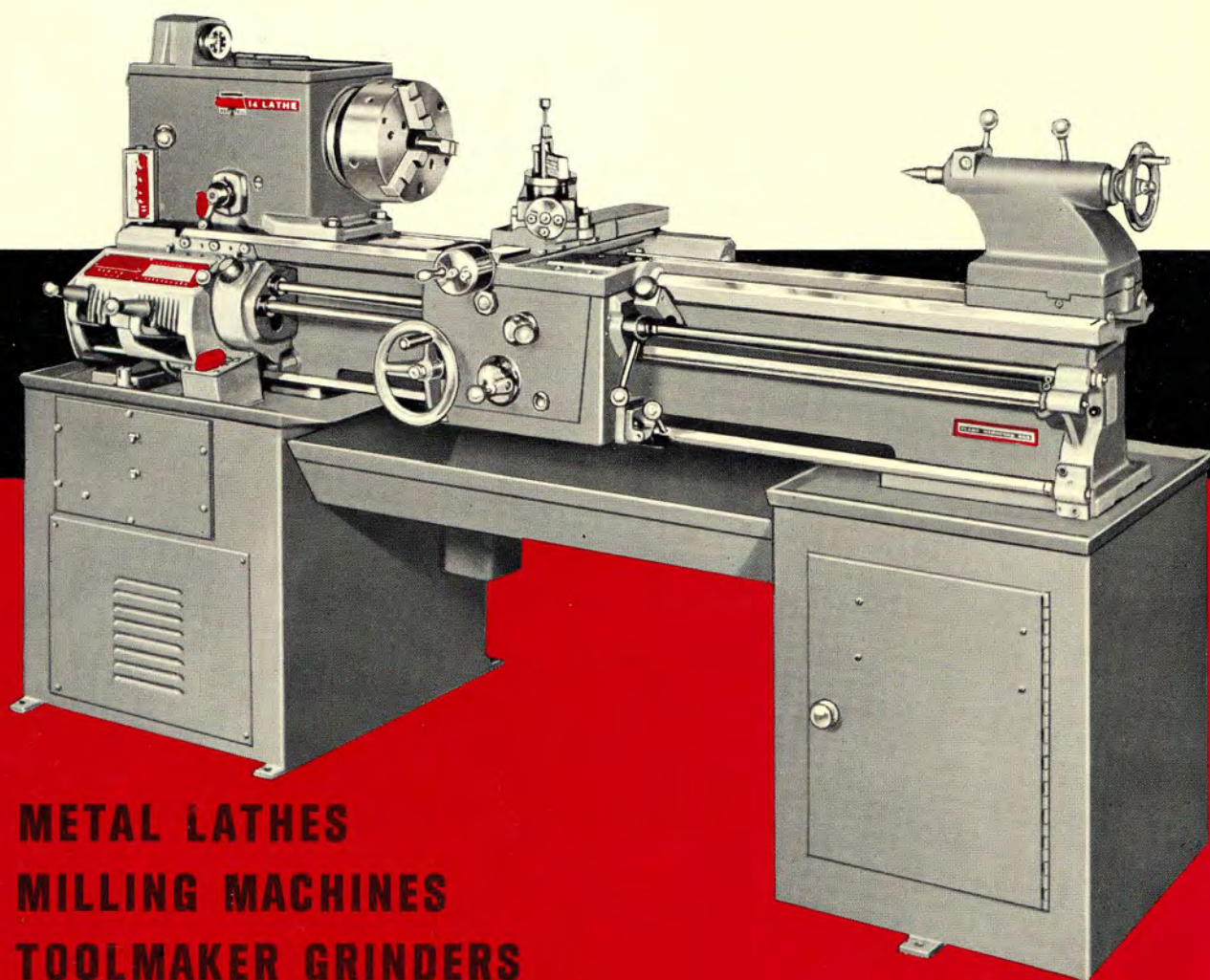


ROCKWELL

machine tools



**METAL LATHES
MILLING MACHINES
TOOLMAKER GRINDERS**

ROCKWELL ... For Power and Precision



Rockwell
MANUFACTURING COMPANY

ROCKWELL MACHINE TOOLS

*for Industry...Job and
School Shops*

*Sold Through Leading
Machine Tool and
Industrial Distributors
Everywhere!*



Look to the Distributor nearest you for all your Rockwell Machine Tool needs, just as Rockwell does at all of its plant locations. You can depend on your local Distributor to provide you with:

Assistance in your production planning. His years of experience and technical know-how have equipped him to give you expert advice on your specific job problems.

Fast delivery from local stocks. Because of his knowledge of local markets, he stocks the products you need and delivers your orders quickly.

Prompt information on new and old products. He is in constant touch with manufacturers who supply him with information on new products and developments.

One source for many types of products. One source ordering simplifies your purchasing procedure and reduces your accounting costs.

YOUR ROCKWELL WARRANTY

Rockwell is proud of the quality of the power tools which it sells. The component parts of our tools are inspected at various stages of production, and each finished tool is subjected to a final inspection before it is placed in its specially designed carton to await shipment. Because of our confidence in our engineered quality, Rockwell agrees to repair or replace any part or parts of Rockwell Power Tools or Rockwell Power Tool Accessories which examination proves to be defective in workmanship or material. In order to take advantage of this guarantee, the complete portable power tool or accessory, or in the case of machinery, the part must be returned prepaid to the appropriate factory, Rockwell service center, or authorized service station for examination. This guarantee, of course, does not include repair or replacement required because of misuse, abuse, or normal wear and tear. Repairs made by other than our factory, service center, or authorized service station, relieves Rockwell of further liability under this guarantee. THIS GUARANTEE IS MADE EXPRESSLY IN PLACE OF ALL OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO QUALITY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.

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**QUALITY
CONTROL
CERTIFICATE**



Rockwell
MANUFACTURING COMPANY

ROCKWELL HORIZONTAL MILLING MACHINE

Catalog No.	Inspected By
Serial No.	Date

This Rockwell Horizontal Milling Machine is a precision machine tool, modern in design and built to highest quality standards. Before it left our factory it had to pass tests for dynamic balance, accuracy, and ease of operation. Shown here are some of the test results on this individual machine, which carries the same serial number as shown above on this certificate.

You can see for yourself the accuracy built into this machine. In every case it has equaled or exceeded the maximum tolerances established by our quality control engineers. Before putting the mill into service, please be sure to read and follow the procedures covered by the instruction manual supplied - especially the instructions about selecting a solid floor, leveling the mill, and lagging it down to the floor. If this is not done, the mill cannot be expected to perform up to the limits shown.

	TEST	Limit Tolerance	This Mill
1	TABLE TOP PERPENDICULAR TO COLUMN WAYS (FRONT-WISE) With dial indicator anchored to column, indicate back surface of test block by raising table six inches.	.0005	
2	TABLE TOP PERPENDICULAR TO COLUMN WAYS (SIDE-WAYS) With dial indicator anchored to column, indicate side surface of test block by raising table six inches.	.0005	
3	TABLE T-SLOTS PARALLEL WITH LONGITUDINAL TABLE TRAVEL With dial indicator anchored to column, indicate back surface of block by moving table longitudinally six inches.	.0005	
4	TABLE T-SLOTS PERPENDICULAR TO TRANSVERSE TABLE TRAVEL With dial indicator anchored to column, indicate side surface of block by traversing table six inches.	.0005	
5	SPINDLE PERPENDICULAR TO TABLE T-SLOTS With dial indicator mounted on test arbor, check center T-slot at "A". Rotate arbor and check at "B".	.0025	
6	SPINDLE TAPER RUNOUT a. Rotate spindle and indicate arbor one inch (1") from spindle nose. b. Rotate spindle and indicate arbor ten inches (10") from spindle nose.	.0005 T.I.R. .001 T.I.R.	
7	LONGITUDINAL TABLE TRAVEL PARALLEL WITH TABLE SURFACE a. (Screw Feed Table) With dial indicator anchored to column, take reading on table surface while feeding table 16" from left to right. b. (Lever Feed Table) With dial indicator anchored to column, take reading on table surface while feeding table 10" from left to right.	.0008 .0006	
8	SPINDLE NOSE RUNOUT a. With dial indicator mounted on table, rotate spindle one full turn, and indicate face of spindle. b. With dial indicator mounted on table, rotate spindle one full turn, and indicate O.D. of spindle nose behind key slots.	.0005 T.I.R. .0005 T.I.R.	
9	TABLE SURFACE PARALLEL WITH SPINDLE With knee, saddle, and table clamps locked, wrap under test arbor at point "A", by sliding indicator base longitudinally along table. Repeat at point "B".	.0000 +.0005	
10	TRANSVERSE TABLE TRAVEL PARALLEL WITH SPINDLE a. With dial indicator on table and centering bar on test arbor in vertical plane (as at "A"), transverse table a distance of 6". b. Repeat with dial indicator in horizontal plane (as at "B").	.001 .0015	

ROCKWELL MACHINE TOOLS ARE QUALITY CONTROLLED

at every
stage!

- RAW MATERIALS
- FINISHED PARTS
- ASSEMBLED COMPONENTS
- COMPLETED PRODUCT

Every Rockwell Machine Tool is a precision machine, modern in design and built to the highest quality standards. Before it leaves the factory, it must pass more than 50 tests for dynamic balance, accuracy and ease of operation.

Because some of these tests are of special interest to the prospective customer, Rockwell provides a Quality Control Certificate with each Rockwell Lathe, Hand Screw Machine or Milling Machine.

This certificate shows the standard of accuracy established by Rockwell engineers for lathes or mills in a given class. It also shows the accuracy of performance of each individual machine. This performance is attested to by the signature of the inspector, who writes in the serial number of the machine, the date of inspection and the results of each test.

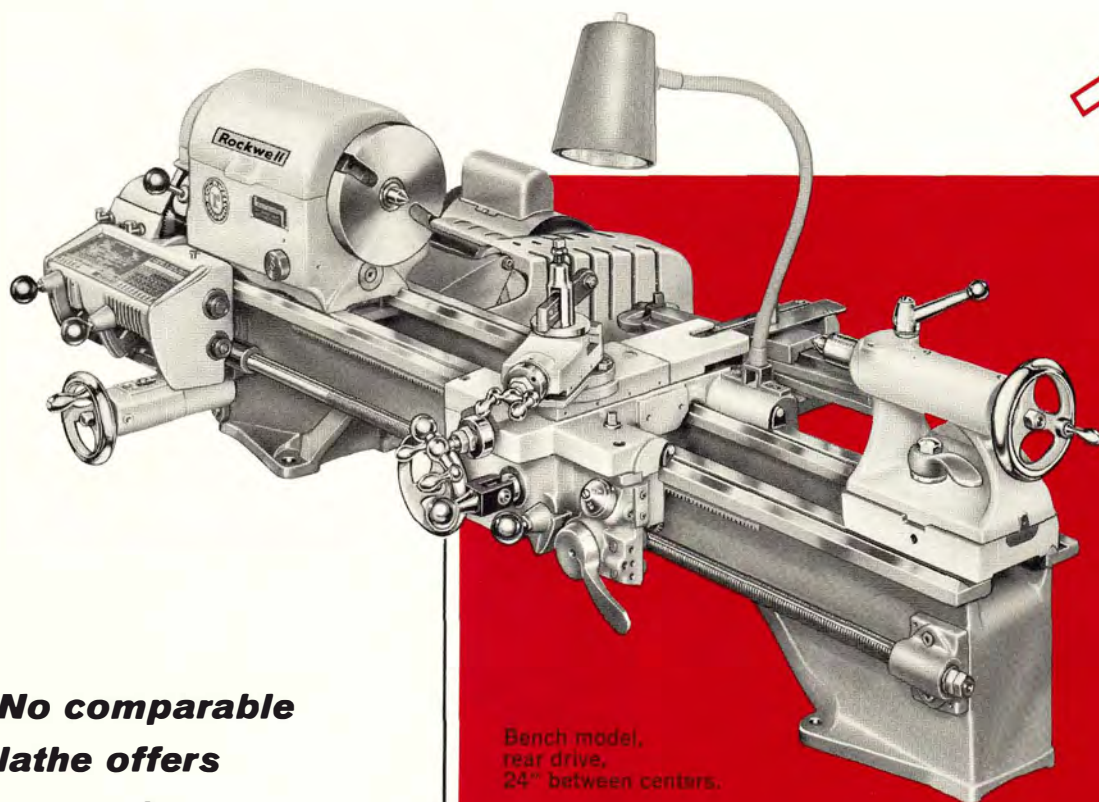
You are invited to see for yourself how much any given Rockwell machine tool exceeds the established standards, before you buy!

This Optical Comparator in the Quality Control Department is used for precision measurement of a wide variety of machine tool parts, assuring high quality levels.

Before a lathe bed leaves the way grinding machine, the operator checks the ways with a precision level for surface relationship and parallelism. The ways must be accurate to within .001" over the entire length of the bed.

ROCKWELL MACHINE TOOLS

6



10"

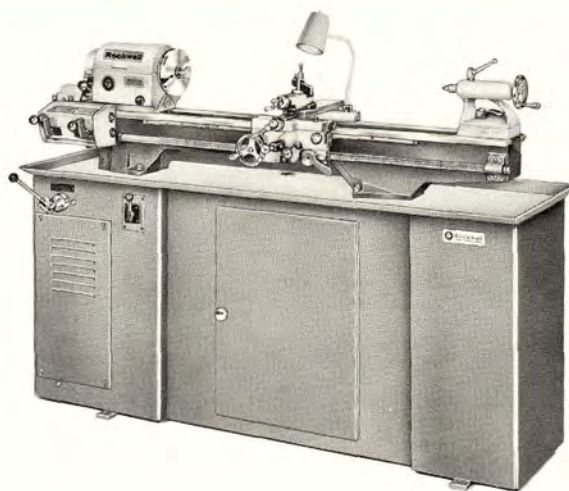
METAL LATHES

**No comparable
lathe offers
so much
real value!**

You'll like everything about this Rockwell 10" Lathe — its modern look, on-the-job performance, and especially the low price. Designed for industry, schools or small workshops, it fills the need for a safe, low cost, precision lathe with heavy duty capacity.

You get variable speed drive, $\frac{3}{4}$ " collect capacity, massive, double row, precision ball bearing at the work load end of the spindle — an exclusive combination of features never before available on a lathe this size at comparable cost.

Bench model,
rear drive,
24" between centers.



Cabinet model,
underneath drive,
36" between centers.

STANDARD EQUIPMENT

Quick change gear box
Matched V-belts for spindle
Variable speed drive complete,
including belts
Motor pulley
6" diameter drive plate
Centers for headstock
and tailstock

Tool post, ring and rocker
Spindle adapter, No. 2
Morse taper i.d.
Thread chasing dial
Combination wrench for
tool post, etc.
Box wrench for tailstock
Extra shear pins

LATHE / SELECTION GUIDE

10" metal lathes

(Less Electricals)

MODEL	BETWEEN CENTERS	BED TYPE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
Bench Model, Rear Drive	24"	Standard	345	25-700
	24"	Hardened	345	25-706
	36"	Standard	388	25-710
	36"	Hardened	388	25-707
Cabinet Model, Underneath Drive	24"	Standard	625	25-720
	24"	Hardened	625	25-708
	36"	Standard	650	25-721
	36"	Hardened	650	25-709

motors and controls FACTORY MOUNTED AND WIRED ON CABINET MODELS ONLY

(See Pages 45 and 46 for separate Motors and Controls; see Page 27 for Mechanical Lock-Out and Disconnect Switch.)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
Single Phase, Three-Quarter Horsepower	Drum Switch Only	Guarded Drip Proof	60-1725	115/230	40	49-450
		TEFC	60-1725	115/230	43	49-451
	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	115/230	44	49-484
		TEFC	60-1725	115/230	46	49-485
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	115/230	46	49-486
		TEFC	60-1725	115/230	48	49-487
Three Phase, Three-Quarter Horsepower	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	230/460	38	49-452
		TENV	60-1725	230/460	40	49-453
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	40	49-454
		TENV	60-1725	230/460	42	49-455
	Drum Switch and Magnetic Starter w/115V Transformer	Guarded Drip Proof	60-1725	230/460	58	49-681
		TENV	60-1725	230/460	64	49-682

NOTE: Single phase motors will be wired for 115V, unless 230V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only.

machine data

CAPACITY

Swing over bed and saddle wings	10 $\frac{1}{8}$ "	
Swing over cross slide	6"	
Between centers (tailstock completely on bed)		
Short bed	24 $\frac{1}{2}$ "; Long bed	36 $\frac{1}{2}$ "
Hole through spindle	1 $\frac{5}{8}$ "	
Maximum capacity with 4-C style collet	3/4"	

THREADS AND FEEDS

Quick change gear box has 54 thread and feed changes	
L.H. or R.H.	
Threads, 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.	
Range of feed rates per spindle revolution	
Longitudinal	.0810-.0014; Cross .0413-.0007
Lead Screw	3/4" dia. Acme 8 t.p.i.

SPINDLE AND HEADSTOCK

Infinite choice of speeds in direct drive	250-1500 rpm
Infinite choice of speeds in gear drive	50-300 rpm
Spindle (Hardened and ground alloy steel)	
Diameter at inboard bearing	1 3/4"
Center used	No. 2 M.T.
Nose	(Has ground threads) 1 1/2"-8
Hole	modified (shortened) No. 9 B. & S.

BED (heavy U-section cross braces)

Has two V-ways and two flat ways			
Length:			
Short bed	44 $\frac{3}{8}$ "	Long bed	56 $\frac{3}{8}$ "
Width	6 $\frac{1}{8}$ "	Depth (in center)	4 $\frac{1}{4}$ "
Width of V's			%

CARRIAGE

Length of saddle V-way	10"; width of saddle bridge	3 1/4"
Cross slide travel	6"; compound slide travel	2"

TOOL POST

3/4 x 1 1/8" opening (takes standard tool holders for 1/4" bits)

TAILSTOCK (has automatic center ejection)

Ram diameter	1 1/8"; Ram travel	2 1/2"
Length of graduations marked on ram, by 1/16ths		2 1/2"
Center used		No. 2 M.T.
Set-over adjustment (either way) for taper turning		1 1/8"

OVERALL DIMENSIONS, BENCH MODEL

Short Bed	53" left to right x 23 1/2" front to rear x 16 1/4" high
Long Bed	65" left to right x 23 1/2" front to rear x 16 1/4" high

OVERALL DIMENSIONS, FLOOR MODEL

Short Bed	54" left to right x 22 1/4" front to rear x 45 1/2" high
Long Bed	66 3/4" left to right x 22 1/4" front to rear x 45 1/2" high

MOTORS

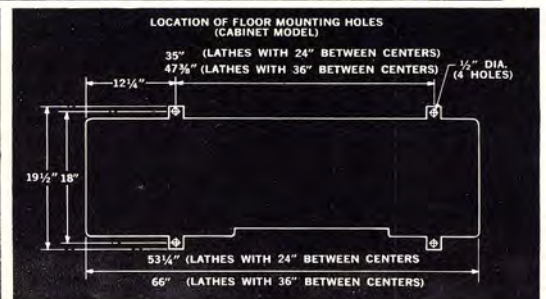
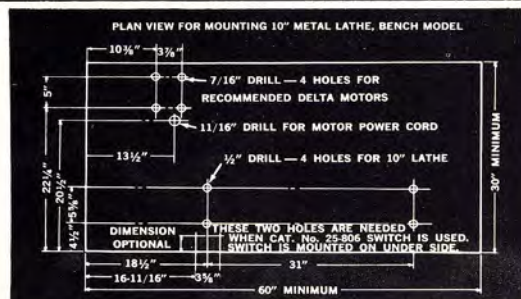
Accommodates NEMA FRAME MOTOR	56
Horsepower recommended	3/4
Speed recommended	1725 rpm

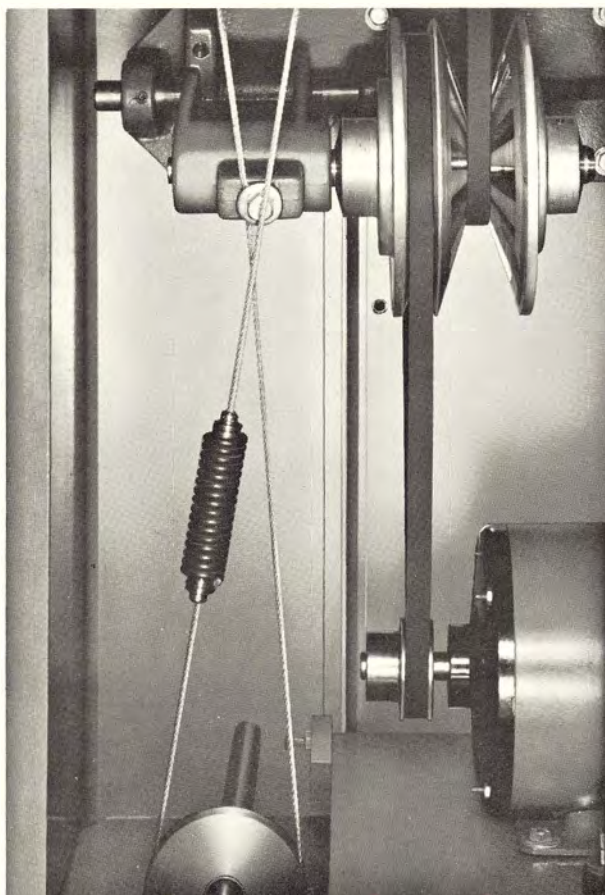
FLAME HARDENED BED

Rockwell 10" Metal Lathes are available with flame hardened bed ways that assure longer wearing qualities and added protection against denting and scoring. Ways are flame hardened, then precision ground with diamond-dressed wheel on special, precision, way-grinding equipment.

Flame hardened bed ways are highly recommended wherever Rockwell 10" Lathes are to be used for machining materials that produce chips or dust that may have an abrasive action on the ways. Flame hardening assures continued original accuracy of the bed ways, even under the stress of repetitive production operations.

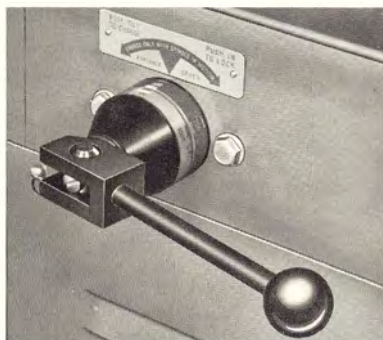
floor space requirements





NEW, IMPROVED VARIABLE SPEED DRIVE ON CABINET MODELS

Gives you all the advantages of a variable speed drive, with an infinite choice of speeds from 50 to 1500 rpm. Its simple construction, with few operating parts, makes it function very smoothly. During speed changes, the variable speed pulley moves up or down at the correct angle to maintain perfect belt alignment at *all* speeds. This assures higher power transmission efficiency— $\frac{3}{4}$ HP motor does work of 1 HP motor required with "old-fashioned," spring-loaded drives.



UNIQUE SPEED SELECTOR

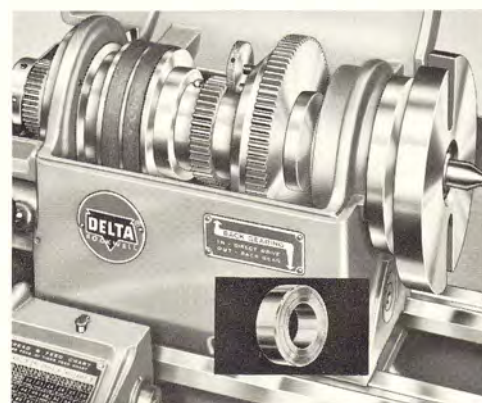
The new variable speed drive, furnished on cabinet models, utilizes a fast-acting lever in place of the hand wheel furnished on bench models. The same wide speed range is offered, however, the speed dial is easier to read, speed changes are made more quickly and there is a cam lock feature that holds the speed constant once it has been selected.



FLEXIBLE SPEED CONTROL

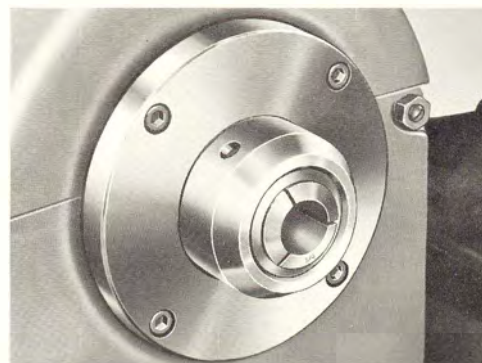
Speeds on bench model can be changed quickly and without effort by turning the large, conveniently located hand wheel. With the easy-to-read pointer and dial, the operator can tell at a glance the spindle speed he is getting through the full range from 50 to 1500 rpm. A *special bonus* feature lets him pre-set the high and low speed limits—a real advantage on repetitive, multiple diameter work—a safety feature for students and inexperienced operators.

***These
features
make the modern
Rockwell
10" Metal Lathe
an unequalled
value!***



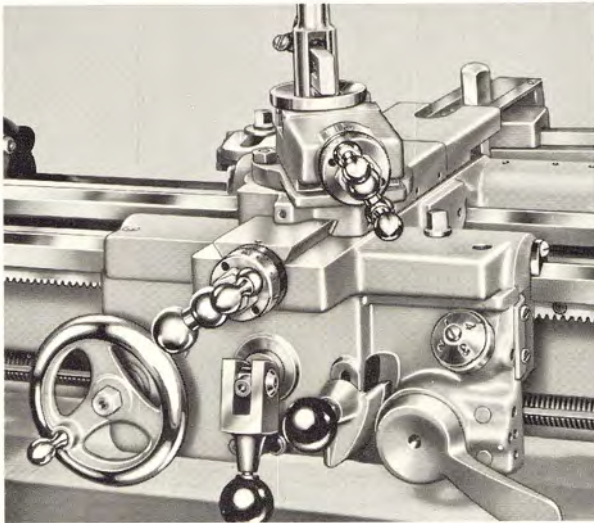
RUGGED HEADSTOCK

Features heavy duty construction throughout. Over-sized spindle is made from heat-treated alloy steel, hardened and ground to a super finish. Spindle nose threads, hardened and then ground, resist damage and maintain original accuracy. Massive, double row, precision ball bearing at spindle nose end features angular contact and internal preloading to prevent all play and assure rigid, accurate work support. Large ball bearing at outboard end "floats" to compensate for expansion as spindle warms up.



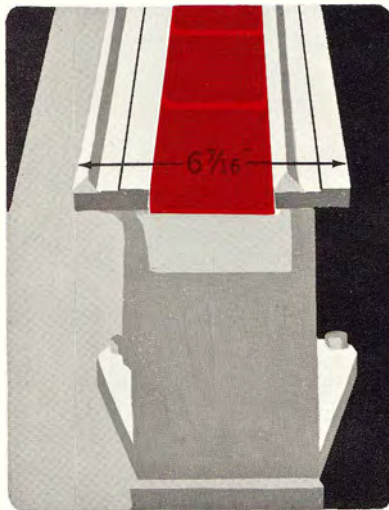
BIG COLLET CAPACITY

You get a full $\frac{3}{4}$ " through the spindle capacity using 4-C style steel collets and $\frac{1}{2}$ " capacity using Jacobs Rubber-Flex Collets. For second operation, the Rubber-Flex collets hold round bars up to $1\frac{1}{4}$ ". This means you can handle large jobs which you could not ordinarily handle on other lathes of this size. Taper for steel collets is ground directly into spindle for extreme accuracy.



ADVANCED CARRIAGE ENGINEERING

Compound slide rest, even in its most forward position, does not overhang the swivel bearing pad. Micrometer collars are direct reading type. Apron has a thread dial as standard equipment. Half-nuts have a special, crisp-action design, appreciated especially by experienced operators. Powerful clutch has infinite choice of settings—can be pre-set to slip when overloaded (to protect the lathe) or can be instantly adjusted, even while lathe is running, for very heavy power transmission.



EXTRA WIDE BED

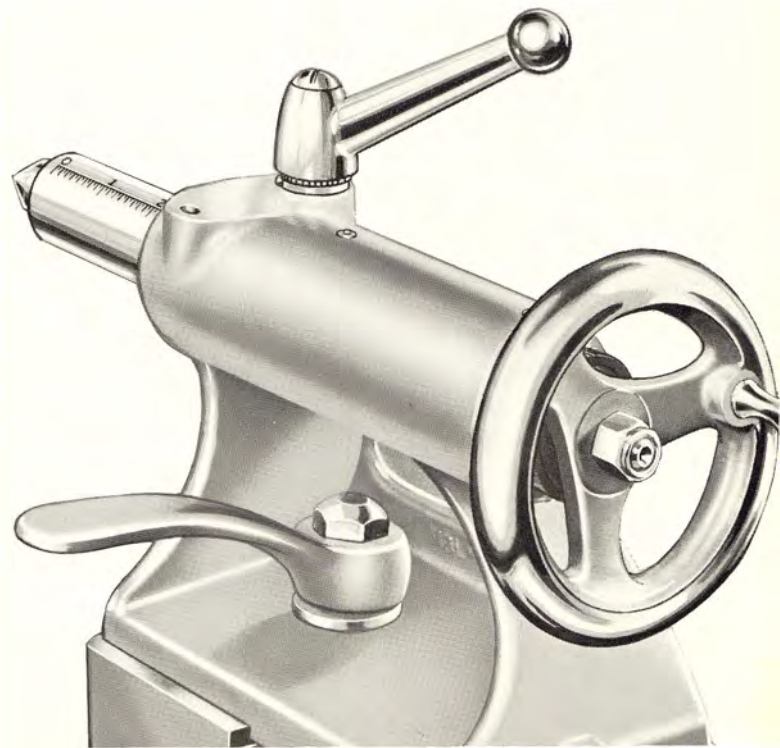
You get an exceptionally wide bed ($6\frac{7}{16}$ "") to assure greatest accuracy possible. Outstanding features include: one-piece construction, with integral riser blocks, plus heavy U-section cross braces for added strength. There are no traps or obstructions to catch chips or coolant. The bed is made of close grained, hi-tensile iron, fully normalized before machining. Precision ground ways provide extremely accurate parallelism with the head-stock spindle over the entire length of bed.

MODERN TAILSTOCK

Rugged, compact, very easy to move and adjust. Can be accurately offset for taper turning by means of adjusting screws. Index marks show exact amount of offset. Ram is marked in $\frac{1}{16}$ ". When fully retracted, ram automatically ejects centers. Large ram lock handle can be set at whatever angle the operator finds most convenient.

QUICK CHANGE GEAR BOX

Gear box provides a choice of 54 feed rates and 54 thread pitches (including 27 threads per inch) by means of two selector levers with rugged, needle bearing equipped tumbler gears. A large, easy-to-read thread and feed chart, conveniently mounted to the top of the box, makes it easy to set selector levers. A lubrication chart, located where it cannot be overlooked, graphically provides all necessary lubrication information.



