



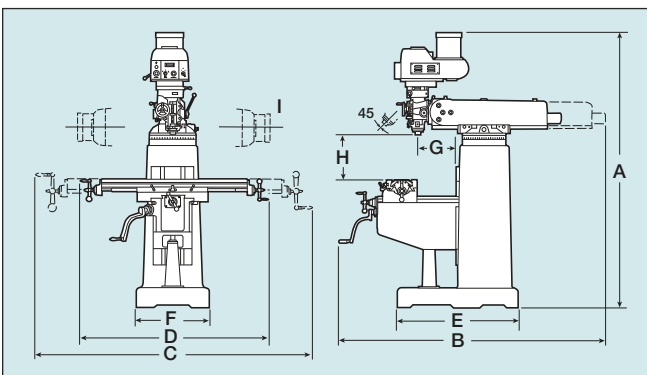
## Clausing EVS Vertical Mills Models: 400EVS, 450EVS, 500EVS Specifications:

| Model                            | 400EVS                                  | 450EVS                      | 500EVS                       |
|----------------------------------|---|-----------------------------|------------------------------|
| <b>Table:</b>                    |   |                             |                              |
| Table Size                       | 10" x 50"<br>(254 x 1270mm)             | 10" x 54"<br>(254 x 1372mm) | 11" x 58"<br>(254 x 11473mm) |
| 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)                 |
| <b>Travels:</b>                  |   |                             |                              |
| X Axis, Longitudinal             | 37.2" (945mm)                           | 39.75" (1008mm)             | 42.75" (1085mm)              |
| Y Axis, Cross                    | 16" (406mm)                             | 16" (406mm)                 | 16" (406mm)                  |
| Z Axis, Knee                     | 16" (406mm)                             | 16" (406mm)                 | 17.7" (450mm)                |
| Ram Travel                       | 22" (559mm)                             | 22" (559mm)                 | 22" (559mm)                  |
| Ram Swivel                       | 360°                                    | 360°                        | 360°                         |
| Spindle to Column                | 5.9"-28.9"<br>(150 - 734mm)             | 5.8"-28.9"<br>(147 - 734mm) | 5.3"-27.2"<br>(135 - 691mm)  |
| Spindle Nose to Table            | 3.54"-19.7"<br>(90 - 500mm)             | 3.54"-19.7"<br>(90 - 500mm) | 1.57"-19.2"<br>(40 - 489mm)  |
| <b>Spindle:</b>                  |   |                             |                              |
| Spindle Drive Motor              | 3 hp (2.25kw)                           | 3 hp (2.25kw)               | 5 hp (3kw)                   |
| Spindle Speed Range              | 50-5000 rpm                             | 50-5000 rpm                 | 50-5000 rpm                  |
| Spindle Taper                    | R-8 or ISO30                            | R-8 or ISO30                | R-8 or ISO30                 |
| Quill Travel                     | 5" (127mm)                              | 5" (127mm)                  | 5" (127mm)                   |
| Quill Diameter                   | 3.28" (83mm)                            | 3.38" (83mm)                | 3.38" (83mm)                 |
| Quill Feed (in/rev)<br>(mm/rev)  | .00157"/.00315"/.006"<br>(.04/.08/.152) |                             |                              |
| Head Tilt (Front or Back)        | 45°                                     | 45°                         | 45°                          |
| Head Tilt (Left or Right)        | 90°                                     | 90°                         | 90°                          |
| <b>Dimensions &amp; Weights:</b> |   |                             |                              |
| 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.<br>(1198kg)                  | 2,750 lbs.<br>(1247kg)      | 3,300 lbs.<br>(1497kg)       |
| Shipping Weight                  | 3,040 lbs.<br>(1379kg)                  | 3,150 lbs.<br>(1429kg)      | 3,700 lbs.<br>(1678kg)       |

Specifications and design subject to change without notice.

### Standard Features...

- Totally enclosed electrics with Yaskawa A.C. inverter variable speed drive
- Quick and accurate rpm setting
- Head mounted, easy to use control panel
- LCD spindle speed display
- Up to 5 hp spindle motor standard
- Spindle brake with auto power off
- Carbon steel, hardened and ground, chrome plated quill
- Coolant system
- Up to 11" x 58" (254x11473mm) table size
- Meehanite castings for superior rigidity
- Hardened and ground table with 3 ground T-slots
- Double nut leadscrew for easy backlash adjustment
- All ways are hardened and ground with Turcite B coating on X and Y axis ways for wear resistance



| Model                         | 400EVS                | 450EVS                | 500EVS                |
|-------------------------------|-----------------------|-----------------------|-----------------------|
| <b>A</b> Height               | 88.6" (2250mm)        | 88.6" (2250mm)        | 90.6" (2300mm)        |
| <b>B</b> Depth w/Ram Travel   | 78" (1980mm)          | 78" (1980mm)          | 82.7" (2100mm)        |
| <b>C</b> Width w/Table Travel | 102" (2590mm)         | 105" (2667mm)         | 110" (2795mm)         |
| <b>D</b> Width                | 66" (1676mm)          | 70" (1778mm)          | 74" (1880mm)          |
| <b>E</b> Base Depth           | 39" (990mm)           | 39" (990mm)           | 44" (1118mm)          |
| <b>F</b> Base Width           | 23.6" (600mm)         | 23.6" (600mm)         | 25" (635mm)           |
| <b>G</b> Spindle to Column    | 5.9"-28.9"(150-735mm) | 5.9"-28.9"(150-735mm) | 5.3"-27.2"(135-690mm) |
| <b>H</b> Spindle to Table     | 3.54"-19.7"(90-500mm) | 3.54"-19.7"(90-500mm) | 1.57"-19.2"(40-488mm) |
| <b>I</b> Head Tilt            | 90° Right or Left     |                       |                       |

MILLING

## 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 Clausing vertical mill to work in Your Toolroom...

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

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

The Clausing 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...

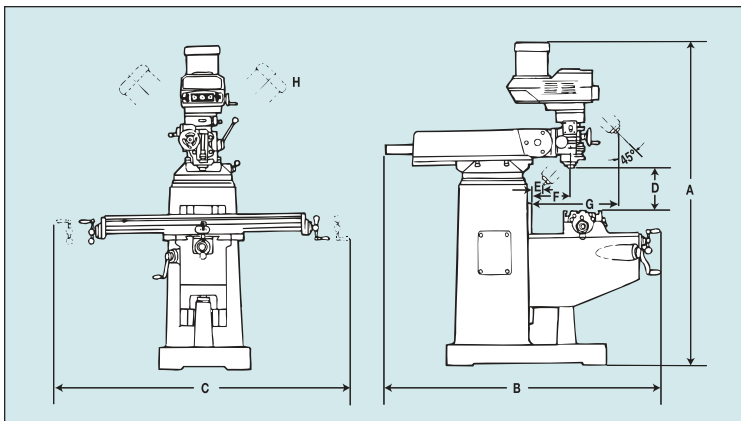
### Standard Features...

- 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)
- Mechanical 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                                   |
|----------------------------------|--|--|--|
| <b>Table &amp; Ways</b>          |  |  |  |
| Table Size                       | 9" x 49" (230x1245mm)                  | 10" x 54" (254x11370mm)                | 10" x 54" (254x11370mm)                |
| No. of T-Slots                   | 3                                      | 3                                      | 3                                      |
| T-Slot Width                     | .63 (16mm)                             | .63 (16mm)                             | .63 (16mm)                             |
| 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                                 |
| <b>Travels</b>                   |  |  |  |
| 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)                         |
| <b>Motors &amp; Spindle</b>      |  |  |  |
| Spindle Motor                    | 3 hp (2.25kw)                          | 3 hp (2.25kw)                          | 5 hp (2.25kw)                          |
| Amp. Draw 208v.                  | 11                                     | 10.5                                   | 18.5                                   |
| Amp. Draw 230v.                  | 10.5                                   | 10.5                                   | 9.3                                    |
| Amp. Draw 460v.                  | 5.2                                    | 5.2                                    | 9.3                                    |
| 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.)<br>(mm/rev) | .0015/.0031/.006<br>(.004/.008/.015mm) | .0015/.0031/.006<br>(.004/.008/.015mm) | .0015/.0031/.006<br>(.004/.008/.015mm) |
| Quill Diameter                   | 3.38" (85mm)                           | 3.38" (85mm)                           | 4.13" (105mm)                          |
| <b>Construction &amp; Weight</b> |  |  |  |
| 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"<br>(80-435mm)  | 3.94"-19.01"<br>(100-483mm)  | 4.52"-18.50"<br>(115-470mm) |
| E 45° Inward          | 0-19.68"<br>(0-500mm)       | 1.57"-16.53"<br>(40-420mm)   | 0-18.89"<br>(0-480mm)       |
| F Spindle ø to Column | 4.53"-23.03"<br>(115-585mm) | 9.45"-29.92"<br>(240-760mm)  | 7.28"-29.13"<br>(185-740mm) |
| G 45° Outward         | 6.89"-29.39"<br>(175-645mm) | 12.20"-27.16"<br>(310-690mm) | 7.48"-29.33"<br>(190-745mm) |
| H Head Tilt           | 90° Right & Left            |                              |                             |

MILLING



# Clausing Horizontal & Vertical Universal Mills

MILLING



Shown with optional DRO

**Model 2500UM**

**Model 2500M**

Clausing Horizontal & Vertical Universal Knee Mills are heavy-duty, reliable, extremely accurate and very versatile machines. These heavy-duty cast iron mills can be used for one-off pieces as well as small to medium size production runs, making them ideal for maintenance tool rooms, job shops or tool and die shops. A wide range of spindle speeds combined with infinitely variable feed rates makes cutting ferrous and non-ferrous metals highly efficient.

