

SPEEDIO

M200Xd1

Compact Multi-Tasking Machine



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Mass production type multi-tasking machine encourages process integration

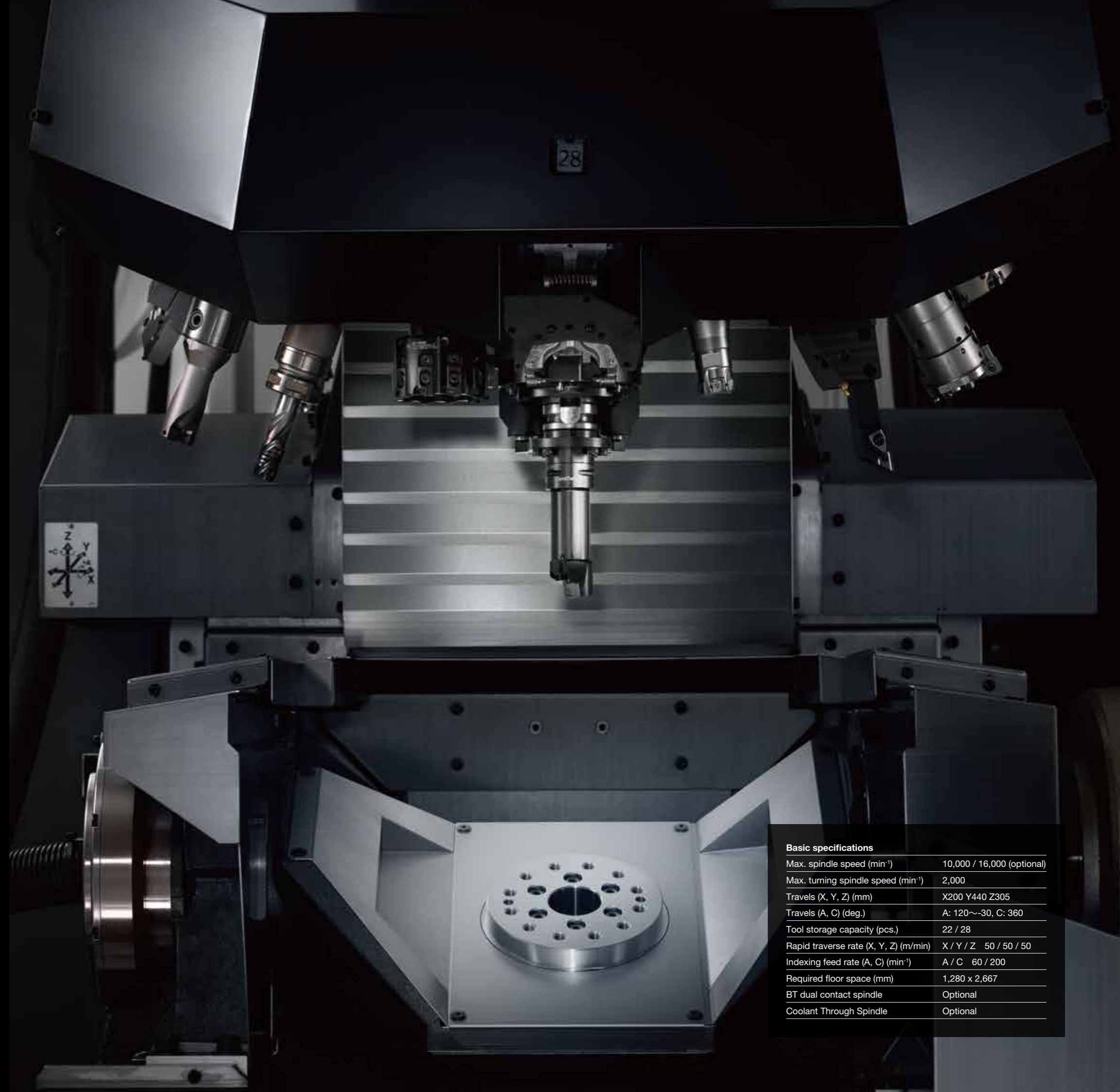
Provides high productivity, from complex machining by turning and milling to multi-face machining.

When equipped with our newly developed 28-tool magazine, the machine further encourages process integration.

Cutting Out the Waste *SPEEDIO*



M200Xd1



Basic specifications	
Max. spindle speed (min ⁻¹)	10,000 / 16,000 (optional)
Max. turning spindle speed (min ⁻¹)	2,000
Travels (X, Y, Z) (mm)	X200 Y440 Z305
Travels (A, C) (deg.)	A: 120~30, C: 360
Tool storage capacity (pcs.)	22 / 28
Rapid traverse rate (X, Y, Z) (m/min)	X / Y / Z 50 / 50 / 50
Indexing feed rate (A, C) (min ⁻¹)	A / C 60 / 200
Required floor space (mm)	1,280 x 2,667
BT dual contact spindle	Optional
Coolant Through Spindle	Optional

Multiple functions integrated in a compact body Diverse range of machining possible with one machine

Integration of turning and milling processes enhances productivity at your premises more than ever before. The new simultaneous 5-axis function enables machining of complex shapes.

