

Methods

MV-B & GB Series Vertical Machining Centers





ROBUST CAPABILITIES

The high torque and high horse-power Big Plus 50-taper spindle allows users to handle any material and execute complex tool paths with ease. The spindle is outfitted with, chiller, and thermal compensation.

MEET THE PRODUCT MANAGER

DARREN WALL



“When we created the MV-GB series, we set out to design an innovative machine. We wanted to push the envelope without breaking the bank. We created a high-end line of machines with quality components, bring a new level of rigidity to the shop floor at an affordable price.

We've analyzed customer feedback and utilized more than 60 years of machine tool design to give you more standard features and high-quality components on day one, making the MV-GB series the most sophisticated product in its class. The result is a heavy-duty machine that can perform in any shop, from job shops to precision mold manufactures.”

**Methods Machining Center
Product Manager**

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✉ dwall@methodsmachine.com

A New Level of Quality

Methods Machine Tools designed the MV-GB/B product line for ultimate versatility. The MV-GB/B series is the backbone of a machine shop, capable of handling any job. Crafted with meticulous attention to detail and more features than any product line in its class, MV-GB/B machines give you everything you need right out of the box. As with all Methods products, Methods machining centers are backed by our industry-leading service, support, installation and application teams who are dedicated to keeping your spindles running.

The MV-B & GB machines feature box way construction on the X, Y & Z axis using Turcite B, a low friction material minimizing stick-slip for better accuracy while maximizing dampening properties allowing you to achieve less chatter, better tool life & better part surface finishes."

Remain cool under the most challenging machining conditions thanks to a spindle outfitted with oil air/grease lubrication and a chiller, enabling you to overcome adverse machining conditions, maximize your spindle life, as well as maintain thermal stability and accuracy.

43 hand-scraped surfaces for unmatched accuracy. Hand scraping is the foundation of precision, creating a perfectly flat surface within millionths of an inch and up to 10 contact points per square inch.

Take charge and change your cutting environment with the thermal compensation system that automatically compensates for temperature changes.

Cut above the competition with the heavyweight champion. MV-GB/B machines' wide heavy base, column & box ways make for a solid and rigid machine with great dampening characteristics.

KEY BENEFITS

- ▶ Reliable FANUC Oi-MF & Oi-MF+ control with 10.4" LCD screen for ease of use
- ▶ AICC II, 2ms BPT, and 200 block look ahead for more accurate and smoother tool pass
- ▶ Prepped for 1000psi coolant thru spindle to reduce tool wear
- ▶ Rigid box-way construction in the X, Y, and Z axes for increased stability
- ▶ 1181 IPM rapid rate in the X & Y-axis and 945 IPM rapid rate in the Z-axis reducing cycle times
- ▶ 30 Tool ATC for versatility
- ▶ Thermal compensation for increased work piece accuracy
- ▶ Spindle chiller, extending spindle life and reducing premature failure
- ▶ 43 hand scraped surfaces for higher rigidity and accuracy
- ▶ Two year machine and control warranty



MV-GB Tech Specs

Technical specifications and features are more than numbers on a page; they tell you what a machine tool can accomplish and how it will perform in your shop. The MV 1100GB, 1300GB and 1100B are engineered & built to strict Methods specifications and quality standards. This product line is packed with standard features and benefits that will exceed the expectations of quality, reliability, accuracy and longevity.