**MODEL 2500UM** is equipped with a vertical spindle motor and a horizontal spindle motor with a fixed quill

**MODEL 2500M** is equipped with a vertical spindle motor and a horizontal spindle motor with a traveling quill

**MODEL 2500U** is equipped with a vertical spindle motor only with a fixed quill

**MODEL 2500QM** is equipped with a vertical spindle motor and a horizontal spindle motor with a traveling quill



**Model 2500U Head**



**Model 2500QM Head**



Table rotates 45° right & left

## Standard Features and Equipment:

- X, Y & Z infinitely variable speed is achieved by a inverter through the gear box and controlled at the operator friendly control panel
- Rapid traverse on X, Y & Z axis
- Variable speed on X, Y & Z axis
- High quality meehanite casting for superior rigidity and wear resistance
- All gears and shafts are hardened
- Large 13.7" x 59" (350 x 1500mm) table with 5 T-slots
- Table swivels 45° left and right
- Extra large square and dovetail square slide ways for greater accuracy
- All slide ways and table are hardened and ground
- Turcite coated Y axis for wear resistance
- Double clamps on all square slide ways
- Motorized overarm with a 5.5 hp (3.75kw) motor
- 1" (27mm) long horizontal ISO-40 milling arbor
- Horizontal & vertical manual drawbars
- Automatic coolant system and coolant pump
- Tool box and service tools

# Specifications:

| Model                            | 2500UM                                    | 2500U                                     | 2500QM                                    | 2500M                                     |
|----------------------------------|---|---|---|---|
| <b>Table</b>                     |   |   |   |   |
| Table Area                       | 13.7" x 59"<br>(350 x 1500mm)             | 13.7" x 59"<br>(350 x 1500mm)             | 13.7" x 59"<br>(350 x 1500mm)             | 13.7" x 59"<br>(350 x 1500mm)             |
| Table Load Capacity              | 1,540 lbs. (700kg)                        | 1,540 lbs. (700kg)                        | 1,540 lbs. (700kg)                        | 1,540 lbs. (700kg)                        |
| Number of T-slots                | 5   | 5   | 5   | 5   |
| Distance Between T-slots         | 2.36" (60mm)                              | 2.36" (60mm)                              | 2.36" (60mm)                              | 2.36" (60mm)                              |
| Table Rotation                   | 45° right/left                            | 45° right/left                            | 45° right/left                            | 45° right/left                            |
| <b>Travel</b>                    |   |   |   |   |
| X Longitudinal                   | 46" (1150mm)                              | 46" (1150mm)                              | 46" (1150mm)                              | 46" (1150mm)                              |
| X Longitudinal optional 72" TBL  | 59" (1499mm)                              | 59" (1499mm)                              | 59" (1499mm)                              | 59" (1499mm)                              |
| Y Cross                          | 15.75" (400mm)                            | 15.75" (400mm)                            | 15.75" (400mm)                            | 15.75" (400mm)                            |
| Z Knee                           | 20" (500mm)                               | 20" (500mm)                               | 20" (500mm)                               | 20" (500mm)                               |
| Distance from Spindle to Overarm | 6" (155mm)                                | 6" (155mm)                                | 6" (155mm)                                | 6" (155mm)                                |
| <b>Spindle (Horizontal)</b>      |   |   |   |   |
| Spindle Taper                    | ISO40                                     | ISO40                                     | ISO40                                     | ISO40                                     |
| Diameter of the Main Shaft Nose  | 3.5"-5.06"<br>(88.88-128.57mm)            | 3.5"-5.06"<br>(88.88-128.57mm)            | 3.5"-5.06"<br>(88.88-128.57mm)            | 3.5"-5.06"<br>(88.88-128.57mm)            |
| Milling Arbor                    | 1" (27mm)                                 | 1" (27mm)                                 | 1" (27mm)                                 | 1" (27mm)                                 |
| Number Spindle Speeds            | 12  | 12  | 12  | 12  |
| Spindle Speed Range              | 40-1800 rpm                               | 40-1800 rpm                               | 40-1800 rpm                               | 40-1800 rpm                               |
| <b>Feeds</b>                     |   |   |   |   |
| Longitudinal and Cross Feeds     | 0.4"-47"<br>(10-1208mm)                   | 0.4"-47"<br>(10-1208mm)                   | 0.4"-47"<br>(10-1208mm)                   | 0.4"-47"<br>(10-1208mm)                   |
| Vertical Feed                    | 0.2-23" (5-604mm)                         | 0.2-23" (5-604mm)                         | 0.2-23" (5-604mm)                         | 0.2-23" (5-604mm)                         |
| <b>Rapid Traverse</b>            |   |   |   |   |
| Longitudinal and Cross Feeds     | 47"/min.<br>(1208mm/min.)                 | 47"/min.<br>(1208mm/min.)                 | 47"/min.<br>(1208mm/min.)                 | 47"/min.<br>(1208mm/min.)                 |
| Vertical Feed                    | 23" (804mm)/min.                          | 23" (804mm)/min.                          | 23" (804mm)/min.                          | 23" (804mm)/min.                          |
| <b>Spindle Drive</b>             |   |   |   |   |
| Main Spindle Motor               | 7.5 hp (5kw)                              | 7.5 hp (5kw)                              | 7.5 hp (5kw)                              | 7.5 hp (5kw)                              |
| Feed Motor                       | 2.5 hp (1.5kw)                            | 2.5 hp (1.5kw)                            | 2.5 hp (1.5kw)                            | 2.5 Hp (1.5kw)                            |
| <b>Coolant</b>                   |   |   |   |   |
| Coolant Pump                     | 1/8 hp (.10kw)                            | 1/8 hp (.10kw)                            | 1/8 hp (.10kw)                            | 1/8 hp (.10kw)                            |
| <b>Spindle (Vertical)</b>        |   |   |   |   |
| Spindle Taper                    | ISO40                                     | -   | ISO40                                     | ISO40                                     |
| Quill Diameter                   | -   | -   | 4.13" (105mm)                             | 4.92" (125mm)                             |
| Quill Travel                     | -   | -   | 4.92" (125mm)                             | 3.94" (100mm)                             |
| Number of Speeds                 | 12  | -   | -   | 12  |
| Variable Spindle Speed           | 35-1600 rpm                               | -   | 70-3500 rpm V.S.                          | 35-1600 rpm                               |
| Spindle Motor                    | 5.5 hp (3.75kw)                           | -   | 5.5 hp (3.75kw)                           | 5.5 hp (3.75kw)                           |
| <b>Weight</b>                    |   |   |   |   |
| Net Weight                       | 7,040 lbs. (3200kg)                       | 7,040 lbs. (3200kg)                       | 7,040 lbs. (3200kg)                       | 7,040 lbs. (3200kg)                       |
| Shipping Weight                  | 7,770 lbs. (3500kg)                       | 7,770 lbs. (3500kg)                       | 7,770 lbs. (3500kg)                       | 7,770 lbs. (3500kg)                       |
| <b>Dimensions</b>                |   |   |   |   |
| Shipping Dimensions              | 70" x 89" x 88"<br>(1778 x 2260 x 2235mm) | 70" x 89" x 88"<br>(1778 x 2260 x 2235mm) | 70" x 89" x 88"<br>(1778 x 2260 x 2235mm) | 70" x 89" x 88"<br>(1778 x 2260 x 2235mm) |

