SHOW SPECIAL

$ 315,995.00

TAKAMAZ

TAKAMAZ MODEL XW-200

CNC PRECISION TURNING CENTER

with ∑GT200 3 Axis Gantry Loading System

TAKAMAZ MODEL XW-200
3-AXIS SELF LOADING TURNING CENTER
AND REVOLVING TOOL ATTACHMENT

Equipped with the [Speed] and [Small Footprint] Servo Loader, "Σ Series"

As a result of machine body and loader integrated as one unit, superiority in design balance is accomplished as well as high productivity and space savings, and with after-sale service by TAKAMAZ, will benefit the customer on different aspects.

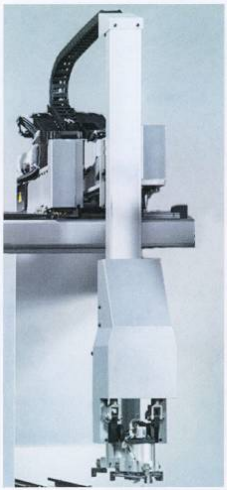
- ◆The largest three-axis control, setup is easy and can be done quickly.
- ◆Depending on the cutting time, it is possible to equip the machine with 1 or 2 loaders.
- ◆In each point, it is possible to set the interlock to prevent accidental collision.
- ◆All database, the servo parameter, the data tables, and timer setting can be uploaded and downloaded to and from the memory card.

GT200 LOADER SYSTEM

Type of Grippers	3 Jaw
Maximum Work size (diameter x length)	7.84" x 4.72"
Maximum work weight	17.6 lb. x 2
Maximum Gripper stroke	15mm
Loader slide stroke	Depends on Spec
Turn device unit stroke (option)	8mm
Type of loader control	PMC
Type of drive unit and motion	Servo
Load/unload time (Minimum)	8-10 sec.
Minimum system cycle time	20 sec.

Loading time with a mark of fastest class at 6 seconds

2 spindle lathe that is especially equipped with a newly developed 3-axes loader.Designed with high rigidity as a result of increase in rack size, pursued a better speed, and thus achieving fastest class 6 seconds loading time.Furthermore, by improving the Middle Turn Device, the original design that requires 2 movements for receiving and transferring part is improved to only one movement achieving a cycle time of only 18 seconds for 1-2 operation cycle of the double-sided machining. (Patent Pending)In addition, improved design with independent drive functions to one of the parallel loader hands, a structure that greatly reduces the delivery and receiving interference with equipment such as stocker and washer etc, is utilized.With the speed optimization of the loader, effort to improve the shutter with half of the opening and closing time of less than 0.5 sec is achieved.

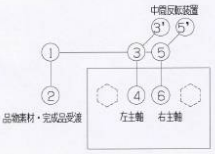


New 3-axis Loader

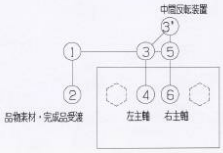
- Traverse axis 170m/min
  (XW-150 30%UP)
- Vertical axis 125m/min
  (XW-150 5%UP)

Rack size also incresed
m1.5→m2.0

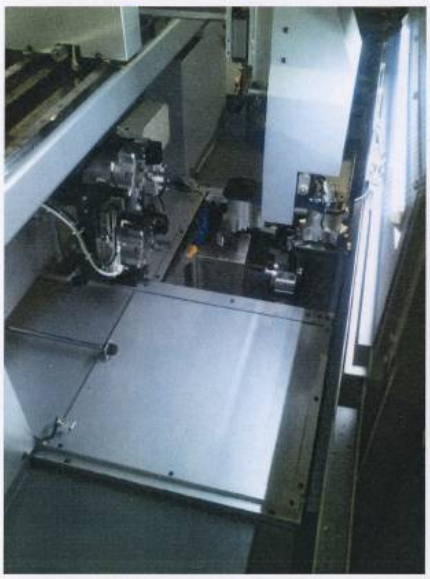
Decreased the loading time by changing the passing time between the middle turn device from 2 time to 1 time per cycle.



Conventional machine cycle



XW-130 cycle



Faster shutter

- Shutter works in half the time of conventional equipment and 0.5sec following both opening operation and closing operation.
  （Conventional machine 1.0sec）
- TAKAMAZ has combined the best cylinder and solenoid valve control (patent pending).
  With the ideal placement of suitable pipe diameter and length, high-speed operation is now possible.

