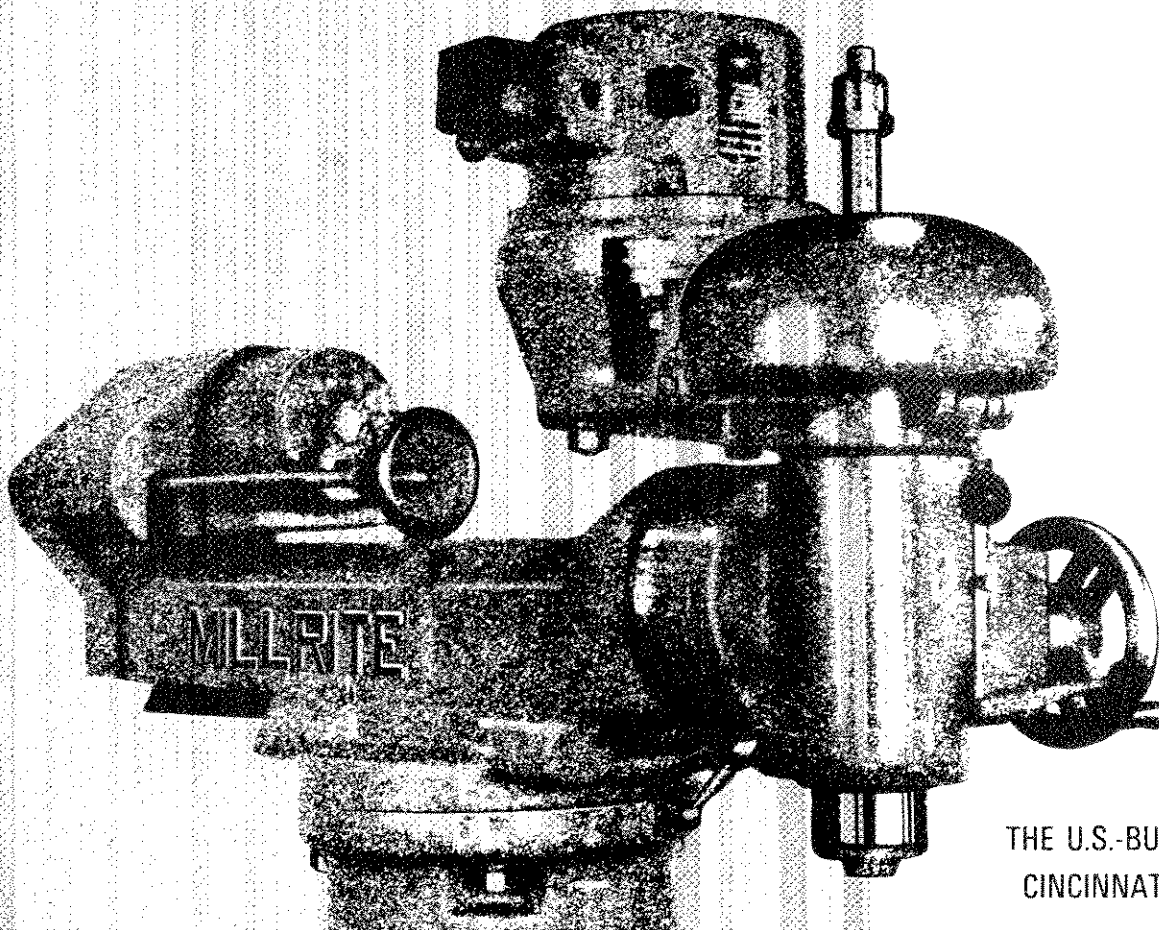


# MILLRITE

FULL SIZE RAM AND TURRET VERTICAL MILLING MACHINE



THE U.S.-BURKE MACHINE TOOL CO.  
CINCINNATI, OHIO, 45227, U.S.A.

# U. S. MILLRITE . . . . THE HIGHEST QUALITY AT THE LOWEST PRICE

Manufactured and

Tested by

Cincinnati Craftsmen

- **QUALITY MATERIALS USED THROUGHOUT**

Gray iron castings are normalized, close grained, semi steel. Aluminum castings are made of a special, highly ductile, shock resistant material. Steel components are machined from stress relieved alloy.

