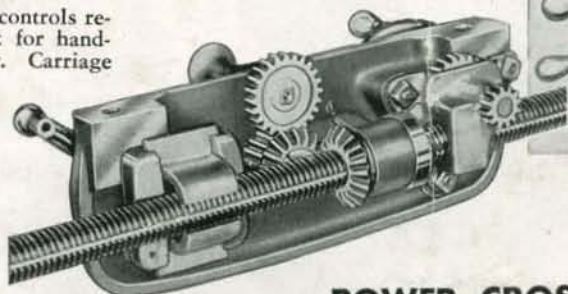


MAKE THE *Atlas* AN OUTSTANDING PRODUCER

CARRIAGE and COMPOUND REST

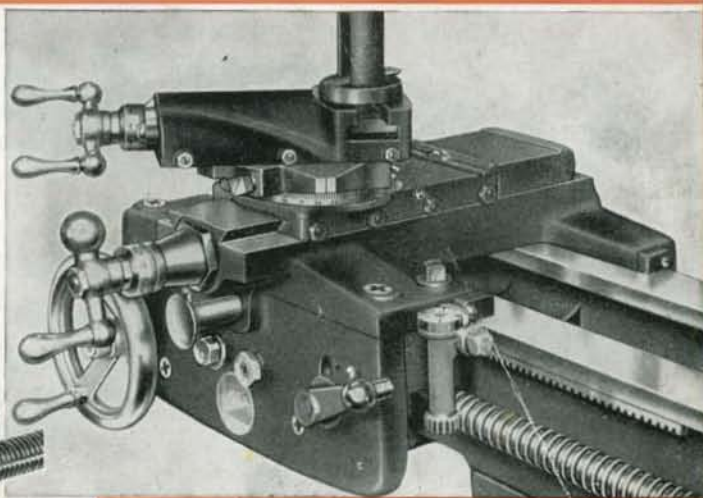
The carriage of the Atlas lathe consists of two heavy castings—the saddle, a broad base and rigid mounting for the compound rest—and the apron, a rugged housing for the power feed mechanisms. The saddle has six accurately machined full-length bearing surfaces on the bed ways, each $9\frac{1}{2}$ " long—two on the top bed ways, two on the side ways, and two on the bottom surfaces. 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 allow accurate alignment of carriage with headstock and tailstock . . . even after long, hard duty. A heavy plate on each side of the saddle bears on bottom bed ways to prevent lift and twist.

Large handwheel on the apron controls reduction gears meshing with rack for hand-feeding carriage longitudinally. Carriage travels full length of bed. Four bed wipers, one at each corner of carriage. Dovetails of cross slide and carriage saddle are accurately machined and hand-fitted to insure accuracy on facing, milling, face-plate grinding, etc. Compound rest has $5\frac{1}{2}$ " bearing on cross slide—a rigid tool post support. Turns in complete circle and locks easily in any position. Top of cross slide machine-graduated through 180° . Cross slide travel is $6\frac{1}{2}$ ", tool post slide travel is $2\frac{1}{4}$ ". Milled T-slot holds drop forged tool post assembly—tool post slot takes $\frac{3}{8}$ " tool bits or holder for $\frac{1}{4}$ " bits.



POWER CROSS and LONGITUDINAL FEED

Power cross feed speeds up all facing operations. A sliding spur gear controlled by a knob engages bevel-gear drive from the keyway in the lead screw with a gear on the cross slide feed screw. Power longitudinal feeds make quick, easy work of turning operations and simplify cutting right or left hand threads. The precision lead screw is $\frac{3}{4}$ " in diameter, 8 Acme threads per inch. Lead screw is driven by gear train from spindle gear.



TAILSTOCK is accurately machined and fitted to bed ways to align accurately at any position. Inside bearing gibbed for take-up. Strong, rigid support for work.



RAM is accurately ground, graduated from 0 to 3" by 16ths, bored for No. 2 Morse taper center. Has $2\frac{1}{4}$ " travel, 5" bearing on barrel, self-ejecting center.



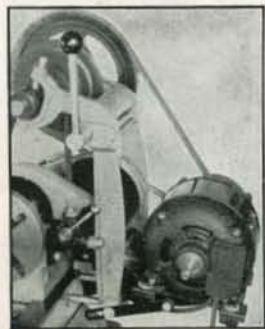
INDEXING MECHANISM. Face of the front spindle back gear has 60 evenly spaced indexing holes for such dividing operations as fluting, reeding, serrating, sprocket- and spoke-spacing.



FEED SCREW COLLARS for cross and compound feed screws are micrometer graduated in .001ths. Set screw permits setting 0 at witness mark for accurate gauging of feed depth.



QUICK-CHANGE COUNTERSHAFTS



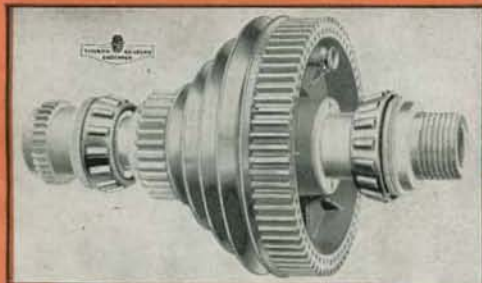
Atlas F-series lathes are available with the horizontal bench-mounted countershaft (right), or the vertical built-in countershaft (left) attached to headstock and bed. Both are "quick-change," with belt-tension lever easily reached for changes. Lever moves forward to release belts, back to engage. Countershaft spindle turns on Hyatt roller bearings. Two-step pulleys from motor to countershaft and 4-step pulleys from countershaft to spindle provide 16 speeds between 28 and 2072 RPM.

(Left) Vertical countershaft attached directly to headstock and bed.

(Right) Horizontal bench-mounted countershaft.



TWO TYPES of MODERN SPINDLE BEARINGS



**TIMKEN
TAPERED ROLLER
BEARINGS**
(Page 6)

Recommended when Atlas F-Series lathes are to be used on production work demanding high spindle speeds over long periods. The tapered design of these modern anti-friction bearings, with their positively aligned rolls, maintains spindle alignment and carries both radial and thrust loads with minimum of friction.



**BABBITT
SPINDLE
BEARINGS**
(Page 7)

Standard for Atlas F-Series 10" Lathes where sustained high speeds are unnecessary. These fine bearings, custom-bored for each lathe after headstock has been fitted to bed, are of the two-piece split-cap type used in larger machine tools and automobile engines. They assure a smooth running spindle and long, accurate life.

Atlas

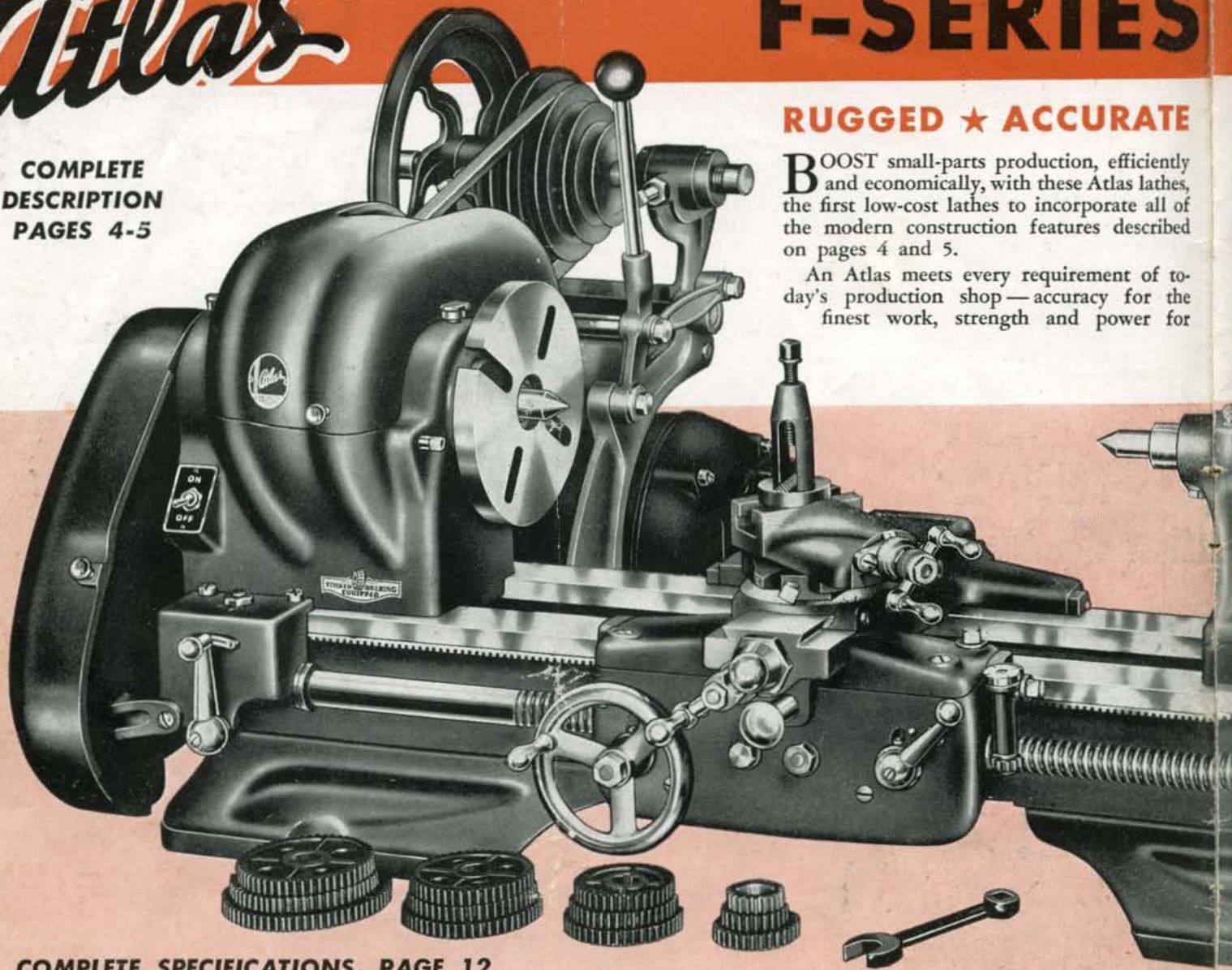
F-SERIES

**COMPLETE DESCRIPTION
PAGES 4-5**

RUGGED ★ ACCURATE

BOOST small-parts production, efficiently and economically, with these Atlas lathes, the first low-cost lathes to incorporate all of the modern construction features described on pages 4 and 5.

An Atlas meets every requirement of today's production shop—accuracy for the finest work, strength and power for



COMPLETE SPECIFICATIONS, PAGE 12

TIMKEN-BEARING F-Series Lathes WITH STANDARD CHANGE GEARS

The Atlas F-Series 10" lathes listed below 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 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, pages 4 and 5; complete specifications, page 12.



WITH HORIZONTAL COUNTERSHAFT



WITH VERTICAL COUNTERSHAFT



TIMKEN TAPERED ROLLER BEARINGS

Spindle with outer races removed to show how Timken tapered roller bearings maintain spindle alignment and carry both radial and thrust loads with minimum friction. Bearing bosses are custom bored.

Length of Bed	Between Centers	Overall Length	Order No.	Shipping Weight less motor	Code Word	Order No.	Shipping Weight less motor	Code Word
36"	18"	40"	TH36	259 lb.	YEPDM	TV36	249 lb.	YENON
42"	24"	46"	TH42	271 lb.	YEPLA	TV42	261 lb.	YENUP
48"	30"	52"	TH48	279 lb.	YEPME	TV48	269 lb.	YEOXY
54"	36"	58"	TH54	284 lb.	YEPOP	TV54	274 lb.	YEPAL
Complete Specifications — Page 12			Overall Depth — 26" Overall Height — 19"			Overall Depth — 21" Overall Height — 24"		

★ **INSTANTLY REVERSIBLE AUTOMATIC POWER CROSS FEED AND LONGITUDINAL FEED**

★ **CUSTOM BUILT SPINDLE BEARINGS**
★ **COMPLETE V-BELT DRIVE — 16 SPEEDS**

10 inch

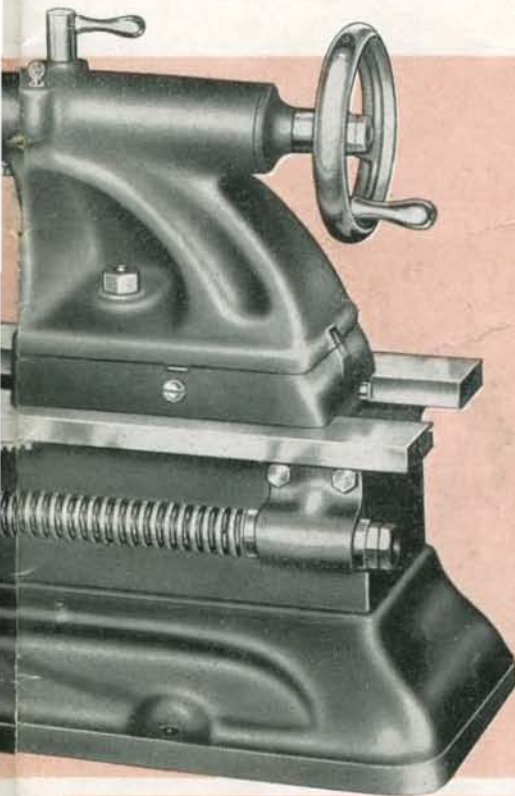
BACKGEARED SCREW CUTTING

LATHES

POWERFUL ★ EFFICIENT

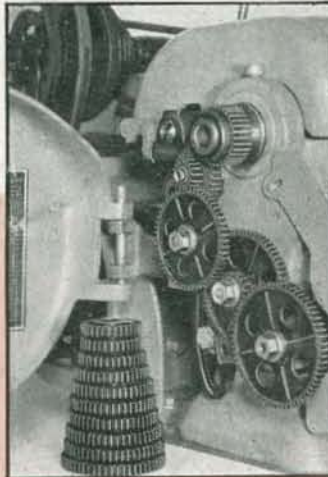
heavy jobs, and many modern features essential for simple, efficient operation. For steady work on production jobs, the Timken-equipped F-series lathes (page 6) are recommended. For tool rooms and general utility, the babbitt-bearing models (page 7) are highly satisfactory.