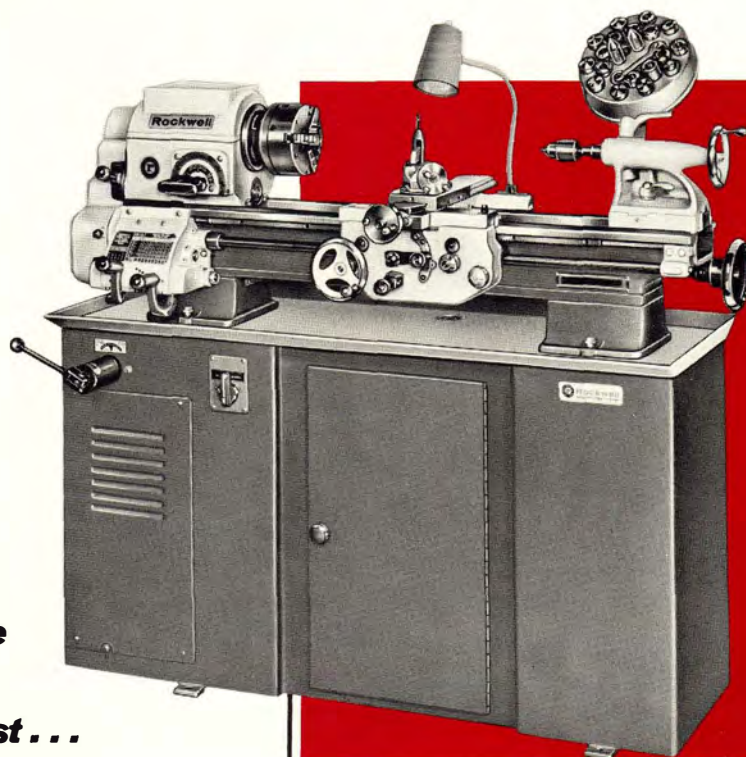
ROCKWELL MACHINE TOOLS

11"

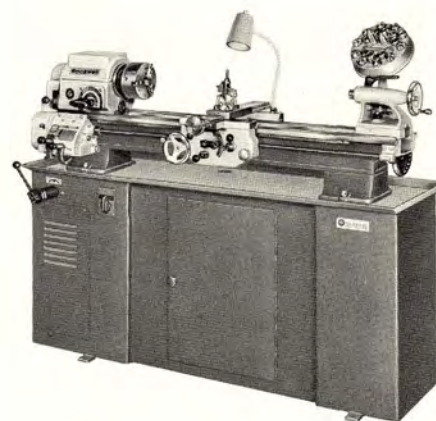
METAL LATHES

**Give
you
big
machine
performance
without big
machine cost...**

No matter what your requirements—production capacity, tool-room precision, or school shop safety—you'll get all the machine you need when you choose a Rockwell 11" Metal Lathe. You can make heavier cuts, faster, because these lathes give you the "beef" you'd normally expect only from machines costing much more. And safe, close tolerance operations on every job are assured by the many built-in features exclusive with Rockwell. Available in 4' bed and 5' bed models with a complete range of accessories to help you match the tool to your job.



Cabinet model,
24" between centers.



Cabinet model,
36" between centers.

STANDARD EQUIPMENT (included on all models)

Cabinet with coolant pan, doors and shelves

Quick change gear box

Variable speed drive complete with belts

Extra shear pins

Thread chasing dial

Thread cutting stop

Motor pulley for $\frac{3}{4}$ " shaft

Tool post, ring and rocker

7" dia. drive plate

Two 60° centers. No. 2 MT for headstock—No. 3 MT for tailstock

Combination wrench for tool post, etc.

Spindle adapter, No. 2 MT i.d.

Box wrench for tailstock

Spanner wrench for draw nut (included on tapered nose models only)

LATHE / SELECTION GUIDE

11" metal lathes

(Less Electricals)

SPINDLE NOSE	BETWEEN CENTERS	BED TYPE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
L-00 Tapered Key Drive	24"	Standard	840	25-130
	24"	Hardened	840	25-084
	36"	Standard	906	25-140
	36"	Hardened	906	25-086
2 1/4"—8 Threaded Spindle Nose	25"	Standard	840	25-100
	25"	Hardened	840	25-080
	37"	Standard	890	25-110
	37"	Hardened	890	25-082

motors & controls FACTORY MOUNTED AND WIRED

(See Pages 45 and 46 for separate Motors and Controls; see Page 27 for Safety Disconnect Switch)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIP WT. LBS.	CATALOG NUMBER
Single Phase, One Horsepower	Drum Reversing Switch Only	Guarded Drip Proof	60-1725	115/230	62	49-768
	Drum Reversing and Overload Switches	Guarded Drip Proof	60-1725	115/230	62	49-775
	Drum Reversing Switch and Magnetic Starter	Guarded Drip Proof	60-1725	115/230	62	49-776
Three Phase, One Horsepower	Drum Reversing Switch and Overload Switch	Guarded Drip Proof	60-1725	230/460	45	49-764
		TENV	60-1725	230/460	64	49-777
	Drum Reversing Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	55	49-766
		TENV	60-1725	230/460	64	49-778
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	65	49-779
		TENV	60-1725	230/460	72	49-780
Three Phase, One And One-Half Horsepower	Drum Reversing and Overload Switch	Guarded Drip Proof	60-1725	230/460	50	49-765
		TENV	60-1725	230/460	58	49-781
	Drum Reversing Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	62	49-767
		TENV	60-1725	230/460	63	49-782
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	60	49-783
		TENV	60-1725	230/460	78	49-784

NOTE: Single phase motors will be wired for 230V, unless 115V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only.

machine data

CAPACITY

Swing over bed and saddle wings	11 1/8"
Swing over cross slide	6 7/8"
Between centers with L-00 tapered key drive nose:	
4 foot bed	24"; 5 foot bed
	36"
Between centers with 2 1/4"—8 threaded nose:	
4 foot bed	25"; 5 foot bed
	37"

THREADS AND FEEDS

Quick change gear box with 54 thread and feed changes R.H. or L.H. Threads... 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.

Range of feed rates per revolution:

Longitudinal	.0902—.0016;	Cross	.0301—.0005
Lead Screw	3/4" dia. Acme x 8 T. P. I.		

SPINDLE AND HEADSTOCK

Infinite stepless speeds in direct drive	220-1550 rpm
Infinite stepless speeds in back gear	45-250 rpm
Spindle dia. at roller bearings	2 1/4"
Spindle center	takes No. 2 M.T.
Hole through spindle	1 3/8"
Maximum collet capacity (5-C type collet)	1 1/8"

BED (furnished with leveling screws)

Length:	
4 foot bed	49 1/4"; 5 foot bed
	61 1/4"
Width	8 1/4"; Depth
	5 7/8"
Width of V's	3/4"

CROSS SLIDE AND COMPOUND REST

Length of saddle V-way	12 3/8"
Width of bridge	4 1/4"
Cross slide travel	6 3/4"
Compound travel	2 1/4"
Travel of cross slide with taper attachment locked	6 1/8"
Travel of carriage with taper attachment locked	9 1/8"

Maximum cross travel of tool by taper attachment... 1 3/8"
Powered cross feed... Wipers for saddle

TOOL POST

3/8" x 1 1/8" opening takes standard tool holders for 3/8" bits

TAILSTOCK

Ram... dia. 1 3/8"; travel 2 3/4"; has No. 3 M.T. with tang slot
Length of graduations marked on spindle by 3/16" M.T. No. 3 M.T.
Center
Handwheel adjustable micrometer collar graduated in .001
Set-over... 3/4"

OVERALL DIMENSIONS

Cabinet and Machine:

4 foot bed... 57 3/4" left to right x 25 1/2" front to rear x 49 1/2" high
5 foot bed... 69 3/4" left to right x 25 1/2" front to rear x 49 1/2" high

Coolant pan:

4 foot bed... 1 3/8" x 22 1/2" x 56" outside dimensions
5 foot bed... 1 3/8" x 22 1/2" x 68" outside dimensions

Drain hole at rear has 1/2" pipe tap

MOTORS

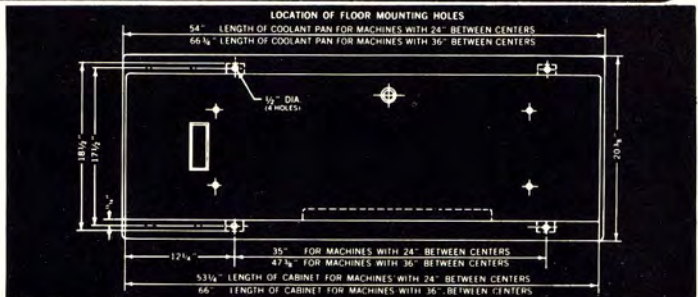
Accommodates NEMA frame motors... 143-143T-145-145T-182-182T

FLAME HARDENED BED

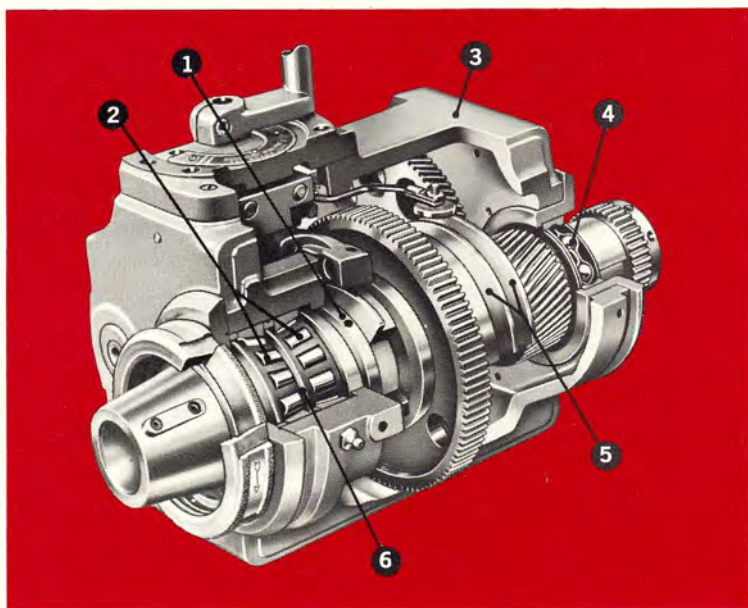
Rockwell 11" Metal Lathes are available with flame hardened bed ways that assure longer wearing qualities and added protection against denting and scoring. Ways are flame hardened, then precision ground with diamond-dressed wheel on special, precision, way-grinding equipment.

Flame hardened bed ways are highly recommended wherever Rockwell 11" Lathes are to be used for machining materials that produce chips or dust that may have an abrasive action on the ways. Flame hardening assures continued original accuracy of the bed ways, even under the stress of repetitive production operations.

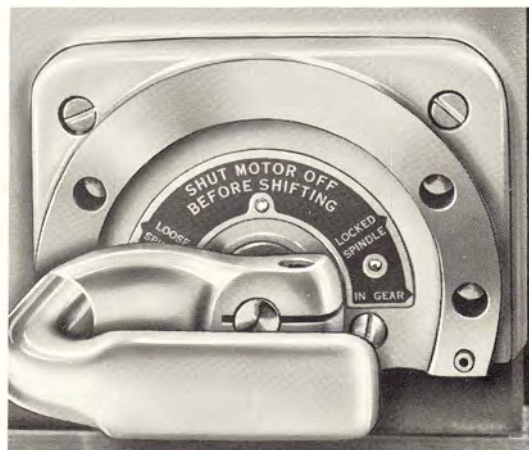
floor space requirements



**Only Rockwell
11" Metal Lathes
offer you this
exclusive
combination
of features!**



- ① Bearing adjustment, to remove all play from spindle, is quickly made by turning easily accessible adjusting collar.
- ② Double, zero precision, tapered roller bearings at the spindle nose end easily handle heavy work loads.
- ③ Massive, one-piece headstock body casting is precision bored to provide perfect alignment of spindle bearings, also totally encloses all back gears for added safety.
- ④ Extra large, lubricated-for-life ball bearing at outboard end "floats" to compensate for expansion as spindle warms up.
- ⑤ Double V-belt final drive is applied between the spindle bearings—close to the work load—for powerful, chatter-free power transmission even in direct drive.
- ⑥ Massive spindle—2¼" in diameter—eliminates chatter when "cutting off" or making other heavy cuts.



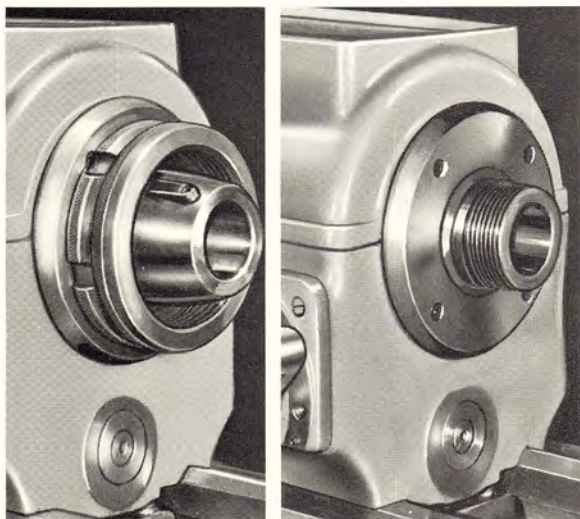
A UNIQUE DRIVE SELECTOR

You can shift to loose spindle, locked spindle, back gear drive or direct drive simply by moving the selector lever. Safe because there is no need to open up the guard . . . Foolproof because mechanical interlock makes it impossible to shift drive while spindle is rotating . . . Convenient because there are no pins to pull . . . Fast because any position is immediately available. Only the Rockwell 11" Lathe gives you all four selections with one shift lever.



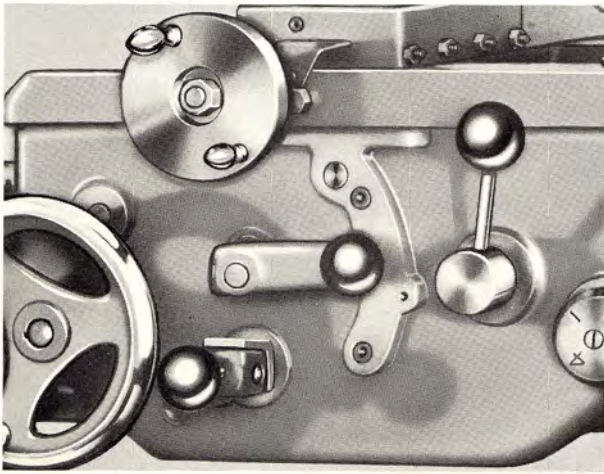
EXCLUSIVE BUILT-IN THREAD STOP

Only Rockwell 11" Metal Lathes give you a built-in thread stop at no extra cost . . . a feature you would normally expect only from machines costing much more. Photo shows bottom side view of stop for clarity. To operate, you simply push in to engage; pull out to disengage. Stop makes thread cutting twice as easy and twice as fast. Provides a very positive stop and cannot become lost or misplaced like the conventional "clamp-on" type.



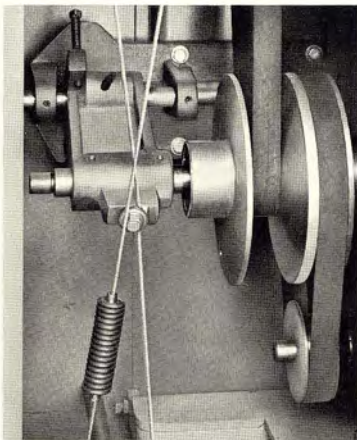
▶ A CHOICE OF L-00 TAPERED KEY DRIVE OR 2¼"—8 THREADED SPINDLE NOSE AT NO EXTRA COST

It costs you nothing extra to take advantage of the safety, convenience and accuracy of the modern tapered spindle nose. However, if you prefer the conventional threaded nose design, a 2¼"—8 threaded spindle nose is also available. Only Rockwell gives you this choice at no extra cost.



APRON . . .

Double wall construction provides extra support for power feed clutch shaft and power feed worm gear shaft. It also forms an oil reservoir. Automatic, foolproof lock out feature makes it impossible to engage the power cross feed or power longitudinal feed simultaneously with the half-nut feed for threading . . . stop on half-nut feed lever prevents binding, is adjustable to compensate for wear.

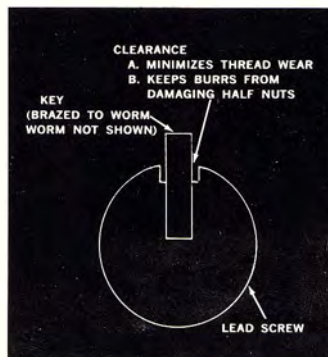


SMOOTH OPERATING VARIABLE SPEED DRIVE

. . . Simply constructed, with few operating parts, it provides an infinite choice of speeds from 45 to 1550 RPM. During speed changes, variable speed pulley moves up or down at correct angle to maintain perfect belt alignment at all speeds. This assures high power transmission efficiency.

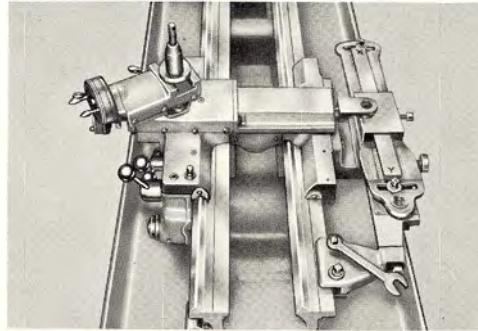
LEAD SCREW . . .

Precision cut lead screw has a hidden, easily accessible shear pin and features a unique T-section key way that prevents wear on the thread and damage to half-nuts.



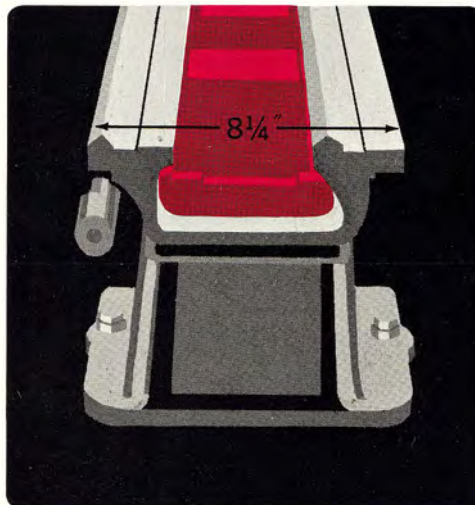
TAILSTOCK . . .

Ram is graduated in $\frac{1}{16}$ ". It has a tang slot (shown in inset photo) for positive drive of twist drills and other tools with a tang-type No. 3 M.T. shank. Complete retraction of ram automatically ejects center. Ram has witness mark at center height for easy positioning of cutting tool.



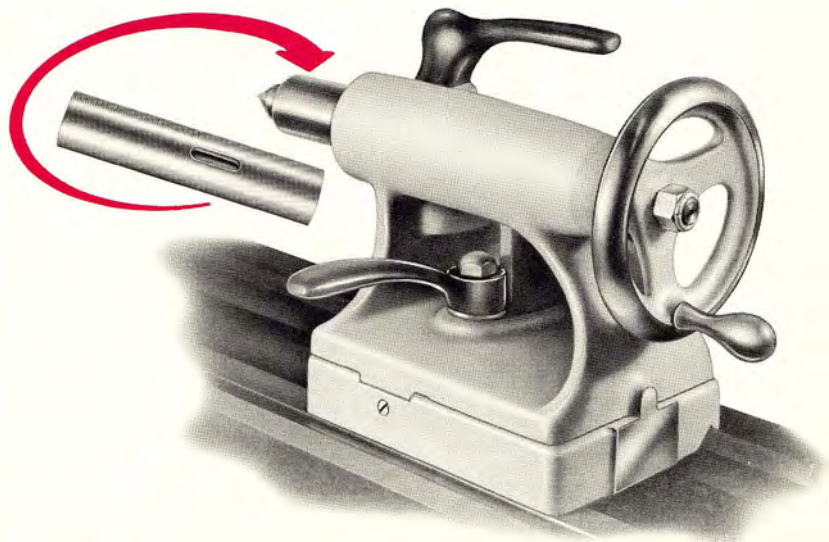
CARRIAGE . . .

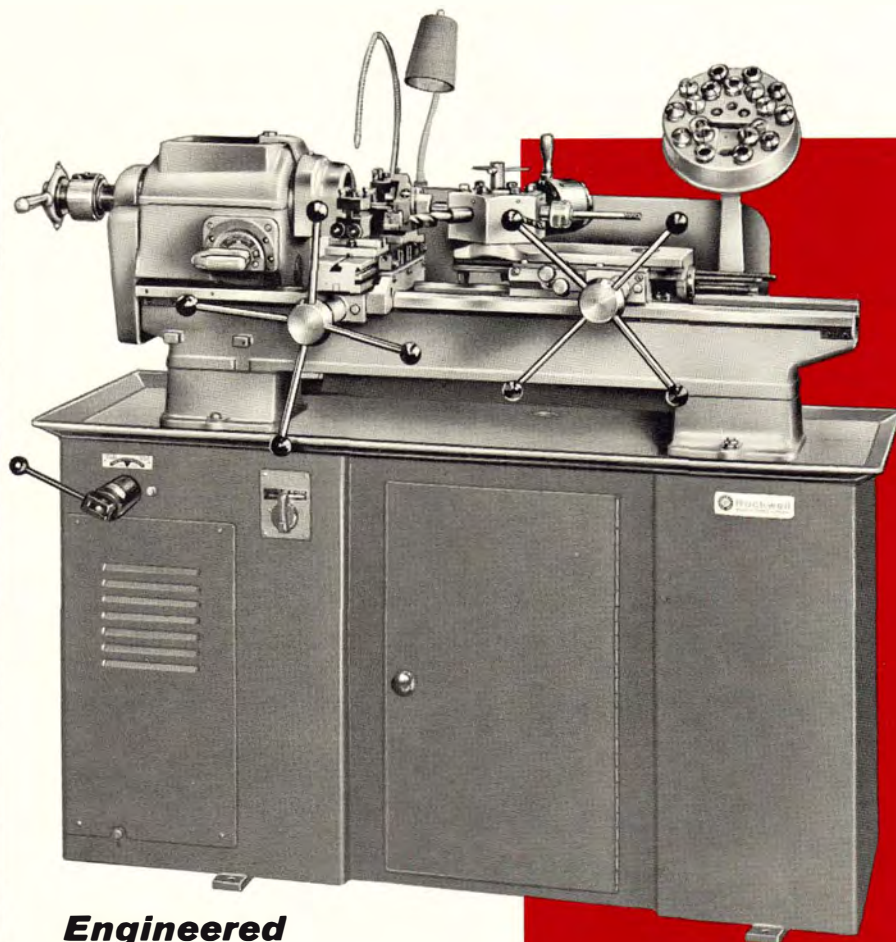
Saddle is machined for *field mounting* of taper attachment, follower rest and lamp. Cross slide and compound feed screws are fully protected from dust and chips. Large, direct reading micrometer collars indicate stock removed from work directly in .001" on the diameter. Positive, convenient lock features are provided for micrometer collars on both cross slide and compound. Tool post never overhangs compound swivel bearing, giving maximum support at all times.



BED . . .

Massive, scientifically braced bed has deep box-section cross members. It is made of close grained alloy cast iron, normalized to relieve stresses. Flat and prismatic ways, cast integrally with bed, are made absolutely straight and parallel by modern grinding methods.





HAND SCREW MACHINE

**Engineered
to save time
and
money
on multiple-
operation
jobs...**

Here is a precision machine engineered to fill the gap between standard engine lathes and expensive automatic screw machines—and at lower cost than any comparable machine. Ideal for repetitive manufacturing of a wide variety of parts, it delivers the close tolerance work of machines costing three or four times as much!

Only Rockwell gives you 8" cross slide travel plus 1½" collet capacity and turning capacity up to 6½" in length. Only Rockwell gives you this massive powerful headstock plus perfected variable speed drive. Only Rockwell combines all these features with the advantages of pilot wheel cross slide feed.

You save money through lower initial cost and reduce costly set-up time between your short run production jobs when you choose the Rockwell Hand Screw Machine.

STANDARD EQUIPMENT

*Double Tool Post Cross Slide
No. 25-555

*Lever Type Collet Closer No. 25-553
or No. 25-554

†Bed Turret No. 25-567

For complete description of above
items, see Accessory Listings starting
on Page 22

Cabinet with coolant pan, door and
shelves

Variable speed drive complete with
belts

Motor pulley for ¾" shaft

Combination wrench, ⅜" square and
⅝" open end

Spanner wrench for draw nut (included
on tapered nose models only)

Guard for outboard end of spindle

*Mounted

†Bedded and turret faces left blank, or
provided with either ⅝", ¾" or 1" holes.
Unless otherwise specified, ¾" holes will
be provided.

LATHE / SELECTION GUIDE

hand screw machines

(Less Electricals)

SPINDLE NOSE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
L-00	888	25-160
2 1/4" - 8	888	25-150

motors and controls

FACTORY MOUNTED AND WIRED
(See Pages 45 and 46 for separate Motors and Controls)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIP. WT. LBS.	CATALOG NUMBER
Single Phase, One Horsepower	Drum Reversing Switch Only	Guarded Drip-Proof	60-1725	115/230	62	49-768
	Drum Reversing and Overload Switches	Guarded Drip-Proof	60-1725	115/230	62	49-775
	Drum Reversing Switch and Magnetic Starter	Guarded Drip-Proof	60-1725	115/230	62	49-776
Three Phase, One Horsepower	Drum Reversing Switch and Overload Switch	Guarded Drip-Proof	60-1725	230/460	45	49-764
		TENV	60-1725	230/460	64	49-777
	Drum Reversing Switch and Magnetic Starter	Guarded Drip-Proof	60-1725	230/460	55	49-766
		TENV	60-1725	230/460	64	49-778
	Drum Reversing Switch and Magnetic Starter (w/115V. Trans.)	Guarded Drip-Proof	60-1725	230/460	65	49-779
		TENV	60-1725	230/460	72	49-780
Three Phase, One And One-Half Horsepower	Drum Reversing Switch and Overload Switch	Guarded Drip-Proof	60-1725	230/460	50	49-765
		TENV	60-1725	230/460	58	49-781
	Drum Reversing Switch and Magnetic Starter	Guarded Drip-Proof	60-1725	230/460	62	49-767
		TENV	60-1725	230/460	63	49-782
	Drum Reversing Switch and Magnetic Starter (w/115V. Trans.)	Guarded Drip-Proof	60-1725	230/460	60	49-783
		TENV	60-1725	230/460	78	49-784

NOTE: Single phase motors will be wired for 230V, unless 115V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only.

machine data

CAPACITY

Maximum collet capacity	1 1/8"
Turns any length up to (Self-Indexing)	6 1/2"
Swing over cross slide	5 1/4"
Swing over bed	11 1/8"
Max. dia. tool clearance over ram	3 1/4"
Total ram travel (Manual Indexing)	7 1/2"

SPINDLE AND HEADSTOCK

Infinite stepless speeds in direct drive	220-1550 rpm
Infinite stepless speeds in back gear	45-250 rpm
Spindle dia. at roller bearings	2 1/4"
Hole through spindle	1 3/8"

BED (furnished with leveling screws)

Length	49 1/4"
Width	8 1/4"

Depth	5 7/8"
Width of V's	3/4"

BED TURRET (for specifications, see CAT. NO. 25-567)

DOUBLE TOOL POST CROSS SLIDE (for specifications, see CAT. NO. 25-555)

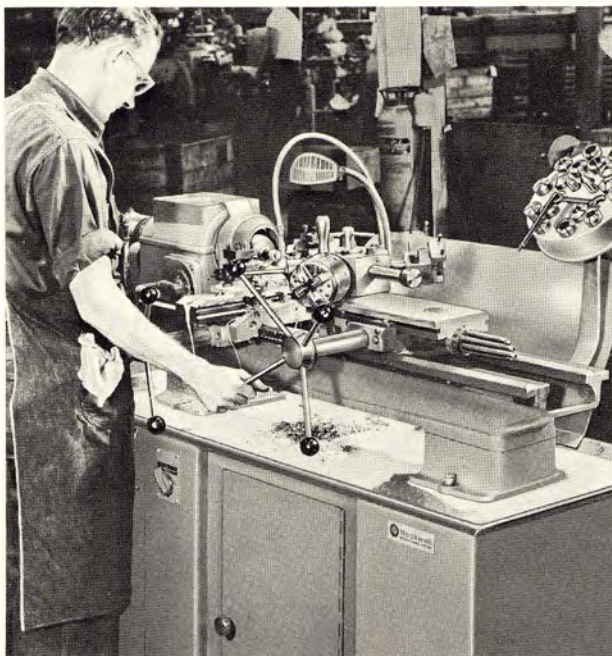
COLLET CLOSER—Uses 5-C collets

OVERALL DIMENSIONS

Cabinet and machine	57 3/4" left to right x 25 1/2" front to rear x 49 1/2" high
Coolant pan	1 1/8" x 22 1/2" x 56" outside dimensions
Drain hole at rear	has 1/2" pipe tap

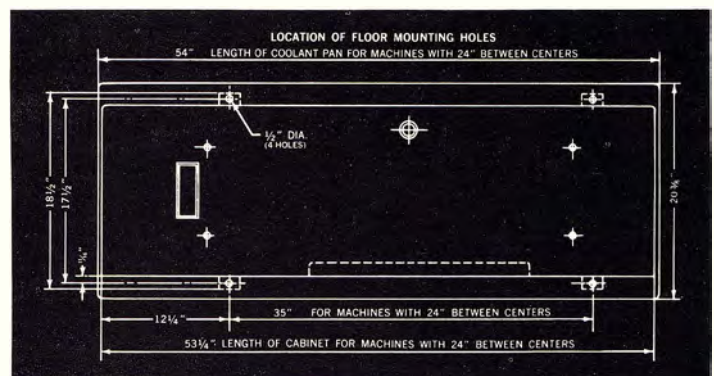
MOTORS

Accommodates NEMA frame motors .143-143T-145-145T-182-182T



With the Rockwell Hand Screw Machine, set-up time is reduced to a minimum. This makes it especially ideal for short production runs of either simple pieces or intricate parts.

