 3/4" WIRE BRUSH for 1/4 and 1/3 HP grinders—complete wheel. Code WYKUP, wt. 2 lb. \$2.50
- No. W58B 3/4" WIRE BRUSH for 1/2 HP grinders—complete wheel. WYLAL, 2 lb. \$2.50
- No. W57A 3/8" COARSE BRUSH SECTION for 1/4 and 1/3 HP grinders. WYKKA, 1 lb. Each. \$0.65
- No. W57B 3/8" COARSE BRUSH SECTION for 1/2 HP grinder. Code WYKLE, 1 lb. Each. \$0.65
- No. W57C 3/8" FINE BRUSH SECTION for 1/4 and 1/3 HP grinders. WYKNO, wt. 1 lb. Each. \$0.80
- No. W57D 3/8" FINE BRUSH SECTION for 1/2 HP grinders. WYKON, wt. 1 lb. Each. \$0.80



BUFFING WHEELS

For light cleaning and high finish work. Mounted with collars furnished with Atlas grinders. Four sections to a wheel.

- No. W60A 6" BUFFING WHEEL complete, 4 sections. Thickness 3/4". Code WYZAZ, wt. 6 oz. \$1.30
- No. W61A 7" BUFFING WHEEL complete, 4 sections. Thickness 7/8". Code WYZDO, wt. 1 lb. \$1.60
- No. W60 6" BUFFING SECTION 3/8" thick. Code WYWYE, 6 oz. Each. \$0.35
- No. W61 7" BUFFING SECTION, 3/8" thick. Code WYZBE, wt. 1 lb. Each. \$0.40

RECESS WHEELS

For Drill Grinding Recessed One Side

- No. W30-40...\$3.55 Diameter6" Diam. Hole.....1/2" WUVSY2 lb.
- No. W30-41...\$4.60 Diameter7" Diam. Hole.....3/8" WUVUR2 1/2 lb.



DRILL GRINDING ATTACHMENT

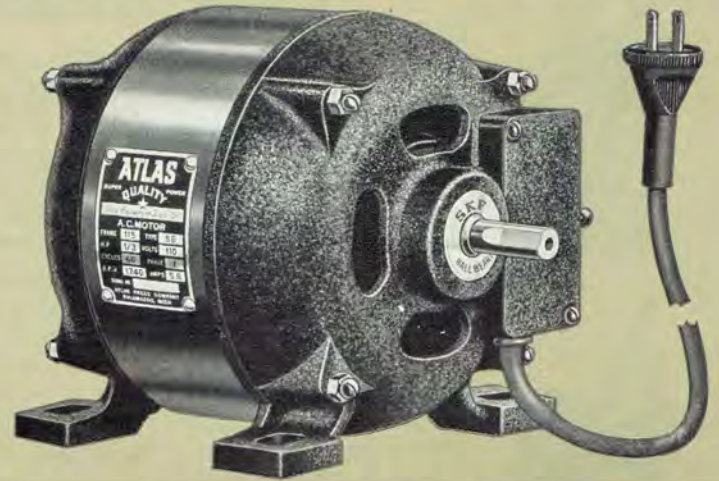
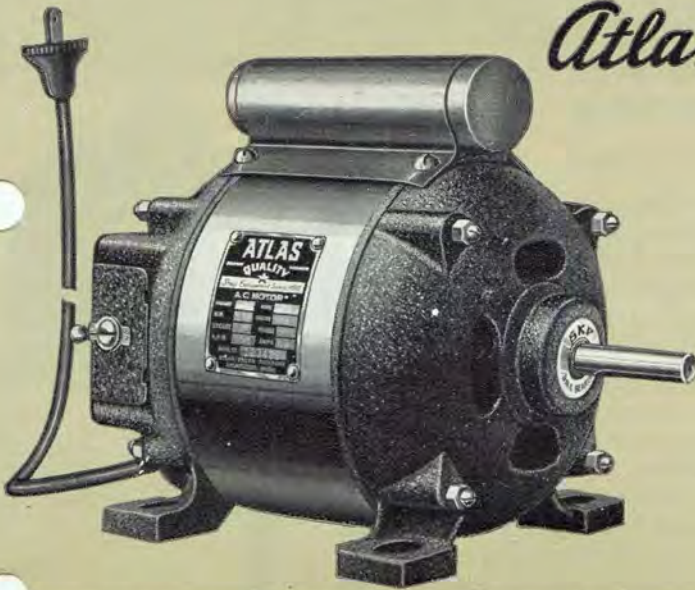
See Page 62

Takes two minutes to sharpen any drill between 3/32" and 1/2" in diameter. Always grinds both lips identically, insur-

ing maximum accuracy and prolonging drill life.