# Add Productivity with Clamping Mill Accessories & DROs

## Spindle Assembly

| Part No. | Description and Model                          | Weight  |
|----------|--|---------|
| ISOR8    | R-8 Spindle for 2VS & 3VS                      | 10 lbs. |
| ISO30    | # 30 Spindle for 2VS & 3VS                     | 15 lbs. |
| ISO40    | # 40 Spindle for 4VSQ                          | 15 lbs. |
| EVS124   | R-8 Spindle for 400EVS, 450EVS & 500EVS        | 15 lbs. |
| EVS124A  | R-8 Spindle Only for 400EVS, 450EVS & 500EVS   | 10 lbs. |
| EVS125   | NT 30 Spindle for 400EVS, 450EVS & 500EVS      | 15 lbs. |
| EVS125A  | NT 30 Spindle Only for 400EVS, 450EVS & 500EVS | 10 lbs. |



**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. |



### Clamping Kit

52 pc. Clamping Kit for all models.  
Part No. 2VS010



**Right Angle Milling Attachment**

| Part No. | Description, Spindle or Model                        | Weight  |
|----------|--|---------|
| 4VS031   | Rt. Angle Milling Attachment for 4VSQ                | 20 lbs. |
| EVS126   | Rt. Angle Milling Attachment, R-8 Spindle for EVS400 | 20 lbs. |
| EVS126A  | Rt. Angle Milling Attachment, #30 Spindle for EVS400 | 20 lbs. |
| EVS126B  | Rt. Angle Milling Attachment, #40 Spindle for EVS400 | 20 lbs. |
| EVS127   | Rt. Angle Milling Attachment, R-8 Spindle for EVS450 | 20 lbs. |
| EVS127A  | Rt. Angle Milling Attachment, #30 Spindle for EVS450 | 20 lbs. |
| EVS127B  | Rt. Angle Milling Attachment, #40 Spindle for EVS450 | 20 lbs. |
| EVS128   | Rt. Angle Milling Attachment, R-8 Spindle for EVS500 | 20 lbs. |
| EVS128A  | Rt. Angle Milling Attachment, #30 Spindle for EVS500 | 20 lbs. |
| EVS128B  | Rt. Angle Milling Attachment, #40 Spindle for EVS500 | 20 lbs. |

### Milling Chuck Kit

Milling Chuck Kit with 7 ER collets, in sizes 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" & 1" in carrying case.



| Part No. | Description and Spindle           | Weight |
|----------|-----------------------------------|--------|
| 2VS020   | Milling Chuck Kit for R-8 Spindle | 6 lbs. |
| 2VS021   | Milling Chuck Kit for #30 Spindle | 6 lbs. |
| 2VS022   | Milling Chuck Kit for #40 Spindle | 6 lbs. |

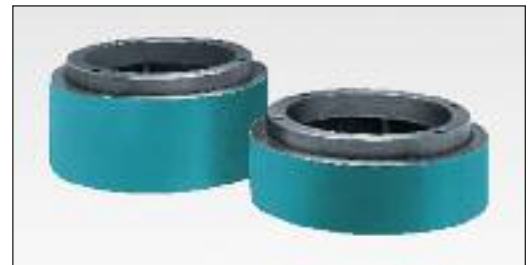


### Horizontal Milling Attachment

Right Angle Milling attachment required

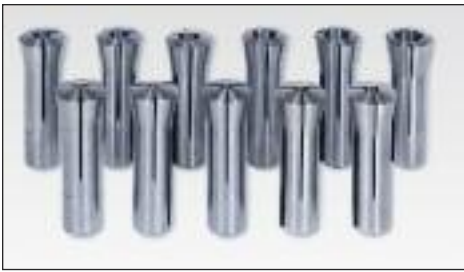
| Part No. | Description, Spindle or Model                         | Weight  |
|----------|---|---------|
| 2VS030   | Horizontal Milling Attachment, R-8 & #30 Spindle      | 20 lbs. |
| 2VS030A  | Horizontal Milling Attachment, #40 Spindle            | 20 lbs. |
| EVS129   | Horiz. Mill Arbor Support for 400EVS, 450EVS & 500EVS | 15 lbs. |
| EVS129   | 1" Milling Arbor for 400EVS, 450EVS & 500EVS          | 10 lbs. |

### Riser Blocks



| Part No. | Description and Model              | Weight   |
|----------|------------------------------------|----------|
| 2VS040P  | 4" Riser Block for 2VS             | 75 lbs.  |
| 2VS041P  | 6" Riser Block for 2VS             | 90 lbs.  |
| 2VS042P  | 8" Riser Block for 2VS             | 100 lbs. |
| 3VS044P  | 4" Riser Block for 3VS             | 75 lbs.  |
| 3VS040P  | 8" Riser Block for 3VS             | 100 lbs. |
| 4VSQ044  | 4" Riser Block for 3VS             | 75 lbs.  |
| 4VSQ040  | 8" Riser Block for 3VS             | 100 lbs. |
| EVS123   | 6" Riser Block for 400EVS 450EVS   | 90 lbs.  |
| EVS123A  | 8" Riser Block for 400EVS & 450EVS | 100 lbs. |
| EVS223   | 6" Riser Block for 500EVS          | 90 lbs.  |
| EVS224   | 8" Riser Block for 500EVS          | 100 lbs. |





### R-8 Round Collet Sets

| Part No.   | Description                                   |
|------------|---|
| Z384-SET-1 | R-8 Metric Set 2mm - 20mm by 1mm, 19 Collets  |
| Z384-SET-5 | R-8 Inch Set 1/8" - 3/4" by 32nds, 21 Collets |
| Z384-SET-6 | R-8 Inch Set 1/8" - 3/4" by 16ths, 11 Collets |
| Z384-SET-7 | R-8 Inch Set 1/8" - 3/4" by 8ths, 6 Collets   |



### Power Feeds

| Part No. | Description and Model                  | Weight  |
|----------|--|---------|
| 2V SX150 | X-Axis Servo Feed for 2VS, 3VS & 4VSQ  | 20 lbs. |
| 2V SXA   | X-Axis Align Power for 2VS, 3VS & 4VSQ | 20 lbs. |
| 2V SY150 | Y-Axis Servo Feed for 2VS, 3VS & 4VSQ  | 20 lbs. |
| 2V SYA   | Y-Axis Align Power for 2VS, 3VS & 4VSQ | 20 lbs. |
| 2V SK140 | Knee Servo Feed for 2VS & 3VS          | 20 lbs. |
| 2V SKA   | Knee Align Power for 2VS & 3VS         | 20 lbs. |

## ACU-RITE® 200S Digital Readout

As the industry standard in digital readout systems, the Acu-Rite 200S offers state-of-the-art features for milling applications.



### DRO Features

- 2 or 3 axes
- 5.7" transmissive LCD display
- Feed Rate Display
- Multiple language support
- Absolute/incremental
- Near-zero warning
- Help function
- 16 Tool Offsets/Diameter
- Preset and zero reset
- 4 function calculator/trig calculator
- Instant Inch/mm conversion
- Position-trac TM
- Bolt hole pattern calculations with graphics (full and partial circles/linear patterns)
- Centerline calculation enables you to establish workpiece zero and midpoints
- Edge finder input
- I/O (option)



### 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. |
| 2VS8440  | Power Drawbar Kit for #40 Spindle | 25 lbs. |



## FAGOR

### Innova 40i DRO for 2, 3 and 4 Axes Milling Machines

### DRO Features

- Linear and angular axes
- Easy setup and diagnosis
- Feedback signal monitoring
- Linear and multi-point compensation
- Radius or diameter display
- Preset and zero setting of the axes
- Incremental and distance-coded reference marks
- Tool radius compensation
- Direct mm/inch conversion
- Fine/coarse axis resolution
- Buzzer
- Absolute / Incremental measurement
- Easy software update through USB adapter
- Alarms for excessive feed rate and travel limit overrun
- "Display OFF" mode
- Calculator
- 3D color display of tool path
- Bolt Hole drilling calculation
- Up to 50 part references (datum points)
- Linear drilling calculation
- Part centering
- Part alignment
- Axis coupling



## NEWALL

### DP700 Digital Readout

The DP700 is a powerful and intuitive DRO that is housed in a rugged, ergonomically designed casting.