Automobile



Electric water pump housing
Aluminum alloy
Size: 110 x 100 x 70



Scroll compressor parts
Aluminum alloy
Size: $\phi 100$ x 45

Valve



Gas control valve
Stainless steel
Size: 75 x 35 x 35



Gas cylinder valve
Brass
Size: 45 x 75 x 100

Medical



Artificial knee joint
Ti-6Al-4V
Size: 65 x 60 x 50



Hip cup
Ti-6Al-4V
Size: $\phi 60$ x 30



Bone plate
Ti-6Al-4V
Size: 170 x 40 x 3

Precision equipment



High pressure regulator
Stainless steel
Size: $\phi 55$ x 50



Watch case
Stainless steel
Size: 45 x 50 x 10



Cross roller bearing
Chromium alloyed steel
Size: $\phi 120$ x 15



Reel body
Aluminum alloy
Size: $\phi 60$ x 50

From complex machining to multi-face machining

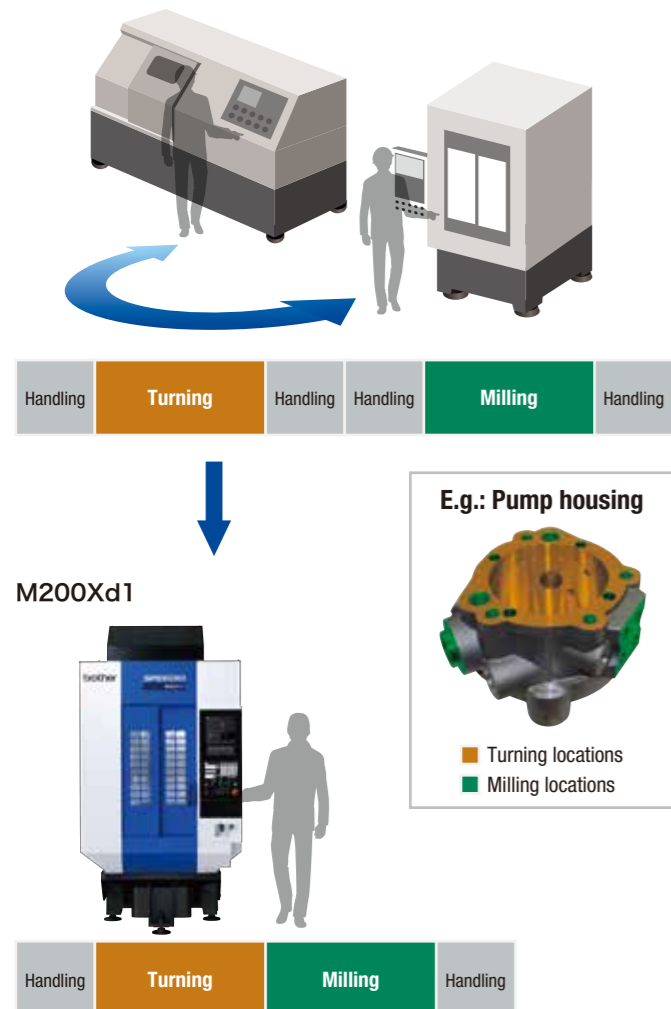
Process integration by mass production type multi-tasking machine

A tilting rotary table with a turning spindle is mounted on the machine.
Processes are integrated on one machine, from complex machining by turning and milling to multi-face machining.

Complex machining

Turning and milling can be completed through one-time chucking on one machine. There is no handling between turning and milling, leading to various advantages.

Turning center + Machining center



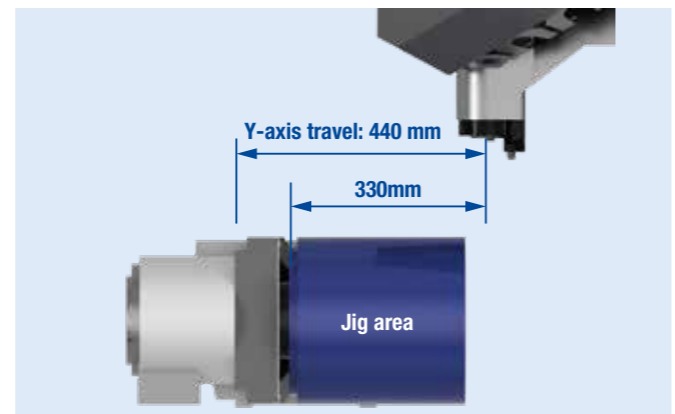
Advantages of complex machining	
• Reduction of handling time between machines	
• Reduction of operators	
• Improvement of machining accuracy through one-time chucking	

Multi-face machining

As the machine is equipped with a tilting rotary table capable of high-speed indexing, performing multi-face machining makes process integration possible.

0 to 90-deg. indexing time	
A-axis 0.6s	C-axis 0.7s

Sufficient machining area is secured when the tilt axis (A-axis) is at 90 degrees. (Y-axis travel from table surface when A-axis is at 90 degrees. 330 mm)



28-tool magazine

Using our newly developed 28-tool turret magazine further promotes process integration by complex machining or multi-face machining.

* The 22-tool magazine can be selected.



Double plunger lock

An original double plunger lock is used to secure turning tools, achieving excellent tool change repeatability.



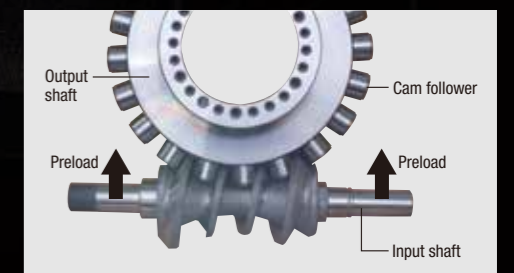
Turning spindle (C-axis)

A high-speed and high-power built-in DD motor is used for the turning spindle (C-axis). Enabling efficient turning and high-speed indexing.



Tilt axis (A-axis)

A roller gear cam mechanism is used for the tilt axis (A-axis). High retention force and a backlash-free structure enable high-speed and highly accurate indexing.



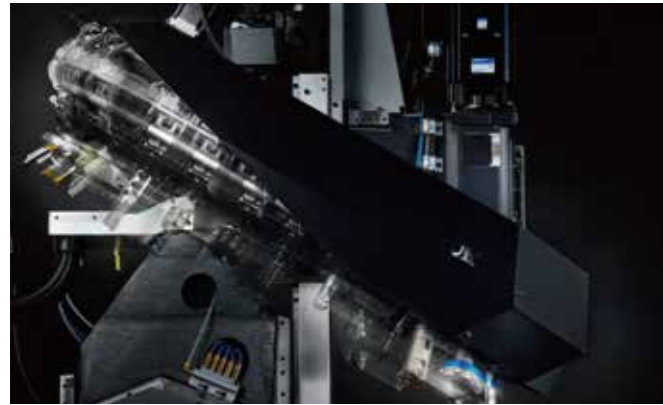
Untiring pursuit of high productivity and a broad variation of jig mounting

Utilizing advantages of machine/controller integrated development, such as faster and optimized simultaneous operation and tool change operation, outstanding high productivity has been achieved.

A variety of jigs can be mounted to cover complex machining to multi-face machining.

