www.dmgmori.com

DMG MORI

Rigid and Precise Turning Center

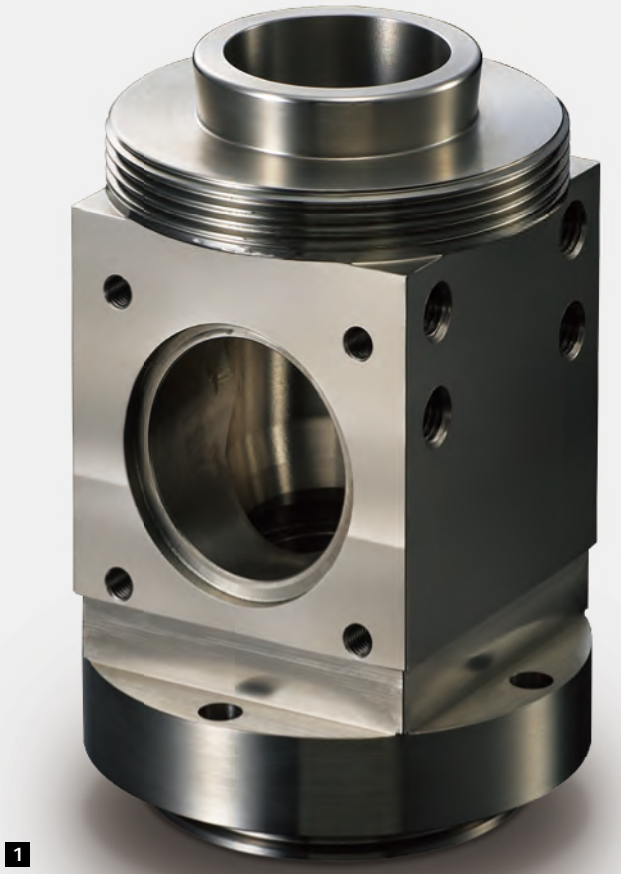
NLX 2500

NLX 2500

NLX 2500

Reaching To the Top of Turning Centers

The NLX 2500 is a high-rigidity, high-precision Turning Center able to flexibly handle various workpieces. The model features the BMT (Built-in Motor) that achieves powerful turning capabilities and outstanding milling performance as well as the highly rigidity bed.
When equipped with CELOS + MAPPS V, the NLX 2500 enables operators to perform machining of various workpieces from simple- to complex-shaped components with an easy operation.
This is the model that can satisfy a wide range of users from beginners to experienced technicians.



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Food machinery

1 Port block

Automotives

2 Flywheel

3 Brake disk

Construction Machinery

4 Flange

Industrial Machinery

5 Drive shaft

6 Cylinder

Boats & Ships

7 Cylinder liner

NLX 2500

High-precision Achieved by Uncompromising Development

The NLX 2500 has been upgraded in the fundamental performance of turning centers such as reliability, accuracy, rigidity and operability. The model employs the DMG MORI original technologies such as thermal displacement control, while inheriting the proven features of the previous model including the high-rigidity bed.
The ergonomically designed new cover has been created taking into account every machine operation scene conceivable, minimizing operators' work load.
The NLX 2500 is an operator and environmentally friendly model that visualizes energy-saving effects by the CELOS application aiming to reduce environmental burden.

Milling

+ Turret equipped with BMT (Built-in Motor Turret)
+ High-speed rotary tool spindle: 10,000 min^{-1}

Operability

+ Equipped with the digital tailstock
+ CELOS+MAPPS V

High precision

+ Thoroughly controlled thermal displacement
+ High-precision, quick-change turret (Option)

High rigidity

+ Slideways are used for X / Y / Z axes

Power-saving

+ Energy-saving Setting and Visualization of Energy-saving Effect

BMT: Built-in Motor Turret
MAPPS: Mori Advanced Programming Production System
CELOS: Control Efficiency Lead Operation System

NLX 2500

Wide Varieties of Lineup to Shape Customers' Demands into Quality Products

The NLX 2500 offers a standard chuck size of 10 inches for Spindle 1 with three variations of distances between centers of 500, 700 and 1,250. The model provides the 2-axis turning specification, the milling specification and the Y-axis specification together with various spindle and turret options. Customers can choose the "one-of-a-kind machine" that flexibly meet their own needs.

＊ Only the 2-axis turning specification is available for the NLX 2500 | 500. (Not for the NLX 2500 | 1250)

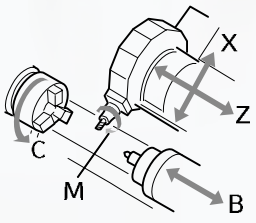
NLX 2500 | 500

NLX 2500 | 700

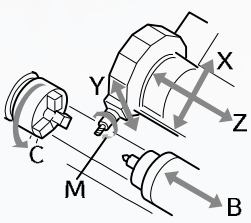
＜Milling ＋ Y-axis ＋ Spindle 2 specifications＞

Variations of the milling specification

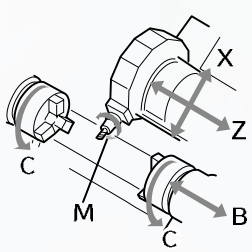
Basic specification



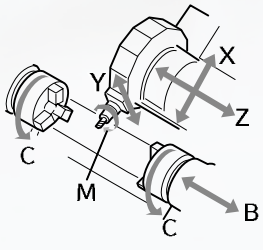
Y-axis specification



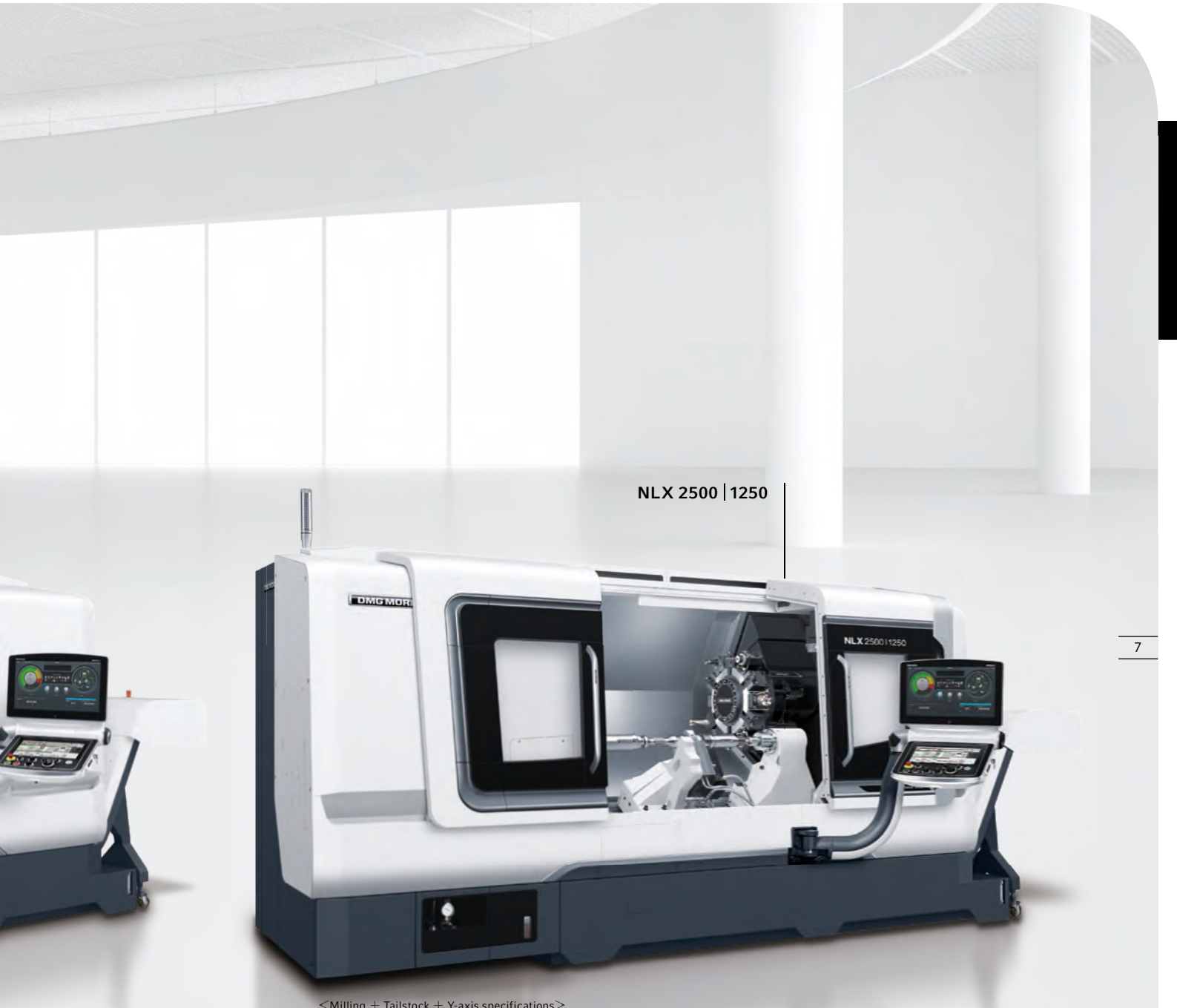
Spindle 2 specification



Y-axis ＋ Spindle 2 specification



■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).



<Milling + Tailstock + Y-axis specifications>

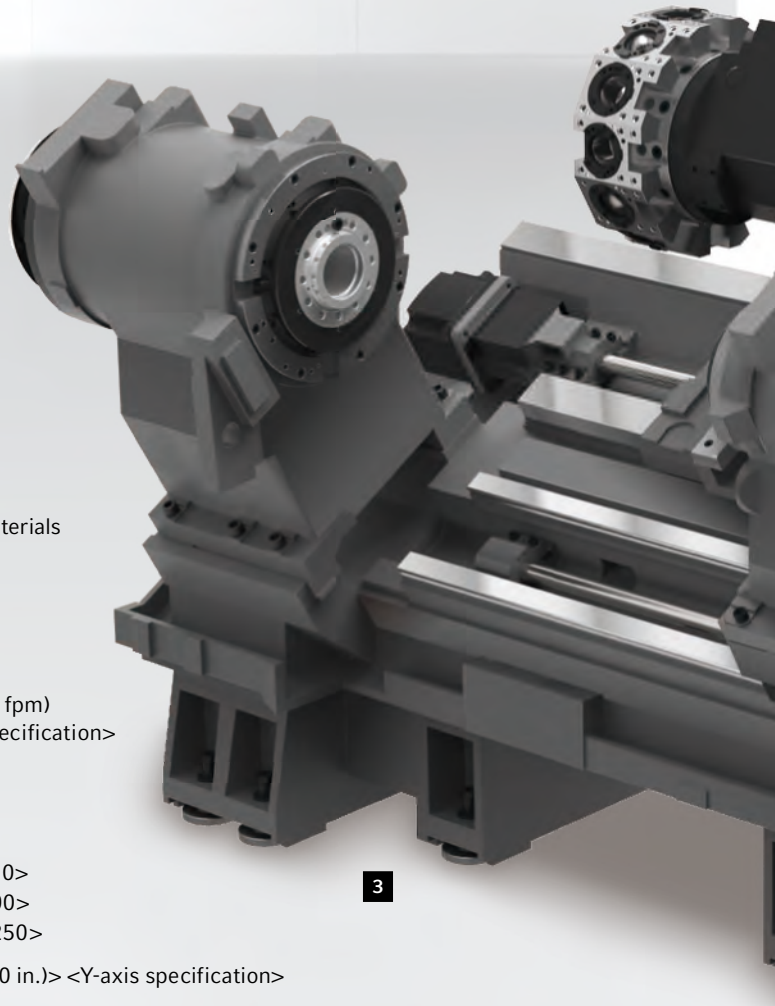
● Standard ○ Option — Not applicable

	NLX 2500 | 500	NLX 2500 | 700	NLX 2500 | 700 NLX 2500 | 1250	NLX 2500 | 700 NLX 2500 | 1250	NLX 2500 | 700 NLX 2500 | 1250	NLX 2500 | 700 NLX 2500 | 1250
Basic specification	T S1	T S1 TS		T MC S1 TS		
Optional specification	TS	—	—	Y	S2	Y S2
Spindle 1 / Turret	●	●	●	●	●	●
Turret (Milling)	—	—	●	●	●	●
Tailstock	○	●	●	●	—	—
Spindle 2	—	—	—	—	○	○
Y-axis	—	—	—	○	—	○

NLX 2500

Machine Structure Maximizing Cutting Performance

What is indispensable for maximum cutting performance is "robust machine construction."
We carry out simulations for torsional rigidity by the FEM analysis at the development stage to create a high-rigidity machine structure.
Slideways are employed on X / Y / Z axes for better damping performance and dynamic rigidity, which achieves outstanding cutting capabilities.



