

MACHINING CENTERS

MC-SERIES



● N20 MC | N30 MC | N40 MC | N50 MC | N60 MC



THE NSH GROUP

MC-SERIES

The NILES-SIMMONS CNC turn-mill machining centers of the MC series are based on a proven inclined-bed machine concept and are available in the sizes N20MC to N60MC. The high and multifunctional performance spectrum of the machining centers enables the economic, flexible and highly precise complete machining of rotationally symmetrical workpieces in one setup (closed-door machining).

Based on a modular design principle our machining centers can be configured as single- or multi-slide machines. In addition, a wide range of configuration and combination options with innovative drive, clamping and tooling concepts can be realized. The MC series provides you with a tailor-made system solution for exceptional long-term accuracy and high cutting performance, even with complicated machining tasks.



Highlights

- **Efficient complete machining**
For rotationally symmetric workpieces up to 9.500 mm length and max. 1.500 mm swing diameter
- **Modular construction principle**
Wide range of configuration and combination options for your application-optimized use
- **Variable multi-slide concept**
Precisely adapted technology combinations with independent machining units
- **Innovative drive concept**
Electronic direct drive or various gearbox versions
- **Bottom support**
Additional bottom slide with turret and automatic tool change or alternative, process-dependent machining and measuring devices
- **Extensive internal machining solutions**
Use of interchangeable boring bars or boring heads with controllable cutting edge (NC axis)
- **Automated User Interfaces**
User-specific operating and programming interfaces
- **Modular expandable tool magazines**
Process-dependent configuration and with loading parallel to main time by means of independent chain magazines as well as separate magazines for long tools
- **Comprehensive tool management systems**
Process-dependent tool management as well as options for tool breakage monitoring and automatic tool measurement
- **CAM packages**
Machine simulation, anti-collision system (PCS®), Condition Monitoring (ironMIND)
- **Exceptional long-term accuracy**
Durable assemblies and machine components, Direct measuring systems in all axes
- **Operator and service friendliness**
Ergonomic machine design, separate service & repair aisle, low machine access
- **Wide range of automation options**
Machine integration into loading systems and production lines (e.g. portal loading, robot loading)

MODULAR DESIGN CONCEPT

The MC series offers the highest flexibility in the configuration of high-precision CNC turn-mill machining centers. Variable configuration of machining units, drives, magazines and slides from the modular system allow the most demanding components to be completely machined in a single setup (closed-door machining).

With intelligent hardware and software tools, we complete your process throughout the entire machine life cycle of the machine:

- CAM Solutions & Automated User Interfaces for NC programming
- „Virtual machine“ for anti-collision control and NC program optimization
- Real-time anti-collision monitoring with Protection Control System (PCS®-online)
- Process monitoring
- In-house condition monitoring system ironMIND - Know your Machine

Configuration diversity



- Universal turning-milling unit



- Combination turning-milling unit and boring bar slide



- Combination turning-milling unit and drilling quill



- Combination turning-milling unit and external milling unit



- Combination turning-milling unit and tool carrier



- Combination turning-milling unit and high-performance milling unit



- Boring bar magazine with automatic boring bar change



- Full-fledged, electrically couplable counter spindle



- Modular tool magazines



- Separate tool change for second slide



- Up to 3 steady rest slides with 2 steady rests each or optional hydrostatic support



- Special tool heads

CUSTOMIZED MACHINING SOLUTIONS

Use the MC series from NILES-SIMMONS for efficient, economical, and resource-saving production.

Due to the combination possibilities of different modules as well as extensive technology and software options, the complex requirements in complete machining are fulfilled.

NILES-SIMMONS offers individually configurable, part-specific technology solutions for your competitive success. Specialist know-how and many years of experience are the foundations for your tailored solution.

Technology diversity



• 5-Axis-Machining



• Turning
(external/ internal/eccentric)



• Threads



• Traori/ B-Axis Turning



• Turning-Milling-orthogonal



• Fine Turning-Milling



• Milling-axis-parallel



• Deburring



• Traori/B-Axis Milling



• Gear Hobbing



• Power Skiving



• Gear Shaping



• Roller Shaping



• Invo-Milling



• Internal Machining
with System Boring Bar



• Internal Machining
with Drilling Quill



• Drilling



• Deep Hole Drilling



• Grinding



• In-Process Measuring
(workpiece/tools)

TECHNICAL DETAILS

N20_{MC}
NILES-SIMMONS

N30_{MC}
NILES-SIMMONS

N40_{MC}
NILES-SIMMONS

N50_{MC}
NILES-SIM

N60_{MC}
NILES-SIMMONS

