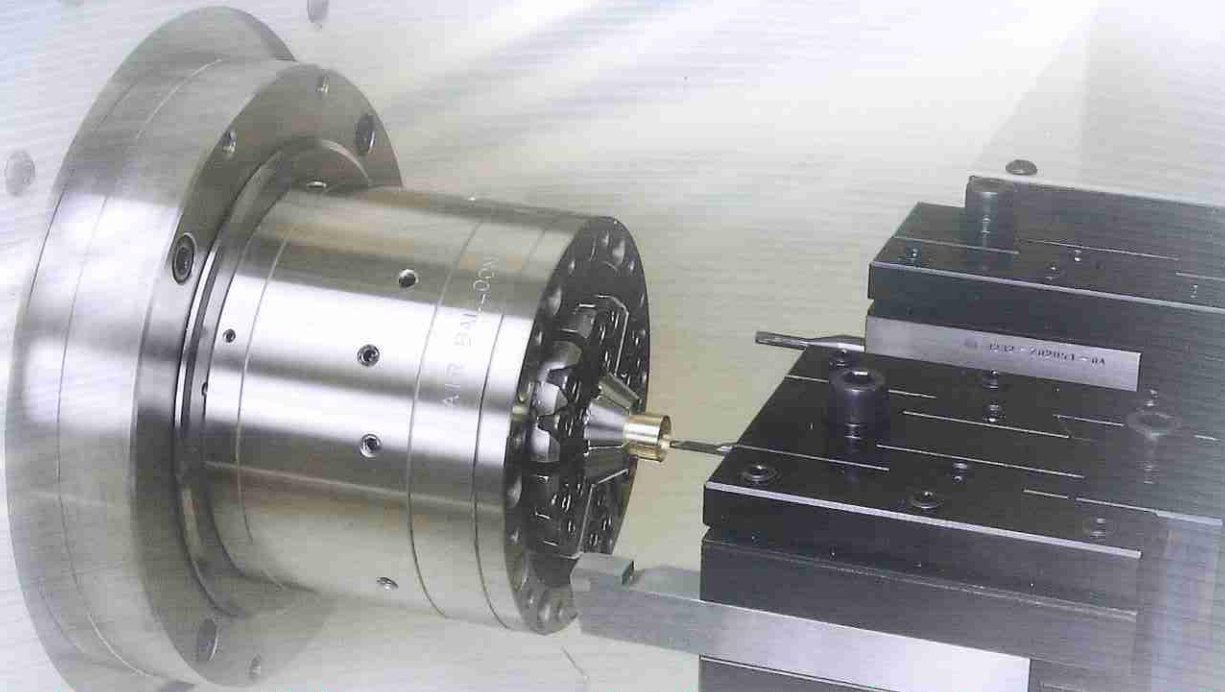


HIGH ACCURACY
HIGH SPEED
HIGH RIGIDITY

PRECISION TSUGAMI



*Super precision mass production to sub-micron conditions
Least input increment of 0.01 μm*

CNC High Precision Automatic Lathe C220

C220

**Super precision gang tool
type production lathes**

■ **High precision machining**

- Laboratory class machining for production facilities
- High dimensional accuracy... $6\sigma = 0.5\mu\text{m}$ (Brass part)
- High geometric accuracy in roundness and cylindricity

■ **The ultimate in dimensional change
suppression with complete thermal
control**

- Minimum dimensional change through pauses in production
- High quality parts - on demand

■ **One piece Chuck and spindle**

- High speed spindle not influenced by traditional chuck actuation tube
- Chuck adapter and spindle are integral for superior accuracy

■ **Independent slides with sliding head**

- X, Z independent T-bar type slides for stability - Eliminates



Standard Machine Specifications

Item		C220
Machining capability	Swing over bed	260mm
	Spindle center height from X slide surface	45mm
	Distance between spindle and X slide face	Max.300 to Min.80mm
Spindle	Spindle Max. spindle speed	12,000min-1(Built-in motor)
	Spindle face configuration	φ 114mm Flat
	Chuck size	4 inch
Tool post	Type	Gang type tool post (On T-grooved plate)
	X axis stroke	220mm
	Z axis stroke	220mm
	Rapid traverse rate	X axis 15m/min Z axis 15m/min
	Tool size	□13mm
Motor	Spindle	3.7/2.2kW
	X axis	1.4kW
	Z axis	1.4kW
	Coolant pump	250W
	Spindle cooling pump	75W
Tank capacity	Lubrication tank	1.8L
	Spindle cooling tank	8L
	Coolant tank	170L (Optional:300L)
Dimensions	Width×Depth×Height	1,466 X 1,930X 1,650mm
	Weight	2,000Kg

