

Press Release

May 22, 2018

Sales release of NHX 4000 / NHX 5000 3rd Generation with high-performance spindle speedMASTER

DMG MORI started sales of NHX 4000 / 5000 3rd Generation, a new generation horizontal machining center of NHX series with 2 different models. We will exhibit NHX 4000 / 5000 3rd Generation for the first time in Japan at Iga Innovation Days 2018 starting from May 22.

NHX 4000 / 5000 3rd Generation is ideal for mass-production of highly rigid and precise components in various areas such as automotive and aerospace industries. DMG MORI's latest spindle, speedMASTER, is mounted as standard and ensures high-speed machining. A newly developed Zero Sludge Coolant Tank is attached as standard as well, and guarantees highly efficient sludge collection and easy maintenance of the coolant tank.

Highlights of NHX 4000 / 5000 3rd Generation are summarized below: 1) High-performance spindle, 2) Cutting chip solution, 3) High-rigidity and high-precision, 4) Improved operation and maintenance, 5) Automation systems.

① High-performance spindle

- Absolutely reliable high-speed spindle speedMASTER with 3-year warranty
Maximal spindle speed 20,000 min⁻¹ as standard.
Enables high-speed machining by maintaining the cutting performance equivalent to the existing model of 15,000 min⁻¹.
- Enhanced spindle labyrinth to prevent coolant intrusion and to guarantee higher durability
- Extended disk spring lifetime
Maintains consistent clamping force on the tool for a long time, reduces vibration at spindle rotation, and achieves high-precision machining.

② Cutting chip solution

- Zero Sludge Coolant Tank as standard – the latest technology to collect fine sludge in the coolant tank efficiently with high-performance cyclone filters
Prevents clogged pipes and coolant nozzles, and slows down pump deterioration, while dramatically reducing sludge accumulation within a coolant tank to spare regular tank maintenance.
Extends coolant lifetime by constantly purifying the liquid.

*Press release on Thursday, May 10

③ High-rigidity / High-precision

- A highly-rigid bed structure with rear step on the X-axis guideways
Allows for higher cutting loads and enables stable machining.
- The minimum distance between the spindle end face and the center of the pallet set to 70 mm
Enables machining by shorter tools and guarantees stable accuracy
- High-precision machining by full-closed-loop control in all axes with SmartSCALE (Magnescale) as standard
- Servo Sense for Workpiece in Z- and B-axis for optimized acceleration/ deceleration for each workpiece's mass and geometry
Reduction of positioning and machining time by adjusting acceleration /deceleration to workpiece mass
Improved positioning and machining accuracy through constantly efficient and smooth acceleration /deceleration
Automatic control by detecting machine vibration and noise

④ Improved operation/ maintenance

- Easy access to the machining area with a handwheel as standard
- Good accessibility to a spindle and pallets makes fixture adjustment and other setup operations easy
- Wide door opening of 826 mm with a sliding door on the side of a set-up station
- Peripherals requiring periodic maintenance are located on side, which contributes to improving operators' work efficiency

*NHX 5000 3rd Generation

⑤ Automation systems

- Hydraulic / pneumatic interfaces essential for automation equipped as standard, which open doors for introducing hydraulic and pneumatic fixtures
Automatic clamping/ unclamping of workpiece
Prevent clamp errors with a seating detection function

- High-quality automation and robot systems to solve diversifying production needs of customers in a short delivery time

RPP system (Round Pallet Pool System)

Outstanding space savings and setup capabilities to hold more pallets per unit area than any other pallet pool system.

CPP system (Carrier Pallet Pool System)

8 predefined and easy-to-install packages to provide optimum specifications for customers' needs.

LPP system (Linear Pallet Pool System)

Multi-level pallet racks and other functions for flexible customization, achieving the optimum productivity and operation rate

- Equipped with a control system to maximize productivity of an automation system

PALLET MANAGER

Displays the entire system layout in an easy-to-see manner. Enables to check the latest pallet status and shorten setup time

Pallets transferrable by drag and drop of the pallet icons on CELOS screen

Prevents machining failure and troubles caused by tool breakage with central tool management

- “DMG MORI One Stop Service” to support everything about automation systems from machine tools, loading systems, peripheral equipment, production control system, as well as machining technologies, fixtures, tools, and measurement devices.

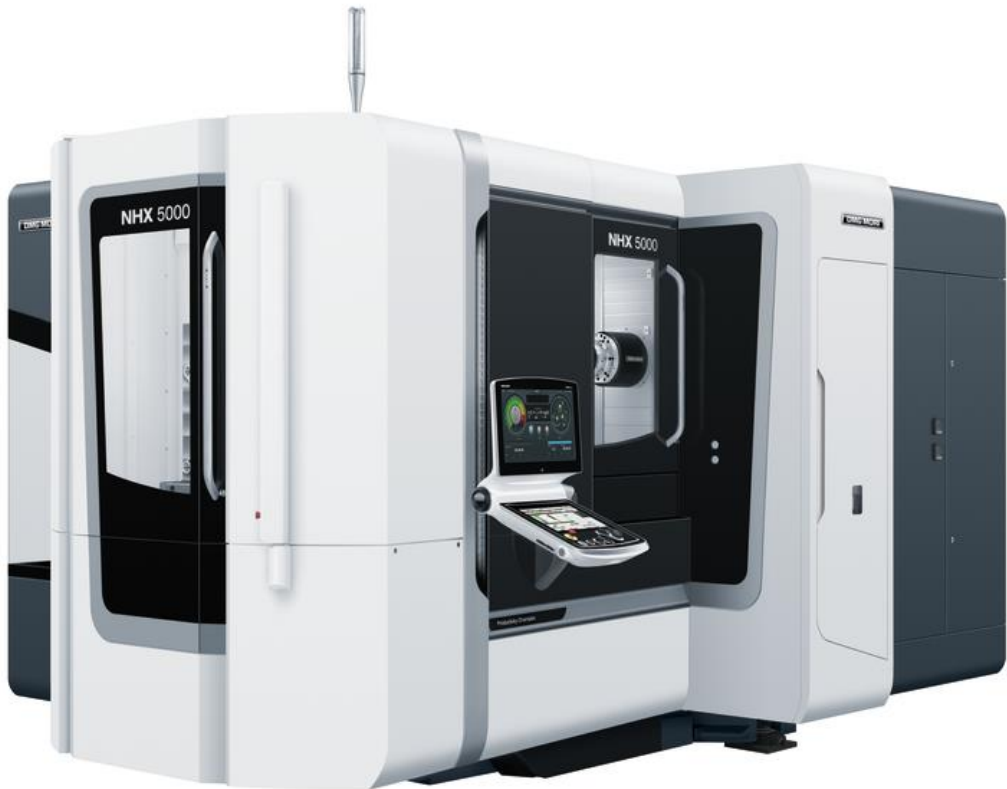
*Applicable to RPP and CPP

DMG MORI will continuously meet customers' needs with highly functional and reliable products well worthy of investment.

Machine type	High-Precision, High-Speed Horizontal Machining Center
Model name	NHX 4000 3 rd Generation NHX 5000 3 rd Generation
Market	Medical, automotive, industrial machinery
Order start	May 2018
Sales target	50 units/month



NHX 4000 3rd Generation



NHX 5000 3rd Generation