Equipment suggestions for handling industrial turret lathe and screw machine work are shown on pages 10 and 11 — complete specifications, page 12.



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

with STANDARD CHANGE GEARS



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	
A-B-C-D-E-F-G-H-I-J-K-L-M-N-O-P-Q-R-S-T-U-V-W-X-Y-Z	<p>4-8-16-32-64 GEAR STUD POSITIONS B = BACK POSITION (TOWARD HEADSTOCK) F = FRONT POSITION (AWAY FROM HEADSTOCK) I = IDLER GEAR B X SPACER ——— CUBANS F X 24 HOLE GEAR BRIDGE POSITION (STANDARD GEAR POSITION)</p> <p>FEEDS PER REVOLUTION OF SPINDLE</p> <p>STANDARD METRIC THREADS IN CHART</p>

THESE Atlas F-series lathes are equipped with standard-type change gears and threading dial for cutting all threads, either right or left hand, from 4 to 96

per inch, in the following standards: National Coarse (USS), National Fine (SAE), Acme, Square, and Whitworth. All standard metric threads from .5 to 7 mm. can be cut with the standard change gears furnished. Gear set-ups for these threads are shown on the pictorial threading chart on the inside of the gear train guard. Hundred of additional feeds are available for screw cutting, coil winding, and special work. Slotted bracket and stud assemblies support the gear train as shown above. Complete instructions for gear train set-ups are described and illustrated in the Atlas "Manual of Lathe Operation" (see page 8).

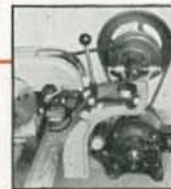
BABBITT-BEARING F-Series Lathes WITH STANDARD CHANGE GEARS

The Atlas F-Series lathes listed below are equipped with headstock spindle bearings of high-speed babbitt. To assure positive alignment, these heavy duty bearings are accurately custom-bored by a special machine mounted in position on the bed ways after the headstock has been fitted to the bed. Laminated shims on each side of the bearings have five .002" laminations for take-up. Front bearing is 1 5/8"; rear bearing, 1 3/8" long. Large capped felt-wick oil cups connect to oil grooves. These fine bearings insure a smooth-running spindle and long, accurate life.



Custom-Bored High-Speed Babbitt HEADSTOCK SPINDLE BEARINGS

High-speed babbitt bearings of the two-piece split cap type used in larger machine tools and auto engines maintain accuracy and alignment under heavy loads. Custom bored after headstock has been fitted to bed.



WITH HORIZONTAL COUNTERSHAFT



WITH VERTICAL COUNTERSHAFT

Length of Bed	Between Centers	Overall Length	Order No.	Shipping Weight less motor	Code Word	Order No.	Shipping Weight less motor	Code Word
36"	18"	40"	H36	259 lb.	YEKUL	V36	249 lb.	YEKIJ
42"	24"	46"	H42	271 lb.	YELAH	V42	261 lb.	YEKKO
48"	30"	52"	H48	279 lb.	YELHA	V48	269 lb.	YEKMY
54"	36"	58"	H54	284 lb.	YELIK	V54	274 lb.	YEKOK
Complete Specifications — Page 12			Overall Depth — 26" Overall Height — 19"			Overall Depth — 21" Overall Height — 24"		

- ★ PRECISION GROUND BED WAYS
- ★ EXTRA POWER FOR HEAVY JOBS

- ★ WIDE THREAD CUTTING RANGE
- ★ 60-HOLE INDEXING MECHANISM

THE NEW PICK-O-MATIC CHANGE

NEW PICK-OFF GEAR DEVELOPMENT PROVIDES QUICKER SELECTION OF THREADS AND FEEDS

THE new Pick-O-Matic change gears speed up all longitudinal operations by permitting instant choice of any one of six threads and automatic feeds without changing the gear train. Work range includes practically all feeds from .00122" to 1.28000" per spindle revolution, obtained in a few seconds by an extremely simplified method of making up the gear train. Pick-O-Matic change gears may be ordered with any F-series lathe for installation at the factory, or separately for simple installation to Atlas ten-inch lathes in the field.

The Pick-O-Matic mechanism consists of a gear bracket and two-position sliding gear, ratio-change gear box with shift lever, and a large easy-to-read selector chart showing only the information required for the one thread or feed selected. Tumbler gear lever controls direction of carriage travel, and a two-piece iron guard with spring-clip catch provides a close-fitting safety cover.

With no change in the gear train set-up, each Pick-O-Matic gear set-up provides six quick-change threads or feeds, obtained as explained below by moving the sliding gear in or out and shifting the ratio-change lever to medium, coarse or fine (A, B, or C). Detailed studies show that almost 80% of most lathe production requires a change from feed to thread and back to feed—exactly the type of work which is simplified immensely by the Pick-O-Matic. The make-up of the Pick-O-Matic gear train is further simplified by the

"Pick-A-Gear" rack with individual slot supports for change gears.

The Pick-O-Matic selector chart (below) gives instant set-up information for 54 threads and feeds between 4 and 240 per inch (.250" to .004" per spindle revolution). Simply turning the central knob of the selector to the thread or feed desired puts all essential data clearly in view: correct gears for two positions on bracket, ratio-change lever position (A, B, or C), sliding gear position (in or out) and thread-feed equivalents. Thus for the most frequently used threads and feeds the Pick-O-Matic selector chart eliminates time-taking reference to detailed charts and tables.

The gear set-ups shown on the Pick-O-Matic selector chart are made in a few seconds without wrenches or tools by simply placing two gears on bracket, checking in or out position of sliding gear, engaging train with tumbler gear and shifting ratio-change lever. Bracket design insures correct gear clearance. The two change gears are held securely in position on bracket by a yoke with handy thumb lift grip—sliding gear is locked with large notched knob.

Instructions for obtaining thousands of odd threads and feeds are given in the "Hand Book" furnished with Pick-O-Matic change gears. These listings show set-up data for threads between .7812 and 819.200 per inch, including practically every feed in very small divisions from 1.2800" to .0012" per spindle revolution. Metric threads between .25 and 7 mm. are included. A gear position is provided for making up standard-type gear trains to obtain this remarkably wide work range.



EXAMPLE OF WORK RANGE OF PICK-O-MATIC CHANGE GEARS Selected Instantly Without Changing Gear Train

Threads Per Inch	Feed Equivalent	Position of Sliding Gear	Ratio-Change Lever at	Gear at Position E	Gear at Position D
6	.1670"	OUT	B	48	48
12	.0830"	OUT	A	48	48
24	.0420"	OUT	C	48	48
48	.0210"	IN	B	48	48
96	.0104"	IN	A	48	48
192	.0052"	IN	C	48	48

NO CHANGE IN GEAR TRAIN

WIDE WORK RANGE FROM ONE GEAR TRAIN

The table at the left shows how Pick-O-Matic change gears multiply lathe efficiency by providing six different quick-change threads for each gear train, each instantly available by simply shifting the ratio-change lever and sliding gear positions (see page 9, Figures 3 and 4).

Notice in the example (left) that all of the six threads listed are obtained from the same gear train (48 tooth gear at Position E, and 48 tooth gear at Position D). With the sliding gear at "Out" position, any one of three threads (6, 12 or 24 per inch) may be selected instantly by shifting the ratio-change lever to B, A, or C. After changing sliding gear to "In", the three ratio-lever positions provide 48, 96 and 192 threads per inch.

Thus, six different quick-change threads and feeds may be selected from any Pick-O-Matic gear train by simply shifting the sliding gear and ratio-change lever. This sharply reduces time on job changeovers and, combined with an extremely wide odd-thread range, makes the Pick-O-Matic change gears an ideal solution for many of today's lathe production problems.

GEARS FOR *Atlas* TEN-INCH LATHES

ORDERING INFORMATION

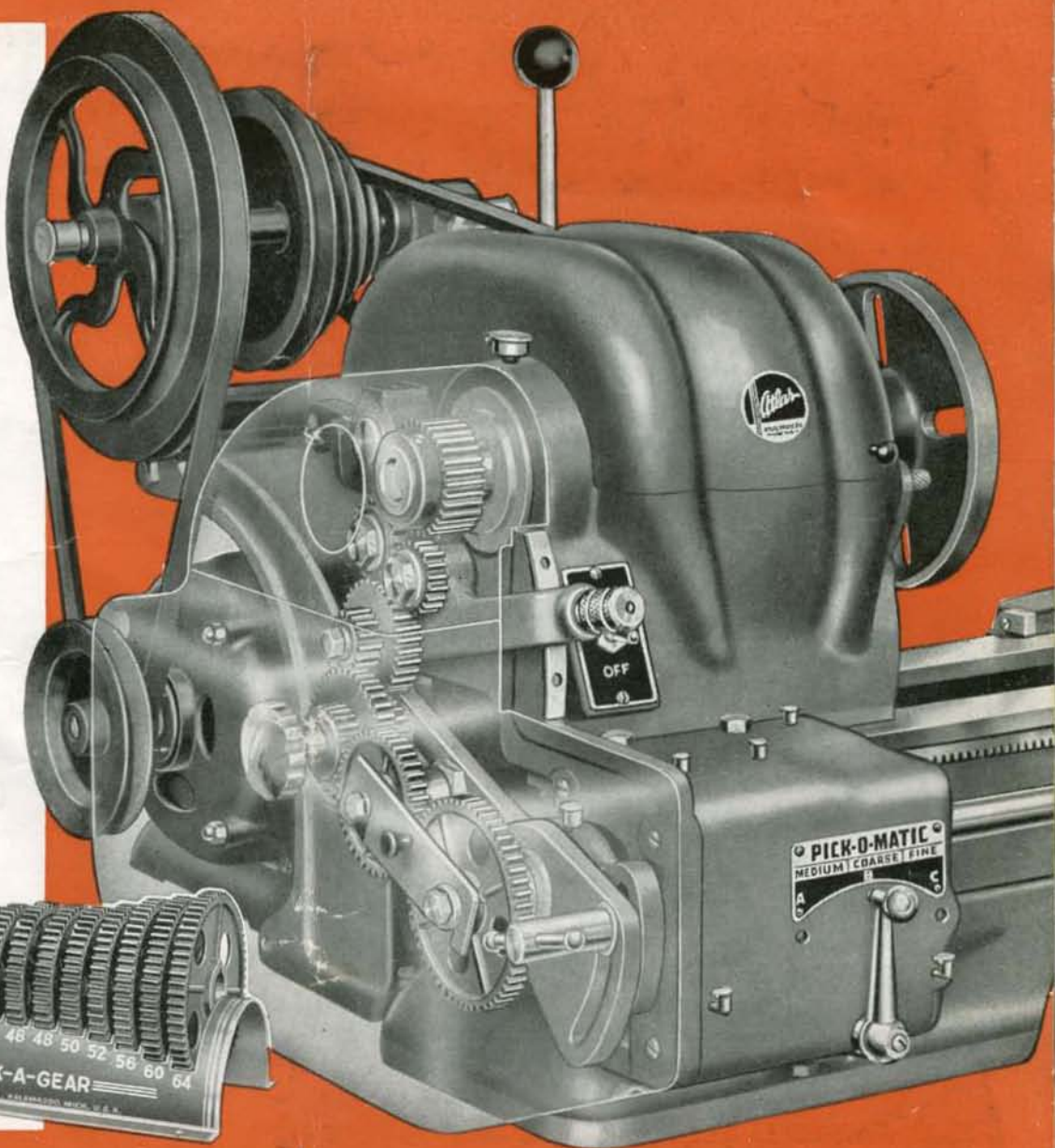
No. 1200 PICK-O-MATIC CHANGE GEARS for Atlas F-series 10" lathes ($\frac{3}{4}$ " diam. lead screw). Furnished as shown with gear bracket, two-piece guard, fifteen gears, selector chart, Pick-A-Gear rack, and Hand Book for thousands of odd threads and feeds. When ordered with F-series lathe, Pick-O-Matic gears are installed at factory. Instructions for installing to F-series lathes in field are included in Hand Book. Code word YICOH, weight 80 lb.....

No. 1270 PICK-O-MATIC CHANGE GEARS for Atlas 10-inch lathes with $\frac{3}{8}$ " diam. lead screw. Furnished as shown with gear bracket, two-piece guard, fifteen gears, selector chart, Pick-A-Gear rack, Hand Book for odd threads and feeds, complete instructions for installation. Code word YICYK, weight 80 lb.....



(Left) Hand Book furnished with Pick-O-Matic gears gives data for thousands of odd threads and feeds.

(Right) Pick-A-Gear rack has slots for change gears. Furnished with Pick-O-Matic change gears.



THE SIMPLIFIED PICK-O-MATIC METHOD OF MAKING UP THE GEAR TRAIN

For most common threads and feeds turn knob of selector chart to correct data. Refer to Hand Book for odd threads.

1



Take two gears from Pick-A-Gear rack and place on bracket positions E and D. Place yoke over gears. Complete set-up made without wrenches or tools.

2



Check position of sliding gear — in or out as shown on selector chart. Mesh gears and raise bracket to engage train. Tighten T clamp.

