

### Fanuc 0iMF PLUS Control Features:



- 10.4" LCD Color Display
- Linear / Circular / Helical Interpolation
- Programmable Data Input
- PCMCIA Card Slot
- Workpiece Coordinate System
- Manual Pulse Generator (Handwheel)
- Coordinate System Rotation
- Rigid Tapping
- Tool Life Management
- Tool Length compensation
- Background Editing
- Ethernet Ready/ USB Slot
- Additional Workpiece Coordinate System
- Manual Guide i

### Heidenhain 620 Control Features:



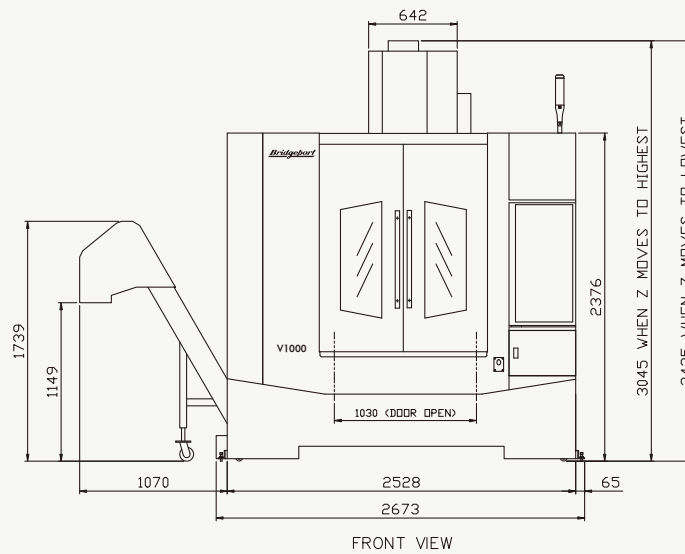
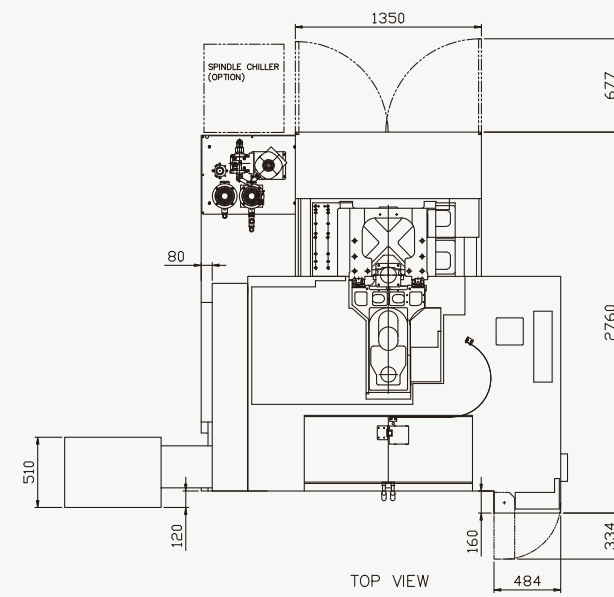
- Contour Approach and Departure
- FK Free Contour Programming
- Program Jumps
- Fixed Cycles
- Coordinate Transformations
- Q Parameters
- Programming Aids
- Actual Position Capture
- Verification Graphics
- Program Run Graphics
- Machining Time
- Returning to the Contour
- Datum Tables
- Preset Table
- Data Interfaces
- Tool Compensation
- Cutting Data Tables
- Constant Contouring Speed
- Parallel Operaton

### Siemens 828D Control Features:



- 10.4" Color Display
- RJ45 Ethernet Port / Network Drive
- USB 2.0
- Compact Flash (CF) interface
- Intuitive Jog Mode
- Tool and Workpiece Measurement
- Intuitive & Transparant Tool Management
- Graphical Iterative Programming & Operation
- Mold Making Quick Viewer
- Transformation - Cycle800
- MDynamics - Mold & Die Technology Package