- **ENGINEERED FOR ADDED RIGIDITY**

Column has cast bands of internal ribbing; ram, continuous internal zig zag supports. Millrite has extra wide bearing surfaces,  $3\frac{1}{4}$ " diameter quill,  $\frac{7}{8}$ " diameter lead screws,  $7\frac{1}{2}$ " diameter head to ram bolt circle. High capacity V belt transmits maximum power over short center distances.

- **DESIGNED FOR OPERATOR CONVENIENCE**

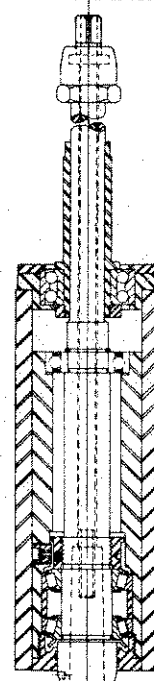
Dials are large, satin chrome finished. Elevating crank fits draw bar and knee lock. All gibs may be adjusted externally. Pivoted guard and swivel motor mount facilitate belt changes. Conveniently positioned brake, spindle lock, and quill lock are standard equipment.

- **BUILT WITH MANY EXCLUSIVE FEATURES**

Anti-friction bearing draw bar facilitates collet ejection. "Feather feed" of quill provided by vertically mounted lead screw permits precision boring to exceptionally accurate depths. Cross-feed nut is split for backlash elimination.

- **EQUIPPED WITH 5 BEARING SPINDLE**

Note how the unique spindle design incorporates the use of both ball and precision tapered roller bearings. All thrust is taken up by nose mounted roller bearings. Provision has been made to alter preload without disassembling head. High speed model furnished with precision preloaded ball bearings.

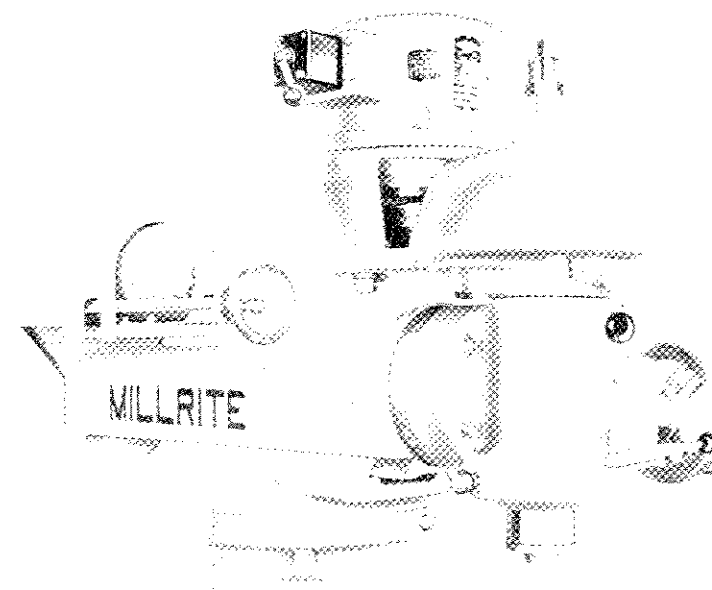


# HIGH PRECISION ASSURED!

Before leaving the factory each MILLRITE must pass these eight rigid tests.

Tests By Number and Description	Maximum Allowable Error	Tests By Number and Description	Maximum Allowable Error
<b>Test No. 1</b> <b>Cutter Spindle Runout</b> Test bar in spindle opening 1—Nearset spindle nose 2—At a distance of 8"	1—.0005" 2—.001"	<b>Test No. 5</b> Center T-Slot square with traverse table movement	.0015" in full 8" travel
<b>Test No. 2</b> <b>Work Table Runout (Moving)</b> Indicator in Spindle 1—Longitudinal movement of table 2—Traverse movement of table	1—.001" per foot 2—.001" per foot	<b>Test No. 6</b> Quill travel of head square with work table	.001" in 4"
<b>Test No. 3</b> <b>Work Table Runout (Stationary)</b> Indicator in Spindle 1—Longitudinal relationship of table to spindle 2—Traverse relationship of table to spindle (A to B)	1—.001" per foot 2—.001" per foot	<b>Test No. 7</b> Column knee slide square with work table (raise and lower knee)	.001" in 6"
<b>Test No. 4</b> Center T-Slot parallel with longitudinal table movement	.001" per foot	<b>Test No. 8</b> Same as Test No. 7 in plane shown	.001" in 6"

