

A large, three-dimensional, metallic blue 'XT' logo is centered in the upper half of the image. The letters have a brushed metal texture and sharp edges. The background features several light gray, wavy, ribbon-like lines that flow across the frame, creating a sense of motion and precision.

# XT

## *SERIES*

CNC 1 SPINDLE 1 TURRET PRECISION LATHE

The Takamiz logo is located at the bottom center of the image. It consists of the word 'TAKAMIZ' in a bold, sans-serif font. The letters are rendered in a light gray color with a subtle gradient and a slight 3D effect, giving them a modern, industrial appearance.

### TAKAMIZ



## Making Workpieces that Fit into the Palm of a Hand



There are needs to advance automation while further increasing part productivity with more stable quality. Since minor stops and trouble are unacceptable, functions that give automatic notifications regarding preventative maintenance are needed, thereby reducing impediments to operation. There are also needs to utilize existing floor space more effectively. To do this, equipment that saves more space is required. The answer to such needs is our XT Series.

With a total of over 30,000 units sold, their stable quality and scalable customizability have been well received, and they continue to evolve. If you haven't yet decided whether or not to introduce the XT series to your factory, ask an acquaintance in the industry about their impression on using TAKAMAZ products.



# XT series

CNC 1 SPINDLE 1 TURRET PRECISION LATHE



- Improved user-friendliness, down to the smallest detail
- Improved resilience with reduced thermal displacement
- New loader model <F Loader> installed
- Operating system incorporated (F loader specifications)

## XT-6



XT-6



XT-6 with compact F loader installed

## XT-8



XT-8



XT-8 with gantry F loader installed



## Completed in One Chucking

Complete parts on one machine with mill/turn cutting in addition to turning. This is the basic concept of process integration. With our record of stable high-quality machining, it is a field where TAKAMAZ excels. These machines are suited to process integration needs including boring, tapping and milling, along with machining inclined faces using Y-axis control and drilling slanted holes.

We can also provide maintenance software that allows even inexperienced operators to complete setup without any mistakes using interactive programming.



# XT series

## CNC 1 SPINDLE 1 TURRET PRECISION LATHE



- Features high-level power tool capabilities (BMT turret) (XT-8M/8MY)
- Full range of units to support shaft work
- New loader model <F Loader> installed
- Operating system incorporated (F loader specifications)

### XT-6M

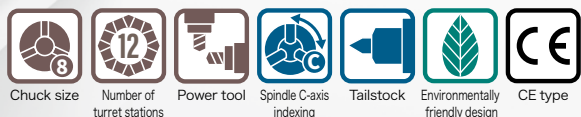


XT-6M



XT-6M with compact F loader installed

### XT-8M

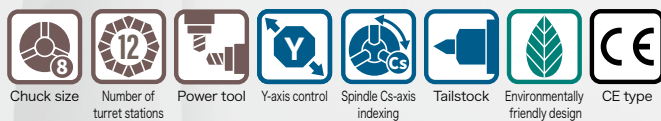


XT-8M



XT-8M with gantry F loader installed

### XT-8MY



XT-8MY



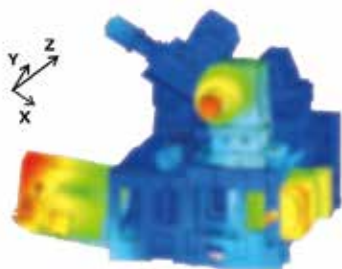
XT-8MY with gantry F loader installed

## Dynamic Performance

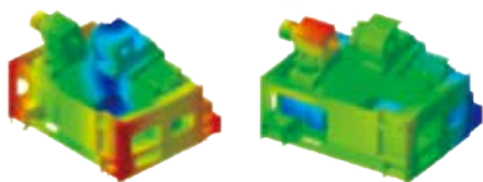
### Bed Construction Resistant to Thermal Displacement

●The rigid bed construction developed using FEM analysis ensures that dimensions can be managed reliably in environments with large temperature changes.

#### Designed for thermal rigidity using FEM analysis



Optimized internal construction of the bed  
Amount of thermal displacement in X-axis direction  
: 40% lower than existing machines (XT-8/8M)



Bed with 100 kg more mass  
Ideal rib construction achieved (XT-6/6M)

●A new specification capable of delivering high torque when machining in the medium- and low-speed ranges is added. (Spindle bearing I.D.  $\phi 120$  mm)  
Equipped with a large-diameter chuck targets the cutting of large-diameter workpieces, this model offers heavy-duty cutting capabilities when machining at medium and low spindle speeds. (XT-8/8M)

### Equipped with a Built-in Spindle Motor (option), Halving Spindle Acceleration/ Deceleration Time (XT-6/6M)

#### Specifications

- Motor specifications: 11/7.5 kW (FANUC)
- Chuck size: 5"
- Max. rotating speed: 8,000min<sup>-1</sup>

#### Spindle acceleration/deceleration time

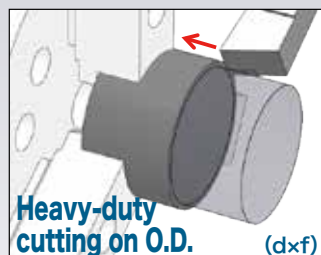
Built-in spindle (8,000min<sup>-1</sup>) 4,500min<sup>-1</sup> : 0.72s

Standard specification (4,500min<sup>-1</sup>) 4,500min<sup>-1</sup> : 1.53s

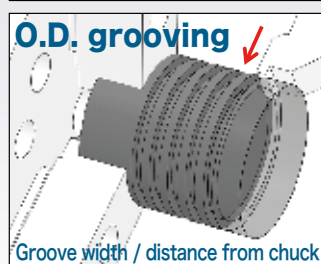


#### XT-6

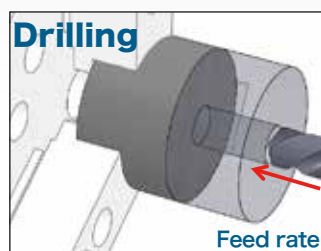
Depth of cut: 4 mm  
Feed rate: 0.4 mm/rev  
Cutting cross sectional area: 1.6mm<sup>2</sup>  
(for short-term rating)



Depth of cut: 4mm  
Feed rate: 0.1mm/rev  
Groove width: 5mm  
Distance from chuck nose: 100mm

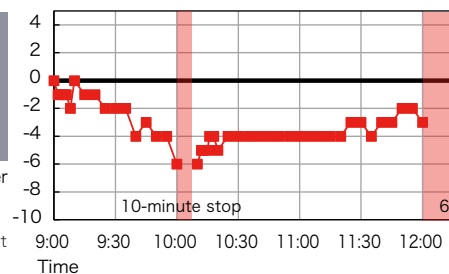


Drill diameter: 25mm  
Feed rate: 0.3mm/rev



#### Change in diameter for workpieces requiring continuous machining (XT-6)

Change of diameter ( $\mu$ m)



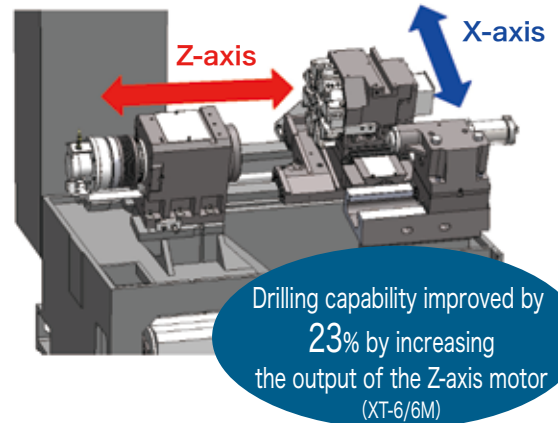
\* In the environment inside our plant





## High Speed

Increased rapid traverse speed (XT-6/6M)