3

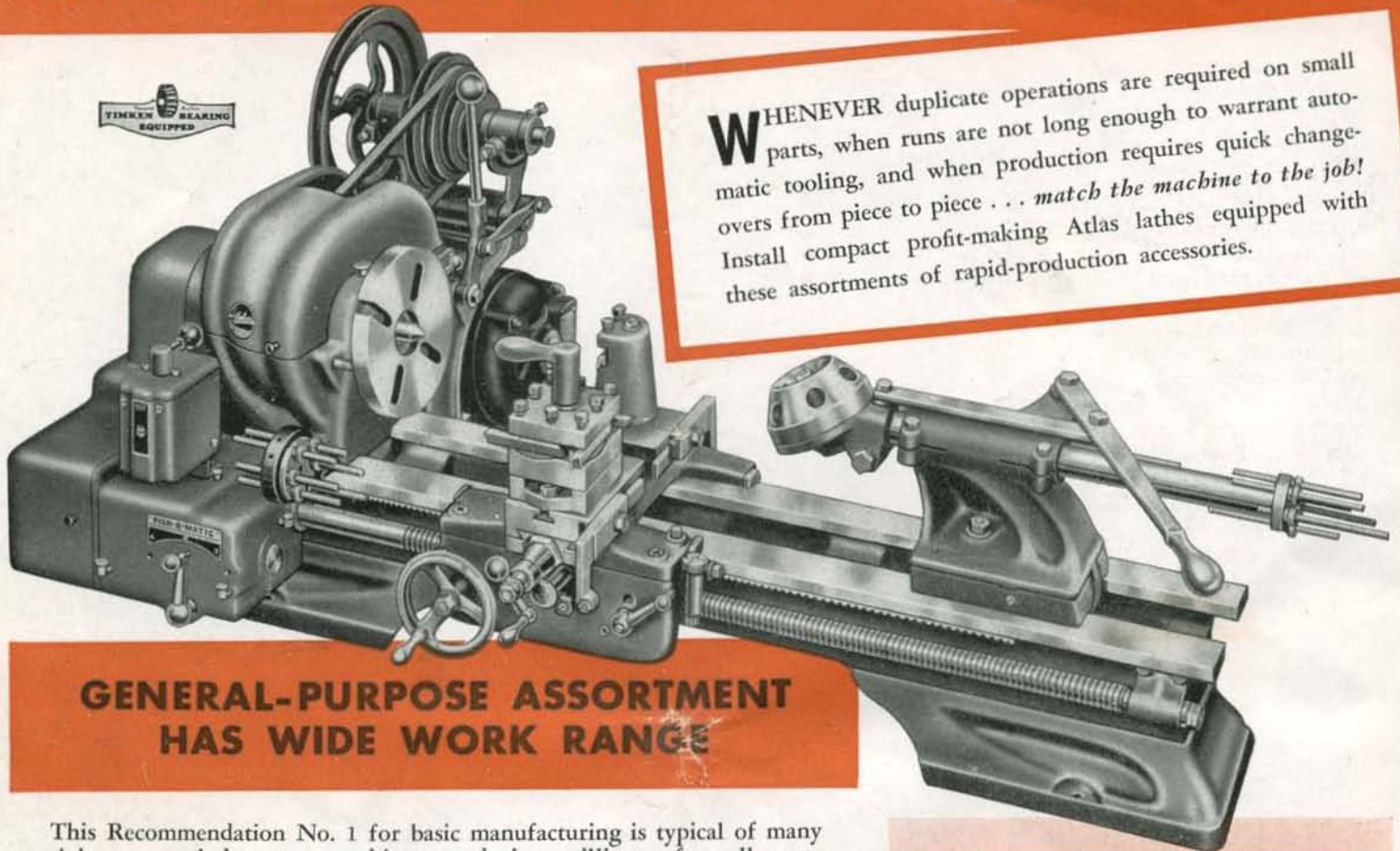


Shift ratio-change lever to position shown on selector chart: A (medium), B (coarse), or C (fine). Lathe is ready for threading operation.

4



Atlas ACCESSORY RECOMMENDATIONS



WHENEVER duplicate operations are required on small parts, when runs are not long enough to warrant automatic tooling, and when production requires quick changeovers from piece to piece... *match the machine to the job!* Install compact profit-making Atlas lathes equipped with these assortments of rapid-production accessories.

GENERAL-PURPOSE ASSORTMENT HAS WIDE WORK RANGE

This Recommendation No. 1 for basic manufacturing is typical of many Atlas turret lathe-screw machines producing millions of small parts quickly, accurately and profitably. Careful selection of production accessories multiplies lathe efficiency and returns investment very soon by reducing unit costs.

Accessories in this group have been selected for versatility, all-around efficiency and accuracy control. The "Pick-O-Matic" (pages 8-9) speeds up all threading and automatic carriage feeding operations by simplifying make-up of gear train and permitting instant selection of one of six threads and feeds. Eleven different duplicate operations may be set up on carriage and tailstock turrets, each controlled by a separate stop gauge. Timken tapered roller bearings for lathe headstock spindle carry radial and thrust loads with minimum of friction.

Notice the extreme flexibility of Recommendation No. 1. Addition of lever-type collet chuck (page 11) converts the installation into an efficient hand-type screw machine for the rapid production of parts from bar stock up to 1/2" diameter. Or install an independent or universal chuck (page 19) and the result is a bench-type turret lathe for producing larger parts. Coolant equipment, floor stand or cabinet, and motor may be selected as required:

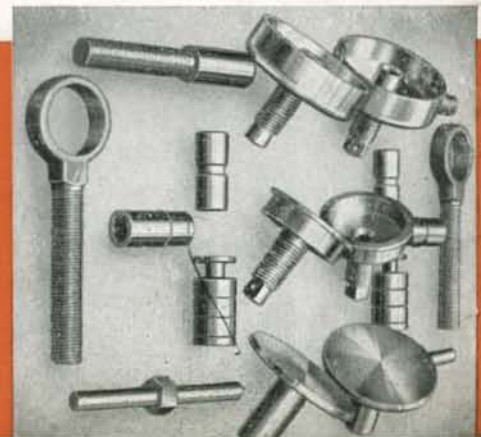
- Coolant Pumps.....Page 22
- Floor Stands and Cabinets.....Page 13
- Motors.....Page 13

RECOMMENDATION No. 1

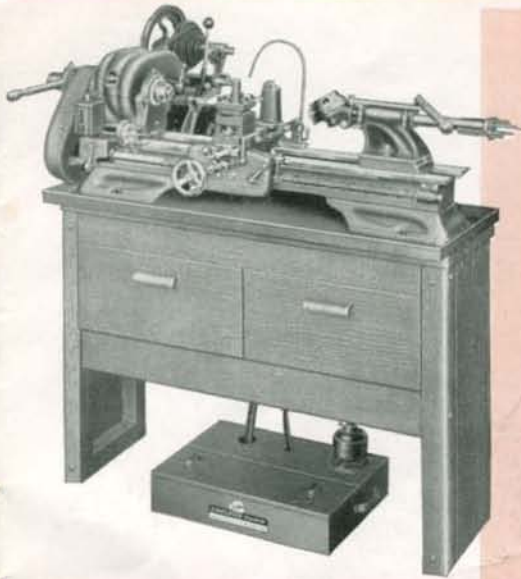
No.	Description	Page
TH42	Atlas F-Series 10" Lathe with horizontal countershaft, Timken tapered roller bearings for headstock spindle.....	6
1200	Pick-O-Matic Change Gears.....	8-9
420HD	Heavy-Duty Reversing Switch.....	13
670	Plain-Type Carriage Turret.....	15
690	Multi-Stop Attachment.....	15
600	Tailstock Turret.....	15

Maximum Distance, face of tailstock turret to lathe spindle.....	20"
Longitudinal travel of cross slide:	
with Multi-Stop.....	19-3/4"
without Multi-Stop.....	21-5/8"
Overall length:	
with tailstock turret at extreme right.....	56-1/2"
with tailstock turret removed.....	47"
Swing over carriage turret slide.....	4-3/4"
Travel of tailstock turret.....	3-7/16"
Cross travel of carriage turret.....	6-1/2"
Tailstock turret ram, diameter.....	1-1/8"

Examples of turret lathe and screw machine work being handled efficiently and economically with Atlas lathes and equipment recommended on these pages.



FOR TURRET LATHE-SCREW MACHINE WORK



Atlas F-Series 10" lathe equipped as hand-type screw machine for rapid continuous small parts production with bar stock. Addition of chuck (page 19) provides also for turret lathe work.

No.	Description	Page
TH42	Atlas F-Series 10" Lathe with horizontal countershaft, Timken tapered roller bearings for headstock spindle.....	6
W101	Hardwood Floor Cabinet.....	13
10-775A	Oil Pan.....	22
420HD	Heavy-Duty Reversing Switch.....	13
900B	Lever-Type Collet Chuck.....	14
751	Holding Collets (specify diam.).....	14
548	Spindle Nose Cap.....	14
670	Plain-Type Carriage Turret.....	15
690	Multi-Stop Attachment.....	15
600	Tailstock Turret.....	15
W89	Universal Coolant Pump and Tank.....	22
W96	Coolant Feed and Return Lines.....	22
Hole through Spindle, diameter.....		25/32"
Capacity:		
round stock.....		3/4"
hexagon stock.....		5/8" across flats
square stock.....		1/2" across flats
Collet Capacity.....		1/2"
Overall Dimensions with Tailstock Turret at Extreme Right.....		59" wide x 20" deep x 50-1/2" high

RECOMMENDATION No. 2

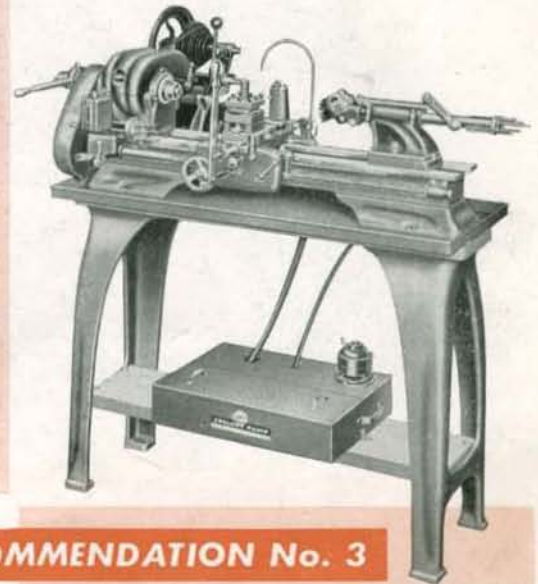
This turret lathe group has been selected especially to permit quick changeovers from job to job. The Atlas "Pick-O-Matic" change gears increase versatility by permitting operator to choose instantly one of several threads and feeds (pages 8-9). Universal and independent chucks hold large pieces and may be supplemented with draw-in or lever-type collet chucks for bar stock (page 14).

No.	Description	Page
TH42	Atlas F-Series 10" Lathe with horizontal countershaft, Timken tapered roller bearings for headstock spindle.....	6
1200	Pick-O-Matic Change Gears.....	8-9
10F-442B	Floor Stand.....	13
10-775A	Oil Pan.....	22
420HD	Heavy-Duty Reversing Switch.....	13
670	Plain-Type Carriage Turret.....	15
690	Multi-Stop Attachment.....	15
600	Tailstock Turret.....	15
U-770B or U-765B	6" Heavy-Duty Universal Chuck.....	19
W89	Universal Coolant Pump and Tank.....	22
W96	Coolant Feed and Return Lines.....	22



RECOMMENDATION No. 4

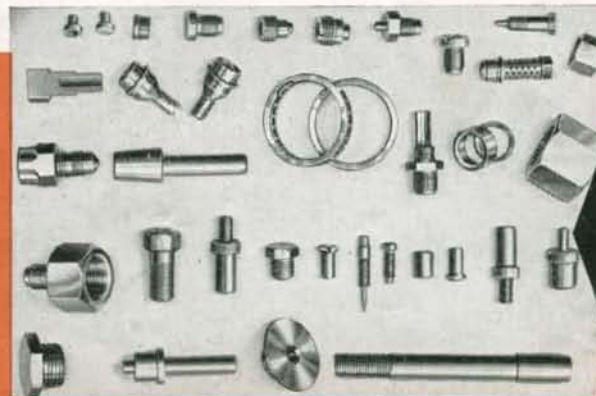
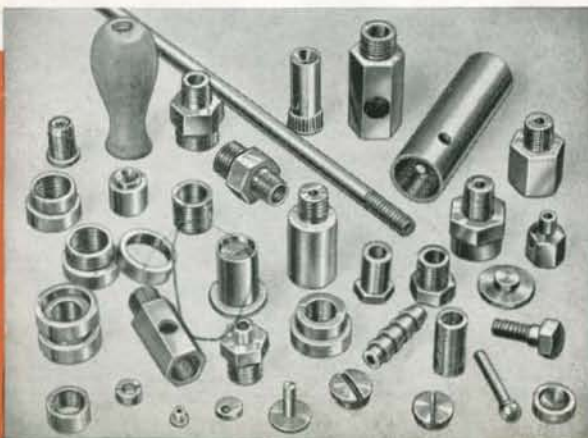
CORRECT TOOLING insures profitable operation. These pages show Atlas lathe-and-accessory installations as specified for small parts production by many efficient manufacturing shops. The recommendations listed are adapted easily to meet individual requirements.



RECOMMENDATION No. 3

An ideal installation for the manufacture of screw machine parts requiring fast feeding across bar stock. Chucks available for turret lathe work (see page 19), also new "Pick-O-Matic" change gears for thread cutting (pages 8-9).

