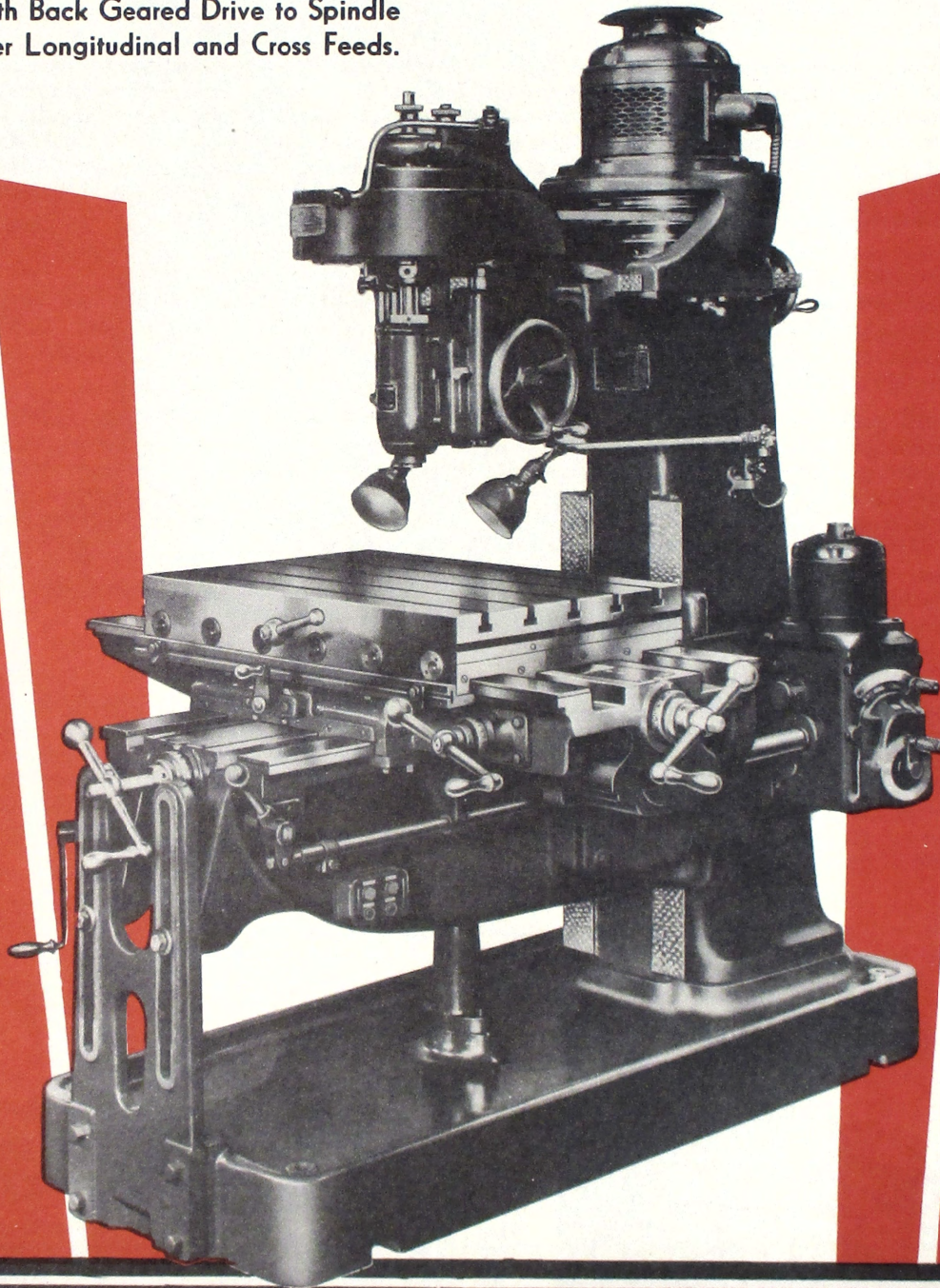


REED-PRENTICE

No. 3VGS VERTICAL MILLER

**For Rubber Molds,
Plastic Molds, Die
Casting Dies, Forge
Dies, Jigs, Fixtures, etc.**

**Shown with Back Geared Drive to Spindle
and Power Longitudinal and Cross Feeds.**



REED-PRENTICE CORP.
WORCESTER, MASS. U.S.A.