- No. W30 DRILL GRINDING ATTACHMENT for any grinder and wheel thickness. Code word WUVNE, wt. 7 lb. \$21.75

Atlas HEAVY-DUTY MOTORS



CAPACITOR START MOTORS

SINGLE PHASE 110-220 VOLT—SKF BALL BEARING EQUIPPED

Atlas capacitor start motors are built especially for the tough job. They have high starting and pull-out torque, developing full power instantly under load without drawing excess current. These capacitor start motors perform—with lower initial and operating costs—the same function as repulsion-induction motors. Ideal for machine tools and such applications as pumps, refrigerators, and air compressors.

The capacitor start motors are equipped with large SKF ball bearings—may be operated in any position—horizontal, vertical, or inverted. All motors are combination 110-220 volt 60 cycle and have 10-foot approved SJ extension cord and plug. Nos. 2510, 2520, and 2530 are furnished with built-in switch. No. 2530A is recommended for the Atlas shaper—has single-end shaft. Nos. 2540B and 2550B are 3450 RPM motors for high speed applications such as bench saws.

SINGLE PHASE CAPACITOR START MOTORS

No.	HP	RPM	Shaft	Weight	Code	Price
2510	1/4	1740	1/2" Single-end	31 lb.	WYJJK	\$16.00
2520	1/3	1740	1/2" Double-end	33 lb.	WYJL	20.50
2530	1/2	1740	1/2" Double-end	38 lb.	WYJJA	24.75
2530A	1/2	1740	1/2" Single-end	38 lb.	WYZIC	23.75
2540B	1/2	3450	1/2" Double-end	35 lb.	ZEELD	24.75
2550B	3/4	3450	5/8" Single-end	40 lb.	ZEEMF	31.50

All above motors are combination 110-220 volt 60 cycle, have large SKF ball bearings, and are furnished with 10-foot approved SJ extension cord and plug. Nos. 2510, 2520, and 2530 are furnished with built-in switch.



REVERSING SWITCH

A dependable reversing switch is essential to reverse the rotation of motor and lathe spindle for grinding, tapping, nut-setting, fine metal and wood finishing. The new 10-420 (left) is a drum-type switch with knobbed lever control easily shifted to forward, off, or reverse position. Operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead)—also both shunt-wound and compound-wound DC. Durable contacts are hard-rolled copper.

No. 10-420 REVERSING SWITCH complete with mounting bracket, cable connections, installation diagram. Code YELJE, wt. 3 1/2 lb. \$4.50

SPECIAL NOTE: If ordering capacitor start motor to operate on 220 volt current with No. 10-420 or No. M6-420 reversing switch (page 36), order motor from this list:

No.	HP	Shaft	Weight	Code	Price
2515	1/4	1/2" Single-end	30 lb.	ZEGBO	\$16.00
2525	1/3	1/2" Double-end	32 lb.	ZEGIZ	20.50
2535	1/2	1/2" Double-end	37 lb.	ZEGOB	24.75
2535A	1/2	1/2" Single-end	37 lb.	ZEGUC	23.75

All above motors are capacitor start 220 volt 60 cycle—have large SKF ball bearings, do not have switch, cord, or plug.

SINGLE PHASE MOTORS

SKF BALL BEARING EQUIPPED

Nos. 2480 and 2490 single phase motors have over-size SKF ball bearings and 1/2-inch double-end shaft—are furnished with built-in switch and 10-foot SJ approved extension cord and plug. These motors operate in any position—horizontal, vertical or inverted. A ball bearing motor must be used when mounted vertically for drill press.

No. 2480 1/3 HP motor is recommended for average-duty machine tool requirements. No. 2490 1/2 HP motor is ideal for heavier work.