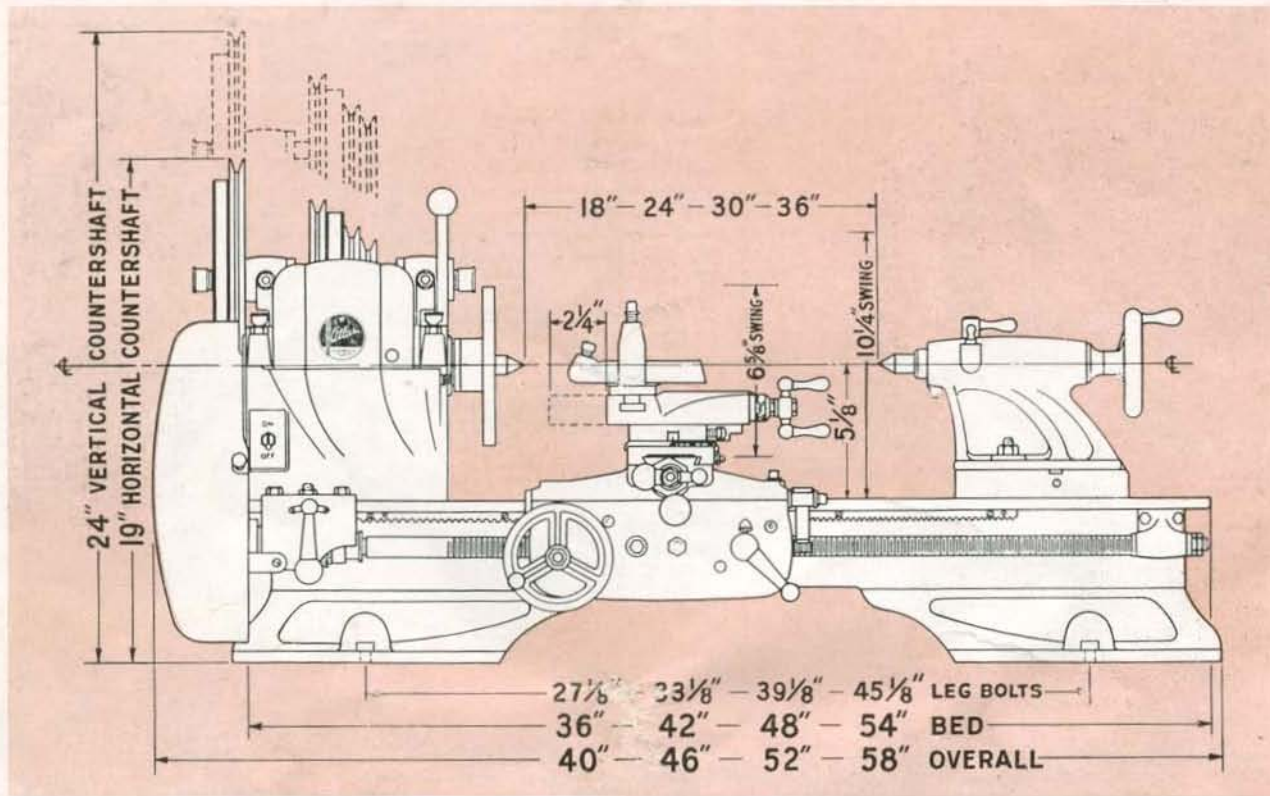
No.	Description	Page
TH42	Atlas F-Series 10" Lathe with horizontal countershaft, Timken tapered roller bearings for headstock spindle.....	6
10F-442B	Floor Stand.....	13
10-775A	Oil Pan.....	22
420HD	Heavy-Duty Reversing Switch.....	13
900B	Lever-Type Collet Chuck.....	14
751	Holding Collets (specify diameters required).....	14
548	Spindle Nose Cap.....	14
800	Lever-Type Carriage Turret.....	15
690	Multi-Stop Attachment.....	15
600	Tailstock Turret.....	15
W89	Universal Coolant Pump.....	22
W96	Coolant Feed and Return Lines.....	22
Swing over Carriage Turret Slide.....		4-3/4"
Cross Travel of Carriage Turret.....		6-1/2"
Overall with Tailstock Turret at Extreme Right.....		59" x 21" x 52-5/8" high



Other Atlas-lathe-produced parts. When requesting specific tooling information, please send sample parts or sketches and principal specifications.

COMPLETE SPECIFICATIONS

Atlas F-SERIES 10" LATHES



COMPLETE SPECIFICATIONS AND EQUIPMENT FURNISHED — ATLAS F-SERIES 10" LATHES

CAPACITY	Swing Over Bed.....	10-1/4"	CARRIAGE	Cross Feed Travel.....	6-1/2"
	Swing Over Carriage.....	6-5/8"		Cross Feed Screw.....	1/2" Diameter, Acme Threads
SPEEDS AND FEEDS	Threading Range, 4 to 96 Standard, Right or Left Hand — Metric, .5 to 7 mm. Standard Collet Capacity.....	1/2" (see page 14)	Feed Screw Collar Graduations.....	0 to 0.1" by .001"	
	No. of Spindle Speeds—16 (8 Direct, 8 Backgeared)		Tool Post Slide Travel.....	2-1/4"	
	8 Direct Spindle Speeds.....	164, 266, 418, 500, 685, 805, 1270, 2072 R.P.M.	Tool Post .3/8" x 7/8" slot to take 3/8" Tool Bits or Tool Holder for 1/4" Tool Bits		
	8 Backgeared Spindle Speeds.....	28, 45, 70, 83, 112, 134, 211, 345 R.P.M.	Tool Post Swivel.....	Graduated 0 to 90° right and left	
	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" Diam., 8 Acme Threads per inch Change Gears Furnished.....	16	Motor Recommended.....	1/3 or 1/2 H.P., 1740 R.P.M.
HEADSTOCK	Spindle Nose.....	1-1/2" Diameter	Motor Mounting.....	Adjustable Base	
	Spindle Nose Taper.....	Bored for No. 3 Morse Taper with reducing sleeve to take No. 2 Morse Taper	Hole Through Motor Pulley.....	1/2" Diameter	
	Hole Through Spindle.....	25/32"	Built-In Motor Control Switch.....	10 Ampere	
	Back Gears.....	12 Pitch, 7/8" Wide	Switch is for single phase current only — 3-phase switch is No. S7-300 (page 13)		
	Backgear Shaft Bearings.....	Oilite Bronze	Countershaft Spindle.....	Roller Bearings	
TAILSTOCK	Backgear Ratio (approximate).....	6 to 1	V-Belts for Complete Drive.....	1/2" Wide	
	Spindle Gear.....	16 Pitch, 32 Teeth, 7/8" Wide	Motor Pulleys.....	2-step	
	Tailstock Ram.....	1-1/8" Diameter	Drive Pulleys.....	4-step	
	Tailstock Ram Travel.....	2-3/4"	Reversible Automatic Power Cross Feed and Longitudinal Feed, Quick-Change Countershaft, Complete V-Belt Drive, 60-Hole Indexing Mechanism, Chrome Plated Control Handles. Finish, Gray.		

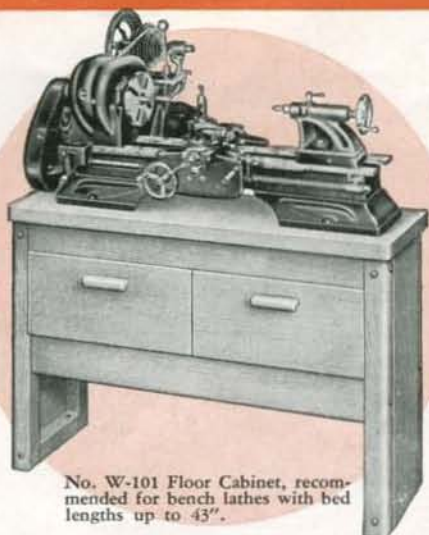
EQUIPMENT FURNISHED — F-SERIES 10" LATHES

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 13); 60-Hole Indexing Mechanism; 6" Face Plate; Two 60° Lathe Centers; Reducing Sleeve for Headstock Center; Combination Multi-Purpose Wrench, Wrenches for Socket-head Screws; Instruction Book — Atlas "Manual of Lathe Operation" (page 18).

- ★ PRECISION GROUND BED WAYS
- ★ EXTRA POWER FOR HEAVY JOBS
- ★ INSTANTLY REVERSIBLE AUTOMATIC POWER CROSS FEED AND LONGITUDINAL FEED

- ★ CUSTOM BUILT SPINDLE BEARINGS
- ★ COMPLETE V-BELT DRIVE — 16 SPEEDS
- ★ WIDE THREAD CUTTING RANGE
- ★ 60-HOLE INDEXING MECHANISM

MOTORS and ACCESSORIES for 10" LATHES



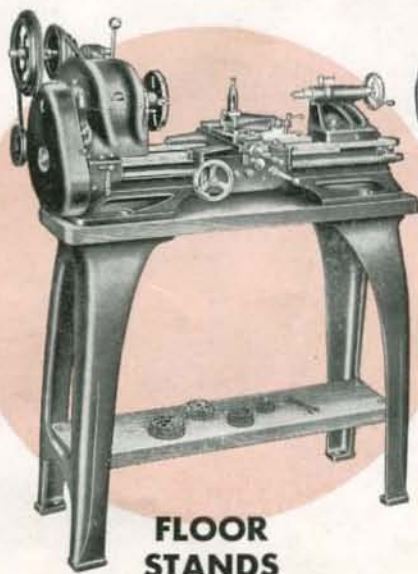
No. W-101 Floor Cabinet, recommended for bench lathes with bed lengths up to 43".

HARDWOOD MACHINE CABINETS

Atlas hardwood floor cabinets Nos. W-101 and W-102 provide rigid support for bench lathes, screw machines, etc. These cabinets are patterned after modern heavy-duty scientific laboratory furniture. Massive solid-hardwood construction with frame joints glued, screwed and bolt reinforced. Overall height 31½". Table board 1½" thick. Roomy drawer, 7½" deep, and cupboard with pull-down drawer, 8¼" high. Flush-type drawers, door. Natural finish.

SPECIFICATIONS

Order No.	For Bed Length	Table Dimensions	Weight	Code Word
W-101	36" and 42"	45" x 14"	160 lb.	YIBCA
W-102	48" and 54"	57" x 14"	186 lb.	YIBDE



FLOOR STANDS

A rigid foundation for accurate lathe work. Legs are heavy iron castings ribbed and cross-braced for rigidity. Legs alone weigh 95 pounds. Lathe mounts with each leg directly over a floor leg, anchoring securely. Height 33⅝". (Height 29⅞" also available for vocational education work.) Bottom board handy for tools and accessories.

Floor Stands for 10" Lathes WITH VERTICAL COUNTERSHAFT

No.	For Bed Length	Weight	Code
10D-442A	36"	150 lb.	YADYO
10D-442B	42"	155 lb.	YAEBB
10D-442C	48"	160 lb.	YAECT
10D-442D	54"	165 lb.	YAEGY

No. 10D-441 FLOOR LEGS ONLY. Code YADVE, wt. 110 lb.
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 Bed Length	Weight	Code
10F-442A	36"	161 lb.	YEPPD
10F-442B	42"	166 lb.	YEPYR
10F-442C	48"	171 lb.	YEPYR
10F-442D	54"	176 lb.	YERAN

No. 10F-441 FLOOR LEGS ONLY. Code YEVAR, wt. 110 lb.

HEAVY-DUTY MOTORS

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. They perform the same function as repulsion-induction motors, with lower initial and operating costs.

Atlas capacitor-start motors are equipped with large SKF ball bearings — may be operated in any position: horizontal, vertical or inverted. Combination 110-220 volt 60 cycle. 10-foot approved SJ extension cord and plug furnished.

ATLAS THREE PHASE Motors are 60 cycle — with large SKF ball bearings and ½" single-end shaft. Furnished with BX connector in terminal box — do not have switch, cord, or plug.



ATLAS MOTORS — COMPLETE SPECIFICATIONS

Order No.	Motor Power	Voltage	RPM	Bearings	Phase, Type	Cord and Plug	Switch	Weight	Code
2520s	1/3	110-220	1740	SKF Ball	Single Phase Capacitor Start	Yes	No	33 lb.	ZEWOR
2530A	1/2	110-220	1740	SKF Ball	Single Phase Capacitor Start	Yes	No	38 lb.	WYZIC
2620S	1/2	220	1740	SKF Ball	Three	No	No	35 lb.	ZEWRO
2630S	1/3	220	1740	SKF Ball	Three	No	No	28 lb.	ZEWPE
2625	1/2	440	1740	SKF Ball	Three	No	No	35 lb.	ZEWUS
2635	1/3	440	1740	SKF Ball	Three	No	No	28 lb.	ZEWYT

ALL MOTORS LISTED ARE 60 CYCLE — ALL HAVE ½" SINGLE-END SHAFT

REVERSING SWITCHES



THE No. 420HD is a heavy duty 1 HP drum-type reversing switch for voltages up to 600 AC. Has large diameter arc shields, snappy star wheel indexing, forged copper-tipped finders. Operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead) — also both shunt-wound and compound-wound DC. Mounts on reverse gear box, a handy, easy-to-reach position.

No. 420HD HEAVY-DUTY REVERSING SWITCH complete with mounting bracket, 6 ft. heavy cord and plug, installation diagram. Code YICAD, wt. 3½ lb.

THE No. 10-420 Reversing Switch (right) is a drum-type switch with knobbed lever control easily shifted to forward, off, or reverse position. Durable contacts are hard rolled copper. Operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead) — also both shunt-wound and compound-wound DC. Mounted on reverse gear box.

No. 10-420 REVERSING SWITCH complete with mounting bracket, cable connections, installation diagram. YELJE, 3½ lb.

No. 420D THREE PHASE REVERSING SWITCH complete with mounting bracket cable connections, installation diagram (a heavy-duty 1 HP drum-type switch for voltages up to 440 AC). Code YEMYP, wt. 4 lb.



THREE PHASE MOTOR CONTROL SWITCH



Required with a three phase motor. A thermal overload 3-pole manual starter for 3-phase circuits. Bracket for bench mounting, flexible cable-covered motor connection cord furnished.

No. 57-300 THREE PHASE CONTROL SWITCH with bench mounting bracket, connections. Code ZEBAR, weight 6 lb.

