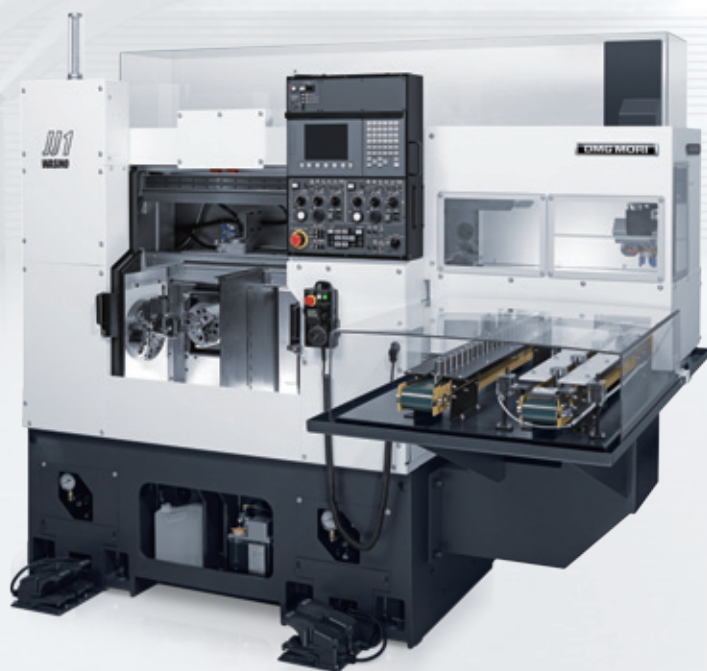


Turning Centers

J-1

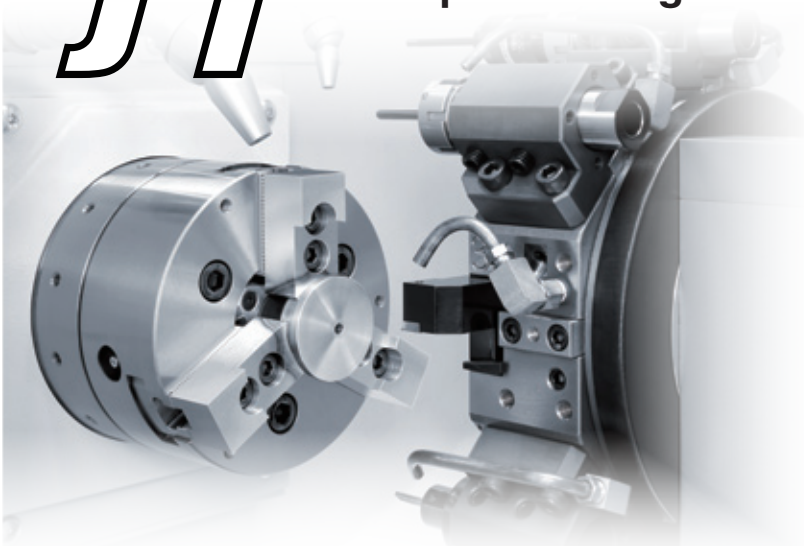
JJ-1

J Series



J1

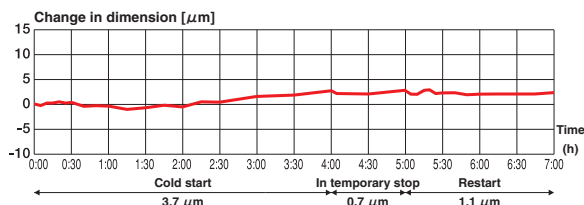
Best-selling machine featuring high precision and space saving



Highlights

- + Thermal displacement (at cold start): ϕ 4.0 μm & Circularity: 0.5 μm
- + Spindle motor output exerts 5.5 kW (7.5 HP), the highest power in this class
- + Floor space is minimum among the machines of this class
- + Proven performance in small precision parts machining
- + Loader/stocker systems for a wide range of production needs
- + Peripheral equipment to support customers in various manufacturing environments

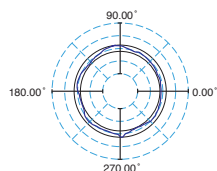
Cold start 4 μm diameter



Cutting conditions
Spindle speed: 6,000 min^{-1}
Depth of cut: ϕ 0.05 mm (ϕ 0.0020 in.)

