

3. MACHINE SPECIFICATIONS

(1) Travel

Column longitudinal travel	(X axis)	900mm
Spindle vertical travel	(Z axis)	450m
Table cross travel	(Y axis)	500mm
Distance from spindle nose to table surface		150 ~ 600mm

(2) Spindle

Type of spindle nose		7/24 taper No.40
Spindle front bearing inner diameter		φ 90mm
Spindle speed		15~ 14000min ⁻¹
Spindle start-up		2.3s/14000min ⁻¹
Spindle speed change		S5-digit direct command
Drive motor		AC 18.5kW/22kW (continuous/30 min)
Orientation		Electric servo type
Type of retention knob		40P (JIS B6339) or P40TI (MAS403)
Tool clamp force		9.8kN (1 ton)

(3) Automatic tool changer (ATC)

Tool storage capacity		15 tools (or 25,40,80 tools)
Tool selection method		Random closest path
Type of tool shank		40T (JIS B6339)
Type of retention knob		40P (JIS B6339) or P40TI (MAS403)
Tool change time	(tool-to-tool)	1.5sec
	(chip-to-chip)	3.9sec
Auto changeable tool		
Max. dimensions (dia. × length)		φ 140 × 300mm
(Note: Tool layout restricted depending on the diameter.)		
Max. tool weight (including shank)		8kg

MACHINE SPECIFICATIONS



(4) Table

Table size	1000 × 500mm
Table surface configuration	T slots (18H8mm × 5pcs)
Table weight	70kg
Max. loading capacity (equal distribution)	700kg 45.1kN (4.6tons)
Table surface height	980mm
Workpiece size	1000 × 630, height 450mm
Number of pallets	2 pallets
Pallet change method	Simultaneous change by swinging arm

(5) Feed

Least input increment	0.001mm
Jog feedrate	0 ~ 4000mm/min (23 steps)
Cutting feedrate	1 ~ 50000mm/min
Rapid traverse	50000mm/min

(6) Machine reference point

X,Y,Z axis reference point	+end of each axis stroke
Reference point detection	Grid detection system
Reference point return	Possible in manual mode

(7) Hydraulic unit

Max. operating pressure	6.9MPa (70kgf/cm ²)
Discharge rate	20/24 ℓ/min (50/60Hz)
Tank capacity	10 ℓ
Motor capacity	2.2kW

(8) Spindle cooling oil temperature controller

Cooling capacity	7270/8370W (50/60Hz)
Cooling compressor	2.2kW
Tank capacity	30 ℓ
Motor capacity	0.75kW × 3

(9) Coolant unit

Number of nozzles	8 pcs
Pump discharge rate	50/60 ℓ/min (50/60Hz)
Pump discharge pressure	0.4MPa (4kgf/cm ²)
Tank total capacity	550 ℓ
Motor capacity	1.06/1.21kW (50/60Hz)

(10) Air pressure source required

Air must be clean.	
Pressure	0.5MPa (5kgf/cm ²) minimum
Consumption	600L/min (at atmospheric pressure)
Dew point temperature below	-17°C (at atmospheric pressure)

(11) Power supply required

Spindle drive	AC 18.5/22kW
Axis feed	3.8kW × 3
ATC magazine (15 tools)	0.3kW
NC unit	1kVA
Machine control unit	1.9kVA
Hydraulic unit	2.2kW
Spindle cooling oil temp. controller	4.4kW
Coolant unit	1.06/1.21kW (50/60Hz)

(12) Power capacity

AC 200/220V±10%
0/60Hz±2%
3 phases
58kVA

Note 1: The power capacity is a simple sum of maximum loads of respective units. Actual mean power consumption is about 15kW, and the maximum power consumption is about 54kW.

Note 2: No-fuse circuit breaker on the machine control panel uses 150A, and therefore use 225A fuse on the factory side.