COLLET CHUCK ATTACHMENTS FOR 10" LATHES

LEVER-TYPE Collet Chuck Attachment

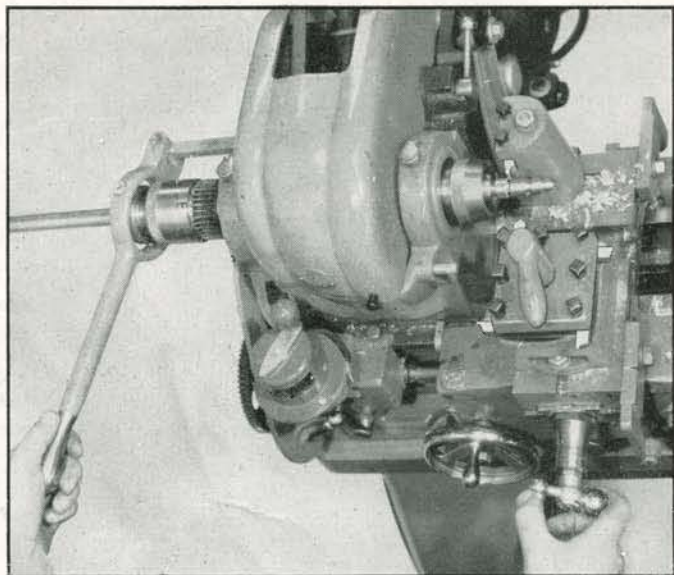
Chucks and Releases Work with Lathe Running

This lever-release collet attachment is the ideal chucking method for fast, accurate duplicate work on bar stock between 1/32" and 1/2" diameter. Teamed with turret attachments (page 15), it converts the Atlas ten-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. Adjustment of collet tension is made with knurled collar at left end of torque tube. Tapered collet sleeve is ground inside and outside to insure concentric closing of collet. Spindle nose cap protects lathe spindle threads.

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

No. 926 TWO-PIECE GEAR TRAIN GUARD for use with 900B Collet Chuck Attachment and 10" lathes with standard change gears (upper guard fixed, lower guard hinged). Code word YICUJ, weight 12½ lbs.



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

No. 900B LEVER-TYPE COLLET CHUCK ATTACHMENT for Atlas F-series 10" Lathes. Furnished complete as shown with one split holding collet listed below — specify diameter. Code word YIBAC, weight 6 lb.

FURNISHED COMPLETE

The 900B Lever-Type Collet Chuck Attachment is furnished complete with 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.*

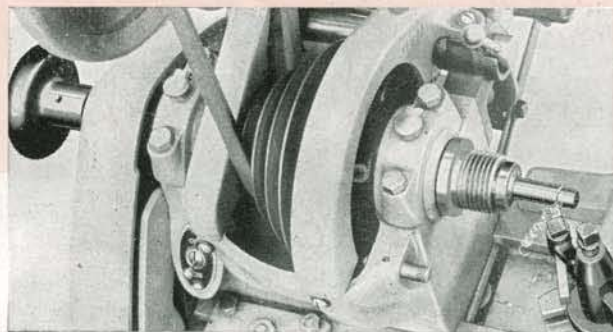
DRAW-IN COLLET CHUCK ATTACHMENT



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 when extreme accuracy is demanded. The complete 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 word YAIRL, weight 3 lb.

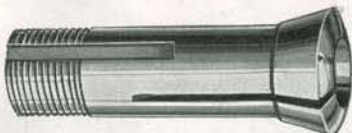


No. 750 Draw-In Collet Chuck Attachment in Operation.

SPINDLE NOSE CAP

No. 548 SPINDLE NOSE CAP protects lathe spindle threads. Code word YETRE, weight 12 ounces.

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 YAJAZ, weight 4 ounces each.



SPLIT HOLDING COLLETS

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. 900B collet chuck attachment. Collets available for hexagonal, square, special work; details on request.

TURRET ATTACHMENTS

FOR PRODUCTION WORK
ON 10" LATHES

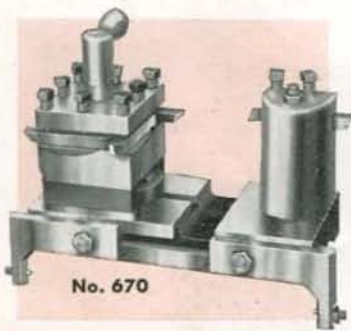
LEVER-TYPE CARRIAGE TURRET

The carriage turret converts the Atlas ten-inch lathe into an efficient turret lathe-screw machine for the manufacture of small parts on a production basis. Pages 10 and 11 show assortments of typical parts being produced quickly and economically with this equipment. Work range includes such operations as forming, roughing, finishing, chamfering, cutting off.

The No. 800 lever-type carriage turret (right) consists of a feed lever for fast cross feeding of carriage, four-way tool post turret, back-slide tool post, and double tool cross slide. 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.

The feed lever, simply installed in place of the standard screw feed, cuts operating costs by speeding up all cross-carriage turret action. High leverage ratio permits sensitive feeding. Feed lever may be purchased separately and installed on Atlas plain-type carriage turrets (No. 710, right).

The four-way tool post turret head may be released by the convenient lock handle and rotated quickly to any one of four operating positions, automatically indexed. The back-slide tool post permits a fifth operation, usually cutting off. Power feed of Atlas lathes speeds up all longitudinal cutting operations. Tool posts take $\frac{3}{8}$ " cutter bits. Adjustable stops at front and back of double tool cross slide may be set to indicate correct depths of cut. No. 690 "Multi-stop" (below) is recommended for quickly gauging length of cut.



No. 670

PLAIN-TYPE CARRIAGE TURRET

No. 670 plain-type carriage turret (left) 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 adapts turret to carriage cross slide dovetails. Turret heads position each tool instantly. Adjustable stops gauge depth of cuts. Power cross and longitudinal feeds of Atlas lathe may be used to speed up all operations with the plain-type carriage turret. Detailed descriptions above.



RECOMMENDATIONS FOR
TURRET LATHE-
SCREW MACHINE WORK

See Pages 10-11

No. 800 LEVER-TYPE CARRIAGE TURRET complete as shown above—Feed lever, double-tool cross slide, 4-way turret, and back slide tool post. Code YIBIF, wt. 28 lb.

No. 710 FEED LEVER ONLY for Carriage Turret, with connections. Code word YIBJY, weight 8 lb.

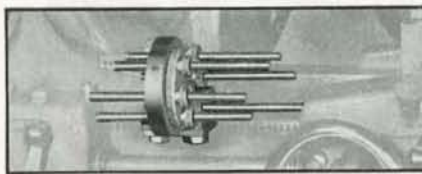
No. 670 PLAIN-TYPE CARRIAGE TURRET, complete as shown at left—double tool cross slide; 4-way turret, and back slide tool post. Code YAJOD, wt. 22 lb.

No. 671A DOUBLE TOOL CROSS SLIDE only. Code word YAJUF, weight 10 lb.

No. 673A FOUR-WAY TURRET only. Code word YAJYG, weight 9 pounds.

No. 676A BACK SLIDE TOOL POST only. Code word YAJZA, weight 5 pounds.
Cutter Bits Not Furnished.

No. 3855 SET OF 6 UNGROUND $\frac{3}{8}$ " CUTTER BITS. Code word YARPY, weight 1 lb.



No. 690 MULTI-STOP ATTACHMENT with mounting bracket. Code word YEHFE, weight 3 pounds.

The "MULTI-STOP"

Six adjustable stop screws accurately gauge length of each cut. Each position stamped to identify operation. Position set by hand-operated ball-and-spring indexing mechanism. Mounts on front bed way near headstock.



No. 600

TAILSTOCK TURRET

The tailstock turret includes 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, each permitting a separate operation. Moving quick-acting hand-feed lever to extreme right unlocks turret head so next tool may be positioned; advancing feed lever locks head in position. Six adjustable stop screws at end of feed ram are automatically indexed with head, and accurately gauge depth of each operation. To assure accurate spindle and tool alignment, holes for tool holders should be bored by lathe on which turret is to be operated. Turret travel, $3\text{--}7/16$ ".

No. 600 TAILSTOCK TURRET with head finish bored. Complete with special tailstock, lever feed, stops. Code word YAJIC, weight 39 pounds.

No. 600A TAILSTOCK TURRET with head unbored. Complete with special tailstock, lever feed, and stops. Code word YAJEB, weight 39 pounds.

LEVER-TYPE TAILSTOCK

Speeds up any single production operation from the tailstock—drilling, reaming, tapping, countersinking, setting length of stock, etc. Feed lever advances ram to work in an instant. Stop collar may be adjusted to gauge depth of cut.



SPECIFICATIONS
Travel of Ram..... $3\frac{3}{8}$ "
Ram Diameter..... $1\frac{1}{8}$ "
Ram.....Bored for No. 2 Morse taper
Ram Graduations...0 to 3" by $1/16$ ths
Setover, Forward or Back..... $3/4$ "

No. 695 LEVER-TYPE TAILSTOCK as shown. Code word YIBGO, wt. 29 lb.

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

MILLING ATTACHMENT FOR 10" LATHES

THIS attachment equips the Atlas 10-inch lathe for face milling, cutting keyways and slots, milling dovetails, squaring shafts, making dies and moulds and a wide variety of other important operations. The change is made quickly and easily 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 the vise to hold the work firmly in position. Vise slide is graduated, and vise can be swivelled to any desired angle. For handling extra large work, clamping plate may be fastened in place of the vise (see above, right).

No. 500A MILLING ATTACHMENT for Atlas 10-inch lathes. Code word YAKBA, weight 19 lb.....

Vertical Feed.....3 $\frac{3}{4}$ " Vise Capacity.....2 $\frac{3}{8}$ "
 Cross Feed.....5" Jaw Depth.....7 $\frac{7}{8}$ "
 Overall Height.....13" Jaw Width.....2 $\frac{1}{2}$ "

FURNISHED: Complete as shown including graduated swivel vise, vertical feed screw with graduated collar, flat block, V-block for round work.

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.



(Above) Handling Milling operation on large piece.

(Left) Handling boring operation with work held in clamping plate, boring bar mounted between centers. Blueprint for making boring bar — No. BP-101. Code word YEREP.....

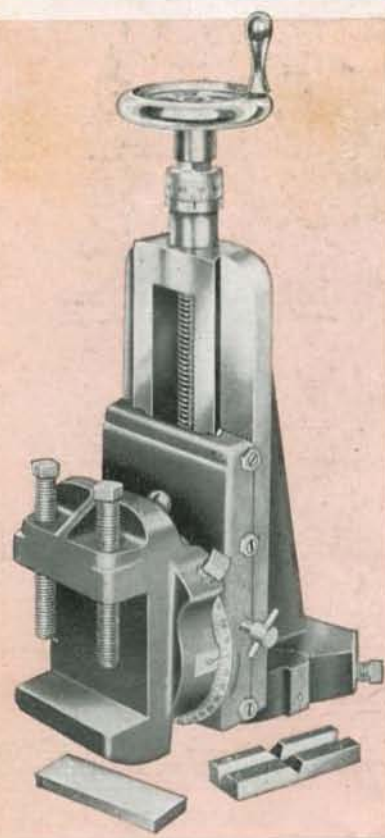
No. 502B Clamping Plate Code YEZOZ, wt. 5 lb. **IMPORTANT!** Give lathe serial no. and date purchased.



GEAR CUTTING

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

No. BP-102 BLUEPRINT of Gear Cutting Attachment. Code YERNA.....



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

CUTTER HOLDING SET



No. 945 CUTTER HOLDING SET. Complete: draw bar, sleeve and arbor. Code YEYAT, wt. 3 lb.

ANGULAR CUTTERS WITH THREADED HOLE

For face-milling, dovetailing, and cutting angles less than 90°. Included angle is 60°. Adapted to holding set with arbors listed below. Weight 6 oz. each.



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

ARBORS FOR ANGULAR CUTTERS

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

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



R. H. SPIRAL STRAIGHT SHANK END MILLS

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

No.	Length of Flute	Diameter	Code Word
576A	5/8"	1/4"	YAKCE
576B	11/16"	5/16"	YAKEC
576C	3/4"	3/8"	YAKFO
576D	7/8"	7/16"	YAKID
576E	15/16"	1/2"	YAKOF



COLLET BUSHINGS

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

No. 563E FOUR COLLET BUSHINGS. Code YALED, weight 6 oz.....

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 holding set. Weight 6 oz. each.

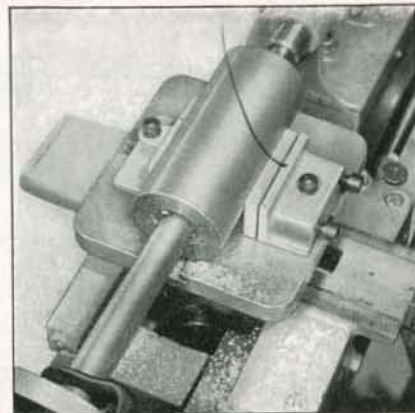
No.	Diameter	Thickness	Diam. Shank	Code
575A	1/2"	1/8"	1/2"	YALUH
575B	3/4"	3/16"	1/2"	YALYJ
575C	1"	1/4"	1/2"	YAMAD
575D	1-1/8"	5/16"	1/2"	YAMDA
575E	1-1/4"	3/8"	1/2"	YAMEF



10" LATHE ACCESSORIES

BORING TABLE and VISE

This fixture permits boring and threading long holes with maximum accuracy — holds work rigidly while cut is taken with boring bar. It replaces the 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 movable face which is tightened on the work after both jaws have been clamped to the table.



No. W68-2A BORING TABLE for 10" lathes, complete with vise and wrench. Code word ZEFZO, wt. 12 lb.

Size of Table.....7" x 7" Jaw Opening.....4 $\frac{5}{8}$ "
 Jaw Width.....3" Jaw Height.....1 $\frac{5}{8}$ "

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

No. BP-101 Blueprint Guide for making Boring Bar shown at right. Code word YEREP.....

HEAVY-DUTY GRINDER FOR 10" LATHES

No. 10-450

THE 10-450 is a lathe 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.

