EVERY MECHANIC has realized the need for a precision vertical milling machine with high speeds for small end mills and slow speeds for end mills up to 1/2" diameter. The above machine makes intricate milling operations on small parts comparatively simple. It is in the extreme precision class for exacting work in production, tool room and laboratory departments. The spindle construction embodies precision preloaded ball bearings of the double row type, providing maximum rigidity with a minimum of friction. Such a design affords high spindle speeds with extreme precision and overcomes radial and end play which are a detriment to milling operations.

— SEE REVERSE SIDE FOR DETAILS —

HARDINCE BROTHERS, INC., ELMIRA, N.Y.

"Performance has established leadership for Hardinge"
THE MACHINE has a welded steel pedestal mounting. The modern design and attractive appearance may be seen by referring to the illustrations. The design was drawn from the successful performance of our ball bearing precision lathes and horizontal milling machines. It will be noted that the machine is fully enclosed to exclude dirt, chips, etc. and also to contain the driving belt to the machine. The illustration below shows the profiling attachment in place. This attachment permits rapid production of small duplicate parts that must be milled. Use of a profiling attachment effects interesting cost reductions as it converts expensive hand work to a production basis.

SPECIFICATIONS: The table working surface is 12\" x 3-3/16\". The micrometer controlled travel of the table is: Longitudinal 5\"; Transverse 3-1/8\" and Vertical 5\". The vertical head has a 3/4\" collet capacity for holding milling cutters. The overall length of the vise is 6\". Vise jaws 3-3/4\" wide x 3/8\" deep — open to 1-1/4\". The machine proper has an overall height of 22\" and an overall height of 60\" when mounted on the pedestal. The floor space required with the pedestal doors open is 39\" x 38\".

ATTACHMENTS: In addition to the vise and profiling attachment shown in the illustrations, an index head, tailstock, swivel base, universal adapter, lever feed arrangement and various collets are available. The index head has 3/4\" collet capacity. The vertical head adapts the standard 2VB HARDINGE Collet for taper end mills or straight shank end mills up to 3/8\" round.

DRIVING UNIT: The machine is furnished completely assembled on the welded steel pedestal. The electrical driving unit is fully enclosed. The pedestal has a section for storage of collets and attachments. The chip pan measures 24\" x 29\". There are no loose pulleys, driving gears or clutches in the driving unit. An endless belt drives the vertical spindle from the electrical driving unit. The two levers at the machine provide convenience in the operation of electrical switches for LOW STOP, HIGH, and FORWARD STOP, REVERSE spindle speeds. Eight speeds from 300 to 5000 r.p.m., forward and reverse, are obtainable.