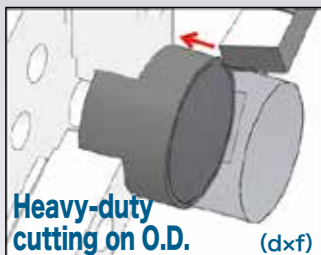


X-axis rapid traverse speed: 18m/min  
(XL-100 12m/min)

Full stroke back and forth travel time: 26% faster  
(compared to XL-100) (-0.13s)

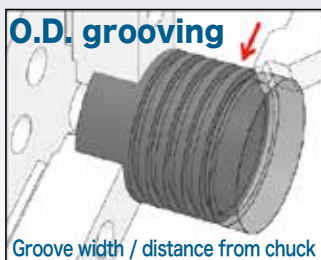
Z-axis rapid traverse speed: 24m/min  
(XL-100 18m/min)

Full stroke back and forth travel time: 23% faster  
(compared to XL-100) (-0.15s)

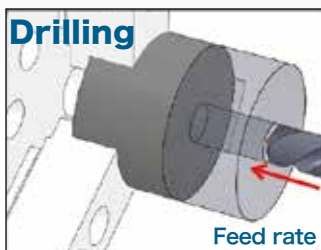


### XT-8MY

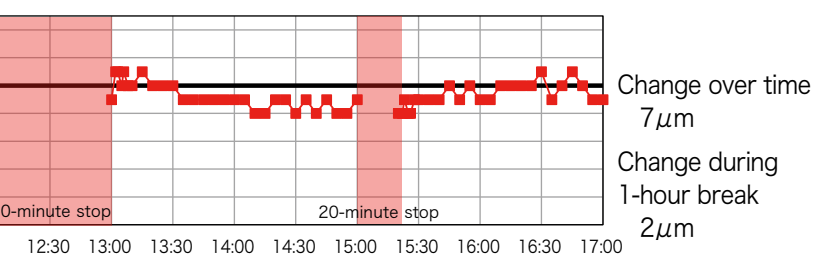
Depth of cut: 5mm  
Feed rate: 0.4mm/rev  
Cutting cross sectional area: 2.0mm<sup>2</sup>  
(for short-term rating)



Depth of cut: 7mm  
Feed rate: 0.1mm/rev  
Groove width: 5mm  
Distance from chuck nose: 94mm



Drill diameter: 25mm  
Feed rate: 0.28mm/rev

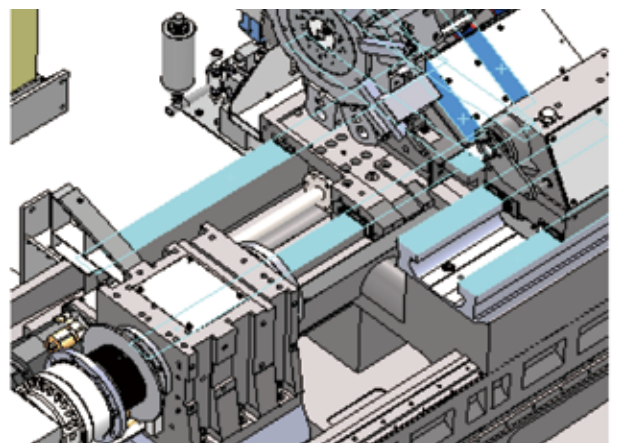


## Improved Durability

X, Z, Y and Tailstock Axes

All Use Square Box-way Slides (XT-8MY)

●The square box-way slide construction reputed for its rigidity is adopted on all axes, so high accuracy can be maintained even over long periods of use. And equipping offset management systems including a thermal displacement compensation system(Thermony) and spindle base cooling has enabled even more stable control of dimensions.



# Basic Performance

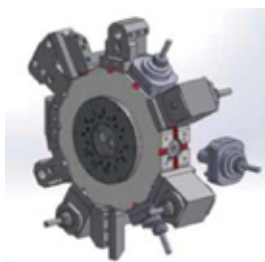
## Mill/Turn Cutting

Improvements in productivity are achieved with power tool drive motor outputs of AC 5.5/3.7/2.2 kW and a milling unit with a maximum tool size of  $\phi 20$  mm.(XT-8M/8MY)



## Adoption of BMT Turret

The bolt mounting system (BMT55) is used for the turret, allowing quicker setups. The turret half-indexing mechanism allows up to 24 tools to be mounted, making it possible to shorten setup times.(XT-8M/8MY)  
(A maximum of 12 power tools can be mounted.)



BMT55  
Maximum tool size:  $\phi 20$  mm



Holder for half-indexing

- Ability to accommodate diverse tooling layouts with full lineup of attachments
- Improved repeat accuracy in holder mounting
- Half-indexing support for mounting tools at up to 24 stations

## Operability

In addition to the conventional FANUC operating functions, functions optimal for machine automation are equipped. Support functions are added to allow manual cutting for tool alignment to be performed safely and easily. In addition, the traceability function helps with preventive maintenance by automatically saving operating statuses.



## Operation System Integrating PC Functions and IT Technology

(Supports F Loader Specifications)

### TAKAMAZ OS Home screen



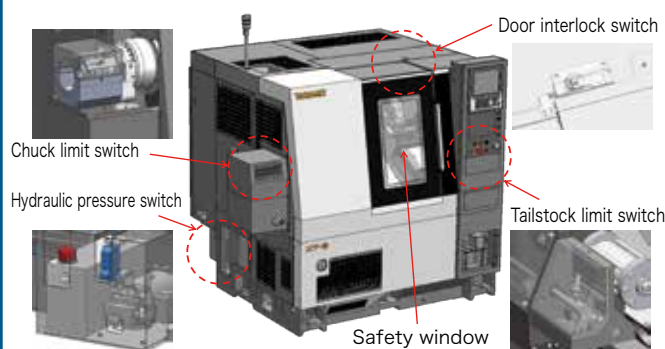
- PC with a 10.4-inch panel suited to TAKAMAZ products adopted
- Convenient functions featured in consideration of automation and ease of setup
- Improved working efficiency utilizing IT and IoT technology

Home screen for advance notification of the causes of production stoppages

Traceability information on each workpiece stored in the unit

## Safety Performance

By equipping the door interlock function, the machining chamber is completely isolated and therefore safety is enhanced.



This machine conforms to safety standards (JIS B 6031:2014).



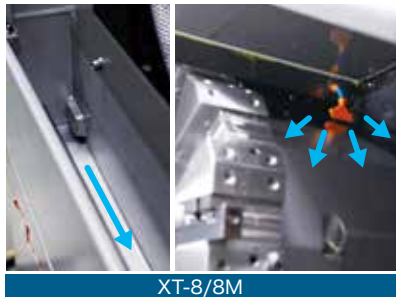
## Maintenance and Setup Changes

An adjustable-stroke hollow chucking cylinder is equipped as standard. Multiple types of chucks can be mounted without changing the cylinder. And because the cylinder is hollow, it can also accommodate bar stock.

A chuck clamping confirmation device is equipped as standard to prevent accuracy errors and the workpiece from flying out due to misclamping, so machining can be carried out safely. Faults of the hydraulic unit equipped with a chuck pressure switch as standard are detected, eliminating danger.

## Coolant Circuit Extended

- Installed on the door lower cover and the top part of the turret housing (XT-8/8M)
- Installed on the sheet metal skirt inside the machine (XT-8MY)
- Prevents accumulation of chips and shortens machine cleaning time (lightening the operator's workload)



XT-8/8M



XT-8MY

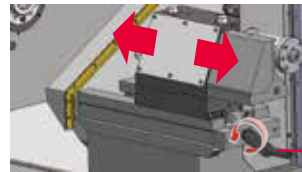
A chip flushing circuit is provided as standard.

## Reduced Operator Workload when Cleaning the Machine (Bed with Tailstock Spec.) (XT-8/8M)

There is a flat part. → Chips accumulate easily. Eliminate flat sections and provide a slope.