### DRO Features

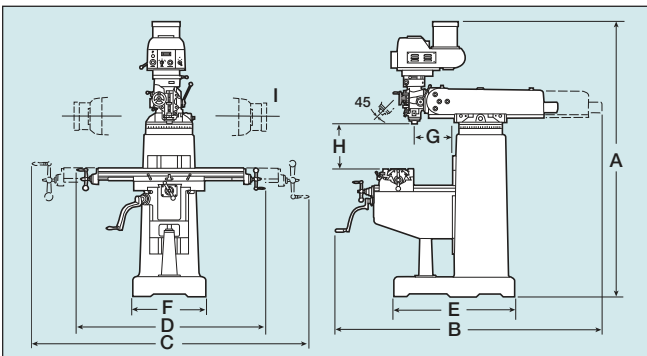
- Solid cast construction
- Long life membrane keypad
- Clean, crisp LEDs
- Intuitive message window
- Wide viewing angle
- Safe, low voltage external Power supply
- Five year warranty
- Customized canned cycles
- ABS/inc
- Digifind
- Metric/inch
- Zero approach
- Tool offsets
- Taper
- Summing
- Bolt hole circle
- Arc contouring
- Polar co-ordinates
- Line hole
- Programmable memory
- Feed-rate display
- Linear and segmented error Compensation
- RS232 output
- Undo function



Shown with FAGOR CNC Control

### Standard Features...

- Choice of two or full three axes CNC control
- Manual operation with DRO, semi-automatic operation with two or three axes operation
- Up to 5 Hp spindle motor standard
- Spindle brake with auto power off
- Totally enclosed electrics with Yaskawa A.C. inverter variable speed drive
- Carbon steel, hardened and ground, chrome plated quill
- Coolant system
- Up to 11" x 58" (254x1270mm) table size
- Meehanite castings for superior rigidity
- Hardened and ground table with 3 ground T-slots
- Double nuts for easy backlash adjustment
- Up to 38.2" (970mm) X axis travel, 16" (406mm) Y axis travel, 17.7" (450mm) knee travel and 4.75" (120mm) quill travel
- All ways are hardened and ground with Turcite B coating on X and Y axis ways for wear resistance and smooth operation



## Clausing CNC EVS Vertical Mills Models: 400EVSCNC, 450EVSCNC & 500EVSCNC

**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

### Specifications:

| Model                                     | 400EVSCNC                                      | 450EVSCNC              | 500EVSCNC              |
|---|--|------------------------|------------------------|
| <b>Table:</b>                             |  |                        |                        |
| Table Size                                | 10" x 50" (254x1270mm)                         | 10" x 54" (254x1270mm) | 11" x 58" (279x1270mm) |
| 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)       |
| <b>Travels:</b>                           |  |                        |                        |
| 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" (559mm)                                    | 22" (559mm)            | 22" (559mm)            |
| Ram Swivel                                | 360°   | 360°                   | 360°                   |
| 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) |
| <b>Spindle Head:</b>                      |  |                        |                        |
| Spindle Drive Motor                       | 3 hp (2.25kw)                                  | 3 hp (2.25kw)          | 5 hp (3.5kw)           |
| Spindle Speed Range                       | 50-5000 rpm                                    | 50-5000 rpm            | 50-5000 rpm            |
| Spindle Taper                             | R-8 or ISO30                                   | R-8 or ISO30           | R-8 or ISO30           |
| Quill Travel                              | 4.75" (120mm)                                  | 4.75" (120mm)          | 4.75" (120mm)          |
| Quill Diameter                            | 3.28" (83mm)                                   | 3.38" (83mm)           | 3.38" (83mm)           |
| Quill Feed                                | .00157/.00315/.006in/rev (0.04/.08/.152mm/min) |                        |                        |
| Head Tilt (Front or Back)                 | 45°  | 45°                    | 45°                    |
| Head Tilt (Left or Right 2 Axis only) (I) | 90°  | 90°                    | 90°                    |
| <b>Dimensions &amp; Weight:</b>           |  |                        |                        |
| 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" (250mm)         |
| Ram/Turret Bearing Length                 | 17.72" (450mm)                                 | 17.72" (450mm)         | 17.72" (450mm)         |
| 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)            |
| 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.





Shown with  
ACU-RITE MILLPWR CNC Control

### 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
- Hardened and ground X, Y & Z ballscrews
- ABEC 7/CP4 spindle bearings
- Coolant system w/pump & switch
- Flexible segmented coolant nozzle
- Chromed Y screw covers and one-piece wipers
- AC rapid vertical drive (4VSQCNC)
- Variable speed drive
- Articulating head for compound angles (limited by number of axes)
- Worm gear angular positioning of head in two directions
- Lever-operated manual rapid quill movement (mill power only)
- Handwheel for fine quill feed (on 2 axis systems)
- Adjustable automatic feed disengagement for quill feed in both directions (2 axis only)
- Micrometer depth stop (2 axis only)
- Spindle reversing switch for clockwise or counter clockwise operation
- R-8 or ISO-30 spindle (2VSCNC & 3VSCNC)
- ISO-40 spindle (4VSQCNC)
- Spindle brake (hand operated)
- One-shot lubrication
- Tool kit, test and accuracy chart
- Operations manual/parts list

## Clausing CNC Vertical Mills Models: 2VSCNC, 3VSCNC & 4VSQCNC

**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.**

### Specifications:

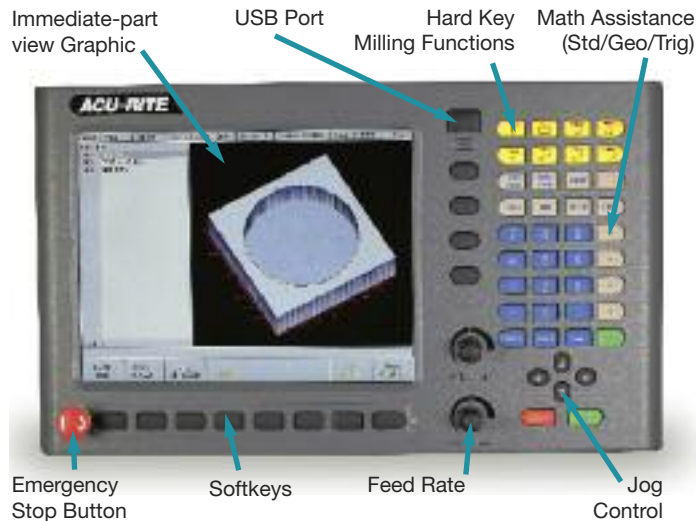
| Model                        | 2VSCNC  | 3VSCNC                 | 4VSQCNC                |
|------------------------------|---|------------------------|------------------------|
| <b>Table &amp; Ways:</b>     |   |                        |                        |
| Table Size                   | 9" x 49" (228x1244mm)                         | 10" x 54" (254x1372mm) | 10" x 54" (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                 |
| <b>Travels:</b>              |   |                        |                        |
| 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)         |
| <b>Motors &amp; Spindle:</b> |   |                        |                        |
| Motor Variable               | 3 hp ( 2.2kw)                                 | 3 hp (2.2kw)           | 5 hp (3.7kw)           |
| 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 ISO30                                  | R-8 or ISO30           | ISO40                  |
| Spindle Travel               | 5" (127mm)                                    | 5" (127mm)             | 5" (127mm)             |
| Quill Feed                   | .0015/.003/.006in/rev. (.004/.008/.015mm/rev) |                        |                        |
| Quill Diameter               | 3.38" (127mm)                                 | 3.38" (127mm)          | 4.13" (105mm)          |
| <b>Construction:</b>         |   |                        |                        |
| 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.

# Clausing CNC Vertical Mill CNC Control Options

**ACU-RITE® MILLPWRG2**

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



## Hardware Features

- Precision Ground and Hardened Ball Screws
- Powerful AC Servo Motors Assemblies
- Closed Loop Feedback using ACU-RITE Precision Glass Scales with (1µm/.00004 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 • USB and Ethernet
- Maximum Table Feedrate of 100 IPM

## Features and Benefits

- 3 axes Control/4-axes Readout Optional
- 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

**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

# Clausing CNC Vertical Knee Mill Control Options & Accessories



**Chip Tray**

| Part No. | Description and Model         | Weight  |
|----------|-------------------------------|---------|
| 2VS001P  | Chip Tray for 2VS             | 15 lbs. |
| 3VS001P  | Chip Tray for 3VS             | 15 lbs. |
| 3VS001P  | Chip Tray for 4VSQ            | 15 lbs. |
| EVS120   | Chip Tray for 400EVS          | 15 lbs. |
| EVS120A  | Chip Tray for 450EVS & 500EVS | 15 lbs. |



**Power Drawbar**

| Part No.    | Description and Spindle           | Weight  |
|-------------|-----------------------------------|---------|
| 2VS8408-CNC | Power Drawbar for R-8 Spindle     | 25 lbs. |
| 2VS8430-CNC | Power Drawbar Kit for #30 Spindle | 25 lbs. |
| 2VS8440-CNC | Power Drawbar Kit for #40 Spindle | 25 lbs. |

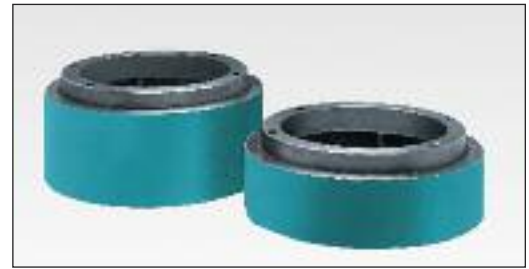
## Milling Chuck Kit

Milling Chuck Kit with 7 ER collets, in sizes 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" & 1" in carrying case.



