

Clausing CNC Bed Mill

600 Group

Affordable, Extra Heavy-Duty, Large Capacity, CNC Bed Mills with Real Cutting Power



- A Large Range of CNC Control Options
- Available with Programmable Spindle Speeds
- Up To 2,000 lbs Table Load Capacity

3-Axis CNC Bed Mills with ACU-RITE MILLPWR Control



Machine Standard Features

- Powerful 5 Hp spindle drive motor
- Mechanical variable speed drive with 2 speed ranges
- Hardened and ground spindle with NT40 taper
- Hardened and chromed quill with 5" travel
- CP4 ABEC7 angular contact spindle bearings
- C7 double nut X/Y/Z axes, 1.26" diameter ballscrew
- Hardened and ground table surface
- Ground T-slots to provide accurate reference edge
- Hardened and ground, square X/Y ways
- Turcite B coating on saddle X/Y axes ways
- Meehanite castings for superior rigidity and wear resistance
- Telescopic Z axis ballscrew cover
- Z axis accordion way cover
- Stainless steel front Y axis way cover
- Rubber rear Y/Z axes way covers
- Heavy-duty overhead square control arm
- X/Y axes handwheels
- Coolant system with pump
- Automatic lubrication with alarm
- Heavy-duty chip tray and rear splash guard
- Table guarding
- Transformer
- Long arm halogen work light
- Tools, toolbox and parts

Optional Equipment

- Air power drawbar

3-Axis Super CNC Bed Mills with Fagor 8055i or ACU-RITE 3500i CNC Control



Machine Standard Features

- Powerful 5 Hp spindle motor on SUP4BVS & SUP6BVS
- 7.5 Hp spindle motor on SUP8BVS
- Inverter variable speed drive with 2 speed ranges
- Hardened and ground spindle with NT40 taper
- Hardened and chromed quill with 5" travel
- CP4 ABEC7 angular contact spindle bearings
- C7 double nut X/Y/Z axes 1.26" diameter ballscrew
- Hardened and ground table surface
- Ground T-slots to provide accurate reference edge
- Hardened and ground, square X/Y ways
- Turcite B coating on saddle X/Y axes ways
- Meehanite castings for superior rigidity and wear resistance
- Telescopic Z axis ballscrew cover
- Z axis accordion way cover
- Stainless steel front Y axis way cover
- Rubber rear Y/Z axes way covers
- Heavy-duty overhead control arm
- X/Y axes handwheels
- Coolant system with pump
- Automatic lubrication with alarm
- Heavy-duty chip tray, rear splash guard and table guarding
- Transformer
- Long arm halogen work light
- Tools, toolbox and parts

Optional Equipment

- X/Y/Z linear scale
- 4th axis package
- Air power drawbar
- Remote MPG unit
- Laser calibration to program encoder motors

