

Clausing CNC Knee Mills

600Group

*A Line of Precision, Affordable,
Heavy-duty CNC Vertical Knee Mills*



- A Large Range of CNC Control Options
- Available with Programmable Spindle Speeds
- Manual Operation with DRO, Semi-Automatic Operation or Full 2 or 3 Axes CNC Operation

Clausing EVS CNC Vertical Mills...

***A Line of Affordable Heavy-duty
CNC Electronic Variable Speed (EVS)
Vertical Knee Mills with A Wide
Range of CNC Control Options.***



The LCD Display allows the operator to select spindle speeds quickly and accurately.
(Not available on models with Programmable Spindle Speeds)

Shown with ANILAM 5000M CNC Control



Machine Features

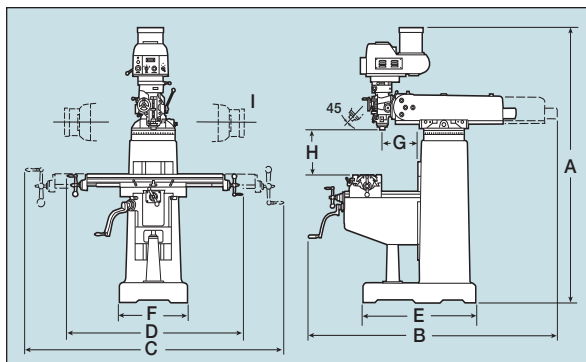
- A wide range of CNC Control options ACU-RITE MILLPWR, Fagor 8055i MC, ANILAM 3000M and ANILAM 5000M
- Flexible operating modes: manual operation with DRO, semi-automatic operation and two or three axes full CNC operation
- Meehanite Castings for superior rigidity and wear resistance
- Hardened and Ground X, Y, and Knee ways for superior accuracy and wear resistance
- Turcite B applied to X, Y ways for wear resistance and extend machine life
- Table size up to 11" x 58"
- Ground T-Slots provide a reference edge for positioning workpieces or fixtures
- Large travel range up to 35.5" X axis travel, 16" Y axis travel, 17.7" knee travel and 4.75" quill travel
- Inverter Drive Variable Speed Spindle achieving more accurate surface speeds for enhanced tool life
- 3 Hp Spindle Motor for exceptional machining power
- Spindle Brake manually operated with auto power off
- ABEC 7/CP4 Spindle Bearings provide accuracy and smooth operation for close tolerance machining
- Hardened and Ground Chrome Plated, Carbon Steel Quill giving the quill wear resistance with close tolerances between the quill and housing
- One Shot Lubrication maintains proper lubrication to all critical machine components
- Built in Coolant System w/pump, switch, and flexible coolant nozzle giving the operator full control over tool cooling
- Precision Hardened and Ground Ballscrews for smooth positioning and accuracy

Machine Specifications: *(see pages 6 & 7 for control options and Model numbers)*

Model	400EVSCNC	450EVSCNC	500EVSCNC
Table:			
Table Size	10" x 50" (254x1370mm)	10" x 54" (254x1270mm)	11" x 58" (254x1475mm)
No. of T-slots	3	3	3
T-slot width	.63" (16mm)	.63" (16mm)	.63" (16mm)
T-slot center distance	2.48" (63mm)	2.48" (63mm)	2.76" (70mm)
Table load capacity	700 lbs. (318kg)	880 lbs. (400kg)	990 lbs. (450kg)
Travels:			
X axis, longitudinal	32.3" (820mm)	31.9" (810mm)	35.5" (902mm)
Y axis, cross	16" (406mm)	16" (406mm)	16" (406mm)
Z axis, knee	16" (406mm)	16" (406mm)	17.7" (450mm)
Ram travel	22" (560mm)	22" (560mm)	22" (560mm)
Ram swivel	360°	360°	360°
Spindle Head:			
Spindle drive motor	3 Hp (2.25Kw)	3 Hp (2.25Kw)	4 Hp (3.5Kw)
Spindle speed range	50-5000 rpm	50-5000 rpm	50-5000 rpm
Spindle taper	R-8 or ISO-30	R-8 or ISO-30	R-8 or IS-O30
Quill travel	4.75" (120mm)	4.75" (120mm)	4.75" (120mm)
Quill diameter	3.28" (83mm)	3.38" (86mm)	3.38" (86mm)
Quill feed (2 axis)	.00157/.00315/.006in/rev (0.04/.08/.152mm/min)		
Head tilt (front or back)	45°	45°	45°
Head tilt left or right (2 axis)	90°	90°	90°
Construction:			
Column turret diameter	15.75" (400mm)	15.75" (400mm)	16.54" (420mm)
Knee width	13.75" (349mm)	15.35" (390mm)	15.35" (390mm)
Knee bearing length	17.72" (450mm)	17.72" (450mm)	19.69" (500mm)
Saddle length	20.08" (510mm)	25.59" (650mm)	25.59" (650mm)
Table bearing length	11.26" (286mm)	11.26" (286mm)	11.02" (280mm)
Ram/turret bearing length	17.72" (450mm)	17.72" (450mm)	17.72" (450mm)
Machine weight	2,640 lbs. (1198kg)	2,750 lbs. (1247kg)	3,300 lbs. (1497kg)
Shipping weight	3,040 lbs. (1379kg)	3,150 lbs. (1429kg)	3,700 lbs. (1678kg)