TAKAMAZ MODEL XW-200
3-AXIS SELF LOADING TURNING CENTER

XW-200 STANDARD FEATURES

Fanuc 0i-TF Control
∑GT-200 Gantry loader (Dedicated L Hand)
Coolant system (200 lit.)
Turret X/Z
8-Station Turret by Servo x 2
Total counter & preset counter
Spindle air blow (Front)
Hydraulic Chucking Cylinder
Signal tower light 3 colors (red, yellow, & green)
Machine light
Pneumatic operated Loader Grippers and Turn Devices
2,800 rpm spindle speed
25 horsepower AC spindle drive motor
Clear up cycle stop sequence
Middle Turn Device
0.2 Second/station turret indexing
944 IPM rapid traverse for X-axis
944 IPM rapid traverse for Z-axis
Set of Takamaz tool holders (PAGE 5)
Hinge type chip conveyor (rear mounted)
2-year warranty on Fanuc control
1-year warranty on machine

■Mounted on the rear side

Chip conveyor
(Floor type)
Chips are reliably discharged outside the machine.

STANDARD ACCESSORIES

Automatic lubrication system
Splashguard door with safety interlock
Hand tools and toolbox
Instruction manual
Fanuc control manual
Parts list
Electrical diagrams
Leveling screws and plate

STANDARD TOOL HOLDER PACKAGE

Qty.	Part No.	Description
4	5278032008	1.5” Boring Holder
3	5278021019	1” Square OD Holder Left
3	5278020011	1” Square OD Holder Right
Optional	5278019013	Turning Tool Holder
Optional	5278033014	U-Drill Holder
Optional	5278037007	Offset U-Drill Holder
Optional	6114801101	Offset Holder 1.5” (2” Offset)
Optional	2333079008	Round Hole Bushing (1/4”)
Optional	2333078000	Round Hole Bushing (3/8”)
Optional	2333077002	Round Hole Bushing (1/2”)
Optional	2333076004	Round Hole Bushing (5/8”)
Optional	2333075006	Round Hole Bushing (3/4”)

Boring Holder

OD Tool Holder

U-Drill Holder

2 Hole Boring Holder

Round Hole Bushing

Clamp Block C

OPTIONAL EQUIPMENT AND FEATURES

- 10” diameter 2 or 3-jaw chuck for spindles
- Stationary type collet H-S16
- 5-C collet system
- 460 Volt step down transformer
- Through-spindle coolant device
- Chain type conveyor W/sensor, bracket, and software
- Special IN/OUT conveyor
- Bowl feeder
- Clamp Holder
- High Pressure Coolant Pump
- Special Color
- Work Set Detector
- Oil Mist Collector
- Automatic Fire Extinguisher
- Takamaz Loader Gripper Fingers
- Extended Warranty

TAKAMAZ-FANUC 0i-TD CONTROL
CNC SPECIFICATIONS

FUNCTIONS	ITEM	DESCRIPTION
Axis control	Controlled axis	Simultaneous X, Z (x 2)
	Slide motor	AC Servo motor digital control
	Interpolation	Linear G01, Circular G02, G03
	Minimum output	X-axis: 0.00002” (0.0005mm)
		Z-axis: 0.00004” (0.001mm)
Programming	Method of command	Absolute (X, Z)
		Incremental (U, W)
	Min. command increment	0.0001”
	Max. command increment	99.999”
	I/O interface	EIA and or ISO by RS232C
	Program input method	Keyboard, Optional DNC, other
		Optional DNC, other
Spindle	Direct command	G97 mode, G96 mode
Tool	Tool selection	T (2+2) code
	Tool offset	Same as above

OTHER FANUC STANDARD FEATURES

Constant surface speed control
Auto chamfering and corner rounding
Back ground editing
Tool nose radius compensation
Custom Macro B
Inch/metric conversion
Programmable data input G10
Tool geometry/wear compensation
Parts program storage 131 Feet
Multiple repetitive cycle (G70 - G76)
Polar coordinate interpolation
Cylindrical interpolation
Dynamic Graphic Function