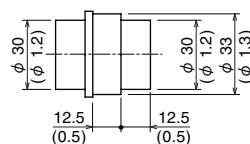
Cycle time: 65 sec.
Tool: Diamond

Circularity 0.5 μm



Workpiece

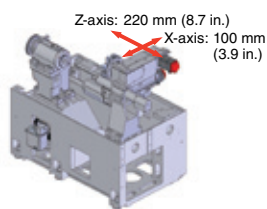
Material: Aluminum mm (in.)



Features

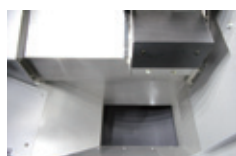
Highly rigid horizontal bed

- High frequency induction-hardened horizontal slideway integrated onto the bed.
- Higher rigidity and lower center of gravity ensure long-term high-precision machining.



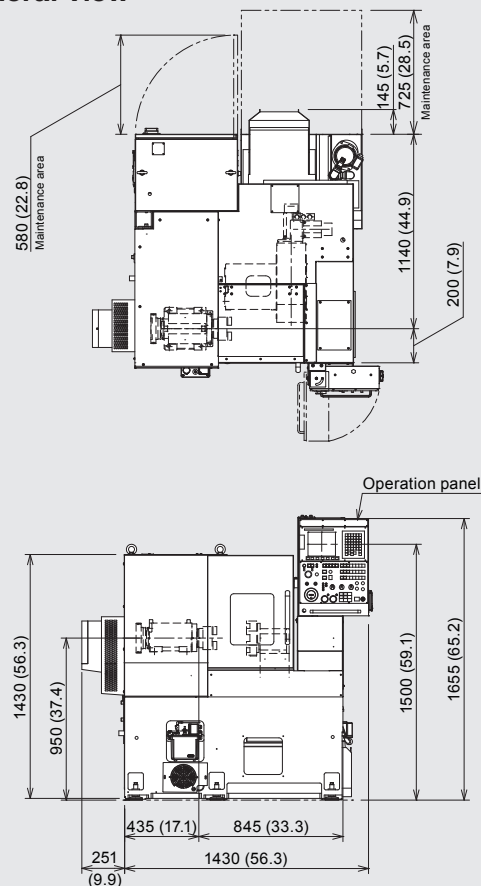
Stable machining accuracy thanks to stainless steel covers

- Stainless steel cover with low thermal conductivity effectively protects the chute.
- Prevents sudden temperature changes in bed caused by coolant and chips.



General view

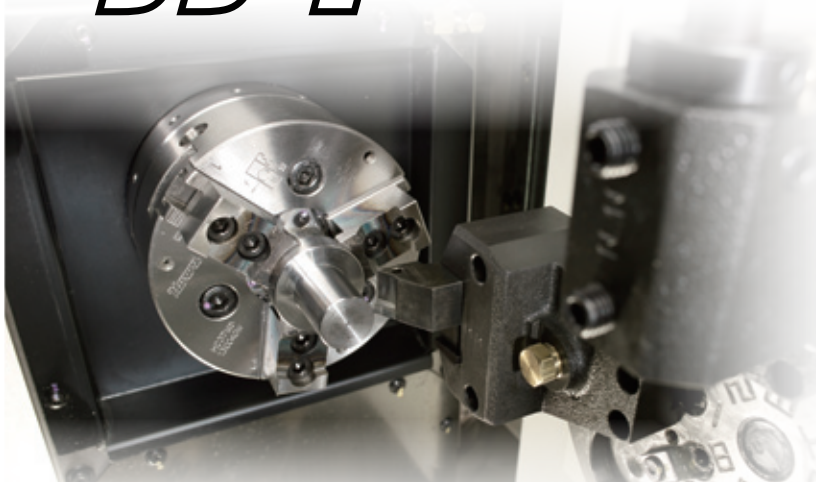
mm (in.)



