



Shown with detail of the rotary table

SERVO IMPACT System 2 CNC Mini-Mill Model M-7800 Series SPECIFICATIONS



New pendant with manual pulse generator

Machine Description

- 3- or 4-axis PC-driven mini-mill on chip tray
- Precision ground ball screws
- Pendant with manual pulse generator, holster and table clamp
- Motor controller 15" x 25" x 8" with easy disconnect cables
- Emergency stop switch
- Impact CNC control software for DOS standard (or optional upgrade to CNC for Windows XP® Professional)
- Customer-supplied PC to Servo specifications (required)
- Travel XYZ 10" x 5.25" x 3.5"
- Table surface 16.75" x 5" with three 3/8" standard T-slots
- Chip tray: 26" x 26" x 1-1/4"
- Maximum clearance 36" x 36" x 24" (including travel)
- One-shot lubrication system (manual)
- Closed loop brushless VR servo motors with encoders
- Liquid-resistant axis drive motor covers
- Axis drive motor thrust 200 lbs.
- Micro-switches for home positioning (XYZ)
- Contouring rate .02-100 ipm; Rapid traverse 200 ipm
- Linear positioning repeatability +/- 0.0002" unidirectional
- Resolution 0.000040"
- Two programmable M-code outlets (110 VAC); turn spindle on/off and one other item, such as coolant
- Three logic outputs, one isolated input
- Machine weight 220 lbs.
- Input voltage 115 VAC, 20 A, 1 phase, 50/60 Hz (mill/control)
- One-year machine warranty
- Servo mill/drill head with spindle speeds 200-20,000 rpm infinitely variable over 2 belt ranges
- Spindle motor rating 1/5 hp
- WW collet system with manual drawbar (0.039" to 0.252" collets not included); spindle runout 0.0002" TIR
- Quill diameter 1.2"; stroke 1.5" sets tools only; entire head assembly moves up and down on the Z-axis column
- Max. spindle nose to table 8.5"; spindle center to column 9.4"

Upgrades and Options

- Servo CNC for Windows XP® Professional
- 4th-axis rotary table for full contouring/indexing (horizontal, vertical, or angular mounting using a sine plate); resolution 0.002 degree; program feed rate .01-4,000 dpm; rapid traverse 9,000 dpm; turntable diameter 3-1/2"; collet type 3C; largest through hole in collet 1/2"
- Column riser block 3.5"
- Mill mounted on laminated woodtop table 60"w x 30"l x 36"h
- Bijur automatic oiling system
- Spray mist (single or dual nozzle)
- Dual mill head bracket assembly (6" between spindle centers)
- Additional mill head
- WW collets (see price list for available sizes)
- Expanded pendant memory
- Servo Quick'n'Easy CAM & CNC Utilities software (DOS)
- 200 VAC 50/60 Hz transformer

Handheld Pendant

- Use Teach mode or on-line PC to create initial point-to-point/angular part program, then transfer to the pendant and run the program from the pendant without use of PC
- Pendant memory capacity for programs stored in pendant
Standard 3-axis = 600 steps; Expanded = 2700 steps
Standard 4-axis = 480 steps; Expanded = 2160 steps
- Manual mode for jogging and axis movement; axis/direction keys for continuous movement; nine jog increments for precise positioning (0.0005"-0.050")
- Feed rate override 0 to 150%
- Hold key to pause and resume operation and/or movement
- Stop key to halt operation and reset program
- Set axis travel limits ("soft limits")

Standard CNC Software

- Run programs of any length (limited only by size of hard drive)
- RS-274D standard G and M codes; CAD/CAM compatible
- Simultaneous 3- or 4-axis linear interpolation
- Full-circle circular interpolation (XY, XZ and YZ plane)
- Helical interpolation
- Continuous contouring mode/In-Position mode
- Inch or metric programming
- Programmable dwell
- Backlash compensation
- Cutter diameter compensation (XY plane)
- Tool length and fixture offsets
- Programmable (P-code) cycles/subroutines
- Toolpath scale, mirror image, rotate
- 13 Canned cycles and 7 drill cycles
- Axis position preset (G92); Axis zero position/set
- Block delete code (/)
- Program editor
- Manual data input
- Single step mode
- Search mode
- Verify mode
- Real-time graphics display
- Part counter and cycle timer
- Current activity display



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