

UN-600/30V

Standard Machine Specifications

Travel	C-axis	360°
	Y-axis	350 mm (13.78")
	Z-axis	400 mm (15.75")
Pallet	Distance between spindle center and pallet center	0 mm ~ 350 mm (0" ~ 13.78")
	Distance between pallet top to spindle nose	150 mm ~ 550 mm (5.91" ~ 21.65")
	Pallet size	400 mm × 400 mm (15.75" × 15.75")
	Max. workpiece dimension	Ø600 mm × 450 mm (Ø23.62" × 17.72")
	Max. pallet load (evenly distributed)	150 kg (331 lbs)
Spindle	Pallet top surface	M16 × P2.8 tapped holes, 160 mm (6.3") pitch
	Speed	20000 min ⁻¹ (rpm)
	Spindle taper	7/24 taper No.30
	Spindle bearing ID	Ø50 mm (1.97")
Feedrate	Spindle acceleration	0.49 s (0 → 20000 min ⁻¹ (rpm))
	Rapid traverse rate**	Y, Z-axis: 60 m/min (2362 IPM) C-axis: 100 min ⁻¹ (rpm)
	Acceleration / deceleration	Y-axis: 1.6 G, Z-axis: 1.8 G
Automatic tool changer	Tool shank	MAS BT-30
	Tool storage capacity	20
	Max. tool diameter / length (from gauge line) / weight	Ø75 mm / 300 mm / 6 kg (Ø2.95" / 11.81" / 13 lbs)
	Max. tool diameter with adjacent pockets empty	Ø130 mm (5.12")
	Tool selection method	Fixed pocket number, shortest path
	Tool change time (chip-to-chip)	2.4 s
	Motors	Spindle motor (10 min. / cont. rating)
Machine size**	Machine height	2727 mm (107.36")
	Floor space requirement	695 mm × 3365 mm (27.36" × 132.48")
	Machine weight	4400 kg (9700 lbs)
Sound	Equivalent continuous sound pressure level at operator position (depend on equipment options)	Less than 80 dB(A)

** Limited feedrate with continuous axis movement

** Coolant tank not included

UN-600/30H

Standard Machine Specifications

Travel	X-axis	510 mm (20.08")
	Y-axis	400 mm (15.75")
	Z-axis	380 mm (14.96")
	Distance between spindle nose and pallet center	100 mm ~ 480 mm (3.94" ~ 18.9")
	Distance between spindle center and pallet top	150 mm ~ 550 mm (5.91" ~ 21.65")
Pallet	Pallet size	400 mm × 400 mm (15.75" × 15.75")
	Max. workpiece dimensions	Ø600 mm × 500 mm (Ø23.62" × 19.69")
	Max. pallet load (evenly distributed)	250 kg (551 lbs)
	Pallet top surface	M16×P2.8 tapped holes, 160 mm (6.3") pitch
	Minimum table indexing increment	0.001°
Spindle	Table indexing time	0.53 s / 90°
	Speed	20000 min ⁻¹ (rpm)
	Spindle taper	7/24 taper No.30
	Spindle bearing ID	Ø50 mm (Ø1.97")
Feedrate	Spindle acceleration	0.49 s (0 → 20000 min ⁻¹ (rpm))
	Rapid traverse rate**	X-axis (X, U-axis): 120 m/min (4724 lbs) (60 m/min (2362 lbs)) Y, Z-axis: 60 m/min (2362 lbs)
	Acceleration / deceleration	X-axis (X, U-axis): 2.0 G (1.0 G) Y, Z-axis: 1.5 G, 2.0 G
Automatic tool changer	Tool shank	MAS BT-30
	Tool storage capacity	20
	Max. tool diameter / length (from gauge line) / weight	Ø75 mm / 300 mm / 6 kg (Ø2.95" / 11.81" / 13 lbs)
	Max. tool diameter with adjacent pockets empty	Ø130 mm (Ø5.12")
	Tool selection method	Fixed pocket number, shortest path
	Tool change time (chip-to-chip)	2.6 s
	Motors	Spindle motor (10 min. / cont. rating)
Machine size**	Machine height	2930 mm (115.35")
	Floor space requirement	990 mm (CNC not included) × 3265 mm (38.98" × 128.54")
	Machine weight	6000 kg (13228 lbs)
Sound	Equivalent continuous sound pressure level at operator position (depend on equipment options)	Less than 80 dB(A)

** Limited feedrate with continuous axis movement

** Coolant tank not included

Mazak

YAMAZAKI MAZAK CORPORATION

1-131 Takeda, Oguchi-cho, Niwa-gun, Aichi-pref., Japan
TEL : +(81)587-95-1131 FAX : +(81)587-95-2717

www.mazak.com

- Specifications are subject to change without notice.
- This product is subject to all applicable export control laws and regulations.
- The accuracy data and other data presented in this catalogue were obtained under specific conditions. They may not be duplicated under different conditions. (room temperature, workpiece materials, tool material, cutting conditions, etc.)

