



**GANESH  
MACHINERY**  
*The Edge in Cutting.*

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# GANESH VFM-7839 CNC MACHINING CENTER

***COMBINING STRENGTH WITH SPEED FOR OPTIMUM PRODUCTIVITY!***



## **Featuring:**

- 12,000 RPM ***Inline Direct-Drive Beltless Spindle***
- ***Big-Plus*** dual contact High-Performance precision ground spindle
- 40- Station Twin-Arm Tool Changer for **CAT or BT#40 tooling**
- 300 PSI “Through-the-Spindle” coolant system with rotary coupling
- Roller Ways in X & Y Axis, Box Ways in Z-Axis, 4-roller ways in Y-axis
- Massive Meehanite cast machine construction – 44,100 lbs.
- 4th & 5th axis wiring is included with the machine

# GANESH VFM-7839

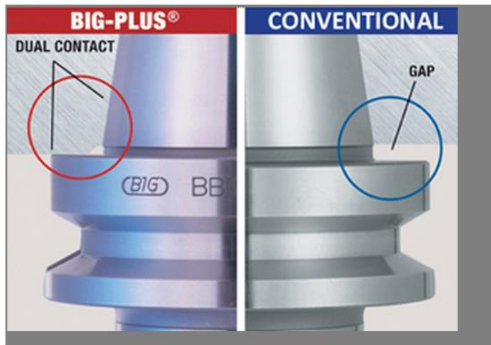
4-Roller Ways  
in the Y-Axis



## The VFM-7839 combines strength & speed for high productivity -

The VFM-7039 casting design used FEA (Finite Element Analysis) with reinforced strategically placed heavy cast ribs to resist flex and dampen vibration for superior machining capability and extended tool life, providing fine surface finishes. The machine is constructed of all certified premium high-density Meehanite castings for superb vibration dampening and features cross-roller ways in the X & Y axis and box ways in the Z-axis. The wide spacing of the ways offers the optimal guide ratio for the moving elements further enhancing the rugged design of the heavy-duty machine. Oversized double anchored pre-tensioned ballscrews with 3-NSK bearings at each end on all 3-axes are utilized for superior metal removal rates and superb size control.

## Big-Plus Dual-Contact High-Performance Precision Ground Spindle



Both the flange and flange face are in contact for:

- Increased Tool Rigidity
- Reduced Tool Runout
- Increased Tool Life
- Increased Cutting Capability
- Superior Tool Length Repeatability

Use standard tools for general work, and Big-Plus tools for superior results in demanding applications.

# **STANDARD GANESH VFM-7839 FEATURES:**

## **40-Tool High-Speed Twin-Arm Tool-Changer –**

Having 40 tools allows you to have more jobs setup on the machine, or to run more complex work that requires more tools. Having redundant tools allows you to make use of the tool-life management system.

## **Beltless Direct Drive Spindle –**

The quiet beltless direct-drive spindle provides fast acceleration and greater spindle control in high-speed tapping applications for increased productivity with the benefit of low heat rise and reduced maintenance.

## **Through-The-Spindle Coolant –**

The standard 300-PSI through-the-spindle coolant system provides improved tool life and superior chip control, increasing overall machine productivity. A 1,000 PSI coolant system is optional.

## **Chip Wash-Down, Chip Augers & Chip Conveyor –**

The machine comes standard with a separate coolant pump for chip wash down that flushes the chips into the chip augers on each side of the machine table. The 2 chip augers force the chips forward into the chip conveyor so they can be efficiently discharged from the left side of the machine to simplify maintenance. (The chip discharge height is 38”).

## **Oil-Separator Unit –**

The included oil-separator unit cleans the oil off of the surface of the coolant to reduce maintenance and extend coolant life. Reduced maintenance interruptions help increase machine productivity.