**Horizontal Milling Attachment**

Right Angle Milling Attachment required for Right Angle Milling Attachment



**Riser Blocks**

| Part No. | Description and Model               | Weight   |
|----------|-------------------------------------|----------|
| 2VS040P  | 4" Riser Block for Model 2VS        | 75 lbs.  |
| 2VS041P  | 6" Riser Block for Model 2VS        | 90 lbs.  |
| 2VS042P  | 8" Riser Block for Model 2VS        | 100 lbs. |
| 3VS044P  | 4" Riser Block for Model 3VS        | 75 lbs.  |
| 3VS040P  | 8" Riser Block for Model 3VS        | 100 lbs. |
| 4VSQ044  | 4" Riser Block for Model 4VS        | 75 lbs.  |
| 4VSQ040  | 8" Riser Block for Model 3VS        | 100 lbs. |
| EVS123   | 6" Riser Block for Models 400 & 450 | 90 lbs.  |
| EVS123A  | 8" Riser Block for Models 400 & 450 | 100 lbs. |
| EVS223   | 6" Riser Block for Model 500        | 90 lbs.  |
| EVS223A  | 8" Riser Block for Model 500        | 100 lbs. |



## Clamping Kit

52 pc. Clamping Kit for all models.  
Part No. 2VS010



**Right Angle Milling Attachment**

| Part No. | Description, Spindle or Model                        | Weight  |
|----------|--|---------|
| 4VS031   | Rt. Angle Milling Attachment for 4VSQ                | 20 lbs. |
| EVS126   | Rt. Angle Milling Attachment, R-8 Spindle for EVS400 | 20 lbs. |
| EVS126A  | Rt. Angle Milling Attachment, #30 Spindle for EVS400 | 20 lbs. |
| EVS126B  | Rt. Angle Milling Attachment, #40 Spindle for EVS400 | 20 lbs. |
| EVS127   | Rt. Angle Milling Attachment, R-8 Spindle for EVS450 | 20 lbs. |
| EVS127A  | Rt. Angle Milling Attachment, #30 Spindle for EVS450 | 20 lbs. |
| EVS127B  | Rt. Angle Milling Attachment, #40 Spindle for EVS450 | 20 lbs. |
| EVS128   | Rt. Angle Milling Attachment, R-8 Spindle for EVS500 | 20 lbs. |
| EVS128A  | Rt. Angle Milling Attachment, #30 Spindle for EVS500 | 20 lbs. |
| EVS128B  | Rt. Angle Milling Attachment, #40 Spindle for EVS500 | 20 lbs. |

| Part No. | Description, Spindle or Model                         | Weight  |
|----------|---|---------|
| 2VS030   | Horizontal Milling Attachment, R-8 & #30 Spindle      | 20 lbs. |
| 2VS030A  | Horizontal Milling Attachment, #40 spindle            | 20 lbs. |
| EVS129   | Horiz. Mill Arbor Support for 400EVS, 450EVS & 500EVS | 15 lbs. |
| EVS129   | 1" Milling Arbor for 400EVS, 450EVS & 500EVS          | 10 lbs. |

MILLING





## Clausing Standard Bed Mills Models: 4BVS40, 6BVS40

### Specifications:

| Model                                | 4BVS40                                      | 6BVS40                            |
|--------------------------------------|---|-----------------------------------|
| Table Size                           | 10" x 54" (254x1371mm)                      | 15" x 60" (380x1524mm)            |
| Table Load Capacity                  | 1,500 lbs. (680kg)                          | 1,800 lbs. (817kg)                |
| Number of T-Slots                    | 3   | 3                                 |
| T-Slot Width                         | .63" (16mm)                                 | .709" (18mm)                      |
| T-Slot Center Distance               | 2.48" (63mm)                                | 3.15" (80mm)                      |
| Table Ways (X Axis) Turcite B Coated | Dovetail                                    | Dovetail                          |
| Bed Ways (Y Axis) Turcite B Coated   | Square                                      | Square                            |
| Column Ways (Z Axis)                 | Square                                      | Square                            |
| <b>Travels</b>                       |   |                                   |
| Longitudinal (X Axis)                | 30.51" (775mm)                              | 41.34" (1050mm)                   |
| Cross (Y Axis)                       | 17.52" (445mm)                              | 19.69" (500mm)                    |
| Vertical (Z Axis)                    | 19.69" (500mm)                              | 23.62" (600mm)                    |
| Quill Diameter                       | 4.13" (105mm)                               | 4.13" (105mm)                     |
| Quill Travel                         | 5" (127mm)                                  | 5" (127mm)                        |
| Head Tilt (Left or Right)            | 90°   | 90°                               |
| Feedrate X & Y Axes                  | .71-31 (in/min) (18-788mm/min)              | 1.1-43.3 (in/min) (88-1100mm/min) |
| Feedrate Z Axis                      | .71-31 (in/min) (18-788mm/min)              | .71-31 (in/min) (18-788mm/min)    |
| X & Y Axes AC Motor with Brake       | 1/2 hp (.37kw)                              | 1 hp (.75kw)                      |
| Z Axis AC Motor with Brake           | 1/2 hp (.37Kw)                              | 1/2 hp (.37Kw)                    |
| <b>Spindle</b>                       |   |                                   |
| Motor (mechanical V.S.)              | 5 Hp (3.7kw)                                | 5 Hp (3.7kw)                      |
| Spindle Speeds (Infinitely Variable) | 70-4300 rpm                                 | 70-4300 rpm                       |
| No. of Speed Ranges                  | 2   | 2                                 |
| Low Gear Range                       | 70-500 rpm                                  | 70-500 rpm                        |
| High Gear Range                      | 570-4300 rpm                                | 570-4300 rpm                      |
| Spindle Taper                        | NT 40                                       | NT 40                             |
| Quill feed                           | .0016/.003/.006in/rev(0.04/0.08/0.15mm/rev) |                                   |
| <b>Construction</b>                  |   |                                   |
| Height                               | 78.74" (2000mm)                             | 85.43" (2170mm)                   |
| Working Width                        | 71.46" (1815mm)                             | 92.91" (2360mm)                   |
| Working Depth                        | 66.14" (1680mm)                             | 76.77" (1950mm)                   |
| Width Across Column Ways             | 11.73" (298mm)                              | 11.73" (298mm)                    |
| Length of Saddle on Bed              | 25.98" (660mm)                              | 47.24" (1200mm)                   |
| Width Across Bed Ways                | 16.53" (420mm)                              | 20.47" (520mm)                    |
| Spindle Nose to Table                | 3.15"-22.83" (80-580mm)                     | 3.93"-27.55" (100-700mm)          |
| Center of Spindle to Column ways     | 17.32" (440mm)                              | 20.47" (520mm)                    |
| Floor to Table Surface               | 36.2" (920mm)                               | 37" (940mm)                       |
| Table to Column Ways                 | 3.15"-20.87" (80-530mm)                     | 2.05"-21.73" (52-552mm)           |
| Ball Screw Dia./Pitch                | 1.26"/.2" (32/5mm)                          | 1.26"/.2" (32/5mm)                |
| Ball Screw Class                     | C7  | C7                                |
| Gross Weight (Approximately)         | 4,400 lbs. (2000kg)                         | 6,600 lbs. (3000kg)               |

### Standard Features...

- Powerful 5 hp (3.7kw) spindle drive motor
- Mechanical variable speed drive with 2 speed ranges
- Hardened and ground spindle with NT 40 taper
- Hardened and chromed quill with 5"(127mm) travel
- CP4 ABEC7 angular contact spindle bearings
- C7 double nut X/Y/Z axes 1.26"(32mm) 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
- Stainless steel front Y axis way cover
- Rubber Z axis and rear Y/Z axes way covers
- Automatic lubrication with alarm
- Transformer
- Long arm halogen work light
- Coolant system with pump
- Tools, toolbox and parts

Machine Control, Design and Specifications are subject to change without notice.