SINGLE PHASE BALL BEARING MOTORS

No.	HP	RPM	Wt.	Code	Price
2480	1/3	1740	28 lb.	WYJL	\$14.25
2490	1/2	1740	35 lb.	WYJLN	17.50

Both motors are 110 volt, 60 cycle; have 1/2" diameter double-end shaft.

BRONZE BEARING SINGLE PHASE MOTORS

Nos. 2470, 2460B, and 2485B have heavy phosphor bronze bearings and 1/2-inch single-end shaft. They are excellent general purpose motors for light and average duty—cannot be used in vertical position. Nos. 2460B and 2485B are furnished with 10 ft. SJ approved extension cord and plug. No. 2470 is recommended for light duty work with the 612 and 618 lathes—an unusual value in a low-priced motor.

SINGLE PHASE BRONZE BEARING MOTORS

No.	HP	RPM	Shaft	Weight	Code	Price
2470	1/4	1740	1/2" diam. single-end	21 lb.	WYORV	\$ 8.25
2460B	1/4	1740	1/2" diam. single-end	26 lb.	ZEDAT	9.75
2485B	1/3	1740	1/2" diam. single-end	28 lb.	ZEBIT	11.00

These motors are 110 volt, 60 cycle. Nos. 2460B and 2485B are furnished with 10 ft. SJ approved extension cord and plug—not furnished with No. 2470.

THREE PHASE MOTORS

220 VOLT—SKF BALL BEARING EQUIPPED

Nos. 2630 and 2620 are designed for use with three phase current. Both motors are 220 volt, 60 cycle—have large SKF ball bearings, double-end shaft. Furnished with BX connector in terminal box—do not have switch, cord, or plug. Shaft diameter 1/2 inch.

THREE PHASE BALL BEARING MOTORS

No.	HP	RPM	Wt.	Code	Price
2630	1/3	1740	28 lb.	WYKAK	\$21.00
2620	1/2	1740	35 lb.	WYKEL	24.75

Furnished with BX connector in terminal box.

THREE PHASE MOTOR-CONTROL SWITCH

No.	For	Described	Weight	Code	Price
S7-300	Lathes	Page 26	6 lb.	ZEBAR	\$13.50
W67	Drill Presses	Page 54	6 lb.	ZECET	13.50
S7-300	Shaper	Page 48	6 lb.	ZEBAR	13.50
S7-300	Milling Machine	Page 40	6 lb.	ZEBAR	13.50
S7-300	2575B & W37C Grinders	Page 65	6 lb.	ZEBAR	13.50

Furnished with mounting bracket and connections.

THREE PHASE REVERSING SWITCH

Construction features are the same as those of 10-420 (left).

No. 420D THREE PHASE REVERSING SWITCH with mounting bracket and connections. Code YEMYP, wt. 4 lb. \$13.50

Atlas ARBOR PRESSES

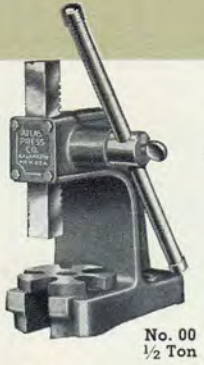
SIMPLE LEVERAGE PRESSES

8 Models for Pressures from 1/2 to 5 Tons

Nos. 00, 0, 1, X, and Y are simple leverage quick-acting presses with capacities between 1/2 and 2 tons. Manufacturers of watches, clocks, radios, speedometers, office machines, and other delicate instruments use these presses for light, high speed production and assembly work. Nos. X and Y have solid square-planed table in place of standard table with plate.

Atlas Nos. 1 1/2, 3A, and 4M presses are operated with a ratchet device which permits using lever in most convenient position—has counterweight for quick return of lever after down stroke. Lever and ratchet pawl are mounted in counterweight. Handwheel advances ram to work in an instant. No. 1 1/2 is a favorite with garages, service stations and appliance shops for general servicing. Nos. 3A and 4M are larger machines for heavier classes of work up to 5 tons. No. 4M is a floor type press equipped with an adjustable table—rack and pinion with crank control changes table elevation. Heavy duty clamp locks table in position.

Rugged floor pedestals are available for all bench type presses except Nos. 00 and X.



No. 00
1/2 Ton



No. X
1/2 Ton



(Above) Atlas No. 3A Simple Leverage Arbor Press. 5 tons capacity—floor pedestal available.