→ **Chips do not accumulate easily on the bed.**

## Tailstock slide simple movement unit (XT-8/8M/8MY)



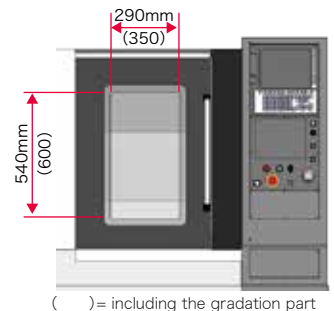
Turn the handle to move the tailstock slide.

→ **Saves labor in setup work**



Tailstock handle

## Improved Visibility in the Machine (XT-8/8M/8MY)



( ) = including the gradation part

Safety window equipped as standard (resistant to scratches by chips)

Expanded door window area → **Improved visibility**

## Green Technology equipped as Standard

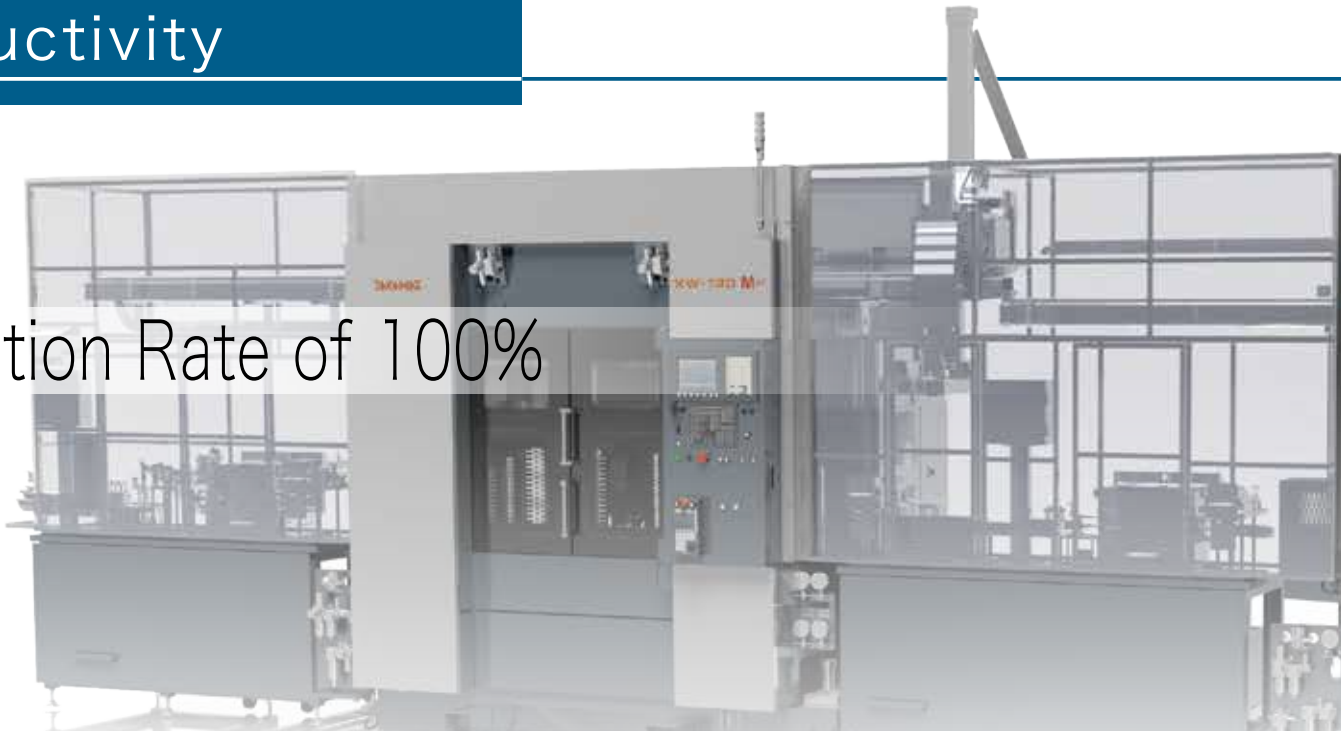
TAKAMAZ takes environmental protection to be a part of its corporate activities, and promotes carbon offsetting right through from product development to before-and-after follow-ups.

- ◆ By equipping two waste oil boxes for separating oil and water, the amount of lubricating oil that flows into the chip tank is reduced, and the life of coolant is prolonged. (XT-8/8M/8MY)
- ◆ In-machine LED lighting equipped, with automatic OFF function
- ◆ Automatic stopping of the chip conveyor after finishing operation

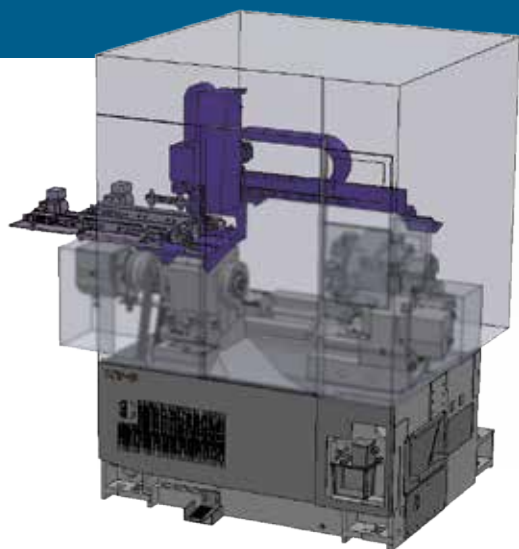
<Other Initiatives> Proposals for going unmanned using IoT / Power cost reduction survey → compilation of comparative data versus older models/ Reduced use of air → installing equipment without accessories / Zero chip adhesion / Prevention of dents and scratches / Cold start



## Operation Rate of 100%



### Compact loader



This is a compact loader that is installed by making use of the space above the machine. It achieves high-speed loading by maintaining a path with the shortest distance between the loader finger and the machine chuck.



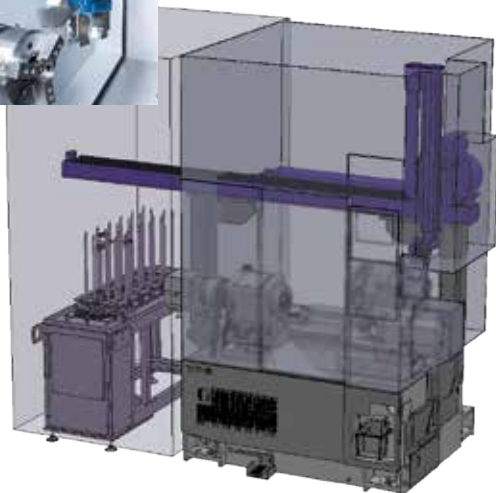
Item			<b>ΣiC60</b>	<b>FC60*</b>	<b>ΣiC80</b>
Compatible models	Unit		XT-6/6M	XT-6/6M	XT-8/8M
Transferable workpiece dimensions (reference values)	Diameter	mm	φ60	φ60	φ80
	Length	mm	50	50	70
	Mass (one side)	kg	1.0	1.0	1.5

※With the F loader specification, the NC unit is installed with a touch-panel screen and Windows PC.

### Gantry loader



The loader type that is handy for automating production lines is the gantry loader. It also has a wide range of hand shapes and can be operated in tandem with peripheral devices.



Swivel hand



Derricking hand



Hand for shaft work

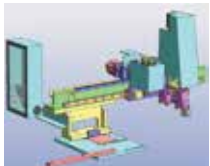
Item			<b>ΣiGH80</b>	<b>ΣiGH80 (High-speed type)</b>	<b>FGH</b>	
Compatible models	Unit		XT-6/6M	XT-6/6M	XT-6/6M	XT-8/8M XT-8MY
Transferable workpiece dimensions (reference values)	Diameter	mm	φ80	φ80	φ80	φ150
	Length	mm	60	60	60	50
	Mass (one side)	kg	1.5	1.5	1.5	1.5

※The figures differ for each loader hand. The table shows values for swivel hands for reference.