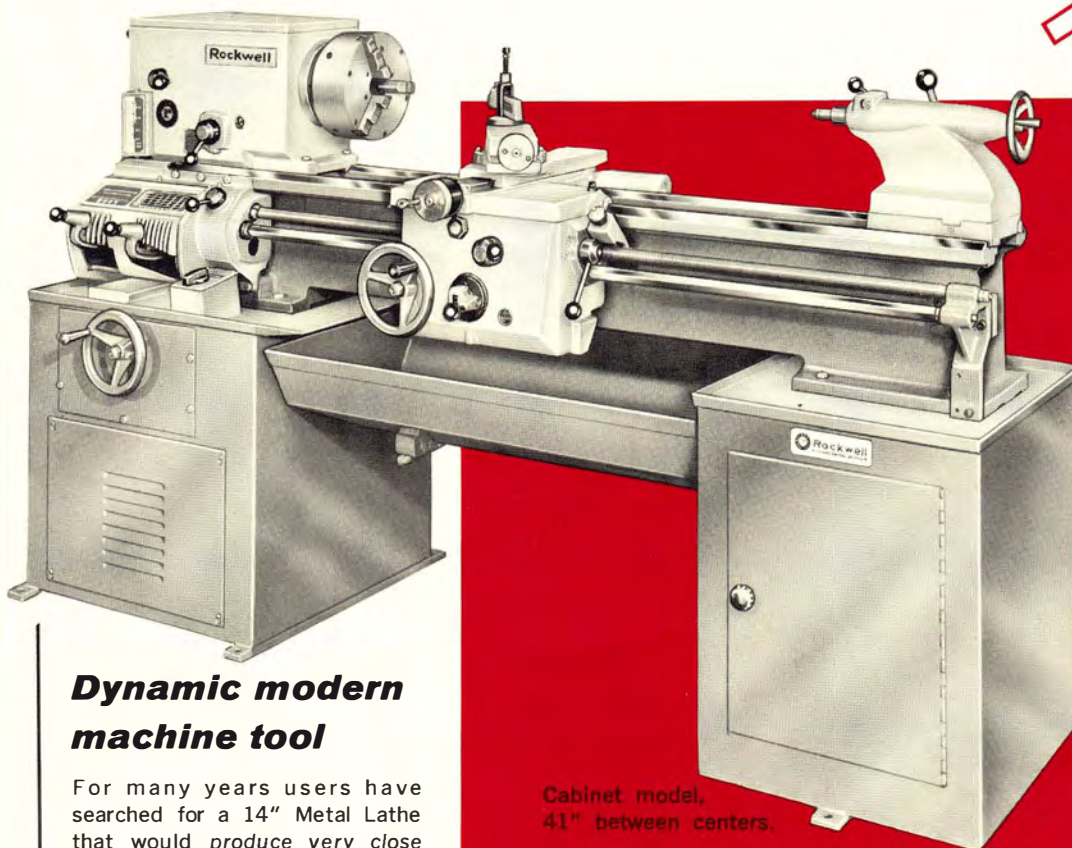
floor space requirements



ROCKWELL MACHINE TOOLS

14"

METAL LATHES



Dynamic modern machine tool

For many years users have searched for a 14" Metal Lathe that would produce very close tolerance work, that would be easy to operate and that was moderately priced. Rockwell's 14" Metal Lathe meets all these objectives and more.

It's precision made, yet ruggedly built to produce superior work. It's safety designed to protect the veteran operator or the student trainee. Its operating controls are conveniently located to save the operator's time and make them easy to use. It's the lathe that's in step with modern technology.

Cabinet model,
41" between centers.

Most advanced lathe design in 25 years

The Rockwell 14" Metal Lathe is completely modern from headstock to tailstock. EXCLUSIVE FEED REVERSE LEVER, built into the Quick Change Gear Box, can be shifted FORWARD, NEUTRAL OR REVERSE, while the lathe is running. UNIQUE CARRIAGE FEED SELECTOR LEVER can be shifted from longitudinal to cross feed while a cut is being made. DUAL DRIVE FOR CARRIAGE provides a separate rod for all power feeding. PERFECTED VARIABLE SPEED DRIVE incorporates an extra shaft for full power at the spindle and an infinite choice of speeds from 40 to 1600 rpm. See a demonstration of these outstanding features that—up to now—cost you twice as much!

STANDARD EQUIPMENT

Cabinet with Chip and Coolant Pan
Two Shelves in Tailstock Pedestal
Quick Change Gear Box
Variable Speed Drive Complete with All Belts
Thread Chasing Dial
Motor Pulley for $\frac{3}{4}$ ", $\frac{7}{8}$ ", 1" or $1\frac{1}{8}$ " Shaft
Tool Post, Ring and Rocker

9" Drive Plate
Two 60° Centers (one hard, one soft)
Combination Wrench for Tool Post, Compound Swivel, Carriage Lock, etc.
Spindle Adapter, No. 3 M.T. I.D.
Spanner Wrench for Spindle Nose
Draw Nut (with L-00 Taper Nose)
Lubrication Chart
Instruction and Parts Manual

14" metal lathes

(Less Electricals)

LATHE/SELECTION GUIDE

BED LENGTH	BED TYPE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
30" Between Centers	Standard	1794	25-201
	Hardened	1794	25-211
41" Between Centers	Standard	1894	25-200
	Hardened	1894	25-210

motors and controls FACTORY MOUNTED AND WIRED

(See Pages 45 and 46 for separate Motors and Controls; see Page 27 for Brake and Disconnect Switch)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIP. WGHT. (LBS.)	CATALOG NUMBER
Single Phase, Two Horsepower	Drum Switch & Overload Switch	Guarded Drip Proof	60-1725	115/230	85	49-465
	Drum Switch & Magnetic Starter	Guarded Drip Proof	60-1725	115/230	88	49-493
Three Phase, Two Horsepower	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	230/460	70	49-466
		TEFC	60-1725	230/460	82	49-467
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	72	49-495
		TEFC	60-1725	230/460	84	49-496
	Drum Switch and Magnetic Starter (w/115V. transformer)	Guarded Drip Proof	60-1725	230/460	72	49-497
		TEFC	60-1725	230/460	84	49-498
Three Phase, Three Horsepower	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	230/460	82	49-468
		TEFC	60-1725	230/460	112	49-469
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	85	49-499
		TEFC	60-1725	230/460	108	49-504
	Drum Switch and Magnetic Starter (w/115V. transformer)	Guarded Drip Proof	60-1725	230/460	85	49-470
		TEFC	60-1725	230/460	115	49-471

NOTE: Three phase motors will be wired for 230V, unless 208V or 460V is specified. Single phase motors will be wired for 230V only. Power cord from electrical outlet to lathe is not supplied.

machine data

CAPACITY

Swing over bed and saddle wings 14 1/4"
 Swing over cross slide 9 1/8"
 Between centers (tailstock completely on bed) 30" or 41"
 Hole through spindle 1 3/8"
 Maximum capacity with 5-C style collet 1 1/8"

SPINDLE SPEEDS (with 1725 rpm motor)

Infinite choice of speeds in direct drive 210-1600 rpm
 Infinite choice of speeds in gear drive 40-265 rpm

THREADS AND FEEDS

Quick change gear box has 54 thread changes L.H. or R.H. 4, 4 1/2, 5, 5 1/2, 5 3/4, 6, 6 1/2, 6 3/4, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 13 1/2, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 32, 36, 40, 44, 46, 48, 52, 54, 56, 64, 72, 80, 88, 92, 96, 104, 108, 112, 128, 144, 160, 176, 184, 192, 208, 216, 224.

Lead Screw (no keyway) 1" dia. Acme x 8 t.p.i.

Feed Rod 3/4" hex.

Longitudinal Feeds 54 feeds from .0017" to .099"

Cross Feeds 54 feeds from .00089" to .052"

HEADSTOCK

Back Gears (Run in oil) 6 to 1 ratio

Spindle (Heat treated and ground alloy steel)

Has three precision ball bearings.

Two outboard bearings are single row 3 1/8" O.D.

Inboard bearing is double row 5 1/8" O.D.

Center used No. 3 M.T.

Taper Hole in Nose Mod. No. 5 M.T.

Spindle Nose: Standard—Long Taper Key Drive, size L-00

Drive Variable Speed, plus outboard twin V-belts

CARRIAGE

Length of saddle V-way 16"

Width of saddle bridge 5 1/4"

Cross slide travel 8"

Compound slide travel 4 3/4"

Tool Post Opening (takes standard tool holders for 3/8" bits) 1 1/4" x 1 1/8" Compound

Slide graduated 90° in both directions, with three witness marks

Apron double wall, oil bath type

TAILSTOCK (has automatic center ejection)

Ram diameter 1 1/2"; has No. 3 M.T. with tang slot

Ram travel 5 1/2"

Length of graduations marked on ram by 1/16ths 5 1/2"

Center used No. 3 M.T.

Method of clamping Lever and Cam

Set-over (either direction) 3/4"

BED (choice of standard or hardened)

Length 63" or 74"

Width 9 5/8" Depth 9 1/2"

Width of V's 1"

Has two prismatic V-ways and two flat ways (precision ground).

OVERALL DIMENSIONS

Cabinet

and Machine 75 or 86" left to right x 25" front to rear x 48" high

Chip and Coolant Pan (detachable) has 1/2" pipe tap

MOTORS

Accommodates NEMA frame motors 145T-182-T-184-213-215

Horsepower recommended 2

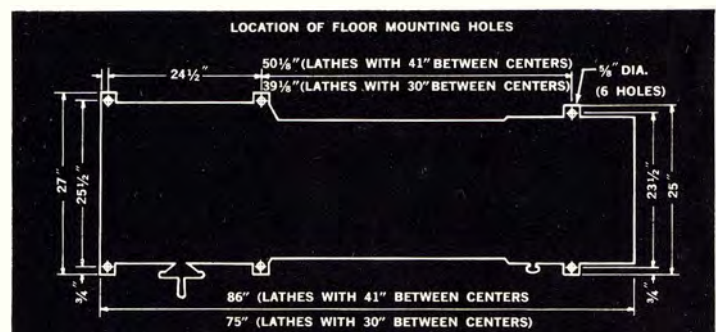
Speed recommended 1725 rpm

FLAME HARDENED BED

All Rockwell 14" Metal Lathes are available with flame hardened bed ways that assure longer wearing qualities and added protection against denting and scoring. Ways are flame hardened, then precision ground with diamond-dressed wheel on special, precision, way-grinding equipment.

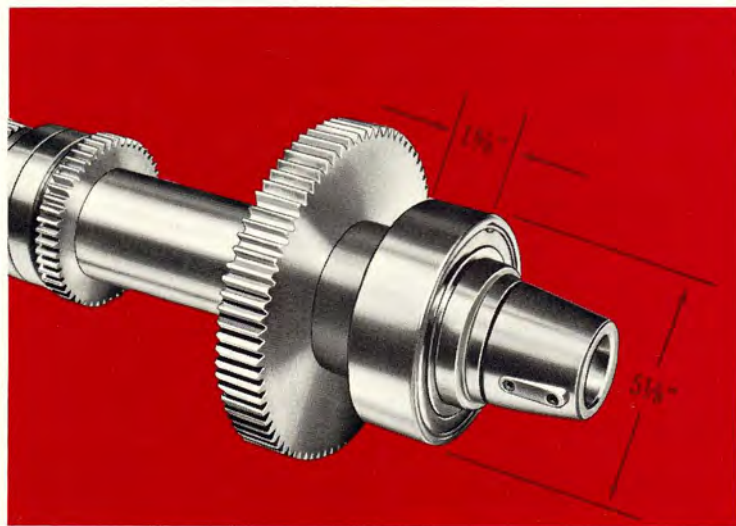
Flame hardened bed ways are highly recommended wherever Rockwell 14" Lathes are to be used for machining materials that produce chips or dust that may have an abrasive action on the ways. Flame hardening assures continued original accuracy of the bed ways, even under the stress of repetitive production operations.

floor space requirements



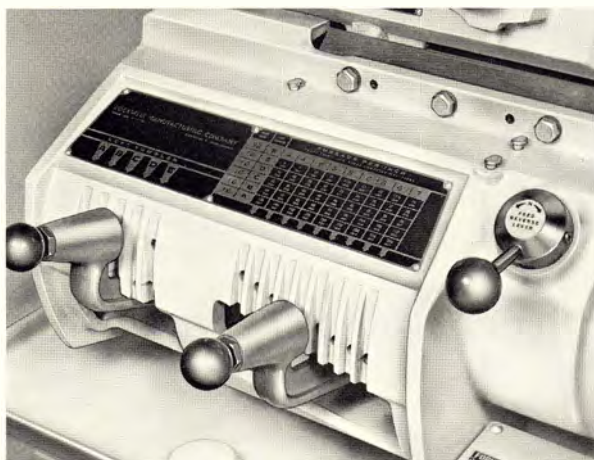
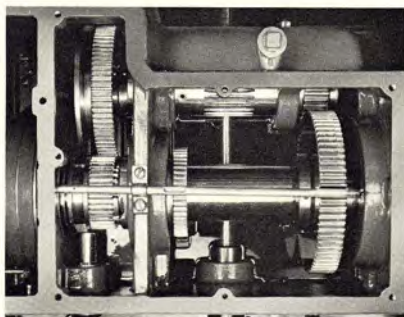
These features make the Rockwell 14" Lathe the *most modern . . . most productive lathe in its class*

18



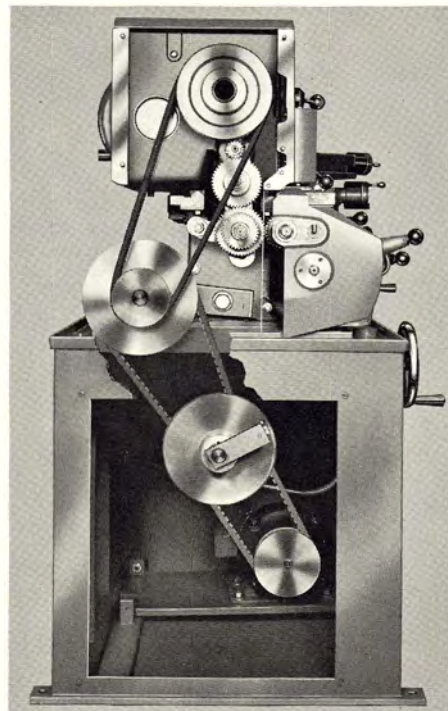
MASSIVE HEADSTOCK HAS GEARS AUTOMATICALLY PROTECTED

A positive lock-out makes it impossible to engage the back gears while in direct drive or to engage direct drive while in back gears. All gears are bathed and showered with circulating oil. Outboard twin V-belts are quickly accessible for easy tensioning or changing. Chatter-free cutting is assured by the over-sized spindle and the massive, double row, internally pre-loaded spindle nose bearing.



QUICK CHANGE GEAR BOX WITH EXCLUSIVE FEED REVERSE LEVER

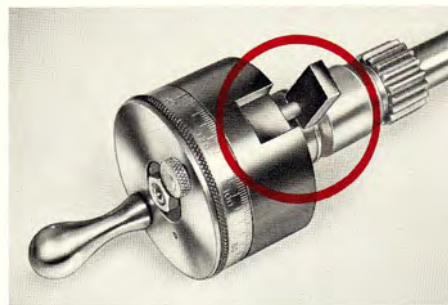
Gear box provides a choice of 54 thread pitches (including 27 threads per inch) by means of two selector levers, with rugged, needle bearing equipped tumbler gears. A unique feature is that the Feed Reverse Lever, built into the Quick Change Gear Box, convenient to the operator's hand, can be shifted (forward—neutral—reverse) while the lathe is running.



PERFECTED VARIABLE SPEED DRIVE

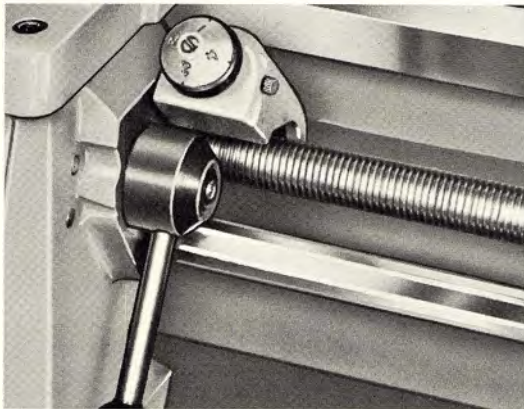
You get all the advantages of a variable speed drive, with an infinite choice of speeds from 40 to 1600 rpm—PLUS the high torque transmitting power of matched V-belts. The Rockwell variable speed drive incorporates an extra shaft between the variable speed drive pulley and spindle. This makes possible high speed power transmission through the variable speed drive belts while twin V-belts transmit steady power to the spindle. You get all this with no unobtainable speeds in the mid range.

A special feature are the lubricated-for-life ball bearings in the spindle pulley, upper jackshaft pulley and variable speed drive pulley. This excellent construction guarantees you longer machine life, more efficient power transmission, eliminates the need for lubrication and makes speed changes easy.



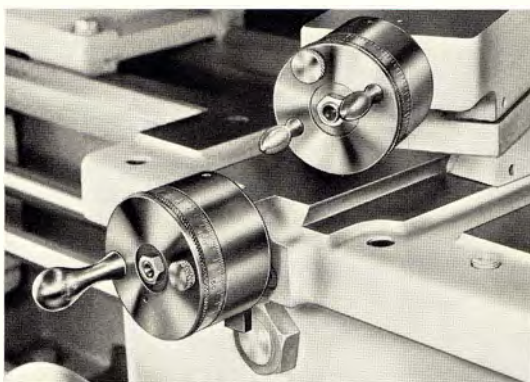
EXCLUSIVE BUILT-IN THREAD STOP

Only Rockwell 14" Metal Lathes give you a built-in thread stop at no extra cost . . . a feature you would normally expect only from machines costing much more. Photo shows bottom side view of stop for clarity. To use thread stop, simply engage dog in slot. When thread stop is not needed, return dog to position shown in photo. Stop makes thread cutting twice as easy and twice as fast. Provides a very positive stop and cannot become lost or misplaced like the conventional "clamp-on" type.



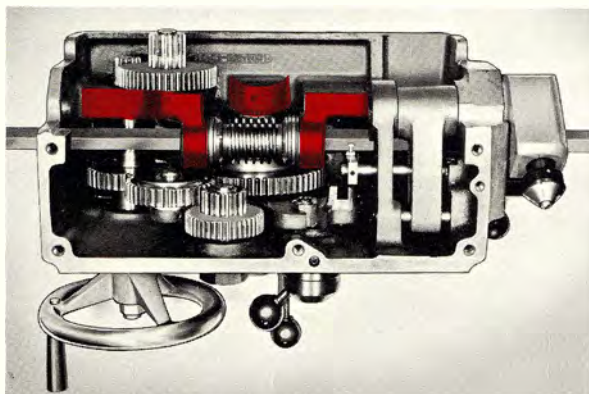
DUAL DRIVE FOR CARRIAGE

A separate rod is used for all power feeding. The solid lead screw (used for threading only) has no keyway to cause wear on the half-nuts . . . new machine threading accuracy is maintained. Furthermore, production time is saved because the feed rod and the lead screw are quickly and simultaneously reversed, WHILE THE LATHE IS RUNNING.



LARGE, DIRECT READING MICROMETER COLLARS

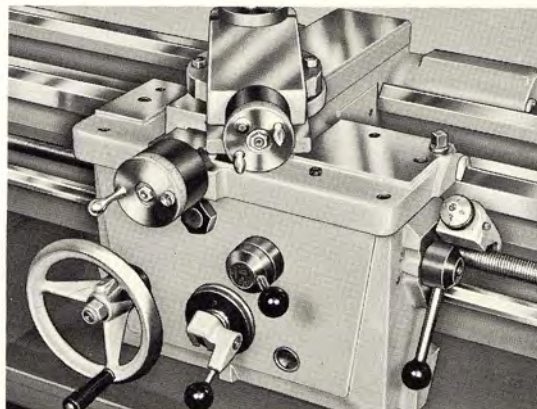
The large size of the micrometer collars for the compound and the cross slide makes them easy to read. Both are of the modern, direct reading type and have a "zero start" feature which makes mental calculations unnecessary. Both are provided with lock knobs to avoid accidental slippage of the collars. Adjusting the sleeves enables the witness marks to be set at whichever viewing angle the operator finds most convenient.



DOUBLE WALL, OIL BATH TYPE APRON ASSURES PROPER LUBRICATION

The steel gears are always well lubricated by dipping into the reservoir of oil. Proper oil level is indicated by the sight gage provided.

Notice the close-coupled rear wall support for rigid alignment of the gears. Notice also the separate rod for power feeding. Thread chasing dial is standard equipment.

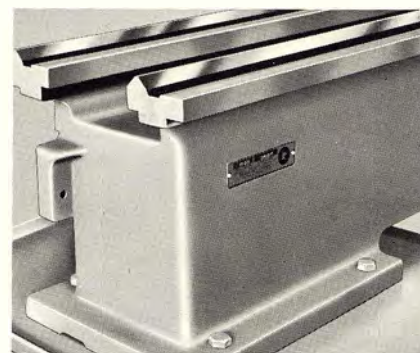


MODERN CARRIAGE HAS CONVENIENT CONTROLS

The large apron handwheel with its "loose" handle, the fast-action clutch lever, the unique feed selector lever, and the lever for half-nuts, all have been designed with the operator in mind.

A unique feature of the feed selector is that it can be shifted from longitudinal feed to cross feed while a cut is in progress, facilitating the turning, then facing of multiple diameter work with shoulders.

A lock-out feature prevents the simultaneous setting for power feeding and threading.

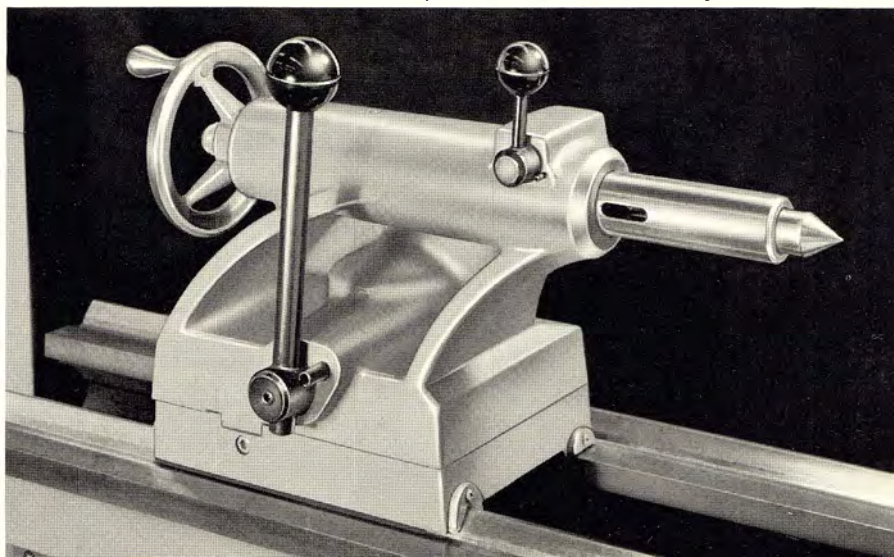


EXTRA DEEP, SOLID WALL BED GUARANTEES MAXIMUM ACCURACY

The strongest "backbone" of any lathe in its class is provided by this heavy massive bed. It is 9 $\frac{3}{8}$ " wide and more than 9" deep. The bracing is stress engineered to guarantee permanent accuracy. V and flat ways are precision ground with the most modern way grinding equipment.

RUGGED TAILSTOCK LOCKS BY PREFERRED CAM-ACTION CONTROL

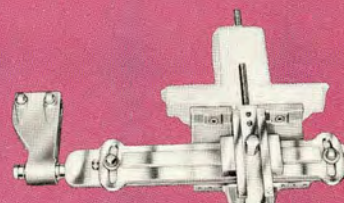
Lathe operators appreciate the quick-acting cam lock that clamps the tailstock to the bed, also the easy accessibility of the ram clamp lever. Ram is graduated in $\frac{1}{16}$ " and has a No. 3 M.T. Ram is extended in photo to show positive tang-slot drive. Tailstock has an off-set feature for taper turning, an ejection feature for centers, and wipers for both V and flat ways.



METAL LATHE ACCESSORIES



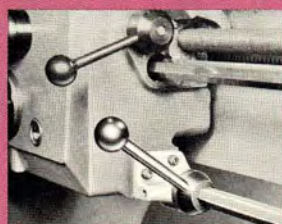
A



B



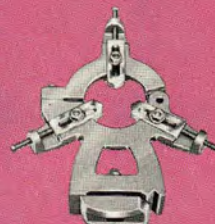
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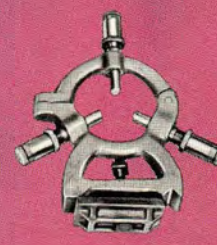
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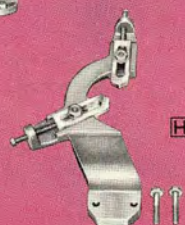
E



F



G



H



I



J



K

THESE ACCESSORIES MAKE ROCKWELL

METRIC TRANSPOSING GEAR KITS . . . With transposing gear, stud gears and everything needed to convert lathe for cutting standard metric thread pitches. Include instructions for field mounting.

A For 10" Metal Lathe. 24 lbs.
For 14" Metal Lathe. 72 lbs.

No. 25-875
No. 25-245

TAPER ATTACHMENTS . . . Telescoping type. Used for boring and turning tapers at one setting with adjustment by means of a micrometer screw. Not necessary to disconnect cross feed screw to change from straight to taper turning. Includes instructions for field mounting.

B For 10" Metal Lathe. Maximum taper up to 8 1/4" at one setting, 3 1/2" per foot, 16° included angle. 40 lbs.

No. 25-856

For 11" Metal Lathe. Maximum taper up to 9 1/2" at one setting, 3 1/2" per foot, 17° included angle. 34 lbs.

No. 25-656

For 14" Metal Lathe. Maximum taper up to 9 3/4" at one setting, 3 1/2" per foot, 18° included angle. Binding lever can be left loose while cutting tapers to permit rapid approach to work by means of cross slide handwheel, or binding lever can be tightened so that cross slide is directly traversed by means of the cross slide pull bar. 140 lbs.

No. 25-222

TAPER ATTACHMENTS . . . Same as above, mounted at factory when ordered with new lathe

For 10" Metal Lathe. 35 lbs.
For 11" Metal Lathe. 35 lbs.
For 14" Metal Lathe. 66 lbs.

No. 25-855
No. 25-649
No. 25-219

MILLING ATTACHMENT . . . A universal work-holding fixture for milling, keyway cutting, boring, etc. Vise opens to 1 3/4" with 1 1/2" x 3 1/2" jaws, each provided with two V grooves for round stock. Vertical travel is 4 1/2" by means of ball crank handle. Zero start micrometer collar is calibrated in .001. Angle plate and vise swivel 360° in horizontal and vertical planes, with degree calibrations. Unique feature of swiveling vise permits milling at all angles without removing and reclamping work. Includes No. 3 MT spindle adapter.

C For 11" Metal Lathe. 26 lbs.

No. 25-651

†POWER DRIVEN SPINDLE SPEED CHANGERS . . . Provide operator with the full range of speeds quickly and effortlessly. The single lever control is always convenient to the operator's hand because it travels with the carriage. Almost no physical exertion is required for spindle speed changing and it is a much quicker operation than with the conventional variable speed drive hand wheel. (The No. 25-221 Tachometer is recommended as a companion accessory to these Power Driven Spindle Speed Changers.)

For 14" Metal Lathe.

D For lathes 41" between centers. 150 lbs.
For lathes 30" between centers. 147 lbs.

No. 25-220
No. 25-264

†E TACHOMETER . . . Complete with drive belt and special headstock cover with integral nacelle. Tachometer is directly belted to spindle pulley for accuracy; 2 1/2" diameter dial is calibrated for direct reading in both direct drive and back gear.

For 14" Metal Lathe. 41 lbs.

No. 25-221

†Mounted without charge only when ordered with new lathe. Includes instructions for field mounting.

STEADY RESTS

F For 10" Metal Lathe, 3/8" to 3" capacity. 12 lbs.

No. 25-852

G For 11" Metal Lathe, 3/8" to 3 1/2" capacity. Deluxe type with telescoping brass jaws. 20 lbs.

No. 25-652

For 14" Metal Lathe. 3/8" to 4 3/4" capacity. 25 lbs.

No. 25-223

FOLLOWER RESTS

H For 10" Metal Lathe, 3/8" to 3" capacity. 10 lbs.

No. 25-850

I For 11" Metal Lathe. 3/8" to 2 3/4" capacity. Deluxe type with telescoping brass jaws. 14 lbs.

No. 25-650

For 14" Metal Lathe. 3/8" to 4 3/4" capacity. 14 lbs.

No. 25-224

J **JACOBS MODEL 50 COLLET CHUCK . . .** Used with Jacobs Series 500 Rubber-Flex Collets, it offers these advantages. It's completely safe — there are no jaws flying around to damage the tool holder. It has tremendous gripping power for heavy-duty turning. It's accurate — maximum runout is .001" T.I.R. at the spindle nose. It's ideal for thin-walled tubing and fragile work — the always parallel Model 50 Rubber-Flex Collet jaws permit excellent chucking of tubing and fragile materials. Scoring of O.D. is reduced to a minimum. Chuck, complete with adapter, hex wrench and instructions. Without collets.

For 10" Metal Lathe. Has 1 1/2"—8 adapter. 10 3/4 lbs.

No. 25-835

For 11" Metal Lathe. Has 2 1/4"—8 adapter. 10 1/2 lbs.

No. 25-175

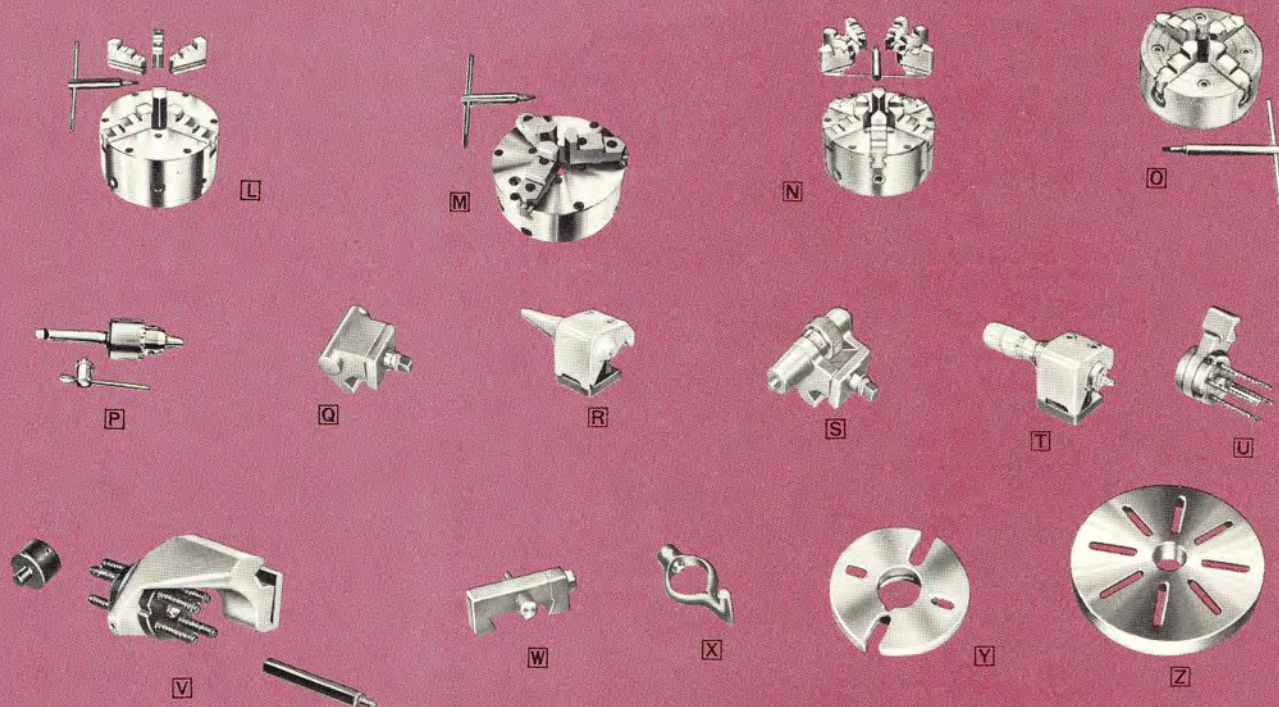
For 11" and 14" Metal Lathes. Has L-00 adapter. 11 3/8 lbs.