## OPTIONAL ATTACHMENTS

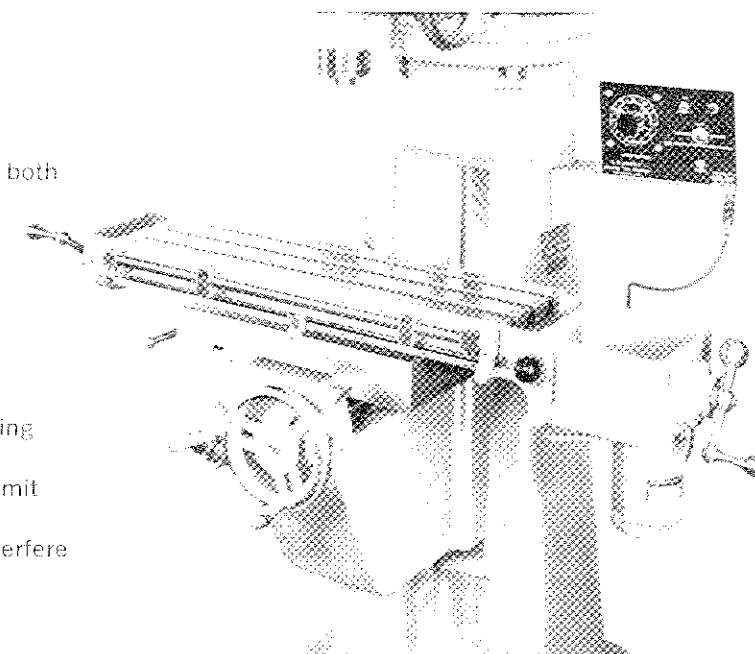


### Power Feed Head

- The feed is independently motor driven, thus permitting constant delivery of full power of the main drive motor to the spindle.
- The feed rate is infinitely variable from 1/2" to 2" per minute. Feeding speeds may be changed while machine is in use.
- Mounting the feed motor in an isolated location improves balance, minimizes vibration.
- Automatic kickout is mounted on front of head, and may be readily repositioned.
- Exceptional power is generated by multiple speed reductions. The feed may be engaged or disengaged at any time with the quill in any position.

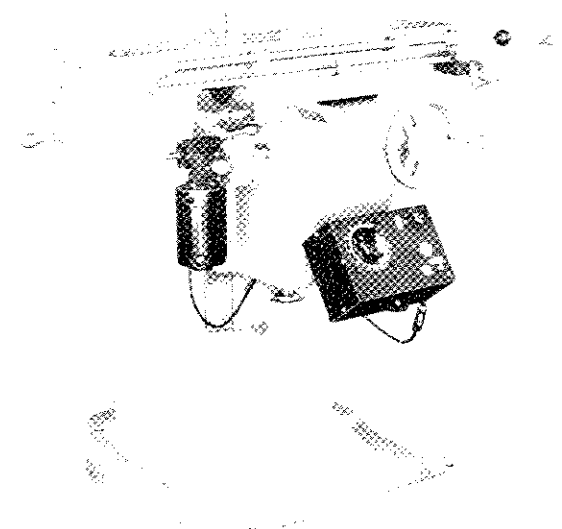
### Power Feed Table

- Infinitely variable feed rate from 1 to 18 I.P.M. in both longitudinal directions.
- Automatic disengagement in both directions, at any position.
- Feed speed may be changed while milling.
- Easy to read and operate, conveniently located directional and speed controls.
- No sacrifice of longitudinal table travel.
- No accuracy destroying deflection from overhanging weight.
- Both table feed handles and dials retained to permit convenient manual operation.
- Engaging lever is beneath table top—will not interfere with large workpieces.



### Power Feed Knee

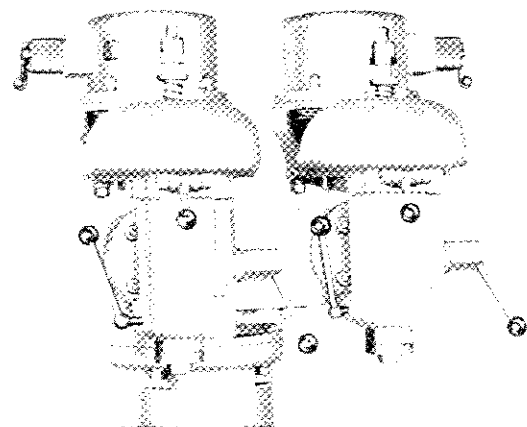
- Permits accurate boring with 1 H.P. rapid quill feed head.
- Table may be fed up or down at infinitely variable rate from 1/2 to 9 I.P.M.
- Power may be engaged or disengaged at any position, feeding speed changed while boring.
- Manual vertical feed shaft and micrometer dial retained in standard position.
- 1/2 H.P., 1 phase drive motor plugs into any 110 volt outlet.
- Conveniently located panel has on/off, directional, and speed controls, plus built-in overload protection.



