

TXseries

TX-80S

Small Type Precision CNC Turret Lathe
(S type : with Sub Spindle)

■ It is the stable high-speed high precision in the good small turret lathe of operativity, and is efficiency up.

With excellent operability and performance, opens up new turret lathe's possibilities.

Since making its first appearance in 1983, the [TX-80 series] has evolved over the years. Now, the series is renovated.



※ Photo shows a machine with options.

■ Operation

Totally new design, easy-to-use operation panel, an excellent structure for maintenance.

■ Low price

All these high performances at reasonable prices.

We will contribute to low costs for customers.

■ Characteristic

■ High-speed

The biggest advantage of the compact CNC turret lathe is zippy, efficient, smooth tool reaching, which significantly reduces the cycle time.

■ High-precision

The unique high-precision main spindle of KITAMURA MACHINE WORKS is well known. However, we reduced the cycle time by adoption of high-acceleration servomotor and latest high-speed CNC, comparing to the former model. Without compromise, we have improved the "scraped finish" that can only be achieved with traditional KNC technology and craftsmanship. We provide you with the most stable precision for many years. Furthermore, an NC order 0.1 μ comes standard, Smoother taper/R processing was made possible.

■ Less space

One of the least space in this class of machines.

■ Special specifications

A great number of special accessories available for customers.

■ Specifications

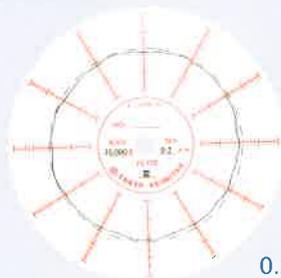
The CNC software options come standard, which generally are necessary. Examples are program storage length 1280M and multiple repetitive cycles. Special specifications are partly removed.

■ Processing precision example

Processing condition

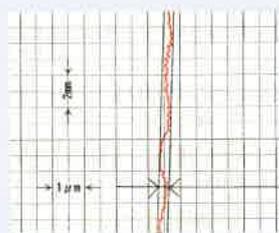
Machined material : BsBM
 Spindle speed : 3000rpm
 Feed : 0.03mm rev
 Cutting depth : 0.02mm(dius diameter)
 Tool used : Compax Nose R0.3

