

Clousing Mechanical Variable Speed Vertical Knee Mills



2VS

9" x 49" Table • 3 hp Spindle Motor

3VS

10" x 54" Table • 3 hp Spindle Motor

4VSQ

10" x 54" Table • 5 hp Spindle Motor

Here are more reasons for putting the Clousing vertical mill to work in Your Toolroom...

If you're looking for a Heavy-duty Standard Vertical Milling Machine, at an affordable price, the Clousing knee mills are what you're looking for.

Designed for precision, the Clousing Mills deliver all the power, precision and versatility you need to handle most milling jobs in your toolroom.

The Clousing Knee Mills are one of the heaviest in it's class and is equipped with a powerful spindle drive motor and an infinitely variable speed drive offering a speed range of 60 to 4300 rpm.

These mills offer features often found only on higher priced milling machines...

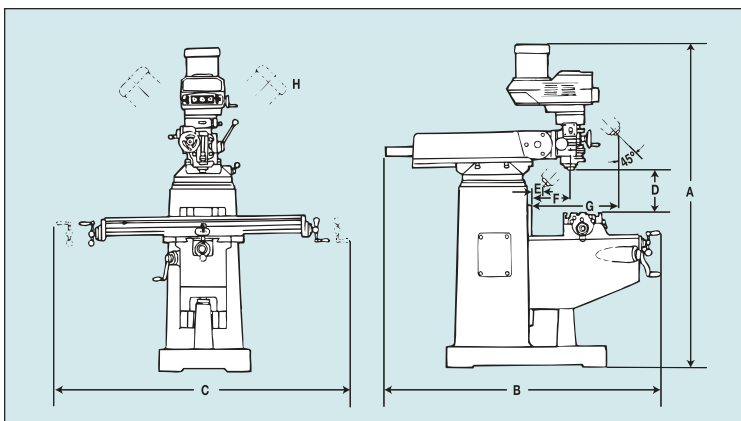
Standard Features...

- Meehanite castings for superior rigidity and wear resistance
- Hardened & ground X,Y & Z ways
- X/Y ways coated with Turcite B
- Column & knee way covers
- T-slots are ground to provide reference edge for positioning your workpiece
- Hardened & ground table surface
- Hardened & ground spindle
- Chromed & ground quill
- Chromed X, Y & Z leadscrews
- Double nut leadscrew for backlash compensation
- ABEC 7/CP4 spindle bearings
- Coolant system w/pump & switch
- Flexible segmented coolant nozzle
- Chromed Y screw covers and one-piece wipers
- 7/16" imperial drawbar (2VS, 3VS)
- M16 metric drawbar with ISO-40 spindle (4VSQ)
- 3 hp AC motor (2VS & 3VS)
- 5 hp AC motor (4VSQ)
- AC rapid vertical drive (4VSQ)
- Variable speed drive
- Articulating head for compound angles
- Worm gear angular positioning of head in two directions
- Lever-operated manual rapid quill movement
- Handwheel for fine quill feed
- Adjustable automatic feed disengagement for quill feed
- Micrometer depth stop
- Reversing switch for clockwise or counter clockwise operation
- R-8 or ISO-30 spindle (2VS & 3VS)
- ISO-40 spindle (4VSQ)
- Spindle brake (hand operated)
- One-shot lubrication
- Halogen work light
- Tool kit, test and accuracy chart
- Operations manual/parts list
- Knee assist on (4VSQ)

Specifications:

Model	2VS	3VS	4VSQ
Table & Ways			
Table Size	9" x 49" (230x1245mm)	10" x 54" (254x11370mm)	10" x 54" (254x11370mm)
No. of T-Slots	3	3	3
T-Slot Width	1.1" (28mm)	1.1" (28mm)	1.1" (28mm)
T-Slot Center Distance	2.08" (52mm)	2.48" (63mm)	2.48" (63mm)
Table Ways	Dovetail	Dovetail	Dovetail
Knee Ways	Dovetail	Square	Square
Column Ways	Dovetail	Dovetail	Square
Travels			
X Longitudinal	38.18" (970mm)	39.56" (1005mm)	41.33" (1050mm)
Y Cross	14.17" (360mm)	15.55" (395mm)	15.35" (390mm)
Z Knee	13.97" (355mm)	15.55" (395mm)	13.97" (355mm)
Ram	18.50" (470mm)	22.04" (560mm)	21.85" (555mm)
Motors & Spindle			
Spindle Motor	3 hp (2.25kw)	3 hp (2.25kw)	5 hp (2.25kw)
Amp. Draw 208v.	7	7	7
Amp. Draw 230v.	7	7	7
Amp. Draw 460v.	5	5	5
Variable Spindle Speed rpm	75-4350	75-4350	75-4350
Low Range rpm	85-780	85-780	85-780
High Range rpm	515-4350	515-4350	515-4350
Main Spindle Taper	R-8 or ISO30	R-8 or ISO30	ISO40
Spindle Travel	5" (127mm)	5" (127mm)	5" (127mm)
Quill Feed (in/rev.) (mm/rev)	.0015/.0031/.006 (.004/.008/.015mm)	.0015/.0031/.006 (.004/.008/.015mm)	.0015/.0031/.006 (.004/.008/.015mm)
Quill Diameter	3.38" (85mm)	3.38" (85mm)	4.13" (105mm)
Construction & Weight			
Column Turret Diameter	14.96" (380mm)	14.96" (380mm)	15.35" (390mm)
Knee Width	11.42" (290mm)	11.42" (290mm)	13.39" (340mm)
Column Bearing Length	16.54" (420mm)	17.91" (455mm)	16.93" (430mm)
Saddle/Table Bearing Length	19.88" (505mm)	20.28" (515mm)	20.28" (515mm)
Ram/Turret Bearing Length	16.14" (410mm)	17.32" (440mm)	17.13" (435mm)
Ram Length	28.94" (735mm)	41.73" (1060mm)	33.46" (850mm)
Table Load	665 lbs. (302kg)	665 lbs. (302kg)	1,108 lbs. (503kg)
Net Weight	2,100 lbs. (950kg)	2,985 lbs. (1350kg)	3,210 lbs. (1450kg)

Specifications are subject to change without notice.



MODEL	2VS	3VS	4VSQ
A Height	89" (2255mm)	88" (2230mm)	89" (2255mm)
B Depth	66" (1675mm)	71" (1790mm)	106" (2700mm)
C Width	99" (2520mm)	76" (1920mm)	78" (1970mm)
D Table to Spindle	3.15"-17.12" (80-435mm)	3.94"-19.01" (100-483mm)	4.52"-18.50" (115-470mm)
E 45° Inward	0-19.68" (0-500mm)	1.57"-16.53" (40-420mm)	0-18.89" (0-480mm)
F Spindle ø to Column	4.53"-23.03" (115-585mm)	9.45"-29.92" (240-760mm)	7.28"-29.13" (185-740mm)
G 45° Outward	6.89"-29.39" (175-645mm)	12.20"-27.16" (310-690mm)	7.48"-29.33" (190-745mm)
H Head Tilt	90° Right & Left		