### FC60 Loader



▶Rapid traverse speed  
Travel axis: 120m/min  
(Existing models 84m/min)  
Vertical axis: 120m/min  
(Existing models 74m/min)

### FGH Loader



▶Rapid traverse speed  
Travel axis: 160m/min  
(Existing models 155m/min)  
Vertical axis: 160m/min  
(Existing models 125m/min)



### Touch Panel

Installed with Windows.  
Equipped with automatic  
teaching function, etc.

For better usability, FANUC operations are used both for control of the machine itself and of the automation units. We also offer reliable and trustworthy automation systems, with features like the handle retrace function to improve the efficiency of setup work.

## Control System with Very Convenient Setup Operations



F Loader operation screen



■FANUC touch panel and servo system used  
Using one controller manufacturer improves maintainability.

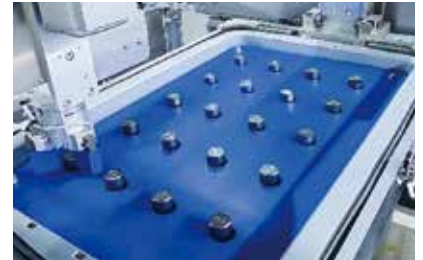
■Easy-to-understand loader setup, even for novices  
The handle retrace function enables confirmation of operations with a high level of safety.

■NC programs adopted for loader operation  
Standard G codes/M codes and macros are used.

## Supply Devices

Supply devices temporarily stock the workpiece material and completed products. They realize labor savings by working in tandem with the loader. Various types are available to suit the workpiece shape and installation footprint. In addition, there are also tray changers that can exchange entire trays, and conveyors that operate in tandem with the previous and next processes.

- Transfer conveyor
- Various stockers
- Tray changer
- Positioning device
- Transfer shuttle
- Parts feeder
- Turnover unit



Tray changer



Rotary stocker

### IN/OUT conveyor



## Measuring and Cleaning

- Various measuring devices
- Cleaning unit
- Deburrer

TAKAMAZ provides systems that automate the whole sequence of workpiece transfer → measurement and inspection → corrective machining → sorting good products. Among such automation equipment, our automated measuring devices have seen increasing demand year after year, and they allow users to maximize productivity and achieve the required machining capabilities. The device itself is placed next to the lathe, and non-contact laser system and touch probe types are available for selection according to the cost and required accuracy. The accumulated measurement data can also be utilized as necessary.



- Suppresses causes of non-uniformity
- Enables machining of 100% good products
- Allows automatic measurement + corrective machining within lines
- Allows high-efficiency, high-accuracy machining
- Assures traceability of machining data

# Customization

## Search

Let's look together for the answers you seek.



## Only one

Easier to use



# Just for you

Manufacturing continually evolves with no limits.  
In each field, products are created utilizing unique technologies.  
TAKAMAZ offers customization to meet all needs.

We will provide a product tailored to your needs from an infinite number of pieces.

## Request

Tell us your requirements.

## New vision

Making products with a shared future vision!

## Collet Chucks

TAKAMAZ also manufactures collet chucks. We do this in a plant specialized for that purpose, using machining methods honed over many years, and undertaking everything from machining to heat treatment and grinding. TAKAMAZ collet chucks boasting robust spring characteristics, wear resistance and high accuracy are able to grip all kinds of workpieces. TAKAMAZ also manufactures special orders according to your requirements.



## Bar Feeder

This equipment is for automatically supplying long pieces of bar stock. By automatically feeding bar stock into the machine in tandem with the NC lathe, a large volume of products can be output in unmanned operation over a long time with no need to stop machining, making it possible to greatly improve production efficiency in the plant.



Example of use: XY-2000 PLUS + bar feeder (ALPS TOOL)

## Unloader

Unloads fully machined workpieces safely outside the machine.



Bucket type for feeder devices

## Robots



Example of use : HV-32A (FEELER) + CRX (FANUC, robot) + T-6i (LEADWELL)

Along with growing needs for production automation, the variety of labor-saving systems is also growing. The articulated robot in the photograph is characterized by a high range of freedom, allowing unique production lines to be built. TAKAMAZ has a department that specializes in FA systems, where full-time system integrators propose labor-saving solutions, both new and remodelled.



## Tailstock



- The unit equipped to improve the coaxiality, roundness and deflection of shaft workpieces is the tailstock.
- Square slideways are adopted on all axes to achieve a highly rigid structure.
- Supports machining of long shafts of up to 370 mm in length. (XT-8)

## High-Pressure Coolant

Pressurized coolant is discharged from high-pressure nozzles to forcibly expel chips in order to prevent damage to tools. It can also be expected to extend tool life.



## Steady Rest

When machining shaft work, sometimes a self-centering steady rest is necessary. Coolant can be discharged from its nose to reduce the incidence of rollers or workpieces becoming defective due to trapped chips, etc.



## Mist Collector

This device collects oil mist generated by machining. It is an environmental equipment that collects oil particles from the oil mist exhausted during machining and expels clean air. The oil particles contained in oil mist is harmful to the human body, but adverse effects on operator health can be prevented by taking out the oil particles, and this also prevents effects on other production equipment.

### Example Installation



Example of use : XY-120 PLUS + Mist collector (Showa Denki Co., Ltd.)

In addition, a full range of options are available. For details, ask our sales personnel.

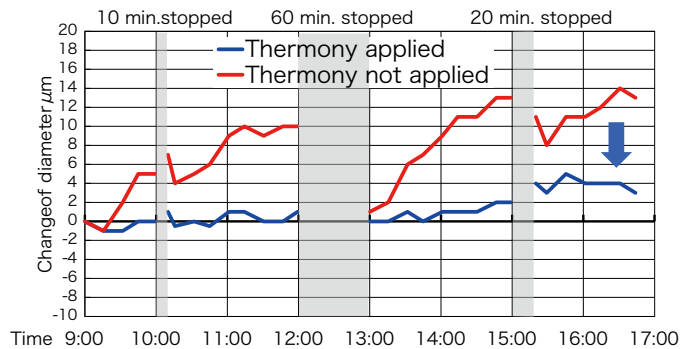
## Thermomy<sup>®</sup>

The machined dimension values change as the machine temperature changes due to the user's conditions of use (machining conditions) and the environmental conditions (factory temperature, etc.). This system predicts the amount of thermal displacement based on the temperature changes at various sections of the machine and provides compensation values to the CNC controller in order to minimize affects on the machining dimension values. When Thermomy is not applied, the amount of change in the machined diameter over 8 hours is 15  $\mu\text{m}$ , but when it is applied the amount of change is suppressed to 6  $\mu\text{m}$ , exhibiting an improvement of 60%.

Evaluated machine: XC-100

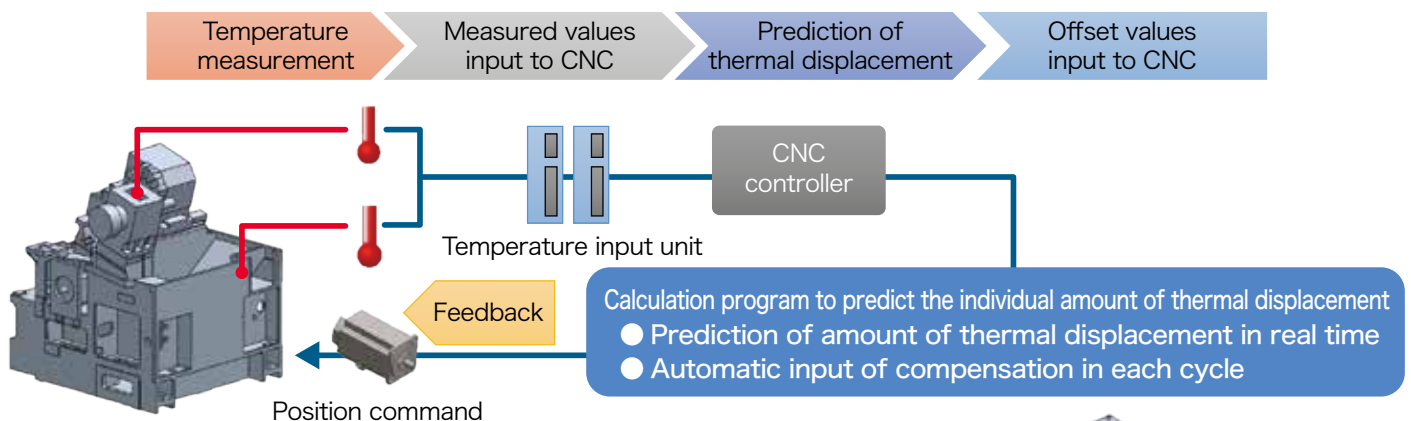
Ambient temperature: Temperature rise of 5°C over 3 hours starting at 9:00