Specifications and design subject to change without notice.

Machine Dimensions:



Model	400EVSCNC	450EVSCNC	500EVSCNC
Height (A)	88.6" (2250mm)	88.6" (2250mm)	90.6" (2300mm)
Depth w/ram travel (B)	78" (1980mm)	78" (1980mm)	82.7" (2100mm)
Width w/table travel (C)	102" (2590mm)	105" (2667mm)	110" (2795mm)
Width (D)	66" (1676mm)	70" (1778mm)	74" (1880mm)
Base depth (E)	39" (990mm)	39" (990mm)	44" (1118mm)
Base width (F)	23.6" (600mm)	23.6" (600mm)	25" (635mm)
Spindle to column (G)	5.9"-28.9" (150-734mm)	5.9"-28.9" (150-734mm)	5.3"-27.3" (135-691mm)
Spindle nose to table (H)	3.54"-19.7" (90-500mm)	3.54"-19.7" (90-500mm)	1.57"-19.2" (40-489mm)

Clausing CNC Vertical Mills...

A Line of Affordable Heavy-duty Precision CNC Vertical Knee Mills with A Wide Range of 2 or 3 Axes CNC Control Options and Features Found Only on Higher Priced Machines.

Clausing CNC Mills can be operated as manual machines with a DRO, semi-automatic operation or full X, Y and Z axes CNC operation.



Shown with ACU-RITE MILLPWR CNC Control

Machine Features

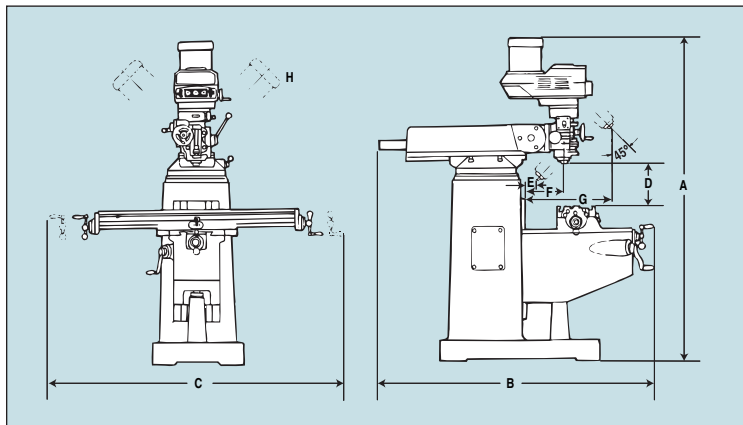
- A wide range of CNC Control options ACU-RITE MILLPWR, Fagor 8055i MC, ANILAM 3000M and ANILAM 5000M
- Flexible operating modes: manual operation with DRO, semi-automatic operation, and two or three axes full CNC operation
- Meehanite Castings for superior rigidity and wear resistance
- Hardened and Ground X, Y, and Knee ways for superior accuracy and wear resistance
- Turcite B applied to X, Y ways for wear resistance and extend machine life
- Work areas up to 10" x 54" table size
- Ground T-Slots provide a reference edge for positioning workpieces or fixtures
- Large travel range up to 33" X axis travel, 16" Y axis travel, 17.7" knee travel and 5" quill travel
- Two Range Variable Speed Spindle: 60-500 rpm low range and 550-4300 high range
- 3 Hp Spindle Motor for exceptional machining power
- Spindle Brake manually operated with auto power off
- ABEC 7/CP4 Spindle Bearings provide accuracy and smooth operation for close tolerance machining
- Hardened and Ground Chrome Plated, Carbon Steel Quill giving the quill wear resistance with close tolerances between the quill and housing
- One Shot Lubrication maintains proper lubrication to all critical machine components
- Built in Coolant System w/pump, switch, and flexible coolant nozzle
- Precision Hardened and Ground Ballscrews for smooth positioning and accuracy