No. 25-176

K **JACOBS SERIES 500 RUBBER-FLEX COLLETS . . .** Used with the Jacobs Model 50 Collet Chuck, these economical collets cover a greater bar stock range than with 63 steel collets. They enable you to chuck any bar between 3/8" and 1 1/4". They provide full, through spindle capacity. They provide greater accuracy. When closing down the collet throughout the entire .100" range, perfect parallelism is maintained between the extra long collet bearing surfaces. The work pressure and gripping pressure are constant throughout the entire collet range.

For use on 10", 11" and 14" Metal Lathes.

Quantity	Capacity (Inches)	Capacity (Metric)	Cat. No.
One	.10— .20	2.5— 5.1 mm	25-281
One	.20— .30	5.1— 7.6 mm	25-282
One	.30— .40	7.6—10.2 mm	25-283
One	.40— .50	10.2—12.7 mm	25-284
One	.50— .60	12.7—15.2 mm	25-285
One	.60— .70	15.2—17.8 mm	25-286
One	.70— .80	17.8—20.3 mm	25-287
One	.80— .90	20.3—22.9 mm	25-288
One	.90—1.00	22.9—25.4 mm	25-289
One	1.00—1.06	25.4—27 mm	25-290
Set of 10	.10 to 1.06	2.5 to 27 mm	25-280



METAL LATHES EVEN MORE VERSATILE

LATHE CHUCKS . . . BACK THREADED OR INCLUDE FITTED CHUCK PLATE. WRENCH INCLUDED.

Size	No. of Jaws	For Spindle Nose	Lathe Size	Wt., Lbs.	Cat. No.
5"	3	1½"-8	10"	8	25-870
L 6"	3	2¼"-8	11"	22	25-570*†
6"	3	L-00	11", 14"	23	25-572*†
M 9"	3	L-00	14"	63	25-217††
6"	6	2¼"-8	11"	25	25-578*†
6"	6	L-00	11", 14"	25	25-580*†
N 9"	6	L-00	14"	68	25-231*†
6"	4	1½"-8	10"	9	25-873
8"	4	2¼"-8	11"	25	25-574
8"	4	L-00	11", 14"	26	25-576
O 10"	4	L-00	14"	63	25-232

*Includes internal and external jaws.

†Has reversible top jaws.

‡Adjust-Tru

SOFT TOP BLANK JAWS . . . Set of 3 for No. 25-217 chuck.

For 14" Metal Lathe. 6 lbs.

No. 25-218

DRILL CHUCK . . . 3 jaw key type, 0-½" capacity, with No. 2 M.T. shank. Includes chuck key. 2½ lbs.

No. 968

DRILL CHUCK . . . 3-jaw key type, 0-½" capacity, with No. 3 M.T. shank. Includes chuck key. 3 lbs.

No. 17-820

PLAIN CARRIAGE STOPS . . . Used on either side of carriage to provide a positive longitudinal feed stop for cutting shoulders, etc. Include parts for mounting on front V-way of bed.

Q For 10" Metal Lathe. 2 lbs.

No. 25-853

For 11" Metal Lathe. 2 lbs.

No. 25-653

R For 14" Metal Lathe. 5 lbs.

No. 25-227

MICROMETER CARRIAGE STOPS . . . Used on either side of carriage to provide a positive longitudinal feed stop for cutting shoulders, etc. Micrometer collar is graduated in .001", provides accurate setting, is self locking by means of a unique spring lock feature. Include parts for mounting on front V-way of bed.

S For 10" Metal Lathe. 2½ lbs.

No. 25-854

For 11" Metal Lathe. 3 lbs.

No. 25-654

T For 14" Metal Lathe. 2 lbs.

No. 25-228

FOUR-POSITION CARRIAGE STOPS . . . Used to provide up to four positive longitudinal feed stops for repetitive operations like spacing shoulders on shafts, etc. Stop fingers are knurled for easy setting and locked by set screws. Body is knurled for quick indexing and is self-locking. Include parts for mounting to front V-way of bed.

U For 11" Metal Lathe. 4" range. 5 lbs.

No. 25-655

V For 14" Metal Lathe. 4½" range. Includes stop finger for carriage, extension hub for back gear engagement shaft and instructions for mounting. 11 lbs.

No. 25-240

THREAD STOP . . . Makes thread cutting faster, easier; limits the forward travel of cross slide against a positive, adjustable stop. Clamps on dovetail of saddle in front of cross slide.

W For 10" Metal Lathe. 1½ lbs.

No. 25-830

For 14" Metal Lathe (not required on late models which have a "built-in" thread stop feature). 2 lbs.

No. 25-277

SAFETY TYPE LATHE DOGS . . . Bent tail type. Made of forged, selected steel. Include socket screw and wrench.

Capacity, In.	Lathe Size	Duty	Wt., Lbs.	Cat. No.
⅜	10", 11"	Lt.	½	25-861
½	10", 11"	Lt.	½	25-862
¾	10", 11"	Lt.	½	25-863
1	10", 11"	Lt.	¾	25-864
1¼	10", 11"	Lt.	1	25-865
1½	10", 11"	Lt.	1	25-866
¾	11", 14"	Hvy.	½	25-661
½	11", 14"	Hvy.	½	25-662
¾	11", 14"	Hvy.	¾	25-663
1	11", 14"	Hvy.	1	25-664
1¼	11", 14"	Hvy.	2	25-665
1½	11", 14"	Hvy.	2¼	25-666
1¾	14"	Hvy.	3½	25-262
2	14"	Hvy.	4	25-263

DRIVE PLATES

Dia. In.	For Spindle Nose	Slots	Lathe Size	Wt., Lbs.	Cat. No.
6	1½"-8	2	10"	4	25-840
7	2¼"-8	1	11"	6	25-640
7	L-00	1	11", 14"	7	25-642
9	L-00	2	11", 14"	13	25-225

FACE PLATES

Dia. In.	For Spindle Nose	Slots	Lathe Size	Wt., Lbs.	Cat. No.
9	1½"-8	8	10"	14	25-839
10	2¼"-8	8	11"	13	25-644
10	L-00	8	11", 14"	13	25-646
13½	L-00	8	14"	38	25-226

METAL LATHE ACCESSORIES



EE



AA



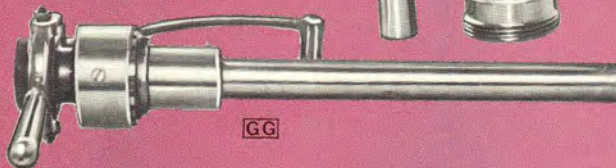
BB



CC



DD



GG



HH



FF



II



JJ



KK

A COMPLETE LINE OF ENGINEERED ACCESSORIES FOR

AA ROUGH CHUCK PLATES . . . These are high quality cast iron plates with enough stock left to be fitted to chucks requiring chuck plate of diameter indicated. Without holes for mounting chuck.

For 11" Metal Lathe.

6" for 2 1/4"-8 threaded nose. 11 lbs.

No. 25-590

8" for 2 1/4"-8 threaded nose. 18 lbs.

No. 25-592

For 11" and 14" Metal Lathes.

8" for L-00 tapered nose. 16 lbs.

No. 25-593

10" for L-00 tapered nose. 32 lbs.

No. 25-246

BB STEEL COLLETS . . . Self-releasing type for holding round stock. Heat treated and hardened.

Quantity	Capacities	Lathe Size	Wt., Lbs.	Cat. No.
Set of 6	1/16" to 3/8" by 16ths	10"	4	25-800
Set of 6	1/8" to 3/4" by 16ths	10"	4	25-810
One	1/8" to 3/4" by 64ths (Specify No. 25-812 and size desired)	10"	1/2	25-812
Set of 8	1/16" to 1/2" by 16ths	11", 14"	5	25-600
Set of 8	1/8" to 1" by 16ths	11", 14"	5	25-610
One	1/8" to 1-1/6" by 64ths (Specify No. 25-612 and size desired.)	11", 14"	5/8	25-612

RACKS FOR STEEL COLLETS

CC For 10" Metal Lathe. Holds 19 collets, 2 centers, nose cap, spanner wrench and draw bar. 12 lbs.

No. 25-828

DD For 11" Metal Lathe. Holds 17 collets, wrench, collet sleeve and draw bar. Swivel or rigid mounting. 14 lbs.

No. 25-628

EE For 14" Metal Lathe. Holds 32 collets, collet sleeve. 6 lbs.

No. 25-235

FF DRAW BARS FOR COLLETS . . . Have hardened threads, ball thrust bearing and collet sleeve.

For 10" Metal Lathe. (Collet sleeve not required.) 8 lbs.

No. 25-825

For 11" Metal Lathe.

With 2 1/4"-8 threaded nose. 9 lbs.

No. 25-625

With L-00 tapered nose. 9 lbs.

No. 25-626

For 14" Metal Lathe. 9 lbs.

No. 25-233

LEVER TYPE BALL BEARING COLLET CLOSERS . . . Used with all 5-C collets — round, square, hex, step, soft, internal, external, etc. Takes bar stock up to 1 1/8" diameter. Includes mounting bracket with bolts, collet sleeve and spindle nose cap.

GG For 11" Metal Lathe.

For 2 1/4"-8 threaded nose lathes. Includes spanner wrench for spindle nose cap. 16 lbs.

No. 25-553

For L-00 tapered nose lathes. 15 lbs.

No. 25-554

For 14" Metal Lathe.

For 14" Lathes with Serial No. 133-4208 and higher. 19 lbs.

No. 25-268

CENTERS . . . High quality type.

Type	Recommended Use and Description	Shank	Lathe Size	Wt., Lbs.	Cat. No.
60°	For headstock. Soft, ground.	No. 2 M.T. 10", 11"	10", 11"	1/2	25-542
60°	For headstock. Soft, ground.	No. 3 M.T. 14"	14"	1	25-238
60°	For tailstock. Hardened and ground.	No. 2 M.T. 10"	10"	1/2	25-841
HH 60°	For tailstock. Hardened and ground.	No. 3 M.T. 11", 14"	11", 14"	1	25-541
60° Half	For tailstock. Hardened and ground.	No. 2 M.T. 10"	10"	1/2	25-843
II 60° Half	For tailstock. Hardened and ground.	No. 3 M.T. 11", 14"	11", 14"	1	25-543
60° Live	For tailstock. Point is heat treated, hardened and ground. Head is carried on an angular contact pre-loaded ball bearing.	No. 2 M.T. 10"	10"	1 1/2	25-844
JJ 60° Live	For tailstock. Point is heat treated, hardened and ground. Head is carried on an angular contact pre-loaded ball bearing.	No. 3 M.T. 11", 14"	11", 14"	3	25-544
60° Live Hollow	For tailstock. Cup is heat treated, hardened and ground. Head is carried on an angular contact pre-loaded ball bearing.	No. 2 M.T. 10"	10"	1 1/2	25-845
KK 60° Live Hollow	For tailstock. Cup is heat treated, hardened and ground. Head is carried on an angular contact pre-loaded ball bearing.	No. 3 M.T. 11", 14"	11", 14"	3	25-545

ARBORS

For 11" and 14" Metal Lathes.

LL #For shell end mills with 1/2" hole. No. 3 M.T. shank tapped 3/8"-18 for draw bolt. With mounting screw. 1 lb.

No. 25-521

MM #For plain milling cutters with 1" hole up to 1 1/2" wide. No. 3 M.T. shank tapped 3/8"-18 for draw bolt. Includes spacing collars, key and nut. 2 lbs.

No. 25-526

SCREW ARBORS

For 11" and 14" Metal Lathes.

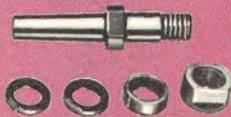
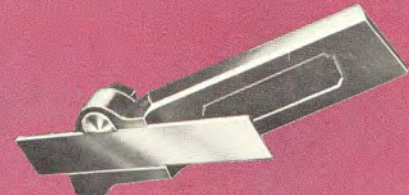
NN #For single angle (dovetail) milling cutters threaded 3/8"-24 R.H. No. 3 M.T. shank tapped 3/8"-18 for draw bolt. 1 lb.

No. 25-522

#For single angle (dovetail) milling cutters, same as 25-522 except threaded 1/2"-20 R.H. 1 lb.

No. 25-524

#Spindle Adapter 25-520 and Draw Bolt 25-291 or 25-528 are required.

**LL****MM****NN****OO****PP****QQ****RR****SS****TT****UU**

ROCKWELL METAL LATHES

OO COLLET CHUCK

For 11" and 14" Metal Lathes . . . For Woodruff keyseat cutters with 1/2" shank. No. 3 M.T. shank tapped 5/16"-18 for draw bolt. With nut. Spindle Adapter 25-520 and Draw Bolt 25-291 or 25-528 are required. 2 lbs. **No. 25-527**

PP SPINDLE ADAPTER

For 11" and 14" Metal Lathes . . . No. 3 M.T., i.d. For mounting milling arbors Nos. 25-521, 25-522, 25-524 and 25-526, collet chuck No. 25-527, or drill chuck No. 17-820. Also may be used for grinding a new point on the 25-541 60° center for tailstock. 2 lbs. **No. 25-520**

MM DRAW BOLT

For 14" Metal Lathe . . . For arbors and collet chuck, threaded 5/16"-18, with bushing, washer and nut. 2 1/4 lbs. **No. 25-291**

TOOL HOLDERS . . . Drop forged from special steel, heat treated and hardened, with set screw and wrench.

For 10" Metal Lathe.

Type	Shank Size	Bit or Blade Size	Bit or Blade Furnished	Wt., Lbs.	Cat. No.
Q Q Straight	3/8 x 7/8"	1/4" x 1/4"	HSS Bit	3/4	25-680
R R Right-Hand Off-Set	3/8 x 7/8"	1/4" x 1/4"	HSS Bit	3/4	25-681
Left-Hand Off-Set	3/8 x 7/8"	1/4" x 1/4"	HSS Bit	3/4	25-682
Straight Carbide	3/8 x 1 1/8"	1/4" x 1/4"	None	7/8	25-689
S S Right-Hand Off-Set Carbide	3/8 x 1 1/8"	1/4" x 1/4"	None	7/8	25-690
Left-Hand Off-Set Carbide	3/8 x 1 1/8"	1/4" x 1/4"	None	7/8	25-691
T T Straight Cutting Off and Side	3/8 x 1 1/2"	3/2 x 5/8"	HSS Blade (ground both ends)	3/4	25-683
U U Right-Hand Off-Set Cutting Off and Side	3/8 x 1 1/2"	3/2 x 5/8"	HSS Blade (ground both ends)	3/8	25-684
Left-Hand Off-Set Cutting Off and Side	3/8 x 1 1/2"	3/2 x 5/8"	HSS Blade (ground both ends)	7/8	25-685

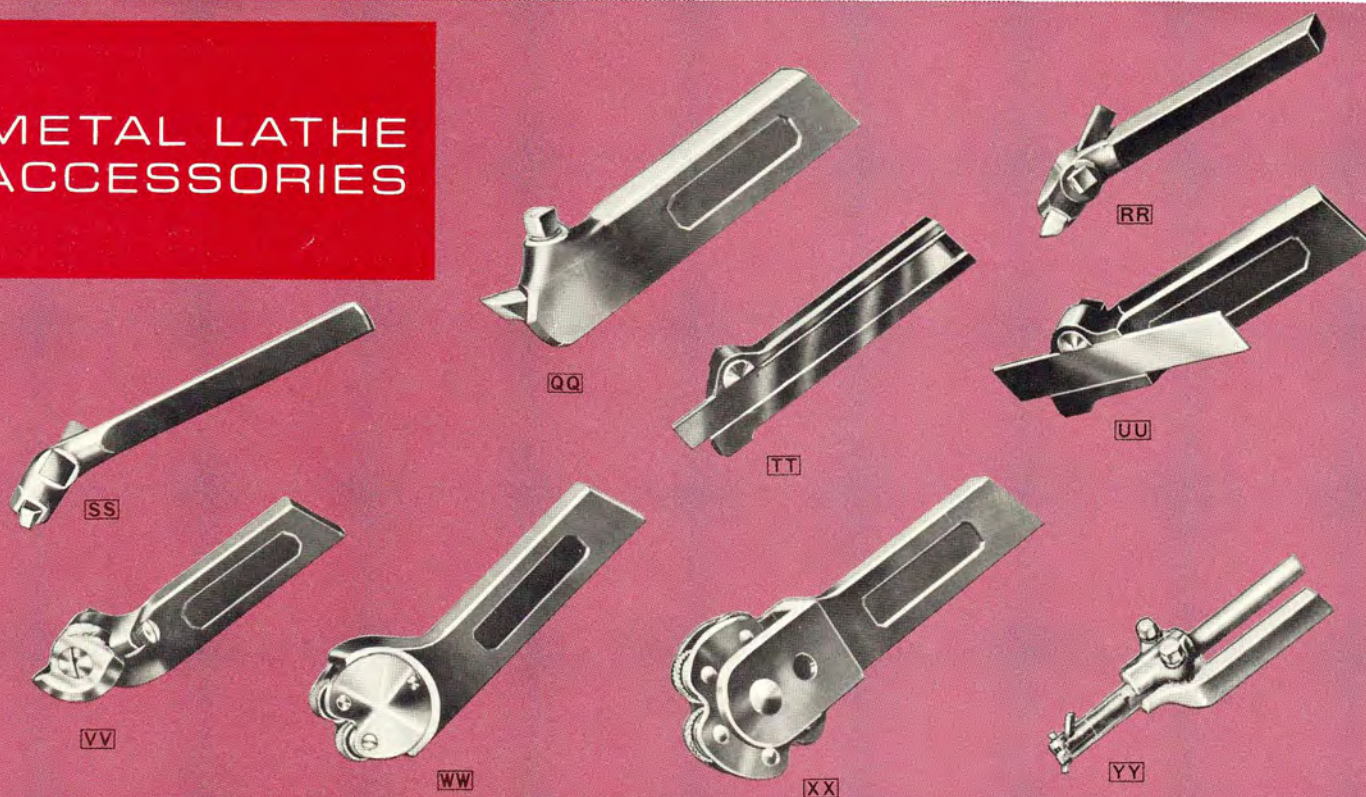
For 11" Metal Lathe.

Type	Shank Size	Bit or Blade Size	Bit or Blade Furnished	Wt., Lbs.	Cat. No.
Q Q Straight	1/2 x 1 1/8"	3/8" x 3/8"	HSS Bit	2	25-671
R R Right-Hand Off-Set	1/2 x 1 1/8"	3/8" x 3/8"	HSS Bit	2	25-672
Left-Hand Off-Set	1/2 x 1 1/8"	3/8" x 3/8"	HSS Bit	2	25-673
Straight Carbide	1/2 x 1 1/4"	3/8" x 3/8"	None	2	25-677
S S Right-Hand Off-Set Carbide	1/2 x 1 1/4"	3/8" x 3/8"	None	2	25-678
Left-Hand Off-Set Carbide	1/2 x 1 1/4"	3/8" x 3/8"	None	2	25-679
T T Straight Cutting Off and Side	1/2 x 1 3/8"	1/8" x 3/4"	HSS Blade (ground both ends)	2	25-674
U U Right-Hand Off-Set Cutting Off and Side	1/2 x 1 3/8"	1/8" x 3/4"	HSS Blade (ground both ends)	2	25-675
Left-Hand Off-Set Cutting Off and Side	1/2 x 1 3/8"	1/8" x 3/4"	HSS Blade (ground both ends)	2	25-676

SPECIAL TOOL POST RING FOR 11" METAL LATHE . . . Adapts lathe for use with 3/8" (size O) toolholders, threading tool, knurling tools and boring tool. Raises 10" Lathe Toolholders to proper height for use on 11" Lathe. 3/4 lb. **No. 25-629**

METAL LATHE ACCESSORIES

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THESE ACCESSORIES EXPAND THE PRODUCTIVE

For 14" Metal Lathe.

Type	Shank Size	Bit or Blade Size	Bit or Blade Furnished	Wt., Lbs.	Cat. No.
Q Q Straight	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	HSS Bit	3	25-247
R R Right-Hand Off-set	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	HSS Bit	3	25-248
Left-Hand Off-set	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	HSS Bit	3	25-249
Straight Carbide	$\frac{5}{8} \times 1\frac{1}{2}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	None	3	25-250
S S Right-Hand Off-set Carbide	$\frac{5}{8} \times 1\frac{1}{2}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	None	3	25-251
Left-Hand Off-set Carbide	$\frac{5}{8} \times 1\frac{1}{2}$ "	$\frac{3}{8} \times \frac{3}{8}$ "	None	3	25-252
T T Straight Cutting Off and Side	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{1}{8} \times \frac{7}{8}$ "	HSS Blade (ground both ends)	3	25-253
U U Right-Hand Off-set Cutting Off and Side	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{1}{8} \times \frac{7}{8}$ "	HSS Blade (ground both ends)	3	25-254
Left-Hand Off-set Cutting Off and Side	$\frac{5}{8} \times 1\frac{3}{8}$ "	$\frac{1}{8} \times \frac{7}{8}$ "	HSS Blade (ground both ends)	3	25-255

SPECIAL TOOL POST RING FOR 14" METAL LATHE . . . Adapts lathe for use with $\frac{1}{2}$ " (size 1) toolholders, threading tool, knurling tools and boring tool. Raises 11" Lathe Toolholders to proper height for use on 14" Lathe. 1 lb. No. 25-278

V V THREADING TOOLS . . . The tool holders are drop forged from special steel, heat treated and hardened. The HSS cutter is ground to an included angle of 60°, and backed off for proper clearance. Cutter is sharpened by grinding top edge only; therefore, true form and correct angle are maintained. A hardened stop screw provides for positive, easy adjustment of cutter after sharpening.

Size of Tool Holder	Lathe Size	Wt., Lbs.	Cat. No.
$\frac{3}{8} \times \frac{7}{8}$ "	10"	$\frac{3}{4}$	25-686
$\frac{1}{2} \times 1\frac{1}{8}$ "	11"	2	25-667
$\frac{5}{8} \times 1\frac{3}{8}$ "	14"	2½	25-256

DIAMOND KNURLING TOOLS . . . Knurls and pins are carefully made from high grade tool steel, hardened and tempered. Teeth of knurls are accurately cut concentric to hole to assure quality knurling of work piece. Self-centering head type has one pair of medium knurls. Revolving head type has three pairs of fine, medium and coarse knurls. Holders are hardened.

Size of Tool Holder	Type of Head	Face of Knurl	Dia. of Knurl	Lathe Size	Wt., Lbs.	Cat. No.
W W $\frac{3}{8} \times \frac{7}{8}$ "	SC	$\frac{3}{16}$ "	$\frac{5}{8}$ "	10"	$\frac{3}{4}$	25-687
X X $\frac{3}{8} \times \frac{7}{8}$ "	RH	$\frac{3}{16}$ "	$\frac{5}{8}$ "	10"	1	25-688
W W $\frac{1}{2} \times 1\frac{1}{8}$ "	SC	$\frac{1}{4}$ "	$\frac{3}{4}$ "	11"	2	25-668
X X $\frac{1}{2} \times 1\frac{1}{8}$ "	RH	$\frac{1}{4}$ "	$\frac{3}{4}$ "	11"	2	25-669
W W $\frac{5}{8} \times 1\frac{3}{8}$ "	SC	$\frac{1}{4}$ "	$\frac{3}{4}$ "	14"	3	25-258
X X $\frac{5}{8} \times 1\frac{3}{8}$ "	RH	$\frac{1}{4}$ "	$\frac{3}{4}$ "	14"	3	25-259

SC—Self-centering head. RH—Revolving head.

V V BORING TOOLS . . . Unique design of holder takes bars of various diameters without sleeves or bushings. The sleeve-bar clamping feature is exceptionally strong and provides for rapid adjustment of either straight or angular cutters without the need for extra parts. Includes two wrenches.

Size of Tool Holder	Cutters Included	Bar Size Range	Lathe Size	Wt., Lbs.	Cat. No.
$\frac{3}{8} \times \frac{7}{8}$ "	45°, 90°	$\frac{1}{4}$ to $\frac{5}{8}$ "	10"	2½	25-692
$\frac{1}{2} \times 1\frac{1}{8}$ "	45°, 90°	$\frac{1}{4}$ to $\frac{3}{4}$ "	11"	5	25-693
$\frac{5}{8} \times 1\frac{3}{8}$ "	45°, 90°	$\frac{3}{8}$ to $1\frac{1}{4}$ "	14"	8	25-260

*Indicates size of bar furnished.



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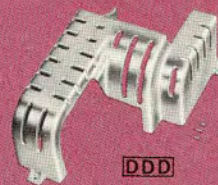
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B B B



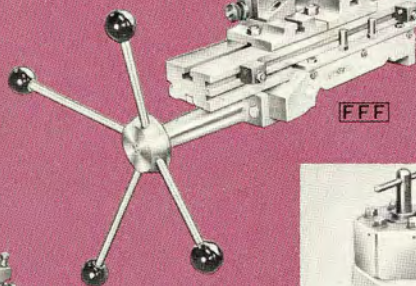
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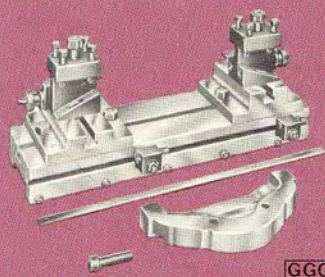
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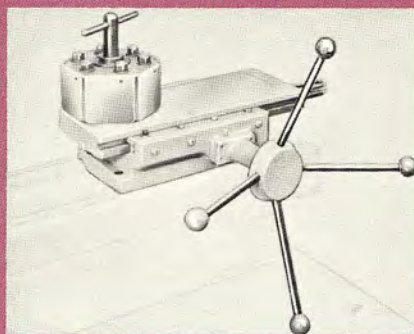
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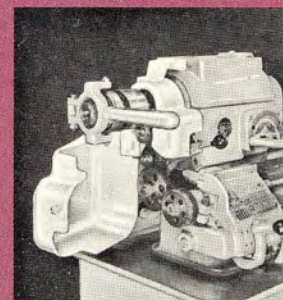
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CAPACITY OF ROCKWELL METAL LATHES

Z Z TURRET TOOL POSTS FOR COMPOUND . . . For facing, turning, thread cutting, drilling, boring, etc. Hold 4 cutter bits, 12 position indexing feature, 30° position for threading.

For 10" Metal Lathe, 2½" sq. head takes bits to ⅜". 10 lbs.

No. 25-851

*For 11" Metal Lathe, 3½" sq. head takes bits to ½". 9 lbs. No. 25-551

For 14" Metal Lathe, 3½" sq. head takes bits to ⅞". 9 lbs. No. 25-236

*When used on Double Tool Post Cross Slides No. 25-555 and 25-556, No. 25-552 Adapter required. Order separately.

A A A ADAPTER

For mounting No. 25-551 Turret Tool Post on No. 25-555 or No. 25-556 Double Tool Post Cross Slide. Mounts on either front or rear post of cross slide. Complete with base, alignment keys, stud with clamp plate, nut and washer. 2 lbs.

No. 25-552

B B B REPLACEMENT CUTTING-OFF BLADES

For 10" Metal Lathe . . . ⅝" x ⅝", made of HSS, ground and ready for use in tool holders Nos. 25-683, 25-684 and 25-685. 2 lbs. No. 25-695

For 11" Metal Lathe . . . ⅝" x ⅝", made of HSS, ground and ready for use in tool holders Nos. 25-674, 25-675 and 25-676. 2 lbs. No. 25-694

For 14" Metal Lathe . . . ⅝" x ⅝", made of HSS, ground and ready for use in tool holders Nos. 25-253, 25-254 and 25-255. 2 lbs. No. 25-261

C C C FORMED THREADING CUTTERS

For 10" Metal Lathe . . . Sharp 60° V-thread, fits No. 25-686 Threading Tool. 2 lbs.

No. 25-696

For 11" Metal Lathe . . . Sharp 60° V-thread, fits No. 25-667 Threading Tool. 1 lb.

No. 25-698

For 14" Metal Lathe . . . Sharp 60° V-thread, fits No. 25-256 Threading Tool. 1 lb.

No. 25-257

D D D BELT AND PULLEY GUARD

For 10" Metal Lathe . . . Aluminum, with ⅜" Slots. Recommended when motor is mounted at rear on wooden bench. 7 lbs. No. 25-859

E E E DELUXE LAMP ATTACHMENT

For 10", 11" and 14" Metal Lathes . . . For 115V. Includes 18" flexible gooseneck, reflector and 8-foot cord with 2-prong plug. Uses standard bulb (not included) up to 75 watts. 3 lbs. No. 25-857

PRODUCTION TYPE ACCESSORIES FOR 11" METAL LATHE

You can convert your standard Rockwell 11" Lathe for screw machine or turret lathe work by installing the following accessories and other items as required.

DOUBLE TOOL POST CROSS SLIDES

These deluxe, heavy-duty Double Tool Post Cross Slides are especially recommended for use with the Bed Turret. They are ideal for repetitive, high production manufacturing of a wide variety of parts.

T-slots in tool post pads and in slide provide transverse and longitudinal adjustment for accurate positioning of tool bits. The hardened steel tool posts have left and right tool positions, sliding wedge height adjustment, and set screws to permit slight rotation of tool bits in a horizontal plane so that either angular or straight tool settings can be perfectly maintained.

MACHINE DATA

Slide:	No. 25-555	No. 25-556
Travel	8"	5½"
Length	17½"	15¼"
Width	3½"	4¼"
Maximum Swing Over Slide	5½"	5½"
Tool Posts:		
Size of Bit	⅝" sq.	⅝" sq.
Tool Bit Slot:		
Depth	½"	½"
Height	⅝"	⅝"
Tool Height Adjustment	¼"	¼"
Distance Between Tool Posts:		
Maximum	11"	8¾"
Minimum	2"	2"
Adjustment of Tool Posts:		
Longitudinal	1¾"	2½"
Transverse	9"	6¾"

F F F BED MOUNTED DOUBLE TOOL POST CROSS SLIDE WITH PILOT WHEEL FEED.