: Rapid change in temperature by 3°C over a short time



Thermomy not applied - Amount of change = 15  $\mu\text{m}$

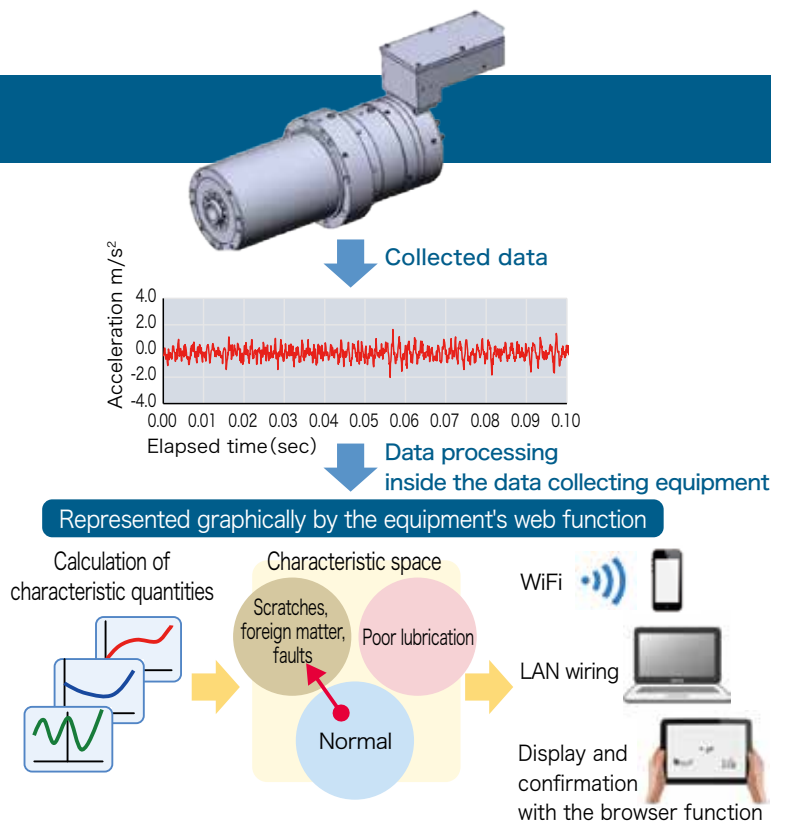
Thermomy applied - Amount of change = 6  $\mu\text{m}$  (improved by 60%)



## Spimony<sup>®</sup>

The application of machine fault diagnosis methods is difficult in many cases where existing threshold values are provided, because the threshold values differ for each machine. We have addressed this issue by providing a new method of diagnosis with a spindle status monitoring system based on the "characteristic space common among machines", which is determined using characteristic quantities.

Data on the acceleration signals generated when faults occur on spindles are processed in data collecting equipment to calculate such characteristic quantities. The characteristic space based on these characteristic quantities allows us to understand the status of spindles and can help with preventive maintenance by giving warning signs about damage.





## How to Select a Chip Conveyor

A variety of chip shapes are generated depending on the cutting conditions and workpiece material. If they are left they accumulate inside the machine, they can obstruct machining or get inside the machine, and in the worst case this can lead to the machine being stopped by a fault. A chip conveyor can prevent and eliminate such problems. We offer a lineup of chip conveyor models matched to a variety of machines. Please select the equipment that suits your application.

**Spiral Type**



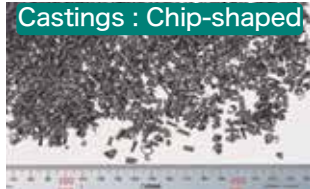
**Floor Type**



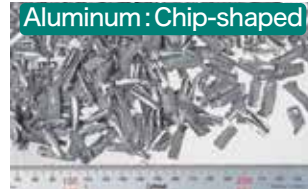
**Steel : Curly, long**



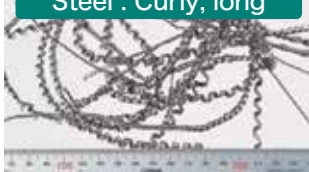
**Castings : Chip-shaped**



**Aluminum : Chip-shaped**



**Steel : Curly, long**



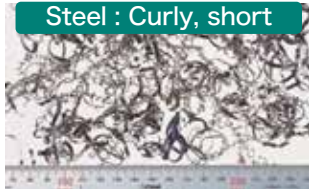
**Steel : Granular**



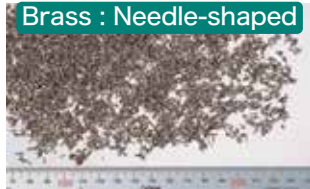
**Aluminum : Curly, long**



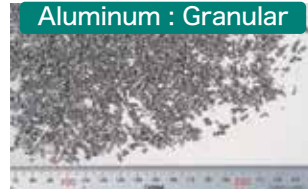
**Steel : Curly, short**



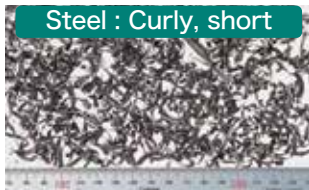
**Brass : Needle-shaped**



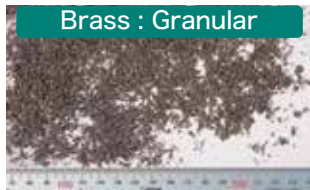
**Aluminum : Granular**



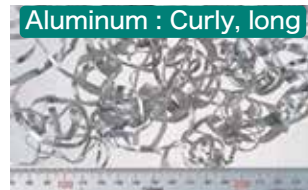
**Steel : Curly, short**



**Brass : Granular**



**Aluminum : Curly, long**



## Equipment Compatibility Table

✓ : Can be used  
— : Cannot be used

	Magnetic						Non-magnetic						
	Steel				Castings		Aluminum				Brass		
	Curly, long	Curly, short	Chip-shaped	Needle-shaped Granular	Chip-shaped	Needle-shaped Granular	Curly, long	Curly, short	Chip-shaped	Needle-shaped Granular	Curly, short	Chip-shaped	Needle-shaped Granular
Spiral	✓	✓	—	—	—	—	—	—	—	—	—	—	—
Floor	✓	✓	✓	—	—	—	—	—	—	—	—	—	—
Scraper	—	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓
Magnet scraper	—	✓	✓	✓	✓	✓	—	—	—	—	—	—	—
Drum filter scraper	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓
2-stage (drum + floor)	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓
Magnet roller	—	✓	✓	✓	✓	✓	—	—	—	—	—	—	—