STABLE PRECISION MACHINING

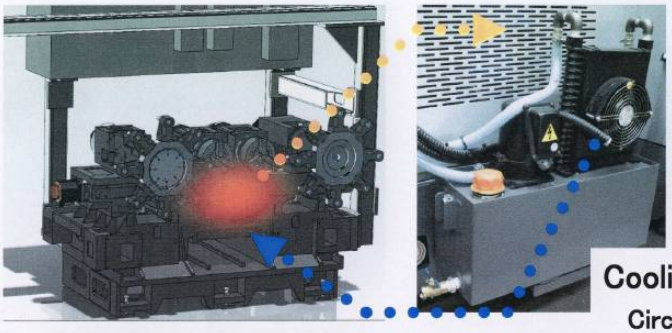
The Z-Axis slide base and the bed support of this machine are combined resulting in a highly rigid design. The slide is a solid box way design, which enables smooth movement and high rigidity controlled by the CNC. These improvements are aimed at improving machine accuracy. By conducting a thorough analysis of thermal displacement, a symmetric bed structure has been introduced. A cooling unit has been installed as standard to restrict relative displacement due to temperature change during machining which maintains stable dimensional accuracy.

- **Suppressed the Turret's thermal displacement designed so the hydraulic oil does not go into the casting.**

※Goal

Time variation 10μ /8H

Down time dimention change 5μ /1H



- **Surpressed the Bed's thermal displacement.**
- **Attune the outer machine temp with the machine center part that heats up.**

Cooling unit

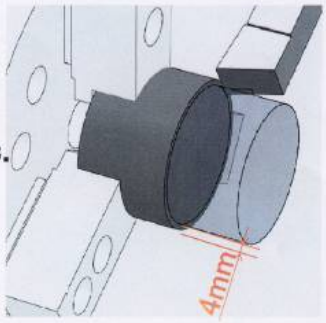
Circulates the coolant.

SPINDLE DRIVE

A 25 horsepower rated AC spindle drive motor, with a spindle speed range from 45 to 2,800 RPM, provides and infinitely variable spindle speed selection through direct RPM spindle programming.

Spindle bearing
ϕ100

【OD heavy cutting】
0.4mm/rev



High rigidity・High output spindle as a standard spec. only an option for competitors'.

Spindle motor11/7.5kw

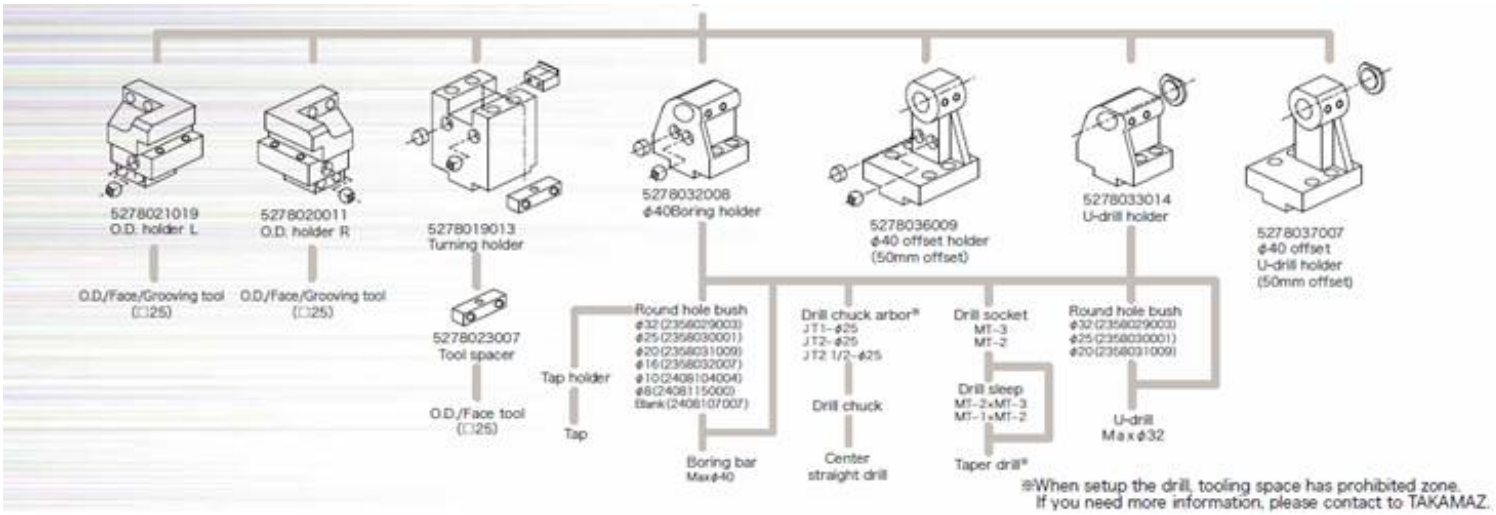
Cutting cross-sectional area(t＊f)