Dual
Spindle

JJ1

Space-saving 2-spindle 2-turret machine with high functionality and high precision



Highlights

- + Lead time reduced by two spindles and two turrets which allow for machining of front and rear faces in one process
- + Improved workability by the machine structure that ensures better access to the turrets and chucks
- + Stable machining accuracy thanks to stainless steel covers
- + Thermal displacement (at cold start): ϕ 5.0 μ m, Circularity: 0.4 μ m
- + Proven performance in small precision parts machining
- + Loader/stocker systems for a wide range of production needs
- + Peripheral equipment to support customers in various manufacturing environments

Basic structure

Travel

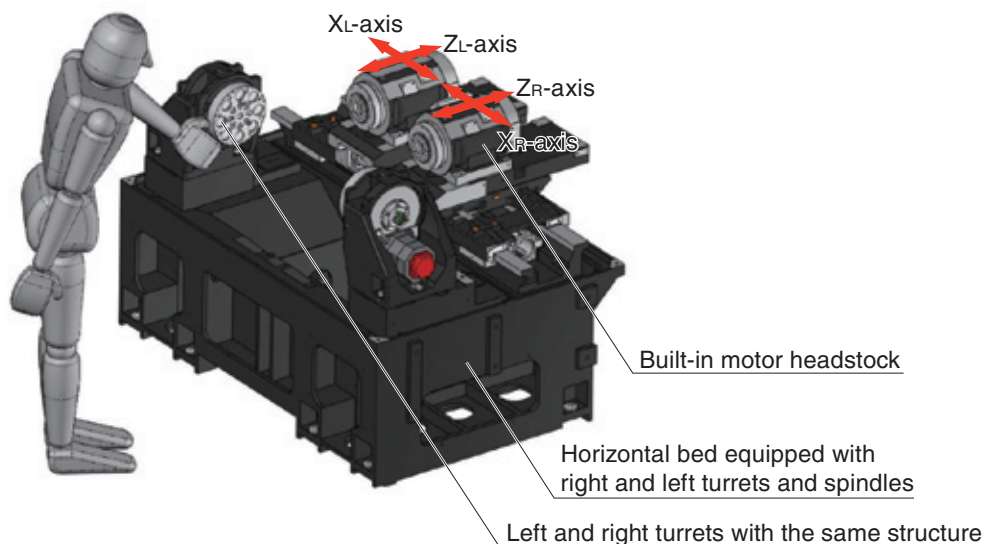
XL-/XR-axis: 147.5 mm (5.8 in.)

ZL-/ZR-axis: 170 mm (6.7 in.)

Rapid traverse rate

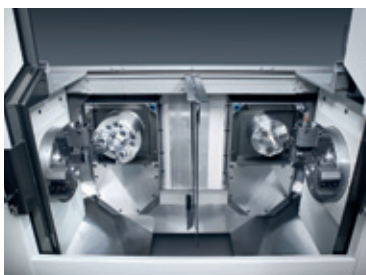
XL-/XR-axis: 15 m/min (590.6 ipm)

ZL-/ZR-axis: 15 m/min (590.6 ipm)



Features

Stable machining accuracy thanks to stainless steel covers



Spindle

Max. spindle speed
6,000 min⁻¹

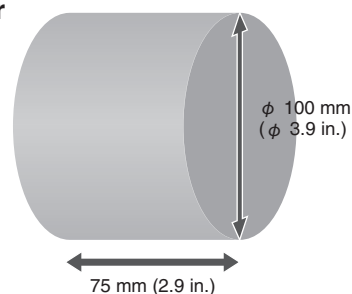
Standard chuck size
5 inches
(Max. size: 6 inches)

Spindle drive motor
5.5/5.5/3.7 kW (7.5/7.5/5 HP)
<15%ED/25%ED/cont>

Workpiece size

Max. turning diameter
 ϕ 100 mm (ϕ 3.9 in.)*
<Standard turning diameter
 ϕ 50 mm (ϕ 1.9 in.)>

Max. turning length
75 mm (2.9 in.)*



* The workpiece size is limited depending on the chuck or robot hand specification.