■ Roundness

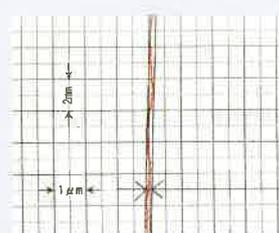


0.25 μ m

■ Straightness

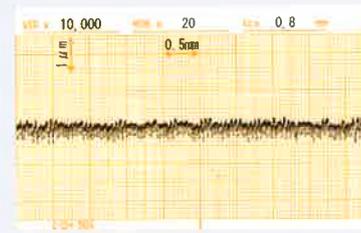


Outside diameter surface / 0.3 μ m

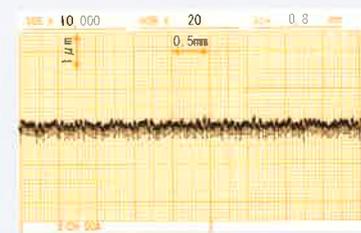


End face / 0.3 μ m

■ Finished surface roughness

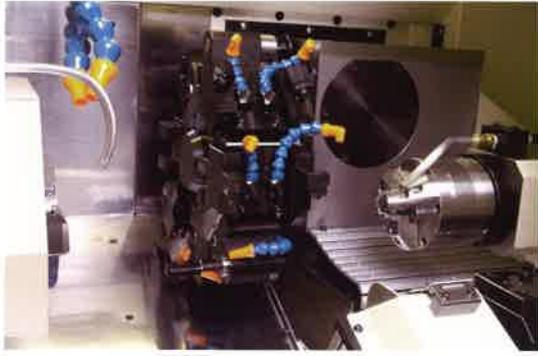


Outside diameter surface

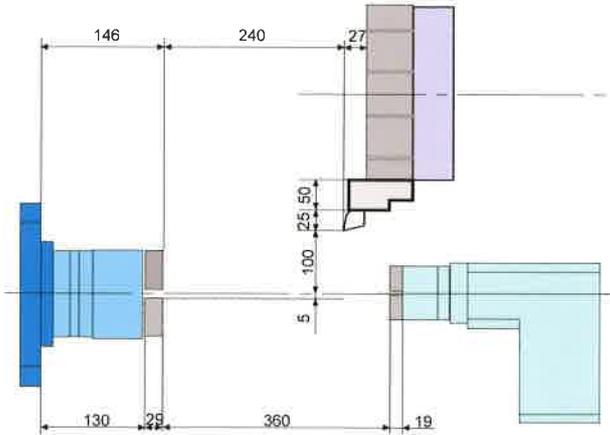


End face

Tooling Area



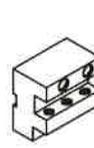
● Effective stroke X axis 105mm
Z axis 240mm



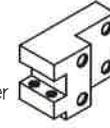
※ It is the stroke area when 5 inch scroll chuck is used.

Tool Holder

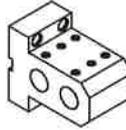
TR-110A
End Face Holder



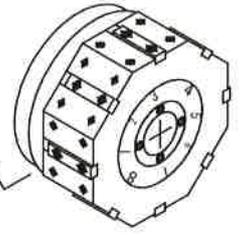
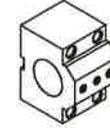
TR-120A
Outer Diameter Holder



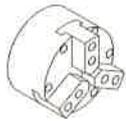
TR-130A
Boring Holder



TR-130B
Boring Holder



Chucks



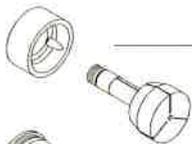
① Power chuck



② Collet chuck
Completed/blank



③ Stepped chuck
Completed/blank



④ Step chuck
Step adapter
Step chuck



⑤ Expanding chuck
Expanding adapter



Draw bar



Expanding chuck



Draw plug



⑥ Work stopper set
Work stopper
M6 tapping

※ ① is standard specification and others are all options.