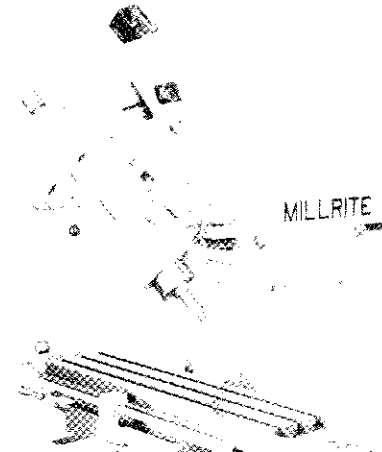
Any or all three power feeds available on same machine.

## OPTIONAL ACCESSORIES

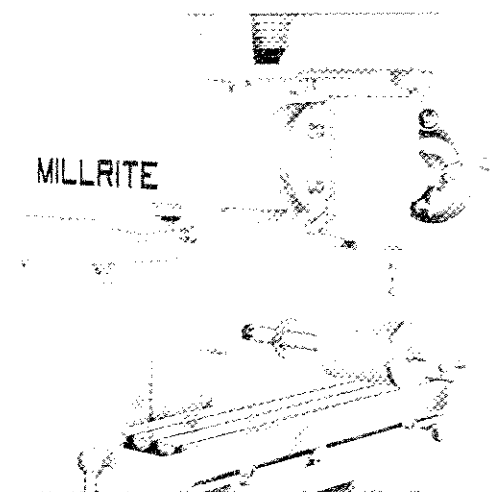
Complete line of options available includes choice of spindle tapers (#9 B & S, #30 National Standard, R-8, or #3 Morse), machine lights, collets, sleeves, vises, dividing heads, rotary tables, endmill holders, etc., as well as accessories shown here.



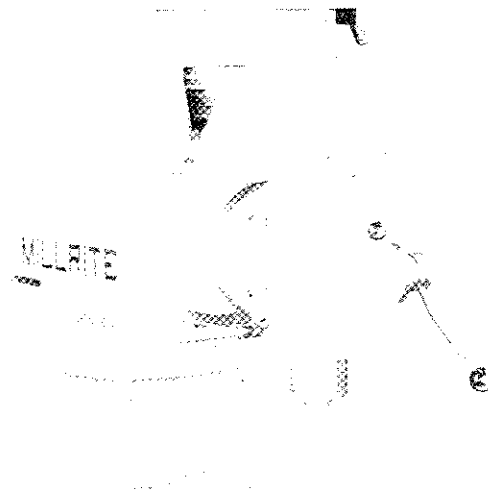
"T-ram" permits mounting two manual feed Millrite heads on same machine.



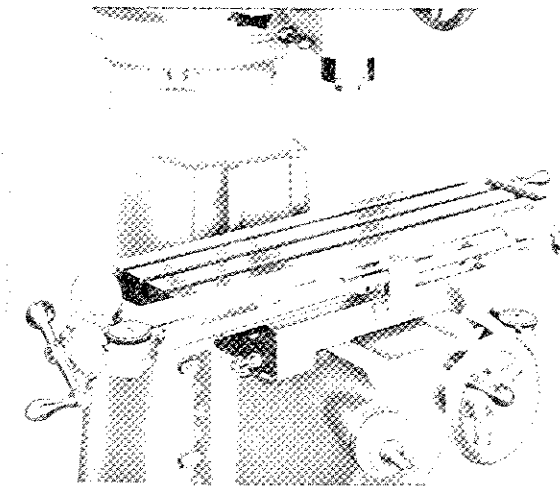
Compound ram provides double angle settings for special production requirements.