No. 3VGS REED-PRENTICE VERTICAL MILLER

While this machine was designed especially for rubber molds it has also been found very satisfactory for plastic molds, die casting dies, forge dies, jigs, fixtures, etc. Hand longitudinal and cross feeds are standard but power longitudinal and cross feeds can be furnished as an extra. Longitudinal and cross feed screws are guarded against chips and provided with adjustable nuts. Table and saddle are mounted on roller bearings carried in eccentric holders providing accurate adjustment and operating on hardened steel ways of knee and saddle. Lubrication of rollers is by "Alemite" system.

DRIVE:

Spindle is driven through endless moulded V-belt and back gears (shown in closeup view below). Spindle and motor pulleys are four step, providing by direct drive and crossing belt to adjacent steps of motor and spindle pulleys, ten spindle speeds with constant speed motors; twenty spindle speeds with 900/1800 RPM two speed motor; and five or six additional slower speeds with back gear drive to spindle (see table below). We recommend two speed motor as it doubles the speed range. Pulleys are balanced for high speed and are of heat treated aluminum alloy combining lightness and strength and reducing inertia when starting or stopping.

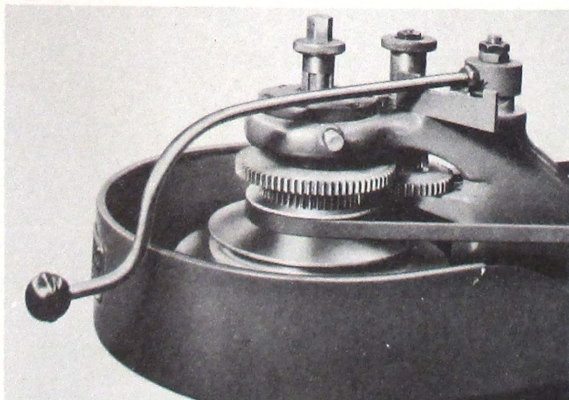
SPINDLE AND HEAD:

Brake operating on large step of spindle pulley provides quick stop of spindle. For locking of spindle when changing collets and cutters a square nut on spindle with drift is provided. Table ends are slotted for clamping of extra long work. Underside of throat of column is cut out for lamp in addition to bracket lamps shown.

Spindle pulley and back gears are guarded and motor is carried in bracket fitted to dovetail of column and adjustable for proper belt tension by screw and hand wheel. Binder handle securely locks motor bracket in proper position. Spindle pulley is provided with double auxiliary support carrying ball bearings and eliminating belt pull on spindle. Spindle is carried in ball bearings with precision Duplex combination ball bearing taking thrust and radial loads. Lubrication is by grease cups at ball bearings. Micrometer stop is furnished for feeding head accurately to depth. Cross, vertical and longitudinal feed screws are provided with micrometer dials graduated in thousandths. Wipers are provided for table and knee slides. Longitudinal and cross feed screws are carried in TIMKEN bearings taking thrust and radial loads. Binder handles are supplied for saddle and table.

POWER CROSS AND LONGITUDINAL FEEDS (At Extra Charge):

Power cross and longitudinal feeds are now available. New design feed box with individual built-in motor drive is of the direct reading dial type. Eighteen (18) different feeds are obtained in numerical order, from $\frac{1}{2}$ " to $20\frac{1}{2}$ " per minute with 1800 RPM drive motor; from $\frac{3}{8}$ " to $17\frac{1}{8}$ " per minute with 1500 RPM motor. Each change is obtained by one complete revolution of the hand lever. Built-in motor is wired so that any stoppage of the spindle drive motor will also stop feed motor. Outstanding features of construction include — heat treated gears, multiple splined shafts, anti-friction bearings all running in bath of oil.