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1 FEM analysis

+ High-rigidity machine body designed by FEM analysis

FEM: Finite Element Method

2 Slideways are used for X / Y / Z axes

+ Slideways on all axes for higher vibration damping performance and dynamic rigidity (all NLX 2500 series models)

3 High-rigidity bed

+ Slideways on X / Y / Z axes and the high-rigidity bed for heavy-duty machining
+ High surface quality in machining of difficult-to-cut materials and intermittent machining
+ Rapid traverse rate: X-axis 30 m/min (98.4 fpm)
  Z-axis 30 m/min (98.4 fpm)
  Y-axis 10 m/min (32.8 fpm)
  <Y-axis specifications>
  Tailstock 7 / 20 m/min (23.0 / 65.6 fpm)
  <Advance / retreat> <Tailstock specification>

4 Spacious work area

+ Travel X-axis 260 mm (10.2 in.)

Z-axis 500 mm (19.7 in.) <NLX 2500 | 500>
795 mm (31.3 in.) <NLX 2500 | 700>
1,345 mm (53.0 in.) <NLX 2500 | 1250>

Y-axis 100 mm (3.9 in.) <± 50 mm (± 2.0 in.)> <Y-axis specification>

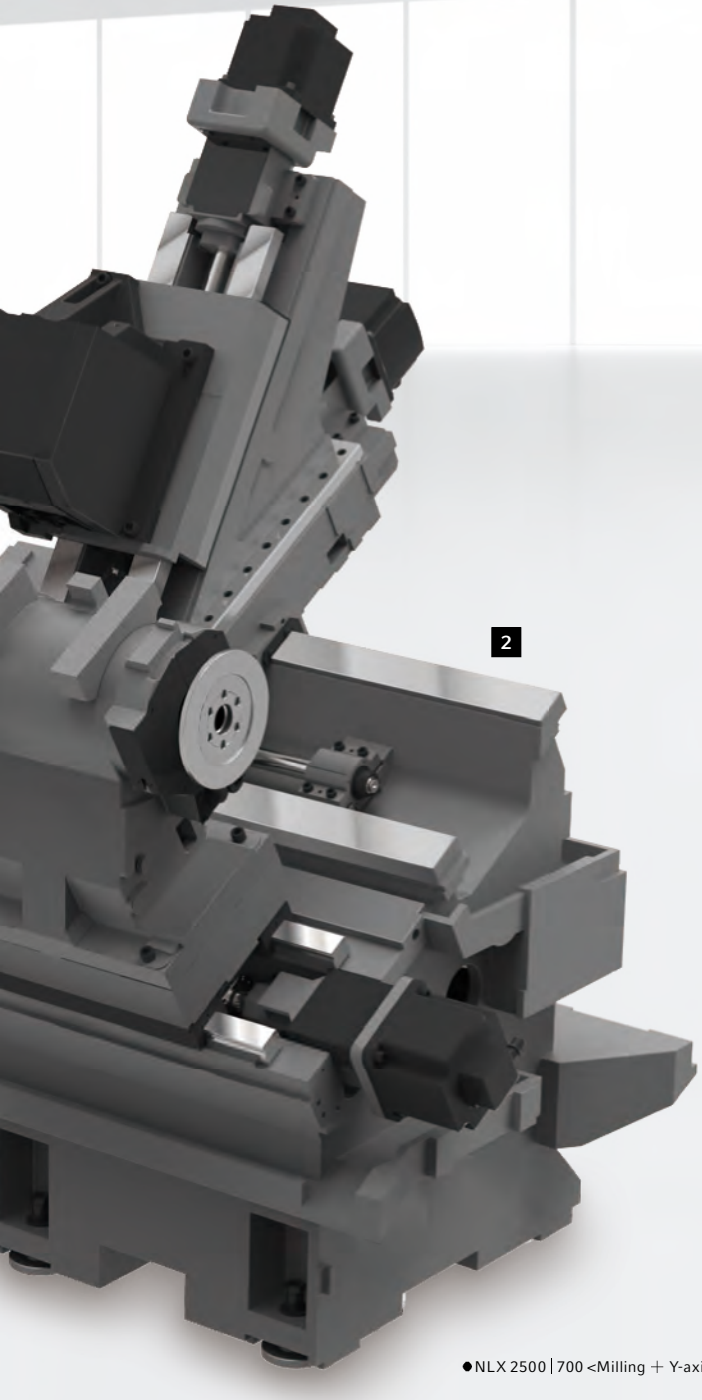
B-axis 734 mm (28.9 in.) <NLX 2500 | 700> <Spindle 2 specification>
1,284 mm (50.6 in.) <NLX 2500 | 1250> <Spindle 2 specification>

Tailstock [380 mm (15.0 in.)]<NLX 2500 | 500> <2-axis turning specification>
650 mm (25.6 in.) <NLX 2500 | 700> <2-axis turning specification>
734 mm (28.9 in.) <NLX 2500 | 700> <Milling specification>
1,284 mm (50.6 in.) <NLX 2500 | 1250> <Milling specification>

[ ] Option

1

2



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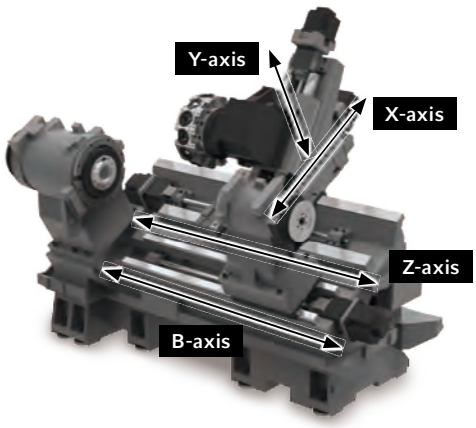

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● NLX 2500 | 700 <Milling + Y-axis + Spindle 2 specifications>

NLX 2500

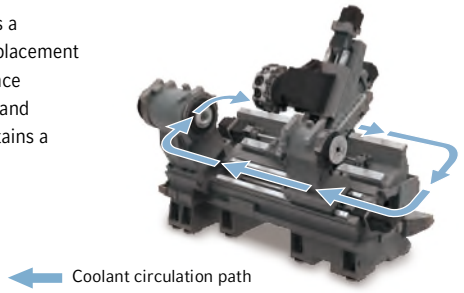
Thoroughly Controlled Thermal Displacement

There are varieties of factors leading to thermal displacement that has a major influence on machining accuracy, including heat generation during machine operation, changes in room temperature and increase in coolant temperature. DMG MORI tackles the factors one by one with the original method for thoroughly controlling thermal displacement from every aspect. For the spindle, which is the prime heat source, we spirally arrange the oil jacket around the spindle unit to control the temperature increase.

Coolant circulation for casting parts

DMG MORI has developed a new technology to circulate coolant through the casting parts as a measure against thermal displacement that directly affects machining accuracy. Thermal displacement is caused by various factors including non-uniform expansion and contraction due to difference in thickness of the casting; uneven heat generation in the slideways; operating environment; and changes in ambient temperature due to season and time of day. The coolant circulation maintains a uniform temperature inside the casting parts, and minimizes deformation in the machine.

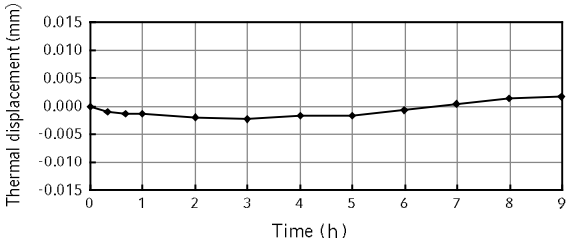
+ Uniform thermal displacement
+ Resistance to changes in ambient temperature
+ High-accuracy long-term machining

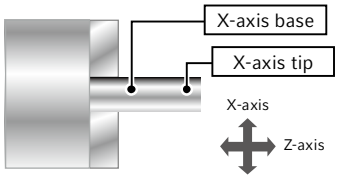


Thermal displacement

NLX 2500|700 <Milling + Y-axis + Spindle 2 specifications>

2.0 µm
(Actual results)





- Spindle speed: 3,200 min^{-1}
- Constant ambient temperature

● The test results indicated in this catalog are provided as examples.
The results indicated in this catalog may not be obtained due to differences in environmental conditions during measurement.

Coolant chiller <Separate type> (Option)

Raised coolant temperature causes thermal displacement in the fixtures and workpiece, affecting the machining accuracy of the workpiece. Use this unit to prevent the coolant from heating up. When using oil-based coolant, the coolant temperature can become extremely high even with the standard coolant pump, so please be sure to select this unit.

When using oil-based coolant or a super-high-pressure coolant system, please be sure to consult our sales representative.

● We cannot guarantee that this unit will completely control the coolant temperature.
It is designed to help prevent oil temperature increases.

Full closed loop control <Scale feedback> (Option)

No contamination of the measuring system to oil or water condensation.

+ Superior precision with the Magnescale full closed loop control (Scale feedback)
+ Magnetic measuring system with a high resolution of 0.01 µm
+ Resistance to oil and condensation due to a magnetic detection principle

+ Impact resistance of 450 m/s^2 (17,716.5 $in./s^2$)
+ Vibration resistance of 250 m/s^2 (9,842.5 $in./s^2$)
+ Thermal expansion coefficient as cast iron

NLX 2500

High-efficiency Spindle Created from Reliability and Proven Technologies

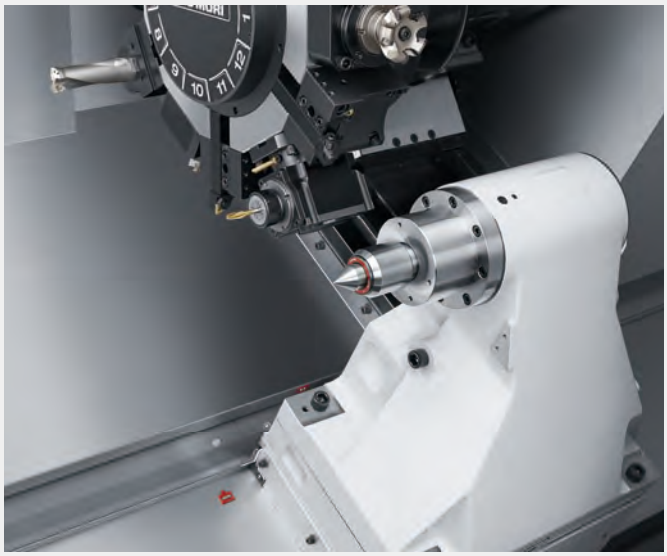
The NLX 2500 offers a standard chuck size of 10 inches for Spindle 1 and 6 inches for Spindle 2, and employs the highly reliable spindle that keeps thermal displacement to the minimum.
We also offer the digital tailstock, which directly controls thrust force of the tailstock spindle and improves machining precision with an accurate workpiece pressing force.
The Spindle 2 specification enables continuous machining of both surfaces.
The combination of rotary tools and the Y-axis function enables integrated machining from turning to secondary/back face machining, and multi-axis machining, allowing for process integration.

