

DMG MORI MV-653/40 Vertical Machining Center (2005) – BBT40, Made in Japan



General Information

- **Manufacturer:** MORI SEIKI (DMG MORI)
- **Model:** MV-653/40
- **Year:** 2005
- **Control System:** MSX-511 (FANUC 18iM)
- **Machine Type:** Vertical Machining Center
- **Country of Origin:** Japan

Travel & Capacity

- **X-axis Travel:** 1,530 mm
- **Y-axis Travel:** 660 mm
- **Z-axis Travel:** 650 mm
- **Distance (Table Surface to Spindle Nose):** 200 – 850 mm
- **Distance (Column to Spindle Center):** 689.6 mm

Table Specifications

- **Table Size:** 1,700 × 660 mm
- **Max Table Load:** 2,000 kg (Heavy-duty machining capability)
- **Table Surface:**
 - 6 × T-slots
 - 18 mm width
 - 100 mm pitch

Spindle • Spindle Speed: Max. 12,000 rpm (Standard) • Spindle Taper: BBT40 (Big-Plus dual contact system) • Dual-contact spindle interface for improved rigidity and machining accuracy • Spindle Bearing Diameter: 85 mm • Speed Range: Single range	ATC (Automatic Tool Changer) • Tool Shank Type: MAS BT40 (Big-Plus compatible) • Tool Storage Capacity: 30 tools (optional: 40 / 60) • Max Tool Diameter: ◦ With adjacent tools: 95 mm ◦ Without adjacent tools: 160 mm • Max Tool Length: 450 mm • Max Tool Weight: 15 kg • Tool Selection Method: Random selection (Technical memory type)
Feed Rates • Rapid Traverse: 24,000 mm/min • Cutting Feed Rate: 1 – 10,000 mm/min • Jog Feed Rate: 0 – 1,260 mm/min ※ Maximum feed rate may vary depending on cutting conditions	Tank Capacity • Lubrication Tank: 6 L • Coolant Tank: 1,100 L • Cooling Oil Tank: 50 L
Utilities • Power Requirement: 54.9 kVA • Air Supply: 0.5 MPa, 350 L/min	Machine Dimensions & Weight • Machine Height: 3,327 mm • Required Floor Space: 4,105 × 4,482 mm • Machine Weight: Approx. 15,500 kg
Machine Structure • High rigidity cast iron structure • Wide bed design for reduced overhang • Large diameter ball screws (45 mm) • Narrow guide system for high positioning accuracy • Semi-floating system for smooth axis movement	Additional Features • High rigidity structure suitable for heavy-duty cutting • High-speed spindle up to 12,000 rpm • Large table capacity (2,000 kg) • Reliable Japanese build quality (MORI SEIKI) • • BBT40 dual-contact system improves rigidity and precision compared to standard BT40
Remarks • Specifications are based on manufacturer data • Actual performance may vary depending on tooling and operating conditions	