■ 8-station turret



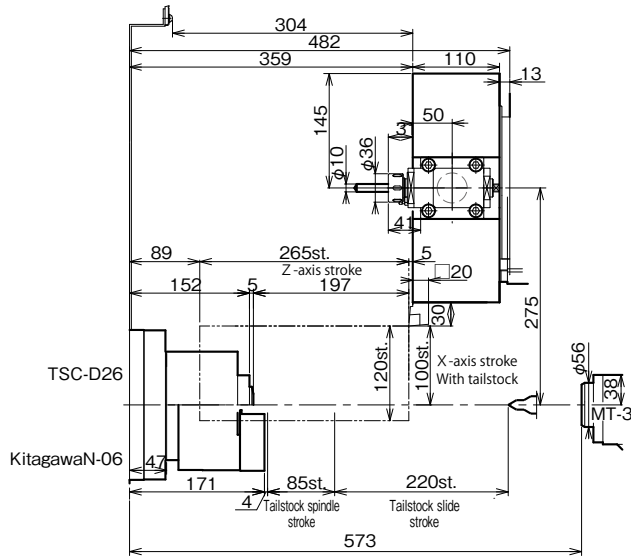
Unit (mm)



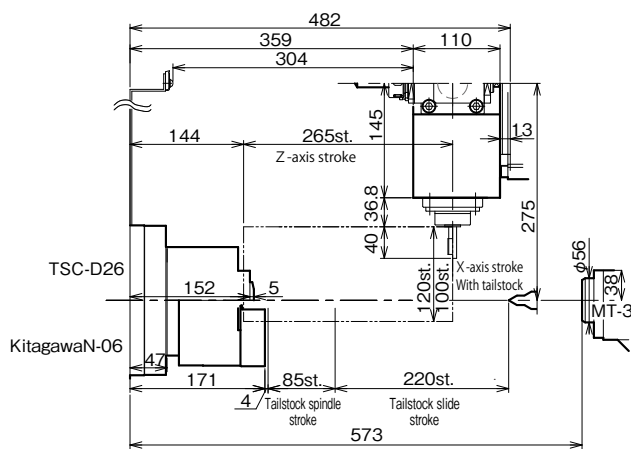
# XT-6M

## Stroke-Related Drawing

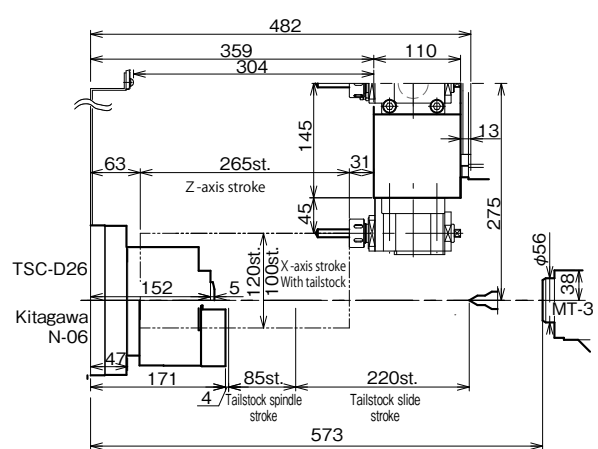
### ■ O.D. turning range



### ■ Side milling range

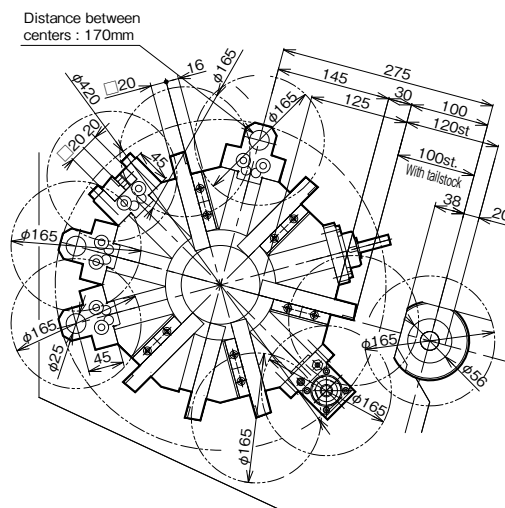


### ■ Face milling range



## Turret Interference

### ■ Power Tool type 12-station turret



### ⚠ CAUTION

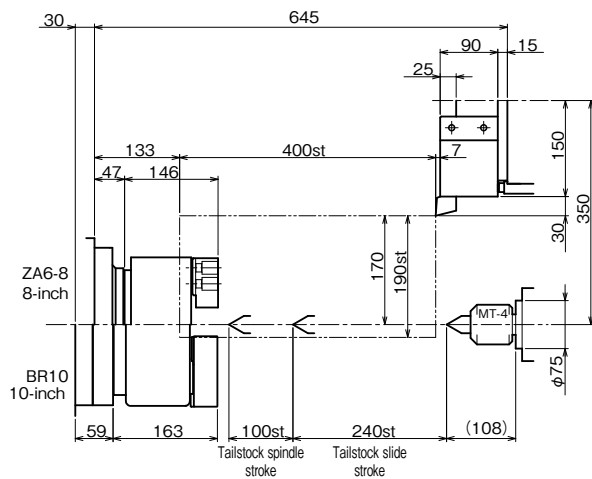
The figure above shows the tooling when an OD (reverse) cutting tool (20 sq.) is mounted. When an OD (normal) cutting tool is mounted, the tool size is limited to 16 sq.

Unit (mm)

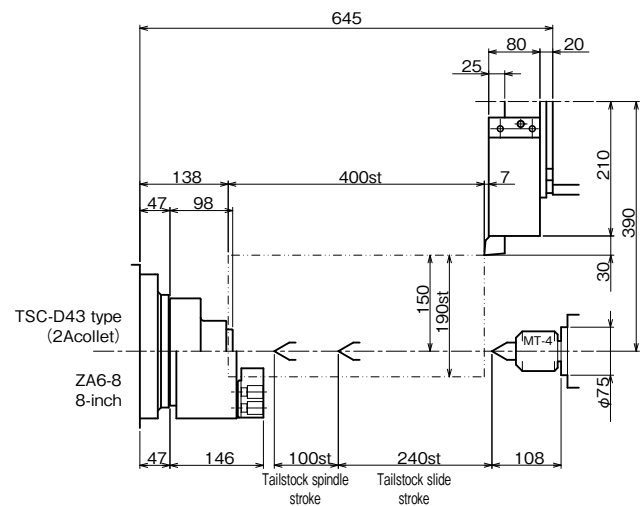
XT-8

## Stroke-Related Drawing

■ 8-station turret

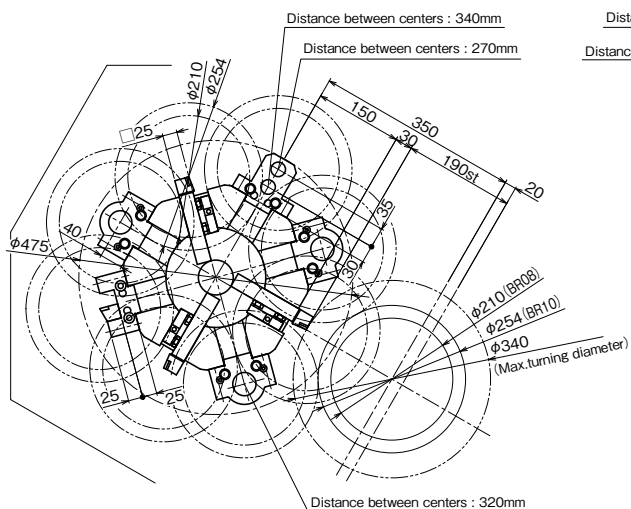


■ 12-station turret (Option)

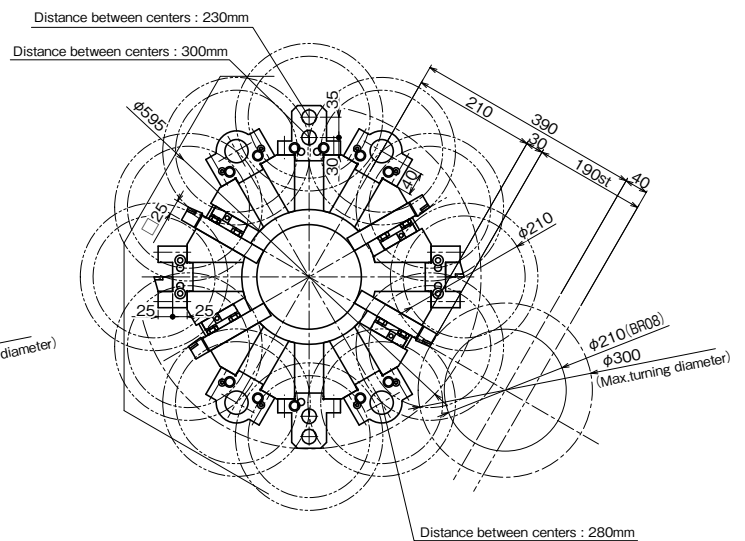


## Turret Interference

■ 8-station turret



■ 12-station turret (Option)