## Clousing Standard Bed Mills

### Models: SUP4BVS40, SUP6BVS40, SUP8BVS40

## Specifications:

| Model                                | SUP4BVS40                           | SUP6BVS40                            | SUP8BVS40                            |
|--------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| Table Size                           | 10" x 54"<br>(254x1371mm)           | 15" x 60"<br>(380x1524mm)            | 16.75" x 62"<br>(425x1575mm)         |
| Table Load Capacity                  | 1,500 lbs. (680kg)                  | 1,800 lbs. (817kg)                   | 2,000 lbs. (907kg)                   |
| Number of T-Slots                    | 3                                   | 3                                    | 4                                    |
| T-Slot Width                         | .63" (16mm)                         | .709" (18mm)                         | .709" (18mm)                         |
| T-Slot Center Distance               | 2.48" (63mm)                        | 3.15" (80mm)                         | 3.15" (80mm)                         |
| Table Ways (X Axis) Turcite B Coated | Dovetail                            | Dovetail                             | Dovetail                             |
| Bed Ways (Y Axis) Turcite B Coated   | Square                              | Square                               | Square                               |
| Ways (Z Axis)                        | Square                              | Square                               | Square                               |
| <b>Travels</b>                       |                                     |                                      |                                      |
| Longitudinal (X Axis)                | 30.51" (775mm)                      | 41.34" (1050mm)                      | 47.24" (1200mm)                      |
| Cross (Y Axis)                       | 17.52" (445mm)                      | 19.69" (500mm)                       | 22.83" (580mm)                       |
| Vertical (Z Axis)                    | 19.69" (500mm)                      | 23.62" (600mm)                       | 23.62" (600mm)                       |
| Quill Diameter                       | 4.13" (105mm)                       | 4.13" (105mm)                        | 4.33" (110mm)                        |
| Quill Travel                         | 5" (127mm)                          | 5" (127mm)                           | 6" (152mm)                           |
| Head Tilt (Left or Right)            | 90°                                 | 90°                                  | 90°                                  |
| Feedrate X & Y Axes                  | .71-31 (in/min)<br>(18-788mm/min)   | 1.1-43.3 (in/min)<br>(28-1100mm/min) | 1.1-43.3 (in/min)<br>(28-1100mm/min) |
| Feedrate Z Axis                      | .71-31 (in/min)<br>(18-788mm/min)   | .71-31 (in/min)<br>(18-788mm/min)    | .71-31 (in/min)<br>(18-788mm/min)    |
| X & Y Axes AC Motor with Brake       | 1/2 hp (.36kw)                      | 1 hp (.75kw)                         | 1 hp (.75kw)                         |
| Z Axis AC Motor with Brake           | 1/2 hp (.36kw)                      | 1/2 hp (.36kw)                       | 1/2 hp (.36kw)                       |
| <b>Spindles</b>                      |                                     |                                      |                                      |
| Motor (Inverter V.S.)                | 5 hp (3.7kw)                        | 5 hp (3.7kw)                         | 7.5 hp (5kw)                         |
| Spindle Speeds (Infinitely Variable) | 65-5160 rpm                         | 65-5160 rpm                          | 70-4300 rpm                          |
| No. of Speed Ranges                  | 2                                   | 2                                    | 2                                    |
| Low Gear Range                       | 65-590 rpm                          | 65-590 rpm                           | 70-500 rpm                           |
| High Gear Range                      | 575-5160 rpm                        | 575-5160 rpm                         | 570-4300 rpm                         |
| Spindle Taper                        | NT 40                               | NT 40                                | NT 40                                |
| Quill feed (in/rev)<br>(mm/rev)      | .0016/.003/.006<br>(0.04/0.08/0.15) | .0016/.003/.006<br>(0.04/0.08/0.15)  | .0016/.003/.006<br>(0.04/0.08/0.15)  |
| <b>Construction</b>                  |                                     |                                      |                                      |
| Height                               | 78.74" (2000mm)                     | 85.43" (2170mm)                      | 84.65" (2150mm)                      |
| Working Width                        | 71.46" (1815mm)                     | 92.91" (2360mm)                      | 98.03" (2490mm)                      |
| Working Depth                        | 66.14" (1680mm)                     | 76.77" (1950mm)                      | 80.71" (2050mm)                      |
| Width Across Column Ways             | 11.73" (298mm)                      | 11.73" (298mm)                       | 11.73" (298mm)                       |
| Length of Saddle on Bed              | 25.98" (660mm)                      | 47.24" (1200mm)                      | 53.15" (1350mm)                      |
| Width Across Bed Ways                | 16.53" (420mm)                      | 20.47" (520mm)                       | 22.83" (580mm)                       |
| Spindle Nose to Table                | 3.15"-22.83"<br>(80-580mm)          | 3.93"-27.55"<br>(100-700mm)          | 3.93"-27.55"<br>(100-700mm)          |
| Center of Spindle to Column Ways     | 17.32" (440mm)                      | 20.47" (520mm)                       | 23.62" (600mm)                       |
| Floor to Table Surface               | 36.2" (920mm)                       | 37" (940mm)                          | 34.3" (871mm)                        |
| Table to Column Ways                 | 3.15"-20.87"<br>(80-530mm)          | 2.05"-21.73"<br>(52-552mm)           | .79"-23.62"<br>(20-600mm)            |
| Ball Screw Dia./Pitch                | 1.26"/.2" (32/5mm)                  | 1.26"/.2" (32/5mm)                   | 1.26"/.2" (32/5mm)                   |
| Ball Screw Class                     | C7                                  | C7                                   | C7                                   |
| Gross Weight (Approximately)         | 4,400 lbs. (2000kg)                 | 6,600 lbs. (3000kg)                  | 7,260 lbs. (3300kg)                  |

### Standard Features...

- Powerful 5 hp (3.7kw) spindle motor SUP4BVS & SUP6BVS and 7.5 hp (3.7kw) spindle motor SUP8BVS
- Inverter variable speed drive with 2 speed ranges
- Hardened and ground spindle with NT 40 taper
- Hardened and chromed quill with 5" (127mm) travel
- CP4 ABEC7 angular contact spindle bearings
- C7 double nut X/Y/Z axes 1.26" (32mm) diameter precision 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 covers
- Rubber rear Y/Z axes way covers
- Stainless steel front Y axis way cover
- Coolant system with pump
- Long arm halogen work light
- Transformer
- Automatic lubrication system with alarm
- Tools, toolbox and parts

Machine Control, Design and Specifications are subject to change without notice.

MILLING



## Clausing CNC Bed Mills Models: 4BVSCNC40, 6BVSCNC40

### Specifications:

| Model                  | 4BVSCNC40              | 6BVSCNC40              |
|------------------------|------------------------|------------------------|
| Table Size             | 10" x 54" (254x1371mm) | 15" x 60" (380x1525mm) |
| Table Load Capacity    | 1,500 lbs. (680kg)     | 1,800 lbs. (817kg)     |
| Number of T-Slots      | 3                      | 3                      |
| T-Slot Width           | .63" (16mm)            | .709" (18mm)           |
| T-Slot Center Distance | 2.48" (63mm)           | 3.15" (80mm)           |
| Table Ways (X Axis)    | Dovetail               | Dovetail               |
| Bed Ways (Y Axis)      | Square                 | Square                 |
| Column Ways (Z Axis)   | Square                 | Square                 |

#### TRAVELS

|                                   |                             |                             |
|-----------------------------------|-----------------------------|-----------------------------|
| Longitudinal (X Axis)             | 30.51" (775mm)              | 41.3" (1049mm)              |
| Cross (Y Axis)                    | 17.5" (446mm)               | 19.6" (498mm)               |
| Vertical (Z Axis)                 | 19.69" (498mm)              | 23.62" (600mm)              |
| Quill Diameter                    | 4.13" (105mm)               | 4.13" (105mm)               |
| Quill Travel                      | 5" (127mm)                  | 5" (127mm)                  |
| Head Tilt (Left or Right)         | 90°                         | 90°                         |
| Rapid Traverse Rate X & Y         | 100 in/min (2540mm/min)     | 100 in/min (2540mm/min)     |
| Rapid Traverse Rate Z             | 75 in/min (1905mm/min)      | 75 in/min (1905mm/min)      |
| Programmable Feedrate X & Y       | 0-100 in/min (0-2540mm/min) | 0-100 in/min (0-2540mm/min) |
| Programmable Feedrate Z           | 0-75 in/min (0-1905mm/min)  | 0-75 in/min (0-1905mm/min)  |
| Feedrate Override (5% Increments) | 5%-150%                     | 5%-150%                     |