### V1000 Floor Plan Dimensions



### Machine Specification

Unit: mm

<b>Travel</b> X/Y/Z Axes Spindle Nose to Table Y-Throat Distance	1020 x 610 x 610 100 - 710 628
<b>Table</b> Table Size Load Capacity Distance From Floor to Table Surface T-Slots (Width x No. x Size)	1200 x 600 900Kg 861 18 x 5 x 100
<b>Spindle</b> Taper Transmission Spindle Speed (RPM)	BBT 40 DDS STD: 12000 (Grease) OPT: 12000 (Oil-Air), 15000 (Oil-Air, Siemens only)
Motor Power	11 kW/ 18.5kW (Cont./ S3-25%) (Fanuc) 10 kW/ 17kW (S1/ S6-25%) (Heidenhain) 14.6kW/17.5kW (Cont./ S6-60%) (Siemens)
Maximum Torque At Base Speed	70N-m/ 118N-m (Cont./ 30min) (Fanuc) 63.7N-m/ 108.6N-m (S1/ S6-25%) (Heidenhain) 94N-m/ 112.8N-m (Cont./ S6-60%) (Siemens)

<b>Axes Drives (X/Y/Z Servo Motors)</b> Fanuc Heidenhain Siemens	3kW/ 3kW/ 4kW 4.5kW/ 4.5kW/ 5.1kW 3.1kW/ 3.1kW/ 4.9kW
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<b>Ball Screws (X/Y/Z Axes)</b> Size Pitch Lubrication	45 / 45 / 45 X/Y : 16, Z : 12 Grease Central Lubrication
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<b>Linear Guideway (X/Y/Z Axes)</b> Type Size Linear Ways Linear Guide Trucks Lubrication Rapid Traverse Rate	Ball Guide 35 / 45 / 45 2 / 2 / 2 4 / 4 / 6 Grease Central Lubrication X/Y: 48m/min, Z: 36m/min
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<b>Accuracy (X/Y/Z Axes)</b> Positioning Repeatability	0.01 (With Scales : 0.005) 0.005 (With Scales : 0.004)
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<b>General Specification</b> Machine Overall Size(Width/Depth/Height) Machine Weight Front Door Opening Vision Window Material Coolant Tank Capacity Air Requirement Power Requirement	2673 x 2760 x 2435~3045 7165 Kg 1030 Laminated 315L 5.5 kg/cm <sup>2</sup> minimum 89 amp/ 220 volt/ 3 phase (Fanuc) 41 amp/ 400 volt/ 3 phase (Heidenhain) 51 amp/ 400 volt/ 3 phase (Siemens)
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### Standard Features

- Manual Central Grease Lubrication (X/Y/Z Axes)
- Work Light
- Stack Light (3 colors)
- Retention Knobs
- Spindle Taper Cleaner
- Remote MPG (Option for Heidenhain)
- Ethernet Connection

### Optional Features

- 4th Axis Pre-wiring
- 4th Axis Drive Package
- 5th Axis Drive Package (4+1)
- Spare M-Codes (8)
- Part / Tool Probe (Wireless) (OMP 40-2 + OTS with OMI-2T)
- Linear Optical Scale (X/Y/Z Axes)
- Column Riser 150 mm
- Power Case Chiller
- External Spindle Surround Coolant

- Coolant Chip Flush / Coolant Wash Gun (Needs Chip Flush)
- Chip Conveyor : Hinge Type / Scraper Type
- Coolant Through Spindle , 280 psi (20 Bar)
- Tool Magazine Autodoor
- Automatic central grease lubrication (X/Y/Z Axes)

- Spindle Oil Chiller AICCI (200 Block) (Fanuc)
- Surround Tool Coolant (On Spindle)
- Cutter Air Blast (Spindle side)
- Automatic Power Off
- Thermal Compenstation

※To keep improvement and developing new functions, Bridgeport Machine Company reserves the rights to change specifications without further notice.  
※Due to varying cutting conditions, actual results may be greater or less than those listed.