The extra long (8") travel of this slide permits the tool posts to be positioned far apart so that even large tooling in the bed turret can be fed in between the tool posts of the cross slide. Has the speed and convenience of a lever type slide but is much safer because the operator's hands never need approach the work while feeding the tool bits. Slide traverses 4" for each revolution of the pilot wheel.

This cross slide is supplied as standard equipment with the Hand Screw Machine. 80 lbs. No. 25-555

G G G SADDLE MOUNTED DOUBLE TOOL POST CROSS SLIDE.

This slide replaces the compound slide rest and regular cross slide of the 11" Metal Lathe. It mounts on the saddle dovetail of the regular lathe carriage and utilizes the cross feed lead screw regularly supplied with the lathe. It may be operated by power through the friction clutch in the apron or manually with the regular handwheel.

The taper attachment may be left on the lathe, if desired, when this cross slide is mounted. Includes complete instructions for easy field mounting by the user. 40 lbs. No. 25-556

H H H BED TURRET FOR 11" METAL LATHE (furnished as standard equipment with Hand Screw Machine).

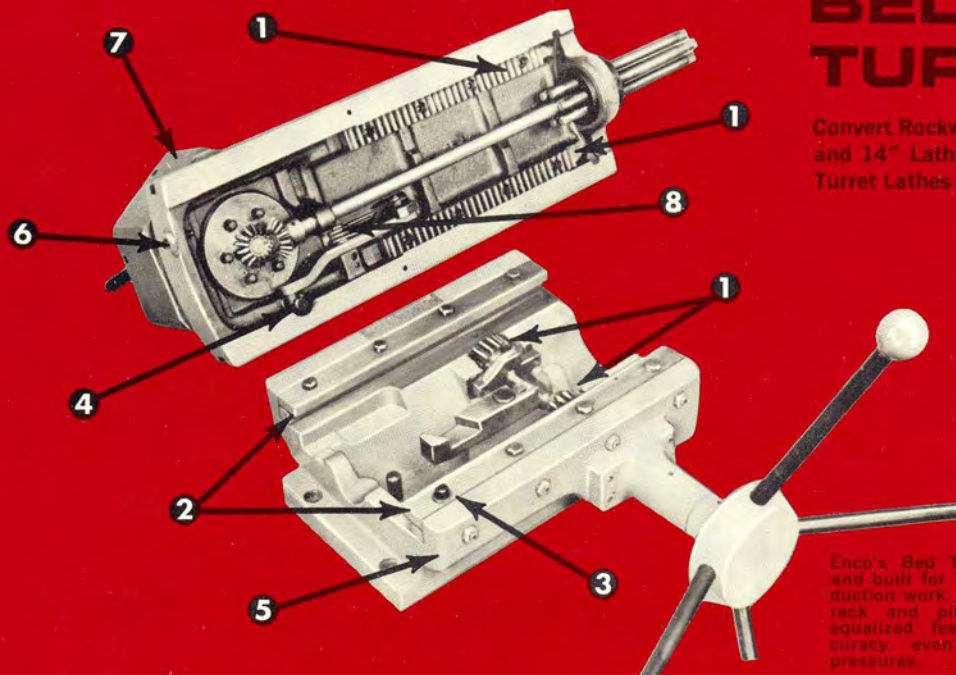
For description of No. 25-567 Bed Turret, see Page 26.

I I I GUARD FOR OUTBOARD GEAR TRAIN

Two-Piece Guard for Outboard Gear Train. Recommended when Lever Type Collet Closer is used on 11" Lathes with lead screw. Lower portion swings open to give access to gears, without disturbing collet closer. Complete with hinge, mounting bracket for upper portion, and lathe lubrication chart. 6 lbs. No. 25-561

ENCO SELF-INDEXING BED TURRETS

Convert Rockwell 10", 11"
and 14" Lathes to Hand
Turret Lathes at Low Cost!



Enco's Bed Turrets are designed and built for heavy duty, high production work. The exclusive double rack and pinion drive provides equalized feed and ensures accuracy, even under heavy feed pressures.

When you add an Enco Bed Turret to your lathe, you get turret lathe performance and production at modest cost. You can perform all operations normally done on a turret lathe or hand screw machine including drilling, counterboring, countersinking, spot facing, reaming, turning, etc. Check these *exclusive* features (see illustrations at right) that guarantee equalized feed and precision performance.

1 Double rack and gear drive equalizes tool feed pressure, gives smooth, parallel slide travel and minimizes torsional strain as load is equally divided, even under heavy cuts.

2 Two-piece adjustable gibs, front and rear, provide lateral adjustment for slide travel.

3 Gib lock provided for work on center or for recessing, necking, or grooving operations from turret.

4 Indexing precision is assured by hardened and ground tapered seat bushings in the turret head.

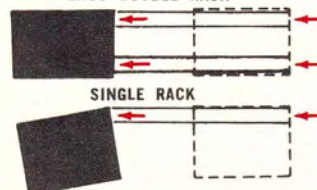
5 The turret base is constructed to clear the wings of the lathe carriage. This permits the turret to be moved close to the headstock for collet work or to perform facing operations from the compound or cross-slide when necessary.

6 Safety stop screw prevents over-ride of head positioning. Also keeps slide from returning too far on back stroke.

7 The hexagon head revolves in an aluminum bronze bearing in the slide having a tensile strength of 90,000 p.s.i.

8 Lever action spring which locates index pin into index bushings thru trip lever, is so designed that constant pressure is exerted in holding hex head in proper position.

ENCO DOUBLE RACK

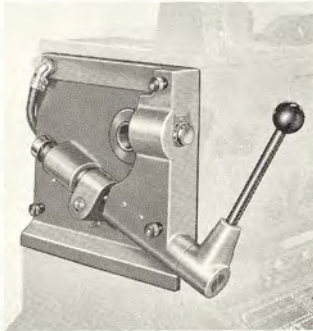


MACHINE DATA

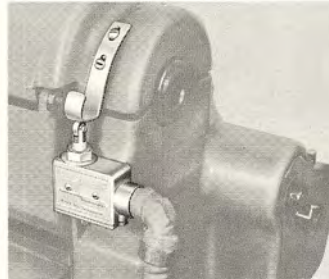
	Bed Turret No. 25-564*	Bed Turret No. 25-567*	Bed Turret No. 25-566*
Size of Lathe	10"	11"	14"
Shipping weight	113 lbs.	120 lbs.	166 lbs.
Tool hole range	$\frac{5}{8}$ " to 1"	$\frac{5}{8}$ " to 1"	1" to $1\frac{1}{2}$ "
Turret head across flats	5 $\frac{5}{8}$ "	5 $\frac{5}{8}$ "	7"
Turret face dimensions			
Wide	3"	3"	3 $\frac{3}{8}$ "
High	2 $\frac{7}{8}$ "	2 $\frac{7}{8}$ "	3 $\frac{3}{8}$ "
Maximum diameter tool clearance over ram	3 $\frac{1}{8}$ "	3 $\frac{1}{4}$ "	5"
Total ram travel	7 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "
Ram travel, max. (self indexing)	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "
Ram travel, min. (self indexing)	2"	2"	2"
Length of ram	16 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "
Base length	11 $\frac{1}{2}$ "	11 $\frac{1}{2}$ "	11 $\frac{1}{2}$ "

*When a Bed Turret is ordered and shipped with a new lathe, it will be bedded and bored for an additional net charge of \$40.00.

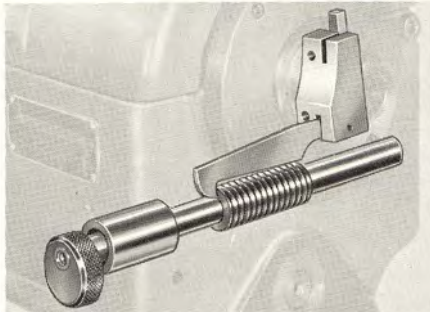
ROCKWELL LATHE ACCESSORIES THAT INCREASE SAFETY AND SPEED PRODUCTION



NO. 25-265



NO. 25-814



NO. 25-831

SAFETY SPINDLE BRAKE WITH ELECTRICAL DISCONNECT AND START SWITCHES for 14" Metal Lathe. Should be used only when lathe is equipped with single or three phase magnetic motor control. These kits make the lathe safer and speed production work. When the brake lever is pushed, the power is cut off and the spindle is stopped. A separate button starts the lathe again in the same direction.

Kit, mounted and wired at the factory when ordered on a new lathe having factory mounted motor and magnetic type control. 36 lbs. **NO. 25-279**

*Kit, with instructions for field mounting. 36 lbs. **NO. 25-265**

SAFETY ELECTRICAL DISCONNECT SWITCH KITS for 10" and 11" Metal Lathes when equipped with single or three phase magnetic motor control. These kits automatically shut off the motor when headstock cover is swung open on 10" Metal Lathe or when gear train guard is swung open on 11" Metal Lathe. Motor remains off, even when cover is closed, until drum switch handle is moved to "on" position.

MECHANICAL BACK GEAR LOCK-OUT KITS for 10" Metal Lathe. These kits protect the gears of the headstock because they force the operator to raise the headstock cover before the back gears can be engaged. (The No. 25-813 or 25-814 Kit must be used with this Lock-out for protection of the operator.) 2 lbs.

Lathe Used On	Factory Mounted and Wired On New Lathes	For Field Mounting (Includes Instructions)
11" Metal Lathe	25-514 (Disconnect)	*25-513 (Disconnect)
10" Metal Lathe	25-814 (Disconnect)	*25-813 (Disconnect)
10" Metal Lathe	25-829 (Lock-Out)	25-831 (Lock-Out)

*Does not include wire.

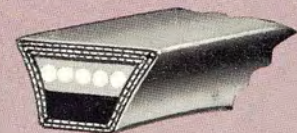
motor pulleys

Product Usage	Outside Dia.	Bore	Wt. Lbs.	Cat. No.
10" ML, Bench Mdl.	2"	½"	1 ¾	41-902
10" ML, Bench Mdl.	2"	⅝"	1 ¾	41-903
10" ML, Bench Mdl.	2"	¾"	1 ¾	41-904
10" ML, Bench Mdl.	2"	¾"	1 ¾	41-905
10" ML, Cab. Mdl.	2"	½"	1	41-212
10" ML, Cab. Mdl.	2"	⅝"	1	41-213
10" ML, Cab. Mdl.	2"	¾"	1	41-214
10" ML, Cab. Mdl.	2"	⅞"	1	41-215
11" ML, HSM	3"	⅝"	2	41-913
11" ML, HSM	3"	¾"	2	41-914
11" ML, HSM	3"	⅞"	2	41-915
11" ML, HSM	3"	1"	2	41-916
11" ML, HSM	3"	1 ⅛"	2	41-917
*14" ML	4.4"	¾"	6	41-544
*14" ML	4.4"	⅞"	6	41-545
*14" ML	4.4"	1"	6	41-546
*14" ML	4.4"	1 ⅛"	6	41-547
Vert. Mill	6-Step	⅝"	4	41-893
Vert. Mill	6-Step	¾"	4	41-894
Hor. Mill	5-Step	¾"	31	41-844
Hor. Mill	5-Step	⅞"	31	41-845

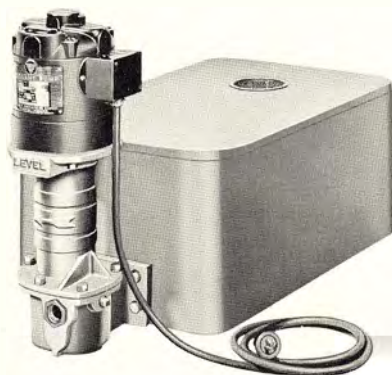
*For new style variable speed drive and No. 25-220 or 25-264 Power Driven Spindle Speed Changer.

belts (Specially Constructed)

Product Usage	Outside Circumference	Description	Wt. Lbs.	Cat. No.
10" ML, Cab. Mdl.	36 1/2"	V-belt (two required) for variable speed drive.	1/2	340
10" ML, Bench Mdl.	27 3/4"	Belt (two required), variable speed drive type.	5/8	49-120
10" ML, Bench and Cab. Mdls.	30 1/8"	V-belts (matched pair) for spindle drive.	1	49-121
11" ML, HSM	34 1/2"	Belt, upper, variable speed drive type.	1/2	25-500
11" ML, HSM	30 1/2"	Belt, lower, variable speed drive type.	1/2	25-501
11" ML, HSM	50 3/4"	V-belts (matched pair) for spindle drive.	1/2	25-502
25-220 and 25-264 Spindle Speed Changers	1/4" dia. x 29 3/4"	Q-belt, stretch type (not specially constructed).	2 oz.	49-097
14" ML	47"	Variable speed belt, upper.	2	49-086
14" ML	36"	Variable speed belt, lower.	1	49-087
14" ML	51"	V-belt (matched pair) for spindle drive.	1	49-129
Vert. Mill	28 1/8"	V-belt	1	272
Hor. Mill	26"	8M Polyflex® Belt	1	49-084
TG-3 Gdr.	35"	Flat Belt	2	49-085



ROCKWELL COOLANT EQUIPMENT



16-Gallon Coolant System Shown with Pump, Cord, Switch and Tank.

Here's the perfect answer for big cost savings on your production jobs. Rockwell Coolant Equipment gives you these important benefits:

1. **Lubricates the cut**—maintains feeds and speeds with less horsepower.
2. **Cools the work and cutting tool**—prevents overheating or discoloration of work.
3. **Flushes chips away from the work**—assures a higher quality finish.

ROCKWELL 16-GALLON COOLANT SYSTEM

Big capacity $\frac{1}{4}$ HP pump provides a full flood of coolant making it ideal for use with Metal Lathes, Multiple Spindle Drill Presses, Cut-Off Machines and many other applications. Check these built-in Rockwell Quality Features:

- Adjustable — can be shut down to mere trickle without damage.
- Highly adaptable — flat machined flange permits use on most wet machine tools.
- Motor fully enclosed — not affected by moisture or caustic solutions.
- Double-sealed, lubricated-for-life ball bearings.
- Drilled and tapped for standard pipe fittings.
- Six-bladed impeller connected directly to motor shaft.
- 16-gallon tank has settling basin and wire mesh filter to keep coolant free from chips.

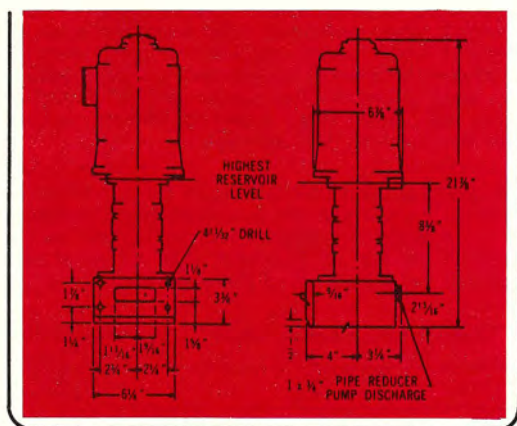
For Single Phase Operation

COOLANT PUMP complete with $\frac{1}{4}$ HP, 115 V, 60 cy, AC, 1725 rpm motor. 68 lbs. Order 49-618, 49-312 separately. **NO. 49-610**

COOLANT PUMP complete with $\frac{1}{4}$ HP, 230 V, 60 cy, AC, 1725 rpm motor. 68 lbs. Order 49-618, 49-313 separately. **NO. 49-611**

For 3 Phase Operation

COOLANT PUMP complete with $\frac{1}{4}$ HP, 230/460 V, 60 cy, AC, 1725 rpm motor. 68 lbs. Order 49-618, 49-838, separately. **NO. 49-619**



COOLANT FLOW — 16-GALLON SYSTEM

Coolant Flow in Gal. Per Hour with a 1725 RPM Motor at 70° F.
(1425 RPM Motor About 1/6 Less)

HEAD IN FEET	PIPE DIA.	COOLANT		
		WATER AND SOLUBLE OIL	LARD OIL	SAE 20 MACHINE OIL
			FLOW IN GAL. PER HOUR	
0	3/4"	1200	720	600
	1"	1920	1200	1200
5	3/4"	840	480	360
	1"	1620	900	900
10	3/4"	420	—	—
	1"	1020	—	—

14 ft. Maximum Lift with water. Discharge for water or soluble oil solution applies to all solutions of similar viscosity and density. Higher viscosity and density, less flow.

ACCESSORIES

TANK, 16-gal. capacity, $15\frac{7}{8}$ x $25\frac{7}{8}$ x 11" high, required with any of above pumps. 38 lbs. **NO. 49-618**

ON-AND-OFF TOGGLE SWITCH, 2-pole, $1\frac{1}{2}$ HP, AC-DC, 125-250 V. Includes 115 V 8-foot cord, 3-prong grounding type plug and clamp. 2 lbs. **NO. 49-312**

ON-AND-OFF TOGGLE SWITCH, 2-pole, $1\frac{1}{2}$ HP, AC-DC, 125-250 V. Includes 230 V 8-foot cord, 3-prong grounding type tandem plug and clamp. 2 lbs. **NO. 49-313**

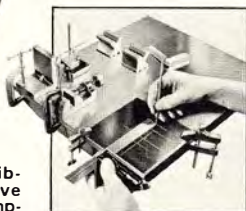
PUSH BUTTON SWITCH for manual on-and-off control of three phase motor, where overload is not desired. 3 lbs. **NO. 49-671**

STARTER, manual, 3-phase. Provides overload protection. Specify coolant pump number and voltage. 6 lbs. **NO. 49-838**

LAYOUT PLATES FOR LAYOUT, TESTING AND INSPECTION WORK



Note the heavy ribbing of this massive plate and the clamping ledge all around the squared sides.



Rockwell Surface Plates offer the four essentials of a 100% useful surface plate:

1. A true surface to start with.
2. A properly ribbed casting to insure that the surface stays true.

3. Adequate ledges at the edges of the plate for clamping purposes.
4. Edges that are machined square with one another and the surface.

Low cost Rockwell Surface Plates have a corner to corner out of flat tolerance of + or - .0005. They can easily and economically be made into precision plates simply by scraping to a master plate or each other.

Layout Plate—Size 15" x 18" x 3". 63 lbs. **No. 640**

Layout Plate—Size 16" x 22" x 3". 71 lbs. **No. 641**

NEW, LOW COST

ROCKWELL 3 & 5-GALLON COOLANT SYSTEMS

Rockwell's new 5-Gallon Coolant System is well suited for use with Single Spindle Drill Presses having a column from 2 3/4" to 4" in diameter, also Metal Lathes, Hand Screw Machines and Surface Grinders.

The new Rockwell 3-Gallon Coolant System is designed especially for use with Rockwell Vertical and Horizontal Milling Machines. It is custom designed to fit out of the way, out of sight within the cabinet base of the mill.

Both systems incorporate these Rockwell Quality Features:

- Pump is hermetically sealed, has life-time lubrication, a nylon impeller and double "X" viton double lip seals. It is equipped with a U.L. approved, 3-conductor, grounding type cord and plug.
- Flow of coolant can be regulated to any amount desired or completely shut off, without harmful effects.
- Double protection is provided against chips recirculating and causing a bad finish on the work. A screen traps the larger particles. A baffle in the tank provides a settling basin.

5-GALLON COOLANT SYSTEM for 115 V, 60 cycle, single phase. Includes submersible pump with 1/4" male outlet, 5-gallon tank with screen and baffle, 6-foot plastic hose, flexible pipe with nozzle and valve, and 6-foot 3-conductor power cord with 3-prong 115 V grounding plug. The universal clamp with garter spring may be instantly snapped onto any round drill press column from 2 3/4" to 4" in diameter. It firmly holds and points nozzle exactly at hole being drilled. Does not include drain hose from machine table to coolant tank. 50 lbs. **NO. 49-620**

3-GALLON COOLANT SYSTEM for 115 V, 60 cycle, single phase. Includes submersible pump with 1/4" male outlet, 3-gallon tank with baffle, 6-foot plastic hose, two L-shaped lengths of 1/4" pipe with one swivel type clamp, 18" flexible pipe with nozzle and valve, non-ferrous screen for end cap of Milling Machine table and plastic drain hose with fittings. In addition, all necessary wiring, with grommets, is included consisting of a 6-foot 3-conductor power cord with 3-prong, 115 V grounding plug, a junction box (for mounting on column of mill) with on-and-off toggle switch and a power cord to connect switch to pump motor. Complete instructions are included for easy field mounting. 50 lbs. **NO. 49-623**

COOLANT FLOW-3 AND 5-GALLON SYSTEMS USING WATER SOLUBLE OIL OR LIGHT CUTTING OIL

HEAD IN FEET	1 FT.	3 FT.	4 FT.	5 FT.	6 FT.	7 FT.
GALLONS PER HOUR	205	168	142	120	78	35
STATIC PRESSURE	3.2 PSI	3.2 PSI	3.2 PSI	3.2 PSI	3.2 PSI	3.2 PSI

[A] COOLANT TROUGHS . . . For table of Rockwell Horizontal or Vertical Milling Machine, one pair. Includes instructions for mounting. For use with 49-623 Coolant System. 12 lbs. **NO. 21-837**

[B] SPINDLE NOSE SPLASH GUARDS . . . Protect lathe operators from chips and coolant. Do not interfere with lever type collet closers or draw bars. Cannot be used with three or four-jaw chucks.

For L-100 tapered nose 11" Metal Lathes. 2 lbs. **NO. 25-559**

For 2 1/4"-8 threaded nose 11" Metal Lathes. 2 lbs. **NO. 25-560**

For L-00 tapered nose 14" Metal Lathes. 3 lbs. **NO. 25-241**

COOLANT PAN SPLASH GUARDS . . . Especially recommended when coolant is used. With clamps for mounting on lip of coolant pan.

For 11" Metal Lathes and Hand Screw Machines. 15" high by 30" wide. 17 lbs. **NO. 25-562**

For 14" Metal Lathes. 24" high by 42" wide. 66 lbs. **NO. 25-243**

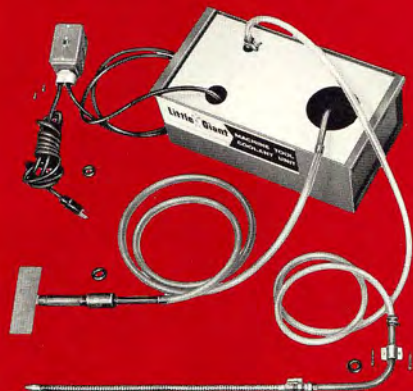
[C] COOLANT GROUPS . . . Consist of nozzle, flexible hose, valve mounting bracket (for mounting coolant line and lamp without interference), "L" shaped length of 1/4" pipe and compound for sealing between headstock and bed. A "Y" type filter for the drain line and a screen for the drain hole of the coolant pan are provided (coolant piping not furnished).

For 11" Metal Lathes and Hand Screw Machines. Mounts on either No. 25-555 Double Tool Post Cross Slide or on saddle of carriage. 8 lbs. **NO. 25-558**

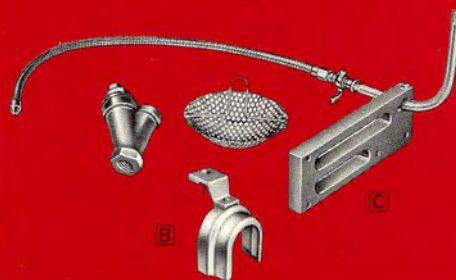
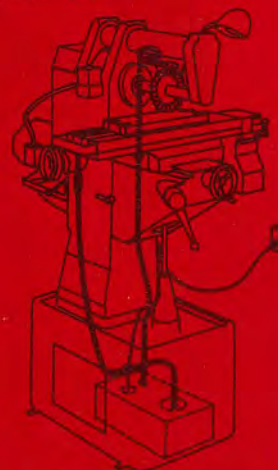
For 14" Metal Lathes. Mounts on saddle of carriage. 5 lbs. **NO. 25-244**

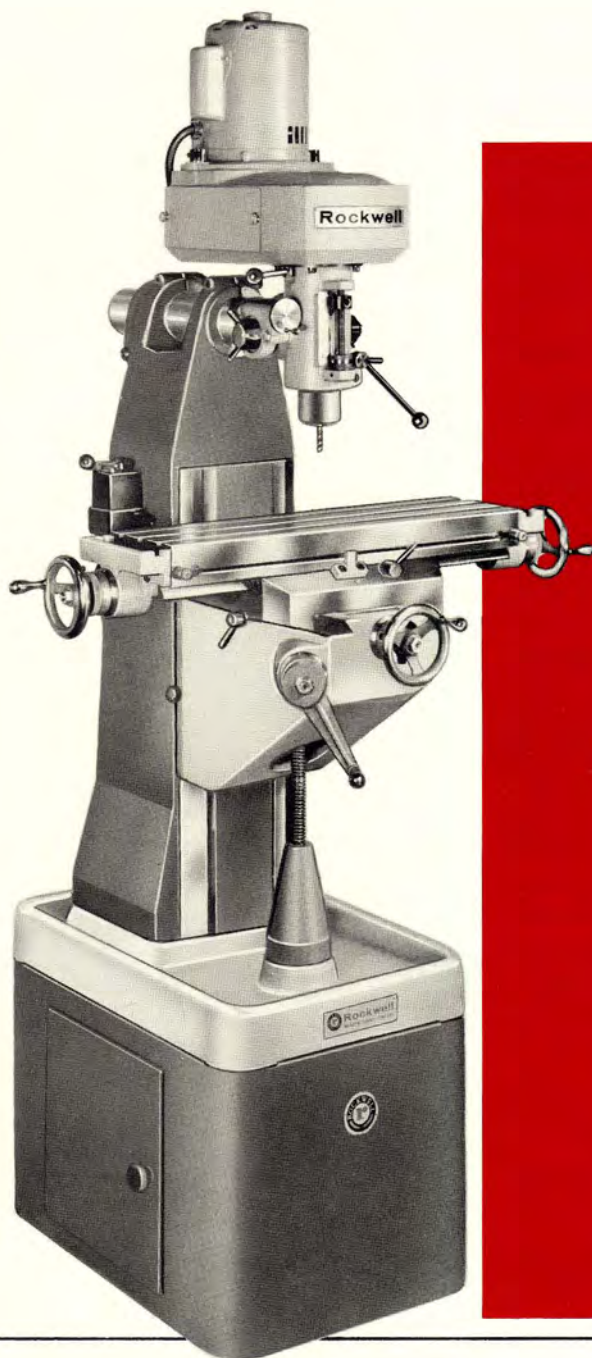


No. 49-620 5-Gallon Coolant System.



No. 49-623 3-Gallon System for Rockwell Milling Machines.





VERTICAL MILLING MACHINE

*will capably
meet your needs
on every job!
Here's why...*

GREATER ACCURACY—All operating parts are manufactured to very close tolerances, then *quality control* tested to assure the highest machine tool standards of accuracy.

DESIGNED FOR DURABILITY—One piece head and ram . . . five ball bearing supported spindle in 3" diameter quill . . . large $\frac{3}{4}$ " ways typify the heavy duty construction that guarantees long life and trouble-free performance.

ADDED CONVENIENCE—Every operating lever, crank and control is conveniently positioned for operational ease and to speed up production.

PROVEN RELIABILITY—More than 35 years' experience in designing and building the finest metal-working machines for industry everywhere stands behind this Rockwell Milling Machine. It's your guarantee that, when you buy a ROCKWELL, you have bought the best!

STANDARD EQUIPMENT

Basic Milling Machine includes storage type cabinet base with door, combination spindle brake and lock, draw bolt for collets, V-belt and motor pulley with $\frac{5}{8}$ " or $\frac{3}{4}$ " bore.

ROCKWELL VERTICAL MILLING MACHINE

MILL / SELECTION GUIDE

vertical milling machine (Less Electricals)

No. 21-100 Milling Machine on cabinet, with V-belt and motor pulley ($\frac{1}{2}$ " bore), less electricals. Hand Screw Feed Table Model. 750 lbs.