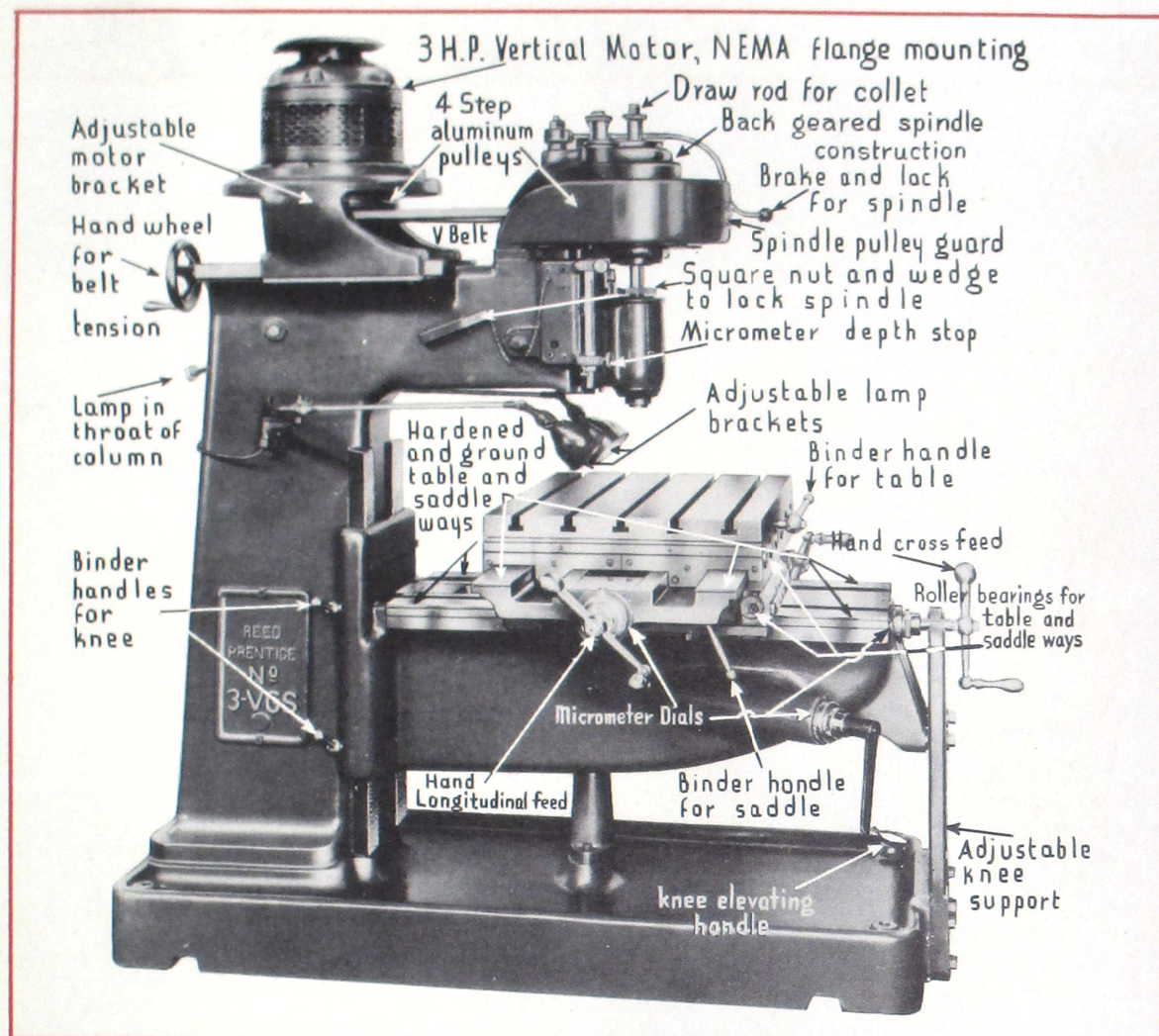
Back Geared Spindle Construction (guard removed)

SPINDLE SPEEDS With or without Back Gears

MOTORS								
900 RPM		1200 RPM		1800 RPM		900/1800 RPM		
OB	BG	OB	BG	OB	BG	OB	OB	BG
300	100	400	135	605	*	300	1120	100
380	130	505	170	770		380	1275	130
430	145	575	190	875		430	1465	145
550	185	730	245	1100		550	1625	185
730	245	960	320	1465		605	1630	245
800	270	1070		1630		730	1950	270
1120		1420		2150		770	2150	
1275		1700		2600		800	2600	
1625		2170		3300		875	3300	
1950		2600		4000		1100	4000	