● Others chuck

- Super precision air chuck
- S type collet chuck
- Vacuum chuck

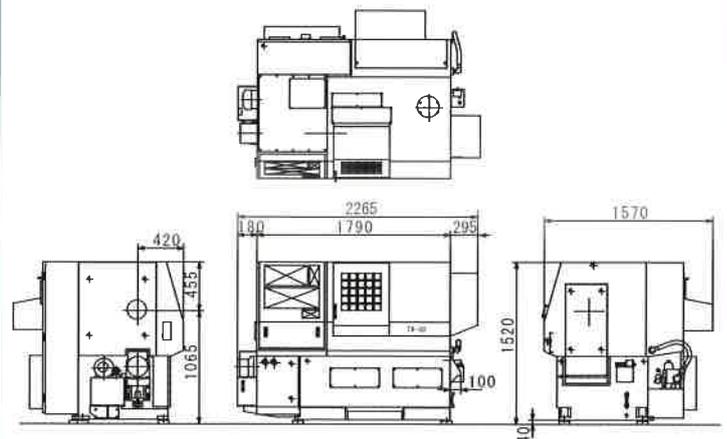
● Standard chucking system

- Rotary hydraulic cylinder open center

Work Sample



Outline Dimensional Diagram



Machine Specifications

Capacity	Max turning diameter (Chuck work)	φ 110mm
	Max turning diameter (Bar work)	φ 42mm
	Max turning length	180mm
Spindle	Spindle speed	MAX.5,000min ⁻¹
	Number of spindle speed ranges	Step-less(S4 digits)
	Through hole diameter	MAX. φ 42mm
Sub Spindle	Spindle speed	MAX.4,000min ⁻¹
	Number of spindle speed ranges	Step-less(S4 digits)
	Through hole diameter	MAX. φ 25mm
Turret slide	Number of tools	8
	Indexing time	0.5sec/1pos
	Tool size	16mm,20mm
Rapid traverse	X-axis rapid traverse	15m/min
	Z-axis rapid traverse	15m/min
	B-axis rapid traverse	15m/min
Travel of tool slide	X-axis travel	105mm
	Z-axis travel	240mm
	B-axis travel	360mm
Motors	Spindle drive motor	7.5/11kW
	Feed motors (X/Z)	X:1.2kW Z:1.2kW
	Sub Spindle drive motor	0.9/2.2kW
etc.	Required electric power	3 φ AC200V50/60HZ 12KVA
	Height of machine	1,520mm
	Height from floor to spindle center	1,065mm
	Floor space	2,265 × 1,570mm
	Mass of machine	Approx.2,600kg
Standard Accessories		
<ul style="list-style-type: none"> • Sub Spindle • Hydraulic chuck unit • Sinch Scroll chuck • Coolant device with chiptank (Spindle side 250W , Tool side H/p 400W) 	<ul style="list-style-type: none"> • Hydraulic unit • Work light • Tools and toolbox • Machine mount 	

CNC Standard Specifications

Control unit	KNC & FANUC 0i -- TD	
Controlled axes	Simultaneously controllabel 4 axes,3 axis in manual mode	
Input method	MDI keyboard input,combined use of absolute/incremental programming	
Program memory capacity	1280m tape	
Interpolation	Linear,taper,circular,threading	
Least input increment	0.0001mm	
Least command increment	X axis	0.00005mm
	Z axis	0.0001mm
	C axis	0.0001mm
	B axis	0.0001mm
	A axis	0.0001mm
Tool offset	Geometry	±999.9999
	Wear	±9.9999
Tool offset pairs	64pairs	
Number of registerable programs	400parts	
Manual handle feed	0.5/0.1/0.01/0.001mm	
Auxiliary function	M3(Multiple commands 3),S4,T4 digits	
Feed rate override	0~150%	
Rapid trverse override	F0,25,50,100%	
Input/output interface	RS232C/Memory card	
Display language	Japanese/English/Traditional Chinese/Simplified Chinese/French/ German/Italian/Spanish/Korean	

Others Specifications

- Canned cycles (G90,G92,G94)
- Inch/metric conversion
- Multiple repetitive cycles (G70~G76)
- Background editing
- Run hour and parts count display
- Graphic function
- Canned cycles for drilling (G80~G89)
- Cylindrical interpolation (G107)
- Variable lead threading (G34)
- Custom macro B
- Extended part program editing
- Sequence number search
- Unexpected disturbance torque detection
- Programmable data input (G10)
- G code system B
- Constant surface speed control
- Direct drawing dimension programming
- Tool nose radius compensation
- Conversational programming with graphic function
- Polar coordinate interpolation
- Threading retract
- Directory display of floppy cassette
- Workpiece coordinate system (G52~G59)
- Adding of custom macro common variables
- Multiple repetitive cycle II
- Spindle synchronous control

Example optional specifications



Air blow



Oil temp controller



Chip conveyor



Signal Tower



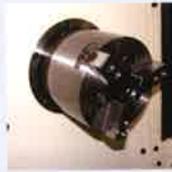
Chuck Foot switch



Work preset counter



Collet chuck type S



Power chuck



Precision air chuck



Simple bar feeder



NC Servo Loader



Parts conveyor



Work stocker



Oil mist collector



Parts catcher

- Variety chucks
- Variety tool holders
- Oil mist spray
- Parts feeder
- Operation panel language English/Chinese
- Variety robots & Loader
- Auto door
- Spindle motor power up
- Spindle Through hole diameter up
- High pressure coolant pump
- Spindle inner coolant
- Variety bar feeder system

※Please feel free to contact us for other options of customization to your specifications.

※The above specifications may be different from the photograph.

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