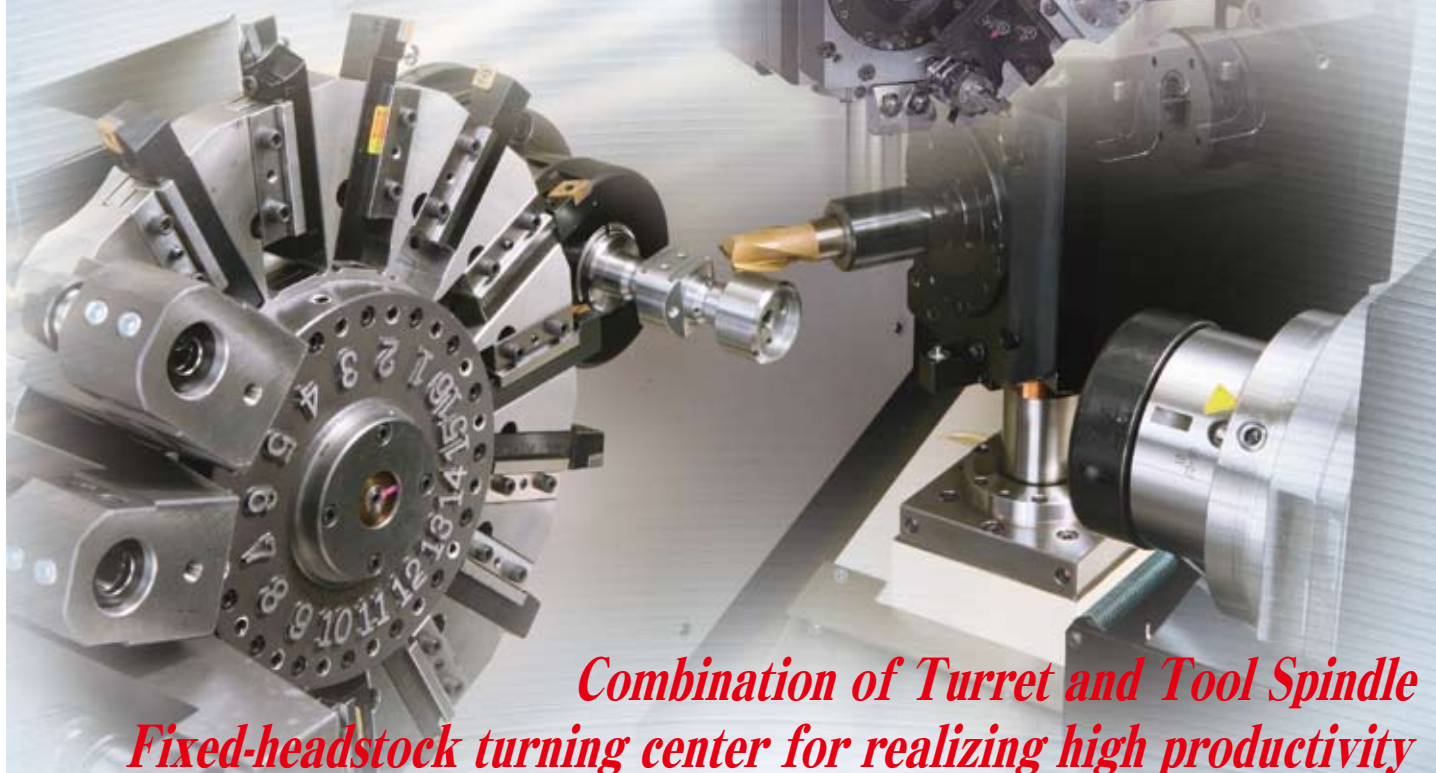


HIGH ACCURACY
HIGH SPEED
HIGH RIGIDITY

PRECISION TSUGAMI



*Combination of Turret and Tool Spindle
Fixed-headstock turning center for realizing high productivity*

CNC Precision Turning Center

TMB2

Applicable to complete machining for complicated parts in one machine

■ Powerful Spindle

High motor output (11/7.5kW) shortens cycle time.

■ High flexibility for various machining

Tool spindle can machine from various directions using Y- and B-axis control.

Complete machining from a bar stock by equipping the back spindle as standard.

■ ATC, tool magazine as standard

Correspond to small production of a large variety workpieces by ATC and Tool magazine.

■ Shortened cycle time by simultaneous marching of both turret and tool spindle

Enabling simultaneous machining of the both end faces of front and back or 2-point external turning.

■ Minimal thermal displacement of X axis (diametrical axis)

The diametrical axis (X axis) of the turret and the tool spindle is arranged in parallel to the ground, and the influence on machining accuracy by thermal displacement becomes minimal.

■ Machining-center-level powerful milling capability

The 5.5kW high-power built-in motor enables machining-center-level heavy-duty milling.