OB — Open belt

BG — Back geared



No. 3VGS Back Geared Ball Bearing Vertical Miller

SPECIFICATIONS:

Longitudinal Feed (hand or power).....	27"
Cross Feed (hand or power).....	20"
Vertical Feed of Knee (hand).....	16"
18 Power Cross or Longitudinal Feeds (at extra charge)	
With 1800 RPM motor, range, inches per minute.....	1/2"-20 1/2"
With 1500 RPM motor, range, inches per minute.....	3/8"-17 1/8"
16 Spindle Speeds (900 RPM Motor with Back Gears).....	100-1950 RPM
15 Spindle Speeds (1200 RPM Motor with Back Gears).....	135-2600 RPM
10 Spindle Speeds (1800 RPM Motor without Back Gears).....	605-4000 RPM*
26 Spindle Speeds (900/1800 RPM Motor with Back Gears).....	100-4000 RPM
Table, length by width by thickness.....	32"x22"x4"
Vertical adjustment head on column.....	5"
Throat depth.....	22"
Maximum distance, spindle to table.....	16 1/2"
Shipping weight with Motor and Control.....	4795 lbs.

*Back gears not furnished with 1800 RPM Motor.

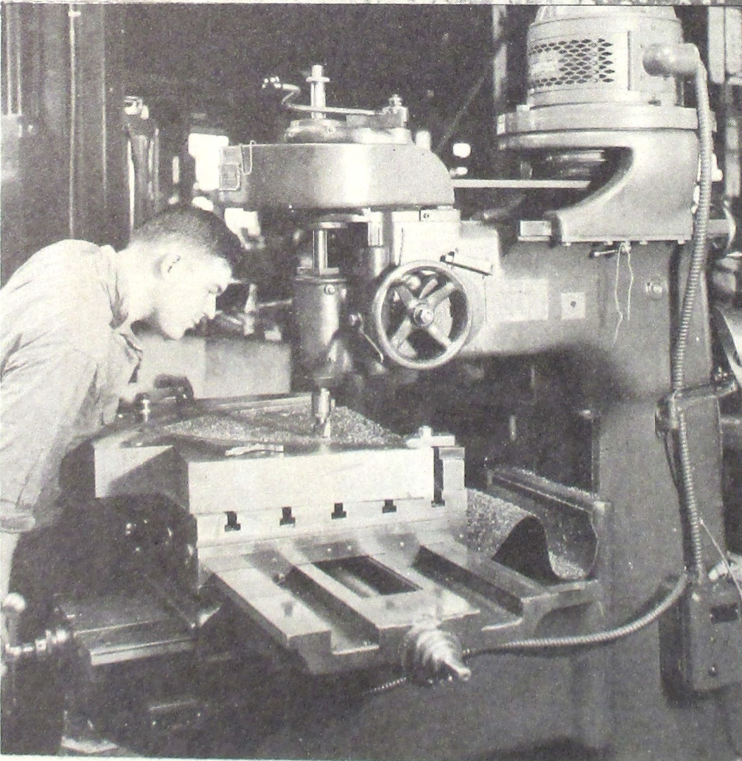
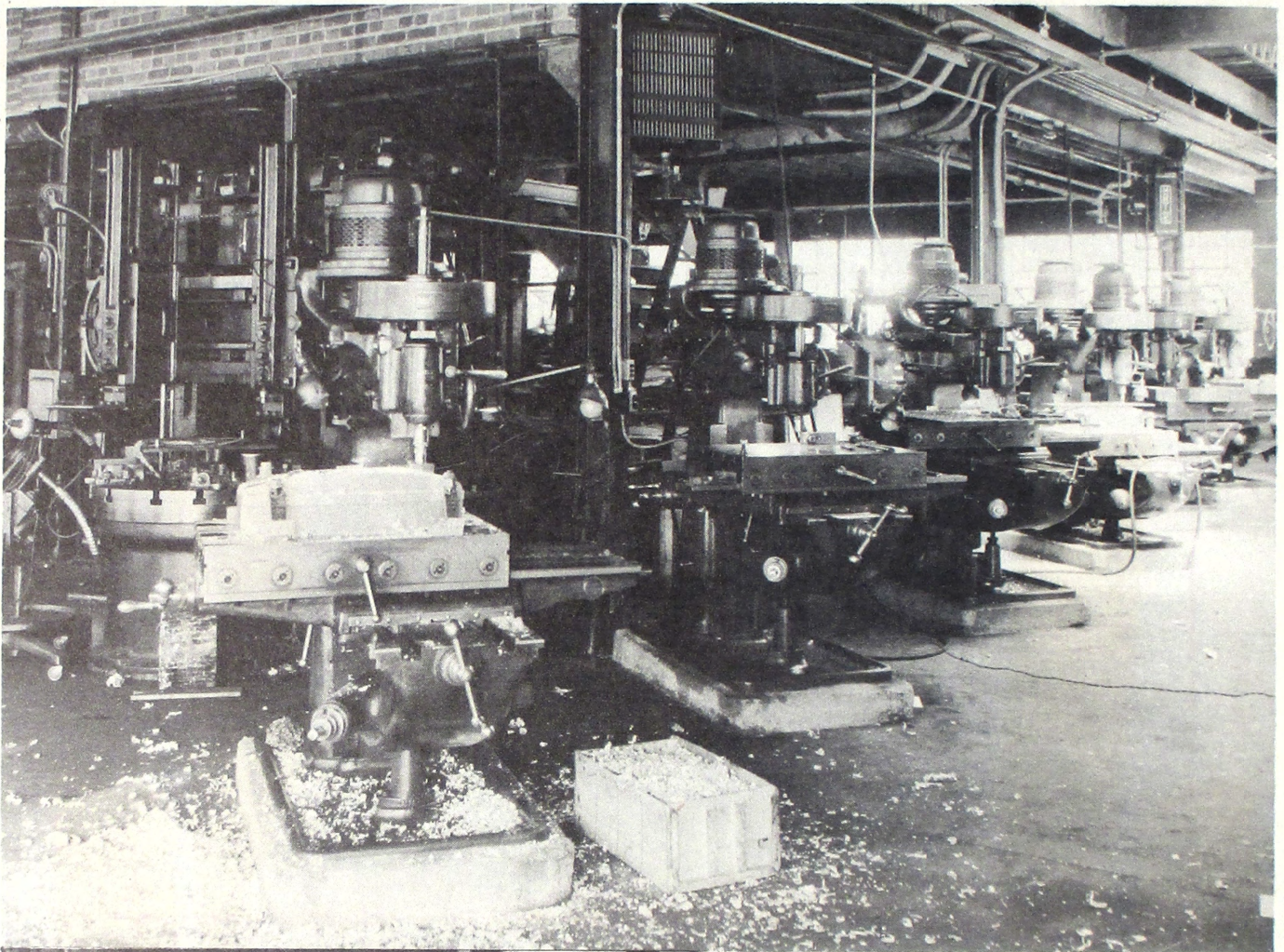
STANDARD EQUIPMENT:

Arranged for vertical motor drive (motor 3 H. P. 1200 RPM, 900 RPM, 1800 RPM or 900/1800 RPM) two adjustable lamp brackets and one fixed lamp set in throat of column, micrometer depth stop, spindle brake and lock, drawbar, No. 3V collet adapter, one No. 3V spring collet (size optional—available sizes 1/8" - 3/4" x 16ths) crank handles and wrenches. (If desired Collet Chuck No. 10 B&S taper shank threaded for drawbar with one collet, size optional, and two wrenches may be substituted for collet adapter and spring collet.)

EXTRA EQUIPMENT:

Electrical equipment, motor driven oil pump and piping, power cross and longitudinal feeds, rotary table with power and hand feed, indexing attachment for rotary table, universal angle plate, vise, profiling attachment, Vernier scales or inside micrometers with end measures and dial indicators for longitudinal and cross feeds, collets, cutter, etc.

No. 3VGS REED-PRENTICE VERTICAL MILLER



Six (6) of the Seven (7) No. 3VS REED-PRENTICE Vertical Millers at plant of R. H. Freitag Mfg. Co., Akron, Ohio.



Close up of No. 3VS REED-PRENTICE Vertical Miller Machining Zinc Die Cast Die for automobile radiator grilles at Freitag plant. Operation is for both roughing and finishing tough steel within limits of $\pm .002''$.