Specifications: *(see pages 6 & 7 for control options and Model numbers)*

Model	2VSCNC	3VSCNC	4VSQCNC
Table & Ways:			
Table Size	9"x49" (228x1244mm)	10"x54" (254x1372mm)	10"x54" (254x1372mm)
No. of T-Slots	3	3	3
T-Slot Width	.63" (16mm)	.63" (16mm)	.63" (16mm)
T-Slot Center Distance	2.48" (63mm)	2.48" (63mm)	2.48" (63mm)
Table Ways	Dovetail	Dovetail	Dovetail
Knee Ways	Dovetail	Square	Square
Column Ways	Dovetail	Dovetail	Square
Travels:			
X Longitudinal	30" (762mm)	33" (838mm)	33" (838mm)
Y Cross	11.5" (292mm)	15.5" (394mm)	16" (406mm)
Knee	16" (406mm)	17.7" (450mm)	17.7" (450mm)
Ram	18.5" (470mm)	20.5" (520mm)	26.75" (680mm)
Motors & Spindle:			
Motor Hp. variable	3 (2.25Kw)	3 (2.25Kw)	5 (3.75Kw)
Variable Spindle Speed rpm			
Low Range	60-500	60-500	60-500
High Range	550-4300	550-4300	550-4300
Main Spindle Taper	R-8 or ISO-30	R-8 or ISO-30	ISO-40
Spindle Travel	5" (127mm)	5" (127mm)	5" (127mm)
Quill Feed (2 axis)	.0015/.003/.006in/rev. (.004/.008/.015mm/rev)		
Quill Diameter	3.38" (86mm)	3.38" (86mm)	4.13" (105mm)
Construction:			
Column Turret Diameter	14.96" (380mm)	16.33" (415mm)	16.33" (415mm)
Knee Width	11.81" (300mm)	14.17" (360mm)	14.96" (380mm)
Column Bearing Length	16.83" (427mm)	18.11" (460mm)	19.7" (500mm)
Saddle/Table Bearing Length	19.88" (305mm)	20.47" (520mm)	20.47" (520mm)
Ram/Turret Bearing Length	17.51" (445mm)	17.51" (445mm)	20.67" (525mm)
Ram Length	32.75" (832mm)	32.75" (832mm)	38.63" (980mm)
Table Load	700 lbs. (316kg)	880 lbs. (400kg)	990 lbs. (450kg)
Net Weight	2250 lbs. (1020kg)	2970 lbs. (1348kg)	3630 lbs. (1647kg)

Specifications subject to change without notice.

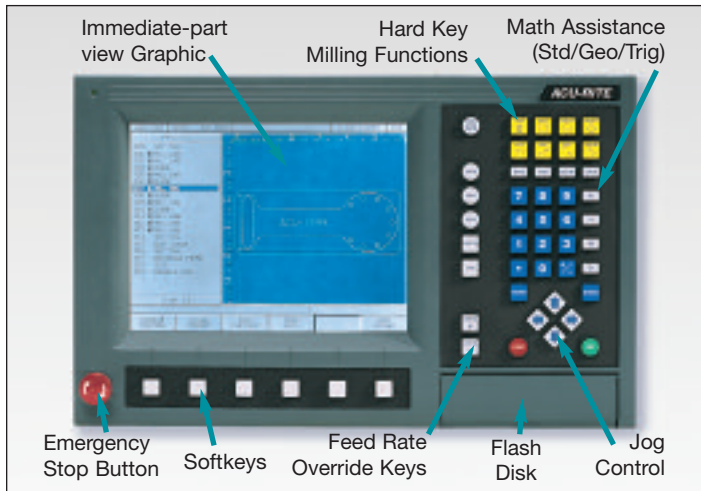
Machine Dimensions:



Model	2VS	3VS	4VSQ
A Height	86" (2185mm)	91" (2310mm)	91" (2310mm)
B Depth	75" (1905mm)	71" (1803mm)	80.3" (2040mm)
C Width	69" (1752mm)	73.6" (1870mm)	73.6" (1870mm)
D Table to Spindle	3.54"-19.29" (90-490mm)	1.97"-19.68" (50-500mm)	1.97"-19.68" (50-500mm)
E 45° Inward	0-13" (0-330mm)	0-18" (0-457mm)	0-16.53" (0-420mm)
F Spindle ø to column	5.5"-26" (140-660mm)	5.5"-24" (140-610mm)	0-26" (0-660mm)
G 45° Outward	10.43"-27.95" (265-710mm)	10.43"-27.95" (265-710mm)	8.85"-29.13" (225-740mm)
H Head Tilt	90° right & left		