Machine Standard Specifications

Item	TMB2
Machining range	Max.machinable dia. $\phi 51$ mm
Spindle Motor	Max.main spindle speed 6,000 min ⁻¹
	Output (built-in) 11/7.5 kW
	Main spindle indexing angle 0.001°
Tool Post	Type 1 spindle with ATC
	B axis indexing angle/ Minimum indexing angle -15° to 195°/0.001°
	Tool spindle indexing angle/position 90°/4 pos.
	Max.spindle speed 10,000 min ⁻¹
	Motor output (built in) 5.5/2.2 kW
Turret	Number of Turret 16 position
	Tool size $\square 20$ mm x 125 mm
	Sleeve size for drill holder $\phi 32$ mm
	Index drive Servo motor
Back Spindle	Spindle speed 6,000 min ⁻¹
	Motor output (built in) 11/7.5 kW
	Main spindle indexing angle 0.001°
Stroke	X1 axis 380 mm
	Y1 axis 110 mm (± 55 mm)
	Z1 axis 560 mm
	X2 axis 130 mm
	Z2 axis 800 mm
	A2 axis 800 mm
Feedrate	Z1,Z2,A2 axes 40 m/min
	X1,Y1,X2 axes 24 m/min
ATC	Tool shank shape Sandvik Coromant C4
	Max.tool size $\phi 80$ mm x 150 mm (4 kg)
	Number of tool storage 30 (Option 60, 118)
	ATC time (tool to tool) 0.8 sec
Power source	Net weight 8,500 kg
	Electric power requirement 40 KVA
	Compressed air requirement 0.5 MPa
	Air discharge rate 300 NL/min
	WidthxDepthxHeight 3,650 x 2,200 x 2,500 mm

NC Standard Specifications

NC unit	FANUC 31i-B
LCD/MDI	10.4" color LCD
Manual pulse generator	1
I/O interface	Modem card, memory card can connect
Parts program storage length	80 m
Number of registered program	63
Back ground editing	
Tool radius compensation R	
Programable data input	
Work coordinate system setting	
Conversion to 3D coordinates	
Cs contour control	Main, Back spindle
Canned cycle	
Multiple repetitive cycle	
Canned cycle for drilling	
Number of tool offsets	64 (30T) 99 (60T)
Tool geometry wear offset	
Rigid tapping	
Reference position return	
Single block	
Optional block skip	
Dry run	

NC Option

Parts program storage length	160, 320, 640, 1,280 m
Registered number of program	200, 400, 1,000
Extended parts program editing function	
Number of tool offsets	400, 999 pairs
Herical interpolation	for large dia, screw and solid cam
Polar coordinate interpolation	

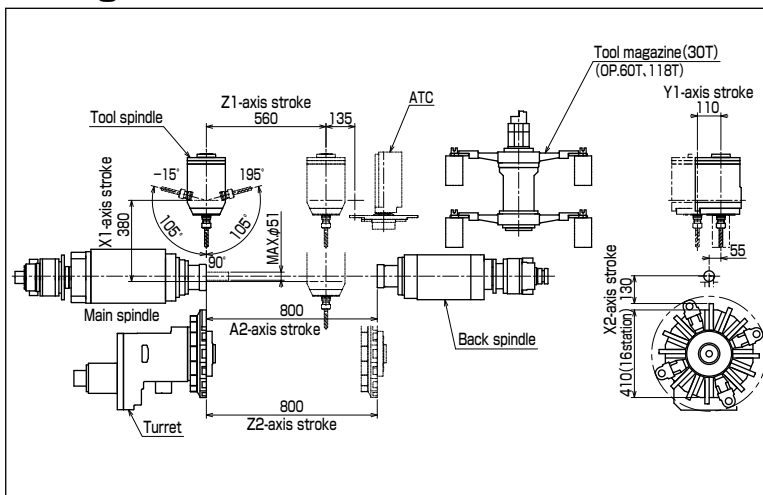
Standard Accessories

Standard tool set
Transit clamps
Main spindle chuck (SAD50)
Back spindle chuck (SAD50)
Tool clamper
B axis indexing angle 0.001°
Front door interlock
Tool magazine door interlock
Back cover interlock
Coolant oil flow switch
Reinforced safety window glass

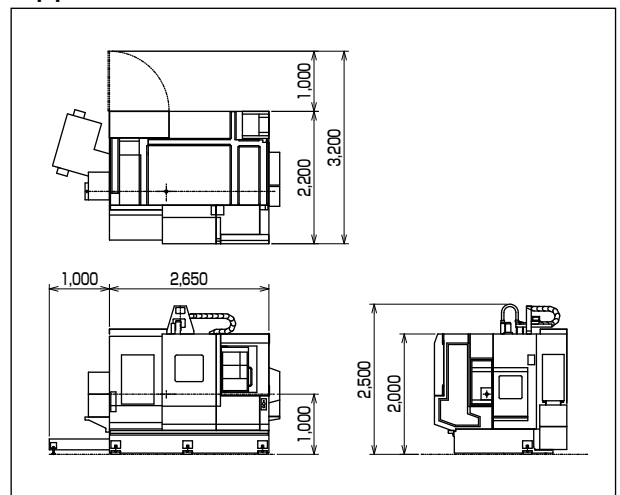
Optional Accessories

60 pcs tool magazine
118 pcs tool magazine
Bar feeder interface
Hobbing specification
Workpiece unloader
Workpiece conveyor
Parts catcher
Ejector
Chip conveyor
Mist collector
Dumper for fire
Automatic fire extinguisher
Signal tower
Tool checker
Scale specification
Collet chuck (main/back spindle)
Drill holder

Tooling Zone



Appearance



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The specifications of this catalogue are subject to change without prior notice.



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