Sophisticated spindle labyrinth + spindle air purge

+ Sophisticated spindle labyrinth structure to handle the frequent use of high-pressure coolant
+ Spindle air purge as standard (Option for the 2-axis turning specification)
+ Highly durable spindle achieved by preventing coolant from entering in the spindle
+ Max. spindle speed for Spindle 1: 4,000 min^{-1}
  [4,000 min^{-1}] (High output)
  [2,500 min^{-1}] (High-torque) <Milling specification, Y-axis specification>
+ Max. spindle speed for Spindle 2 <Spindle 2 specification>: [6,000 min^{-1}]
  [5,000 min^{-1}] (High-torque)
+ Chuck size: Spindle 1 Support for 10-inch and 12-inch (8-inch size is also available for the 2-axis turning specification)
  Spindle 2 Support for 6-inch and 8-inch <Spindle 2 specification>

[ ] Option
● Only the NLX 2500 | 500 and the NLX 2500 | 700 are for 2-axis turning.
● Chuck: Option

■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).

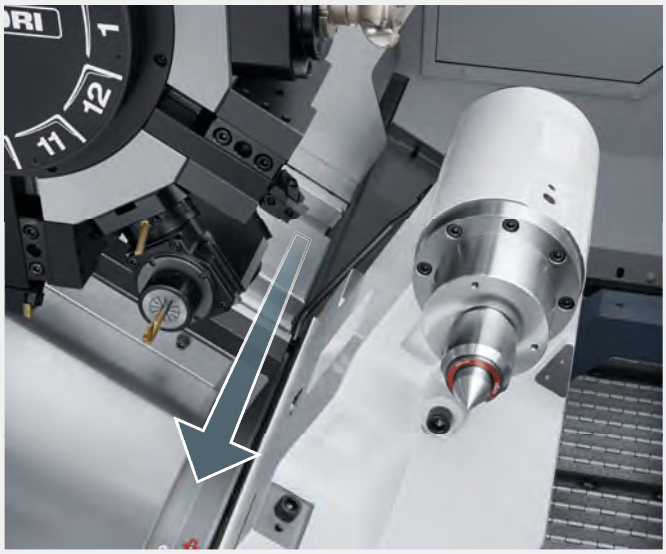


Digital tailstock (Tailstock specification)

The high-rigidity digital tailstock driven by a servo motor significantly reduces setup time.

+ Fewer steps requiring operation of the tailstock
+ Setup time: Reduced by over 50%
+ Tailstock spindle operating time: Reduced by over 20%
+ Variable pressure control using program instructions
+ Simple operation using MAPPS

*NLX 2500 | 500 is optional
MAPPS: Mori Advanced Programming Production System



Chip flushing coolant

Chip flushing coolant is featured as standard at the base of the digital tailstock, improving chip processing capability.

Workpiece size

		NLX 2500 | 500	NLX 2500 | 700	NLX 2500 | 700				NLX 2500 | 1250			
Basic specification		T S1	T S1 TS	T MC S1 TS				T MC S1 TS			
Optional specification		TS	—	—	Y	S2	Y S2	—	Y	S2	Y S2
Max. turning diameter	mm (in.)	ϕ 460 (18.1)*1		ϕ 366 (14.4)*1							
Max. turning length	mm (in.)	450 (17.7)	728 (28.6)	705 (27.7)				1,255 (49.4)			
Bar work capacity	mm (in.)	ϕ 80 (ϕ 3.1)*2									

*1 For O.D. cutting tool with an overhang of 35 mm (1.4 in.)
*2 Bar work capacity: Depending on the chuck/cylinder used and its restrictions, it may not be possible to reach full bar work capacity.

NLX 2500

Equipped with BMT (Built-in Motor Turret)

The Milling type and the Y type are equipped with the BMT (Built-in Motor Turret) with a max. rotary tool spindle of 10,000 min^{-1} as standard. The rotary tool spindle motor ensures excellent machining precision using the coolant jacket that controls heat generation.
The Y-axis specification enables high-efficiency, high-precision machining of complex-shaped workpieces.

Number of tool stations

	Standard	Option
2-axis turning specification	10 tools	12 tools*2
Milling basic specification	10 tools	12, 16, 20 tools
Milling optional specification*1	12 tools	10, 16, 20 tools

*1 Including Milling + Y-axis specifications, Milling + Spindle 2 specifications and Milling + Y-axis + Spindle 2 specifications
*2 If the tool holder is used in common with CL, SL or Dura and an I.D. cutting tool is mounted on the adjacent station, interference with the 10-inch standard chuck will occur.
*3 Made by Sauter (12- station bolt-tightened turret only)


2-axis turning specification
10-station turret


Milling + Y-axis specifications /
Milling + Spindle 2 specifications
12-station turret


Milling + Y-axis
+ Spindle 2 specifications*3
12-station turret

"Mature" and "Evolved" BMT Technology

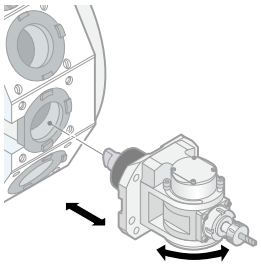
BMT®
Built-in Motor Turret

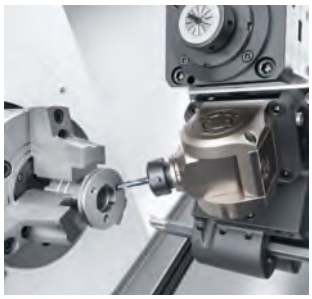
+ Improved milling power
+ Improved milling accuracy
+ Controls the turret' s heat and vibration
+ Reduced energy loss
+ Displacement amount: Previous model (5,000 min^{-1}) 3.05 µm
  →NLX 2500 (10,000 min^{-1}) 0.43 µm
+ Turret temperature increases:
  Compared with conventional machine 1 / 10 or less
+ Vibration amplitude:
  Compared with conventional machine 1 / 3 or less

BMT: Built-in Motor Turret

Universal holder (Consultation is required)

As tools can be adjusted and fixed at any required angles in advance, it is highly effective for inclined hole machining. For automatic operation, machining can be immediately started after turret indexing.



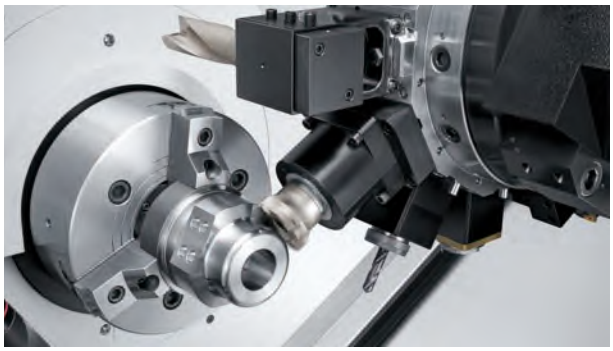


Inclined hole machining with the universal holder

20-station turret specifications for long-term operation at night and complex machining* [Option]

+ With the 20-station turret you can machine a wide range of workpieces, including those for which automation used to be difficult because they require many processes.
+ Comes with the high-rigidity, compact tooling system

12-station VDI quick-change turret (Sauter Trifix) <Y-axis specification> [Option]



This is a turret with the high-rigidity, high-accuracy quick-change specifications conforming to the VDI tooling system. It reduces setup time by substantially shortening tool mounting time.

+ Mounting repeatability 6 µm / 200 mm (7.9 in.)

* Excluding 2-axis turning specification

NLX 2500

Best Chip Disposal Solution in the Industry

Chips can be one of the main causes leading to machining failure and machine stop.
DMG MORI group conducted an in-depth study on them by carrying out various experiments and analyses, and achieved outstanding chip disposal performance.
We offer optimal chip disposal solutions according to a machining condition of each customer.

Chip conveyor (Option)

+ Provides highly efficient chip disposal

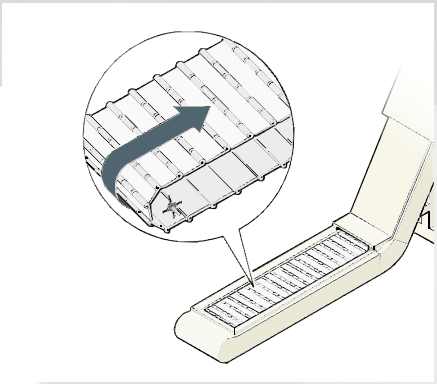
◎: Optimum ○: Suitable —: Not suitable

Workpiece material and chip size	Steel			Cast iron	Aluminum, non-ferrous metal		
	Long	Short	Powdery	Short	Long	Short	Powdery
Hinge type	○	○	—	—	○	—	—
Hinge type (Aluminum)	—	—	—	—	—	○	—
Scraper type	—	○	○	○	—	—	—
Magnet scraper type	—	◎	◎	◎	—	—	—

Chip size guidelines
Short: chips 50 mm (2.0 in.) or less in length, bundles of chips ϕ40 mm (ϕ1.6 in.) or less
Long: bigger than the above

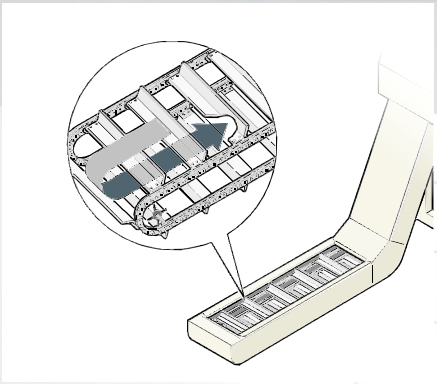
- The options table shows the general options when using coolant. Changes may be necessary if you are not using coolant, or depending on the amount of coolant, compatibility with machines, or the specifications required.
- Please select a chip conveyor to suit the shape of your chips. When using special or difficult-to-cut material (chip hardness HRC45 or higher), please consult our sales representative.
- We have prepared several options for different chip shapes and material. For details, please consult our sales representative.

Chip conveyor (Hinge type)*



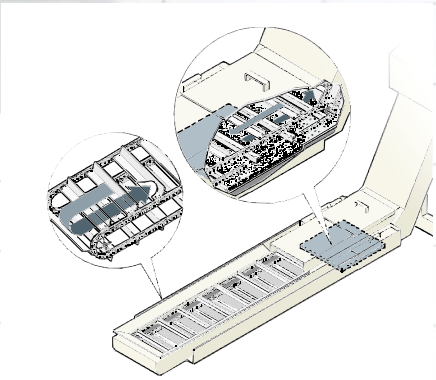
The hinge plate carries and discharges chips to the outside of the machine. Particularly effective for long chips.

Chip conveyor (Scraper type)*



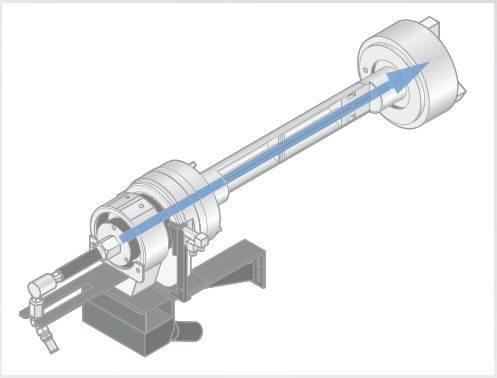
Chips accumulated on the bottom of the chip conveyor are scraped up by a scraper and discharged to the outside. Suitable for short or powdery chips.