(Left) Atlas No. 1 1/2 Simple Leverage Arbor Press on Floor Pedestal. Capacity 2 tons.

COMPOUND LEVERAGE PRESSES

5 Models for Pressures from 5 to 12 Tons

The original Atlas compound leverage device permits the operator to apply great pressures with minimum of effort. Compound or simple leverage is quickly obtained by simply inserting or extracting a sliding pin. Handwheel advances ram to work in an instant—spindle brake sets ram in any desired position. All compound leverage presses listed below are equipped with this mechanism.

Nos. 2, 2B, 2 1/2, and 3 are bench-type presses available with floor pedestals. No. 2 1/2 press is same as No. 2 press but with 21" capacity over table, 19 3/4" over table plate. No. 2B is same as No. 2 press with 5 1/2" opening for arbors. No. 4 is a heavy-duty floor type machine and has an adjustable table with rack and pinion to control elevation.



No. 4
12 Tons



No. 2
5 Tons
on
Pedestal



No. 3
12 Tons

Atlas SIMPLE LEVERAGE ARBOR PRESSES

Press No.	Largest Diameter Work, Inches	Largest Arbor, Inches	Capacity Over Table, Inches	Capacity Over Table Plate, Inches	Length and Size of Ram, Inches	Floor Space, Inches	Height, Inches	Leverage Ratio	Approx. Tons, Pressure	Shipping Weight, Pounds	Code Word	PRICE LESS PEDESTAL	Weight, Pedestal, Pounds	Code Word Pedestal	Price PEDESTAL ONLY
00	7	1	4 1/4	3 3/4	1x1x7	Bench 4x10	9	24-1	1/2	22	PACK	\$ 14.00	—	—	—
0	10	1 1/8	7 3/4	7 3/8	1x1x12	Ped. 10 1/4 x 18	14 1/2	36-1	1	70	PACE	24.00	85	DELL	\$24.00
X	7	—	4 1/2	—	1x1x7	Bench 4x10	9	24-1	1/2	22	POST	14.00	—	—	—
Y	10	—	8	—	1x1x12	Ped. 10 1/4 x 18	14 1/2	36-1	1	70	POND	24.00	85	DELL	24.00
1	14	1 5/8	11	10 1/4	1 1/2 x 1 1/2 x 16 1/2	Ped. 14x22	20	48-1	2	140	PAGE	35.00	120	DENT	27.00
1 1/2	14	1 5/8	11	10 1/4	1 1/2 x 1 1/2 x 16 1/2	Ped. 14x22	20	48-1	2	150	PALM	39.00	120	DESK	27.00
3A	20	4	16	14 1/2	2x2x22	Ped. 18x28	30	55-1	5	450	PEACH	94.00	275	DEAN	44.00
4M	21	4 1/2	25	23 3/16	2x2x22	21x29	62	55-1	5	1030	PATRON	184.00	—	—	—