#### SPINDLE

|                                      |  |              |
|--------------------------------------|--|--------------|
| Motor                                | 5 hp (3.7Kw)                                   | 5 hp (3.7hw) |
| Spindle Speeds (Infinitely Variable) | 70-4300 rpm                                    | 70-4300 rpm  |
| No. of Speed Ranges                  | 2  | 2            |
| Low Gear Range                       | 70-500 rpm                                     | 70-500 rpm   |
| High Gear Range                      | 570-4300 rpm                                   | 570-4300 rpm |
| Spindle Taper                        | NT 40  | NT 40        |
| Quill Feed                           | .0016/.003/.006in/rev. (0.04/0.08/0.15mm/rev.) |              |

#### CONSTRUCTION

|                                  |                         |                          |
|----------------------------------|-------------------------|--------------------------|
| Height                           | 89.76" (2280mm)         | 99" (2515mm)             |
| Width                            | 71.46" (1815mm)         | 92.91" (2360mm)          |
| Depth                            | 66.14" (1680mm)         | 76.77" (1950mm)          |
| Working Width                    | 100" (2540mm)           | 131" (3327mm)            |
| Working Depth                    | 74" (1880mm)            | 90" (2286mm)             |
| Width Across Column Ways         | 11.73" (298mm)          | 11.73" (298mm)           |
| Length of Saddle on Bed          | 25.98" (660mm)          | 47.24" (1200mm)          |
| Width Across Bed Ways            | 16.53" (420mm)          | 20.47" (520mm)           |
| Spindle Nose to Table            | 3.15"-22.83" (80-580mm) | 3.93"-27.55" (100-700mm) |
| Center of Spindle to Column Ways | 17.32" (440mm)          | 20.47" (520mm)           |
| Floor to Table Surface           | 36.2" (919mm)           | 37" (940mm)              |
| Table to Column Ways (min/max.)  | 3.15"-20.87" (80-530mm) | 2.05"-21.73" (52-552mm)  |
| Ball Screw Dia.                  | 1.26"/.2" (32/5mm)      | 1.26"/.2" (32/5mm)       |
| Ball Screw Class                 | C7                      | C7                       |
| Gross Weight (Approximately)     | 4,400 lbs. (1996kg)     | 6,600 lbs. (2994kg)      |

**ACU-RITE®**

**MILLPWR** Three axes  
CNC Control

#### Hardware Features

- Precision Ground and Hardened Ball Screws
- Powerful AC Servo Motors Assemblies
- Closed Loop Feedback using ACU-RITE Precision Glass Scales with (1µm/.00004 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 • USB and Ethernet
- Maximum Table Feedrate of 100 IPM

#### Standard Features...

- Hardened and ground spindle with NT 40 taper
- Hardened and chromed quill with 5" (127mm) travel
- CP4 ABEC7 angular contact spindle bearings
- C7 double nut X/Y/Z axes 1.26" (32mm) diameter ballscrew
- Hardened and ground table surface
- Ground T-slots to provide accurate reference edge
- Hardened and ground, square X/Y axes ways
- Turcite B coating on saddle X/Y axes ways
- Meehanite castings for superior rigidity
- Telescopic Z axis ballscrew cover
- Z axis accordion way cover
- Stainless steel front Y axis way cover
- Rubber rear Y/Z axes way covers
- X/Y axes handwheels • Table guarding
- Automatic lubrication with alarm
- Heavy-duty chip tray and rear splash guard

*Machine Control, Design and Specifications are subject to change without notice.*





## Clausing Bed Mills

Models: SUP4BVSCNC40, SUP6BVSCNC40, SUP8BVSCNC40

### Specifications:

#### Standard Features...

- Available with FAGOR 8055i, or ACU-RITE MILLPWR
- 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 NT 40 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

| Model                                | SUP4BVSCNC40              | SUP6BVSCNC40              | SUP8BVSCNC40                 |
|--------------------------------------|---------------------------|---------------------------|------------------------------|
| Table Size                           | 10" x 54"<br>(254x1371mm) | 15" x 60"<br>(380x1524mm) | 16.75" x 62"<br>(425x1575mm) |
| Table Load Capacity                  | 1,500 lbs. (680kg)        | 1,800 lbs. (817kg)        | 2,000 lbs. (907kg)           |
| Number of T-Slots                    | 3                         | 3                         | 4                            |
| T-Slot Width                         | .63" (16mm)               | .709" (18mm)              | .709" (18mm)                 |
| T-Slot Center Distance               | 2.48" (63mm)              | 3.15" (80mm)              | 3.15" (80mm)                 |
| Table Ways (X Axis) Turcite B Coated | Dovetail                  | Dovetail                  | Dovetail                     |
| Bed Ways (Y Axis) Turcite B Coated   | Square                    | Square                    | Square                       |
| Ways (Z Axis)                        | Square                    | Square                    | Square                       |

#### Travels

|                                   |                              |                              |                              |
|-----------------------------------|------------------------------|------------------------------|------------------------------|
| Longitudinal (X Axis)             | 30.51" (775mm)               | 41.34" (1050mm)              | 47.24" (1200mm)              |
| Cross (Y Axis)                    | 17.52" (445mm)               | 19.69" (500mm)               | 22.83" (580mm)               |
| Vertical (Z Axis)                 | 19.69" (500mm)               | 23.62" (600mm)               | 23.62" (600mm)               |
| Quill Diameter                    | 4.13" (105mm)                | 4.13" (105mm)                | 4.33" (105mm)                |
| Quill Travel                      | 5" (127mm)                   | 5" (127mm)                   | 6" (127mm)                   |
| Head Tilt (Left or Right)         | 90°                          | 90°                          | 90°                          |
| Rapid Traverse Rate X & Y Axes    | 100 (in/min)<br>(2540mm/min) | 100 (in/min)<br>(2540mm/min) | 100 (in/min)<br>(2540mm/min) |
| Feedrate Z Axis                   | 75 (in/min)<br>(1905mm)      | 75 (in/min)<br>(1905mm)      | 75 (in/min)<br>(1905mm)      |
| Programmable Feedrate X & Y       | 0-100 in/min (0-2540mm/min)  |                              |                              |
| Programmable Feedrate X & Y       | 0-75 in/min (0-1905mm/min)   |                              |                              |
| Feedrate Override (5% Increments) | 5%-150%                      | 5%-150%                      | 5%-150%                      |

#### Spindle

|                                      |                                     |                                     |                                     |
|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Motor (Inverter V.S.)                | 5 hp (3.7kw)                        | 5 hp (3.7kw)                        | 7.5 hp (5kw)                        |
| Spindle Speeds (Infinitely Variable) | 65-5160 rpm                         | 65-5160 rpm                         | 70-4300 rpm                         |
| No. of Speed Ranges                  | 2                                   | 2                                   | 2                                   |
| Low Gear Range                       | 65-590 rpm                          | 65-590 rpm                          | 70-500 rpm                          |
| High Gear Range                      | 575-5160 rpm                        | 575-5160 rpm                        | 570-4300 rpm                        |
| Spindle Taper                        | NT 40                               | NT 40                               | NT 40                               |
| Quill feed (in/rev)<br>(mm/rev)      | .0016/.003/.006<br>(0.04/0.08/0.15) | .0016/.003/.006<br>(0.04/0.08/0.15) | .0016/.003/.006<br>(0.04/0.08/0.15) |

#### Construction

|                                  |                              |                              |                              |
|----------------------------------|------------------------------|------------------------------|------------------------------|
| Height                           | 78.74" (2000mm)              | 85.43" (2170mm)              | 84.65" (2150mm)              |
| Width                            | 71.46" (1815mm)              | 92.91" (2360mm)              | 98.03" (2490mm)              |
| Depth                            | 66.14" (1680mm)              | 76.77" (1950mm)              | 80.71" (2050mm)              |
| Working Width                    | 100" (2540mm)                | 131" (3327mm)                | 140" (3556mm)                |
| Working Depth                    | 74" (1880mm)                 | 90" (2286mm)                 | 100" (2540mm)                |
| Width Across Column Ways         | 11.73" (298mm)               | 11.73" (298mm)               | 11.73" (298mm)               |
| Length of Saddle on Bed          | 25.98" (660mm)               | 47.24" (1200mm)              | 53.15" (1350mm)              |
| Width Across Bed Ways            | 16.53" (420mm)               | 20.47" (520mm)               | 22.83" (580mm)               |
| Center of Spindle to Column Ways | 17.32" (440mm)               | 20.47" (520mm)               | 23.62" (600mm)               |
| Spindle Nose to Table            | 3.15" - 22.83"<br>(80-580mm) | 3.93" - 27.55"<br>(52-552mm) | 3.93" - 27.55"<br>(20-600mm) |
| Floor to Table Surface           | 36.2" (920mm)                | 37" (940mm)                  | 34.3" (871mm)                |
| Table to Column Ways             | 3.15"-20.87"<br>(80-530mm)   | 2.05"-21.73"<br>(100-700mm)  | .79"-23.62"<br>(100-700mm)   |
| Ball Screw Dia./Pitch            | 1.26"/.2" (32/5mm)           | 1.26"/.2" (32/5mm)           | 1.26"/.2" (32/5mm)           |
| Ball Screw Class                 | C7                           | C7                           | C7                           |
| Gross Weight (Approximately)     | 4,400 lbs. (2000kg)          | 6,600 lbs. (3000kg)          | 7,260 lbs. (3300kg)          |

Machine Control, Design and Specifications are subject to change without notice.

