

HIGH ACCURACY
HIGH SPEED
HIGH RIGIDITY

PRECISION TSUGAMI

*Space saving 1.0m² floor space
Integrated all production system*

CNC High Precision Automatic Lathe

C150

**Space saving machine for
productive ultraprecision processing**

■ Space saving

1.0m² floor space includes NC loader, 2 pallets and coolant tank with oil temperature controller.
Investment can be reduced through more machine and additional equipments installed in any given area.
Reducing machining operating cost (room air conditioner cost)

■ High accuracy and high productivity

Dimensional accuracy 0.2 μ m, 6 σ =0.5 μ m (Material: Brass)
Less thermal displacement 0.3 μ m without running operation,
0.1 μ m with short-term suspension
Maximum spindle speed 15,000 min⁻¹ with 3-inch chuck

■ Automated system

NC loader and 2 pallets integrated into machine
Machine and NC loader all controlled through machine side
NC operation panel.
Improved operator friendliness as 2 pallets are accessed
from front side of machine



Standard Machine Specifications

Item		C150	
Machining range	Swing over bed	220 mm	
	Spindle center height from X slide surface	45 mm	
	Distance between spindle and X slide face	100 to 250 mm	
Spindle	Max.main spindle speed	15,000 min ⁻¹	
	Spindle face	Dia.114 mm Flat	
	Spindle through ID	Air-tube integrated type	
	Chuck size	3" (4")	
Tool post	Type	Gang type tool post (On T grooved plate)	
	X-axis stroke	150 mm	
	Z-axis stroke	150 mm	
	Rapid traverse	X axis	15 m/min
		Z axis	15 m/min
Tool size	□13 mm		
Motors	Spindle	1.5/2.2 kW	
	X axis	0.75 kW	
	Z axis	0.75 kW	
	Coolant pump	250 W	
	Spindle cooling pump	75 W	
Tank	Lubricating oil tank	1.8 L	
	Spindle cooling tank	8 L	
	Coolant tank	210 L	
Power source	Net weight	1,400 kg (loader, 2P included)	
	Electric power	15 KVA	
	Compressed air requirement	More than 0.4 MPa	
	Air discharge rate	40 NL/min	
	Width x Depth x Height	1,000 mm x 1,100 mm x 1,875 mm	

Standard NC Specifications

Item	Specification
NC unit	FANUC 32i-B
LCD/MDI	8.4" color LCD
No.of control axis	2
Least input increments	0.01 μm
Feed format	mm/rev, mm/min
Command method	Absolute/incremental
Interpolation method	Liner/circular
Miscellaneous method	M2 digits
Spindle function	S5 digits
Tool function	T4 digits
No.of tool offsets	16
Part program storage length	80 m (32 Kbyte)
Feedrate override	0 to 150 % (10 % step)
Optional block skip	1
Backlash compensation	Standard
Program number	04 digits
Sequence number	N5 digits
Canned cycle	Standard
Language	Standard

Standard Accessories

Tool holder
Foundation plate
Transit clamps
Spindle cooling unit
Height gauge

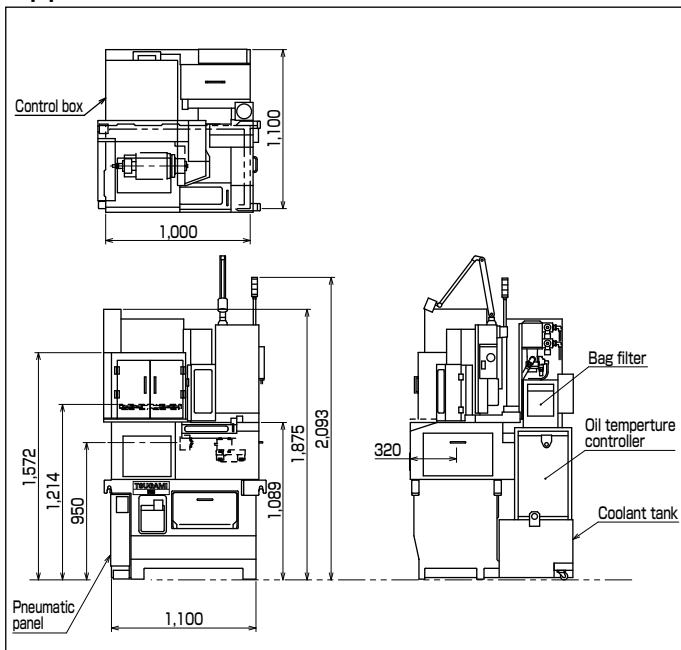
Option

NC loader
2 pallets
Automatic shutter
Coolant tank system
X-axis scale
Z-axis scale
Oil temperature controller
Automatic fire extinguisher
Illumination light
High speed chuck
Signal indicator

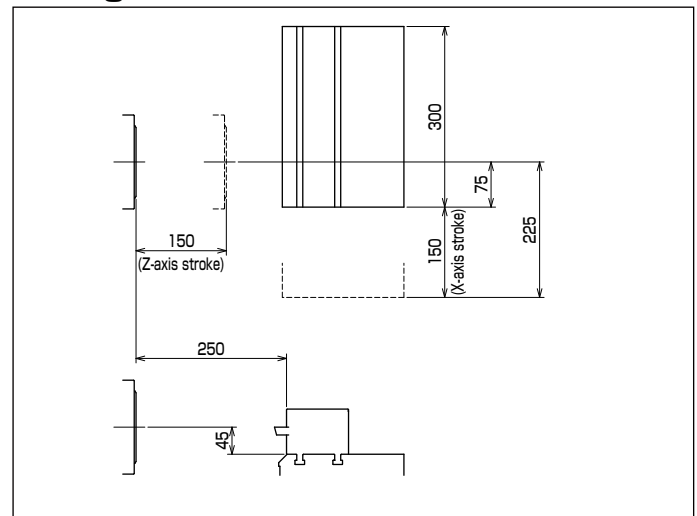
NC Option

Tool nose radius compensation	Tool geometry and wear offset	Tool offset 32 pairs
Custom macro B	Multiple repetitive cycle	Bach ground editing
Chamfering corner R	Inch/metric conversion	Part program storage length
Run time & parts number display	Spindle speed fluctuation	160 m (64 Kbyte) 320 m (128 Kbyte)

Appearance



Tooling Zone



Export permission by the Japanese Government may be required for exporting our products in accordance with the Foreign Exchange and Foreign Trade Law. Please contact our sales office before exporting our products.

Specifications	Machine model name
Without scale	C150
With X-axis scale	C150 (X)
With X-axis scale and Z-axis scale	C150 (X-Z)

When submitting the exporting documents, use the following machine model name according to the machine specifications.

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



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