KNC
Traditional Technology

TXseries

TX-75D

Super-Small Type
Precision CNC Multiple Turret Lathe
(Rotary tools + Rigidtapping + Cs Contouring Control)

English

TX-75D

Super-Small Type Precision CNC Multiple Turret Lathe

Rotary tools / Rigidtapping / Cs Contouring Control

One-chuck operation by complex machiningas well as stable, high-speed, high-precision machining of a compact turret lathe.

Our goal was to implement the high-precision, compact CNC complex turret lathe. After reviewing the design from all aspects, newborn models are now available. The turret tool (drill unit and rigid tap) and Cs contour control function enable complex machining in one-chuck operation. If the cycle time needs to be reduced in machining a small workpiece, this compact lathe is the best solution. Is your lathe best suited for a workpiece to be machined?

※ 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 complex 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 0.1μ 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

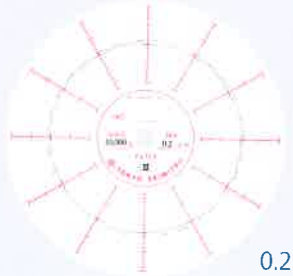
The CNC software options come standard, which generally are necessary.Examples are program storage length 1280M and multiple repetitive cycles.Special specifications are partly removed.

Processing precision example

Processing condition

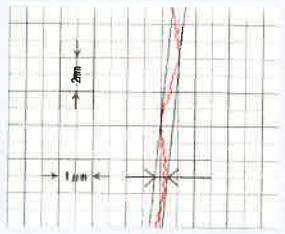
Machined material : BsBM
Spindle speed : 3000rpm
Feed : 0.03mm rev
Cutting depth : 0.02mm(dius diameter)
Tool used : Compax Nose R0.3