Non-stop ATC

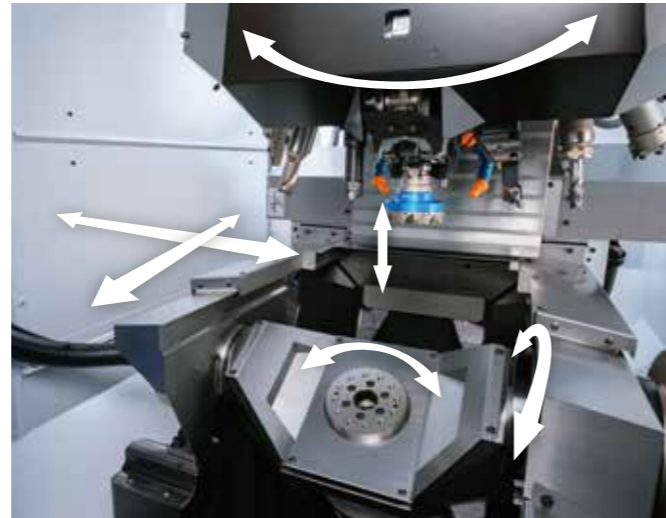
High-speed tool change has been achieved by faster and optimized spindle start/stop, Z-axis up/down, and magazine operation.



28-tool magazine	
Chip to Chip 1.4s	Tool to Tool 0.8s

Simultaneous operation

Wasted time has been reduced by simultaneously performing tool change and positioning X/Y and A/C axes.



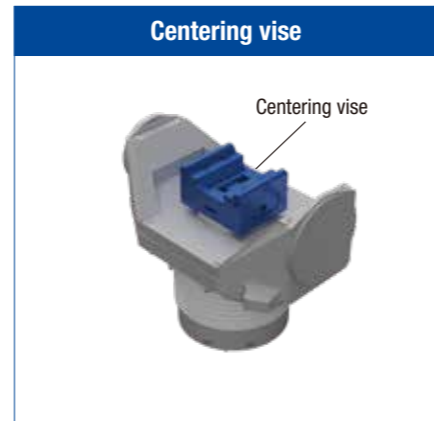
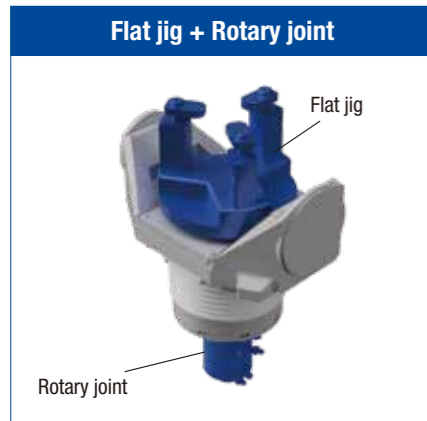
Spindle start/stop time	
Milling spindle 0.2s or less	
Turning spindle 0.3s or less	

High acceleration/deceleration spindle

Using a low inertia spindle and high acceleration/deceleration spindle motor has achieved faster spindle start/stop. In addition, the turning spindle with DD motor achieves high acceleration/deceleration speed.

Jig mounting examples

A wide variety of jigs, such as our specially designed flat jig, chuck suitable for round shapes, and centering vise suitable for square shapes, can be mounted according to the workpiece. Applicable to rotary joints with hydraulic/pneumatic ports or rotary cylinders.

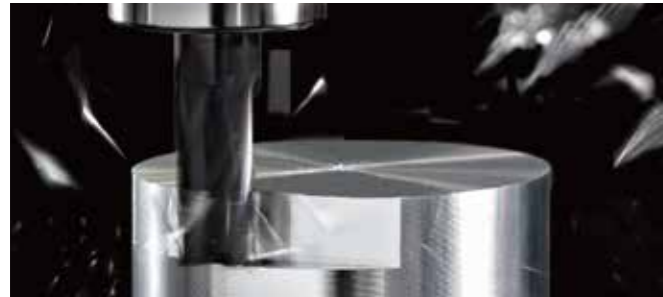


Demonstrates high machining capabilities from milling to turning processes

A high-power motor is used for the milling spindle and the turning spindle. The tilting rotary table provides high clamp force. These features ensure that the machine demonstrates high machining capabilities in complex machining or multi-face machining. Tool center point control has been added to support simultaneous five-axis machining.

Milling process

As the spindle can provide high torque in the medium- and high-speed range, the machine fully demonstrates its capabilities in high-speed and highly efficient machining of aluminum or iron.



10,000 min ⁻¹ (standard)
Max. torque 40N·m Max. output 18.9kW

C-axis clamp

The C-axis with high clamp force enables more stringent cutting conditions to be set for machining that results in load being applied in the rotation direction, improving production efficiency.

C-axis clamp torque **345N·m**

A-axis clamp (optional)

The mechanical plus servo clamp method enables the machine to demonstrate high machining capabilities in high-load machining and stable lathe turning, improving machining accuracy. A double type clamp mechanism, where clamps are provided on the left and right sides, is available to further enhance high machining capabilities.



A-axis clamp (double) *1

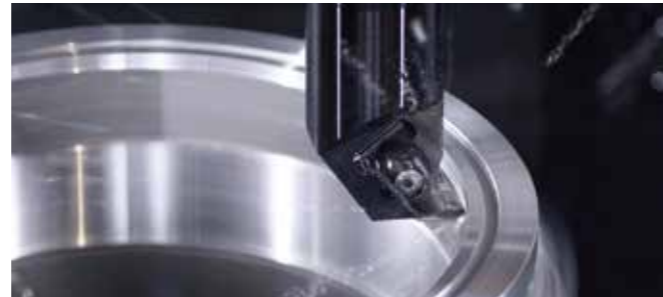
A-axis clamp torque *2
Single 695N·m Double 975N·m

*1. Only driving side for single type

*2. Value of mechanical clamp (at pneumatic 0.5 MPa) plus servo clamp

Turning process

Highly efficient machining is achieved by the high-power turning spindle with a maximum speed of 2,000 min⁻¹, and the turning tool secured by the double plunger lock.



Turning spindle
Max. torque 55N·m Max. output 8.7kW

Simultaneous 5-axis machining

Provided with functions required for simultaneous 5-axis machining, including tool center point control where machining is performed by changing the tool direction relative to the workpiece, look-ahead max. 1,000 blocks, and submicron command.

For the new CNC-D00 controller, the CPU capacity has been greatly increased to enhance processing of minute line segments by fourfold the conventional controller. This enables high-speed processing of CAM data with small tolerance.

In addition, a roller gear cam is used for the A-axis, and a DD motor for the C-axis to achieve backlash-free operation.

These improvements ensure high-speed and highly accurate simultaneous 5-axis machining.



Artificial bone
Ti-6Al-4V
Size: 70 x 64 x 41

NC functions related to simultaneous 5-axis machining *3
Tool center point control (look-ahead 1,000 blocks), submicron command, Feature coordinates setting, memory capacity (3 Gbytes)

*3. All these are standard on the M200Xd1-5AX.