Atlas COMPOUND LEVERAGE ARBOR PRESSES

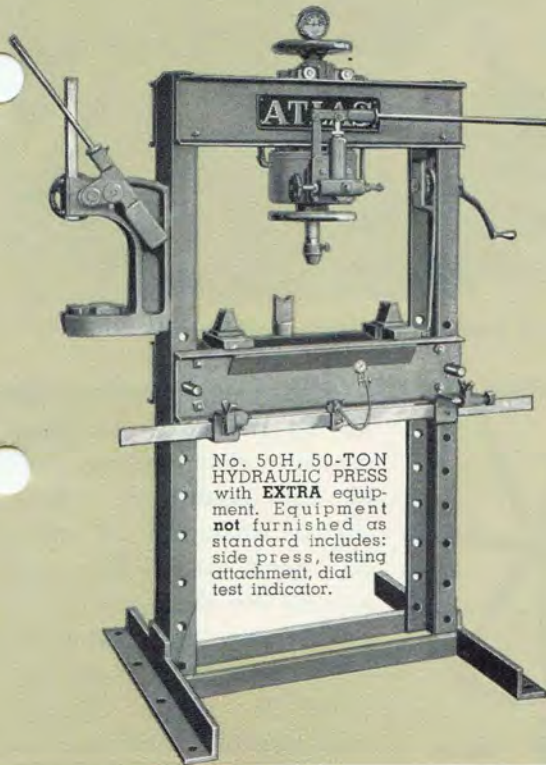
Press No.	Largest Diameter Work, Inches	Largest Arbor, Inches	Capacity Over Table, Inches	Capacity Over Table Plate, Inches	Length and Size of Ram, Inches	Floor Space, Inches	Height, Inches	Leverage Ratio	Approx. Tons, Pressure	Shipping Weight, Pounds	Code Word	PRICE LESS PEDESTAL	Weight, Pedestal, Pounds	Code Word Pedestal	Price PEDESTAL ONLY
2	15 1/2	3 1/8	14	12 3/4	1 1/2 x 1 1/2 x 19	Ped. 18x23 1/2	25	100-1	5	270	PADEN	\$ 72.00	225	DESTAL	\$38.00
2B	15 1/2	5 1/8	15	13 3/4	1 1/2 x 1 1/2 x 19	Ped. 15x24	25	100-1	5	290	PICKLE	80.00	225	DECK	38.00
2 1/2	15 1/2	3 1/8	21	19 3/4	1 1/2 x 1 1/2 x 26 1/2	Ped. 18x23 1/2	35 1/2	100-1	5	315	POMP	82.00	225	DESTAL	38.00
3	20 1/2	5	18	16 1/2	2x2x24	Ped. 21x30	36	160-1	12	640	PARCO	150.00	375	DECOX	53.00
4	21	5	25	23 3/8	2x2x24	24x29	64	160-1	12	1390	PACKER	245.00	—	—	—

ASK FOR COMPLETE ARBOR PRESS CATALOG NO. 33

Atlas HYDRAULIC PRESSES

Great power and large work capacities make the Atlas Hydraulic Presses ideal for factories, garages, service stations, and machine shops. The hydraulic workhead furnished as standard equipment is a compact, self-contained unit and can be moved quickly to any position along the top channel—an exclusive Atlas feature. Simple design and superior construction result in many years of trouble-free service. The frame is welded reinforced structural steel; pump is a drop forging. Workhead cylinder is nickel chrome alloy steel. Auxiliary screw type ram, handy release valve, and adjustable table are described at the right. See table below for complete specifications.

- **FRAME**—Welded structural steel with heavily reinforced table.
- **SELF-CONTAINED WORKHEAD**—Reservoir and controls are one compact unit. Roller mounting provides transverse adjustment.
- **AUXILIARY SCREW TYPE RAM**—Ram is brought down to work quickly with handwheel control.
- **RELEASE VALVE**—Automatically returns ram to starting point when opened by small hand wheel.
- **ADJUSTABLE TABLE HEIGHT**—Handy crank mechanism for raising or lowering table.
- **CONSERVATIVELY RATED**—Before shipment, Atlas presses are tested at pressures 5 to 10 tons higher than actual rating.



No. 50H, 50-TON HYDRAULIC PRESS with EXTRA equipment. Equipment not furnished as standard includes: side press, testing attachment, dial test indicator.

Atlas HYDRAULIC WORKHEAD

(Right) Close-up view showing self-contained construction and roller mounting of the workhead unit furnished on Atlas Hydraulic Presses. Workhead cylinder is nickel chrome alloy steel. Pump is a drop forging. This unit may be purchased separately for use with any press frame—see table below. The Atlas Engineering Department is prepared to make recommendations for handling extra large or odd-shaped press work.



ATLAS HYDRAULIC WORKHEAD

SPECIFICATIONS AND PRICES

ORDER NUMBER	No. 50H	No. 70H
Height Overall	6' 8"	7' 1"
Floor Space	36"x43"	36"x56"
Travel of Table	40"	36"
Travel of Piston	5"	5 1/4"
Travel of Screw	7"	7"
Width between uprights (largest diameter work).....	33"	44"
Width between table channels (largest arbor).....	7"	8"
Maximum distance ram to table in lowest position.....	43"	38 1/2"
Table Channel	8"-16.25 lb.	12"-30 lb.
Head Channel	8"-16.25 lb.	12"-30 lb.
Upright Channels	7"- 9.8 lb.	8"-13.75 lb.
Capacity	50 tons	70 tons
Weight	820 lb.	1390 lb.
Code Word	HAMP	HORT
PRICE with Standard Equipment listed below	\$210.00	\$295.00

STANDARD EQUIPMENT FURNISHED—Pressure Gauge, Hydraulic Workhead, 2 Table Plates, Table Lifting Device, 2 V-Blocks, 1 V Ram Nose for Straightening, 1 Round Nose for Pressing.