Standard NC Specifications

Item	C220
NC unit	TSUGAMI-FANUC LG2 (FANUC 21i-TB)
Display unit	7.2" monochrome LCD
Number of simultaneously controlled axes	2 axes (X, Z)
Least input increment	0.01 μm
Least detection increment	0.01 μm
Feed rate command	mm/rev, mm/min
Command input method	absolute/incremental
Interpolation	Linear & Circular
Miscellaneous function	M 3 digits
Spindle function	S 5 digit (Direct command)
Tool function	T 4 digits
Number of tool offsets	16 pairs
Part program storage length	20m
Feed rate override	0 to 150% (by 10% step)
Optional block skip	1
Backlash compensation	
Program number search	O 4 digits
Sequence number search	N 5 digits
Canned cycle	

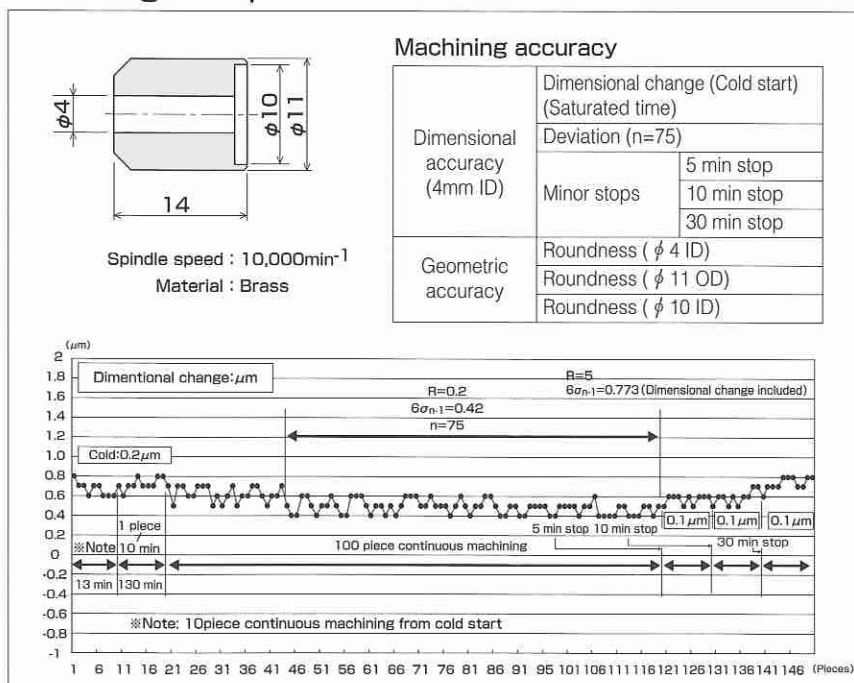
Optional accessories

Gantry loader (2 axes)
4-spindle drill unit
2-pallet changer
X axis scale
Z axis scale
Automatic shutter
Coolant tank
High pressure pump
Coolant temperature controller
Oil mist collector
Illumination (Out side of machine)
Bag filter

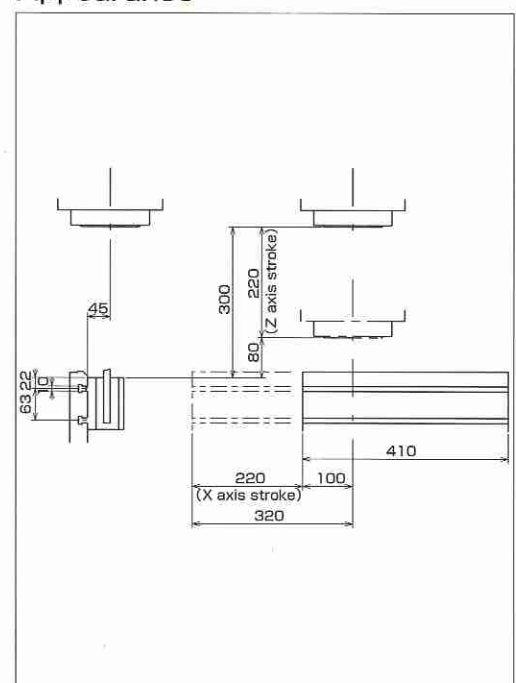
NC options

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	Part program storage length
Run hour and parts count display	Spindle speed fluctuation detection	40m, 80m, 160m, 320m

Machining example



Appearance



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

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