

## Press Release

October 30, 2019

# Local Production Begins in India for Highly Reliable Vertical Machining Center CMX 600 Vi with Overwhelming Quality and Durability

DMG MORI CO., Ltd. (hereinafter called DMG MORI) will begin local production for a vertical machining center CMX 600 Vi for the Indian market on October 29. The production will be outsourced to Lakshmi Machine Works of India, which makes possible a shorter lead time until delivery than domestic production in Japan. The DMG MORI's highly-reliable machine contributes to boosting productivity of customers in the remarkably growing Indian market.

The CMX 600 Vi features are described below in terms of 1. Wide Work Envelope; 2. High Rigidity; 3. High-Performance Spindle; and 4. Workability, Maintainability and Reliability.

### 1. Wide Work Envelope

The CMX 600 Vi ensures a wide work envelope despite a space-saving design. With the largest Y-axis in its class of 560 mm, the machine is capable of handling round-shaped large workpieces such as gear box housings which are difficult to cut on the machines in the same class. Because of its wide work envelope, interference can be reduced even when workpieces are rotated on the rotary table during machining.

### 2. High Rigidity

FEM analysis was used from the basic designing phase, and simulations of varieties of operational conditions and environmental changes were made to optimize the bed thickness, lib form and unit arrangement. The fundamental rigidity supports stable cutting performance to do heavy-duty cutting.

### 3. High-performance Spindle

The model is equipped with a high-reliability spindle with a max. speed of 12,000 min<sup>-1</sup> to handle a wide range of machining. For machining that uses high-pressure coolant frequently, the labyrinth structure of the spindle was strengthened to prevent coolant from entering inside and increase spindle rigidity. As spindles are components that especially require a high level of accuracy and rigidity, the model employs the spindles manufactured in-house. Every process from production and assembly of spindle parts to the final inspection is done in the Spindle Plant at the Iga Campus.

#### 4. Workability, Maintainability, Reliability

The CMX 600 Vi was meticulously designed to details with a thorough focus on workability from perspective of operators who actually run the machine. Thanks to good access to the spindle and table, operators can smoothly do setup work such as attachment of tools and workpieces. A shallow dent in the front cover also allows them to move one step closer to the table. A big window is used on the front door to drastically improve visibility, which makes it easy for operators to check machining status. Furthermore, the model comes standard with the magazine door to facilitate daily maintenance such as replacement of tools inside the magazine. The CMX 600 Vi boasts high reliability, taking solid measures against chips which are one of the major reasons for machine stop and machining failure. The in-machine cover is tilted at an angle of 30 degrees to prevent chips from accumulating during machining. The ATC shutter also comes as standard to prevent chips from entering the magazine.

DMG MORI provides products that are highly functional, reliable and worthy of investment to respond to customer needs in the world.

|                    |  |
|--------------------|--|
| Type               | Vertical Machining Center  |
| Model Name         | CMX 600 Vi   |
| Market             | Automotive, aircraft, die & mold, industrial machinery, electric, medical, communication equipment |
| Monthly Production | 10 units/month (Lakshmi Machine Works of India)  |

#### ■ Main specifications

| Item                      |                      | CMX 600 Vi     |
|---------------------------|----------------------|----------------|
| X-axis travel             | (mm)                 | 600            |
| Y-axis travel             | (mm)                 | 560            |
| Z-axis travel             | (mm)                 | 510            |
| Table size                | (mm)                 | 900 × 560      |
| Table loading capacity    | (kg)                 | 600            |
| Max. spindle speed        | (min <sup>-1</sup> ) | 12,000         |
| Rapid traverse rate       | (m/min)              | X:36 Y:36 Z:30 |
| Tool storage capacity     | (tool)               | 30             |
| Spindle drive motor       | (kW)                 | 15 / 11        |
| Footprint (width × depth) | (mm)                 | 2,952 × 2,752  |



CMX 600 Vi