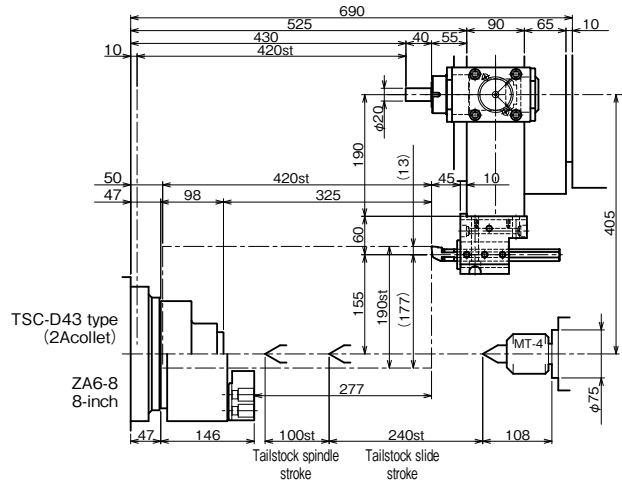
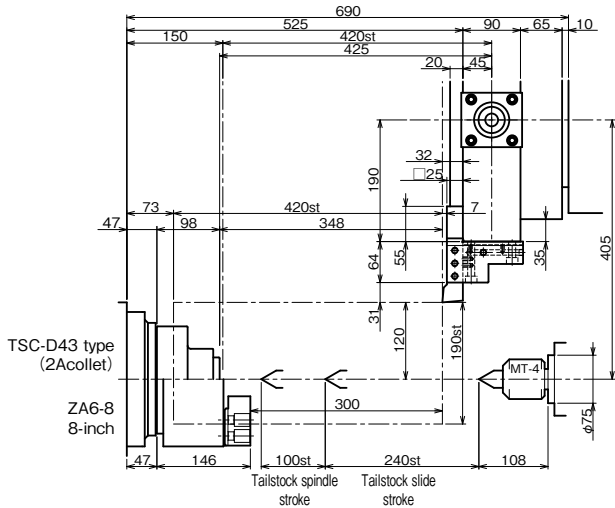
Unit (mm)



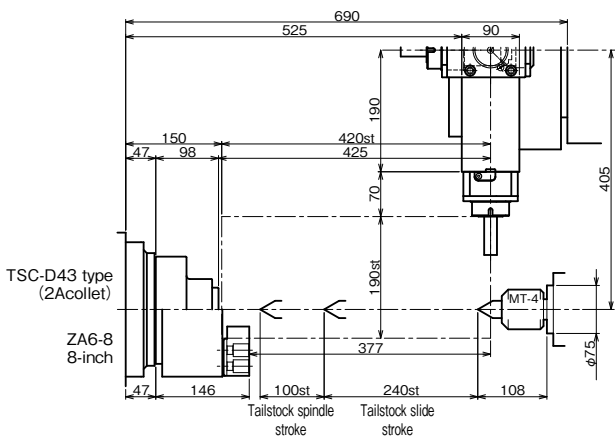
XT-8M

## Stroke-Related Drawing

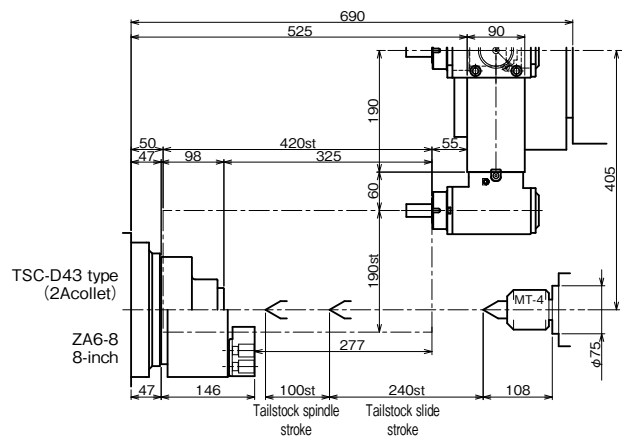
■ O.D. turning range



■ Side milling range

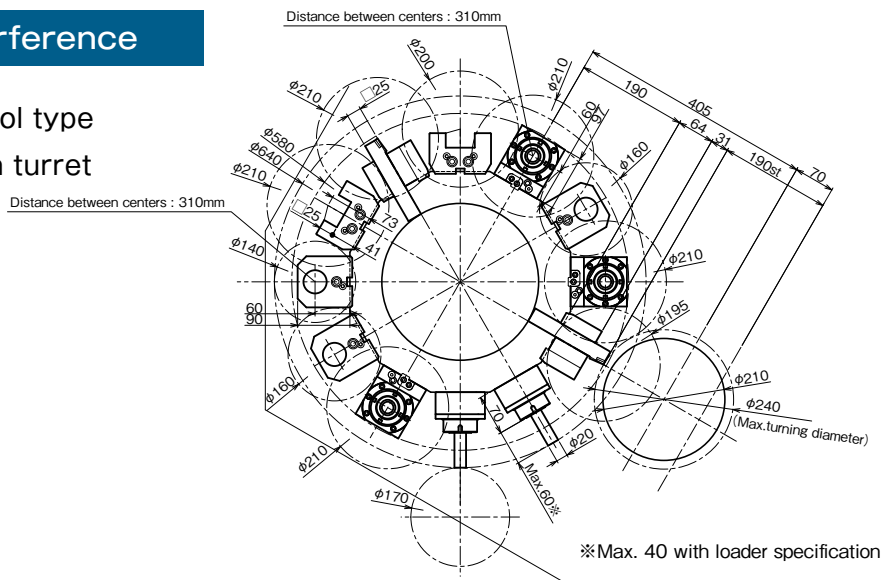


■ Face milling range



## Turret Interference

■ Power Tool type  
12-station turret



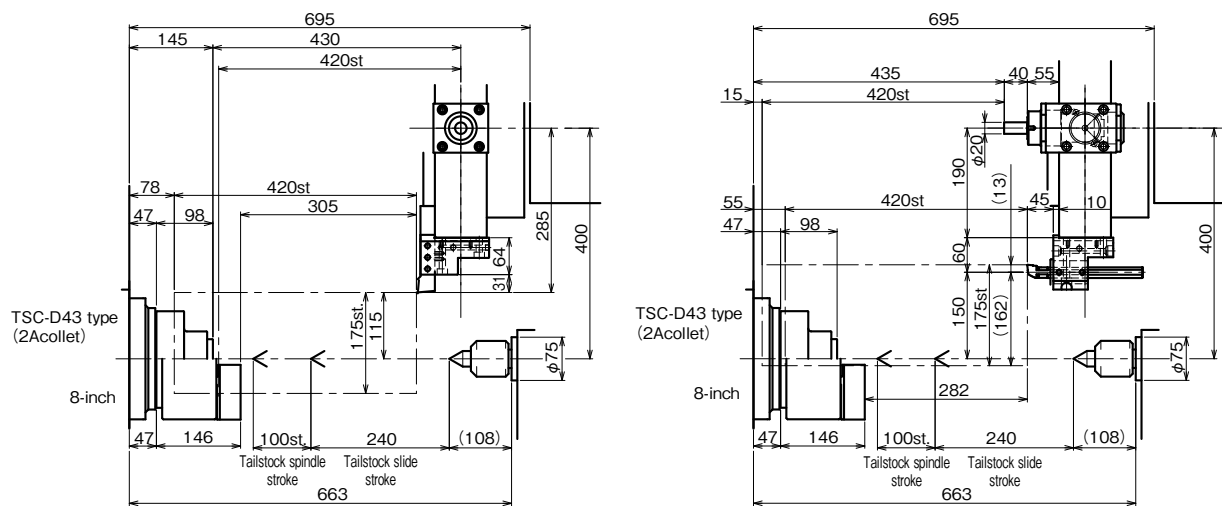
※Max. 40 with loader specification

Unit (mm)

