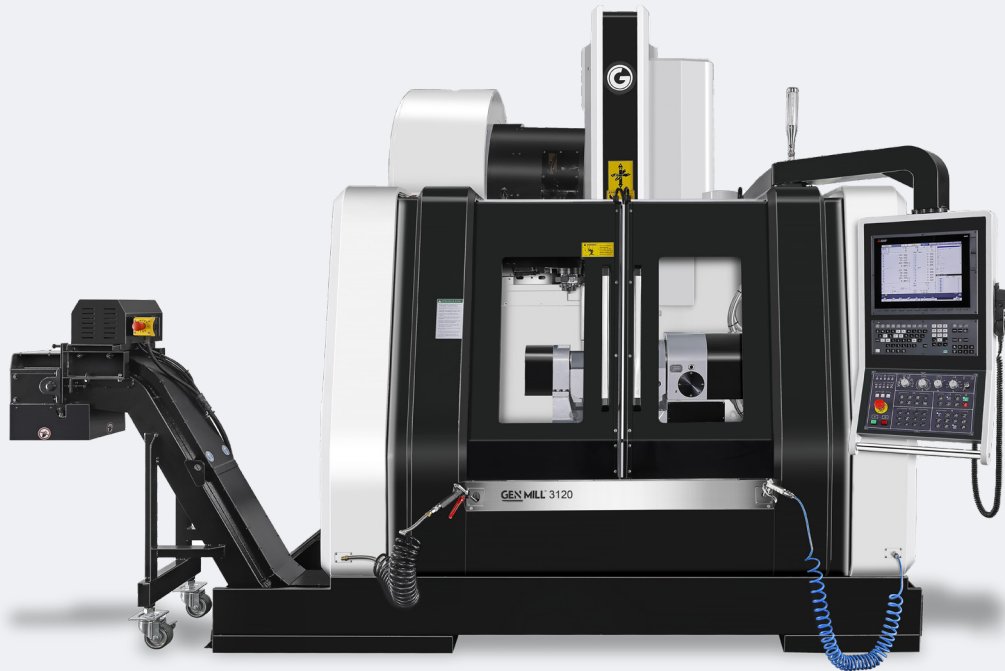




# 3120

## 31.50" X 19.68" High Speed Vertical Machining Center

- + 12,000 RPM Direct-Drive Beltless Spindle
- + Belt Type Chip Conveyor with 38" barrel height discharge
- + Mitsubishi M830 CNC Control, 2,700 Block Look Ahead
- + 30-Tool High-Speed Twin-Arm Tool-Changer
- + 300 PSI "Through-the-Spindle" Coolant with rotary union
- + Chip Wash- Down System
- + Full Machine Enclosure w/ Top Covers & precut exhaust duct

|                       |                                                     |                         |                                      |
|-----------------------|-----------------------------------------------------|-------------------------|--------------------------------------|
| <b>Axis Travel</b>    | X-Axis Travel                                       | 31.496"                 | 800 mm                               |
|                       | Y-Axis Travel                                       | 19.685"                 | 500 mm                               |
|                       | Z-Axis Travel                                       | 19.685"                 | 500 mm                               |
|                       | Spindle Nose to Work Table Surface                  | 4.72" – 24.40"          | 120 – 620 mm                         |
|                       | Spindle Center to Z-axis way covers                 | 20.27"                  | 515 mm (throat dimension)            |
| <b>Table</b>          | Table Size (L x W)                                  | 37.40" x 19.68"         | 950 mm X 500 mm                      |
|                       | T-slot width (3 T-slots total)                      | 18 mm on 100 mm centers |                                      |
|                       | Max. Table Load                                     | 1,323 lbs.              | 600 kgs load                         |
| <b>Spindle</b>        | Spindle Motor – S1 / S2 / S3 = 5.5 / 7.5 / 11 kW    | 20-Horsepower Peak      | 15-HP 30-min. duty-rating            |
|                       | Spindle Speed – Inline Direct-Drive                 | 12,000 rpm              | 15,000 rpm optional                  |
|                       | Spindle Torque                                      | 50 ft-lb @ 1,500 rpm    |                                      |
|                       | Spindle Taper Material / Hardness                   | SCM415 / HRC 58-62      |                                      |
|                       | Spindle Runout                                      | ≤ 0.000040" T.I.R.      |                                      |
|                       | Retention System / Holding Capability               | Bellville Spring Stack  | 1,650-1,760 lbs.                     |
|                       | Retention Knob (pull stud)                          | C40-4502H (coolant)     | Japanese Standard                    |
| <b>Axis Feeds</b>     | Accuracy X, Y, & Z axis (JIS6338)                   | ± 0.0002" / 12"         | ± 0.005 mm over 300 mm travel        |
|                       | Repeatability X, Y, & Z axis (JIS6338)              | ± 0.0002" / 12"         | ± 0.003 mm over 300 mm travel        |
|                       | Least Input Command Increment                       | 0.0001" / 0.000040"     | 0.001 mm / (40-millionths in metric) |
|                       | Rapid Traverse - X and Y                            | 1,417 ipm               | 36 m / minute                        |
|                       | Rapid Traverse- Z                                   | 1,260 ipm               | 32 m / minute                        |
|                       | Cutting Feedrate                                    | 0.02 - 393 ipm          | 10 m / minute                        |
|                       | Axis Drive Motor Power – X, Y                       | 2.7-HP                  | 2.0 kW                               |
|                       | Axis Drive Motor Power - Z                          | 4-HP                    | 3.0 kW                               |
|                       | Ballscrews – X, Y, Z                                | 32 mm ballscrews        | 12 mm pitch                          |
| <b>Tool Changer</b>   | Tool Capacity (30+1)                                | 30-Tool Twin-Arm        | Hi-Speed Tool Changer                |
|                       | Tool Shank                                          | CAT#40 Taper            | BT#40 optional                       |
|                       | Tool Change Time                                    | 2.2-sec. Tool-to-Tool   |                                      |
|                       | Maximum Tool Diameter / w/ adjacent tool            | 5.90" / 3.15"           | 150 mm / 80 mm                       |
|                       | Maximum Tool Length (from gage line)                | 11.81"                  | 300 mm                               |
|                       | Maximum Tool Weight                                 | 15 lbs.                 | 7 kg                                 |
|                       | Tool Selection / Tool Access                        | Random access           | Bi-directional shortest path         |
| <b>Specifications</b> | Air Service Requirements                            | 85 psi @ 14-scfm        |                                      |
|                       | Electrical Requirements - connected load            | 220 vac ±5%, 60-Hz      | 25 kVA                               |
|                       | Coolant Capacity / Pressure                         | 68-gallons              | 256 liters                           |
|                       | Machine Weight                                      | 11,023 lbs.             | 5,000 kg                             |
| <b>Warranty</b>       | Warranty – 1-year machine warranty                  |                         |                                      |
|                       | 3-year Mitsubishi control, motors, & drive warranty |                         |                                      |