Machining capability

		ADC	Cast iron	Carbon steel
Drilling				
	10,000min ⁻¹	D28 × 0.2 (1.1 × 0.008)	D28 × 0.15 (1.1 × 0.006)	D23 × 0.1 (0.91 × 0.004)
Tool diameter mm(inch) x Feed mm(inch)/rev	16,000min ⁻¹	D21 × 0.2 (0.83 × 0.008)	D20 × 0.15 (0.79 × 0.006)	D16 × 0.1 (0.63 × 0.004)
Tapping				
	10,000min ⁻¹	M22 × 2.5 (7/8-9UNC)	M22 × 2.5 (7/8-9UNC)	M16 × 2.0 (5/8-11UNC)
Tool diameter mm(inch) x Pitch mm(inch)	16,000min ⁻¹	M16 × 2.0 (5/8-11UNC)	M16 × 2.0 (5/8-11UNC)	M12 × 1.75 (7/16-14UNC)
Facing				
	10,000min ⁻¹	489 (29.8)	110 (6.7)	54 (3.3)
Cutting amount cm ³ /min (inch ³ /min)	16,000min ⁻¹	489 (29.8)	73 (4.5)	48 (2.9)

* Data obtained from tests conducted by Brother.

* These values are when the A-axis is at 0 degrees and X/Y axes are at their travel center. The above machining capability may not be achieved depending on conditions, including usage environment, tools in use, and coolant.



Equipped with new “CNC-D00” controller for improved usability Enhanced accessibility to make setup easier

Intuitive operation is possible with new apps and 15-inch vertical LCD touch panel display.

Waste-free operation is possible in setup, machining adjustment, production, and recovery process, leading to improved work efficiency and operating rate.

Accessibility to the machine has been enhanced to enable smooth setup including workpiece change.

New user interface

Usability has been greatly improved by grouping relevant functions, creating new support apps that are intuitive with improved operability and visibility, providing useful accessories (calculator, notebook, file viewer etc.), and making operation on conventional screens possible on the touch panel.



List of support apps



Conventional screen (position screen)

Accessibility and workability

The jig or workpiece can be tilted toward the operator, which enables operators to perform setup, including workpiece change, without any strain.



Accessibility to jig or workpiece with A-axis at -30 deg.

Setup support

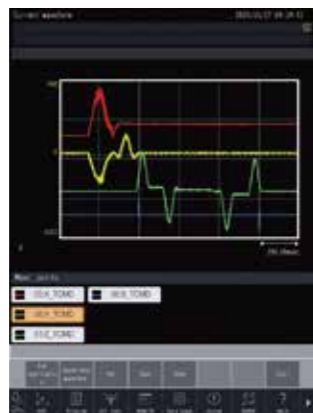
Equipped with functions to easily perform setup, such as an ATC tool app that enables all magazine tool settings to be performed on one screen, menu programming that enables you to create NC programs by following instructions on the screen, and an on-screen help function.



ATC tool app

Machining adjustment support

Equipped with functions to easily perform optimal machining adjustment to improve productivity, such as a machining parameter adjustment app that enables you to easily adjust parameters according to machining details and a machining load waveform display/saving function.



Waveform display app

Production support

Equipped with functions to improve the operating rate, such as real time tool monitoring to eliminate defects, displaying production performance, power consumption etc. as a graph, and PLC/network functions to meet peripheral equipment and automation requirements.