Clousing CNC Bed Mill Control Options and Accessories

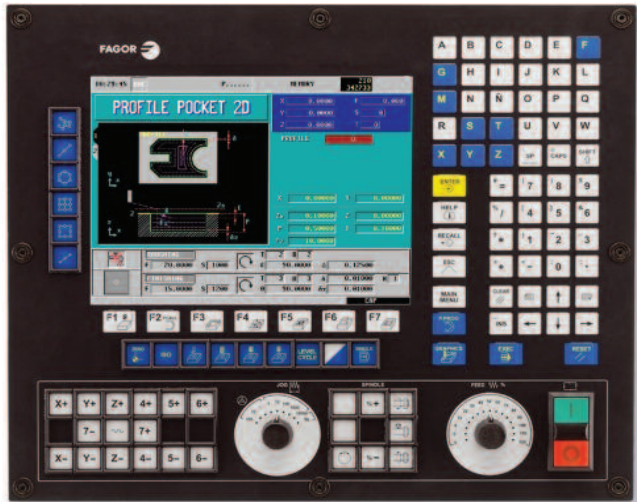
Clousing CNC Bed Mill Options

Model	Control Description & Spindle
4BVSCNC40	3-Axes ACU-RITE MILLPWR and #40 Spindle
SUP4BVSCNC	3-Axes w/4th drive ACU-RITE 3500i and #40 Spindle
SUP4BVSCNC/4	4-Axes w/motor & cable ACU-RITE 3500i and #40 Spindle
SUP4BVSCNC/MP	3-Axes ACU-RITE MILLPWR and #40 Spindle
SUP4BVSCNCFG	3-Axes w/4th drive Fagor 8055i and #40 Spindle
SUP4BVSCNCFG/4	4-Axes w/motor & cable Fagor 8055i and #40 Spindle
6BVSCNC40	3-Axes ACU-RITE MILLPWR and #40 Spindle
SUP6BVSCNC	3-Axes w/4th drive ACU-RITE 3500i and #40 Spindle
SUP6BVSCNC/4	4-Axes w/motor & cable ACU-RITE 3500i and #40 Spindle
SUP6BVSCNC/MP	3-Axes ACU-RITE MILLPWR and #40 Spindle
SUP6BVSCNCFG	3-Axes w/4th drive Fagor 8055i and #40 Spindle
SUP6BVSCNCFG/4	4-Axes w/motor & cable Fagor 8055i and #40 Spindle
SUP8BVSCNC	3-Axes w/4th drive ACU-RITE 3500i and #40 Spindle
SUP8BVSCNC/4	4-Axes w/motor & cable ACU-RITE 3500i and #40 Spindle
SUP8BVSCNC/MP	3-Axes ACU-RITE MILLPWR and #40 Spindle
SUP8BVSCNCFG	3-Axes w/4th drive Fagor 8055i and #40 Spindle
SUP8BVSCNCFG/4	4-Axes w/motor & cable Fagor 8055i and #40 Spindle

Clousing CNC Bed Mill Accessories

Part No.	Description	Mill Model
2VS8408	Air Power Draw Bar R-8 Spindle	All Models
2VS8430	Air Power Draw Bar #30 Spindle	All Models
2VS8440	Air Power Draw Bar #40 Spindle	All Models
2VS010	52 Piece Clamping Kit	All Models
2VS020	Milling Chuck Kit w/7 Collets R-8 Spindle	All Models
4VS205	Coolant Oil Skimmer	4BVS & SUP4BVS
4VSCNC5	Table Guard with Interlock	4BVS & SUP4BVS
4VSCNC9	Air Powered Drawbar	4BVS & SUP4BVS
4VS204	Remote Start/Stop ACU-RITE MILLPWR	4BVS
6VS205	Coolant Oil Skimmer	6BVS & SUP6BVS
6VSCNC3	4th Axis Hand Wheel	6BVS & SUP6BVS
6VSCNC5	Table Guard with Interlock	6BVS & SUP6BVS
6VSCNC9	Air Powered Drawbar	6BVS & SUP6BVS
6VS204	Remote Start/Stop ACU-RITE MILLPWR	6BVS
6VSCNC2	7.5 hp Motor/Inverter	SUP6BVS
8VS205	Coolant Oil Skimmer	8BVS & SUP8BVS
8VSCNC2	Handy-Pulser MPG handle ACU-RITE 3500i	SUP4, 6 & 8BVS
8VSCNC3	4th Axis Hand Wheel	8BVS & SUP8BVS
8VSCNC5	Table Guard with Interlock	8BVS & SUP8BVS
8VSCNC9	Air Powered Drawbar	8BVS & SUP8BVS
8VS203	4th Axis Motor & Cables ACU-RITE 3500i	SUP4, 6 & 8BVS
8VS203FG	4th Axis Motor & Cables FAGOR 8055i	SUP4, 6 & 8BVS
8VS204	Remote Start/Stop ACU-RITE MILLPWR	SUP8BVS

FAGOR 8055i MC CNC Control



The Fagor 8055i MC Control System is one of the most versatile CNC in existence due to its Dual Operating System. In one mode, it is a very powerful ISO G-code control System and in the other mode Icon conversational programming with highly interactive graphics.

Icon Conversational Programming

- 26 canned cycles... Slot Milling, Profile Milling, Multiple Drilling cycles, Boring cycles, Reaming cycles, Arc bolt hole cycles, Random position cycles, Grid Pattern position cycles and more
- Mirror Imaging • Automatic chamfer blending
- Arc defined by three points • Automatic radius blending
- Part Scaling (in part or whole)
- Programming in absolute arc center coordinates
- Main plane selection • Individual plane selections
- Definition of lower work area limits
- Zero offsets and auto-deletion of offsets referencing
- Automatic machine home sequence
- Preset of coordinate values • Preset of polar origin

G Code Programming

- DNC (RS232) • Geometric help • Execution mode
- MDI mode (Manual Data Input) • Teach-in mode
- Play back mode • Single block mode • Manual mode
- Background editing mode • Mid program start
- Automatic tool calibration mode
- Tool inspection mode with auto-return
- Programmable spindle speed (SUP models)
- Number of main programs: 999,999 *3
- Repeat of sections of program
- Part zero offsets • Number of nesting levels: 15
- Feedrate: 0.00001 to 7900 inches/min.
- Machining canned cycles in all planes
- User defined canned cycles • On board graphic editor
- Override control for feed rate and spindle