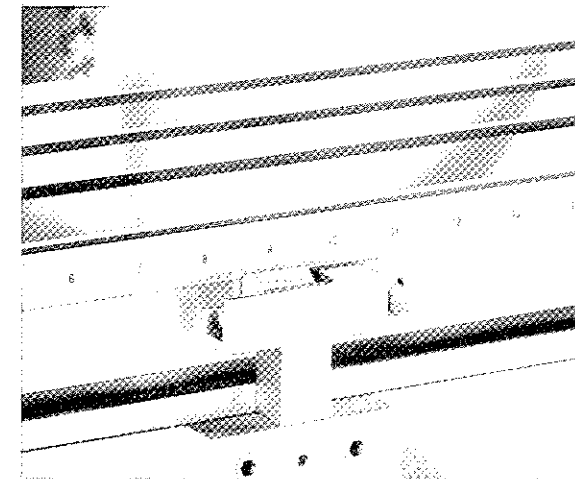
Right angle attachment converts Millrite to horizontal milling machine. Pictured unit has optional outboard support.



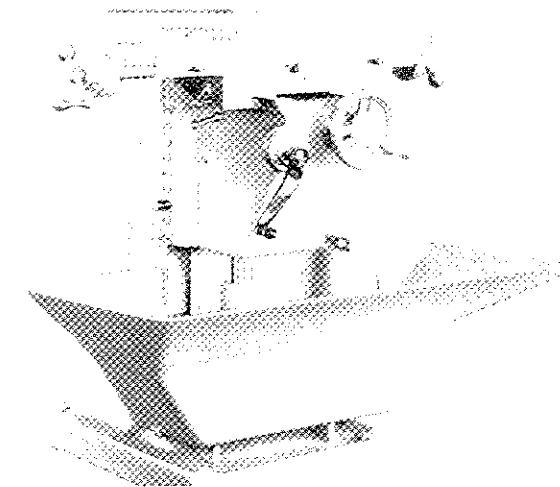
Rapid hand quill feed makes Millrite a precision, low cost drilling machine.



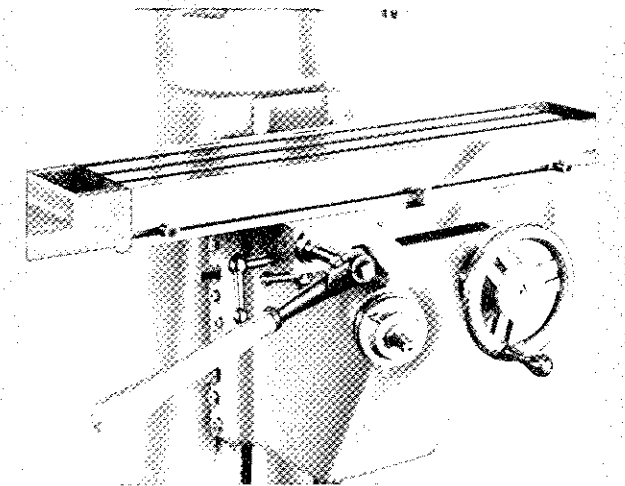
Troughs, stops, and dial indicators provide easy-to-read, extremely accurate table and saddle positioning.



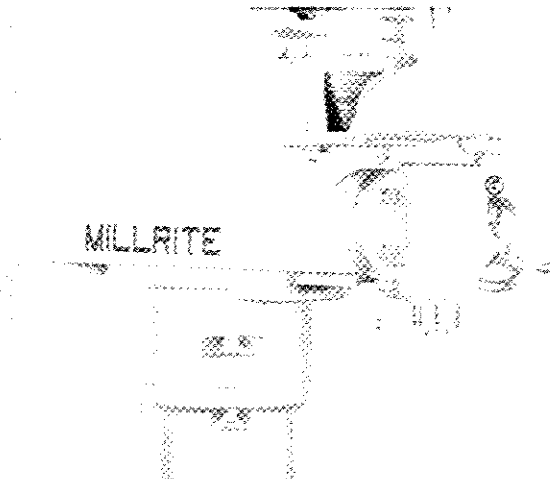
Verniers for inexpensive, fast longitudinal and cross positioning of table.



Coolant system with double compartmented, one piece cast collecting skirt and tank combination.



Rack and pinion manual longitudinal table feed for production vertical milling.