Roundness



0.2μm

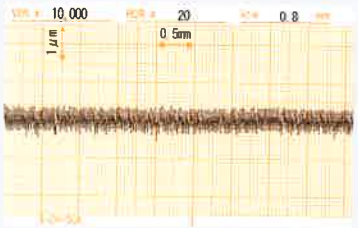
Straightness



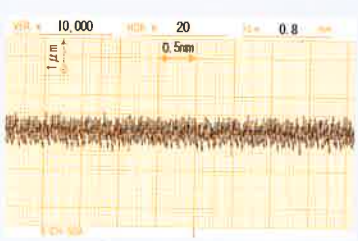
Outside diameter surface / 0.3μm

End face / 0.35μm

Finished surface roughness



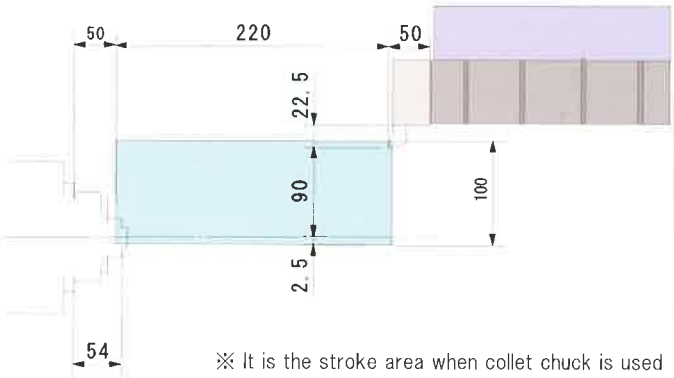
Outside diameter surface



End face

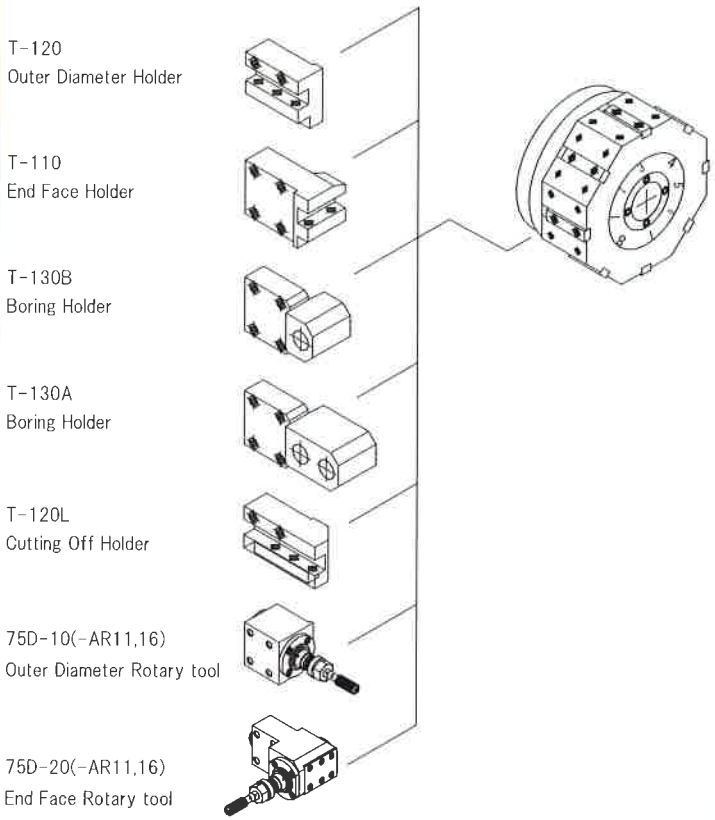
Tooling Area

●Effective stroke X axis 100mm
Z axis 220mm

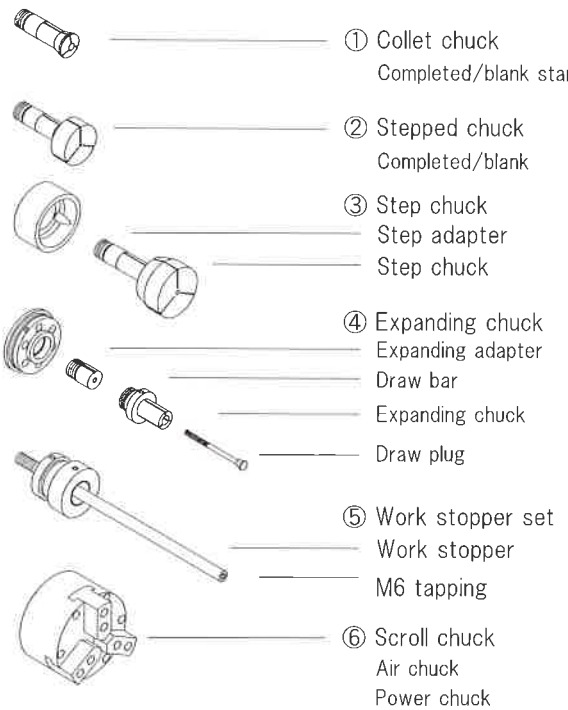


※ It is the stroke area when collet chuck is used

Tool Holder



Chucks



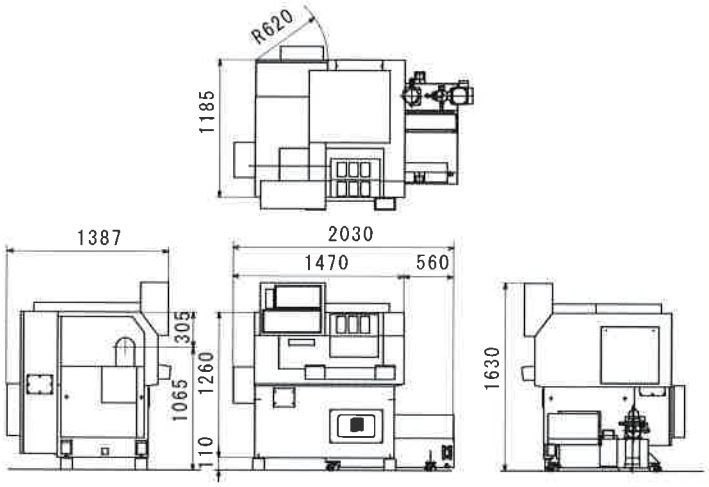
※ ① is standard specification and others are all options.
※ ①~⑤ can be used with lever type chucking system (standard chucking system)

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

● Others chucking system
- Rotary air cylinder open/closed center
- Rotary hydraulic cylinder open/closed center

Work Sample

Outline Dimensional Diagram



※ Rear specification is possible for coolant unit.

Machine Specifications

Capacity	Max.turning diameter (Chuck work)	φ80mm
	Max.turning diameter (Bar work)	φ25mm
	Max.turning length	50mm
Spindle	Spindle speed	MAX.6,000min^{-1}
	Number of spindle speed ranges	Step-less(S4 digits)
	Through hole diameter	MAX.φ25mm
Turret slide	Number of tools	10
	Indexing time	0.5sec/1pos
	Tool size	16mm
Rapid traverse	X-axis rapid traverse	16m/min
	Z-axis rapid traverse	20m/min
Travel of tool slide	X-axis travel	100mm
	Z-axis travel	220mm
Rotary tools	Spindle speed	MAX.5,000min^{-1}
Motors	Spindle drive motor	3.7/5.5kW
	Feed motors (X/Z)	X:0.75kW Z:1.2kW
	Turret index	1.2kW
	Rotary tools spindle motor	0.55/1.1kW
etc.	Required electric power	3φAC200V50/60HZ 10KVA
	Height of machine	1,630mm
	Height from floor to spindle center	1,065mm
	Floor space	1,850×1,387mm
	Mass of machine	Approx.1,000kg

Standard Accessories

- Cs contouring control + Rigidtapping
- Collet chuck blank
- Hydraulic chuck unit
- Coolant device with chiptank (Spindle side 250W , Tool side H/p 400W)
- Work light
- Tools and toolbox
- Machine mount
- Hydraulic unit

CNC Standard Specifications

Control unit		KNC & FANUC 0i - TD
Controlled axes		Simultaneously controllabel 3 axes,2 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	0.0001deg
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		M2(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 repetive 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
- Rigidtapping
- 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 (G112,G113)
- Threading retract
- Directory display of floppy cassette
- Workpiece coordinate system (G52~G59)
- Additing of custom macro common variables
- Multiple repetitive cycle Ⅱ
- Cs contouring control

Example optional specifications


Air blow


Oil temp controller


Chip conveyor


Signal Tower


Chuck Foot switch

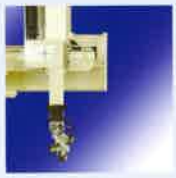

Work preset counter


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 Thtough 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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●Note: Specifications subject to change without notice forimprovements and modifications.