

HIGH ACCURACY
HIGH SPEED
HIGH RIGIDITY

PRECISION TSUGAMI

*Space saving 1.0m² floor space
New generation high precision gang tool slide lathe*

CNC High Precision Automatic Lathe

C150

■ Space saving

1.0m² floor space includes NC loader and 2-pallet stoker
Coolant tank with oil temperature controller
Investment can be reduced through more machines and additional equipments installed in any given area
Reduce machine operating cost(room air conditioner cost)

■ High accuracy and high productivity

Dimensional accuracy 0.2 μm , $6\sigma=0.5 \mu\text{m}$
Less thermal displacement 0.3 μm
without running operation
Spindle maximum speed 15,000m⁻¹ with 3 inches chuck

■ Automated system

NC loader and 2-pallet changer integrated into machine
Machine, stoker and NC loader all controlled through machine
Side NC operating board
Improved operator friendliness as 2-pallet changer is accessed from front side of machine



Machine Standard Specifications

| Item | | C150 | |
|----------------------|--|--|---------|
| Machining range | Swing over bed | 260mm | |
| | Spindle center height | 45mm | |
| | from X slide surface Distance between spindle and X slide face | 100~250mm | |
| Spindle | Max.main spindle speed | 15,000min ⁻¹ | |
| | Spindle face | Dia. 114mm Flat | |
| | Spindle through ID | N/C | |
| | Chuck size | 3" (4") | |
| Tool post | Type | Gang type tool post (On T grooved plate) | |
| | X axis stroke | 150mm | |
| | Z axis stroke | 150mm | |
| | Rapid traverse | X axis | 15m/min |
| | | Z axis | 15m/min |
| | Tool size | □13mm | |
| Motors | Main spindle | 1.5/2.2kW | |
| | X axis | 0.75kW | |
| | Z axis | 0.75kW | |
| | Coolant pump | 250W | |
| | Spindle cooling pump | 75W | |
| | Tank | Lubrication tank | 1.8L |
| Spindle cooling tank | | 8L | |
| Coolant tank | | 170L | |
| Power source | Net weight | 2,000kg(Include) | |
| | Electric power | 15KVA | |
| | Compressed air | More than 0.4Mpa | |
| | Air discharge rate | 40NL/min | |
| WidthxDepthxHeight | | 1,000mmX1,000mmX1,724mm | |

NC Standard Specifications

| Item | Specification |
|-----------------------------|--------------------------|
| NC unit | FANUC 21i-TB |
| LCD/MDI | 7.2" black and white LCD |
| No.of control axis | 2 |
| Least input increments | 0.01μm |
| 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 | 20m |
| Feedrate override | 0~150%(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 |
| Base plate |
| Transfer tool |
| Spindle cooling unit |
| Height gauge |

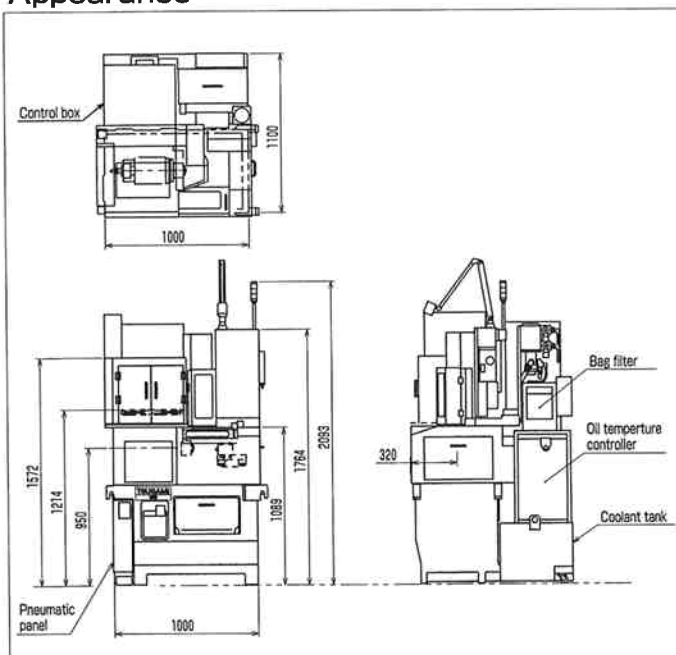
Optional Accessories

| |
|-----------------------------|
| NC loader |
| 2 pallet try stocker |
| Automatic shutter |
| Coolant tank system |
| X axis scale |
| Z axis scale |
| Oil temperature controller |
| Automatic fire extinguisher |
| Illumination lamp |
| High speed chuck |
| Signal indicator |

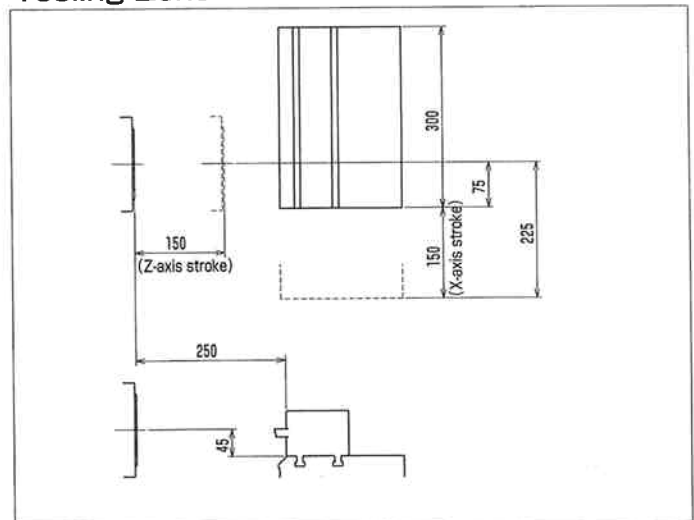
NC Option

| | | |
|--------------------------------|-------------------------------|----------------------|
| Tool nose radius compensation | Tool geometry and wear offset | Tool offset 32 pairs |
| Custom macro B | Multiple repetitive cycle | Back ground editing |
| Chamfering corner R | Inch/metric conversion | length |
| Run hour & parts count display | Spindle speed fluctuation | 40m, 80m, 160m |

Appearance



Tooling Zone



The export of this product is subject to an authorization from the government of the exporting country and/or Japan. Check with the government agency for authorization.

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

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

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

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