

Press Release

June 29, 2015

**G-07 Super High-Precision Lathe
Providing Stable Machining Accuracy**

DMG MORI WASINO, LTD. (hereinafter, DMG MORI WASINO) will be showcasing the G-07 super high-precision lathe at IGA INNOVATION DAYS 2015 to be held July 22 - 25.

The G-07 is a super high-precision lathe that has been marketed under the well-established WASINO brand. Joining the lineup of DMG MORI lathes, the machine was redesigned to employ the unified DMG MORI design. The G-07 has successfully reduced cycle times by achieving “zero indexing time” that was made possible by the use of a gantry type tool post. Featuring the longest X-axis travel in its class of 480 mm, the G-07 offers flexible tooling. Additionally, the lathe provides superb accuracy that only a gang type would be capable of achieving, allowing itself to satisfy the demands of higher accuracy in finishing, hard turning or high added-value machining. Based on DMG MORI WASINO’s time-proven application engineering, we offer customers solutions best suited for their manufacturing environment.

We would like to highlight the main features of the G-07 from the perspectives of: (1) Basic structure, (2) Super-high-precision machining (3) Automation (4) Energy saving and (5) Safety.

(1) Basic Structure

The G-07 has a symmetrical structure with respect to the spindle center, which is unique to a gang type lathe. The induction-hardened horizontal slideways integrated on the bed demonstrate excellent thermal stability, high rigidity and low center of gravity, thus achieving long-term stable machining accuracy. The Z-axis with the flat-V slideways and the X-axis with the dovetail slideway guarantee high levels of rigidity and straightness. The X-axis with the longest travel in its class (480 mm) is another feature of the G-07.

(2) High-precision Machining

The G-07 maintains stable dimensional accuracy even over long-term operation thanks to the following features designed for high-precision machining.

1. The horizontal, single-piece, scraped cast iron slideways with superior damping performance and a high resistance to chatter make it possible to lower the position of the center of gravity between the floor and the feed system, thereby achieving stable machining.
2. The minimum distance between the axis travel reference guide and the spindle helps minimize the effects of heat.
3. The ball screw support bearing is placed as close to the spindle as possible to suppress thermal displacement, and also a reliable pre-tension structure is employed to guarantee high precision.

Designed to provide high-precision machining, the G-07 achieves a dimensional accuracy of 3 μm even from a cold start (machining without warming up). It also satisfies customers' high accuracy requirements in turning by achieving a circularity of 0.5 μm.

(3) Automation

DMG MORI WASINO provides a broad lineup of loader and workpiece stocker systems to accommodate diverse production needs. Our automation solutions include: gantry loaders, conveyors for material loading and finished part unloading, 1-axis/2-axis palletizers and rotary stockers. Most products are designed in-house, so they are flexibly customizable according to customer needs, enabling customers to build highly reliable automation systems.

At the INNOVATION DAYS event, the SR-1 gantry loader and the PZB-4 one-axis palletizer will be on display along with the machine, which have been particularly well-received by the market.

There is also a variety of peripherals available, including the part catcher, external measuring unit and tool setter to facilitate setups and other tasks; the semi-dry unit, coolant chiller and high-pressure coolant unit to support machining operation; and the chip conveyor and mist collector to maintain clean work environment. With the extensive automation solutions and useful peripherals, the G-07 delivers greater productivity to customers in a variety of manufacturing environments.

(4) Energy Saving

In an effort to reduce environmental burden and running costs, DMG MORI WASINO uses energy-efficient components such as LED lighting. We have achieved effective energy savings through the optimization of various functions and the integration of energy-saving features into our machine design.

(5) Safety

The G-07 complies with safety standards all over the world, including ISO standards, IEC standards, UL standards and JIS standards.

DMG MORI WASINO will continue to provide products that are reliable, highly functional and worthy of investment to meet each and every customer's needs.

Type	Super high-precision lathe
Model name	G-07
Market	Automotive, optical and hydraulic/pneumatic equipment industries, etc.
Production volume	250 units/year (G series total)

■Main Specifications

Item		G-07
Axis travel (X/Z)	(mm)	480 / 285
Max. turning diameter	(mm)	Φ170
Bar work capacity	(mm)	Φ38.1
Rapid traverse rate (X/Z)	(m/min)	12 / 20
Max. spindle speed	(min ⁻¹)	6,000
Chuck size	(inch)	5
Spindle drive motor	(kW)	5.5
Floor space (width x depth)	(mm)	1,400 × 1,725



Photo 1. Machine exterior

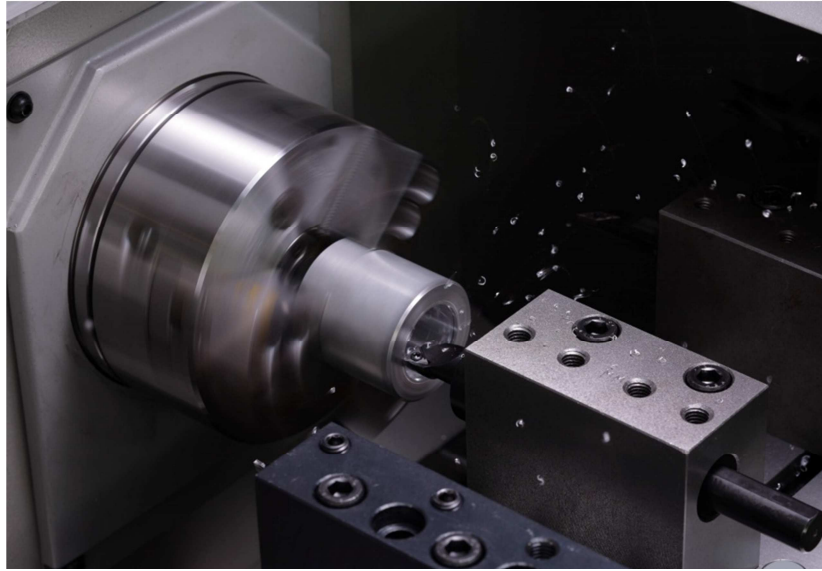


Photo 2. Inside of the machine