● Machine specifications (standalone)

Item			J-1
Capacity	Standard turning diameter	mm (in.)	φ 80 (φ 3.1)
	Max. turning diameter	mm (in.)	φ 160 (φ 6.2)*1
	Bar work capacity	mm (in.)	φ 38.1 (φ 1.5)*2
	Spindle center height	mm (in.)	950 (37.4)
Travel	X-axis travel	mm (in.)	100 (3.9)
	Z-axis travel	mm (in.)	220 (8.7)
	Max. spindle speed	min ⁻¹	6,000, 4,000
Spindle	Type of spindle nose	mm (in.)	φ 100 (φ 3.9) flat
	Through-spindle hole diameter	mm (in.)	φ 45 (φ 1.8)
	Spindle bearing inner diameter	mm (in.)	φ 75 (φ 3.0)
	Turret type		V8
Turret	Number of tool stations		8
	Shank height for square tool	mm (in.)	20×20 (3/4×3/4)
	Shank diameter for boring bar	mm (in.)	φ 25 (φ 1)
	Turret head swing	mm (in.)	φ 330 (φ 13.0)
	Feedrate	mm/min (ipm)	15,000/15,000 (590.6/590.6)
Tailstock (option)	Taper hole of tailstock spindle		MT3
	Tailstock spindle travel	mm (in.)	70 (2.8)
	Thrust force <max.>*3	N (lbf)	980 (220.3) <when hydraulic pressure is 1.5 MPa (217.5 psi)>
Motor	Spindle drive motor <15 min/cont>	kW (HP)	5.5/3.7 (7.5/5)
	Electrical power supply	kVA	12
Power sources	Voltage, frequency		AC200/220 V ±10%, 3 phase 50/60 Hz±1 Hz
	Machine height	mm (in.)	1,655 (65.2)
Machine size	Floor space <projecting parts not included>	mm (in.)	1,280×1,335 (50.4×52.6)
	Mass of machine	kg (lb.)	1,430 (3,146)
	Control unit		FANUC-0i-TF

- *1 Tools may interfere with workpieces. Please contact our sales representative for details.
*2 Depending on the chuck/cylinder used and its restrictions, it may not be possible to reach full bar work capacity.
*3 Set the tailstock adjustment pressure to 0.5 to 1.5 MPa (72.5 to 217.5 psi).
● 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.

● Machine specifications (standalone)

Item			JJ-1	
			L	R
Capacity	Standard turning diameter	mm (in.)	φ 50 (φ 1.9)*1	
	Max. turning diameter	mm (in.)	φ 100 (φ 3.9)*1	
	Spindle center height	mm (in.)	900 (35.4)	
	X-axis travel	mm (in.)	147.5 (5.8)	
Travel	Z-axis travel	mm (in.)	170 (6.7)	
	Max. spindle speed	min ⁻¹	6,000	
	Number of spindle speed ranges		Infinity variable	
Spindle	Type of spindle nose	mm (in.)	φ 100 (φ 3.9) flat	
	Through-spindle hole diameter	mm (in.)	φ 45 (φ 1.8)	
	Turret type		V8 turret	
	Number of tool stations		8	
Turret	Shank height for square tool	mm (in.)	20×20 (3/4×3/4)	
	Shank diameter for boring bar	mm (in.)	φ 25 (φ 1)	
	Turret head swing	mm (in.)	φ 376 (φ 14.8)	
	Feedrate	mm/min (ipm)	15,000/15,000 (590.6/590.6)	
Motor	Spindle drive motor <15%ED/25%ED/cont>*2	kW (HP)	5.5/5.5/3.7 (7.5/7.5/5)	
	Electrical power supply	kVA	20.7	
Power sources	Voltage, frequency		AC200/220 V ±10%, 3 phase 50/60 Hz±1 Hz	
	Machine height	mm (in.)	1,500 (59.1)/1,790 (70.5) <for operation panel>	
Machine size	Floor space	mm (in.)	1,490×1,615 (58.7×63.6)	
	Mass of machine	kg (lb.)	2,600 (5,720)	
	Control unit		FANUC-0i-TF	

- *1 The workpiece size is limited depending on the chuck or robot hand specification.
*2 15%ED/25%ED: Ratio of the motor operating time in a 10-minute cycle in which the motor is repeatedly operated or stopped.
● 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.

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