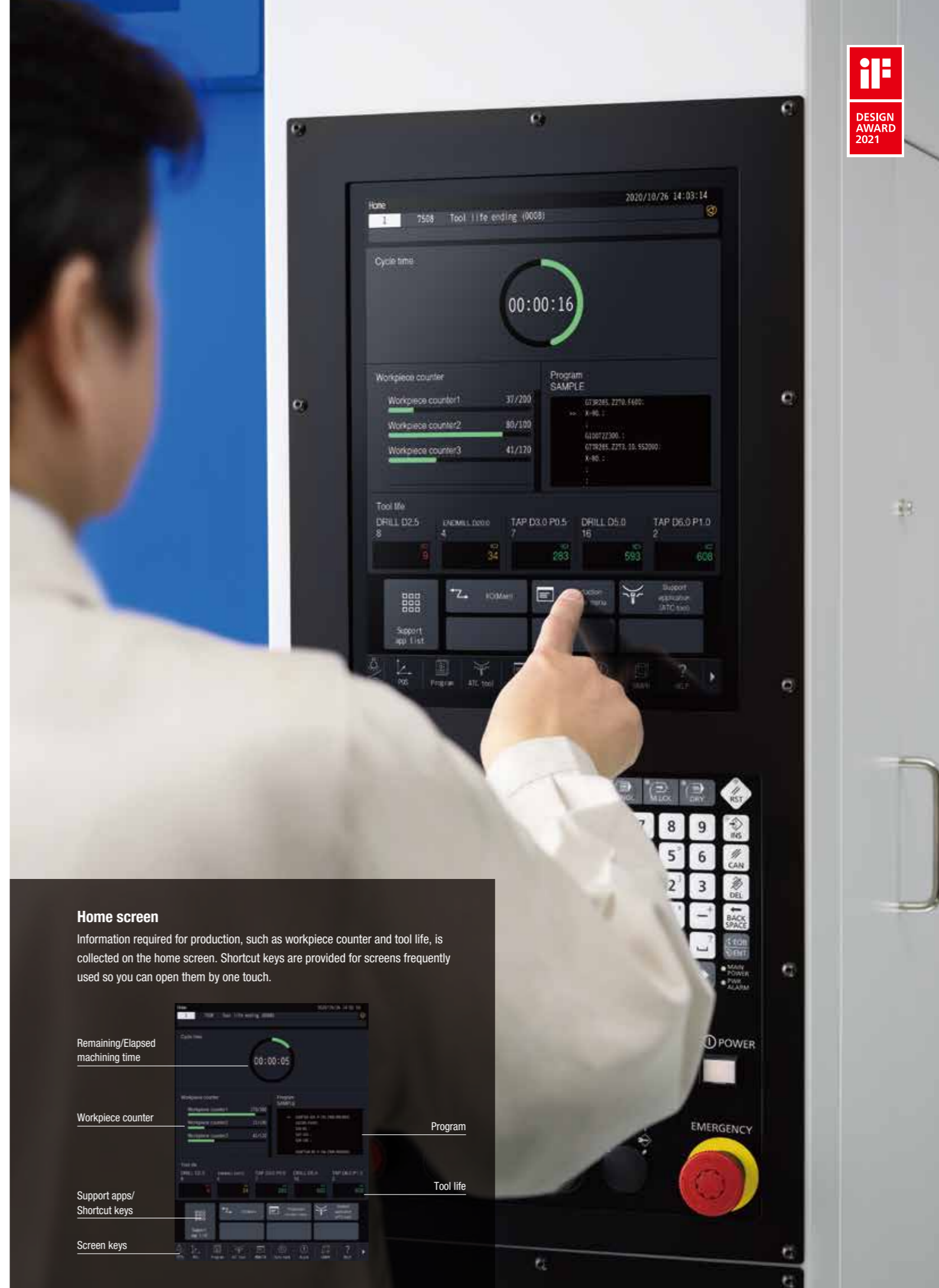
Production performance app

Recovery support

Equipped with functions to prevent failure or ensure quick recovery, such as maintenance time notice, displaying details when an alarm occurs, and guidance for recovery/check work.



Recovery support app



Home screen

Information required for production, such as workpiece counter and tool life, is collected on the home screen. Shortcut keys are provided for screens frequently used so you can open them by one touch.

Remaining/Elapsed machining time

Workpiece counter

Support apps/Shortcut keys

Screen keys

Program

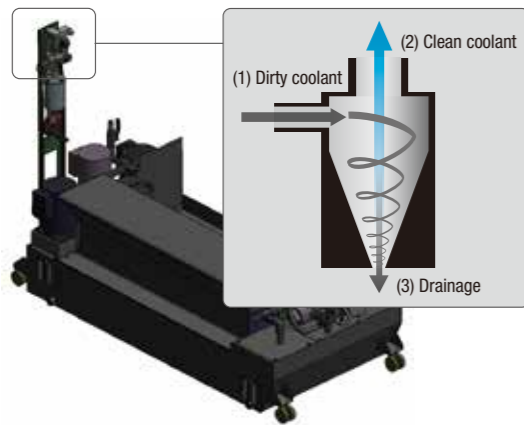
Tool life

Earth-friendly machine with reliability that ensures high productivity

High reliability has been achieved by thorough evacuation and efficient handling of chips, and maintenance functions to prevent failures. Low power and air consumption greatly reduces CO₂ emissions, creating an earth-friendly plant environment.

Tank with cyclone filter and no consumables (special option for CTS)

Clean coolant is returned to the clean tank through another tank with a cyclone filter that removes fine chips. Coolant is kept clean this way to reduce the filter change frequency and extend the service life of the pump.



Low power consumption

In addition to the low inertia spindle and highly efficient spindle motor, the machine is equipped with various energy saving functions to lower power consumption.

Power consumption app

Current and past power consumption can be checked.

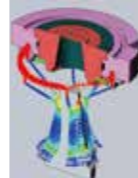


Low air consumption

Air related functions have been reviewed and optimized to eliminate any waste, leading to reduction in air consumption.

Air purge

A highly airtight structure achieved through repeated flow rate analysis reduces the amount of air used.



Spindle air blow

Amount of air used is reduced by discharging three times the conventional volume of air only when required.



Reliability and maintenance functions for prevention of defects/failures and quick recovery

To maintain productivity at plants, the machine is equipped with many functions that can prevent possible defects in daily production sites, such as tool abrasion, omission of tool attachment, and re-machining of the same workpiece, and functions that assist with recovery in the case of machine failure or other problems.

ATC tool monitoring

The presence of a spindle tool is checked before and after tool change without using a sensor.



Machining load monitoring

Machining load applied to the spindle is monitored to issue an alarm when the load is not within the preset range.



Maintenance notice

Notifies operators of maintenance related issues in advance, such as greasing time.



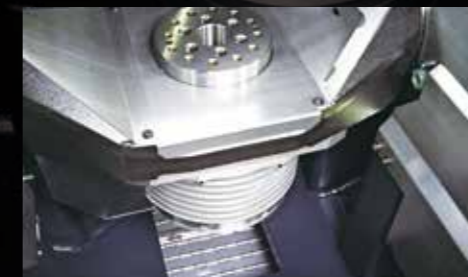
Alarm log

Displays alarm log details to help identify the cause.



Center trough structure

Provides high chip evacuation performance by the tilted base and the center trough structure.



Tool washing, air-assisted type (optional)

Air-assisted high discharge pressure and discharge amount steadily remove chips attached to the holder.





Chip conveyor
A two-step structure (hinged plate and scrapper) is used, enabling evacuation of chips in a variety of sizes and shapes. An oil skimmer can be added.



Coolant tank with chute
Coolant flows through the chute to evacuate chips. The chute can be separated from the coolant tank, making maintenance easier.



Coolant Through Spindle (CTS)
Can be selected from 3.0 MPa or 7.0 MPa. Pump and tank are not included.



Tool washing, air-assisted type
High discharge pressure and flow rate efficiently remove chips attached to the holder. Equipped with a filter clog warning function.



Signal light (1, 2, or 3 lamps)
LED lamps are used. No maintenance required. Can be tilted to improve visibility.



Automatic oil lubricator
Regularly applies oil to all lubricating points on the tree axes.
* Manual greasing is required for the standard specification model.



Automatic grease lubricator
Regularly applies grease to all lubricating points on the three axes.
* Manual greasing is required for the standard specification model.



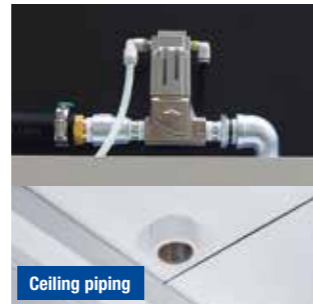
Automatic door with switch panel 10 holes
A motor-driven door is used, achieving smooth operation.



Rotary joint
Provided with four ports (two hydraulic, one pneumatic, and one common for pneumatic, coolant, and hydraulic), and attached to the bottom of the turning spindle motor.



Chip shower
Chip shower pipes are located at the upper section inside the machine for more efficient flow, and flexible shower nozzles can be directed to the side of the machine cover or sections where chips tend to accumulate.