Chip conveyor (Magnet scraper type)*



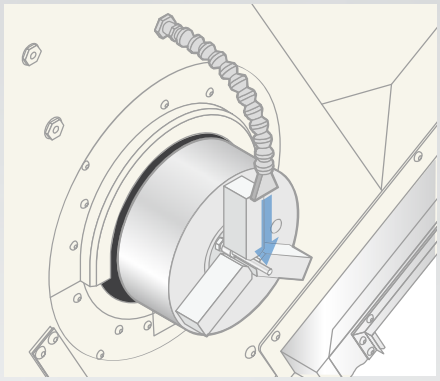
Chips are forcibly precipitated by the magnet plate at the bottom of the tank and are scraped up by a scraper and discharged to the outside. Suitable for fine magnetic chips such as casting chips.

Through-spindle coolant system*



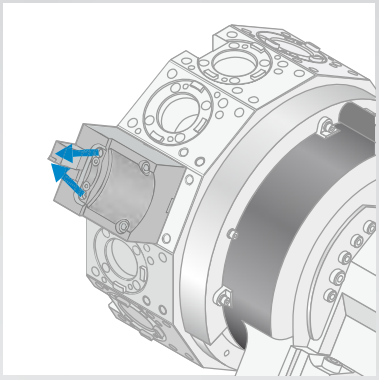
Coolant supplied through the center of the chuck removes chips generated during I.D. machining.

Coolant in upper part of chuck*

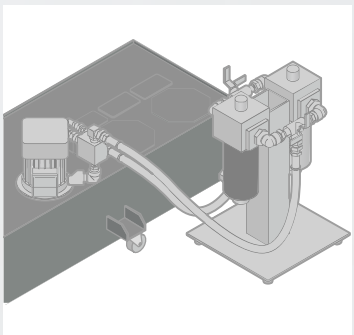


Coolant supplied from above the chuck removes chips and minimizes heat generation in the workpiece.

Air blow (Tool tip)*



Air is blown toward the tool tip to blow away chips adhering to the tool.



Coolant line filter

It removes foreign matter in the coolant coming from the coolant pump. The filter clogging detection function is available.

The coolant tank pulls out to the front

With the new design, the coolant tank can be pulled out in front without having to pull out the chip conveyor. It can be pulled out easily and does not take up extra space in the back.

* Option

NLX 2500

Elaborate Design in Pursuit of Usability

The NLX 2500 is equipped with mechanical ingenuity in every part of the body to improve a machine operation rate from viewpoints of workability and maintainability.
The model achieves shorter MTTR (Mean Time To Repair) by thorough analysis of customers' demands such as a wider door opening for better working efficiency and ease of maintenance.
Each of the machine units is easy to be inspected, so the NLX 2500 can always deliver its best performance that contributes to increasing customers' productivity.

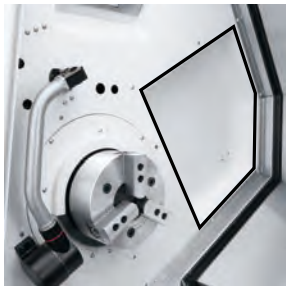
1 Improved operability

The setup workability has been improved by the wide door opening. The model employs the touch screen operation panel with the rotating mechanism. The lower touch screen tilts while the whole operation panel turns horizontally, which improves operability.

●NLX 2500 | 700 <Milling + Y-axis + Spindle 2 specifications>

2 Interference prevention pocket <Milling specification* only>

The chuck cover with a pocket for tool overhang prevents interference.



*Including Milling + Y axis specifications, Milling + Spindle 2 specifications and Milling + Y axis + Spindle 2 specifications

3 Lubricating oil tank (for slideways)

The supply port of the lubricating oil tank for the slideways is arranged in the front side of the machine for easy refilling.

4 Oil chiller / Hydraulic unit

The oil chiller and hydraulic unit are placed together in the rear side of the machine without a cover for easy access.

5 Layout of pneumatic equipment

The air equipment is placed together on the machine for better maintainability.

●NLX 2500 | 1250 <Milling + Y-axis specifications>

NLX 2500

Various Automation Solutions

We offer various solutions to automation using workpiece loaders and unloaders and bar feeders.
It enables complete automation from provision of raw materials to ejection of
finished workpieces on one machine, reducing non-cutting times to ensure customers' profit.

● Photo: NLX 2000

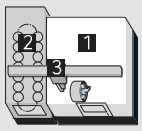
Loader type				GX-05 (Over-machine traveling type)
Gantry loader	Max. transfer weight		kg (lb.)	5 (11) <×2>
	Max. travel speed	X-axis (Hand moves up and down)	m/min (fpm)	180 (590.6)
		Z-axis (Loader moves right and left)	m/min (fpm)	200 (656.2)
		Y-axis (Loader moves back and forth)	m/min (fpm)	—
Loader hand	Hand type			Parallel hands
	Jaw stroke (radius)		mm (in.)	10 (0.4)
	Applicable workpiece size	Outer diameter	mm (in.)	ϕ 40—150 (ϕ1.6—5.9)
		Length	mm (in.)	20—120 (0.8—4.7)
		Max. mass	kg (lb.)	5 (11)
Work stocker	Workpiece stocker type			Track-type rotary table with two lifters
	Number of pallet tables		Pallet	14 [20] [26]
	Max. workpiece weight		kg (lb.) / Pallet	35 (77)

● Please consult our sales representative in the case that a workpiece diameter is less than 40 mm (1.6 in.), or a workpiece length is less than 20 mm (0.8 in.).

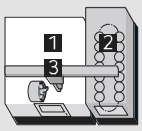
Gantry-type loader system variations (Option)

Specifications

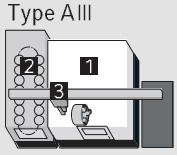
Type A I



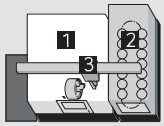
Type A II



Type A III

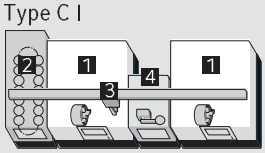


Type A IV

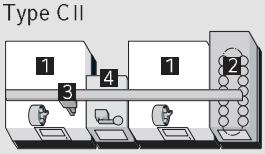


Other specifications (Consultation is required)

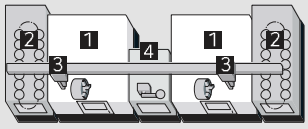
Type C I



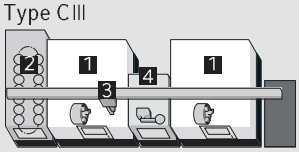
Type C II



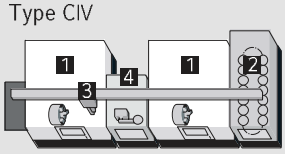
Type E III



Type C III



Type C IV



Units
1 Machine
2 Work stocker
3 Loader
4 Turnover unit

● Separate consultation is required for hollow cylinder specifications. (Type A Ⅰ, Type A Ⅲ, Type C Ⅰ, Type C Ⅲ, Type E Ⅲ)

Workpiece unloader* <built-in type> (Option)

We have further developed the previous parts catcher so that it can now be customized more easily by the end user. Both spindles handle workpieces up to double the previous length.

+ Applicable workpiece diameter: ϕ80 mm (3.1 in.)
+ Applicable workpiece length: 170 mm (6.7 in.) <NLX 2500|500>
  200 mm (7.9 in.) <NLX 2500|700>
+ Max. transfer weight: 3.0 kg (6.6 lb.)

*Standard for Spindle 2 specification. (Not including gantry loader specifications)
● Not available when the steady rest is selected, because of interference.
For standard machines, it is necessary to remove the workpiece unloader when the steady rest specifications are selected.

2-axis turning specification

Milling specification

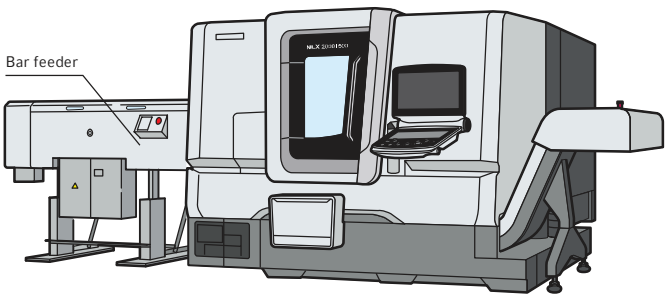
Bar feeder system (Option)

The combination of workpiece unloader enables automation of machining of bar materials.

+ Bar work capacity: ϕ80 mm (3.1 in.)

Recommended accessories for bar feeder specification

+ Bar feeder + Multi counter + Signal light
+ Guide bushing + Work stopper



● Bar work capacity: Depending on the chuck/cylinder used and its restrictions, it may not be possible to reach full bar work capacity.

● Diagram: NLX 2000|500

NLX 2500

Provide Total Solutions DMG MORI Qualified Products

The DMG MORI Qualified Products (DMQP) program <option> is designed to certify peripherals that meet DMG MORI standards in quality, performance and maintainability. DMG MORI collaborates with our partners in the world and provides customers with peripherals required for their machining.
We take care of the arrangement from selection to installation to support best-quality machining.
DMG MORI helps customers improve productivity by offering the total solutions including quality peripherals as well as machine tools.

Meet various customer needs

Handling

- Robot system
- Bar feeder

Shaping

- Oil skimmer
- Coolant chiller
- High-pressure coolant system
- Hydraulic steady rest
- Mist collector

Measuring

- In-machine tool presetter
- External tool measurement
- In-machine measuring system (workpiece)
- Surface roughness measuring system

Monitoring

- Electrical cabinet chiller
- Rotary window
- Coolant float switch
- Signal light

● The options above are examples. For details, please consult our sales representative.
DMQP: DMG MORI Qualified Products

Bar feeder

Hydraulic steady rest

Signal light

Mist collector

Through-spindle coolant system

External chip conveyor

In-machine tool presetter

Oil chiller

In-machine measuring system (workpiece)

Tool presetter

Coolant chiller

Air dryer

Air compressor

Coolant gun

Tool cabinet

Tool

Robot system

Coolant flow switch

Oil skimmer

Coolant float switch

NLX 2500

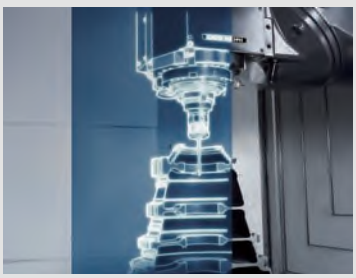
DMG MORI Technology Cycles

Technology Cycles (option) are total solutions that achieve complex machining easily in a short time. They enable every operator to easily perform high-quality machining, setups and measurement with general-purpose machine tools and standard tools / fixtures, which used to be done with specialized machines, programs and tools.