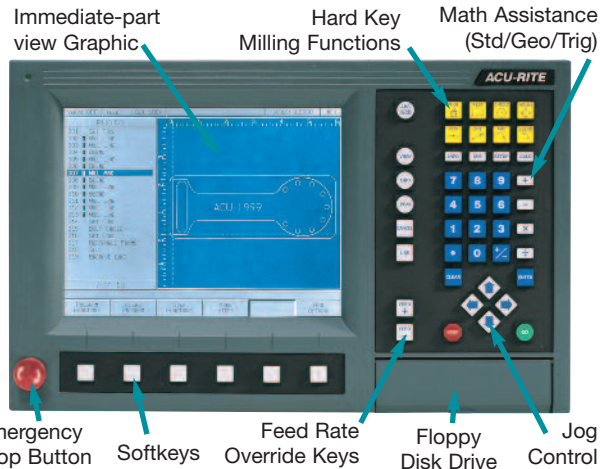
Clousing CNC Bed Mill Control Options

ACU-RITE®
MILLPWR

Full Three axes* CNC Control *(in G Code only)

Features and Benefits

- 3 axes Control/4-axes Readout
- Conversational Menu-prompted Programming
- Position-Trac™/Find Home: Quickly find workpiece zero after power loss
- 3-D, Tactile-Feel, Color Keypad
- ACU-RITE Precision Glass Scales for better accuracy, repeatability, high resolution, closed loop feedback and proven reliability
- Jog Control: One axis or two axes simultaneously
- Remote Stop/Go Switch, with hand-held switch
- Travel Limits: With software
- Engrave: Alphanumeric references into parts
- Tool Offset Compensation
- Tool Library
- Hard Key Milling Functions: Select routine functions (lines, arcs, rectangles, circles, etc.)
- Bolthole Calculations: Calculate full & partial circles
 - Linear row/column
 - Rectangle frame
 - Rectangle array
 - Mirror/Repeat/Rotate
- Custom Pocket
- Skew: Save time aligning parts
- Bend
- Explode
- Feed Rate Override
- DXF File Input
- Teach Position
- Edit Capabilities
- Reference Tables
- Math Functions: Standard • Trigonometry • Geometry • rpm



Hardware Features

- Precision Ground and Hardened Ball Screws
- Powerful AC Servo Motors Assemblies
- Closed Loop Feedback using ACU-RITE Precision Glass Scales with (2µm/.0001 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
- Floppy Disk Drive
- Maximum Table Feedrate of 100 IPM

ACU-RITE® 3500i CNC Control

Acu-Rite 3500i boosts efficiency, versatility, productivity...



Easy to Learn, Intuitive to Operate

At the heart of the Acu-Rite 3500i's versatility is its touch screen interface and the innovative software driving the interface. Menus and function keys are integrated into the borders of the high resolution, 12.1" XGA screen. Floating numeric keypads are easily dragged to the operator's preferred position

Milling jobs are now as simple as...touch...and GO

The Acu-Rite 3500i features a flexible touch screen layout that's driven by software designed from the ground up to give operators a versatile array of options. Graphical, one-touch function keys both simplify and accelerate programming and set-up tasks.

The 3500i is two controls in one, Conversational and G-Code. Conversational is programmed in plain machinist language and uses a powerful set of canned cycles to aid in quick and easy to understand programming. G-Code is entered using the on screen full keyboard or the G-Code help editor. Importing programs is fast and easy via networking and USB.

New Interface

- Intuitive touch screen interface
- Custom PLC touch screen buttons eliminate the need for a manual panel
- Active MDI fields
- XGA Display (Extended Graphics Array 1024x768 resolution)
- Text and graphical program preview in Program Manager
- Program preview in editor
- Full support for conversational and g-code programming
- Up to 4-axis plus closed-loop spindle

