

Press Release

January 31st, 2022

NTX 2500, 3000 2nd Generation Now distance between centers 3,000 version for long shaft processing at the highest dimensional, volumetric & surface accuracy

DMG MORI CO., LTD. (hereinafter “DMG MORI”) has launched its ultra-high precision integrated mill turn center NTX 2500, 3000 2nd Generation with a new specification of distance between centers 3,000 version.

Ever since its launch in 2018, NTX 2500 2nd Generation and NTX 3000 2nd Generation with a distance between centers of 1,500 version have been the machines of choice for customers all around the world in need of process integration and 5-axis simultaneous machining of complex-shaped workpieces in sectors such as automotive, aircraft, medical and die & mold. In recent years, actions against global warming by reducing greenhouse gas emissions such as carbon dioxide to practically zero (referred to as ‘carbon neutrality’) have led to decarbonization in the energy sector (wind power generation) and the large transportation sector (aircraft and ships). The result is a growing demand for efficient processing of large-size shaft-shaped workpieces.

NTX 2500 | 3000 2nd Generation with distance between centers 3,000 version was developed to enable all turning and milling operations on 1 machine through combination of the high-performance turning spindle turnMASTER and the turn-mill spindle compactMASTER with only 350 mm in length.

The processing of large-size shaft-shaped workpieces of max. 3,030 mm*¹ in one chucking reduces setup changes and enables process integration. Furthermore, a large-capacity tool magazine for storage of up to 246 tools*² and a long tool stocker for special shaft-processing tools are available as well.

Since 2021, DMG MORI has achieved carbon neutrality from component procurement to product shipment at all production sites around the world. NTX 2500 2nd Generation and NTX 3000 2nd Generation are such products manufactured under carbon neutral conditions and therefore labeled GREEN MACHINE on the machine housing. In addition, reduced energy consumption during idle time, higher cutting performance for shorter processing time and other improvements realize an even more energy-saving and environment-friendly product.

For those interested, DMG MORI recommends a visit to its small-scale weekly exhibition “DMG MORI Technology Friday” where the actual NTX 3000 | 3000 2nd Generation will be on display at Iga Campus from the middle of February 2022 onwards.*³

■ Main features

① High-performance spindle

- MASTER-series spindle with 3-year warranty
 - + turnMASTER – turning spindle with high performance
 - Stronger durability realized by large-size bearing balls and improved component accuracy
 - Machining with high accuracy made possible by Magnescale high-accuracy rotary sensor
 - + compactMASTER – turning & milling spindle
 - Direct transmission of motor rotation through the Direct Drive Spindle (DDS) to increase cutting performance while reducing maintenance frequency and risk of defects
 - Wide machining area due to compact spindle structure with only 350 mm in length
 - Retreating stroke of 250 mm makes for large machining space and enables the longest machining length in its class*³

② Long shaft machining

- Distance between centers of 3,000 version to machine large-size shaft-shape workpieces
 - + Longest machining possible in its class*³
 - NTX 2500 | 3000 2nd Generation : 3,030 mm
 - NTX 3000 | 3000 2nd Generation : 3,019 mm
- Process integration by long tooling for shaft machining with max. diameter 80 mm & max. machining length 1,300 mm
 - + Long tool stocker available*²
- Up to 2 automatic steady rests available*²

③ Compact floor space

- No. 1 machining length of its class*³ while maintaining similar floor space compared to other machines on the market*³ makes for the highest productivity

④ Automation & Measuring

- Automation solutions for increasingly diverse production demands
 - + MATRIS*²
 - Innovative robot system without the need of special knowledge related to programming

- and operation
 - + Large-capacity tool magazine*2
 - Tool magazine for up to 246 tools to support automated high-mix low-volume production and reduce tool setup
 - Measurement solutions for on-machine measurement and more efficient setup
 - + On-machine measurement system*2
 - Measurement of the machined workpiece by touch probe mountable on turning & milling spindles
 - + Automatic on-machine tool presetter*2
 - Tool measurement on the machine to reduce setup work and even detect tool breakage
 - + Tool visualizer*2
 - On-machine non-contact tool measurement through cutting-edge sensing technology
- ⑤ Solutions against cutting chips, coolant and mist
- External chip conveyor with high-performance drum filter for efficient ejection of cutting chips and high-accuracy coolant filtering
 - Chip wash coolant equipped as standard for effective cutting chip removal below the spindle
 - “Zero Sludge Coolant” equipped as standard for efficient removal of fine sludge inside the coolant by high-performance cyclone filter.
 - Built-in mist collector *zeroFOG* available to maintain a clean factory by efficiently removing mist caused during metal processing. *2
- ⑥ Energy saving
- GREEN MACHINE manufactured under carbon neutral conditions
 - Equipped with DMG MORI’s original function for energy saving: GREENmode
 - + GREEN monitoring
 - Energy consumption and CO₂ emissions visualized on the CELOS operation screen
 - + GREEN device
 - High-luminance LED lighting and hydraulic pumps with inverters
 - + GREEN idle reduction
 - Power shut-down of servo motors, spindles, coolant pumps during machine stop
 - Automatic shut-off of the panel display after a pre-defined idle time
 - + GREEN control
 - Quick M-code output, inverter-controlled coolant spray volume

DMG MORI will continue to attend to customer needs and launch highly functional, reliable and investment-worthy products.

Product name	NTX 2500 3000 2 nd Generation NTX 3000 3000 2 nd Generation
Target markets	Energy, Aerospace, ships, etc.

*1 The maximum machining length of NTX 2500 | 3000 2nd Generation

*2 Option

*3 Calculation by DMG MORI

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NTX 3000 | 3000 2nd Generation