Shaping



Measuring



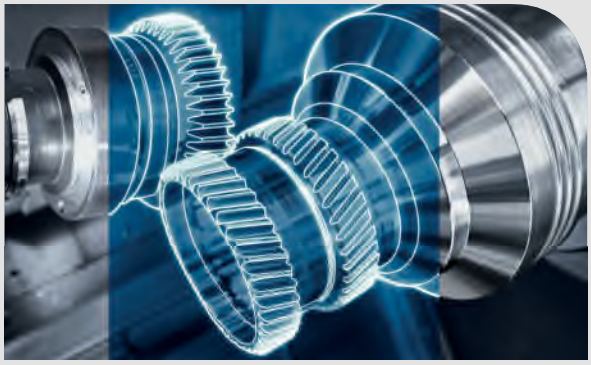
Monitoring


Handling



- The availability of the functions differ depending on the machine. For details, please consult our sales representative.
- The above is an image picture.

gearSKIVING

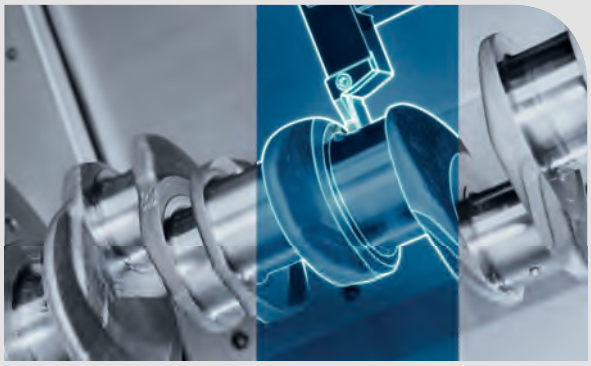


High-speed gear cutting including internal teeth

Multi-threading

Cutting special thread

Excentric machining



Easy programming of excentric machining

Alternating speed

Stable machining in which chatter hardly occurs

Gear hobbing

Integrating process of gear cutting machines

Efficient Production Package
(High-speed canned cycle)

Easy inputting of various machining patterns

NLX 2500

From the Idea to the Finished Product

DMG MORI's cutting-edge operation system, CELOS, enables consistent management, documentation and visualization of orders, processes and machine data. CELOS can be extended with apps and is also compatible with your company's existing infrastructures and programs.

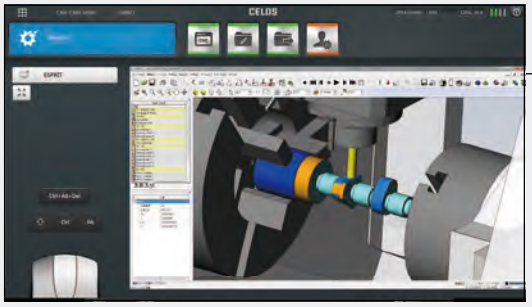
CELOS APPs facilitate quick and easy operation: three examples »»

JOB MANAGER
Systematic planning, administration and preparation of work orders

+ Machine related creation and configuration of new work orders
+ Structured storage of all production related data and documents
+ Easy visualization of job information on drawings, models, tools, fixtures, etc.

JOB ASSISTANT
Process-defined orders

+ Menu guided set-up of the machine and conversational processing of production orders
+ Reliable error prevention thanks to windowsbased assistance instructions with a mandatory acknowledgement function



CAD-CAM VIEW
Visualize workpieces and improve program data

+ Direct remote access to external CAD / CAM workstations
+ Central master data as basis for component viewing
+ Immediate change options for machining steps, NC programs and CAM strategies, directly in the CNC system

CELOS: Control Efficiency Lead Operation System

ERGO*line* Control with 21.5-inch multi-touch-screen and MITSUBISHI

STANDARD

Standard user interfaces for all new high technology machines from DMG MORI

CONSISTENT

Consistent administration, documentation and visualization of order, process and machine data

COMPATIBLE

Compatible with PPS and ERP systems Can be networked with CAD / CAM products Open to trendsetting CELOS APP extensions

PPS: Production Planning and Scheduling System
ERP: Enterprise Resource Planning

NLX 2500

High-Performance Operating System MAPPS Ⅴ

MAPPS Ⅴ is a high-performance, smart operation system mounted on CELOS.
It enables operators to easily control machine operation with touch operation.

The 6-window display provides access to a variety of information at the same time »»

The screen combinations can be freely customized »»

Lower Touch Panel Screen Layout

❶ Individual function operation area	: Displays function buttons at all times regardless of the operation mode.
❷ Operation mode selection area	: Displays mode selection buttons at all times.
❸ Status display area	: Displays the override status.
❹ Machine operation area	: Displays buttons related to spindle / turret operation and optional functions over multiple pages.
❺ Mode-by-mode operation area	: Displays buttons related to axis feed, zero return or automatic operation over multiple pages. The available buttons will change depending on the mode selected.
❻ In-machine display area	: Displays the machine model view.

MAPPS: Mori Advanced Programming Production System
CELOS: Control Efficiency Lead Operation System

DMG MORI's Connected Industries for Manufacturing Innovations

The CELOS plays a central role in promoting IoT technologies at shop floor. For example, the CELOS application visualizes machining status of machines connected online and operating conditions of a whole shop floor, and clarifies production issues to contribute to drastically improving productivity.

DMG MORI Messenger (Option)

+ Visualize operating conditions of the machines connected online and contribute to improving production processes
+ Operators can check the status on smartphones or tablets anytime anywhere*1

Condition Analyzer (Option)*2

+ Record various machine data with various sensors attached to a machine, and detect machine and machining problems at an early stage
+ Handle problems using sensor information to minimize machine downtime at the time of trouble

*1 To check operating status via the Internet, it is required to use a VPN or the like to ensure a secure connection to the LAN.
*2 Consultation is required

Machine status monitoring

Various machine data generated by sensors can be easily checked on the CELOS.

*1 Option
*2 Option for 2-axis turning and milling specification
*3 Consultation is required for 2-axis turning specification
● For details, please consult our sales representative.

Each monitoring value is displayed in an easy-to-understand manner

❶ Structural components (bed, headstock, etc.)*1
+ Temperature

❷ Coolant*1
+ Temperature + Pressure
+ Coolant level + Flow rate

❸ Work space*1
+ Temperature

❹ Oil chiller*2
+ Inlet temperature + Machine temperature
+ Outlet temperature + Room temperature

❺ Hydraulic unit*3
+ Actual pressure

❻ Electric power
+ Whole machine

NLX 2500

DMG MORI's Unique Energy-saving Function GREENmode

DMG MORI developed the new energy-saving function GREENmode to achieve sustainable development.

The function reduces power consumption by approximately 40%* compared to the conventional machine by using efficient machining programs to minimize unnecessary stand-by power.

* The effect indicated above may not be achieved depending on the machines, cutting conditions, environmental conditions at measurement.

+ Improve cutting conditions to reduce machining time by bringing the best out of machine tools and tools
+ Reduce unnecessary power consumption during stand-by time by shutting off power of the spindle, chip conveyor and coolant pump at a time of machine stop
+ Visualize power consumption and CO_2 emission amount

GREENmode

GREEN monitoring

+ Visualize power consumption and CO_2 emission amount on the CELOS operation screen

GREEN device

+ High-brightness LED light
+ Inverter-equipped hydraulic pump

GREEN idle reduction

+ Shut off the power of the servo motor, spindle and coolant pump at a time of machine stop
+ Turn off the operation panel screen when a machine is not in operation for a certain time

GREEN control

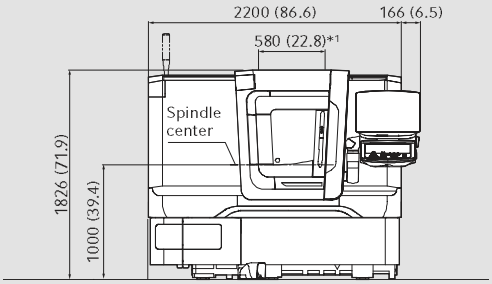
+ Quicken standard M codes
+ Inverter-controlled coolant supply

General View

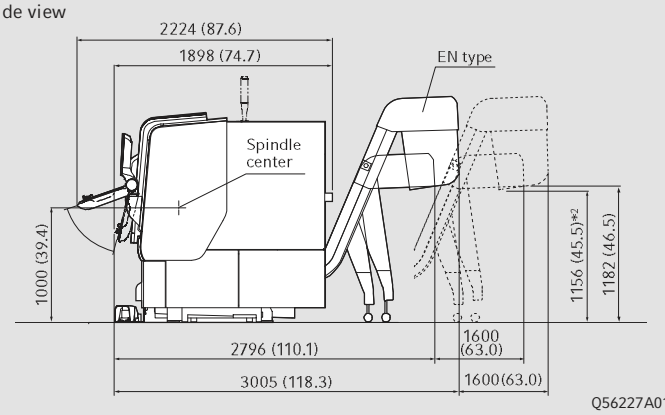
mm (in.)

NLX 2500 | 500 <Chip conveyor rear disposal specification>

Front view



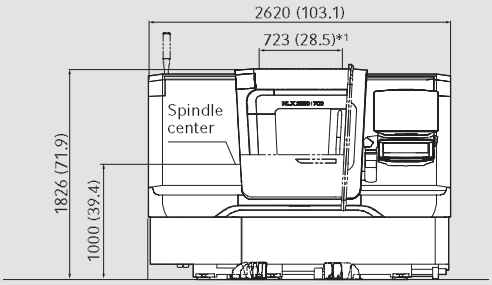
Side view



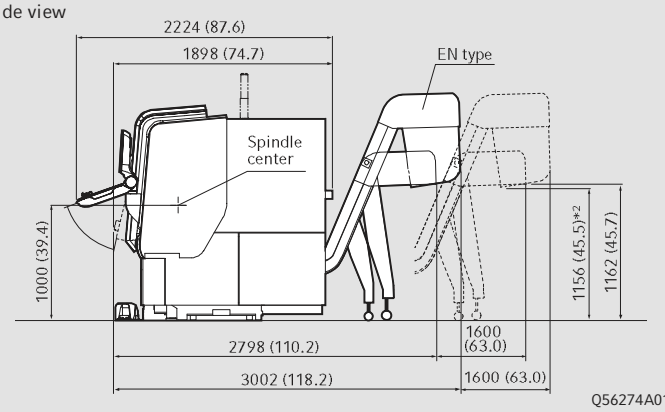
Q56227A01

NLX 2500 | 700 <2-axis turning specification> <Chip conveyor rear disposal specification>

Front view



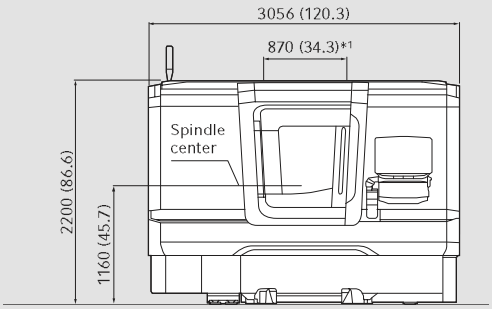
Side view



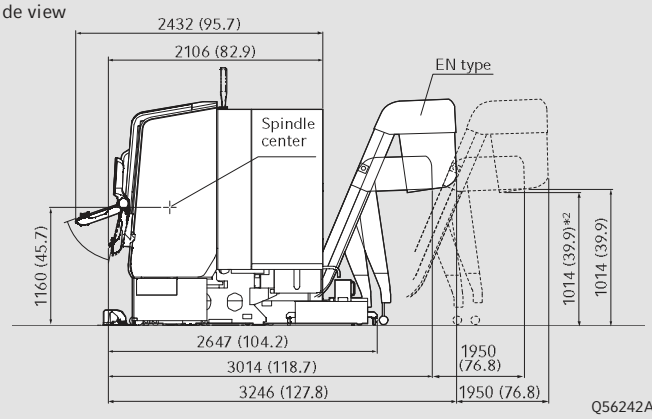
Q56274A01

NLX 2500 | 700 <Milling specification>*3 <Chip conveyor rear disposal specification>

Front view



Side view



Q56242A04

*1 Door opening width
*2 EN type <EN: European Norm (European Standards)>
*3 Including Milling + Y axis specifications, Milling + Spindle 2 specifications and Milling + Y axis + Spindle 2 specifications

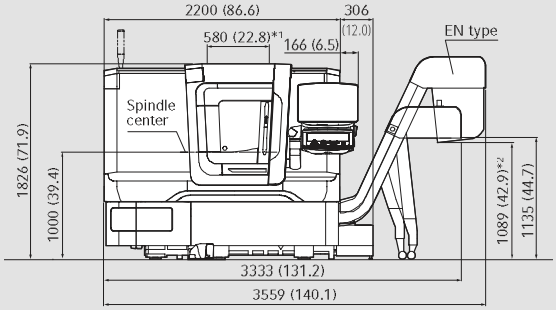
NLX 2500

General View

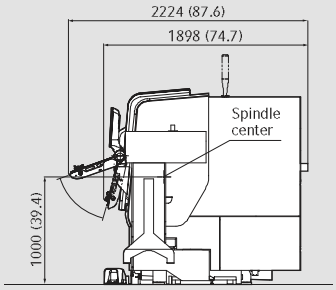
mm (in.)