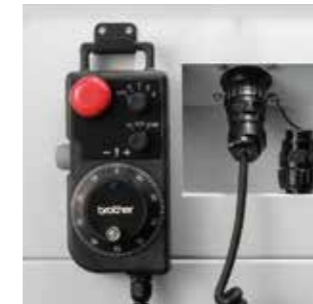
Fixture shower valve unit
Consists of jig washing valves and pipes to the ceiling of the machine. Pipes from the machine to the required location must be prepared by customers.



Cleaning gun
Helps clean the workpiece or chips inside the machine after machining.



Area sensor
Optical area sensors are used. Use area sensors to prevent operators being caught in the automatic door.



Manual pulse generator
A cable is provided for the manual pulse generator, making setup easier. Equipped with emergency stop and enable switches.



Tool breakage detector, touch type
A touch switch type tool breakage detector is available.



Spindle override
Spindle speed can be changed without changing the program.



A-axis clamp (single, double)
In addition to the single type, a double type that clamps a workpiece on the left and right sides has been added. Effective for machining where a higher load is applied.



Side door with transparent window
Makes setup from the side easier. The machining room can be checked through the window. The manual pulse generator can also be operated.



Side cover with transparent window
External light is drawn in to make the inside of the machine brighter and improve visibility.



Work light (right side, left side)
LED lamps are used to extend lamp life and save energy.



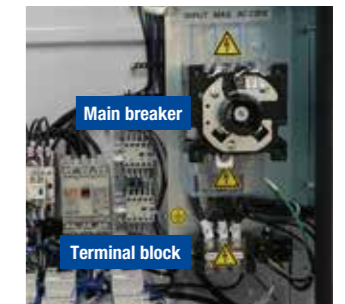
Switch panel (8 holes or 10 holes)
Various switches, such as automatic door open/close switches, are set in specific locations. The switch panel (8 holes) is also available so that the position of the manual pulse connector can be changed.



Master on circuit
Master on circuit and switch can be attached.
* A switch panel (8 holes or 10 holes) is required separately.



Data protection switch, key type
Changing the operation level is enabled or disabled by the key.



Power supply expansion 50A
The capacity of the main breaker can be increased from 30A to 50A. The size of the relevant wiring increases accordingly. A terminal block for external equipment power supply is provided under the main breaker.

* When you select the coolant tank with chute, you must also select the chip shower. In addition, chips may not be evacuated correctly depending on the shape of chips. Please contact your local distributor for details.

* The rotary joint must be used with hydraulic oil supplied. If hydraulic oil is not supplied, only conduct indexing operation or remove the rotary joint from the turning spindle motor.

* The type of coolant may have a significant influence on the machine's lifecycle. It is recommended to use high-lubricity (emulsion type) coolant. Do not use chemical solution type (synthetic type) coolant, as it may cause damage to the machine.

* When using CTS (Coolant Through Spindle) function, do not use flammable coolant (ex. oil-based type).

● Please read the instruction manuals and safety manuals before using Brother products for your own safety.

When using oil-based coolant or when machining materials which can cause a fire (ex. magnesium, resin), customers are requested to take thorough safety measures against fire.

The types of cutting material, cutting tools, coolant, or lubrication oil may have an influence on the machine's lifecycle.

For further questions, please contact our sales representative.

● Leave 700 mm between machines as maintenance space.

● When exporting our machine, the machine is deemed to be included in the "applicable listed items" controlled by the Foreign Exchange and Foreign Trade Law of Japan. When exporting the machine, please obtain required permissions, including an export license, from the Ministry of Economy, Trade and Industry (METI) or Regional Bureaus of Economy, Trade and Industry before shipment. When re-selling or re-exporting the machine, you may need to obtain permissions from METI, and the government of the country where the machine is installed.

● When exporting our machine, as a machine conforming to Row 2 of Appended Table 1 of Export Trade Control Order, a relocation detection device is installed on the machine depending on the destination country. After relocating the machine with the detection device, the machine is locked and any operation is temporarily impossible. Please inform your local distributor of machine relocation in advance and apply to perform the release operation of relocated machine.

- Coolant tank
 - 1) Coolant tank with chute, 150L
 - 2) Coolant tank with chute, 150L for 1.5 MPa CTS pump with cyclone filter
 - 3) Chip conveyor tank, 370L
 - 4) Chip conveyor tank, 370L with oil skimmer
 - 5) Chip conveyor tank, 370L for 1.5 MPa CTS pump with cyclone filter
 - 6) Chip conveyor tank, 370L for 1.5 MPa CTS pump with cyclone filter and oil skimmer
- Coolant through spindle (CTS) piping, Max. 3.0 MPa
- Coolant through spindle (CTS) piping, Max. 7.0 MPa
- Head coolant nozzle
- Rotary joint 4 ports
- Chip shower
- Tool washing, air-assisted type
- Fixture shower valve unit
- Cleaning gun
- Mesh basket for collecting chips
- A-axis clamp (single, double)

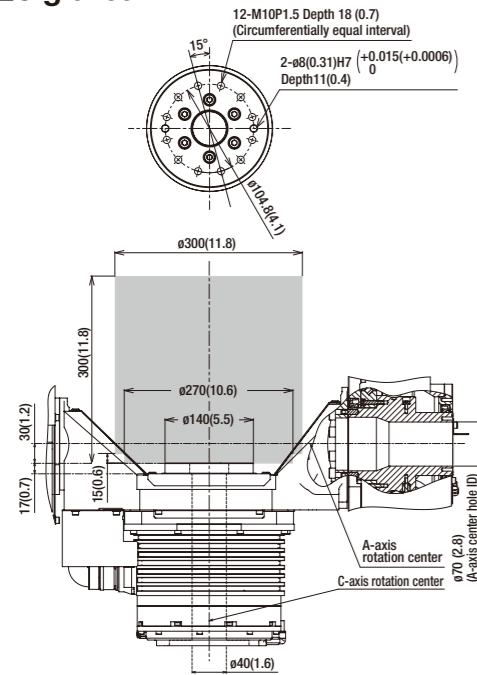
- Side cover with transparent window, one side
- Side door with transparent window, right side
- Work light (1 lamp for right side, 1 lamp for left side)
- Signal light (1, 2, or 3 lamps)
- Automatic oil lubricator
- Automatic grease lubricator
- Automatic door with switch panel 10 holes
- Area sensor
- Switch panel (8 holes or 10 holes)
- Manual pulse generator with enable switch
- Connector and hook for manual pulse generator with enable switch
- Tool breakage detector, touch type
- RS232C 25-pin connector at control box
- Spindle override
- Master on circuit
- Data protection switch, key type
- Grip cover for 22/28-tool magazine
- Parts name sticker set
- Origin alignment mark