MV-1100GB

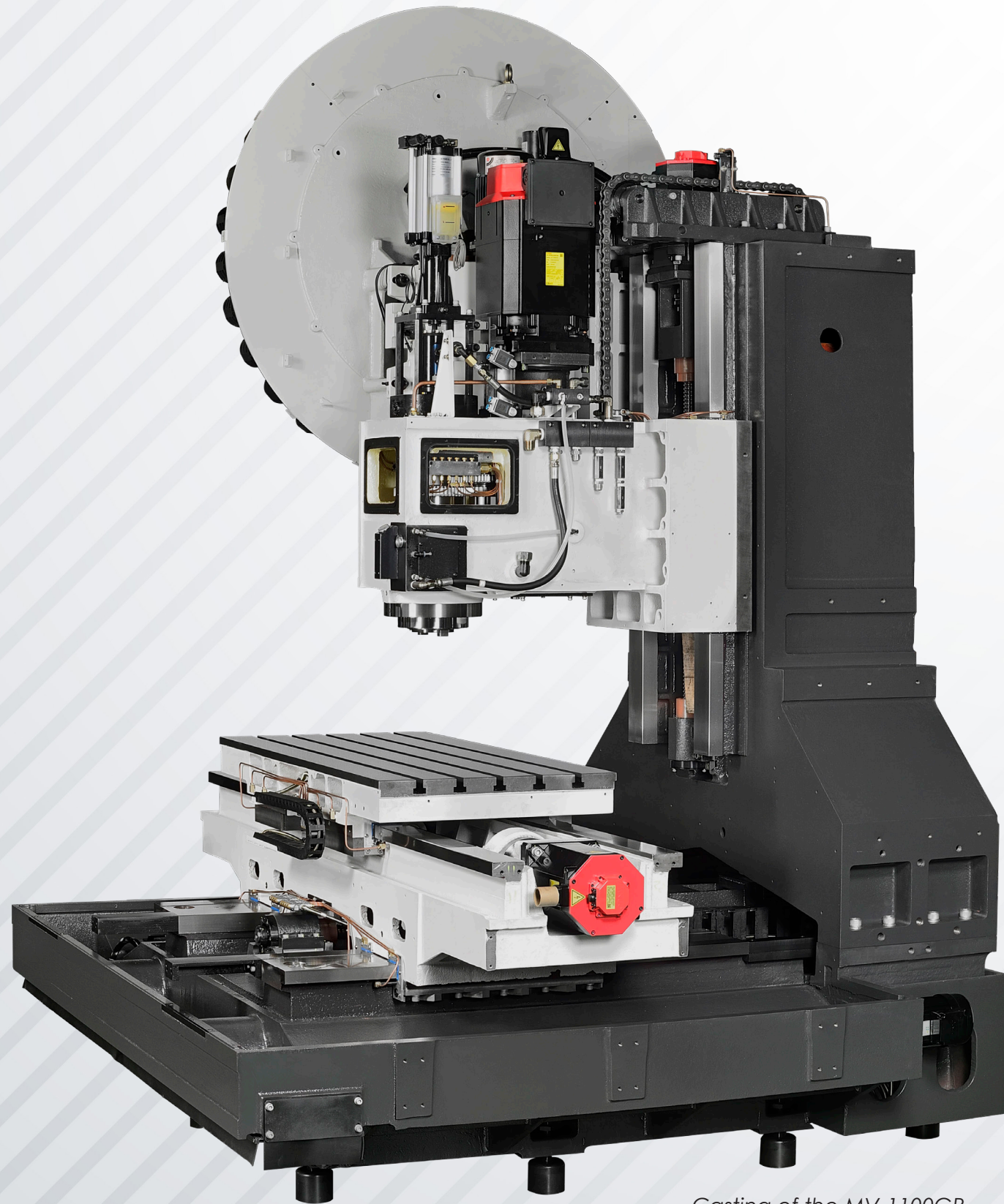


MV-1300GB

► **Full Boxway:** The MV-GB/B series are three axis, full boxway vertical machining center engineered and built to strict Methods specifications and quality standards .

► **Clean Machine, Clear Results:** Our comprehensive chip management system, comprising of a coolant gun, coolant nozzles, and a chip conveyor, makes keeping your machining environment chip-free an effortless endeavor.