NLX 2500 | 500 <Right-disposal chip conveyor specification>

Front view



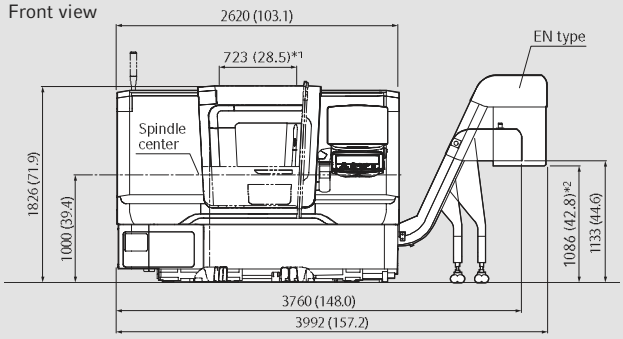
Side view



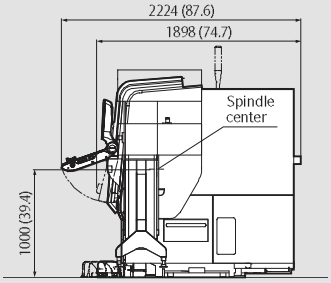
Q56224A01

NLX 2500 | 700 <2-axis turning specification>
<Right-disposal chip conveyor specification>

Front view



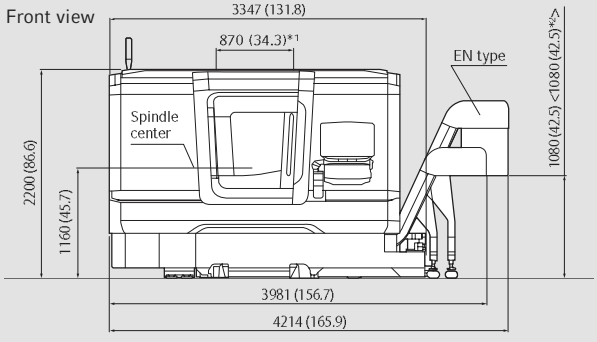
Side view



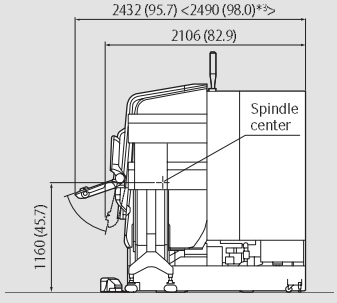
Q56273A01

NLX 2500 | 700 <Milling specification>*4
<Right-disposal chip conveyor specification>

Front view



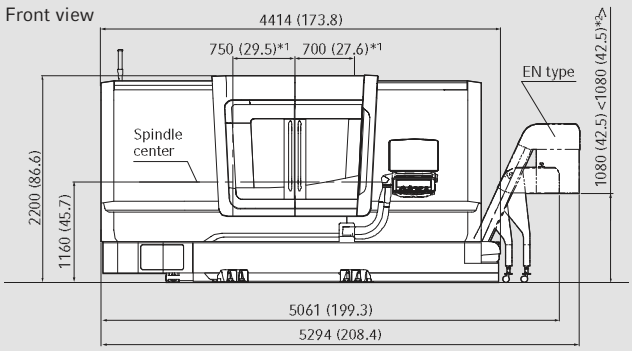
Side view



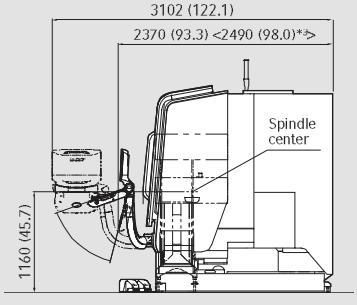
Q56241A03

NLX 2500 | 1250 <Right-disposal chip conveyor specification>

Front view



Side view



Q56244A03

*1 Door opening width
*2 EN type <EN: European Norm (European stndards)>
*3 Including space to remove coolant tank
*4 Including Milling + Y axis specifications, Milling + Spindle 2 specifications and Milling + Y axis + Spindle 2 specifications

■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).

NLX 2500

Main Machine Specifications

			NLX 2500 | 500	NLX 2500 | 700
Basic specification			T S1	T S1 TS
Optional specification			TS	—
Capacity				
Swing over bed		mm (in.)	590 (23.2)	
Swing over cross slide		mm (in.)	360 (14.2)	
Max. turning diameter		mm (in.)	460 (18.1)	
Max. turning length		mm (in.)	450 (17.7)	728 (28.6)
Bar work capacity		mm (in.)	80 (3.1)	
Travel				
X-axis		mm (in.)	260 (10.2)	
Z-axis		mm (in.)	500 (19.7)	795 (31.3)
Spindle 1				
Max. spindle speed		min^{-1}	4,000 [4,000]	
Spindle nose			JIS A_2-8	
Turret				
Number of tool stations			10 [12*1]	
Shank height for square tool		mm (in.)	25 (1.0)	
Feedrate				
Rapid traverse rate		mm/min (ipm)	X, Z: 30,000 (1181.1), Tailstock: 20,000 (787.4) <Retract>*2, 7,000 (275.6) <Extend>	
Tailstock				
Tailstock travel		mm/min (ipm)	[380 (15.0)]	650 (25.6)
Taper hole of tailstock spindle			Live center: MT5 [Built-in center: MT3] [Built-in center: MT4]	
Motors				
Spindle 1 drive motor	4,000 min^{-1}	kW (HP)	18.5 / 18.5 / 15 (24.7 / 24.7 / 20) <25%ED / 50%ED / cont>	
	[4,000 min^{-1} (High output)]	kW (HP)	26 / 26 / 22 (34.7 / 34.7 / 30) <10 min. / 30 min. / cont>	
Machine size				
Machine height		mm (in.)	1,826 (71.9)	
Floor space (width×depth) [Including a chip conveyor]		mm (in.)	2,200×1,898 (86.6×74.7) [3,333×1,898 (131.2×74.7) <Right discharge>]	2,620×1,898 (103.1×74.7) [3,760×1,898 (148.0×74.7) <Right discharge>]
Mass of machine		kg (lb.)	4,200 (9,240)	4,500 (9,900)

[ ] Option
*1 If the tool holder is used in common with CL, SL or Dura and an I.D. cutting tool is mounted on the adjacent station, interference with the 10-inch standard chuck will occur.
*2 When the fixed steady rest, hydraulic steady rest (bolt-tightened) or hydraulic tailstock is selected, the retraction speed of the tailstock spindle is limited to 7 m/min (23.0 fpm).
● Bar work capacity: Depending on the chuck / cylinder used and its restrictions, it may not be possible to reach full bar work capacity.
● Max. spindle speed: Depending on restrictions imposed by the workpiece clamping device, fixture and tool used, it may not be possible to rotate at the maximum spindle speed.
● The information in this catalog is valid as of September 2017.

NLX 2500

Main Machine Specifications

			NLX 2500 | 700			
Basic specification			T MC S1 TS			
Optional specification			—	Y	S2	Y S2
Capacity						
Swing over bed		mm (in.)	920 (36.2) <interference with front cover: 589 (23.2)>			
Swing over cross slide		mm (in.)	742 (29.2)			
Max. turning diameter		mm (in.)	366 (14.4)*1 356 (14.0)*2 [348 (13.7) <16-station Turret>] [278 (10.9) <20-station Turret>]			
Max. turning length		mm (in.)	705 (27.7)			
Bar work capacity		mm (in.)	80 (3.1) [90 (3.5) <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>] [102 (4.0) <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>]			
Travel						
X-axis		mm (in.)	260 (10.2)			
Y-axis		mm (in.)	—	±50 (±2.0)	—	±50 (±2.0)
Z-axis		mm (in.)	795 (31.3)			
Spindle 2 travel (B-axis)		mm (in.)	—		734 (28.9)	
Spindle 1						
Max. spindle speed		min^{-1}	4,000 [4,000] [2,500<Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>]			
Spindle nose			JIS A_2-8			
Spindle 2						
Max. spindle speed		min^{-1}	—		[6,000] [5,000 <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>]	
Spindle nose			—		JIS A_2-5 [JIS A_2-6 <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>]	
Turret						
Number of tool stations			10 [12] [16] [20]	12 [10] [16] [20]		
Shank height for square tool		mm (in.)	25 (1.0) [20 (0.8) <16, 20-station Turret>]			
Max. rotary tool spindle speed		min^{-1}	10,000			
Feedrate						
Rapid traverse rate		mm/min (ipm)	X, Z: 30,000 (1,181.1), Tailstock: 20,000 (787.4) <Retract>*3, 7,000 (275.6) <Extend>	X, Z: 30,000 (1,181.1), Y: 10,000 (393.7), Tailstock: 20,000 (787.4) <Retract>*3, 7,000 (275.6) <Extend>	X, Z, B: 30,000 (1,181.1)	X, Z, B: 30,000 (1,181.1), Y: 10,000 (393.7)
Tailstock						
Tailstock travel		mm (in.)	734 (28.9)		—	
Taper hole of tailstock spindle			Live center: MT5 [Built-in center: MT3] [Built-in center: MT4]		—	
Motors						
Spindle 1 drive motor	4,000 min^{-1}	kW (HP)	18.5 / 18.5 / 15 (24.7 / 24.7 / 20) <25%ED / 50%ED / cont>			
	[4,000 min^{-1} (High output)]	kW (HP)	26 / 26 / 22 (34.7 / 34.7 / 30) <10 min. / 30 min. / cont>			
	[2,500 min^{-1} (High torque)]	kW (HP)	22 / 18.5 (30 / 24.7) <30 min. / cont> <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>			
Spindle 2 drive motor	[6,000 min^{-1}]	kW (HP)	—		11 / 7.5 (15 / 10) <25%ED / cont>	
	[5,000 min^{-1}]	kW (HP)	—		11 / 7.5 (15 / 10) <25%ED / cont> <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>	
Rotary tool spindle drive motor	10,000 min^{-1}	kW (HP)	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>*4 [10.7 / 6.1 (14.3 / 8.1) <15%ED / 100%ED>]*5	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>	5.5 / 4.2 (7.5 / 5.6) <25%ED / 100%ED>*6 [5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>]*7 [10.7 / 6.1 (14.3 / 8.1) <15%ED / 100%ED>]*5
Machine size						
Machine height		mm (in.)	2,200 (86.6)			
Floor space (width×depth) [Including a chip conveyor]		mm (in.)	3,347×2,106 (131.8×82.9) [3,981×2,106 (156.7×82.9) <Right discharge>]			
Mass of machine		kg (lb.)	5,820 (12,804)	6,140 (13,508)	6,040 (13,288)	6,360 (13,992)

[ ] Option
*1 For O.D. cutting tool with an overhang of 35 mm (1.4 in.)
*2 For O.D. cutting tool with an overhang of 40 mm (1.5 in.)
*3 When the fixed steady rest, hydraulic steady rest (bolt-tightened) or hydraulic tailstock is selected, the retraction speed of the tailstock spindle is limited to 7 m/min (23.0 fpm).
*4 10-station / 12-station bolt-tightened turret, 16-station VDI turret, and 20-station bolt-tightened turret specifications
*5 12-station VDI quick-change turret (Sauter Trifix) specification
*6 12-station bolt-tightened turret specification
*7 10-station bolt-tightened turret, 16-station VDI turret, and 20-station bolt-tightened turret specifications
● Bar work capacity: Depending on the chuck / cylinder used and its restrictions, it may not be possible to reach full bar work capacity.
● Max. spindle speed: Depending on restrictions imposed by the workpiece clamping device, fixture and tool used, it may not be possible to rotate at the maximum spindle speed.
● The information in this catalog is valid as of September 2017.