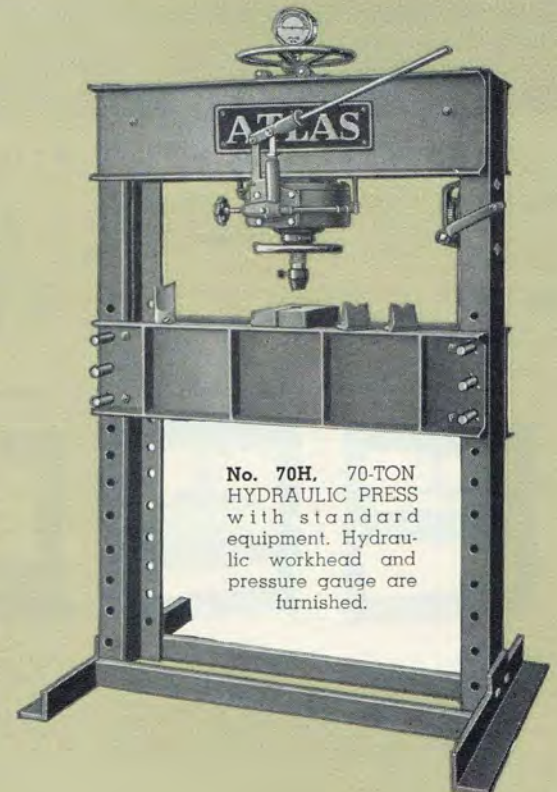
EXTRA EQUIPMENT AVAILABLE

No. 13/4	2-Ton Rack and Pinion Side Press.....	WYNAN	155 lb.	\$ 39.00
No. 35	Testing and Straightening Attachment.....	WYNOR	35 lb.	20.00
No. 35-20	Dial Test Indicator and Bracket.....	WYNPE	2 lb.	16.50

HYDRAULIC WORKHEAD (When Purchased Separately)

		Code Word	Weight	Price
No. 50HW	50-Ton, Complete with Pressure Gauge	WYNRO	295 lb.	\$130.00
No. 70HW	70-Ton, Complete with Pressure Gauge	WYNUS	385 lb.	195.00

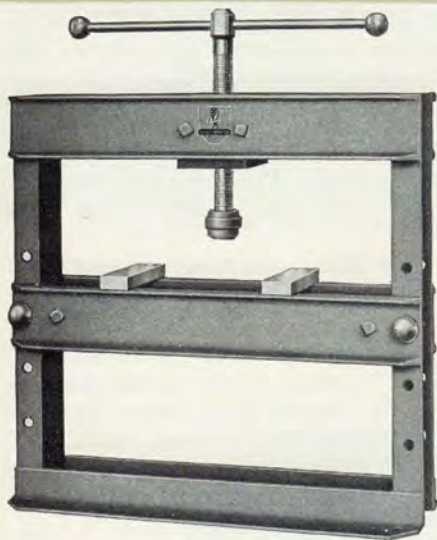
PLEASE ORDER BY CATALOG NUMBER



No. 70H, 70-TON HYDRAULIC PRESS with standard equipment. Hydraulic workhead and pressure gauge are furnished.

PORTABLE GENERAL PURPOSE PRESS

FOR PRESSURES UP TO 10 TONS



- ★ WELDED STRUCTURAL STEEL FRAME.
- ★ 10-TON CAPACITY.
- ★ HANDLES DIAMETERS UP TO 18 INCHES.
- ★ 16½ INCH CAPACITY OVER BASE.
- ★ ADJUSTABLE TABLE.
- ★ EASILY MOVED TO JOB.

The Atlas P-10 meets the need for a rugged, sensibly priced multi-purpose press to handle a wide range of work. It can be moved easily to different shop locations or set up on a maintenance or service truck.

Frame is built of heavy structural steel channels electrically welded for maximum strength. Table of structural steel is rigid work support, easily moved to any one of four positions on frame. Screw is special alloy steel, free fitting for speedy ram travel—is 1" diameter, 8 threads per inch. Ram nose has ball thrust bearing. Two table blocks 1¾"x7"x¾" are furnished with the P-10 press.

