

Press Release

June 16, 2008

Excellent for Machining Difficult-to-cut Material, Bringing the Large Vertical Machining Center to the Market

We will start receiving orders for the MV-1003L.

Mori Seiki will start receiving orders for the Vertical Machining Center **MV-1003L** on June 16, 2008.

In recent years, Mori Seiki has been concentrating on developing large machines due to increasing demands for machine tools from aircraft, shipping, construction machine and energy industries. During its development, it is important to improve specifications for new models, as well as improving them for existing models.

The new model, MV-1003L is a vertical machining center which expanded its strokes according to our customers' needs while succeeding the excellent machine structure of the MV-1003B. The main features are as listed as below.

1. The machine structure inherited from MV-1003B

One of the biggest features of the MV-1003B is the machine structure that comes from detailed structural analysis and design knowledge put together. By using cast irons such as columns and beds which have enough thickness throughout the machine, it has achieved a high-rigidity structure available for heavy duty cutting. Material with low frictional drag is used on slideways for each axis, and also the semi-floating system which is a method of reducing load is used with air and lubricating oil for the feed of X and Y axes to achieve **positioning and feed of high speed, high precision**. All of these features have been inherited by MV-1003L, which can be widely used from precision machining to heavy-duty cutting.

2. Variety of spindles

There are four different types of spindles, such as spindles of torque 1,317N·m (30 minutes) with high output, and high speed spindles with built-in motors. Customers can choose **the spindle that suits their needs the most**.

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3. Expansion of the X-axis stroke

For the MV-1003L, the X-axis stroke has been set to 3,500 mm (MV-1003B: 2,400 mm), and the width of the table working surface to 3,900 mm (MV-1003B: 2,800 mm). These changes will **dramatically widen the range of machining**, and make **machining of long workpieces possible**.

4. Improvement of chip disposal

Inside the machine, there is a total of 13 spiral-typed chip conveyors set to dispose chips rapidly. On the outside, a composite type chip conveyor (hinge type + scraper type + drum filter) has been equipped so that **various types of chips** will be disposed into the chip bucket, no matter what material or length they are.

Mori Seiki will continue developing new models as well as making the previous model into a series in order to bring better products to the market.

Type	Vertical Machining Center
Model	MV-1003L
Market	Aircraft, Construction machines
Orders start	June 16, 2008
Production	5 units/month

■ Major Specifications (MV-1003B is shown for comparison)

	MV-1003L	MV-1003B
Axis travel (X/ Y/ Z)	3,500/1,020/800 mm	2,400/1,020/800 mm
Size of table working surface	3,900×1,020 mm	2,800×1,020 mm
Table loading capacity	4,000 kg	5,000 kg
Max. spindle speed	5,000 [5,000 (high output)] [10,000] [15,000] min ⁻¹	
Spindle taper hole	No. 50	
Motor for spindle	5,000 min ⁻¹ :18.5/15 kW(30min/cont) [5,000 min ⁻¹ (high output) :26/22 kW(30min/cont)] [10,000 min ⁻¹ :30/25 kW(30min/cont)] [15,000 min ⁻¹ :30/25 kW(30min/cont)]	
Rapid traverse rate (X/ Y/ Z)	20,000/20,000/20,000 mm/min	
Tool storage capacity	36 [66]	
Height of machine	3,795 mm	
Floor space (width × depth)	10,324×5,132 mm	7,676×5,132 mm

[] Option



Figure 1. Exterior

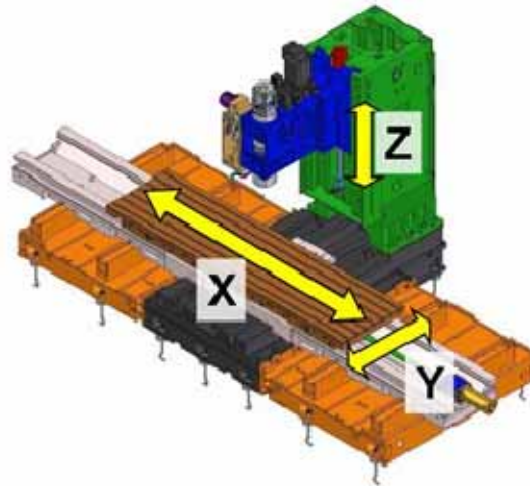


Figure 2. Axis structure

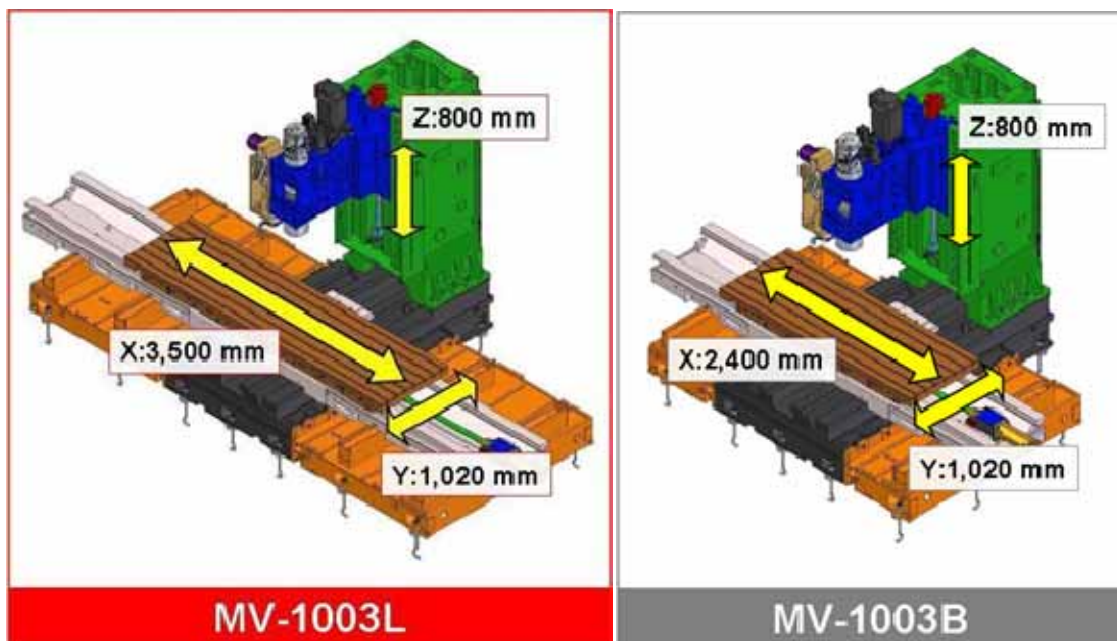


Figure 3. Comparison of travel



Figure 4. Machining example (Aircraft parts)