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Feb.2024 BR-11302M

# BRIDGEPORT V SERIES

PERFORMANCE  
VERTICAL MACHINING CENTER

V1000







## High Performance Precision Spindle

- Dual contact, 40 taper, 12,000-rpm grease lubricated spindle powered by a direct drive, dual-wound Fanuc spindle motor. Optional Siemens or Heidenhain spindle motor is also available.
- Optional 12,000-rpm Oil-Air Spindle/ 15,000-rpm Oil-Air Spindle (Siemens control).
- High tool retention for aggressive cutting applications. (900kgf / 8,820N)

## ATC Tool Magazine with Inverter

Taper (ISO No.): 40  
 Tool Holder Type: BT or CAT or ANSI or DIN (SK)  
 Pull Stud Type: 1. BT or modified BT for CAT & ANSI  
 2. DIN

Tool Capacity: 30  
 Maximum Tool Diameter (Full Drum): 75 mm  
 Max. Tool Diameter (Adj. Pockets Empty): 150mm  
 Maximum Tool Length: 300 mm  
 Maximum Tool Weight: 7 Kg  
 Tool Change Time ( T-T ): 1.5 Sec

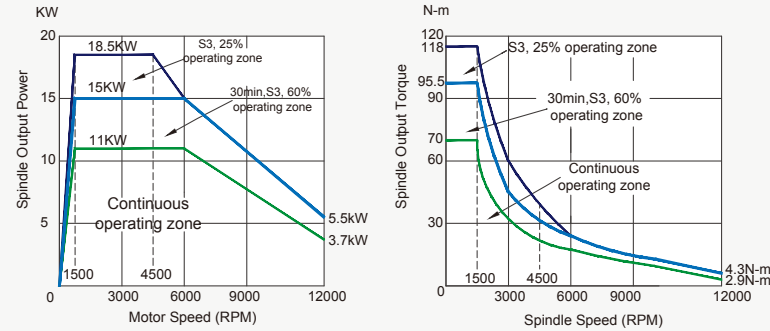
There are 5 features with the Inverter type cam box:

1. Higher speed tool change.
2. Decelerate: Swing arm decelerate before it hits the tool.
3. Support bigger dia. tool and heavy tool change.
4. Arm C.W. and C.C.W. jog operation.
5. Auto recovery.



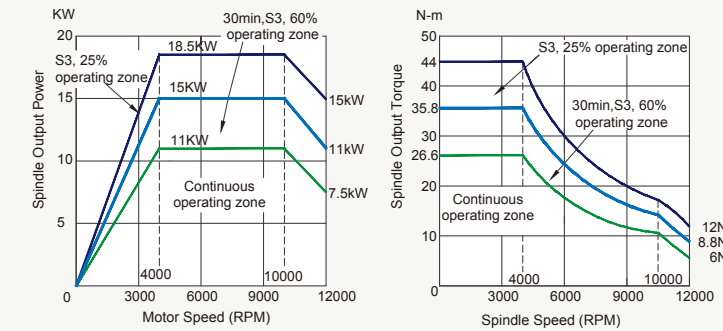
## Fanuc Spindle Motor 12000rpm power & torque characteristic curve:

### Low-Speed winding



FANUC aiT12 / 12000rpm Spindle Motor

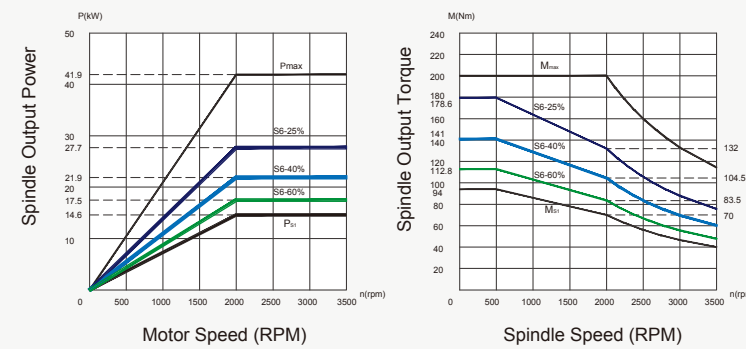
### High-Speed winding



FANUC aiT12 / 12000rpm Spindle Motor

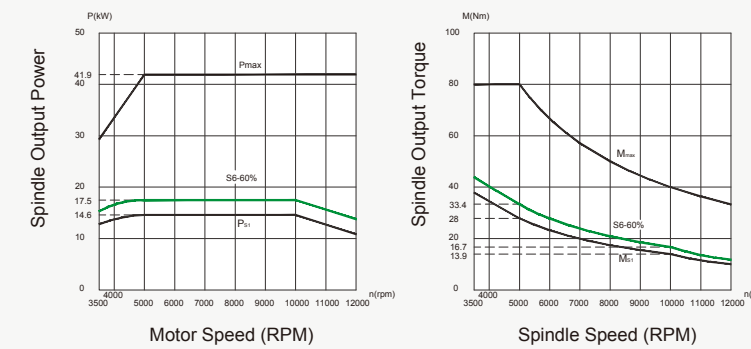
## Siemens Spindle Motor 12000rpm power & torque characteristic curve:

### Low-Speed winding



Siemens 1PH8131 / 15000rpm Spindle Motor (Speed Limit 12000rpm)

### High-Speed winding



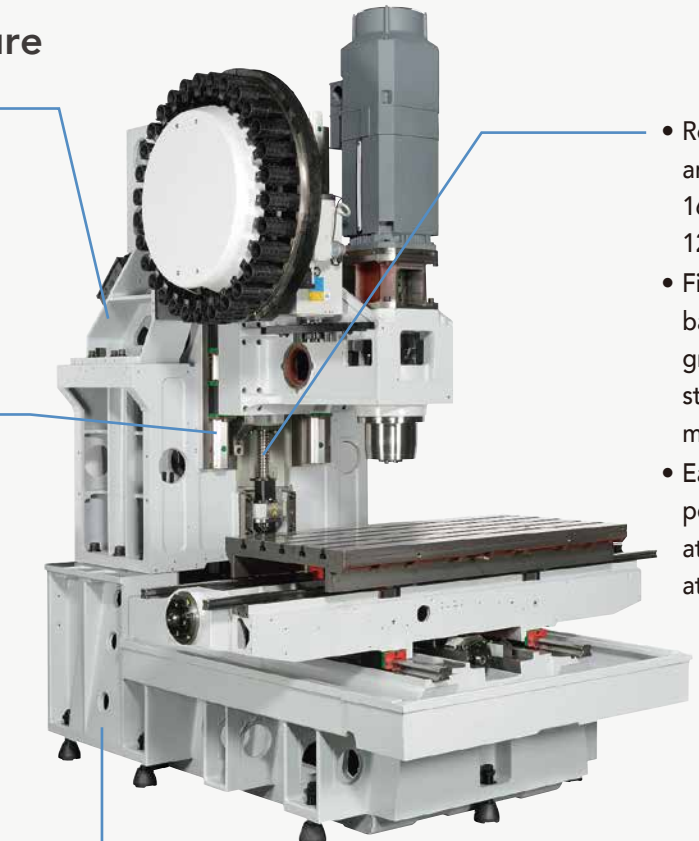
Siemens 1PH8131 / 15000rpm Spindle Motor (Speed Limit 12000rpm)

## High Rigidity Structure

The ATC mount is designed to properly support the ATC's weight by putting the force directly into the column for superior stability, rigidity and minimized vibration to the cutting zone.

• The Z & Y-axis utilizes 45mm ball-guides. The Z-axis features (3) trucks per guideway and the Y-axis, (2) trucks per guideway. The X-axis features (2) 35mm ball-guides with (2) trucks per guideway.

• This heavy duty guideway system ensures a very stiff, rigid and durable machine providing years of low maintenance, high accuracy and superior surface finishes.