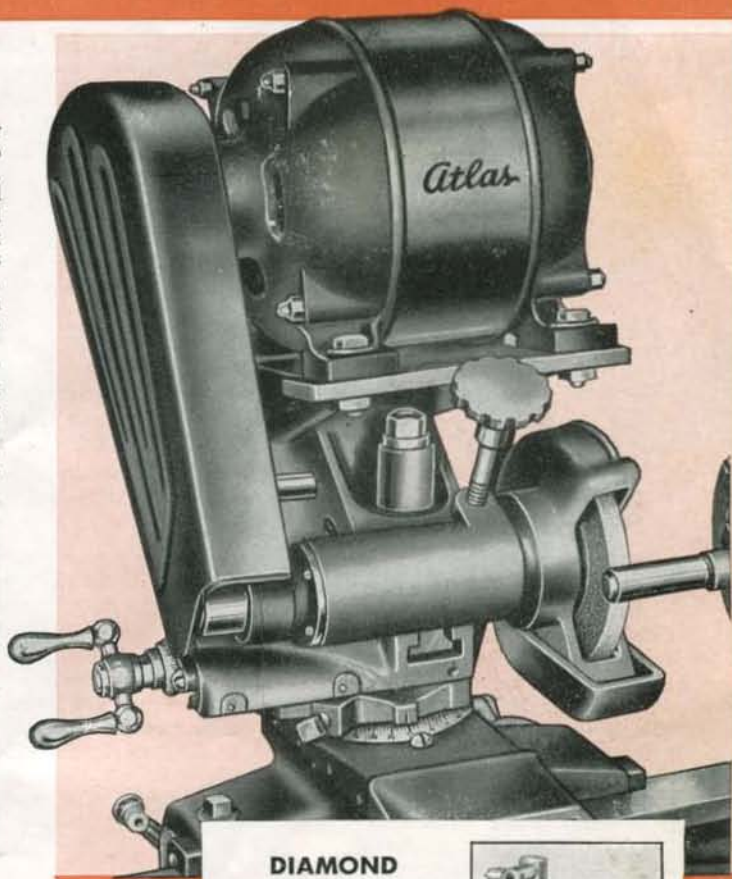
The main frame is a heavy casting which furnishes maximum strength and rigidity. Spindle housing is accurately machined to take bearings. One end of the frame supports the motor mounted on tilting bracket adjustable for belt tension. Frame is bored for mounting post. Post is 1-3/16" diameter and has 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.



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

The 10-450 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 safety shield.



DIAMOND WHEEL DRESSER

Furnished with No. 10-450 lathe grinder. Clamps to bed ways and dresses wheel in exactly the position in which it will be used. Illustration also shows internal grinding quill and No. 477 1/2 wheel furnished with No. 10-450 grinder.



★
REVERSING SWITCH BELOW

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 1/4"
Grinds External Diameters up to	4 1/4"
Grinds Internal Diameters from	1/2" to 9 1/4"
Internal Wheels Grind to Depth of	2 3/8"
Base Swivels for Angular Grinding	0 to 50°
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

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

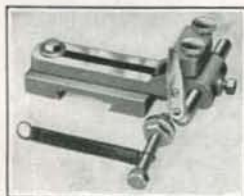
No.	Description	Diam.	Weight	Code
10-475	External Wheel for Steel, 3/8" thick (recessed-type)	4"	1 lb.	YENKA
10-476	External Wheel for Cast Iron, 3/8" thick (recessed-type)	4"	1 lb.	YENLE
477 1/4	Internal Wheel	1 1/2"	2 oz.	YANJO
477 1/2	Internal Wheel	1 1/2"	3 oz.	YANLY
477 3/4	Internal Wheel	1 1/2"	3 oz.	YANOJ
477-1	Internal Wheel	1"	3 oz.	YANUK
10-478	Special Cup Wheel for O.D. of Reamers	2 3/4"	8 oz.	YEVIT
479	Special Saucer Wheel for Face of Solid Reamers	1 1/4"	3 oz.	YAODY

No. 10-450 HEAVY-DUTY GRINDER for Atlas 10" lathes. Code word YENEL, weight 60 lb.

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 wheel dresser; extension cord, plug.

ATTACHMENTS FOR No. 10-450 LATHE GRINDER

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 No. 10-450 grinder. Code word YAOLG, weight 4 lb.

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 No. 10-450 grinder. YAONJ, 3 lb.



HEAVY-DUTY REVERSING SWITCH

Required for Grinding Operations

No. 420HD heavy-duty switch quickly changes the rotation of the lathe spindle by reversing the motor. It is a 1 HP drum-type switch for voltage up to 600 AC. Has large arc shields, star wheel indexing, forged copper-tipped finders. Operates on single phase, capacitor, and 3-lead repulsion-induction motors (not 4-lead) — also both shunt-wound and compound-wound DC.

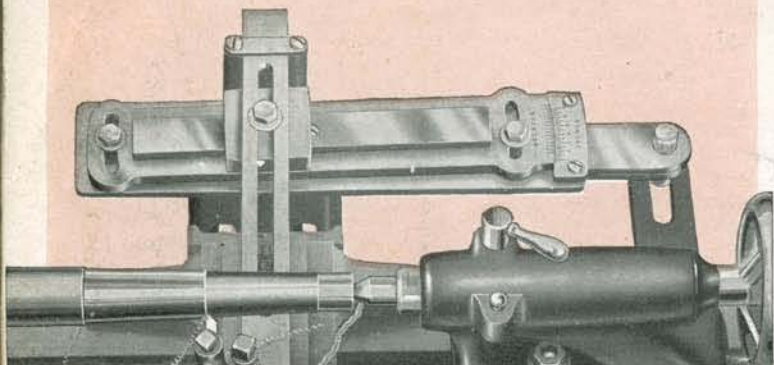
Furnished with bracket for mounting on reverse gear box, a handy, easy-to-reach position. For other switches, refer to page 13.

No. 420HD HEAVY-DUTY REVERSING SWITCH complete with mounting bracket, 6 ft. heavy cord, plug, installation diagram. Code YICAD, wt. 3 1/2 lb.



TAPER ATTACHMENTS FOR 10" LATHES

No. 700 TOOL ROOM TAPER ATTACHMENT



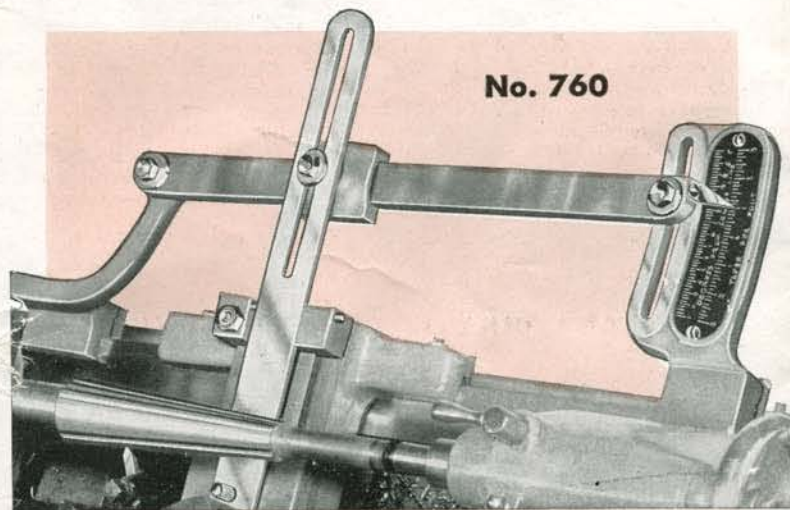
The Atlas No. 700 taper attachment is designed and recommended for tool rooms and production shops. It has the extra weight and rigidity required for extreme accuracy in production taper work. The dovetail slide bar, installed parallel to the bed way, is accurately machined and has gib adjustment to 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.
 Maximum Travel, One Setting.....6 1/2"
 Range, Right or Left.....7° 10' (3" per foot)

No. 760 TAPER ATTACHMENT

(Right) The No. 760 is an accurate, reasonably priced taper attachment developed by Atlas engineers to meet the demand of hundreds of shops. Its sensationally low price puts this important accessory within the reach of any lathe owner. The No. 760 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 support brackets. 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 TAPER ATTACHMENT for Atlas 10-inch Lathes. Code word YAJBE, weight 11 pounds.....
 Maximum Travel, One Setting.....6"
 Range, Right or Left.....7° (2-15/16" per foot)



No. 760

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 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. 10F-720 SAFETY BELT GUARDS for Atlas 10" lathes with horizontal countershaft. Code YEVSE, weight 22 lb. Per set.....

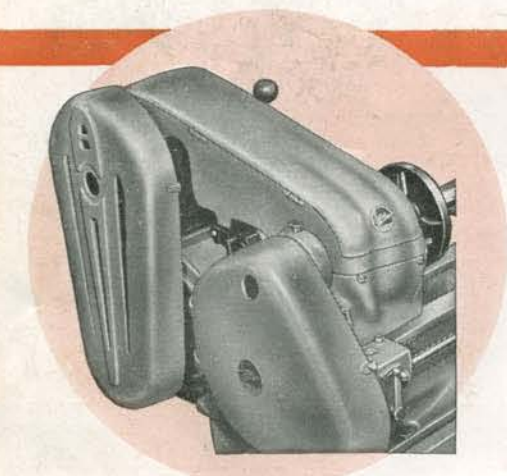
No. 10-720 SAFETY BELT GUARDS for Atlas 10" lathes with vertical countershaft. Code YADUZ, weight 16 lb. Per set.....

"MANUAL OF LATHE OPERATION"

"LATHE OPERATION" has earned a place as an authentic reference source for all shop men, both experienced and beginners. Its pages illustrate and describe in easy-to-understand language the care and operation of modern screw-cutting lathes. It includes the latest technical data for machining the new metal alloys and plastics—tool grinding, cutting speeds, lubricants, tables and charts.

The Atlas Manual is logically arranged and accurately indexed for quick reference. Divisional tabs make each chapter instantly available—the special binding allows the book to lie open flat at any page.

"MANUAL OF LATHE OPERATION," 6"x9";
 272 pages; 366 pictures; 89 charts and tables.
 Postpaid per copy.....
 (Furnished free with Atlas 10" lathes)

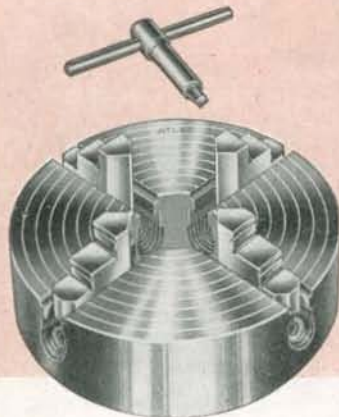


Opens Easily
Lies Flat

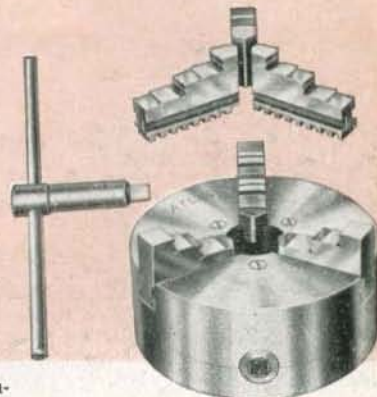
CHUCKS FOR 10" LATHES

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

No. U-370 6" MEDIUM DUTY INDEPENDENT CHUCK complete with wrench. Body threaded for 10" lathe spindle. Code word YIAGH, weight 10 lb.

No. U-370-8 8" MEDIUM DUTY INDEPENDENT CHUCK complete with wrench. Body threaded for 10" lathe spindle. Code word YIAHJ, weight 22 lb.

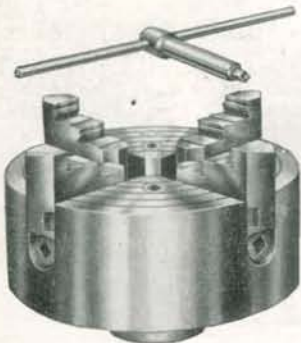
Has self-centering jaws controlled by turning one screw — ideal for quickly centering round and hexagon stock. Body is high-strength semi-steel. Scroll is special alloy metal — pinion is special alloy steel. Jaws are alloy steel heat-treated — have raised and ground steps. Furnished with two sets of 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-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 8 lb.

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 YEZVA, wt. 13 lb.

No. U-765 6" HEAVY DUTY INDEPENDENT CHUCK only less adapter. Code YIAMN, weight 9½ lb.

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.

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 16 lb.

No. U-770 6" HEAVY DUTY UNIVERSAL CHUCK only less adapter. Code YIARS, wt. 12½ lb.

No. U-770A ADAPTER PLATE ONLY. Diameter 3-13/16", threaded for 10" lathe spindle, face semi-finished. Code YIAST, wt. 3½ lb.

JACOBS CHUCKS

For 10-Inch Lathes Only. 6" Lathe Chucks Are Described on Page 25—Armature Chuck Kits, Page 21.

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. 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. Code word YAGYE, weight 4 lb.

No. 377 ARBOR for 375 chuck only. Code word YAHUD, wt. 8 oz.

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

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. 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, weight 3 lb.

No. 377 ARBOR required. Code word YAHUD, weight 8 oz.



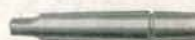
No. 377 ARBOR to adapt 375 or 445 chuck to 10" lathe tailstock. Code YAHUD, weight 8 ounces.

DRILL CHUCK

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



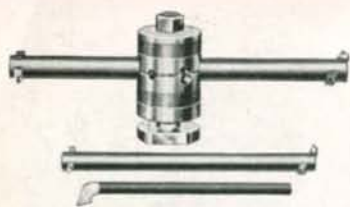
No. 40-60 JACOBS DRILL CHUCK, capacity No. 70 drill to 1/2", complete with key-type wrench. Code YAHIB, weight 2 lb.



No. 378 ARBOR to adapt No. 40-60 chuck to 10" lathe headstock or tailstock. Code word YAHYA, wt. 8 oz.

CHUCK ARBORS

ACCESSORIES and TOOLS for 10" LATHES

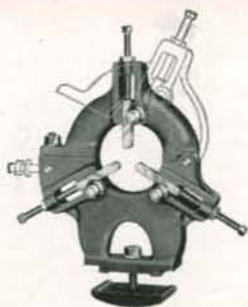


TURRET TYPE BORING SET

Provides maximum rigidity. Steel turret head has heavy clamp screw for locking bars in rigid position—replaces standard lathe tool post. $\frac{3}{8}$ " bar is solid high-speed steel — $\frac{1}{2}$ " and $\frac{3}{4}$ " bars have $\frac{1}{8}$ " and $\frac{1}{4}$ " high-speed cutters.

No. 970 TURRET TYPE BORING SET complete as shown. Code word YIBED, weight 8 lb.....