NOTE: For Variable Rate Power Table Feed Model, order No. 21-100 Machine plus No. 21-820 Table Feed. Variable Rate Power Table Feed Model will be shipped completely assembled. See Page 36 for description of Variable Rate Power Table Feed and Page 37 for Table Travel Limit Switch Kit No. 21-838.

motors and controls FACTORY MOUNTED AND WIRED

(See Pages 45 and 46 for separate Motors and Controls)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIPPING WEIGHT (LBS.)	CATALOG NUMBER
Single Phase, One-Half Horsepower	Drum Switch Only	Guarded Drip Proof	60-1725	115/230	27	49-472
		Guarded Drip Proof	60-1140	115/230	39 $\frac{3}{4}$	49-473
	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	115/230	29 $\frac{3}{4}$	49-488
		Guarded Drip Proof	60-1140	115/230	42 $\frac{3}{4}$	49-489
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	115/230	32 $\frac{3}{4}$	49-474
		Guarded Drip Proof	60-1140	115/230	45 $\frac{3}{4}$	49-475
Single Phase, Three-Quarter Horsepower	Drum Switch Only	Guarded Drip Proof	60-1725	115/230	36 $\frac{1}{4}$	49-476
	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	115/230	39 $\frac{1}{4}$	49-490
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	115/230	42 $\frac{1}{4}$	49-477
		Guarded Drip Proof	60-1725	230/460	25 $\frac{3}{4}$	49-478
Three Phase, One-Half Horsepower	Drum Switch and Overload Switch	Guarded Drip Proof	60-1140	230/460	26 $\frac{1}{4}$	49-479
		Guarded Drip Proof	60-1725	230/460	28 $\frac{1}{4}$	49-480
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1140	230/460	28 $\frac{3}{4}$	49-481
		Guarded Drip Proof	60-1725	230/460	53	49-678
	Drum Switch and Magnetic Starter (w/115 V. Transformer)	Guarded Drip Proof	60-1140	230/460	60	49-679
		Guarded Drip Proof	60-1725	230/460	43 $\frac{1}{4}$	49-482
Three Phase, Three-Quarter Horsepower	Drum Switch and Overload Switch	Guarded Drip Proof	60-1725	230/460	45 $\frac{3}{4}$	49-483
	Drum Switch and Magnetic Starter	Guarded Drip Proof	60-1725	230/460	60	49-680
	Drum Switch and Magnetic Starter (w/115 V. Transformer)	Guarded Drip Proof	60-1725	230/460		

NOTE: Single phase motors will be wired for 115V, unless 230V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only.

machine data

TABLE

Working Surface	6 $\frac{1}{2}$ x 24"
No. of T-Slots	3
Size of T-Slots	$\frac{7}{16}$ "
Spacing of T-Slots (Center to Center)	2"
Height from Floor (Lowest Position)	35"

RANGE

Table Longitudinal Travel	16"
Table Cross Travel	6 $\frac{3}{4}$ "
Table Vertical Travel	16 $\frac{1}{2}$ "
Spindle Nose to Table	0 to 16 $\frac{1}{2}$ "
Spindle ϕ to Column V-ways	2 $\frac{5}{8}$ " to 11 $\frac{1}{4}$ "

SPINDLE

Spindle Taper	R8
Hole Through Spindle	$\frac{1}{4}$ "
Number of Bearings	5
Number of Splines	6

SPEEDS

With 1725 RPM Motor	370, 700, 1170, 2440, 4420 and 6300 rpm
With 1140 RPM Motor	245, 470, 780, 1620, 2940 and 4200 rpm

QUILL

Diameter	3"
Stroke	2 $\frac{1}{2}$ "
Feed	Choice of Rapid or Fine Feed

SADDLE WIDTH

	12"
--	-----

DOVE-TAILS

Size	$\frac{3}{4}$ "
Kind of Gib	Tapered

MOTORS

NEMA C Face Frame (Special)	56
Horsepower Recommended	$\frac{1}{2}$ or $\frac{3}{4}$
Speeds Recommended (RPM)	1725 or 1140
Special Shaft Length (from Face of Flange)	4 $\frac{3}{4}$ "

OVERALL DIMENSIONS

Height (including $\frac{1}{2}$ HP Motor)	73 $\frac{1}{2}$ "
Width	37 $\frac{3}{4}$ "; Front to Rear

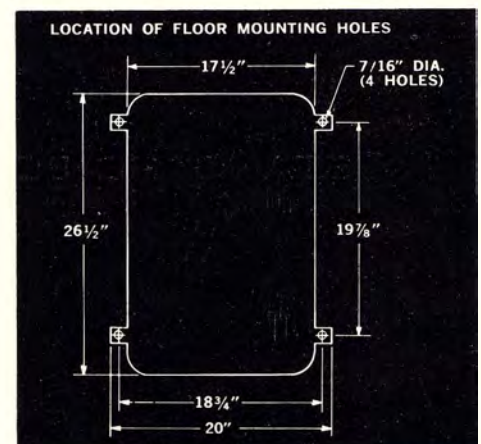
CABINET BASE DIMENSIONS

Width	17 $\frac{1}{2}$ "
Front to Rear	26 $\frac{1}{2}$ "

SHIPPING WEIGHT WITH ELECTRICALS

(Approx.)	780 lbs.
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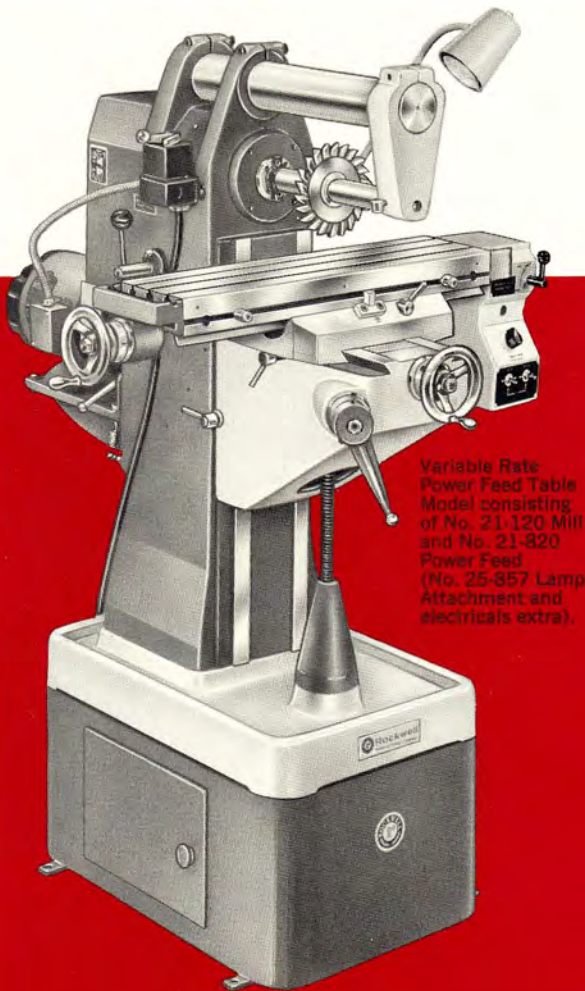
floor space requirements



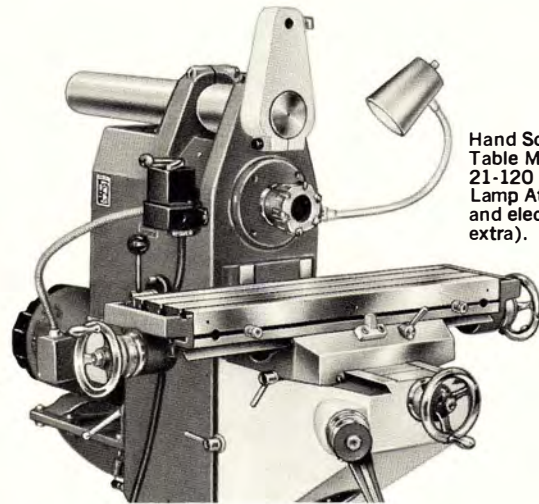
HORIZONTAL MILLING MACHINES

- VARIABLE RATE POWER FEED TABLE MODEL
- HAND SCREW FEED TABLE MODEL
- HAND LEVER FEED TABLE MODEL
- "DOUBLE DUTY" MODEL

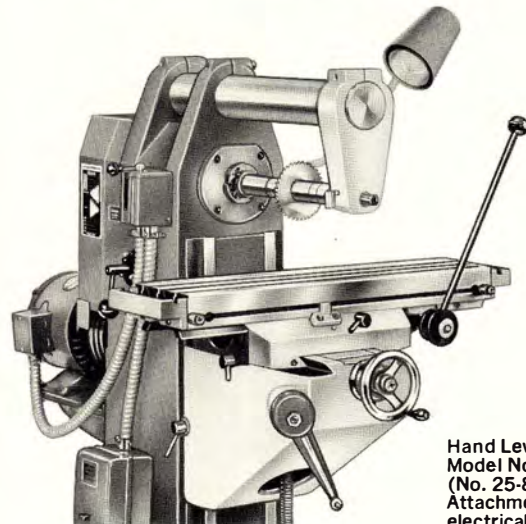
32



Variable Rate Power Feed Table Model consisting of No. 21-120 Mill and No. 21-820 Power Feed (No. 25-857 Lamp Attachment and electricals extra).



Hand Screw Feed Table Model No. 21-120 (No. 25-857 Lamp Attachment and electricals extra).



Hand Lever Feed Table Model No. 21-121 (No. 25-857 Lamp Attachment and electricals extra).

No matter which model you select, your Rockwell Horizontal Milling Machine is unsurpassed for capacity, performance and value.

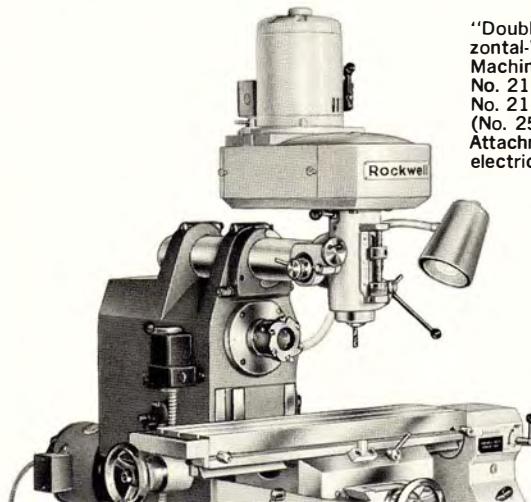
The Hand Screw Feed Model is ideal for the tool room, experimental department or small job shop which produces parts and pieces on a short run basis.

The Hand Lever Feed Model is especially designed for repetitive, rapid production milling operations of small parts as used in the aircraft and automotive industries.

The Variable Rate Power Table Feed Model is well suited for all users who must work on a production basis and where time is a critical factor.

If space or cost must be considered, the No. 21-122 "Double Duty" Horizontal-Vertical Milling Machine is recommended. It will do both horizontal and vertical milling simultaneously or independently, as the user desires.

Only Rockwell offers you this wide selection of models to suit your specific job requirements. Let us "Performance-Prove" one of these models for you today!



"Double Duty" Horizontal-Vertical Milling Machine consisting of No. 21-122 Mill with No. 21-820 Power Feed (No. 25-857 Lamp Attachment and electricals extra).

MILL/SELECTION GUIDE

horizontal milling machines (Less Electricals)

No. 21-120 Milling Machine on cabinet, less electricals. Hand Screw Feed Table Model. 900 lbs.

No. 21-121 Milling Machine on cabinet, less electricals. Hand Lever Feed Table Model. 900 lbs.

No. 21-122 "Double-Duty" Horizontal-Vertical Milling Machine on cabinet, less electricals. Consists of 21-120 Milling Machine, plus 21-816 Vertical Head, shipped separately. 1,050 lbs.

NOTE: For Variable Rate Power Table Feed Model, order No. 21-120 or 21-122 Basic Machine plus No. 21-820 Table Feed. Table Feed will be shipped assembled to machine.

ACCESSORIES

No. 21-820 Variable Rate Power Table Feed for 115 V, single phase, 60 cycle, with 8-foot grounding type cord and plug. For 21-120 Horizontal Mill, 21-122 Horizontal Vertical Mill or 21-100 Vertical Mill only. Fits in place of right table hand wheel, but left table hand wheel can still be used. Instructions for field mounting are included, or will be factory mounted when ordered with a new machine. (No. 21-838 Table Travel Limit Switch Kit recommended—see Page 37.) 28 lbs.

motors and controls Factory Mounted and Wired

(See Pages 45 and 46 for Separate Motors and Controls)

Motor	Motor Control	Motor Enclosure	Cycles & Motor RPM	Voltage	Ship. Wt. Lbs.	Catalog No.
Single Phase One Horsepower	Drum Reversing Switch Only	Guarded Drip Proof	60-1725	115/230	55	49-758
	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	115/230	70	49-677
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	115/230	63	49-759
Single Phase One and One-Half Horsepower	Drum Reversing Switch Only	Guarded Drip Proof	60-1725	115/230	62	49-695
	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	115/230	68	49-696
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	115/230	70	49-697
Three Phase One Horsepower	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	230/460	47	49-761
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	230/460	52	49-762
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	58	49-763
Three Phase One and One-Half Horsepower	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	230/460	54	49-772
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	230/460	58	49-773
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	64	49-774

NOTE: Three phase motors will be wired for 230V, unless 208V or 460V is specified. One horsepower single phase motors will be wired for 230V, unless 115V is specified. One and one-half horsepower single phase motors will be wired for 230V only, cannot be supplied for 115V. Power cord and plug supplied on single phase motors only.

machine data

TABLE

Working Surface	6½" x 24"
No. of T-Slots	3
Size of T-Slots	¾"
Spacing of T-Slots (Center to Center)	2"
Height from Floor (Lowest Position)	33"
Micrometer Collars	2½" Dia.; Graduated to .001"
Travel for each revolution of hand wheel	200"
RANGE	
Table Longitudinal Travel	16"
With Hand Screw Feed	16"
With Variable Rate Power Feed	16"
With Hand Lever Feed	10"
Table Cross Travel	6¾"
Table Vertical Travel	16½"
Table to C of Spindle	0 to 15"
Cutter Dia. (Maximum with Overarm)	8"
Spindle Nose to Arbor Support (Max.)	12¾"
Maximum Arbor Length (Shoulder to Nut)	11"
Bottom of Overarm Bracket to C of Spindle	1"
POWER TABLE FEED RATES (Inches Per Minute)	
Infinitely Variable from	0 to 22"
Jog or Rapid Approach	30"
SADDLE WIDTH	
DOVE-TAILS	12"
Size	¾"
Kind of Gib	Tapered
SPINDLE	
Taper	NMTB #30
Hole	¾"
Precision Timken Roller Bearings (Oil-bath Lubricated)	2
OVERARM ARBOR SUPPORT	
BRACKET	Takes Style A Arbors with 2½" Pilot Drive
Motor to Ball Bearing Countershaft	8M Polyflex® Belt
Countershaft to Spindle	8M Polyflex® Belt
Back Gears (Alloy Steel, Heat Treated)	Oil Bath Lubricated

No. 21-816 VERTICAL HEAD complete, for use on Horizontal Milling Machine. Includes head with ram, spindle and quill, spindle brake and lock, feed parts, belt guard, pulleys, V-belt, motor mounting plate, draw-bolt for collets, worm and gear tilting mechanism, tilt scale and instructions for field mounting. Less electricals. 130 lbs.

MOTORS AND REVERSING DRUM SWITCHES FACTORY MOUNTED AND WIRED ON NO. 21-816 VERTICAL HEAD ACCESSORY

Motor	Cycles and Motor RPM	Catalog Number
1 Phase ½ HP	60-1725	49-687
1 Phase ½ HP	60-1140	49-688
1 Phase ¾ HP	60-1725	49-689
3 Phase ½ HP	60-1725	49-690
3 Phase ½ HP	60-1140	49-691
3 Phase ¾ HP	60-1725	49-692

NOTE: All motors have guarded drip-proof enclosure. Single phase motors will be wired for 115V, unless 230V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only. If overload switch or magnetic starter is required, order separately from Page 46. Overload switches and magnetic starters are not factory mounted and wired on the 21-816 Vertical head.

Motor	Motor Control	Motor Enclosure	Cycles & Motor RPM	Voltage	Ship. Wt. Lbs.	Catalog No.
Single Phase One Horsepower	Drum Reversing Switch Only	Guarded Drip Proof	60-1725	115/230	55	49-758
	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	115/230	70	49-677
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	115/230	63	49-759
Single Phase One and One-Half Horsepower	Drum Reversing Switch Only	Guarded Drip Proof	60-1725	115/230	62	49-695
	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	115/230	68	49-696
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	115/230	70	49-697
Three Phase One Horsepower	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	230/460	47	49-761
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	230/460	52	49-762
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	58	49-763
Three Phase One and One-Half Horsepower	Drum Reversing & Overload Switches	Guarded Drip Proof	60-1725	230/460	54	49-772
	Drum Reversing Switch & Magnetic Starter	Guarded Drip Proof	60-1725	230/460	58	49-773
	Drum Reversing Switch & Magnetic Starter (w/115V. Trans.)	Guarded Drip Proof	60-1725	230/460	64	49-774

SPEEDS (With 1725 rpm Motor)

Gear Drive 60, 135, 240, 300 and 385 rpm
Direct Drive 375, 845, 1500, 1875 and 2400 rpm

MOTORS

Accommodates Frame Sizes Delta #8½ and NEMA #182
Horsepower Recommended 1 or 1½

OVERALL DIMENSIONS

Height 57½"
Width (Table in center position) 37¾"
Front to Rear (Motor mounted) 51"
CABINET BASE DIMENSIONS
Width 17½" Front to Rear 26½"

SHIPPING WEIGHT WITH ELECTRICALS

(Approx.) 975 lbs.

machine data for 21-816 vertical head accessory

RANGE

Spindle Nose to Table 0 to 17"
Spindle C to Column V-ways 3¾" to 12½"

SPINDLE

Spindle Taper R8 Hole Through Spindle ¾"
Number of Bearings 5 Number of Splines 6

SPEEDS

With 1725 rpm motor 370, 700, 1170, 2440, 4420 and 6300 rpm
With 1140 rpm motor 245, 470, 780, 1620, 2940 and 4200 rpm

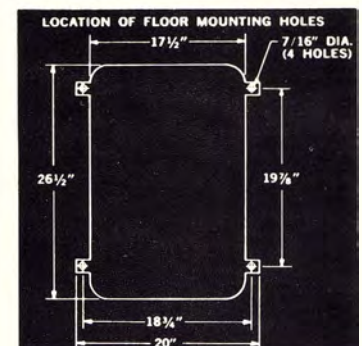
QUILL (Hard Chrome Plated)

Diameter 3"
Stroke 2½"
Feed Choice of Rapid or Fine Feed

MOTORS

NEMA C Face Frame (Special) 56
Horsepower Recommended ½ or ¾
Speeds Recommended (RPM) 1725 or 1140
Special Shaft Length (from Face of Flange) 4¾"

floor space requirements

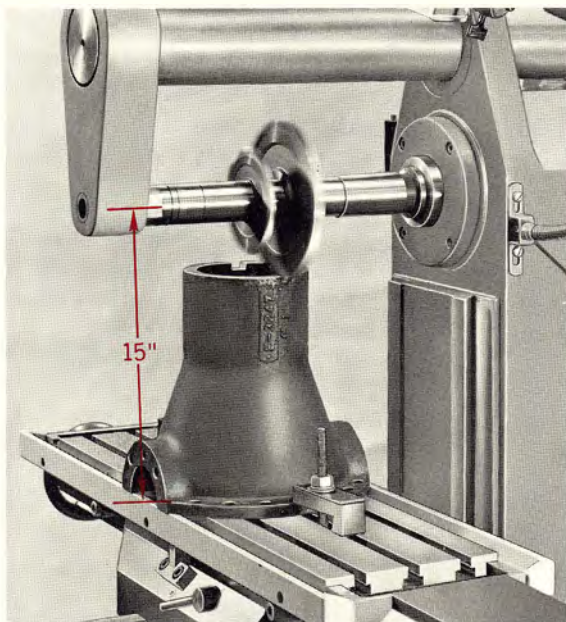


STANDARD EQUIPMENT

Basic Milling Machine includes storage type cabinet with door, guard for V-belts and pulleys, draw bolt threaded ½"—13, overarm support for Style A arbors, V-belts (2), motor pulley (¾" bore), two 1½" open end wrenches, and oil for spindle bearings. Without arbors and electricals.

**Rockwell Milling Machine features are
modern in design... BIG in value...
to give you greater production results!**

FOR HORIZONTAL MILLING MACHINES

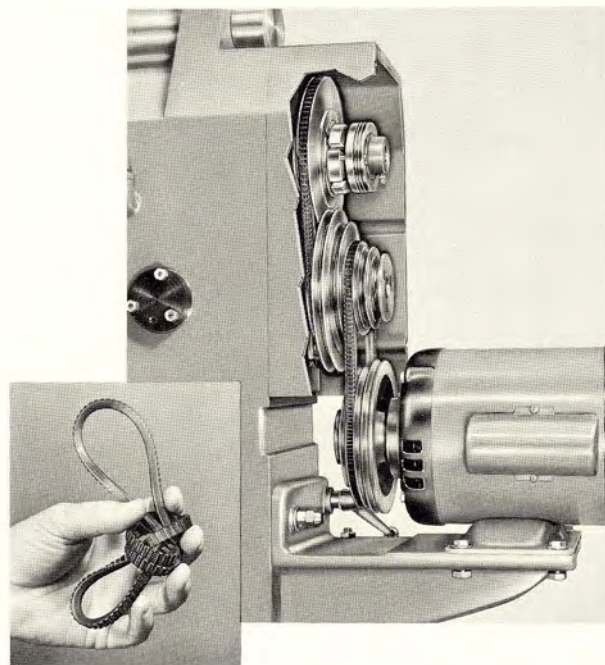


LARGE MILLING MACHINE CAPACITIES

Table to centerline of spindle clearance is a full 15"—a capacity obtainable only on much costlier mills. This means you get the extra capacity you need for big jobs, especially where jigs, fixtures or other working devices are required.

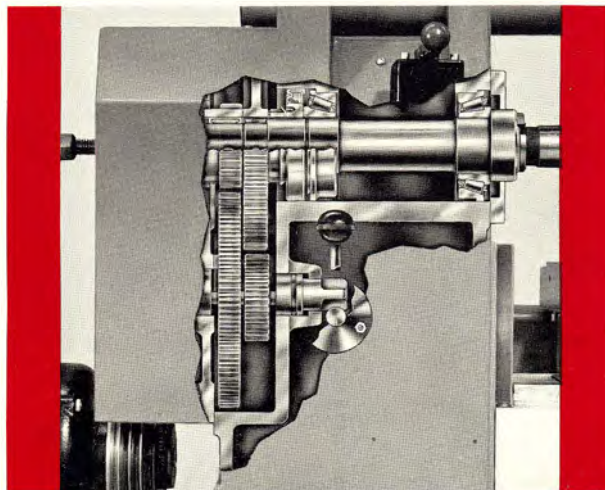
MASSIVE MOTOR MOUNT HAS AUTOMATIC BELT TENSION DEVICE

Speed changes can be made in seconds. Operator simply loosens two handles, swivels cast iron plate and makes speed change. After operator releases plate, special spring automatically provides the exact amount of tension on belt as operator re-locks two handles.



UNIQUE DRIVE SYSTEM

A powerful drive with ten speeds ranging all the way from 60 to 2400 RPM has been designed into a very small space, thanks to the revolutionary, new 8M Gates Polyflex® Belt. The small, radically different Gates Belt, which was developed especially for the automotive industry, has greater flexibility (see photo), offers uniformity without laps for smoother running, has resistance to oil, ozone, oxygen and sunlight, as well as superior abrasion resistance for long life. Typical advantages include the ability to transmit full power without slip, even with small pulley diameters, and to absorb shock loads.

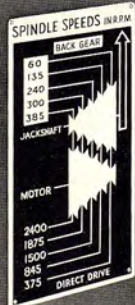


HEAVY DUTY BACK GEARS DRIVE MASSIVE SPINDLE

Cut-away photo shows the heavy duty 6-to-1 ratio gear train that drives the spindle. The large spindle, with #30 NMTB taper and $\frac{3}{32}$ " hole, rides on widely spaced, preloaded Timken tapered roller bearings. Gear train and spindle are separately oil-bath lubricated for long life.

HANDY CHART FACILITATES PROPER SPEED SELECTION

Chart on belt and pulley guard illustrates position of Gates Polyflex® Belt on pulleys for direct speeds of 375 to 2400 RPM or back gear speeds of 60 to 385 RPM.



FOR VERTICAL MILLING MACHINES



UNIQUE WORM AND GEAR TILTING MECHANISM

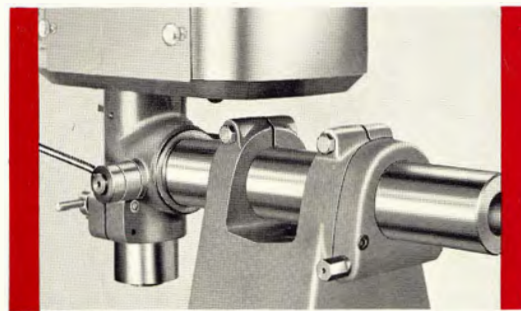
Tramming the table for perfect 90° positioning of the spindle can be accomplished easily with the worm and gear tilting mechanism. Fine adjustment for tilting the spindle to any angle is easily achieved without danger of the head falling. Motor and belt guard can be swiveled around a circle, eliminating interference when the spindle is tilted beyond a horizontal position.

CONVENIENT CONTROLS

All controls are located "up front," readily accessible to the operator. The optional lever type rapid feed or the wheel type fine feed adds convenience plus the extra accuracy needed for operations like boring to a specified depth. Heavy stop allows repeated machining to same depth. Lever at upper left actuates combination spindle lock and brake.

LARGE SPINDLE AND MASSIVE QUILL

The heavy, six-spline spindle is supported on five ball bearings in a large 3" diameter quill. Quill is hard chrome plated, guaranteeing long machine life with consistent, new machine accuracy. Spindle takes R8 collets with up to 3/4" capacity.



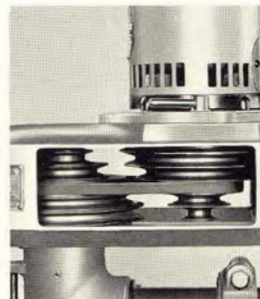
HEAD AND RAM CAST IN ONE PIECE, QUILL PRECISION FIT INTO HEAD

Notice the widely spaced clamps which rigidly hold the heavy 3 1/8" diameter ram. The ram, with its 13/16" wall, is integrally cast with the head, virtually eliminating all deflection of the head.

Quill slides snugly in precision bored lands inside head. Head design permits adjustment to compensate for quill wear after long use. New machine accuracy is maintained without need for replacing head and quill.

CLOSE-COUPLED DRIVE

Close belt centers provide smooth operation at spindle. Dynamically balanced pulleys are cast iron. Extra weight of cast iron provides fly-wheel type action for smooth cutting. Motor swivels to release belt tension for easy speed changing. Speed chart shows correct belt settings.

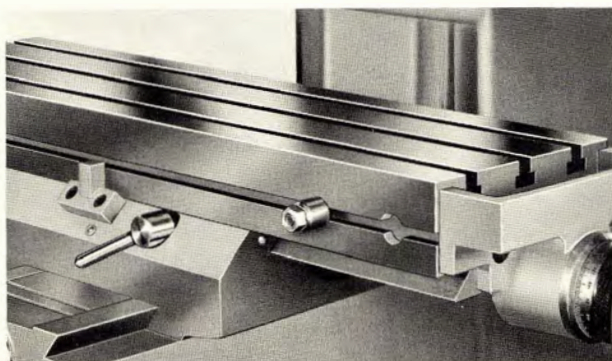


35

FOR HORIZONTAL & VERTICAL MILLING MACHINES

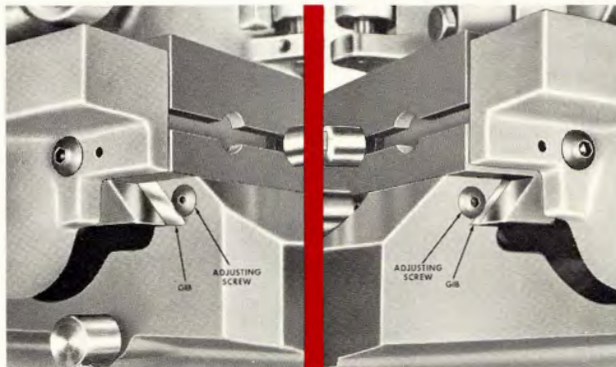
LARGE, PRECISION GROUND 3/4" DOVE-TAIL WAY CONSTRUCTION THROUGHOUT

Table, saddle and knee slide on precision ground 3/4" ways with accurately fitted, tapered gibs. Photos of tapered gib for table clearly show the dual adjustment feature using two adjusting screws, one at each end of the gib. Accurate adjustment of all gibs is possible, with absolutely no end play as found with the conventional adjustment feature using a single screw working in a slot-type, tapered gib.



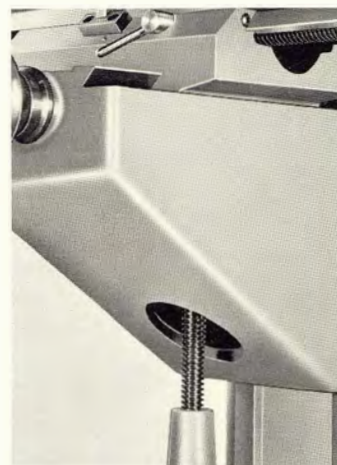
BIG TABLE, MASSIVE SADDLE, EASY-TO-READ MICROMETER COLLARS

Large 2 1/4" x 6 1/2" x 24" table has 156 square inches of working surface. Table travels on large, precision ground, 3/4" dove-tail ways, supported by a massive saddle. Handy table end trays gather chips, provide convenient storage for tools and collect coolant. The single handle lock feature and the ease of adjusting the rugged stops add convenience in operation. Micrometer collars have deep cut .001" calibrations; screw feeds table .200" for each rotation of hand wheel.



MASSIVE BOX TYPE KNEE

Enclosed, box type knee, with its internal ribbing and cross bracing, provides a solid support for the saddle and table. Knee has full length engagement with the column dove-tail slide throughout its entire vertical travel. The heavy ball bearing elevating screw operates easily, even when supporting heavy work pieces. Seven ball bearings in all support the elevating crank shaft and the two table feed screws.



AUTOMATE YOUR MILLING MACHINES WITH A ROCKWELL VARIABLE RATE

ONLY THE ROCKWELL VARIABLE RATE POWER TABLE FEED OFFERS THESE QUALITY FEATURES

- Operates on regular 115 V, 60 cycle, AC, single phase current.
- Extra wide range — .5 to 22 inch/minute (.25 to 11 inch/minute on Clausing Mill).
- Infinite choice of feeds within the range.
- Same heavy feed pressure from fastest down to slowest feed avoids stalling.
- Jog or rapid approach — 30 inch/minute (15 inch/minute on Clausing Mill).
- Has a delicate, fine feed selection from .5 to 6" (.25 to 3" on Clausing Mill), an increasingly coarse, fast feed selection from 6 to 22" (3 to 11" on Clausing Mill).
- Complete flexibility of feed — selected power feed rate can be overridden by rapid approach in either direction, instant return to previously selected feed in either direction. Hand feed immediately available for job set-ups.
- Clutch adjustable from 0 to maximum feed pressure—senses dull tools, protects motor and gears.
- Special design permits full table travel.
- Completely housed in a lightweight aluminum frame — minimum weight added to table.
- Motor protected against burnouts by built-in overload switch.
- Circuit fuse protected.
- Totally enclosed, dirt-free unit is easy to install—does not require a separate lead screw.



FOR ROCKWELL

POWER TABLE FEED

FOR ROCKWELL,
BRIDGEPORT, U. S. BURKE,
MILLRITE AND CLAUSING
MILLING MACHINES

(Factory Mounted on New Rockwell Mills
... Easily Mounted in the Field on Your
Present Rockwell Vertical or Horizontal
Mills or Bridgeport, Millrite or Clausing
Milling Machines.)

Here is the world's most versatile power table feed. Truly in a class by itself
... simple to operate, remarkably efficient.

You just dial the feed desired, then push the Rapid Approach Switch in the correct direction. On releasing the Rapid Approach Switch, the previously selected feed automatically takes over. Feed rate can be adjusted at any time with the power feed on or off. Speed selection can be extremely slow for hardened alloys to very fast for non-ferrous metals.

You can eliminate hand approach by using the Rockwell Rapid Approach Control. Lets you get to work fast, avoids delay. Yet, hand feed can be used, if desired, on any job set-up.

Here is a great way to speed up production, up-date older milling machines.

CATALOG LISTING

Rockwell Variable Rate Power Table Feed operates on standard 115 V, 60 cycle, single phase current. Includes an 8-foot grounding type cord and plug. Mounts in place of right table hand wheel, but left table hand wheel can still be used. Includes complete instructions for easy field mounting. (No. 21-838 Table Travel Limit Switch Kit recommended; see Page 37.)