## **4<sup>th</sup> & 5<sup>th</sup> Axis Prewired –**

The wiring to upgrade the machine for use in 4<sup>th</sup> and 5<sup>th</sup> axis applications is included with waterproof quick-disconnect connectors already mounted in the work enclosure. This speeds up the transition to upgraded productivity when needed, allowing you to complete a greater amount of work in one machining operation.

## **Auto Power Shut Off –**

The control's auto shut off feature automatically shuts down the machine once a long program is finished. This capability enhances your ability to let the machine run lights-out for extended production capability.

## **Ball-Bar Testing –**

The **geometric ball bar test** conducted on each machine checks for servo gain synchronization, backlash, lateral play, squareness, and straightness to ensure your machine will perform to our rigid accuracy and performance standards. **Laser inspection technology** is employed to measure linear and pitch error accuracy and repeatability to ensure high quality machine performance. The spindle is **dynamically balanced** to ensure long term production performance. Premium quality ball screws are double-anchored and pre-tensioned, and then 100% inspected for parallelism to the axis guideways. The rotational torque of each ballscrew is inspected over the entire length of travel to guarantee a true smooth non-binding alignment to ensure maximum service life and the highest possible machining accuracy.

## ***LARGE WORKTABLE***

***Allows the 4<sup>th</sup> axis & 2 Vises on the table at the same time!***

**The Ganesh VFM-7839 is manufactured in our  
Certified ISO 9001 Production Facility in Taiwan.**

# **VFM – 7839 TECHNICAL SPECIFICATIONS**

## **AXIS TRAVEL**

X-Travel	78.74"	2,000mm
Y-Travel	39.37"	1000mm
Z-Travel	35.43"	900mm
Spindle Nose to Table Surface	9.8"– 45.27"	250 – 1150mm
Spindle Center to Z-axis covers	41.53"	1055mm (throat dimension)

## **TABLE**

Table Size (LxW)	84.65" x 35.43"	2,150mm X 900mm
T-slots - 5 total	22mm slot width	on 150mm centers
Max. Table Load	4,850 lbs	2200 kgs. limit for full accuracy

## **SPINDLE**

Spindle Motor – 22/26 kW	50-Horsepower Peak	35-HP 30-minute duty-rating
Spindle Speed	12,000rpm	15,000 – 20,000 rpm optional
Tool Type	CAT #40 Taper	(CAT/BT #40 & #50 taper optional)
Spindle Taper Material / Hardness	SCM415 / HRC58-62	
Retention System / Holding Capability	Bellville Spring Stack	1650-1760 lbs
Spindle Runout	0.000040 T.I.R.	
Spindle Bearing Front	110mm NSK 70BNR	10 x 2, P4 class-7 bearings
Spindle Bearing Rear	110mm NSK 70BNR	10 x 2, P4 class-7 bearings

## **AXIS FEEDS**

Accuracy X, Y, & Z axis (JIS6338)	± 0.0002" / 12"	± 0.005mm over 300mm travel
Repeatability X, Y, & Z axis (JIS6338)	± 0.0001" / 12"	± 0.003mm over 300mm travel
Least Input Command Increment	0.0001" / 0.000040"	0.001mm / (40-millionths in metric)
Rapid Traverse – Z, Y	590 ipm	15m / minute
Rapid Traverse - Z	472 ipm	12m / minute
Cutting Feedrate	0.02 - 393 ipm	10m / minute
Axis Drive Motor Power – Z, Y	6-HP	4.5kw
Axis Drive Motor Power - Z	6-Hp	4.5kw w/brake
Maximum Thrust Force	4408 lbs	2,000 kg
Constant Thrust Force	2204 lbs	1000kg
Ballscrews – X, Y, Z	63mm ballscrews	10mm pitch