| Feature | Unit | MV-1100GB | MV-1300GB | MV-1100B |
|-------------------------------|-------------------|-----------------------------|----------------------------|-----------------------------|
| TRAVEL | | | | |
| X/Y-Axis | in (mm) | X: 43.3 (1100) Y: 24 (610) | X: 51.2 (1300) Y: 24 (610) | X: 43.3 (1100) Y: 24 (610) |
| Z-Axis | in (mm) | 23.6 (600) | | |
| Encoder Resolutions | - | 4 million pulse | | |
| Axis Motor | FANUC | α22i | | |
| TABLE | | | | |
| Table Size | in (mm) | 51.2 x 23.6 (1300 x 600) | 59.1 x 23.6 (1500 X 600) | 51.2 x 23.6 (1300 x 600) |
| Max. Table Load | lbs (kg) | 2,205 (1,000) | | |
| Number of T-Slots | qty | 5 | | |
| T-Slot Width | in (mm) | .708 (18) | | |
| SPINDLE | | | | |
| Spindle Speed | rpm | 8,000 | | 10,000 |
| Spindle Type | Dual Contact | Big Plus/CAT50 | | |
| Spindle Power | hp (kW) 15 min | 25 (19) | | 47.6 (35) |
| Spindle Torque | ft-lb (nm) 15 min | 359 (487) | | 164 (223) |
| Spindle Cooling | - | Chiller | | |
| AUTOMATIC TOOL CHANGER | | | | |
| Maximum Number of Tools | - | 30 | | |
| Maximum Tool Weight | lbs (kg) | 33 (15) | | |
| Maximum Tool Length | in (mm) | 12 (305) | | |
| GENERAL | | | | |
| Floor Space | in (mm) | 174.5 x 104 (4,432 x 2,642) | 182.7 x 104 (4641 x 2642) | 174.5 x 104 (4,432 x 2,642) |
| Weight | lbs (kg) | 21,000 (9,500) | 22,000 (10,000) | 19,642 (9,000) |
| Height | in (mm) | 123.3 (3,131) | 123.3 (3,131) | 128 (3,253.5) |



Casting of the MV-1100GB

A Solid Foundation 60+ Years in the Making

- 1 Be ready for anything** with powerful 25 HP, 8,000 RPM, and 359 ft/lb torque spindle on GB machines and 47.6 HP, 10,000 RPM, and 164 ft/lb torque spindle on B machines. The versatile, hollow-shaft, direct-drive BIG PLUS spindle can handle any job.
- 2 30 -Tool ATC** with fast 2.9 second tool-to-tool change time.
- 3 Adapt and adjust** with the thermal compensation system, utilizing thermo-couples for real-time temperature feedback.
- 4 Dual-contact spindle offers endless benefits**, including extended tool life, superior ATC reliability, and ultimate rigidity.
- 5 Best of both construction methods** with an unyielding box guideway on the Z-axis using Turcite B and linear rails on the X- and Y- axes for absolute precision and speed.
- 6 Simulated conditions for natural machining.** The machine was designed using finite element analysis (FEA) techniques – complex mathematical simulations – creating a natural machining experience.
- 7 Clean machine, clear results.** The comprehensive chip management system, consisting of augers, a chip conveyor, coolant wash down and a coolant flush gun clean every crevice of the work area for better uptime, better precision, and better throughput.



Rest Assured with Time-Tested, Industry-Trusted Quality Control

- Methods Machine Tools sets rigid quality requirements that ensure our machines and inspection equipment are calibrated, monitored and controlled using industry-standard systems and methods.
- Our team of seasoned machining experts, programmers, electrical engineers and application specialists pour over every schematic and check every detail. We conduct rigorous tests and comb through every specification so you don't have to.

Raising the Bar for Excellence

- All MV-GB and B machines are laser-interferometer and ballbar-tested to certify perfect positioning while delivering practical data and benchmarks. These systems assess and confirm the static and dynamic accuracy of the machine.
- Ballbar testing monitors spindle movement across a programmed path and compares the results to a perfect circle. The test considers all the variables in machining such as machine geometry, temperature fluctuations, and tool wear to produce accurate parts and give you actionable data.

Methods Machine Tools takes precision machining to another level by going above and beyond international standards of quality. Ballbar testing exceeds performance evaluations for computer numerically controlled machining centers such as ISO 230-4 and ANSI/ASME B5.54.



**Specifications are subject to change without notice*

Showrooms and Technical Centers

Boston ■ Charlotte ■ Chicago ■ Detroit ■ Los Angeles
Memphis ■ Milwaukee ■ Phoenix ■ San Francisco

 **Methods**

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