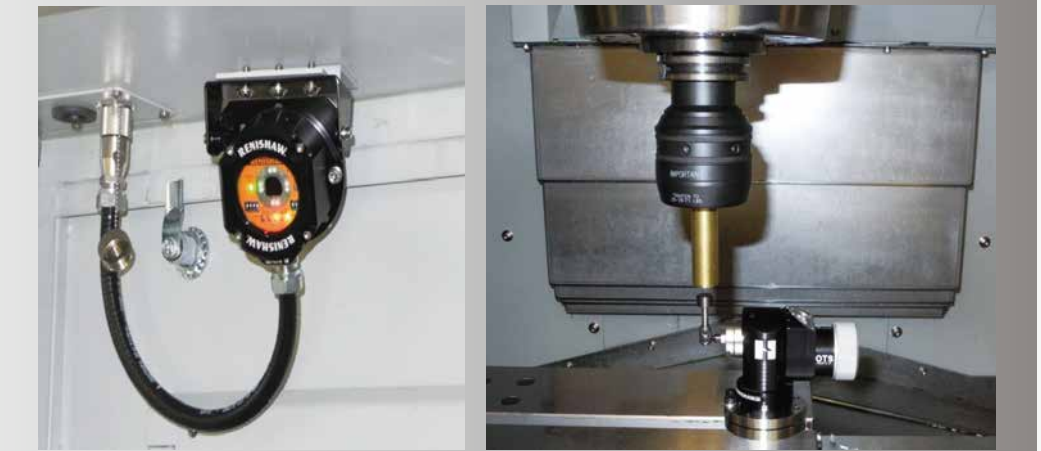


- Robust double-nut ballscrews are featured, class #3, 45mm, 16mm pitch for X & Yaxis, 12mm pitch for Z axis.
- Fixed, pre-tensioned (0.04mm) ballscrews minimize thermal growth, enhance rigidity, stability, and precision of the machine.
- Each axis features (5) bearings per ballscrew. (3) bearings/set at motor side, (2) bearings/set at end side.

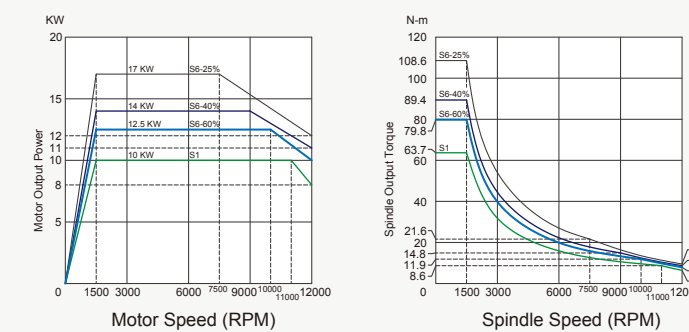
- Robust "C- frame" fixed column design from the popular XR machine family.
- Strategically ribbed base, column, and spindle carrier for increased rigidity and stiffness during demanding machining applications.
- Includes scraping of column & base joint for improved overall stiffness and rigidity.

## Tool Probe (Optional)

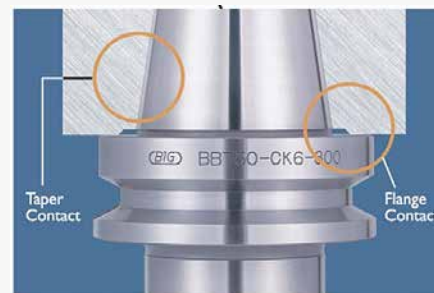
Automatic Renishaw Tool Probe, easy to use and define tool offset combined with marco programming Reduce non-cutting cycle time and easily check tool length, diameter or wear.



## Heidenhain QAN 200 UH 12000rpm



Heidenhain QAN 200 U / 200 UH - 12000rpm Spindle Motor



- BIG-PLUS dual contact spindle that provides a stiffer interface between the spindle and the tool holder along with minimum run out on extended tools and better overall repeatability.

## High Versatility

The high-rigidity body of the V1000 can be perfectly customized for wheel rim machines and is suitable for a variety of customized special needs. Contact your dealer for instructions on special specification requirements.



Customized for wheel rims