## **TOOL CHANGER**

Tool Capacity 40 +1	40 -Tool Twin-Arm	Chain Drive
Tool Shank	CAT#50 Taper	(CAT#40, BT#40 & 50 optional)
Tool Change Time	4.3-second tool-to-tool	
Maximum Tool Diameter	4.33"	110mm
Maximum Tool Length	13.78"	350mm
Maximum Tool Weight / Total tool weight	33 lbs. / 529 lbs.	15kg / 240kg
Tool Selection / Tool Access	Random access / Bi-directional	

## **SPECIFICATIONS**

Air Service Requirements	85 psi @ 14-cfm	
Coolant Capacity	172 gallons	650 liters
Connected load electrical requirement	36KVA, 100 amps	220vac ±5%, 60-Hz
Floor space requirements recommended	193" x 131" x 142"	490x332x360cm (add 47" for conveyor)
Shipping dimensions (L x W x H)	217" x 146" x 150"	550x370x380cm
Machine Weight	50,706 pounds	23,000 kg

# MITSUBISHI M830 HIGH-PERFORMANCE CNC CONTROL



The Mitsubishi M830 High-Performance CNC control provides the highest level of productivity, intuitive usability, and superior functionality. The advanced control algorithm uses a cutting edge Mitsubishi CNC-dedicated CPU running at 270,000 blocks per minute with 2000-block look-ahead under NANO control with Super Smooth Surface control for superior surface finishes. The CNC-dedicated CPU not only results in phenomenal processing speed, but also reduces the number of required components, leading to fewer possibilities of failure and increasing product quality. The ultra-high speed fiber-optic drive communication (3 times faster) and distributed architecture delegates routine motion control operations to intelligent servo and spindle amplifiers reducing cycle processing time and improving processing speed and productivity. Operators appreciate the ergonomics of the easy-to-use Human Machine Interface that can be easily customized. The Navi Conversational programming, workpiece pick-up tool measurement, background editing, modal program search to restart the program at the exact point of interruption all form a highly productive operator interface. A huge 10-GB program memory plus 32-GB SD memory and USB Card Slots for direct machine operation with full edit capability. Tool-life monitoring to facilitate lights-out operation is included.

- **Mitsubishi developed CNC-Dedicated 64-Bit CPU with highly efficient RISC architecture**
- **2,000 block buffered look-ahead and a blazing 270,000 block per minute processing speed**  
**The above features work in harmony to provide faster program throughput & greater productivity**
- **32-GB SD & USB slots & 10-GB internal memory provides program memory for machine operation**
- **15” Touch Screen** that operates like a smart phone or tablet which includes 3D solid model graphics that can pinch-in to zoom, pinch-out, drag, edit, rotate, and scroll.
- Mid-program restart function for operator convenience after a program interruption
- Dampened backlash compensation eliminates spiking during the axis reversal moves for higher accuracy machining, superb surface finishes, and exacting feature definition.
- 1-nanometer interpolation with 2000-block look-ahead provide fine surface finishes and detailed arc and radius features precisely follow the program commands
- **Automatic power-fail tool retract.** Least input and command increment: 0.1µm
- 4-axis simultaneous contour control capability & high-speed synchronous rigid tapping
- Graphics –Tool path and 3-D part shape can be drawn to help detect errors at an early stage
- NC Monitor – monitoring of machine screens for observation on a remote PC
- Intuitive HMI for ease of operation with rapid setup & changeover and “on the fly” tool offsets
- Program copy, move, delete functions, and input guidance screens help create part programs
- Ethernet RJ-45, USB, RS-232, & 2-SD 32-GB Card ports provide a choice of communications.
- Mitsubishi high performance matched motors and drives yield exacting program feature definition.
- 3-year Mitsubishi control, motor, and servo drive warranty

***“World’s Fastest and Most Powerful CNC Control!”***

**64-Bit CNC Dedicated CPU with highly efficient RISC processor**

**Blazing 270,000 Block-Per-Minute Processing Speed – 4,500 BPS**

**2,000 Block Look-Ahead – 64-GB Program Memory**

Specifications, features, options, and colors are subject to change without notice. Machine shown with optional equipment.