Clausing CNC Vertical Mill CNC Control Options

ACU-RITE® MILLPWR



Hardware Features

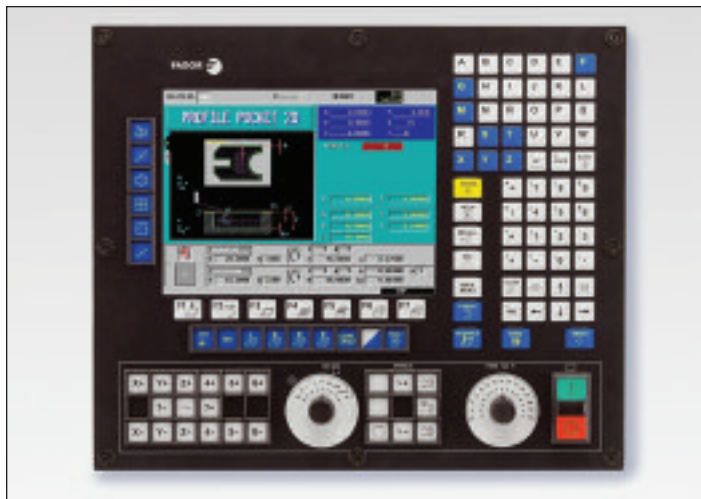
- Precision Ground and Hardened Ball Screws
- Powerful DC Servo Motors Assemblies
- Closed Loop Feedback using ACU-RITE Precision Glass Scales with (1µm/.0004" Resolution)
- 10" Flat Panel, Color, LCD Display
- Large Internal Part Program Storage Capacity
- RS-232 Port for Downloading from an Offline Source
- Remote Stop/Go Switch • Modular Construction
- Flash Disk • Maximum Table Feedrate of 100 IPM

ANILAM 3000M CNC Control



The Series 3000M is a user-friendly controls designed by ANILAM specifically for the milling industry. It utilizes G-code or Conversational Programming, there are no G-codes or other machine codes to learn. You don't have to have prior programming experience, you are prompted for data input by use of the F keys. The intuitive interaction makes it easy to set-up part programs. The many ANILAM 3000M features include on-screen editing and help graphics and DXF and G-code conversion, which converts DXF and G-code to Conversational Programming.

FAGOR 8055i MC CNC Control



The Fagor 8055i is an user-friendly, easy to operate control ideal for large production part run applications as well as Job Shop and Toolroom applications for one-off parts because the operator can use at any time either the ISO programming system or the Fagor conversational programming system.

ANILAM 5000M CNC Control



The Series 5000M is a user-friendly control, with integrated conversational or G-code programs.

Automatic mode

During automatic operation, the 5000M will control everything from start to finish. The machinist has several options on how to generate the programs.

Single step mode

The single step mode allows the machinist to go through all or part of the manufacturing by executing the program step by step.

Mill Model Number and Control Option *Clousing CNC Vertical Mill Accessories*

Clousing EVS CNC Controls Options

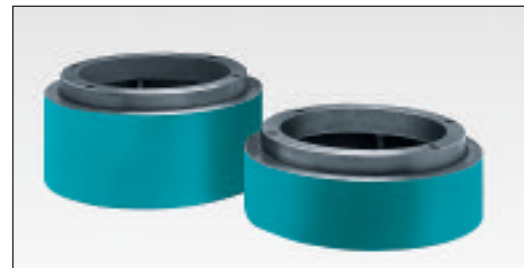
Model No.	Model, Description and CNC Control	Spindle
400EVS08CNCAR	400EVSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
400EVS30CNCAR	400EVSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
400EVS08CNC3	400EVSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
400EVS30CNC3	400EVSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
400EVS08CNCFG3	400EVSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
400EVS08CNC2-3K	400EVSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
400EVS08CNC3-3K	400EVSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
400EVS08CNC3-5K	400EVSCNC with 3 Axes ANILAM 5000M	R-8 Spindle
450EVS08CNCAR	450EVSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
450EVS30CNCAR	450EVSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
450EVS08CNC3	450EVSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
450EVS30CNC3	450EVSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
450EVS08CNCFG3	450EVSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
450EVS08CNC2-3K	450EVSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
450EVS08CNC3-3K	450EVSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
450EVS08CNC3-5K	450EVSCNC with 3 Axes ANILAM 5000M	R-8 Spindle
500EVS08CNCAR	500EVSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
500EVS30CNCAR	500EVSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
500EVS08CNC3	500EVSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
500EVS30CNC3	500EVSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
500EVS08CNCFG3	500EVSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
500EVS08CNC2-3K	500EVSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
500EVS08CNC3-3K	500EVSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
500EVS08CNC3-5K	500EVSCNC with 3 Axes ANILAM 5000M	R-8 Spindle