FURNISHED: Turret head, $\frac{3}{4}$ " x 11" boring bar with two $\frac{1}{4}$ " high-speed cutters, $\frac{1}{2}$ " x 8" boring bar with two $\frac{3}{16}$ " high-speed cutters, $\frac{3}{8}$ " x 6" solid high-speed boring tool.



STEADY REST

Rigid support for accurately machining long pieces. Clamps to bed ways. Frame, base are strong iron castings; bronze jaws prevent scoring. Top hinged so that work may be inserted and removed without disturbing jaw settings.

No. 10-325A STEADY REST for 10" lathes, 27 $\frac{1}{8}$ " capacity. Code YIAWY, wt. 5 lb.....



FOLLOWER REST

Insures accurate work on long slender rods. Quickly mounted on back of carriage dovetail slide. Ruggedly built—hardened steel jaws quickly adjusted and locked.

No. 425 FOLLOWER REST for 10" lathes. Code YAVNE, wt. 3 lb.....



FACE PLATES

No. 365 is 8 $\frac{1}{2}$ " diameter for holding large work. Threaded to fit spindle nose of Atlas 10" lathes. Accurately machined grey iron casting. 8 slots for clamping work firmly in position.

No. 365 8 $\frac{1}{2}$ " FACE PLATE. Code YAVSY, wt. 7 lb.....

No. 15 6" FACE PLATE as furnished with Atlas 10" lathe. Code YEYMP, 3 lb.....



CROTCH CENTER

Automatically centers round work in tailstock ram for accurate cross-drilling. V-slot carefully machined. Ground steel shank is No. 2 Morse taper. 2" diameter, 1" slot.

No. 356 CROTCH CENTER. Code YATRY, wt. 1 lb.....



DRILL PAD

Mounts in tailstock ram as rigid brace for drilling flat or square work with drill in headstock. Shank is No. 2 Morse taper. Diam. face 3 $\frac{1}{8}$ ".

No. 360 DRILL PAD. Code YATOP, wt. 1 $\frac{1}{2}$ lb.....



LATHE CENTER

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

No. 9-88 60° LATHE CENTER. Code word YAVAM, weight 8 oz.....

No. 138 REDUCING SLEEVE. No. 3 to No. 2 Morse Taper. Code YEYLN, wt. 6 oz.....

No. 790 CENTER EJECTOR BAR, length 13 $\frac{1}{2}$ ". Removes center without burring center of sleeve. Code word YEMPY, wt. 2 pounds.....



BALL BEARING TAILSTOCK CENTER

Center point rotates on enclosed ball bearing—recommended for high-speed operations. Ideal for the average shop.

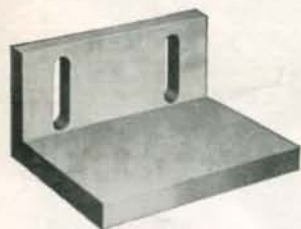
No. 348 BALL BEARING CENTER, No. 2 Morse taper shank. Code YEMMO, wt. 1 lb.



HEAVY-DUTY BALL BEARING TAILSTOCK CENTER

Center point turns with work—permits faster turning and deeper cuts on heavier work. Thrust load is carried by Timken tapered roller bearing; radial load by sealed precision ball bearing. Bearings are held by hardened and ground one-piece housing, packed with grease and sealed.

No. 348A BALL BEARING TAILSTOCK CENTER, No. 2 Morse taper shank. Code YIBYJ, weight 1 $\frac{1}{2}$ lb.....

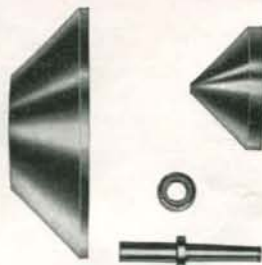


ANGLE PLATE

Simplifies off-center work and machining of odd-shaped pieces. Heavy casting machined to right angle. May be bolted to any point on face plate.

Horizontal Face — 6" x 4 $\frac{1}{8}$ " x $\frac{3}{8}$ ".
Vertical Face — 6" x 2 $\frac{3}{8}$ " x $\frac{3}{8}$ ".
Two Slots — 1 $\frac{1}{2}$ " (cc) x $\frac{1}{2}$ " x $\frac{3}{8}$ " thick.

No. 740 ANGLE PLATE. Code YAVYS, weight 10 lb.....



PIPE CENTERS

For supporting pipe in tailstock. Centering cones turn with work and are supported by tailstock arbor. Ball bearing absorbs thrust.

No. 755 SET OF PIPE CENTERS complete as shown. Code YAWAN, wt. 12 lb.

No. 757 PIPE CENTERING CONE, capacity 4" to 8". Code YEYTA, 9 lb.

No. 756 PIPE CENTERING CONE, capacity $\frac{1}{4}$ " to 4". Code YEYUZ, 3 lb.

No. 758A TAILSTOCK ARBOR, No. 2 MT shank. YEYVE, 2 lb.....



LATHE LAMP

The Atlas lathe lamp improves vision by throwing plenty of light directly on the work—eliminates eye glare by proper deflection. 15" flexible cable allows bulb and shade to be moved to any position. 11" rigid post clamps by mounting brackets to base of bed. Ball-joint in shade, push-thru switch.

No. 745 LATHE LAMP, cord, plug furnished. Code YAIKD, wt. 3 lb.....



BORING TOOL HOLDER

Rigid support for boring tools. Clamp ring fits over tool post, has three slots at different heights to hold boring tools of 3/16", 1/4", 5/16" and 3/8" diameter in tool post slot. Tool post screw tightens V-block and plain block on boring tool.

No. 990 BORING TOOL HOLDER with clamp ring, V-block, plain block and one 1/4" high-speed boring tool. Code YIBOG, wt. 1 lb.....

ACCESSORIES and TOOLS for 10" LATHES



MOTOR DRIVEN MICA UNDERCUTTER

For servicing armatures. Attaches to back of carriage cross slide where it can be put in action in a second or moved out of way when not in use. Saw is fed through mica by turning lathe carriage hand-wheel — the new grooves are always clean, square, parallel, and uniform in depth. Height of cutter arbor is adjusted by elevation screw with hand-wheel control. Saw arbor driven by Dumore motor. Capacity under arbor, 5".

No. 510 MICA UNDERCUTTING ATTACHMENT for Atlas 10" lathes, complete as shown. Dumore motor, 105-125 volt, 25-60 cycle AC, 105-125 volt DC. Furnished: Set of 5 high speed under-cutting saws (.015", .020", .025",

.030" and .035"), extension cord, switch, plug. Code word YAMFE, wt. 11 lb.

No. 523A SET OF 10 HIGH SPEED SAWS (two each: .015", .020", .025", .030", .035"). Code YETUV, wt. 2 oz. Per set of ten.



ARMATURE CHUCK KIT

Contains two Jacobs chucks: center rest bearing chuck to support armature shaft in tailstock, and headstock chuck for driving. Key-type wrench, recessed-type arbors, attractive case.

No. 9-441 CHUCK KIT. Arbors for No. 2 Morse taper spindles. Code YEJOJ, wt. 8 lb.



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.

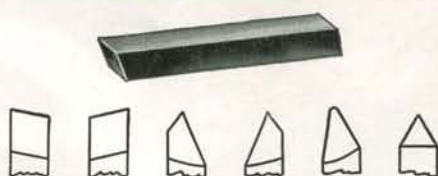
No. 780 COIL WINDING ATTACHMENT. Code word YAWEP, weight 2 lb.



TOOL-POST TOOL SET

High speed, ready-ground boring and turning tools. Solid, one-piece construction . . . held directly in tool post. Ideal for accurate jobs requiring rigid tool mounting.

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.



1/4" CUTTER BITS

High speed 1/4" x 1/4" cutter bits, ready-ground for use in Atlas tool holders. Set of 6 permits wide range of operations. 3/8" unground bits for use in tool post also listed.

No. 386 SET OF 6 FORMED CUTTER BITS 1/4" x 1/4". Includes bits shown. Code word YARJA, weight 1 lb.

No.	Description	Code
386S	Set of 6 Unground 1/4" cutter bits	YARKE
386T	Set of 12 Unground 1/4" cutter bits	YARMO
385S	Set of 6 Unground 3/8" cutter bits	YARPY



TOOL HOLDERS

Drop-forged special steel, accurately machined, heat-treated. Alloy steel set-screws heat treated. Slot is accurately machined for 3/8" cutter bits—3/8" shank fits tool post slot. Set of 3 handles all turning, facing operations.

No. 139L LH TOOL HOLDER. Code YAUDZ, wt. 1 lb.

No. 139R RH TOOL HOLDER. Code YAUHD, wt. 1 lb.

No. 139 STRAIGHT TOOL HOLDER. Code YAUCY, wt. 1 lb.



KNURLING TOOL

Floating construction makes rollers self-centering. Hardened tool steel rollers form gripping surface for handles, nuts, markers, etc.

No. 340 KNURLING TOOL, medium diamond-shape knurls. Code YAUSP, wt. 1 lb.

No. 343 EXTRA KNURLS, medium-diamond. Code YEGYJ, wt. 2 oz. Per pair.



CUT-OFF TOOL

Quick, clean cut-offs. Drop-forged RH holder with 3 1/2" high speed replaceable blade, ready-ground. Sharpen front edge only.

No. 590 CUT-OFF TOOL with blade. Code word YAUJF, weight 1 lb.

No. 592 EXTRA BLADE. Code YAURN, 4 oz.



THREADING TOOL

Ground to cut 60° threads. Resharpener easily, accurately by grinding top edge only. RH holder. Clamp screw holds tool rigidly.

No. 430 THREADING TOOL. Code word YAUXT, weight 1 lb.



STOPS

MICROMETER CARRIAGE STOP simplifies accurate duplicate work on turning, boring, facing. Clamps on front bed way. Will not automatically stop carriage.

No. 10-315 CARRIAGE STOP. Code YIAZB, wt. 2 lb.



CROSS SLIDE STOP shows depth to stop cross feed. Clamps to cross slide dovetail. Will not automatically stop cross feed.

No. 725 CROSS SLIDE STOP. Code YAIBT, wt. 8 oz.



CLAMP DOG

For holding square, rectangular, hexagonal, or round work. Clamp bars forged steel, screws heat treated.

No. 741 CLAMP-TYPE DOG. Opens 2 1/4". Code word YAPGA, wt. 1 lb.



DOGS

No. 142A SET OF 4 LATHE DOGS to handle diameters up to 1 1/2". Code word YAPAG, wt. 2 lb.

No.	Opening	Weight	Code
142	1/2"	4 oz.	YAOPK
143	3/4"	5 oz.	YAORM
144	1"	7 oz.	YAOWR
145	1 1/2"	10 oz.	YAOZT

COOLANT SYSTEMS

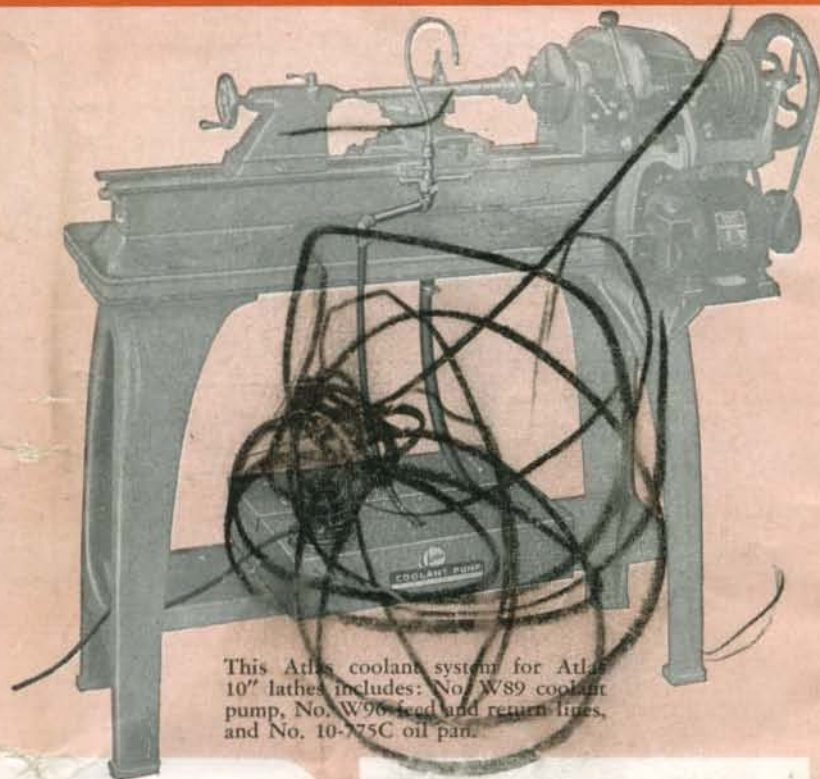
THE installation of an efficient, dependable Atlas coolant system on a bench lathe, turret lathe or screw machine increases production, reduces tool wear and improves work finish. Complete, compact, portable, and easily installed, an Atlas Coolant System may be shifted from one machine to another as the need arises. Notice in the illustration at right, how the coolant system is out of the way, yet easily accessible to the operator.

Powerful Atlas coolant pumps are engineered for continuous service under severe operating conditions and circulate any cutting fluid. The centrifugal design permits control valve to be closed completely while the pump is operating without injury to any part of the system. Simply turning the valve adjusts coolant flow from drip to strong washing action.

The pump motors, induction and universal types, are designed for smooth continuous operation. Completely enclosed, they are not affected by moisture or caustic solutions. Shaft turns on oilite bronze bearings lubricated through capped oil cups. Tanks are heavy-gauge steel, leakproof welded; cover removes easily for filling tank.

All feed and return tubing furnished with Atlas coolant systems is extruded plastic — tough, chemically resistant, flexible, and non-kinking. It is not affected by any type of oil, caustic, disinfectant or coolant ingredient.

An Atlas coolant pump and tank, plus oil pan, plus feed and return unit makes up a complete, low cost coolant system that repays its cost many times over on continuous production schedules.