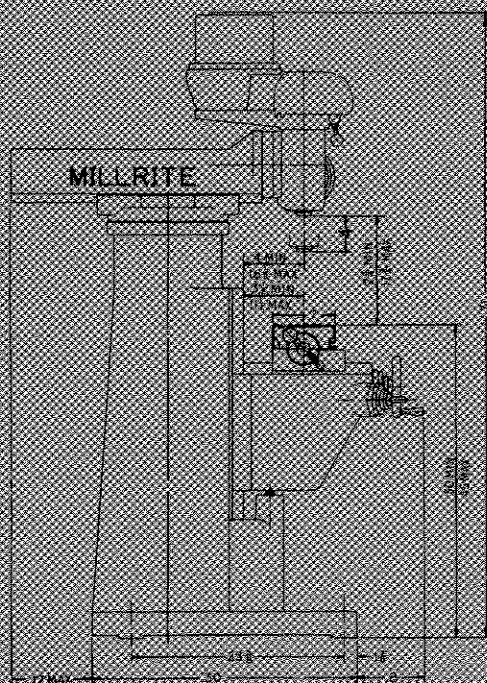
One or more 5" riser blocks increase clearance of table top to spindle.



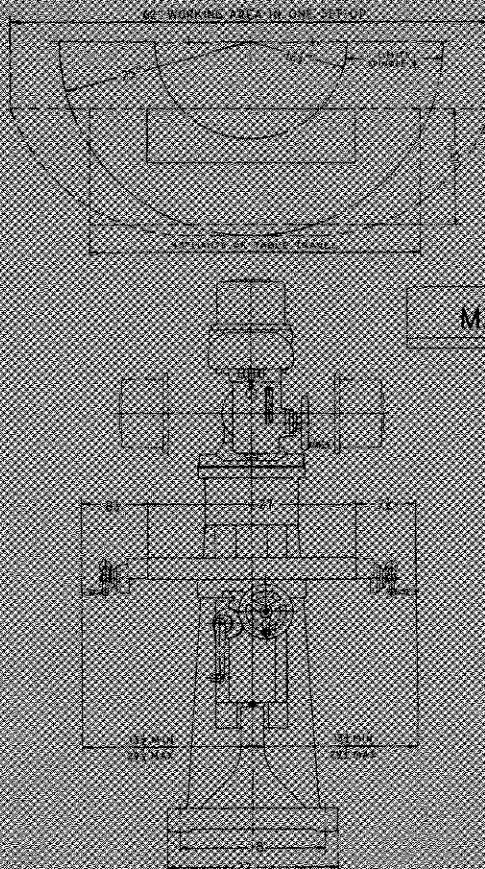
Horizontal and vertical milling in one twin-headed Millrite provided by pictured combination.



## DIMENSIONS



**STANDARD SWIVEL MODEL**



**COMPOUND SWIVEL MODEL**

## MILLRITE IS FULL-SIZED

The Millrite is a full sized ram and turret vertical milling machine that will handle work of the same size, class, and to the same quality standards as machines costing several times as much. Check its dimensions.

## SPECIFICATIONS

### RANGE

Longitudinal Table Travel:	16", or 21" or 25"
Cross Table Travel:	8"
Vertical Travel of Knee:	15"
Vertical Travel of Quill:	4"
Spindle Nose to Top of Table:	17 3/4" Max. Plus 5" with With Compound Swivel: 18" Max. riser block
Throat Distance, Spindle to Column Face, Plain Overarm:	16 1/2" Max. 4" Min.
Compound Swivel Overarm:	17" Max. 6 1/2" Min.

### TABLE

Working Surface:	7" x 27" or 8" x 32" or 8" x 36"
3 T-Slots:	1 1/4" Wide; 2 1/4" between slots
Dials:	3 1/2" Dia., Graduated in .001"

### SPINDLE

Spindle nose: #9 B & S Taper standard, other tapers optional including #10 B & S, #30 National standard, R-8, #2 or #3 Morse

Spindle Speeds in R.P.M., both directions.

With 1 H.P. 1800 R.P.M. Motor:  
335—575—970—2550—3075—4535

With 1 H.P. 1200 R.P.M. Motor:  
250—430—725—1160—2300—3400

With 1 H.P. 900 R.P.M. Motor:  
185—320—540—860—1700—2500

### FLOOR SPACE

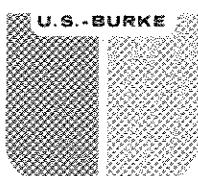
60" x 50"

### NET WEIGHT

1100 Lbs. (Approx.)

### STANDARD EQUIPMENT

Includes involute spline spindle and 1 3/4" diameter vertical lead screw, anti-friction bearing draw bar (on models with self holding spindle tapers), crank handle, wrenches for turret, head and ram movements.



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