- 100V outlet in control box
- Power supply expansion 50A
- Transformer box
- Specified color
- EXIO board assembly
 - 1) EXIO board, input 32/output 32, additional #1
 - 2) EXIO board, input 32/output 32, additional #2
- PLC programming software for D00
- Industrial network
 - 1) CC-Link, master station
 - 2) CC-Link, remote device station
 - 3) PROFIBUS-DP, slave
 - 4) DeviceNet, slave
 - 5) PROFINET, slave
 - 6) EtherNet/IP, slave
- Memory expansion 3 Gbytes *1

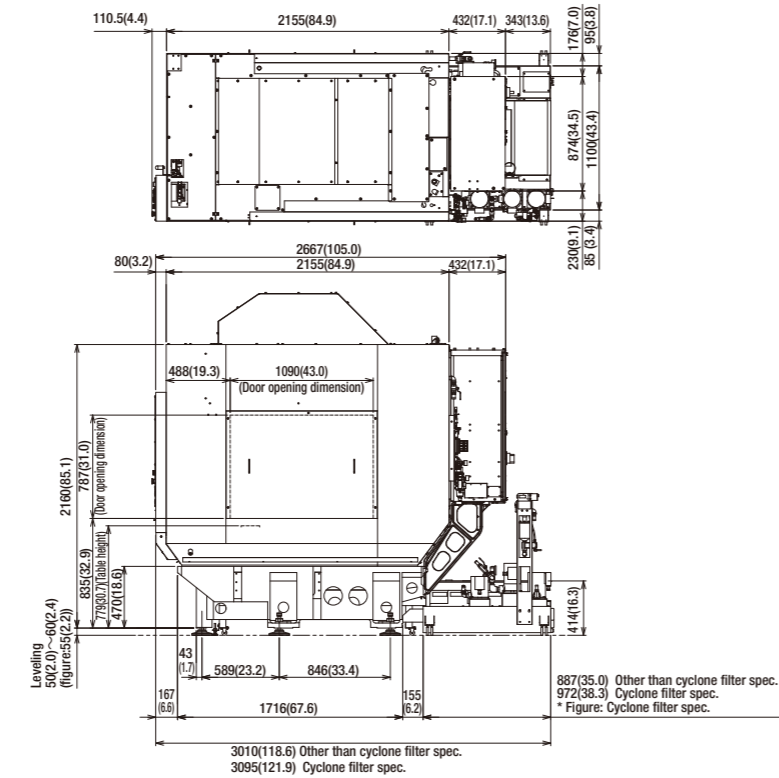
*1. Standard on the M200Xd1-5AX

Table details

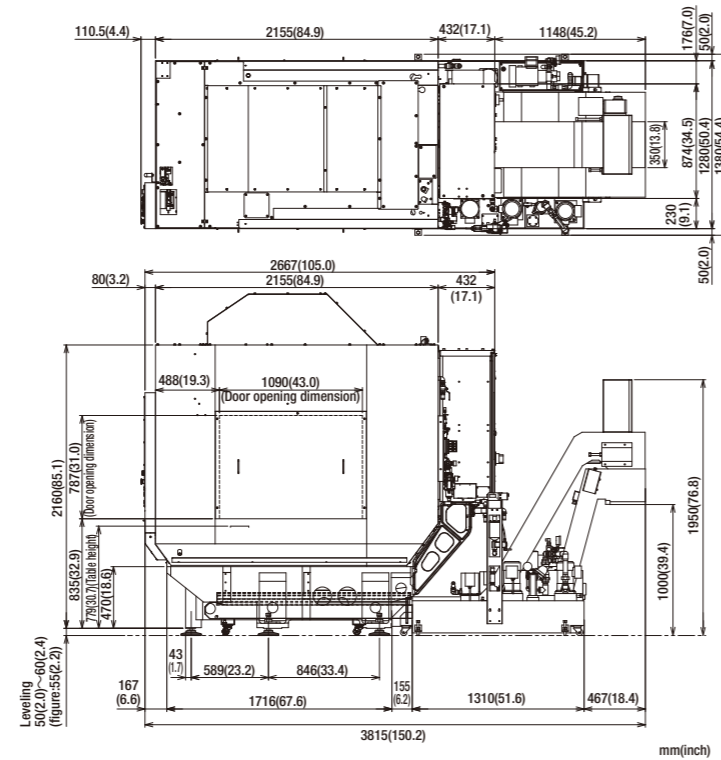
Jig area



Chute type



Chip conveyor type



NC unit specifications

CNC model	《M200Xd1》 《M200Xd1-5AX》	CNC-D00 CNC-D00v (DB)
Control axes	5 axes (X, Y, Z, A, C)	
Simultaneously controlled axes (M200Xd1)	Positioning	5 axes (X, Y, Z, A, C)
	Interpolation	Linear: 4 axes (X, Y, Z, 1 axis for rotation) Circular: 2 axes Helical/Conical: 3 axes (X, Y, Z)
Simultaneously controlled axes (M200Xd1-5AX)	Positioning	5 axes (X, Y, Z, A, C)
	Interpolation	Linear: 5 axes (Up to 3 axes for linear+2 axes for rotation) Circular: 2 axes Helical/Conical: 4 axes (Up to 3 axes for linear + 1 axis for rotation, 2 axes for linear + 2 axes for rotation)

Least input increment	0.001 mm, 0.0001 inch, 0.001 deg.
Max. programmable dimension	±999999.999 mm, ±99999.9999 inch
Display	15-inch color LCD touch display
Memory capacity	《M200Xd1》 500 Mbytes, 3 Gbytes (optional) 《M200Xd1-5AX》 3 Gbytes (Total capacity of program and data bank)
External communication	USB memory interface, Ethernet, RS232C (optional)
No. of registrable programs	4,000 (Total capacity of program and data bank)
Program format	NC language *Conversation language not available.

* "Control axes" and "Simultaneously controlled axes" indicate the maximum number of axes, which will differ depending on the destination country and the machine specifications.
* Ethernet is a registered trademark of Xerox Corporation in the United States.