No. 21-817 Variable Rate Power Table Feed
For Bridgeport Model BRM 1/2 HP Turret Miller
For Bridgeport Model BRJ 1 HP Turret Miller

No. 21-818 Variable Rate Power Table Feed
For U. S. Burke Millrite Vertical Mill

No. 21-819 Variable Rate Power Table Feed
For Clausing Vertical Mill

No. 21-820 Variable Rate Power Table Feed
For Rockwell Model 21-100 Vertical Mill
For Rockwell Model 21-120 Horizontal Mill

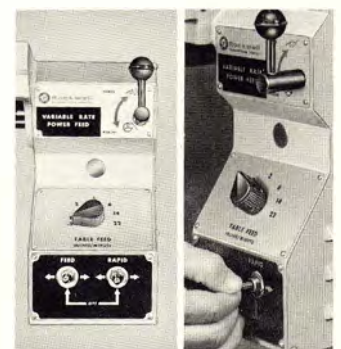
FOR BRIDGEPORT



FOR MILLRITE

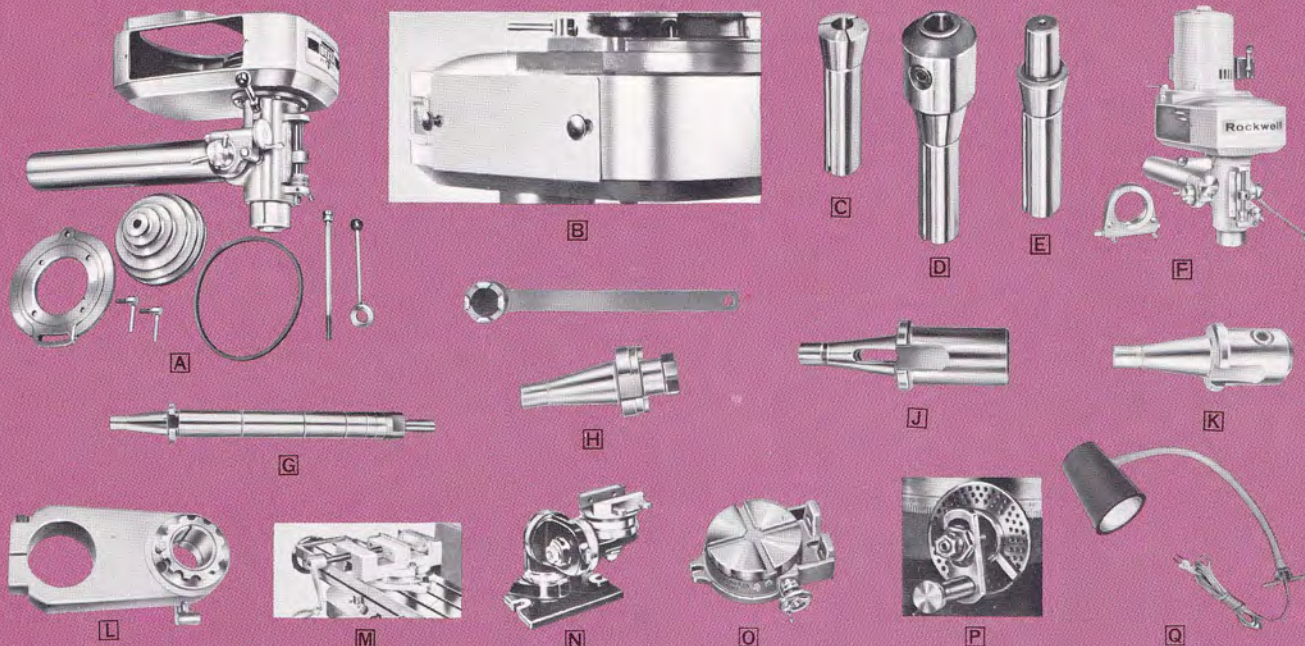


FOR CLAUSING



EXTRA WIDE POWER FEED RANGE (Top Left)—The tremendous range of .5 to 22 inch/minute (.25 to 11 inch/minute on Clausing Mill) means you get a feed ratio of 44 to 1, plus an infinite choice within the range, making it possible to machine any material.

EXCEPTIONALLY VERSATILE FEED CONTROLS (Top Right)—For power feeding at selected rate, Feed Switch is pushed in direction desired. At any time Rapid Approach can over-ride selected feed in either direction (see photo). When Rapid Approach Switch is released, selected feed resumes at previously set rate and direction.



DO MORE JOBS WITH THESE ROCKWELL MILLING MACHINE ACCESSORIES

VERTICAL MILLING MACHINE ACCESSORIES

A HEAD FOR MILLING MACHINE, complete. Includes head with ram, spindle and quill, spindle brake and lock, feed parts, belt guard, pulleys, V-belt, motor mounting plate and draw-bolt for collets. Less electricals. 128 lbs. **NO. 21-815**

B GUARDS (two) for side openings of belt guard. 2 lbs. **NO. 21-813**
COLLETS, set of six, from 1/8" to 7/16" by 16ths, style R8. 9 lbs. **NO. 21-800**

COLLETS, set of five, from 1/2" to 3/4" by 16ths, style R8. 7 lbs. **NO. 21-810**

C COLLET, one only, available from 1/8" to 3/4" by 16ths, style R8. (Specify No. 21-812 and size desired.) 2 lbs. **NO. 21-812**

3/16" END MILL HOLDER, style R8. 2 lbs. **NO. 21-803**

3/8" END MILL HOLDER, style R8. 2 1/4 lbs. **NO. 21-804**

1/2" END MILL HOLDER, style R8. 2 1/2 lbs. **NO. 21-805**

5/8" END MILL HOLDER, style R8. 2 3/4 lbs. **NO. 21-806**

***3/4" END MILL HOLDER**, style R8. 3 lbs. **NO. 21-807**

***7/8" END MILL HOLDER**, style R8. 3 1/4 lbs. **NO. 21-808**

***1" END MILL HOLDER**, style R8. 3 1/2 lbs. **NO. 21-809**

ARBOR, for drill chucks with No. 3 Jacobs female taper, style R8. 3 lbs. **NO. 21-801**

E ARBOR, for drill chucks with No. 33 Jacobs female taper, style R8. 3 lbs. **NO. 21-802**

HORIZONTAL MILLING MACHINE ACCESSORIES

DRILL CHUCK, 3-jaw type, 0 to 1/2" capacity, with No. 2 M.T. shank. Includes chuck key. 2 1/2 lbs. **NO. 968**

DRILL CHUCK, same as No. 968 except with No. 3 M.T. shank 3 lbs. **NO. 17-820**

F VERTICAL HEAD for use on Horizontal Milling Machine, complete. Includes head with ram, spindle and quill, spindle brake and lock, feed parts, belt guard, pulleys, V-belt, motor mounting plate, draw-bolt for collets, worm and gear tilting mechanism, tilt scale and instructions for field mounting. Less electricals. See Page 33 for ordering. 130 lbs. **NO. 21-816**

ARBOR, 7/8", 10" length shoulder to nut, style "A" with assorted spacers. 5 lbs. **NO. 21-821**

G ARBOR, 1", 10" length shoulder to nut, style "A" with assorted spacers. 10 lbs. **NO. 21-822**

ARBOR, 3/4", for shell end mills. 4 lbs. **NO. 21-831**

H ARBOR, 1", for shell end mills. 4 lbs. **NO. 21-832**

ARBOR, 1 1/4", for shell end mills. 7 lbs. **NO. 21-833**

I SPINDLE ADAPTER, No. 3 M.T. 2 lbs. **NO. 21-823**

SPINDLE ADAPTER, No. 2 M.T. 2 lbs. **NO. 21-824**

3/8" END MILL HOLDER. 2 lbs. **NO. 21-825**

1/2" END MILL HOLDER. 2 lbs. **NO. 21-826**

K 5/8" END MILL HOLDER. 3 lbs. **NO. 21-827**

3/4" END MILL HOLDER. 3 lbs. **NO. 21-828**

7/8" END MILL HOLDER. 5 lbs. **NO. 21-829**

1" END MILL HOLDER. 5 lbs. **NO. 21-830**

L OVERARM ARBOR SUPPORT BRACKET with bearing and draw-in nut. Fits running bushings with 1 7/8" O.D. Required for style "B" ar-

bors or may be used for extra rigidity in addition to style "A" arbor support bracket, which is supplied as standard equipment. Includes instructions for boring in line with spindle for field installation, or will be completely machined at factory when ordered with a new Horizontal Milling Machine. 3 lbs. **NO. 21-834**

SPINDLE AND WAY OIL, Velocite-E, 1/2 pint can. 2 lbs. **NO. 24-812**

HORIZONTAL AND VERTICAL MILLING MACHINE ACCESSORIES

M MACHINE VISE, "Low Boy" design, 4" maximum opening. Includes 360° swivel base, 1 1/4" x 4 1/2" steel jaws, crank type wrench and two removable 3/4" keys for table slot. 23 lbs. **NO. 21-811**

N UNIVISE. First truly universal vise for grinding, drilling and milling. Can be set at any angle desired. Vise can be returned exactly to its original setting for duplicate grinding. Each station has a 360° circular scale. 16 lbs. **NO. 24-902**

O 8" ROTARY TABLE, with base for horizontal or vertical use. Includes two removable 3/4" keys for milling machine table slots. Table top is calibrated in 1° increments, with an adjustable pointer for accurate indexing, and has two T-slots for 1/2" bolts. Micrometer collar on crank shaft is graduated to 1/20 degree (3 min.) and has a thumb screw for locking the collar or setting it to 0° at the start of the job. The horizontal, as well as the vertical base pad, has a 1/8" x 5/8" keyway and the overall height of the table in the horizontal position is only 3 3/8". Although especially recommended for use on Rockwell Milling Machines, this versatile table provides fast set-up and accurate indexing for boring, drilling, reaming, tapping, grinding and other jobs. (No. 21-836 Attachment for Positive Indexing is recommended for the No. 21-835 Table.) 35 lbs. **NO. 21-835**

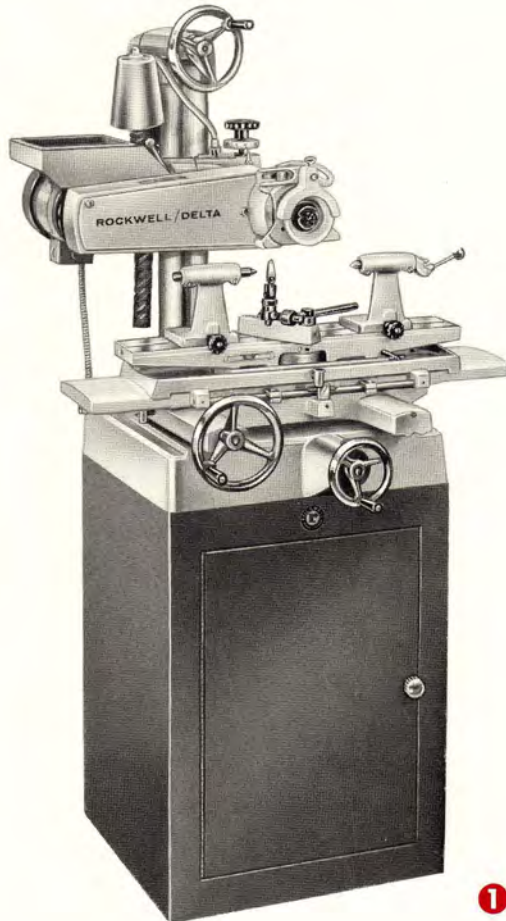
P ATTACHMENT FOR POSITIVE INDEXING, for use with No. 21-835 Table. This attachment replaces the regular table hand wheel and includes two interchangeable disks, each with three circles of equally spaced holes. One disk provides a choice of 24, 30 and 36 holes while the other has a selection of 25, 34 and 40 holes. The two pre-selector fingers are fully adjustable and the attachment adds both convenience and accuracy to the indexing of the table. 1 lb. **NO. 21-836**

COOLANT TROUGHS for table, one pair. 12 lbs. **NO. 21-837**

TABLE TRAVEL LIMIT SWITCH KIT. Automatically shuts off motor of 21-820 Table Feed (on Horizontal or Vertical Milling Machine) if machine is left unattended. Includes "Antenna" type limit switch, utility box, receptacle, 8-foot power cord with 115 V 3-prong grounding type plug, wire and instructions for field mounting. 2 lbs. **NO. 21-838**

Q DELUXE LAMP ATTACHMENT for 115V. Includes 18" flexible gooseneck, reflector and 8-foot cord with 2-prong plug. Uses standard bulb (not included) up to 75 watts. 3 lbs. **NO. 25-857**

*NOTE: For single end mills only.



1

No. 24-151 TG • 3 TOOLMAKER* Tool and Cutter Grinder shown with Accessory 25-857 Lamp Attachment and Electricals.

TOOLMAKER* GRINDERS

- 1 A Tool and Cutter Grinding Machine
- 2 A Surface Grinding Machine
- 3 A Single Point Tool Grinding Machine

Only Rockwell offers you a complete line of three individual grinding machines . . . each suited to meet your particular grinding requirements.

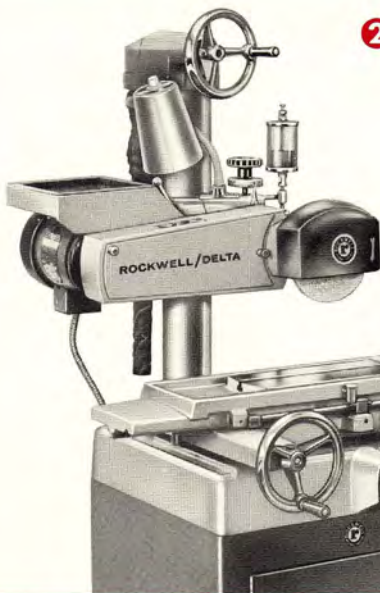
The TOOLMAKER Surface Grinder, for example, is an excellent machine for the small shop while larger, high production plants find it ideal as a secondary unit to relieve bottlenecks or to use when larger grinding equipment is tied up.

The TOOLMAKER Tool and Cutter Grinder, which consists of the TG-3 Surface Grinder and Tool and Cutter Grinding parts, efficiently sharpens all types of mills, reamers, taps, saw blades and other multiple-point cutting tools. It does this right in your plant to reduce operating costs.

The TOOLMAKER Single Point Tool Grinder, which consists of the TG-3 Surface Grinder with the Universe and "Center Mist" Coolant Attachment, capably precision grinds the chip-breaker groove in carbide-tipped and other tool bits. It will do this without delay to keep production moving.

Many machines are available which perform only one function—surface grinding, tool and cutter sharpening or the grinding of chip-breaker grooves. Only Rockwell offers you three individual machines, tailored to handle your specific grinding needs. If you prefer, you can purchase the TG-3 TOOLMAKER Surface Grinder only, plus the various accessories, and do all three types of grinding on this one machine. You can do this at less cost than on comparable single purpose machines.

Let us **PERFORMANCE-PROVE** a TG-3 TOOLMAKER Grinder for you today!



2

No. 24-150 TG • 3 TOOLMAKER* Surface Grinder shown with Accessory 25-857 Lamp Attachment, 24-823 Coolant Attachment and Electricals.



3

No. 24-152 TG • 3 TOOLMAKER* Single Point Tool Grinder shown with Accessory 25-857 Lamp Attachment and Electricals.

GRINDER/SELECTION GUIDE

*TG-3 TOOLMAKER grinders (Less Electricals)

No. 24-150 TOOLMAKER Surface Grinding Machine on cabinet, less electricals. Includes motor pulley ($\frac{5}{8}$ " bore), flat belt, guard for belt and pulleys, guard for straight wheel, wheel adapter, holder for diamond wheel dresser, $\frac{1}{2}$ pint oil for spindle bearings, wrenches and instruction manual. 800 lbs.

No. 24-151 TOOLMAKER Tool and Cutter Grinding Machine. Consists of 24-150 Basic Surface Grinder on cabinet with 24-822 Tool and Cutter Grinding components. Components are partially mounted. 882 lbs.

No. 24-152 TOOLMAKER Single Point Tool Grinding Machine. Consists of 24-150 Basic Surface Grinder on

Cabinet with 24-823 Coolant Attachment, mounted and ready to use, and 24-902 Univise. 819 lbs.

*NOTE: Shipped only with specially balanced motor and motor control which are factory mounted, wired and tested.

STANDARD EQUIPMENT

All Toolmaker grinders include storage type cabinet with shelves and door, four anti-vibration pads, motor pulley ($\frac{5}{8}$ " bore), flat belt, guard for belt and pulleys, guard for 7" straight wheel, wheel adapter, holder for diamond wheel dresser, oil for spindle bearings, wrenches, T-bolts (2) and instruction manual. No. 24-822 Tool and Cutter Grinding Attachment is included with No. 24-151 Tool and Cutter Grinding Machine. No. 24-823 Coolant Attachment and No. 24-902 Univise are included with No. 24-152 Single Point Tool Grinding Machine.

motors and controls FACTORY MOUNTED AND WIRED

(See Pages 45 and 46 for separate Motors and Controls)

MOTOR	MOTOR CONTROL	MOTOR ENCLOSURE	CYCLES & MOTOR RPM	VOLTAGE	SHIP. WT. (LBS.)	CATALOG NUMBER	CAT. NO. (575 V, 60 CY)
Single Phase $\frac{1}{2}$ Horsepower	Push Button Switch Only	Totally Enclosed	60-3450	115/230	32	49-752	
	Push Button Switch and Magnetic Starter	Totally Enclosed	60-3450	115/230	37	49-753	
Three Phase $\frac{1}{2}$ Horsepower	Push Button Switch Only	Totally Enclosed	60-3450	230/460	32	49-754	49-683
	Push Button and Overload Switches	Totally Enclosed	60-3450	230/460	37	49-755	49-684
	Push Button Switch and Magnetic Starter	Totally Enclosed	60-3450	230/460	39	49-756	49-685
	Push Button Switch and Magnetic Starter (w/115 V. Transformer)	Totally Enclosed	60-3450	230/460	41	49-757	49-686

NOTE: Single phase motors will be wired for 115V, unless 230V is specified. Three phase motors will be wired for 230V, unless 208V or 460V is specified. Power cord and plug supplied for single phase motors only.

machine data

TABLE

Ground Work Surface $5\frac{3}{4}$ " x 13"
T-Slot (One) $\frac{3}{8}$ "
Longitudinal Travel (Rack and Pinion) $13\frac{1}{2}$ "
Ways (Teflon Lined) One Flat and One V
Height from Floor 40"

CROSS SLIDE

Transverse Travel (Covered Lead Screw) 7"
Micrometer Collar Each Rev. .100";
..... Each Grad. .001"

Ways One Flat and One V

HEAD (ON 4" COLUMN WITH KEY AND GIB)

Vertical Travel (Covered Lead Screw) 15"
Down Feed (Zero-Backlash Lead Screw) $\frac{5}{8}$ "
Micrometer Collar Each Rev. .050";
..... Each Grad. .0005"

Rotation 360°

CAPACITIES

Surface Grinds 6 x 13", With 13" Under 7" Wheel
Max. Dia. Cutter Sharpens
Between *Centers With Cup Wheel 8";
..... With Dish Wheel 10"
With *Tool and Cutter Attach. and *Unihead 16"
Takes Magnetic Chuck 5 x 10" or 6 x 12"

SPINDLE

Ball Bearings Oil Bath, Preloaded, Angular Contact
Wheel Adapter (Mounts on Spindle Nose Taper)
Takes Wheels With Hole $1\frac{1}{4}$ "
Has Flanges for
Straight Wheel 7 x $\frac{1}{2}$ "
Cup Wheel 4 x $1\frac{1}{2}$ "
Dish Wheel 6 x $\frac{1}{2}$ x $\frac{3}{8}$ "
Speeds 3300, 3700, and 5600 RPM

MOTOR $\frac{1}{2}$ HP, 3450 RPM, Special Balance,
Rockwell No. 6 Frame, Totally Enclosed

OVERALL DIMENSIONS

Height 67"
Width (Table in Center Position) 34"
Front to Rear $36\frac{1}{2}$ "

CABINET BASE DIMENSIONS

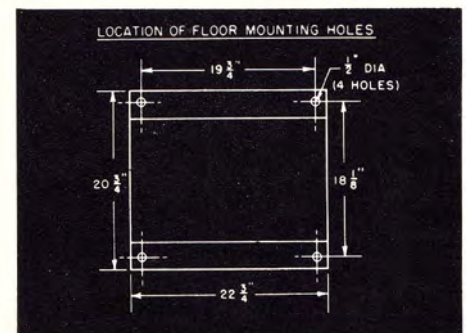
Width $22\frac{3}{4}$ "
Front to Rear $20\frac{1}{2}$ "

SHIPPING WEIGHT WITH ELECTRICALS

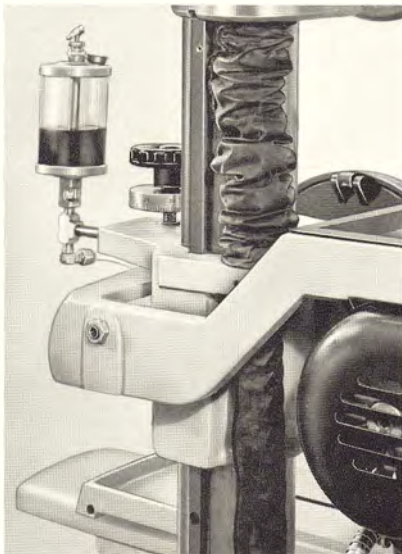
(Approx.) 800 lbs.

*Accessory Item

floor space requirements



Rockwell TG•3 quality features assure precision grinding and sharpening



Safety and Convenience Features —

Both the elevating and cross feed screws are completely enclosed by a protective sleeve to keep out harmful abrasive dust. The totally enclosed motor is mounted upside down, providing a handy tray for wrenches, indicators and work pieces. Efficient Coolant Attachment provides just the right amount of coolant to keep diamond wheels cool for chip-breaker grinding.



Quick Operating Hand Wheel; Precision Down Feed Control—Large hand wheel facilitates rapid, vertical travel of head for rough settings while Micrometer Down Feed Knob (with no back lash) permits fine settings. Extra large micrometer collar is easy to read, graduated in .0005", and has "slip" feature for zero reading.



Exclusive Three-Speed Range — Unlike other machines, Rockwell's TG•3 provides matched three-step cone pulleys with a flat belt drive to the spindle. You get these benefits: *Three* spindle speeds—3300, 3700 and 5600 RPM—the right SFPM for the different diameters of straight, dish and cup wheels. The flat belt drive assures vibration-free spindle operation.

Heavy Duty, Ball Bearing Spindle — The massive spindle, which is carefully ground and balanced, is mounted on preloaded, duplex, precision ball bearings to assure high quality grinding year after year. Sealed bearing construction protects the spindle from abrasive dust and prevents coolant from washing lubricant out of the bearing.



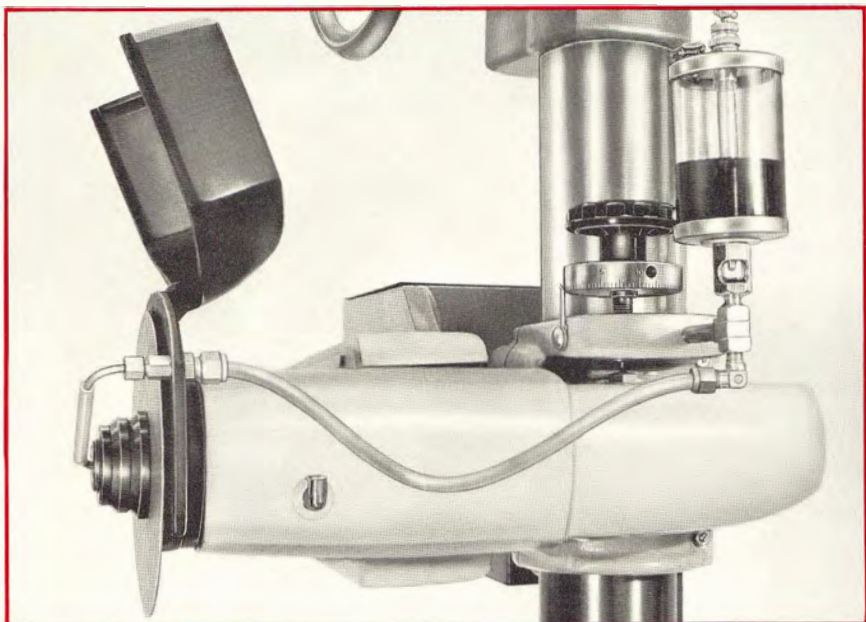
Time and Money-Saving Wheel Adapters

—Rockwell makes available interchangeable, taper mounted wheel adapters which fit snugly on the ground, tapered spindle. These adapters save time and money because once a wheel is mounted and dressed, it can be removed, then mounted without resetting or redressing — especially important where diamond wheels are used.

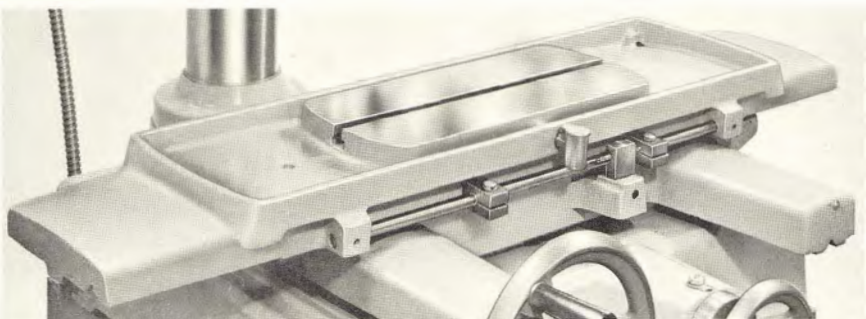


Unique Rotation of Head and Spindle—

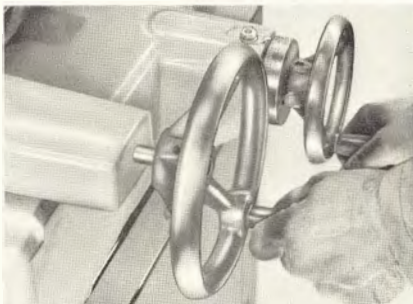
The TG•3's use of a round column, versus competitive A-frame construction, gives it a versatility and ease of set-up not available with other grinders. This is true because the column, with work head and spindle, can be rotated away from the normal "zero" position as shown by the witness marks. It is easy to provide wheel clearance for tool and cutter grinding, and the work head can even be rotated a full 360° for special jobs.



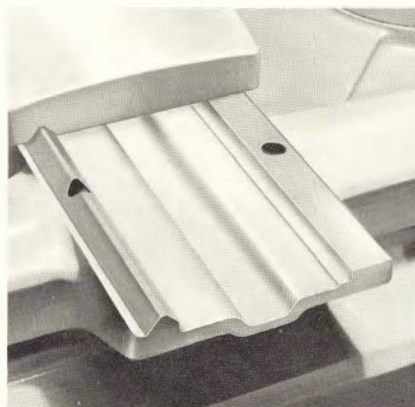
Unique "Center Mist" Coolant — Only Rockwell's TG-3 offers a "center mist" coolant attachment developed especially for chip-breaker grinding with diamond wheels. It improves surface grinding quality, too. Coolant drips from reservoir through tube and enters hollow spindle. Then, it flows out through two staggered port holes, 180° apart. Wheel flanges, recessed in the center with grooves extending to the outer rims, carry the coolant down both sides as well as through the porous wheel. The fan action of the wheel breaks the coolant down into a fine mist which cools the work exactly at the point of grinding, much better than coolants sprayed or flooded onto the general grinding area.



Many-Purpose Table — Has a $5\frac{3}{4}$ " x 13" surface, finish ground by its own spindle to within 16 microinches. Designed with T-slot to facilitate clamping of work or the mounting of work-holding fixtures. Coolant trough permits wet or dry grinding (side and end shields can easily be added for wet grinding). Adjustable, spring-loaded stops act as cushion . . . are especially suited for tool and cutter grinding.



Multi-Position Handle—You can select the most comfortable position of the handle on the table feed hand wheel, in a matter of seconds. Just pull out the handle, set it where you want it, and let it snap back into engagement. This is especially important when the operator is grinding small pieces and must continually "short stroke" the table. Large micrometer sleeve on cross feed is easy to read and has "zero" start feature.

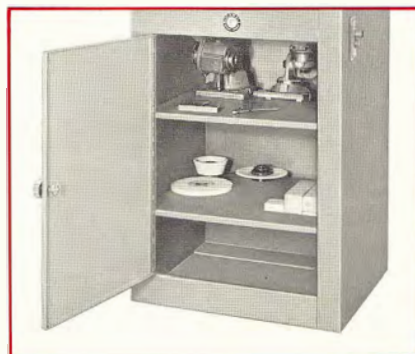


Smooth Operating Table and Cross Slide

—Table and cross slide have precision ground V and flat ways (no troublesome gibs to adjust). Ways are Teflon-lined, practically eliminating wear and providing smooth, effortless table feed.



Specially Designed Base — Massive, scientifically ribbed base provides extra rigid support for the $\frac{3}{4}$ " thick cast iron column and grinding head. Built-in leveling jacks at rear corners (not shown) guarantee proper alignment for precision grinding.



Large, Deluxe Cabinet Base—The TG-3 rests on a heavy, rigidly reinforced steel base. Vibration pads, furnished for placement under each corner, isolate the grinder, protecting it from floor vibrations caused by trucks, elevators, punch presses and similar machinery. This assures smooth grinder performance. Two large shelves provide ample storage room. Large door has a cam type, rattle-proof latch.

YOU CAN DO ALL THESE OPERATIONS WITH ROCKWELL TG-3 TOOLMAKER GRINDERS:

TOOL AND CUTTER GRINDING



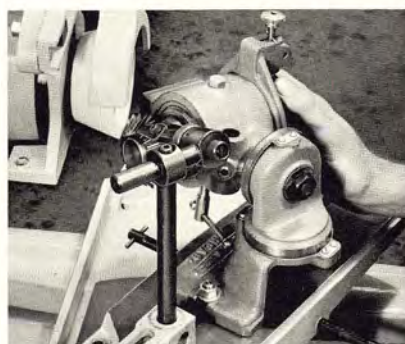
Grinding a spiral milling cutter.



Grinding a reamer.



Sharpening a 16" carbide-tipped saw blade using the 24-955 Unihead.



Grinding an angular cutter using the 24-955 Unihead.

SURFACE GRINDING



Grinding a precision surface on flat stock (magnetic chuck not sold by Rockwell).



Applying a perfectly true, smooth finish to a part (magnetic chuck not supplied by Rockwell).

SINGLE POINT TOOL GRINDING



Using a diamond wheel to grind the chip-breaker groove on a tool bit using the 24-902 Univise.



Grinding a new cutting edge on a carbide-tipped tool bit using the 24-902 Univise.