1.60mm^2 ※XW-150

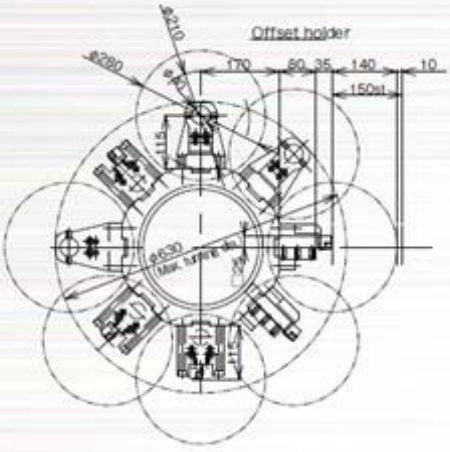
×1.5※

THE TURRET

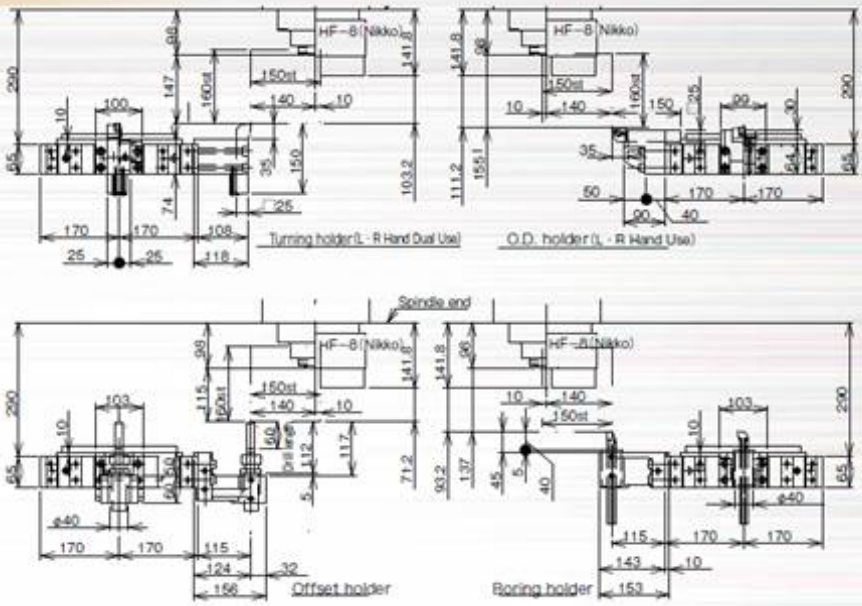
The XW-200 is equipped with two 8 station turrets. The main turret provides fast indexing of 0.2 second from station to station. Bi-directional turret indexing allows the turret to automatically take the shortest path to the next selected cutting tool station. The turret is interference free, providing ample clearance between each tool station and the work piece, allowing any combination of O.D. or I.D. tools to be used.



Turret Interference



Stroke-Related Drawing



HIGH PRESSURE COOLANT SYSTEM (optional)

A 800-PSI high-pressure coolant is fed through the turret for the station in use to the tip of the cutting tool. The program controls the coolant start/stop. The high-pressure coolant system operates independently from the flood coolant system for maximum chip flushing. Flood coolant tank capacity = 40 gallons; 50 psi ; 10.5 gpm.

COOLANT OPTIONS

High-pressure coolant
Constantly cooled coolant is discharged at high pressure so that the tool life is significantly prolonged.

Semi-dry machining
Ultratrace,highly-lubricating vegetable coolant is applied to the correct point on the cutting edge, realizing semi-dry machining.

IN/OUT CONVEYOR (Option)

IN/OUT conveyors are adjustable to cover the full range of the loader capacity. The IN/OUT conveyor can also be customized according to parts shape. The IN conveyor can be connected to a bowl feeder or other feeding mechanism. The OUT conveyor can also transfer the part to a desired point.