■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).

			NLX 2500 | 1250			
Basic specification			T MC S1 TS			
Optional specification			—	Y	S2	Y S2
Capacity						
Swing over bed		mm (in.)	920 (36.2) <interference with front cover: 688 (27.1)>			
Swing over cross slide		mm (in.)	742 (29.2)			
Max. turning diameter		mm (in.)	366 (14.4)*1 356 (14.0)*2 [348 (13.7) <16-station Turret>] [278 (10.9) <20-station Turret>]			
Max. turning length		mm (in.)	1,255 (49.4)			
Bar work capacity		mm (in.)	80 (3.1) [90 (3.5) <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>] [102 (4.0) <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>]			
Travel						
X-axis		mm (in.)	260 (10.2)			
Y-axis		mm (in.)	—	±50 (±2.0)	—	±50 (±2.0)
Z-axis		mm (in.)	1,345 (53.0)			
Spindle 2 travel (B-axis)		mm (in.)	—		1,284 (50.6)	
Spindle 1						
Max. spindle speed		min^{-1}	4,000 [4,000] [2,500 <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>]			
Spindle nose			JIS A_2-8			
Spindle 2						
Max. spindle speed		min^{-1}	—		[6,000] [5,000 <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>]	
Spindle nose			—		JIS A_2-5 [JIS A_2-6 <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>]	
Turret						
Number of tool stations			10 [12] [16] [20]	12 [10] [16] [20]		
Shank height for square tool		mm (in.)	25 (1.0) [20 (0.8) <16, 20-station Turret>]			
Max. rotary tool spindle speed		min^{-1}	10,000			
Feedrate						
Rapid traverse rate		mm/min (ipm)	X, Z: 30,000 (1,181.1), Tailstock: 20,000 (787.4) <Retract>*3, 7,000 (275.6) <Extend>	X, Z: 30,000 (1,181.1), Y: 10,000 (393.7) Tailstock: 20,000 (787.4) <Retract>*3, 7,000 (275.6) <Extend>	X, Z, B: 30,000 (1,181.1)	X, Z, B: 30,000 (1,181.1) Y: 10,000 (393.7)
Tailstock						
Tailstock travel		mm (in.)	1,284 (50.6)		—	
Taper hole of tailstock spindle			Live center: MT5 [Built-in center: MT4]		—	
Motors						
Spindle 1 drive motor	4,000 min^{-1}	kW (HP)	18.5 / 18.5 / 15 (24.7 / 24.7 / 20) <25%ED / 50%ED / cont>			
	[4,000 min^{-1} (High output)]	kW (HP)	26 / 26 / 22 (34.7 / 34.7 / 30) <10 min. / 30 min. / cont>			
	[2,500 min^{-1} (High torque)]	kW (HP)	22 / 18.5 (30 / 24.7) <30 min. / cont> <Through-spindle hole diameter ϕ111 mm (ϕ4.3 in.)>			
Spindle 2 drive motor	[6,000 min^{-1}]	kW (HP)	—		11 / 7.5 (15/10) <25%ED / cont>	
	[5,000 min^{-1}]	kW (HP)	—		11 / 7.5 (15 / 10) <25%ED / cont> <Through-spindle hole diameter ϕ73 mm (ϕ2.8)>	
Rotary tool spindle drive motor	10,000 min^{-1}	kW (HP)	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont> [5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>]*5	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont> [10.7 / 6.1 (14.3 / 8.1) <15%ED / 100%ED>]*4 [5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>]*5	5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont> [5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>]*5	5.5 / 4.2 (7.5 / 5.6) <25%ED / 100%ED>*6 [10.7 / 6.1 (14.3 / 8.1) <15%ED / 100%ED>]*4 [5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <3 min. / 5 min. / cont>]*5
Machine size						
Machine height		mm (in.)	2,200 (86.6)			
Floor space (width×depth) [Including a chip conveyor]		mm (in.)	4,414×2,370 (173.8×93.3) [5,061×2,370 (199.3×93.3) <Right discharge>]			
Mass of machine		kg (lb.)	7,220 (15,884)	7,540 (16,588)	7,440 (16,368)	7,760 (17,072)

[ ] Option
*1 For O.D. cutting tool with an overhang of 35 mm (1.4 in.)
*2 For O.D. cutting tool with an overhang of 40 mm (1.6 in.)
*3 When the fixed steady rest, hydraulic steady rest (bolt-tightened) or hydraulic tailstock is selected, the retraction speed of the tailstock spindle is limited to 7 m/min (23.0 fpm).
*4 12-station VDI quick-change turret (Sauter Trifix) specification
*5 10-station bolt-tightened turret, 16-station VDI turret, and 20-station bolt-tightened turret specifications
*6 12-station bolt-tightened turret specification
● Bar work capacity: Depending on the chuck/cylinder used and its restrictions, it may not be possible to reach full bar work capacity.
● Max. spindle speed: Depending on restrictions imposed by the workpiece clamping device, fixture and tool used, it may not be possible to rotate at the maximum spindle speed.
● The information in this catalog is valid as of September 2017.

NLX 2500

Main Standard & Optional Features

(NLX 2500 | 500, NLX 2500 | 700)

●: Standard ○: Option
◇: Select one —: Not applicable

		NLX 2500 | 500	NLX 2500 | 700				
Basic specification		T S1	T S1 TS	T MC S1 TS			
Optional specification		TS	—	—	Y	S2	Y S2
Spindle							
Spindle 1	4,000 min⁻¹: 18.5 / 18.5 / 15 kW (24.7 / 24.7 / 20 HP) <25%ED / 50%ED / cont>	●	●	●	●	●	●
	4,000 min⁻¹: 26 / 26 / 22 kW (34.7 / 34.7 / 30 HP) <10 min./30 min./cont> (High output)	○	○	○	○	○	○
	2,500 min⁻¹:22/18.5 kW (30/24.7 HP) <30 min. / cont> (Spindle 1 through-spindle hole ϕ111 mm (ϕ4.3 in.))	—	—	○	○	○	○
Spindle 2	6,000 min⁻¹: 11/7.5 kW (15/10 HP) <25%ED / cont>	—	—	—	—	◇	◇
	5,000 min⁻¹: 11 / 7.5 kW (15 / 10 HP) <25%ED / cont> (Spindle 2 through-spindle hole ϕ73 mm (ϕ2.8 in.))	—	—	—	—	◇	◇
Turret							
10-station bolt-tightened turret	for CL, SL and Dura holders	●	●	—	—	—	—
10-station bolt-tightened turret	for NL holders	—	—	●	○	○	○
12-station bolt-tightened turret	for CL, SL and Dura holders*1	○	○	—	—	—	—
12-station bolt-tightened turret	for NL holders	—	—	○	●	●	—
12-station bolt-tightened turret (Sauter)	for NL holders	—	—	—	—	—	●
12-station VDI quick-change turret (Sauter Trifix)	ϕ40 mm (ϕ1.6 in.)	—	—	—	○	—	○
12-station VDI face quick-change turret		○	○	—	—	—	—
16-station VDI quick-change turret	ϕ30 mm (ϕ1.2 in.)	—	—	○	○	○	○
20-station bolt-tightened turret		—	—	○	○	○	○
Rotary tool spindle: 10,000 min⁻¹	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 10-station bolt-tightened turret	—	—	●	○	○	○
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 12-station bolt-tightened turret	—	—	○	●	●	—
	5.5 / 4.9 / 4.2 kW (7.5 / 6.5 / 5.6 HP) <25%ED / 30%ED / 100%ED> 12-station bolt-tightened turret	—	—	—	—	—	●
	10.7 / 8.5 / 6.1 kW (14.3 / 11.3 / 8.1 HP) <15%ED / 30%ED / 100%ED> 12-station VDI quick-change turret	—	—	—	○	—	○
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 16-station VDI quick-change turret	—	—	○	○	○	○
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 20-station bolt-tightened turret	—	—	○	○	○	○
Tailstock							
Tailstock spindle live center*2	MT5	○	●	●	●	—	—
Tailstock spindle built-in center	MT3	○	○	○	○	—	—
	MT4	○	○	○	○	—	—
No-tailstock		●	○	○	○	—	—
Tailstock with the hydraulic quill		○	○	○	○	—	—
Fixture / Steady rest							
Steady rest*3	ϕ20—ϕ120 mm (ϕ0.8—ϕ4.7 in.)	—	○	—	—	—	—
	ϕ20—ϕ200 mm (ϕ0.8—ϕ7.9 in.)	—	—	○	○	—	—
Coolant							
Coolant system	350 / 550 W (50 / 60 Hz)	●	●	●	●	●	●
High-pressure coolant system	800 / 1,100 W (50/60 Hz)	○	○	○	○	○	○
	1 / 1.5 MPa (145.0/217.5 psi) <1.1 / 2.2 kW (1.5 / 3 HP)> (50 / 60 Hz)	○	○	○	○	○	○
Super-high pressure coolant system <Separate type> (When super-high-pressure coolant system is used, a coolant chiller is recommended. For details, please consult our sales representative.)	3.5 MPa (507.5 psi)	○*	○*	○*	○*	○*	○*
	7.0 MPa (1,015.0 psi)	○*	○*	○*	○*	○*	○*
	Interface <3.5 MPa (507.5 psi)>	○	○	○	○	○	○
	Interface <7.0 MPa (1,015.0 psi), KNOLL>	○	○	○	○	○	○
	Interface <7.0 MPa (1,015.0 psi)>	○	○	○	○	○	○

■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).