Standard and Optional Equipment

Spindle	20000 min ⁻¹ (rpm)	●
Tool shank	BT-30	●
Table	0.0001° × 3600000 NC positioning table	●
Tool magazine	20 tool magazine	●
High accuracy	Ball screw core cooling	●
	Chiller unit (spindle motor, table, ball screw)	●
Safety equipment	Proximity sensor (for aluminum chip)	○
	Automatic open / close door	○
CNC	Fanuc 32i	●
Factory automation	Table hydraulic power supply ports (max. 8 ports)	○
	Workpiece seating confirmation 3 ports (table hydraulic power supply ports required)	○
	Fixture wash coolant 1 port (through pallet)	○
	Robot interface	○
	Tool runout detector	○
	Tool breakage detector	○
Coolant / chip disposal	Central coolant system	○
	Air through spindle	○
	Preparation for mist collector	○
	Mist collector	○

Standard and Optional Equipment

Spindle	20000 min ⁻¹ (rpm)	●
Tool shank	BT-30	●
Table	0.001° × 360000 NC positioning table	●
Tool magazine	20 tool magazine	●
	30 tool magazine	○
High accuracy	Ball screw core cooling	●
	Chiller unit (for spindle motor and ball screw)	●
Safety equipment	Proximity sensor (for aluminum chip)	○
	Automatic open / close door	○
CNC	Fanuc 32i	●
Factory automation	Table hydraulic power supply ports (max. 8 ports)	○
	Workpiece seating confirmation 3 ports (table hydraulic power supply ports required)	○
	Fixture wash coolant 1 port (through pallet)	○
	Robot interface	○
	Tool runout detector	○
	Tool breakage detector	○
Coolant / chip disposal	Central coolant system	○
	Air through spindle	○
	Preparation for mist collector	○
	Mist collector	○

UN-600/30V UN-600/30H



UN-600/30V

UN-600/30H

Mazak

UN-600/30V, UN-600/30H 17.03.0 G 99J284017E0

Smallest width machines in their class

Incorporating experience accumulated over many years, these machines are designed to provide unsurpassed ease of maintenance and reliability



Compact vertical / horizontal machining centers for large volume production

UN SERIES

Compact, high speed machining centers for large volume production of automotive components



UN-600/30V : 2 machines + UN-600/30H : 1 machine

Vertical machining center
UN-600/30V

- Thanks to the interpolation of the machine table (C-axis) and the column (Y-axis) for the X-axis positioning, the machine width is reduced.

Horizontal machining center
UN-600/30H

- By moving the column (U-axis) for one-half the X-axis stroke and the table (X-axis) for the other half, the machine width is considerably reduced when compared to other horizontal machining centers with the same workpiece capacity.

1 High speed

Spindle speed	Synchronized tapping	Acceleration / deceleration
20000 min ⁻¹ (rpm)	8000 min ⁻¹ (rpm)	0.49 sec. [0~20000 min ⁻¹ (rpm)]

UN-600/30V	
Feedrate (Y, Z-axis / C-axis)	Acceleration (Y-axis / Z-axis)
60 m/min (2362 IPM) / 100 min ⁻¹ (rpm)	1.6 G / 1.8 G

UN-600/30H	
Feedrate (X-axis [X, U-axis] / Y, Z-axis)	Acceleration (X-axis [X, U-axis] / Y-axis / Z-axis)
120 m/min (4724 IPM) [60 m/min (2362 IPM)] / 60 m/min (2362 IPM)	2.0 G [1.0 G] / 1.5 G / 2.0 G

2 High accuracy

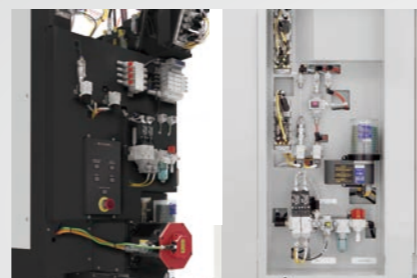
- The standard cooling unit is used to control the temperature of the oil used for the ball screw core cooling system, the spindle housing, and the machine table.

3 High reliability

- Mechanical components isolated from chips and coolant to prevent problems
- Machine is designed for ease of maintenance to minimize machine downtime
- Centralized location of lubrication, hydraulic and pneumatic units

4 Environmental considerations

- Reduced electrical power consumption thanks to intermittent operation of hydraulic unit with accumulator
- Optimum amount of grease is supplied to linear guides for reduced consumption



Ease of maintenance

Lubrication, air supply and other items requiring frequent access are centrally located in an uncovered area for ease of maintenance.

[left] UN-600/30V (Back of machine) [right] UN-600/30H (right side of machine)



Fanuc 32i CNC

Programming of the X-axis is done the same as for a conventional vertical machining center. The CNC automatically converts the linear coordinates to polar coordinates for the X-axis.