Chip Tray

Part No.	Description and Model	Weight
2VS001	Chip Tray for 2VS	15 lbs.
2VS001A	Chip Tray for 3VS	15 lbs.
4VSQ001A	Chip Tray for 4VSQ	15 lbs.
EVS120	Chip Tray for 400EVS	15 lbs.
EVS120A	Chip Tray for 450EVS & 500EVS	15 lbs.

Riser Blocks



Part No.	Description and Model	Weight
2VS040	4" Riser Block for 2VS	75 lbs.
2VS041	6" Riser Block for 2VS	90 lbs.
2VS042	8" Riser Block for 2VS	100 lbs.
3VS044	4" Riser Block for 3VS	75 lbs.
3VS040	8" Riser Block for 3VS	100 lbs.
4VSQ044	4" Riser Block for 3VS	75 lbs.
4VSQ040	8" Riser Block for 3VS	100 lbs.
EVS122	4" Riser Block for All Models	75 lbs.
EVS123	6" Riser Block for All Models	90 lbs.

Clousing Mill CNC Controls Options

Model No.	Model, Description and CNC Control	Spindle
2VS08CNCAR	2VSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
2VS30CNCAR	2VSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
2VS08CNC3	2VSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
2VS30CNC3	2VSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
2VS08CNCFG3	2VSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
2VS08CNC2-3K	2VSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
2VS08CNC3-3K	2VSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
2VS08CNC3-5K	2VSCNC with 3 Axes ANILAM 5000M	R-8 Spindle
3VS08CNCAR	3VSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
3VS30CNCAR	3VSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
3VS08CNC3	3VSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
3VS30CNC3	3VSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
3VS08CNCFG3	3VSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
3VS08CNC2-3K	3VSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
3VS08CNC3-3K	3VSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
3VS08CNC3-5K	3VSCNC with 3 Axes ANILAM 5000M	R-8 Spindle
4VS08CNCAR	4VSCNC with 2 Axes ACU-RITE MILLPWR	R-8 Spindle
4VS30CNCAR	4VSCNC with 2 Axes ACU-RITE MILLPWR	#30 Spindle
4VS08CNC3	4VSCNC with 3 Axes ACU-RITE MILLPWR	R-8 Spindle
4VS30CNC3	4VSCNC with 3 Axes ACU-RITE MILLPWR	#30 Spindle
4VS08CNCFG3	4VSCNC with 3 Axes FAGOR 8055i	R-8 Spindle
4VS08CNC2-3K	4VSCNC with 2 Axes ANILAM 3000M	R-8 Spindle
4VS08CNC3-3K	4VSCNC with 3 Axes ANILAM 3000M	R-8 Spindle
4VS08CNC3-5K	4VSCNC with 3 Axes ANILAM 5000M	R-8 Spindle

Power Drawbar



Part No.	Description and Spindle	Weight
2VS8408	Power Drawbar for R-8 Spindle	25 lbs.
2VS8430	Power Drawbar Kit for #30 Spindle	25 lbs.



Your Single Source for Machine Tools

Clausing Precision Drills

- Clausing Belt-drive Drills
- Clausing Geared-head Drills
- Clausing Radial Drills

Clausing Precision Mills

- Clausing Bed Mills
- Clausing CNC Bed Mills
- Clausing Knee Mills
- Clausing EVS Knee Mills

Clausing Precision Lathes

- Clausing/Colchester Geared Head Lathes
- Clausing/Colchester Professional V.S. Lathes
- Clausing/Harrison Standard Lathes
- Clausing Large Swing Standard and CNC Lathes
- Clausing/Metosa Standard Lathes

Clausing Precision Grinders

- Clausing Manual Grinders
- Clausing 2 Axes Hydraulic Grinders
- Clausing 3 Axes Hydraulic Grinders
- Clausing ASDII Automatic Grinders

Clausing Precision Cutting Machines

- Clausing/Kalamazoo Horizontal Bandsaws
- Clausing/Kalamazoo Vertical Bandsaws
- Clausing/Kalamazoo Tilt Frame Miter Bandsaws
- Clausing/Kalamazoo Cold Saws

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