●: Standard ○: Option
☆: Consultation is required —: Not applicable

			NLX 2500 | 500	NLX 2500 | 700				
Basic specification			T S1	T S1 TS	T MC S1 TS			
Optional specification			TS	—	—	Y	S2	Y S2
Chip disposal								
Chip conveyor	Right discharge, Hinge type		○	○	○	○	○	○
	Rear discharge, Hinge type		○	○	○	○	○	○
	Right discharge, Scraper type		○	○	○	○	○	○
	Rear discharge, Scraper type		○	○	○	○	○	○
	Right discharge, Magnet scraper type		○	○	○	○	○	○
	Rear discharge, Magnet scraper type		○	○	○	○	○	○
	Right discharge, Hinge type (Aluminum)		☆	☆	○	○	○	○
Air blow	Tool tip		○	○	○	○	○	○
	Chuck (Spindle 1)		○	○	○	○	○	○
	Tailstock spindle		○	○	○	○	○	○
Measurement								
Manual in-machine tool presetter (Spindle 1)	Pivoting type		●	●	●	●	●	●
	Removable		○	○	○	○	○	○
Automatic in-machine tool presetter (Spindle 1)	Pivoting type		○	○	○	○	○	○
Manual in-machine tool presetter (Spindle 2)	Removable		—	—	—	—	●	●
In-machine measuring system (Spindle 1)	Optical type touch sensor (Renishaw)		○	○	○	○	○	○
Improved accuracy								
Full closed loop control (Scale feedback)	X-axis / Z-axis		○	○	○	○	○	○
	Y-axis		—	—	—	○	—	○
Automation								
Automatic power off			○	○	●	●	●	●
Workpiece unloader (built-in type)			○	○	○	○	●	●
Spindle 2 workpiece ejector			—	—	—	—	●*4	●*4
	Cylinder type		—	—	—	—	○	○
Loader	Gantry-type loader system	GX-05	○	○	○	○	○	○
		LG-10	○	○	○	○	○	○
	Work stocker (Number of pallet tables)	GX-05: 14 / 20 / 26	○	○	○	○	○	○
		LG-10: 10 / 20	○	○	○	○	○	○
	Work stocker arrangement (Right / Lelt)		○	○	○	○	○	○
Other								
Chuck foot switch	1 foot switch (Spindle 1 only)		●	●	●	●	—	—
	2 foot switches (Spindle 1 only)		○	○	○	○	—	—
	1 foot switch (Spindle 1, 2)		—	—	—	—	●	●
	2 foot switches (Spindle 1, 2)		—	—	—	—	○	○
Air purge	Spindle		○	○	●	●	●	●
	Tailstock spindle		☆	☆	☆	☆	☆	☆
	Electrical cabinet		☆	☆	☆	☆	☆	☆
	Double slide seal		—	—	○	○	○	○
	Double slide seal＋forced lubrication		○	○	○	○	○	○
Built-in worklight (LED)			●	●	●	●	●	●
Signal light	4 layers (LED type Red, yellow, green, Blue)		○	○	○	○	○	○
Buzzer for signal light			○	○	○	○	○	○
Foot switch for tailstock			○	○	○	○	○	○
Manual pulse generator (separate type)			○	○	○	○	○	○

* DMQP (DMG MORI Qualified Products)
*1 If an I.D. cutting tool is mounted on the adjacent station, interference with the 10-inch standard chuck will occur.
*2 The center is optional.
*3 When the fixed steady rest or hydraulic steady rest (bolt-tightened) is selected, the retraction speed of the tailstock spindle is limited to 7 m/min (23.0 fpm).
*4 When a hollow cylinder is mounted or a chuck body is not required, the workpiece ejector, through-spindle air blow, and pneumatic units and piping for them are not provided with the machine. For machines equipped with a hollow cylinder, the cylinder-type workpiece ejector is available.
● DMQP:Please see Page 22 for details.
● The information in this catalog is valid as of September 2017.
● Specifications, accessories, safety device and function are available upon request.
● Some options are not available in particular regions. For details, please consult our sales representative.

⚠ Flammable coolant such as oil-based coolant has a high risk of ignition, and will cause fire or machine breakage if ignited.
If you have to use a flammable coolant for any reason, please be sure to consult our sales representative.

NLX 2500

Main Standard & Optional Features

(NLX 2500 | 1250)

●: Standard ○: Option
◇: Select one —: Not applicable

		NLX 2500 | 1250			
Basic specification			T MC S1 TS		
Optional specification		—	Y	S2	Y S2
Spindle					
Spindle 1	4,000 min^{-1}: 18.5/18.5/15 kW (24.7 / 24.7 / 20 HP) <25%ED / 50%ED / cont>	●	●	●	●
	4,000 min^{-1}: 26 / 26 / 22 kW (34.7 / 34.7 / 30 HP) <10 min. / 30 min. / cont> {High output}	○	○	○	○
	2,500 min^{-1}: 22 / 18.5 kW (30 / 24.7 HP) <30 min. / cont> {Spindle 1 through-spindle hole ϕ111 mm (ϕ4.3 in.)}	○	○	○	○
Spindle 2	6,000 min^{-1}: 11 / 7.5 kW (15 / 10 HP) <25%ED / cont>	—	—	◇	◇
	5,000 min^{-1}: 11 / 7.5 kW (15 / 10 HP) <25%ED / cont> {Spindle 2 through-spindle hole ϕ73 mm (ϕ2.8 in.)}	—	—	◇	◇
Turret					
10-station bolt-tightened turret	for NL holders	●	○	○	○
12-station bolt-tightened turret	for NL holders	○	●	●	—
12-station bolt-tightened turret (Sauter)	for NL holders	—	—	—	●
12-station VDI quick-change turret (Sauter Trifix)	ϕ40 mm (ϕ1.6 in.)	—	○	—	○
16-station VDI quick-change turret	ϕ30 mm (ϕ1.2 in.)	○	○	○	○
20-station bolt-tightened turret		○	○	○	○
Rotary tool spindle: 10,000 min^{-1}	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 10-station bolt-tightened turret	●	—	—	—
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 12-station bolt-tightened turret	—	●	●	—
	5.5 / 4.9 / 4.2 kW (7.5 / 6.5 / 5.6 HP) <25%ED / 30%ED / 100%ED> 12-station bolt-tightened turret	—	—	—	●
	10.7 / 8.5 / 6.1 kW (14.3 / 11.3 / 8.1 HP) <15%ED / 30%ED / 100%ED> 12-station VDI quick-change turret	—	○	—	○
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 16-station VDI quick-change turret	○	○	○	○
	5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <3 min. / 5 min. / cont> 20-station bolt-tightened turret	○	○	○	○
Tailstock					
Tailstock spindle live center*1	MT5	●	●	—	—
Tailstock spindle built-in center	MT4	○	○	—	—
Tailstock with the hydraulic quill		○	○	—	—
Fixture / Steady rest					
Steady rest*2	ϕ20—ϕ200 mm (ϕ0.8—ϕ7.9 in.)	○	○	—	—
Coolant					
Coolant system	350 / 550 W (50/60 Hz)	●	●	●	●
High-pressure coolant system	800 / 1,100 W (50/60 Hz)	○	○	○	○
	1 / 1.5 MPa (145.0/217.5 psi) <1.1 / 2.2 kW (1.5 / 3 HP)> (50 / 60 Hz)	○	○	○	○
Super-high pressure coolant system <Separate type> (When super-high-pressure coolant system is used, a coolant chiller is recommended. For details, please consult our sales representative.)	3.5 MPa (507.5 psi)	○*	○*	○*	○*
	7.0 MPa (1,015.0 psi)	○*	○*	○*	○*
	Interface <3.5 MPa (507.5 psi)>	○	○	○	○
	Interface <7.0 MPa (1,015.0 psi), KNOLL>	○	○	○	○
	Interface <7.0 MPa (1,015.0 psi)>	○	○	○	○
Chip disposal					
Chip conveyor	Right discharge, Hinge type	○	○	○	○
	Right discharge, Scraper type	○	○	○	○
	Right discharge, Magnet scraper type	○	○	○	○
	Right discharge, Hinge type (Aluminum)	○	○	○	○
Air blow	Tool tip	○	○	○	○
	Chuck (Spindle 1)	○	○	○	○
	Tailstock spindle	○	○	○	○

■: Standard □: Option
T : Turret MC : Milling Y : Y-axis
S1 : Spindle 1 S2 : Spindle 2 TS : Tailstock
● The Spindle 2 specification (S2) is not equipped with a tailstock (TS).

●: Standard ○: Option
—: Not applicable

		NLX 2500 | 1250			
Basic specification		T MC S1 TS			
Optional specification		—	Y	S2	Y S2
Measurement					
Manual in-machine tool presetter (Spindle 1)	Pivoting type	●	●	●	●
	Removable	○	○	○	○
Automatic in-machine tool presetter (Spindle 1)	Pivoting type	○	○	○	○
Manual in-machine tool presetter (Spindle 2)	Removable	—	—	●	●
In-machine measuring system (Spindle 1)	Optical type touch sensor (Renishaw)	○	○	○	○
Improved accuracy					
Full closed loop control (Scale feedback)	X-axis / Z-axis	○	○	○	○
	Y-axis	—	○	—	○
Automation					
Automatic power off		○	●	●	●
Workpiece unloader (built-in type)		○	○	●	●
Spindle 2 workpiece ejector		—	—	●*3	●*3
	Cylinder type	—	—	○	○
Other					
Chuck foot switch	1 foot switch (Spindle 1 only)	●	●	—	—
	2 foot switches (Spindle 1 only)	○	○	—	—
	1 foot switch (Spindle 1, 2)	—	—	●	●
	2 foot switches (Spindle 1, 2)	—	—	○	○
Air purge	Spindle	●	●	●	●
	Tailstock spindle	○	○	○	○
	Electrical cabinet	○	○	○	○
	Double slide seal	○	○	○	○
	Double slide seal＋forced lubrication	○	○	○	○
Built-in worklight (LED) <2 units>		●	●	●	●
Signal light	4 layers (LED type Red, yellow, green, blue)	○	○	○	○
Buzzer for signal light		○	○	○	○
Foot switch for tailstock		○	○	○	○
Manual pulse generator (separate type)		○	○	○	○

* DMQP (DMG MORI Qualified Products)
*1 The center is optional.
*2 When the fixed steady rest or hydraulic steady rest (bolt-tightened) is selected, the retraction speed of the tailstock spindle is limited to 7 m/min (23.0 fpm).
*3 When a hollow cylinder is mounted or a chuck body is not required, the workpiece ejector, through-spindle air blow, and pneumatic units and piping for them are not provided with the machine. For machines equipped with a hollow cylinder, the cylinder-type workpiece ejector is available.
● DMQP:Please see Page 22 for details.
● The information in this catalog is valid as of September 2017
● Specifications, accessories, safety device and function are available upon request.
● Some options are not available in particular regions. For details, please consult our sales representative.

⚠ Flammable coolant such as oil-based coolant has a high risk of ignition, and will cause fire or machine breakage if ignited.
If you have to use a flammable coolant for any reason, please be sure to consult our sales representative.

<Precautions for Machine Relocation>

EXPORTATION:
All contracts are subject to export permit by the Government of Japan.
Customer shall comply with the laws and regulations of the exporting country governing the exportation or re-exportation of the Equipment, including but not limited to the Export Administration Regulations.
The Equipment is subject to export restrictions imposed by Japan and other exporting countries and the Customer will not export or permit the export of the Equipment anywhere outside the exporting country without proper government authorization.
To prevent the illegal diversion of the Equipment to individuals or nations that threaten international security, it may include a "Relocation Machine Security Function" that automatically disables the Equipment if it is moved following installation.
If the Equipment is so-disabled, it can only be re-enabled by contacting DMG MORI or its distributor representative. DMG MORI and its distributor representative may refuse to re-enable the Equipment if it determines that doing so would be an unauthorized export of technology or otherwise violates applicable export restrictions.
DMG MORI and its distributor representative shall have no obligation to re-enable such Equipment.
DMG MORI and its distributor representative shall have no liability (including for lost profits or business interruption or under the limited service warranty included herein) as a result of the Equipment being disabled.

+ If you have any questions regarding the content, please consult our sales representative.
+ The information in this catalog is valid as of September 2017. Designs and specifications are subject to changes without notice.
+ The machines shown in the catalog may differ from the actual machines. The location and the size of the nameplates may also differ from the actual machines, or the nameplates may not be attached to some machines.
+ DMG MORI is not responsible for differences between the information in the catalog and the actual machine.

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