# Clausing Standard Bed Mill DROs & Accessories

## ACU-RITE® 200S Digital Readout

As the industry standard in digital readout systems, the Acu-Rite 200S offers state-of-the-art features for milling applications.



### DRO Features

- 2 or 3 axes
- 5.7" transmissive LCD display
- Feed rate display
- Multiple language support
- Absolute/incremental
- Near-zero warning
- Help function
- 16 tool offsets/diameter
- Preset and zero reset
- 4 Function calculator/trig calculator
- Instant inch/mm conversion
- Position-Trac™
- Bolthole pattern calculations with graphics (full and partial circles/linear patterns)
- Centerline calculation enables you to establish workpiece zero and midpoints
- Edge finder input
- I/O (option)

## NEWALL

### DP700 Digital Readout

The DP700 is a powerful and intuitive DRO that is housed in a rugged, ergonomically designed casting.



### DRO Features

- Solid cast construction
- Long life membrane keypad
- Clean, crisp LEDs
- Intuitive message window
- Wide viewing angle
- Safe, low voltage external Power supply
- Five year warranty
- Customized canned cycles
- ABS/inc
- Digifind
- Metric/inch
- Zero approach
- Tool offsets
- Taper
- Summing
- Bolt hole circle
- Arc contouring
- Polar co-ordinates
- Line hole
- Programmable memory
- Feed-rate display
- Linear and segmented error Compensation
- RS232 output
- Undo function



## FAGOR

### Innova 40i DRO for 2, 3 and 4 Axes Milling Machines

### DRO Features

- Linear and angular axes
- Easy setup and diagnosis
- Feedback signal monitoring
- Linear and multi-point compensation
- Radius or diameter display
- Preset and zero setting of the axes
- Incremental and distance-coded reference marks
- Tool radius compensation
- Instant inch/mm conversion
- Fine/coarse axis resolution
- Buzzer
- Absolute / Incremental measurement
- Easy software update through USB adapter
- Alarms for excessive feed rate and travel limit overrun
- "Display OFF" mode
- Calculator
- 3D color display of tool path
- Bolt-hole drilling calculation
- Up to 50 part references (datum points)
- Linear drilling calculation
- Part centering
- Part alignment
- Axis coupling

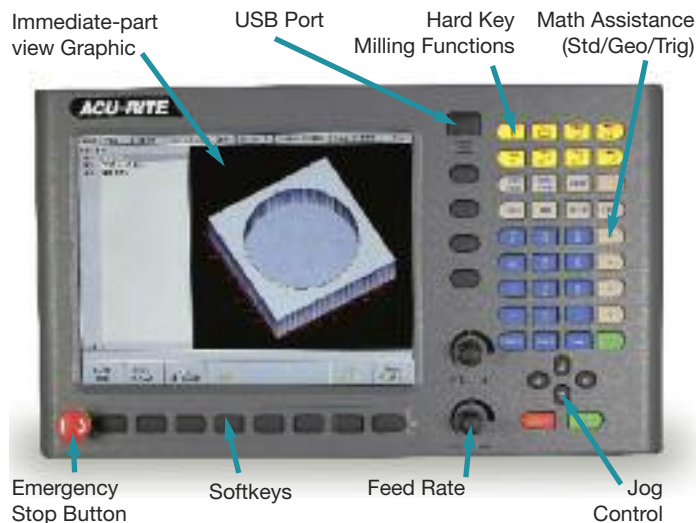
### Clausing Standard Bed Mill Accessories

| Part No. | Description                | Mill Model        |
|----------|----------------------------|-------------------|
| 4VS001A  | 3 Piece Chip Tray          | 4BVS              |
| 4VS001B  | Heavy-Duty Chip Tray       | 4BVS              |
| 4VS007   | Auto Lube with Alarm       | 4BVS & SUP4BVS    |
| 4VS008   | Coolant/Oil Skimmer        | 4BVS & SUP4BVS    |
| 4VS009   | Z-Axis Concertina Cover    | 4BVS              |
| 4VS011   | H.D. Back Chip Guard       | 4BVS & SUP4BVS    |
| 4VS012   | Table Guard                | 4BVS & SUP4BVS    |
| 4VS013   | Table Guard with Interlock | 4BVS & SUP4BVS    |
| 4VS014   | Quill Guard with Lock      | 4BVS & SUP4BVS    |
| 4VS015   | Air Power Draw Bar         | 4BVS & SUP4BVS    |
| 6VS001A  | 3 Piece Chip Tray          | 6BVS              |
| 6VS001B  | Heavy-Duty Chip Tray       | 6BVS              |
| 6VS005   | 7.5 hp Inverter Motor      | 6BVS & SUP6/8BVS  |
| 6VS007   | Auto Lube with Alarm       | 6BVS & SUP6/ 8BVS |
| 6VS008   | Coolant/Oil Skimmer        | 6BVS              |
| 6VS009   | Z-Axis Concertina Cover    | 6BVS              |
| 6VS011   | H.D. Back Chip Guard       | 6BVS & SUP6/8BVS  |
| 6VS012   | Table Guard                | 6BVS              |
| 6VS013   | Table Guard with Interlock | 6BVS              |
| 6VS014   | Quill Guard with Lock      | 6BVS & 8BVS       |
| 6VS015   | Air Power Draw Bar         | 6BVS & 8BVS       |

# Clausing CNC Bed Mill CNC Controls Options and Accessories

**ACU-RITE® MILLPWRG2**

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



## Hardware Features

- Precision Ground and Hardened Ball Screws
- Powerful AC Servo Motors Assemblies
- Closed Loop Feedback using ACU-RITE Precision Glass Scales with (1µm/.00004 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 • USB and Ethernet
- Maximum Table Feedrate of 100 IPM

## Features and Benefits

- 3 axes Control/4-axes Readout Optional
- 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

**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

**MILLING**



## Clausing CNC Bed Mill Options

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

### Clausing CNC Bed Mill Accessories

| Part No. | Description                                   | Mill Model     |
|----------|---|----------------|
| 2VS010   | 52 Piece Clamping Kit                         | All Models     |
| 2VS022   | Milling Chuck Kit w/7 Collets NMTB 40 Spindle | All Models     |
| 4VS205   | Coolant Oil Skimmer                           | 4BVS & SUP4BVS |
| 4VSCNC5  | Table Guard with Interlock                    | 4BVS & SUP4BVS |
| 6VS205   | Coolant Oil Skimmer                           | 6BVS & SUP6BVS |
| 6VSCNC3  | 4th Axis Hand Wheel                           | 6BVS & SUP6BVS |
| 6VSCNC5  | Table Guard with Interlock                    | 6BVS & SUP6BVS |
| 6VSCNC2  | 7.5 hp Motor/Inverter                         | SUP6BVS        |
| 8VS205   | Coolant Oil Skimmer                           | 8BVS & SUP8BVS |
| 8VSCNC3  | 4th Axis Hand Wheel                           | 8BVS & SUP8BVS |
| 8VSCNC5  | Table Guard with Interlock                    | 8BVS & SUP8BVS |
| 8VS203FG | 4th Axis Motor & Cables FAGOR 8055i           | SUP4, 6 & 8BVS |

#### Milling Chuck Kit

Milling Chuck Kit with 7 ER collets, in sizes 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" & 1" in carrying case.



#### Clamping Kit

52 pc. Clamping Kit for all models.  
Part No. 2VS010