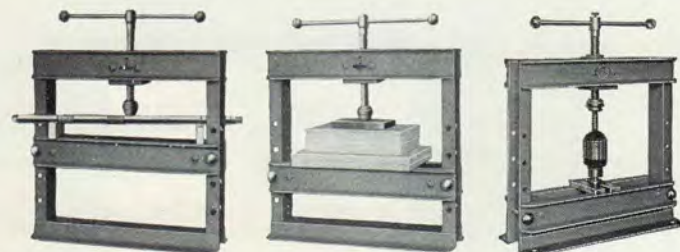
No. P-10 GENERAL PURPOSE PRESS complete as shown above. Including 2 table blocks each 1¾" x 7" x ¾". Code word WYOHL, wt. 80 lb. **\$20.00**

Largest Diameter of Work.....18" Largest Arbor3"
Capacity over Base.....16½" Screw Travel5"
Overall Height of Frame.....20¼" Bench Space8"x17"

TABLE BLOCK AND V-BLOCKS

No. P10-13 TABLE BLOCK for general press work, gluing, etc.—size 4" x 6" x ¾". Code word WYOLP, weight 6 pounds. **\$1.45**

No. P10-14 Two V-BLOCKS for straightening and arbor work—size 1¾" x 7" x ¾". Code WYOJM, weight 6 lb. **\$2.00**

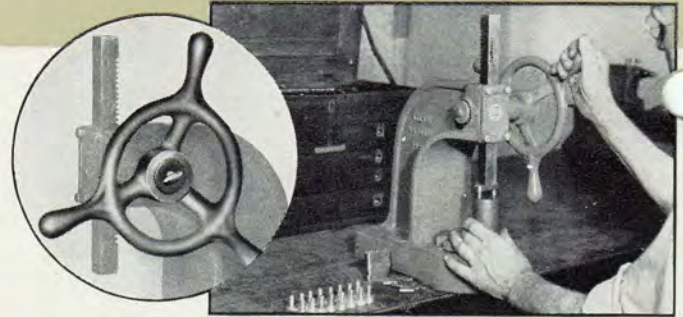


Straightening shaft with No. P10-14 V-block plates supporting work on table. Notice how extra long pieces can be extended beyond sides of press.

Using the P-10 as a gluing press. No. P10-13 table block distributes pressure evenly and does not mar wood. Veneering is another job for the P-10 press.

Work range of the P-10 includes all types of automotive press work—bearings, bushings, shafts and pins. Above, pressing bearing on armature shaft.

WHEEL-OPERATED PRODUCTION PRESSES



No. 00S press handling rapid assembly operation.



No. 2S
30" Wheel

Handwheel control speeds up the ram action of these presses and makes them ideal for light production and assembly work. No. 2S has a 30" hand wheel—Nos. 00S and XS are equipped with a 14" diameter 3-handled wheel—Nos. 0S and YS have 20" wheel. Nos. XS and YS have solid square-planed table in place of standard table with plate. Rugged floor pedestals are available for Nos. 2S, 0S and YS.

SPECIFICATIONS—WHEEL-OPERATED PRESSES

Press No.	Largest Diameter Work, Inches	Largest Arbor, Inches	Capacity Over Table, Inches	Capacity Over Table Plate, Inches	Length and Size of Ram, Inches	Floor Space, Inches	Height, Inches
00S	7	1	4¼	3¾	1 x1 x 7	Bench 4 x10	14½
XS	7	—	4½	—	1 x1 x 7	Bench 4 x10	14½
0S	10	1⅛	7¾	7⅞	1 x1 x12	Ped. 10¼x18	22¼
YS	10	—	8	—	1 x1 x12	Ped. 10¼x18	22¼
2S	15½	3⅜	14	12¾	1½x1½x19	Ped. 18 x24	38