PALLET STOCKER (Option)

Available in 8 – 16 station size, pallet stockers can be used to hold parts of larger diameter and weight sizes. Stations can be easily adjusted according to the size of each part.

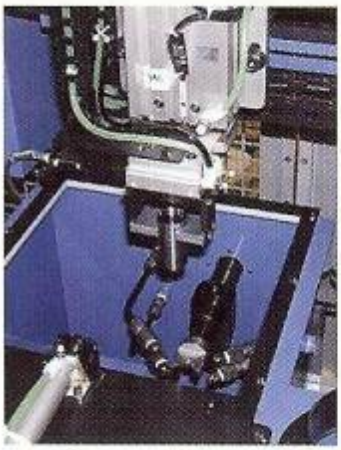
TOTAL AND PRESET COUNTER

The preset counter allows a pre-determined number of parts to be manufactured and then stops the machining cycle. The preset counter can also be used as an aid in production control and tool life management. The total counter will keep count of the total production runs for the machine while it is in cycle. It can also be reset for individual total part production.

ADDITIONAL AVAILABLE OPTIONS

External measurement instrument

Dimensional errors are fed back to the machine to maintain high dimensional accuracy.



Cleaning unit

To avoid dirtying operator's hands, cleaning is performed automatically.

Automatic fire extinguisher

If fire breaks out in the machine during automatic operation, fire extinguishing agent is automatically discharged.

Oil mist collector

Oil mist collection facilitates a clean production environment.

SPINDLE INNER COOLANT (OPTION)

A rotary coupling connected to the coolant pump at one end is mounted on the rear of the chuck cylinder to supply coolant to the back of the work holding fixture. Coolant is used through the back of the spindle to flush chips at the chucking point. It is also used to remove chips during boring, reaming, and other I.D operations.

COLLET SYSTEM (OPTION)

A variety of collet systems are available for ID/OD to match the needs of the particular application. For example, HAR-5C collet assembly or H-S16 can be used.

CHUCK (OPTION)

The main spindle can be equipped with an 10" diameter, 2 or 3-jaw hydraulic chuck.

OTHER OPTIONS

Post process gauging, wash/dry stations, and transfer units to secondary operations can be achieved.

MACHINE INSTALLATION

At your plant facility, machine installation and start-up service is provided by a factory-trained service engineer who will assist in the set-up and production of your first part run.

WARRANTY

Takamaz warrants the machine for 1 year. Fanuc control and the products furnished to be free from defects in material and workmanship for one year (2 years on Fanuc control) from date of delivery to the original purchaser if given normal and proper usage, care and maintenance.

MODEL XW-200 SPECIFICATIONS

MACHINING CAPACITY

Maximum turning diameter .....13.14”
Maximum turning length .....8.88”

SPINDLE

Spindle speed range (infinitely variable) ..... 45 To 2,800 RPM
Spindle drive motor (30 minute rating) .....AC 25 HP
Motor type..... AC motor
Spindle nose..... A2-8

TURRET SLIDE

Slide travel X axis .....6.69”
Z axis.....8.66”

Rapid traverse rate X axis ..... 944 IPM
Z axis..... 944 IPM

GENERAL PURPOSE LOADER SYSTEM

Type of Grippers..... 3 Jaw
Maximum Work size (diameter x length).....7.9” x 4.72”(Standard)
Maximum work weight..... 17.6 lb. x 2
Maximum Gripper stroke..... 15mm
Loader slide stroke.....5.5’
Turn device unit stroke (option) 8mm
Type of loader control.....PMC
Type of drive unit and motion .....Servo
Load/unload time (Minimum) .....8 secs.
Minimum system cycle time (OP 10-20)..... 20 sec.

TURRET TOOLING

Types of Turret clamping .....BMT
Number of tools ..... 8 x 2
Tool Hole Diameter .....1.5”
Tool Shank Size.....1.0”
Turret indexing time ..... 0.2 sec.

GENERAL INFORMATION

Power required.....55 KVA
Voltage required .....200/220 Volts
Amperage required .....104 Amps
Compressed air required .....80 PSI

MACHINE DIMENSIONS

Width (With Palletizer).....9.7’
Length (With Chip Conveyor).....8.9’
Height (With Loader).....9.6’
Machine Weight.....14,350 lbs.