Machine specifications

CNC Unit	Item	M200Xd1/M200Xd1 RD *8		M200Xd1-5AX/M200Xd1-5AX RD *8	
		CNC-D00		CNC-D00v (DB)	
Travels	X axis	mm(inch)	200 (7.9)		
	Y axis	mm(inch)	440 (17.3)		
	Z axis	mm(inch)	305 (12.0)		
	A axis	deg.	120~30		
	C axis	deg.	360		
	Distance between table top and spindle nose end	mm(inch)	150~455 (5.9~17.9)		
Table	Work area size	mm(inch)	ø140 (ø5.5)		
			In compliance with table nose No.5 of ISO702-4 (JISB109-2)		
Table	Max. loading capacity(uniform load)	kg(lbs)	Table side 40 (88.2) / Tale side 19 (41.9) *9		
	Max. table load inertia	kg·m ² (lb·inch ²)	Table side 0.29 (991) / Tale side 0.04 (137)		
	Spindle speed	min ⁻¹	10,000min ⁻¹ specifications: 1~10,000	16,000min ⁻¹ specifications (Optional): 1~16,000	
	Speed during tapping	min ⁻¹	MAX. 6,000		
Spindle	Tapered hole		7/24 tapered No.30		
	BT dual contact spindle (BIG-PLUS)		Optional		
	Coolant Through Spindle (CTS)		Optional		
Turning spindle	Max. spindle speed	min ⁻¹	2,000		
	Rapid traverse rate (XYZ-area)	m/min(inch/min)	50 x 50 x 50 (1,969 x 1,969)		
Feed rate	Cutting feed rate	mm/min(inch/min)	X, Y, Z axis: 1~30,000 (0.04~1,181) *7		
	Indexing feed rate (A and C)	min ⁻¹	A axis: 60 C axis: 200		
	Tool shank type		MAS-BT30		
ATC unit	Pull stud type *4		MAS-P30T-2		
	Tool storage capacity	pcs.	22/28 *10		
	Max. tool length	mm(inch)	250 (9.8)		
	Max. tool diameter	mm(inch)	80 (3.1)		
	Max. tool weight *1	kg(lbs)	3 (6.6)		
Tool change time *5	Tool selection method		Random shortcut method		
	Tool To Tool	sec.	0.8		
Electric motor	Chip To Chip	sec.	1.4		
	Main spindle motor (10min/continuous) *2	kW	10,000min ⁻¹ specifications: 10.1/7.0, 16,000min ⁻¹ specifications (optional): 7.4/5.1		
	Axis feed motor	kW	X, Y axis: 1.0 Z axis: 1.8 A axis: 0.8		
Power source	Turning spindle motor	kW	4.2		
	Power supply		AC 200 to 230 V±10%, 3-phase, 50/60Hz±2%		
	Power capacity (continuous)	kVA	10,000min ⁻¹ specifications: 9.5, 16,000min ⁻¹ specifications (optional): 9.5		
Machining dimensions	Air supply	Regular air pressure	MPa		
		Required flow	L/min		
			175		
Accuracy *3	Height	mm(inch)	2,612 (102.9)		
	Required floor space*11	mm(inch)	1,280 x 2,667 (50.4 x 105)		
	Weight	kg(lbs)	2,700 (5,953) [3,000 (6,614) with BV7-870Ad]		
Accuracy *3	Accuracy of bidirectional axis positioning (ISO230-2:1988)		X, Y, Z axis: 0.006~0.020 mm (0.00024~0.00079 inch)		
	Repeatability of bidirectional axis positioning (ISO230-2:2014)		A, C axis: 28 sec or less		
Standard accessories			X, Y, Z axis: Less than 0.004 mm (0.00016 inch) A, C axis: 16 sec or less		
			Instruction Manual (DVD 1 set), leveling bolts (5 pcs.), leveling plate (5 pcs.)		

*1. Actual tool weight differs depending on the configuration and center of gravity. The figures shown here are for reference only. *2. Spindle motor output differs depending on the spindle speed. *3. Measured in compliance with ISO standards and Brother standards. Please contact your local distributor for details. *4. Brother specifications apply to the pull studs for CTS. *5. Measured in compliance with JIS B6336-9 and MAS011-1987. *6. Regular air pressure varies depending on the machine specifications, machining program details, or use of peripheral equipment. Set the pressure higher than the recommended value. *7. When using high accuracy mode B. *8. The machine needs to be equipped with a relocation detection device depending on the destination. Machines equipped with a relocation detection device come with "RD" at the end of the model name. *9. The loading capacity on the tail side is 13 kg at the rotating section and 6 kg at the fixed section. *10. For the 28-tool magazine, turning tools cannot be set in adjacent pods. *11. The value does not include the coolant tank or chip conveyor.

NC functions

Operation	Monitoring	Programming	Measurement	High speed and high accuracy	Automatic / Network	Accessories
Dry run	Machining load monitoring	Absolute / Incremental	Automatic workpiece measurement *1	Machining parameter adjustment	Computer remote	File viewer
Machine lock	ATC tool monitoring	Inch / Metric	Tool length measurement	High-accuracy mode All	Computer remote	Notebook
Program restart	Overload prediction	Coordinate system setting		High-accuracy mode BI	Computer remote	Calculator
Rapid traverse override	Waveform display / Waveform output to memory card	Corner C / Corner R		High-accuracy mode BI (look-ahead 160 blocks)	Computer remote	Register shortcut
Cutting feed override	Heat expansion compensation system II (X, Y, and Z axes)	Rotational transformation		Backlash compensation	Computer remote	Display off
Background editing	Production performance display	Synchronized tap			Computer remote	
Screen shot	Tool life / Spare tool	Subprogram			Computer remote	
Operation level	Support apps	Graphic display			Computer remote	
External input signal key	Adjust machine parameters				Computer remote	
Shortcut keys	ATC tool				Computer remote	
<Optional>	Tool life				Computer remote	
Spindle override	Waveform display				Computer remote	
	Status log				Computer remote	
	Production performance				Computer remote	
	Power consumption				Computer remote	
	Recovery support				Computer remote	
	Inspection				Computer remote	
	PLC				Computer remote	
	Turning functions				Computer remote	
	Constant peripheral speed control				Computer remote	
	Feed per revolution control				Computer remote	
	Tool position compensation (X, Y, Z)				Computer remote	
	Nose R compensation				Computer remote	
	Thread cutting function				Computer remote	

*1. Measuring instrument needs to be prepared by users. *2. Available only for the M200Xd1-5AX *3. Standard on the M200Xd1-5AX

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Figures in brackets () are the country codes.

Specifications may be subject to change without any notice.

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