Practically every conceivable grinding or sharpening operation can be accomplished with Rockwell TG-3 TOOLMAKER Grinders. Why? Because Rockwell offers you a selection of three individual machines, designed specifically for tool and cutter grinding, surface grinding or chip-breaker grinding. These machines come equipped with specially designed and patented work holding devices—Tool and Cutter Grinding Attachment, Unihead and Univise—that are unmatched in flexibility and versatility. You can set them at any angle or position to handle practically any grinding or sharpening job. And there are dozens of other cost-saving accessories, too.

Add up all of these benefits and you will agree that Rockwell TG-3 TOOLMAKER Grinders deserve a place in your operation.

MOTOR AND BELT REPLACEMENT PARTS

No. 24-800 consists of $\frac{1}{2}$ HP, 115/230 V, single phase motor; motor pulley and 49-085 Belt, balanced together for field installation. 32 lbs.

No. 24-803 consists of $\frac{1}{2}$ HP, 230/460 V, three phase motor; motor pulley and 49-085 Belt, balanced together for field installation. 32 lbs.

No. 24-802. Same as 24-803 except 575 V. 32 lbs.

No. 49-085 Flat Belt, $\frac{3}{4}$ " wide, 35" OC. 2 lbs.

ROCKWELL QUALITY ACCESSORIES THAT MAKE TG-3 TOOLMAKER GRINDERS UNMATCHED IN VERSATILITY

No. 24-807 Wheel, 7 x $\frac{1}{2}$ ", aluminum oxide, $1\frac{1}{4}$ " hole, for soft material, balanced to within $\frac{1}{8}$ -ounce inch. 2 lbs.

No. 24-808 Wheel, 7 x $\frac{1}{2}$ ", aluminum oxide, $1\frac{1}{4}$ " hole, for hard material, balanced to within $\frac{1}{8}$ -ounce inch. 2 lbs.

No. 24-973 Standard Dish Wheel, Type 12, 6 x $\frac{1}{2}$ x $\frac{5}{16}$ ", aluminum oxide, $1\frac{1}{4}$ " hole. 5 lbs.

No. 24-974 Standard Cup Wheel, Type 11, 4 x $1\frac{1}{2}$ ", aluminum oxide, $1\frac{1}{4}$ " hole. 5 lbs.

No. 24-820 Adapter for wheels with $1\frac{1}{4}$ " hole. Has $2\frac{1}{2}$ " flange for straight wheels, 4 x $1\frac{1}{2}$ " type 11 cup wheels and 6 x $\frac{1}{2}$ x $\frac{5}{16}$ " type 12 dish wheels, plus a $2\frac{3}{4}$ " flange for $3\frac{1}{2}$ x $1\frac{1}{2}$ " cup wheels. Same as adapter supplied with 24-150 Surface Grinder, except has holes and slots needed for use with 24-823 Coolant Attachment. Order extra adapters for each kind of wheel to be used to obviate centering or dressing wheel each time it is mounted on spindle. 2 lbs.

No. 24-805 Diamond-pointed Wheel Dresser, with $\frac{1}{16}$ x 2" body. $\frac{1}{2}$ lb.



No. 25-857 Lamp Attachment for 115 V. Includes 18" flexible gooseneck, reflector and 8-foot cord with 2-prong plug. Uses standard bulb (not included) up to 75 watts. 3 lbs.

No. 24-812 Spindle and Way Oil, Velocite-E. $\frac{1}{2}$ pt. can.

No. 24-819 Attachment Package for Dust Collector. 19 lbs.

THE UNIHEAD® WITH INDEXING FEATURE IS UNIVERSALLY ADJUSTABLE WORK HEAD

The Unihead is a universally adjustable work head designed for use with the Toolmaker Cutter Grinder and other makes of machines, especially if the No. 24-970 Tooth Stop Unit is used with it.

Unit consists of a heat treated sleeve arranged with a No. 9 Brown & Sharpe taper accurately mounted in lubricated-for-life ball bearings. The adjustable index stop collar and dog can be disengaged or set in any position that is convenient to the operator. It is equipped with a 12-tooth index collar with selector plate which permits the dog to engage automatically either 2, 3, 4, 6 or 12 selected equal spaces. Other plain collars (without selector plate) are available as listed.

Has a push-out nut arranged at the back of the sleeve for pushing out tightly fitted adapters. Swivel bracket with 360 graduations. Base with removable keys that engage the table. Can also be used with Tool and Cutter Grinding Attachment 24-822.

NO. 24-955



No. 24-955 Unihead arranged with sealed-for-life ball bearings and sleeve for No. 9 B & S taper. With one 12-tooth collar with selector plate to engage 2, 3, 4, 6 or 12 selected equal spaces. 23 lbs.

No. 24-970 tooth stop unit not furnished. Indexing collars listed below cover a varied range of combination spacing and should be ordered separately as required.

INDEXING COLLARS

No. 24-957 Plain, 36-tooth, for 2, 3, 4, 6, 9, 12, 18 and 36 equal spaces. $\frac{3}{4}$ lb.

No. 24-958 Plain, 34-tooth, for 17 and 34 equal spaces. $\frac{3}{4}$ lb.

No. 24-959 Plain, 33-tooth, for 3, 11 and 33 equal spaces. $\frac{3}{4}$ lb.

No. 24-960 Plain, 32-tooth, for 2, 4, 8, 16 and 32 equal spaces. $\frac{3}{4}$ lb.

No. 24-961 Plain, 30-tooth, for 3, 5, 6, 10, 15 and 30 equal spaces. $\frac{3}{4}$ lb.

No. 24-962 Plain, 28-tooth, for 4, 7, 14 and 28 equal spaces. $\frac{3}{4}$ lb.

No. 24-963 Plain, 26-tooth, for 13 and 26 equal spaces. $\frac{3}{4}$ lb.

No. 24-964 Plain, 24-tooth, for 2, 3, 4, 6, 8, 12 and 24 equal spaces. $\frac{3}{4}$ lb.

No. 24-965 Collar, blank. $\frac{3}{4}$ lb.

ADAPTERS

No. 24-967 Adapter for Unihead with No. 9 B & S outside taper arranged with 1"—8 R.H. threaded end to receive 6" Face Plate (No. 937). $1\frac{1}{4}$ lbs.

No. 24-968 Adapter for Unihead with No. 9 B & S outside taper arranged with No. 33 Jacobs taper to receive drill chucks. $1\frac{1}{4}$ lbs.

TOOTH STOP UNIT

The Unihead uses the same tooth stop unit regularly furnished with the Tool and Cutter Grinder Attachment (No. 24-822). If the Unihead is to be used on another make of machine, it may be advisable to obtain the No. 24-970 Tooth Stop Unit.



NO. 24-970

No. 24-970 Tooth Stop Unit consisting of 1 bracket, 2 bars, 1 clamp and tooth stop with 2 fingers (included with No. 24-822 Grinder Attachment). 5 lbs.

THE UNIVISE® FIRST TRULY UNIVERSAL VISE FOR GRINDING, DRILLING AND MILLING

NO. 24-902

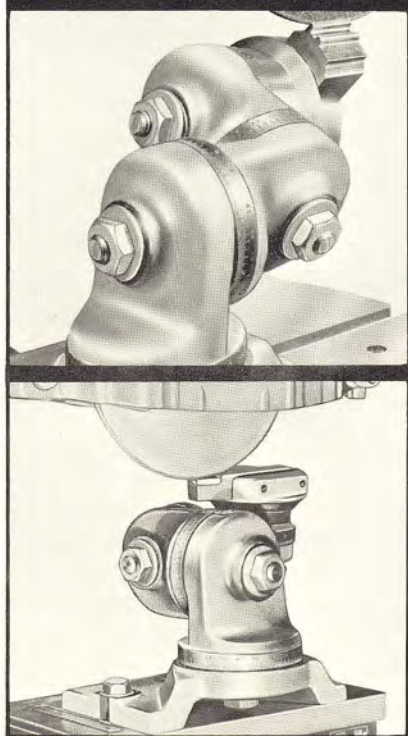
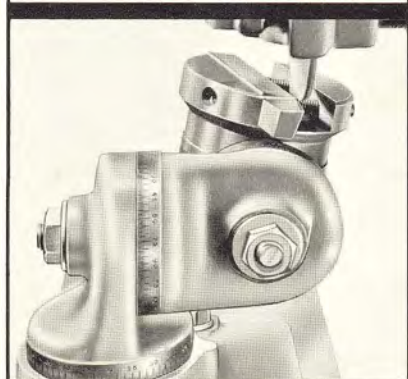
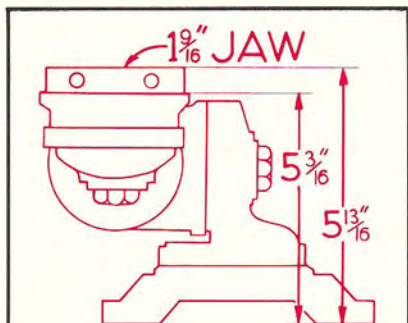


The Univise is a heavy, rigid, massive vise completely universal so that it can be set at ANY angle desired. It is composed of four separate parts, each of which can be rotated and independently set so that there are four separate distinct planes of adjustment. This means that ANY angle desired can be easily and readily obtained. It means, also, that for duplicate grinding the vise can be returned EXACTLY

ROCKWELL TG-3 TOOLMAKER GRINDER ACCESSORIES

to its original setting. Each part has a circular scale of 360 degrees. Each station is marked so that by making a record of the setting of each scale it is impossible to make an error. Thus, settings can be made direct from the blueprint without fuss or bother. Two of the parts rotate a full 360 degrees. It is $5\frac{3}{16}$ " high, 6" wide and $7\frac{1}{4}$ " long. Jaws take up to $1\frac{1}{2}$ " tools. Fits any surface or tool grinder. Has detachable keys in base which can be removed to permit use on a drill press or other machine without table slots, or on a magnetic chuck.

No. 24-902 Univise, complete. 16 lbs.



"CENTER MIST" COOLANT ATTACHMENT

With instructions for field mounting on any TG-3 Grinder. Supplied as standard equipment on 24-152 TOOLMAKER Single Point Tool Grinder.

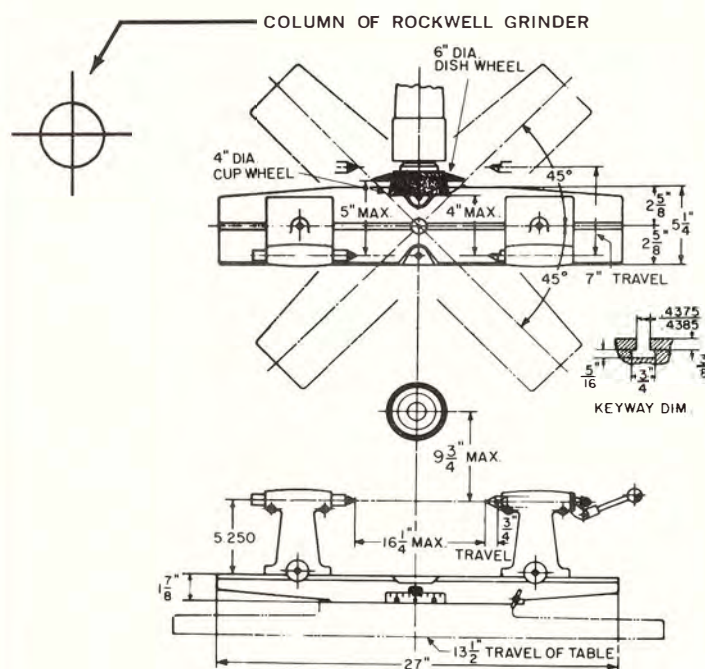
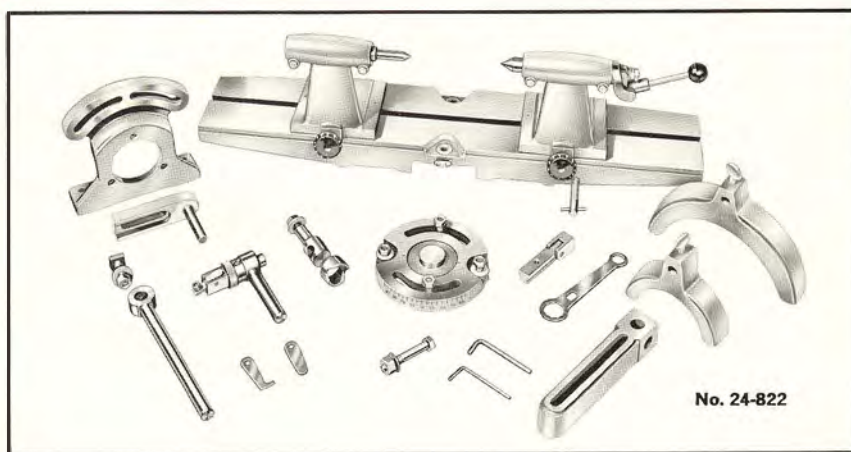


No. 24-823 Coolant Attachment complete with sight gravity feed oiler, coolant line, fittings, 24-820 Wheel Adapter with holes and slots for coolant, and instructions. 5 lbs.

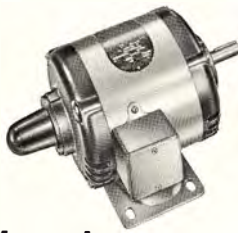
GRINDER ATTACHMENT CONVERTS STANDARD SURFACE GRINDER TO A TOOL AND CUTTER GRINDER

The Tool and Cutter Grinding Attachment is designed and engineered to permit conversion of the basic Toolmaker Surface Grinder for tool and cutter grinding work. This complete attachment, when added to the basic Toolmaker Surface Grinder, provides the workholding features for sharpening many types of small tools and cutters.

No. 24-822 Toolmaker Tool and Cutter Grinding Attachment consisting of swivel table with head and tail stocks and No. 24-970 tooth stop unit, 2 wheel guards and support bracket. Standard on 24-151 Grinder. Can be added to 24-150 and 24-152 Toolmaker Grinders. 82 lbs.



MOTORS



**designed
specifically for
Rockwell
machine tools**

**provide maximum
efficiency
in operation**

Here's Why Rockwell Motors Give Long Life and Dependable, Trouble-Free Service

- All ball bearings are sealed and lubricated for life. Bearing designs permit Rockwell Motors to be mounted either vertically or horizontally.
- Motor enclosures are designed to offer the maximum safety possible under all operating conditions.
- All Rockwell Motors comply with or exceed the maximum motor manufacturing power standards (breakdown torque) as established by the National Electrical Manufacturers Association (NEMA).
- All double-shaft motors are supplied with one shaft guard for maximum safety to the operator.
- Motor windings have high grade insulation and are carefully wound and tested.
- Accurately balanced rotors insure smoothness of operation and prevent destructive vibration.
- Well designed ventilating systems assure cool operating motors, thus providing adequate overload capacity and longer motor life.

45

SPECIFICATIONS FOR ROCKWELL SINGLE-PHASE CAPACITOR START MOTORS

(115V cord and plug set supplied with motor is grounding type with 3-prong plug.)

Number	H.P.	R.P.M.	Volts	Cycles	Shaft	Frame Size	Switch	Cord & Plug	Enclosure	Duty	Usage	Wt.
†24-800	1/2	3450	115/230	60	5/8" Single	No. 6	None	No	TEFC	Heavy	TG-3 Gdr.	32
62-510	1/2	1725	115/230	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	28
62-530	1/2	1140	115/230	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	45
62-550	3/4	1725	115/230	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	38
62-710	3/4	1725	115/230	60	5/8" Single	No. 6	None	Yes	GD	Heavy	10" Metal Lathe	38
62-770	3/4	1725	115/230	60	5/8" Single	No. 6	None	Yes	TEFC	Heavy	10" Metal Lathe	40
83-210	1	1725	115/230	60	3/4" Single	No. 8 1/2	None	No	GD	Heavy	11" Metal Lathe	62
83-510	1	1725	115/230	60	3/4" Single	No. 8 1/2	DPST	Yes	GD	Heavy	Hor. Mill	59
83-610	1 1/2	1725	115/230	60	3/4" Single	No. 8 1/2	None	No	GD	Heavy	Hor. Mill	80
93-610	2	1725	115/230	60	3/4" Single	No. 8 1/2	None	No	GD	Heavy	14" Metal Lathe	78

SPECIFICATIONS FOR ROCKWELL 3-PHASE MOTORS

Number	H.P.	R.P.M.	Volts	Cycles	Shaft	Frame Size	Switch	Cord & Plug	Enclosure	Duty	Usage	Wt.	Cat. No. 208V Version	Cat. No. 575V Version
66-519	1/2	1725	230/460	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	25	66-512	66-520
66-539	1/2	1140	230/460	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	32	66-531	66-540
66-559	3/4	1725	230/460	60	5/8" Single	NEMA 56C Spl	None	No	GD	Heavy	Vert. Mill	32	66-553	66-560
66-719	3/4	1725	230/460	60	5/8" Single	No. 6	None	No	GD	Heavy	10" Metal Lathe	32	66-712	66-730
66-779	3/4	1725	230/460	60	5/8" Single	No. 6	None	No	TENV	Heavy	10" Metal Lathe	34	66-771	66-772
86-909	1	1725	230/460	60	3/4" Double	No. 8 1/2	None	No	GD	Heavy	11" ML, H. Mill	44	86-935	86-930
86-999	1	1725	230/460	60	3/4" Double	No. 8 1/2	None	No	TENV	Heavy	11" ML, H. Mill	47	86-991	86-980
87-149	1 1/2	1725	230/460	60	3/4" Double	No. 8 1/2	None	No	GD	Heavy	11" ML, H. Mill	50	87-135	87-130
87-179	1 1/2	1725	230/460	60	3/4" Double	No. 8 1/2	None	No	TENV	Heavy	11" ML, H. Mill	90	87-173	87-128
96-329	2	1725	230/460	60	3/4" Single	No. 8 1/2	None	No	GD	Heavy	14" Metal Lathe	62	96-321	96-330
96-349	2	1725	230/460	60	7/8" Single	NEMA 184	None	No	TEFC	Heavy	14" Metal Lathe	74	96-343	96-344
96-629	3	1725	230/460	60	1 1/8" Single	NEMA 213	None	No	GD	Heavy	14" Metal Lathe	74	96-634	96-630
96-649	3	1725	230/460	60	1 1/8" Single	NEMA 213	None	No	TEFC	Heavy	14" Metal Lathe	104	96-645	96-643

Write for information on available motors not listed. Such motors, when ordered special, are not subject to cancellation.
†Consists of motor, motor pulley and belt, balanced together for field installation.

TENV—Totally enclosed, non-ventilated.
TEFC—Totally enclosed, fan cooled.
GD—Guarded drip-proof

INFORMATION ON 50 CYCLE MOTORS SUPPLIED ON REQUEST.

DIMENSIONAL DATA

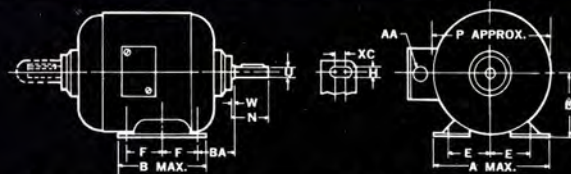
ON ROCKWELL MOTORS

*All motors listed are supplied with external junction boxes.

*†Supplied with 3/8 x 3/8 x 1 1/4" key.

†Supplied with 3/8 x 3/8 x 1 3/8" key.

‡Supplied with 1/4 x 1/4 x 2" key.



Motor Frame	A Max	AA*	B Max	BA	D	E	F	H	N-W	P	U	XC
Delta No. 6	6 1/4	1/2	4 1/4	2	3 1/4	2 1/2	1 1/4	3/8	1 1/8	6	3/8**	1 1/2
Delta No. 8 1/2	8 1/2	1/2	5	3 1/2	4 1/2	3 1/4	1 3/8	3/8	2 1/4	8 1/2	3/4†	3/8
NEMA 56 C Spl.	—	1/2	—	—	—	—	—	—	3 3/8	6 1/2	3/8**	—
NEMA 184	9	3/4	7 1/2	2 3/4	4 1/2	3 3/4	2 3/4	1 1/2	2 1/4	8 1/2	7/8†	—
NEMA 213	10 1/2	3/4	7 1/2	3 1/2	5 1/4	4 1/4	2 3/4	1 1/2	3	10 3/8	1 1/8†	—



No. 49-670



No. 25-806



No. 49-799



No. 49-420



No. 49-673



No. 49-665

SWITCHES

Cat. No.	Product Usage	Description	Max. HP Rating				Wt., Lbs.
			Single Phase		Three Phase		
			115V	230V	208-230V	460-575V	
49-670	TG • 3 Gdr.	Push Button Switch, 2 Pole, Manual Control	1	1½	—	—	2½
49-671	TG • 3 Gdr.	Push Button Switch, 3 Pole, Manual Control	—	—	2	2	3
49-672	TG • 3 Gdr.	Push Button Switch, Magnetic Control	—	—	—	—	2
25-505	11" M. L.	Push Button Reversing Switch, Manual Control	1	1	2	2	10
25-806	Mills & 10" M.L.	Drum Reversing Switch, Manual Control	1	1	—	—	3
49-412	10" M. L.	Drum Reversing Switch, Manual Control	1	1	—	—	2
49-799	Mills & 10" M.L.	Drum Reversing Switch, Manual Control	1½	2	2	1½	5
49-901	10", 11" & 14" M. L.	Drum Reversing Switch, Manual Control	1½	2	2	1½	5
49-420	10", 11", 14" M.L.	Drum Reversing Switch, Manual & Magnetic Control	1	2	2	3	5
49-432	14" M. L.	Drum Reversing Switch, Manual & Magnetic Control	1	2	3	3	5
49-673	Mills & 10" M.L.	Drum Reversing Switch, Manual & Magnetic Control	1	2	2	3	3

†OVERLOAD SWITCH

49-669	All	Overload Switch, 2-Pole	1	2	5	5	3
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*MAGNETIC STARTER, SINGLE PHASE ACROSS-THE-LINE TYPE

49-664	All	Magnetic Starter, Size O, NEMA Type 1, 115/230V, 50/60 Cy Operating Coil and Reset Button Only	1	2	—	—	13
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*MAGNETIC STARTERS, THREE PHASE ACROSS-THE-LINE TYPE

49-665	10" & 11" M. L. V & H Mills, TG • 3 Gdr.	Magnetic Starter, Size OO, NEMA Type 1, 208-230/460 V, 50/60 Cy Operating Coil and Reset Button Only	—	—	1½	2	11½
49-666	14" M. L.	Magnetic Starter, Size O, NEMA Type 1, 208-230/460 V, 50/60 Cy Operating Coil and Reset Button Only	—	—	3	5	14
49-698	TG • 3 Gdr.	Magnetic Starter, Size OO, NEMA Type 1, 575 V, 60 Cy Operating Coil and Reset Button Only	—	—	—	2	7

*MAGNETIC STARTERS, THREE PHASE 115 VOLT

(Control Transformer 49-516 or 49-517 is Required for Starters Listed Below)

49-667	14" M. L.	Reversing Magnetic Starter, Size O, NEMA Type 1, 115V, 50/60 Cy Operating Coil and Reset Button Only	—	—	3	5	27
49-668	10" & 11" M. L., V & H Mills	Reversing Magnetic Starter, Size OO, NEMA Type 1, 115V, 50/60 Cy Operating Coil and Reset Button Only	—	—	1½	2	23
49-674	TG • 3 Gdr.	Magnetic Starter, Size OO, NEMA Type 1, 115V, 50/60 Cy Operating Coil and Reset Button Only	—	—	1½	2	12

TRANSFORMERS 115 VOLT, MAGNETIC CONTROL

49-517	All	50 VA, 60 Cy Transformer, 575 V Primary	—	—	—	—	2
49-519	All	50 VA, 60 Cy Transformer, 230 and 460V Primary	—	—	—	—	2
49-528	All	50 VA, 60 Cy Transformer, 208V Primary	—	—	—	—	2

POWER CORDS WITH PLUGS

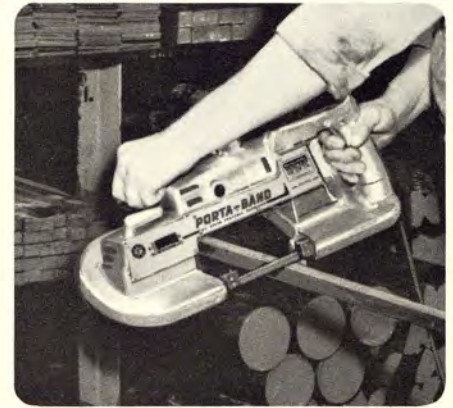
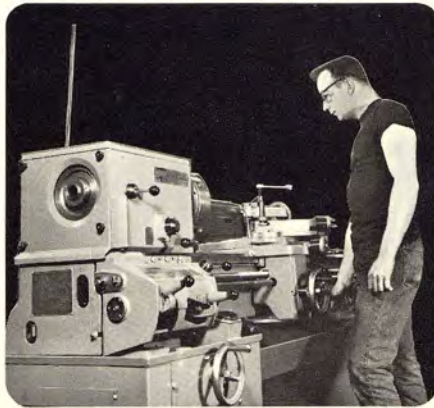
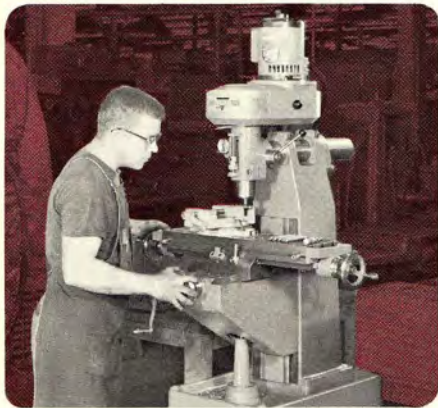
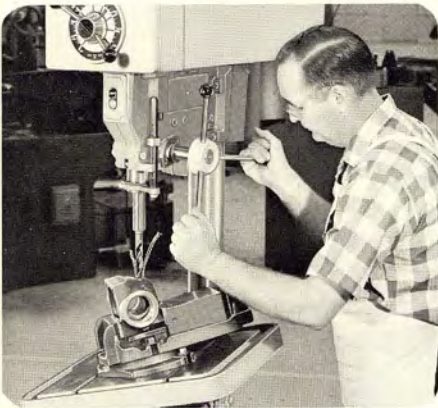
49-357	V. Mill, 10" M. L. TG • 3 Gdr.	Cord, 8-foot Long, #16-3 Conductor, Type S-J, with 3-Prong 115V Grounding Plug	¾	—	—	—	3
49-417	V. Mill, 10" M. L. TG • 3 Gdr.	Cord, 8-foot Long, #16-3 Conductor, Type S-J, with 3-Prong 230V Grounding Plug	—	¾	—	—	2
49-513	11" M. L., H. Mill	Cord, 8-foot Long, #14-3 Conductor, Type S, with 3-Prong 115V Grounding Plug	1	—	—	—	3
49-514	11" & 14" M. L., H. Mill	Cord, 8-foot Long, #14-3 Conductor, Type S, with 3-Prong 230V Grounding Plug	—	2	—	—	3

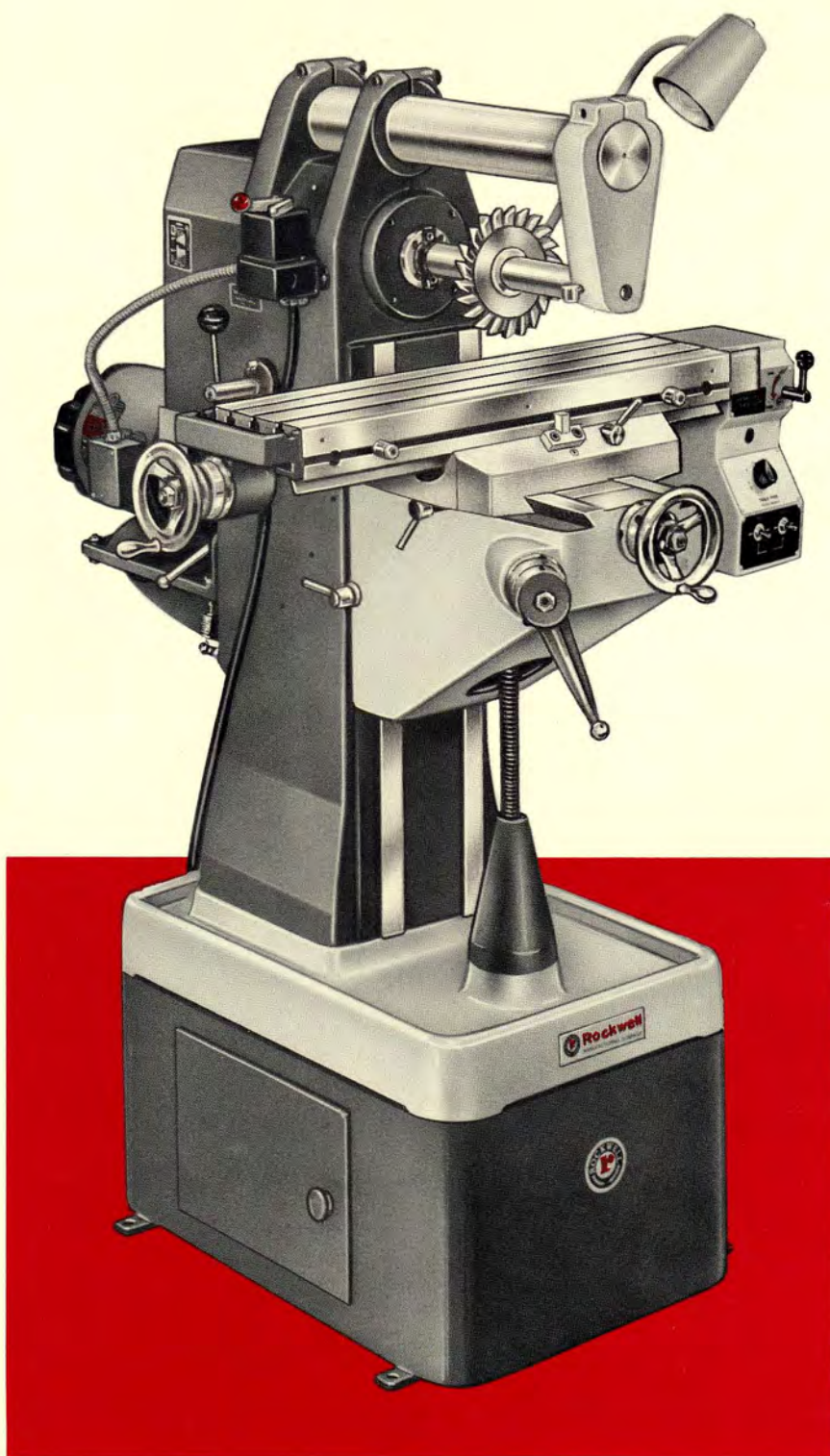
†Specify motor number and operating voltage when ordering.

*Starter provides motor with overload, low-voltage and no-voltage protection. Specify motor number and line voltage when ordering.

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