Press No.	Leverage, Ratio	Approx. Tons, Pressure	Shpg. Weight, Lbs.	Code Word	PRICE LESS PEDESTAL	Weight, Pedestal, Lbs.	Code Word Pedestal	Price PEDESTAL ONLY
00S	12-1	¼	26	ZAPEC	\$15.00	—	—	—
XS	12-1	¼	26	ZAPFO	15.00	—	—	—
0S	20-1	½	77	ZAPID	27.00	85	DELL	\$24.00
YS	20-1	½	77	ZAPOF	27.00	85	DELL	24.00
2S	16-1	½	200	PONY	75.00	225	DESTAL	38.00

GENERAL CATALOG NO. 41

January, 1941

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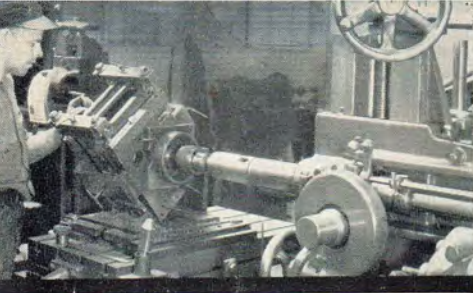
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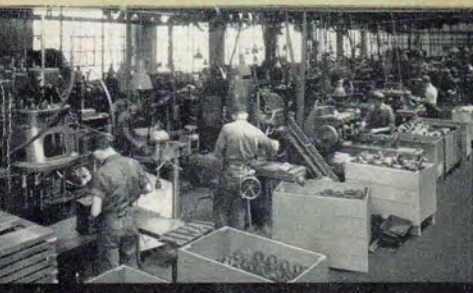
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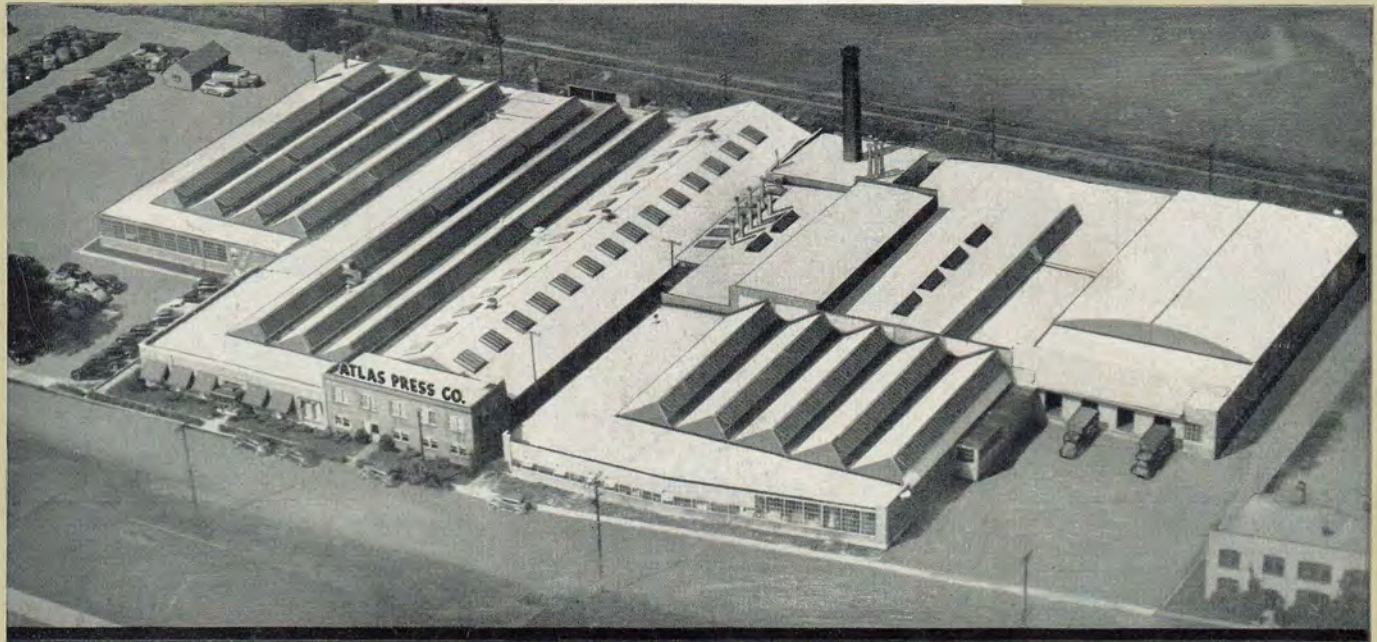
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