This Atlas coolant system for Atlas 10" lathes includes: No. W89 coolant pump, No. W96 feed and return lines, and No. 10-775C oil pan.

No. W89



UNIVERSAL PUMP AND TANK

Recommended for heavy-duty production and flood washing. Centrifugal design insures continuous dependable service.

No. W89 UNIVERSAL COOLANT PUMP complete as shown at left with 8 ft. extension cord, push-thru switch and plug. Code word ZEJAZ, wt. 24½ lb.

Universal Motor.....6000 RPM, 110-120 volt AC-DC
Outlet.....¼" pipe nipple (approx. ⅜" ID)
Tank Capacity.....5 gallons
Tank Dimensions.....14½" x 20⅝" x 4¼" deep
Overall Height with Motor.....8½"

INDUCTION PUMP AND TANK

(Right) A compact, efficient centrifugal-type pump recommended for average-duty work — an excellent general utility unit.

No. W88 INDUCTION COOLANT PUMP complete as shown at right with 8 ft. extension cord, push-thru switch and plug. Code word ZEIRL, wt. 17 lb.

Induction Motor.....3450 RPM, 110-120 volt, 50-60 cycle AC
Outlet.....¼" pipe nipple (approx. ⅜" ID)
Tank Capacity.....2½ gallons
Tank Dimensions.....12⅝" x 12⅝" x 4¼" deep
Overall Height with Motor.....8½"



No. W88

FEED AND RETURN SYSTEMS

Furnished complete with Plastic Feed and Return Lines.

No. W96



Support bracket of No. W96 is attached directly to Atlas 10" lathe carriage — can also be adapted to other machine tools.

No. W96 FEED AND RETURN UNIT for Atlas 10" lathes, etc. Includes 15' flexible metal tubing, valve, 7" feed pipe thumb screw, 5' x ⅜" (ID) plastic feed line, 4' x ⅜" (ID) plastic return hose and nipple. Code ZEJUF, weight 4 lb.

Whenever added length is required near nozzle, the No. W97 unit is recommended.

No. W97 FEED AND RETURN UNIT. Same as No. W96 with 8" feed pipe added above control valve. Code ZEJYG, wt. 4½ lb.

PUMPING CAPACITIES

No.	Outlet Elevation Above Motor	Gallons per Hour	
		Soluble Oil (50% Solution)	Lard Oil (70° F.)
W89	Level	450	150
	1 ft.	360	108
	2 ft.	300	90
	3 ft.	252	66
	4 ft.	240	60
W88	Level	225	90
	1 ft.	198	78
	2 ft.	180	54
	3 ft.	162	38
	4 ft.	126	23
	5 ft.	114	10

OIL PANS FOR ATLAS 10" LATHES



Heavy-gauge, leakproof-welded, especially designed to accommodate Atlas 10" lathes. Reduced width at left to accommodate countershaft. Welded outlet nipple for ⅜" ID return hose, 4 oilproof gaskets furnished. Two sizes. Note: We do not manufacture special pans.

No.	For Bed Lengths	Overall	Code	Wt.
10-775A	36" & 42"	45" x 18" x 1¼"	ZEKAB	17 lb.
10-775C	48" & 54"	57" x 18" x 1¼"	ZEJZA	24 lb.

Atlas 6" BACKGEARED SCREW-CUTTING LATHE

• TIMKEN TAPERED ROLLER BEARINGS

• REVERSIBLE AUTOMATIC LONGITUDINAL POWER FEED
 • CUTS 8 TO 96 THREADS PER INCH (STANDARD)
 • 16 SPEEDS — 54 TO 3225 RPM
 • COMPLETE V-BELT DRIVE • 60-HOLE INDEXING MECHANISM • PRECISION-GROUND BED-WAYS



THE FIRST LOW-COST PRECISION-BUILT SMALL LATHE

The exceptional value of this rugged Atlas machine tool is a tribute to modern manufacturing methods. Included in its modern, compact design are these features: Timken-equipped backgeared headstock, V-belt drive, precision-ground bed, 16 spindle speeds, reversible automatic longitudinal power feed, wide thread-cutting range.

Using special-built machinery, rigid inspections at each stage of part-machining, efficient line production assembly, and thorough performance tests of the completed lathe, Atlas is able to produce this 6" lathe with a guaranteed accurate alignment of spindle, tailstock, carriage, and bed ways to within .001 inch in all horizontal and vertical planes.

ACCURACY BUILT IN STEP BY STEP

Beginning with the heavy bed, accuracy is built into the 6" lathe step by step. The entire bed is a heavy massive casting of close-grained semi-steel iron. Ways and leg pads are first rough-milled, then the casting is seasoned and finish-milled until all eight surfaces align within .001 inch in all planes.

Headstock, tailstock, and carriage are hand-fitted to the bed ways. The carriage has six full-length bearings on the bed, each 5" long. The tailstock has four full-length bearing surfaces, each 3 5/8" long. Both headstock and tailstock have take-up adjustments. The large way-bearings plus take-up adjustments guarantee long-lived accuracy under heavy loads.

Timken roller bearings in the headstock carry all spindle loads with minimum friction and permit a wide range of sixteen speeds between 54 and 3225 RPM.

The backgeared drive, powered completely by V-belts, delivers a smooth, even flow of power. Adjustable countershaft is mounted on bench within easy reach for speed changes. Sixty holes in front spindle gear provide indexing mechanism for dividing operations. Threading dial, gears, and chart are furnished for cutting all standard threads between 8 and 96 per inch.

No. 618 6" BACK-GEARED SCREW-CUTTING LATHE. Complete as shown, less motor, with equipment listed at right. Code word YEDUF, shipping wt. 100 lb.

No. 2520S SINGLE PHASE MOTOR. 1/2 H.P., 1740 R.P.M., Capacitor-Start Ball Bearings. 110/220 volt, 60 cycle, 1/2" single end shaft, 10-ft. SJ approved cord and plug. Code word ZEWOR, wt. 33 lb.

SPECIFICATIONS

CAPACITY

Swing Over Bed.....	6"
Swing Over Carriage.....	4 3/4"
Capacity between Centers.....	18"
Threading Range.....	8 to 96 Standard, Right or Left Hand — Metric, .5 to 3 mm. Standard
Collet Capacity.....	9/32" (see page 25)
Overall Dimensions.....	33 1/2" x 27" x 12" high

SPEEDS AND FEEDS

Sixteen Speeds.....	54, 82, 122, 140, 187, 287, 317, 365, 481, 550, 820, 940, 1250, 1925, 2125, 3225 RPM
Feeds (Left or Right) per Revolution of Spindle.....	.0104", .0078", .0048", .0039" or .0024"
Lead Screw.....	1/2" Diam., 16 Acme Threads per inch

DRIVE UNIT

Motor Recommended.....	1/2 H.P., 1740 RPM
Motor Mounting.....	Bench
Countershaft Spindle Bearings.....	Oilite Bronze

HEADSTOCK

Spindle Bearings.....	Timken Tapered Roller Bearings with Thrust Take-up Collar and Nut
Spindle Nose.....	1" Diameter, 10 Pitch NF Threads
Spindle Nose Taper.....	No. 2 Morse Taper
Hole Through Spindle.....	17/32"
Back Gears.....	20 Pitch, 3/8" Wide
Backgear Shaft Bearings.....	Oilite Bronze
Spindle Gear.....	24 Pitch, 32 Teeth, 7/16" Wide

CARRIAGE

Cross Feed Travel.....	4 3/4"
Cross Feed Screw.....	3/8" Diameter, Acme Thread
Tool Post Slide Travel.....	1 3/4"
Tool Post.....	3/8" x 1/4" slot to take 3/8" bits or tool holder for 3/16" bits

TAILSTOCK

Tailstock Ram.....	1/2" Diam. Bored for No. 1 Morse Taper
Tailstock Ram Travel.....	1 1/4"
Tailstock Set-Over, Forward or Back.....	9/16"

EQUIPMENT FURNISHED

Reversible Automatic Power Longitudinal Feed; Graduated Compound Rest; Tool Post, Ring and Rocker; 3/8" 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 1/2" diameter motor shaft — prices for other size motor shafts on request; 60-Hole Indexing Mechanism; 5 1/4" 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, Finish, gray.

6-INCH LATHE ATTACHMENTS (1)

FOR 6-INCH LATHES ONLY
10" Lathe Attachments are Described on Pages 13-22



STEADY REST

Clamps to the bed ways and serves as 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, wt. 3 lb.



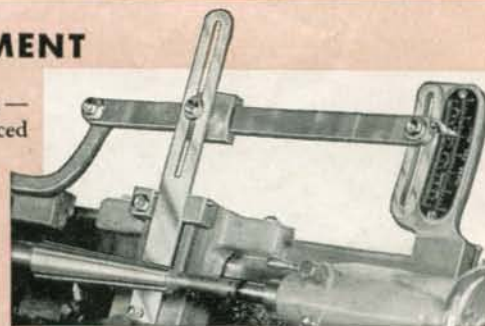
FOLLOWER REST

Insures accurate work on long slender rods. Mounted quickly and easily on the back of the carriage dovetail slide and follows the cutting tool, holding the work in rigid position. Ruggedly built — hardened steel jaws quickly adjusted and locked.

No. M6-395 FOLLOWER REST for Atlas 6" lathes. Code YEFID, 2 lb.

TAPER ATTACHMENT

A typical 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. 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 word YEITS, weight 4 1/2 lb.

Maximum travel, one setting.....7 1/4"
Range, right or left.....7° (2-15/16" per ft.)

MILLING ATTACHMENT



Clamps in place of compound rest for face-milling, routing, cutting keyways and slots, milling dovetails, squaring and splining shafts, making dies, molds, etc. Vise slide is graduated in degrees, and vise swivels to hold work at any angle.

No. M6-500 MILLING ATTACHMENT. Complete as shown with flat block, V-block. Code YEILK, wt. 10 lb.
Vertical Feed 1 1/4" Vise Capacity.....2"
Cross Feed.....3 3/8" Jaw Depth.....3/4"
Overall Ht.....11 1/2" Jaw Width.....2"



CUTTER HOLDING SET

Holds milling cutter in headstock spindle.

No. M6-945 CUTTER HOLDING SET. Includes draw bar, sleeve, arbor for 1/2" shank cutters. Code YEYBD, wt. 2 lb.



R. H. SPIRAL END MILLS

For general milling. Straight shank—adapted to holding set with collet bushings below. Wt. 4 oz. each.

No.	Lgth. Flute	Diam.	Code
576A	5/8"	1/4"	YAKCE
576B	1/16"	5/16"	YAKEC
576C	3/4"	3/8"	YAKFO
576D	1/8"	7/16"	YAKID
576E	15/16"	1/2"	YAKOF



COLLET BUSHINGS

Required to adapt 576 end mills to 22C-5-5 holding set. Not required for 576E end mill.

No. 563E FOUR COLLET BUSHINGS. Code YALED, wt. 6 oz.



ANGULAR CUTTERS

For face-milling, dovetailing, and cutting angles less than 90°. Threaded hole — adapted to M6-945 set with arbors listed below. Wt. 6 oz. each.

No.	Thick	Diam.	Hole	Thread	Code
574A	7/16"	1 1/4"	3/8"	24	YALIF
574B	9/16"	1 1/2"	1/2"	20	YALJY

ADAPTER ARBORS required to adapt 574 cutters to M6-945 set.

No.	For No.	Wt.	Code
572	574A	8 oz.	YEWTE
567	574B	8 oz.	YEWUX

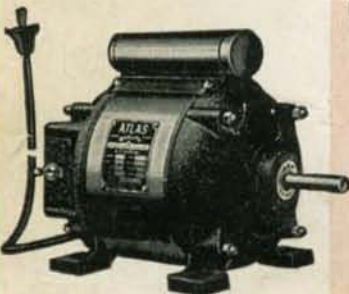


WOODRUFF KEYWAY CUTTERS

For Woodruff keyways, slots, grooves, T-slots. 1/2" straight shank — held in arbor of M6-945 set.

No.	Diam.	Thick	Code
575A	1/2"	1/8"	YALUH
575B	3/8"	3/16"	YALYJ
575C	1"	1/4"	YAMAD
575D	1 1/4"	5/16"	YAMDA
575E	1 1/2"	3/8"	YAMEF

Wt. 6 oz. each.



MOTORS

No. 2520S 1/3 HP 1740 RPM SINGLE PHASE CAPACITOR-START BALL BEARING MOTOR: 110/220 volt, 60 cycle 1/2" single-end shaft, 10 ft. SJ approved cord and plug. (Develops full power instantly under load without drawing excess current.) Code ZEWOR, wt. 33 lb.

THREE PHASE MOTORS

Nos. 2630S and 2635 are designed for use with three phase current. Both are 1/3 HP, 1740 RPM, 60 cycle — have SKF ball bearings, 1/2" single-end shaft. Furnished with BX connector in terminal box — do not have switch, cord or plug.

No.	HP	Volt	Wt.	Code Word
2630S	1/3	220	28 lb.	ZEWPE
2635	1/3	440	28 lb.	ZEWYT



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 3/8" diam. face. Code word YATPO, wt. 12 oz.

CROTCH CENTER

Automatically centers round work in 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.



DOGS

Drop-forged steel. Hold work firmly, transmit maximum power.

No. 142A SET OF 4 DOGS for diameters up to 1 1/2". Code word YAPAG, wt. 2 lb.

No.	Open-ing	Wt.	Code
142	1/2"	4 oz.	YAOPK
143	3/4"	5 oz.	YAORM
144	1"	7 oz.	YAOWR
145	1 1/2"	10 oz.	YAOZT



CLAMP DOG

Holds rectangular, hexagonal, round work. Mounts without removing work from lathe centers.

No. 741 CLAMP DOG. Opens 2 3/4". Code YAPGA, wt. 1 lb.



CARRIAGE STOP

Clamps to bed way, indicates accurate carriage stopping point.

No. 10-315

Code YIAZB, wt. 1 lb.



CROSS SLIDE STOP

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

No. M6-725

Code YEMKE, wt. 8 oz.



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 word YEYOY, wt. 5 lb.