Machine Specifications

Model	4BVSCNC40	SUP4BVSCNC	6BVSCNC40	SUP6BVSCNC	SUP8BVSCNC
Table Size	10" x 54" (254 X 1371mm)	10" x 54" (254 X 1371mm)	15" x 60" (380 X 1524mm)	15" x 60" (380 X 1524mm)	16.75" x 62" (425 X 1575mm)
Table Load Capacity	1,500 lbs. (680kg)	1,500 lbs. (680kg)	1,800 lbs. (817kg)	1,800 lbs. (817kg)	2,000 lbs. (907kg)
Number of T-Slots	3	3	3	3	4
T-Slot Width	.63" (16mm)	.63" (16mm)	.709" (18mm)	.709" (18mm)	.709" (18mm)
T-Slot Center Distance	2.48" (63mm)	2.48" (63mm)	3.15" (80mm)	3.15" (80mm)	3.15" (80mm)
Table Ways (X Axis)	Dovetail	Dovetail	Dovetail	Dovetail	Dovetail
Bed Ways (Y Axis)	Square	Square	Square	Square	Square
Column Ways (Z Axis)	Square	Square	Square	Square	Square
TRAVELS					
Longitudinal (X Axis)	30.51" (775mm)	30.51" (775mm)	41.3" (1050mm)	41.3" (1050mm)	47.24" (1200mm)
Cross (Y Axis)	17.5" (445mm)	17.52" (445mm)	19.6" (500mm)	19.6" (500mm)	22.83" (580mm)
Vertical (Z Axis)	19.69" (500mm)	19.69" (500mm)	23.62" (600mm)	23.62" (600mm)	23.62" (600mm)
Quill Diameter	4.13" (105mm)	4.13" (105mm)	4.13" (105mm)	4.13" (105mm)	4.33" (110mm)
Quill Travel	5" (127mm)	5" (127mm)	5" (127mm)	5" (127mm)	6" (152mm)
Head Tilt (left or right)	90°	90°	90°	90°	90°
Rapid Traverse Rate X & Y	100"/min (2540mm/min)				
Rapid Traverse Rate Z	75"/min (1905mm/min)				
Programmable Feedrate X & Y	0-100"/min (0-2540mm/min)				
Programmable Feedrate Z	0-75"/min (0-1905mm/min)				
Feedrate Override (5% increments)	5%-150%	5%-150%	5%-150%	5%-150%	5%-150%
SPINDLE					
Motor	5 Hp	5 Hp	5 Hp	5 Hp (7.5 Hp optional)	7.5 Hp
Spindle Speeds (Infinitely Variable)	70-4300 rpm	65-5160 rpm	70-4300 rpm	65-5160 rpm	65-5160 rpm
No. of Speed Ranges	2	2	2	2	2
Low Gear Range	70-500 rpm	65-590 rpm	70-500 rpm	65-590 rpm	65-590 rpm
High Gear Range	570-4300 rpm	575-5160 rpm	570-4300 rpm	575-5160 rpm	575-5160 rpm
Spindle Taper	NT 40	NT 40	NT 40	NT 40	NT 40
Quill feed	.0016"/.003"/.006"/rev (0.04/0.08/0.15mm/rev)				
CONSTRUCTION					
Height	78.74" (2000mm)	78.74" (2000mm)	85.43" (2170mm)	85.43" (2170mm)	84.65" (2150mm)
Width	71.46" (1815mm)	71.46" (1815mm)	92.91" (2360mm)	92.91" (2360mm)	98.03" (2490mm)
Depth	66.14" (1680mm)	66.14" (1680mm)	76.77" (1950mm)	76.77" (1950mm)	80.71" (2050mm)
Working Width	100" (2540mm)	100" (2540mm)	131" (3327mm)	131" (3327mm)	140" (3556mm)
Working Depth	74" (1880mm)	74" (1880mm)	90" (2286mm)	90" (2286mm)	100" (2540mm)
Width Across Column Ways	11.73" (420mm)	11.73" (420mm)	11.73" (420mm)	11.73" (420mm)	11.73" (420mm)
Length of Saddle on Bed	25.98" (660mm)	25.98" (660mm)	47.24" (1200mm)	47.24" (1200mm)	53.15" (1350mm)
Width Across Bed Ways	16.53" (420mm)	16.53" (420mm)	20.47" (520mm)	20.47" (520mm)	22.83" (580mm)
Center of Spindle to Column ways	17.32" (440mm)	17.32" (440mm)	20.47" (520mm)	20.47" (520mm)	23.62" (600mm)
Floor to Table Surface	36.2" (920mm)	36.2" (920mm)	37" (940mm)	37" (940mm)	34.3" (871mm)
Table to Column Ways	3.15"-20.87" (80-530mm)	3.15"-20.87" (80-530mm)	2.05"-21.73" (52-552mm)	2.05"-21.73" (52-552mm)	.79"-23.62" (20-600mm)
Ball Screw Dia.	1.26"/.2 (32/5mm)	1.26"/.2 (32/5mm)	1.26"/.2 (32/5mm)	1.26"/.2 (32/5mm)	1.26"/.2 (32/5mm)
Ball Screw Class	C7	C7	C7	C7	C7
Spindle Nose to Table	3.15"-22.83" (80-580mm)	3.15"-22.83" (80-580mm)	3.93"-27.55" (100-700mm)	3.93"-27.55" (100-700mm)	3.93"-27.55" (100-700mm)
Gross Weight (approximately)	4,400 lbs (2000kg)	4,400 lbs (2000kg)	6,600 lbs (3000kg)	6,600 lbs (3000kg)	7,260 lbs (3300kg)

Machine Control, Design and Specification are subject to change without notice



Your Single Source for Machine Tools

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- 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 Universal Mills

Clausing Precision Lathes

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- Clausing/Metosa Geared Head & V.S. Lathes
- Clausing/Metosa CNC Lathes
- Clausing Large Swing Standard and CNC Lathes

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