*XT-8MY*

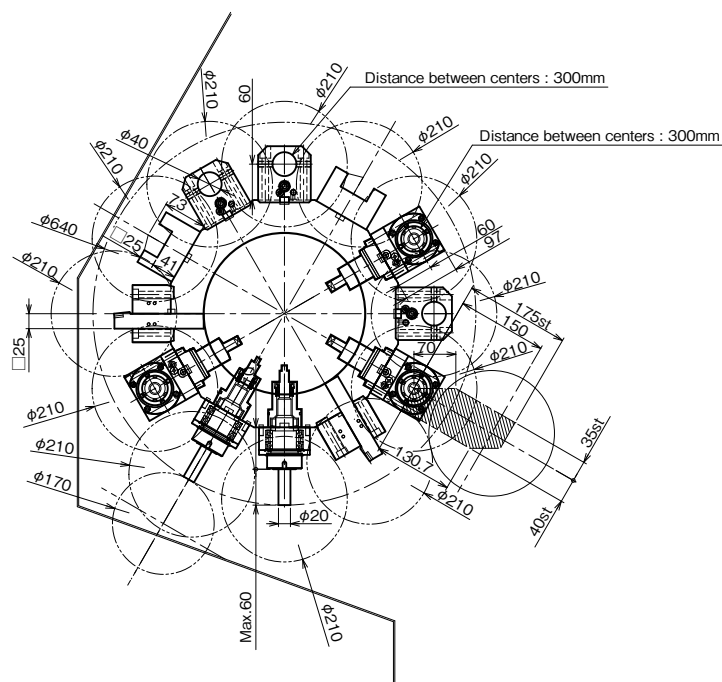
## Stroke-Related Drawing

- O.D. turning range



## Turret Interference

■ Power Tool type  
12-station turret



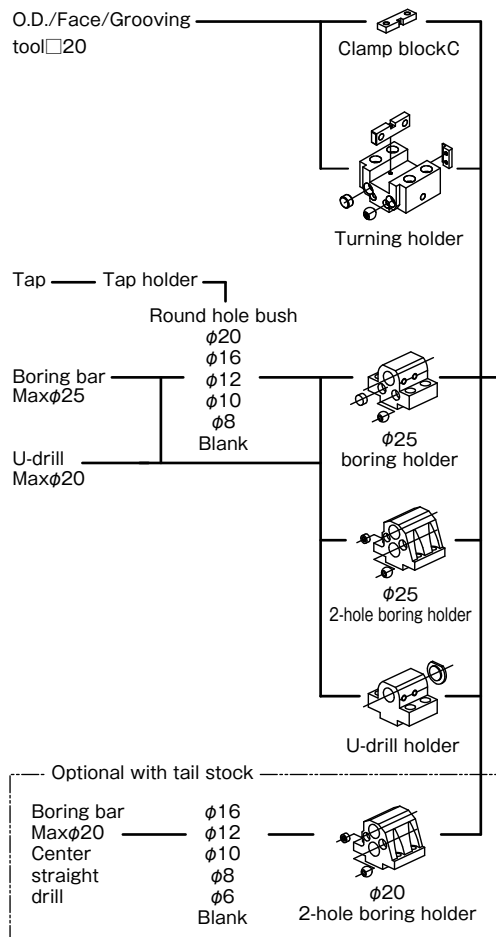
※The shaded area is the travel range of the X and Y axes.

Unit (mm)

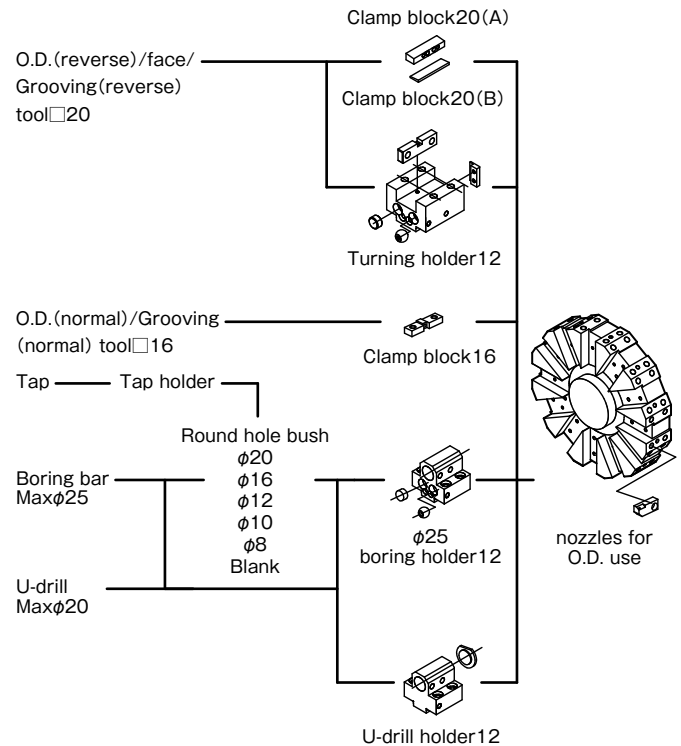
## XT-6

### Tooling system

#### [8-station turret]



#### [12-station turret]

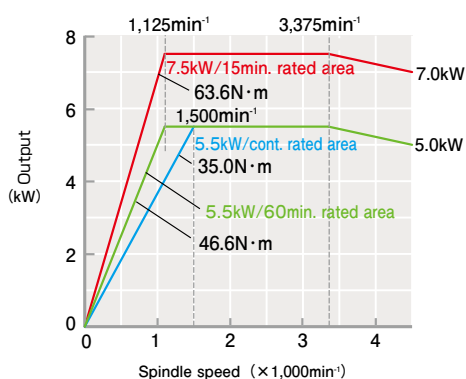


### CAUTION

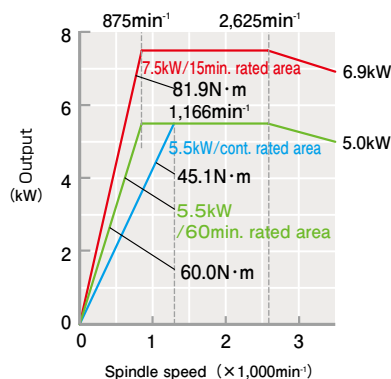
Do not use an ID holder provided for X-100 (X-10i or X-10). It interferes with the cover when the turret turns.

### Spindle power characteristic curve

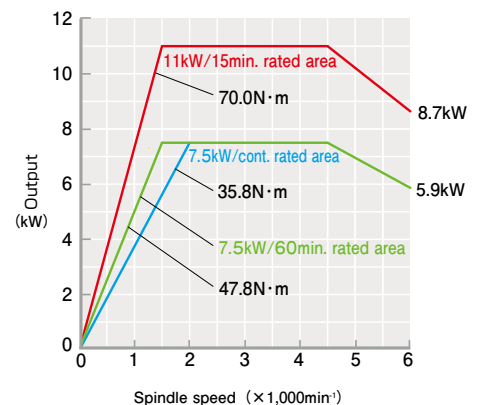
■ Max.4,500min<sup>-1</sup> (AC 7.5/5.5kW) φ75



■ Max.3,500min<sup>-1</sup> (AC 7.5/5.5kW) φ85



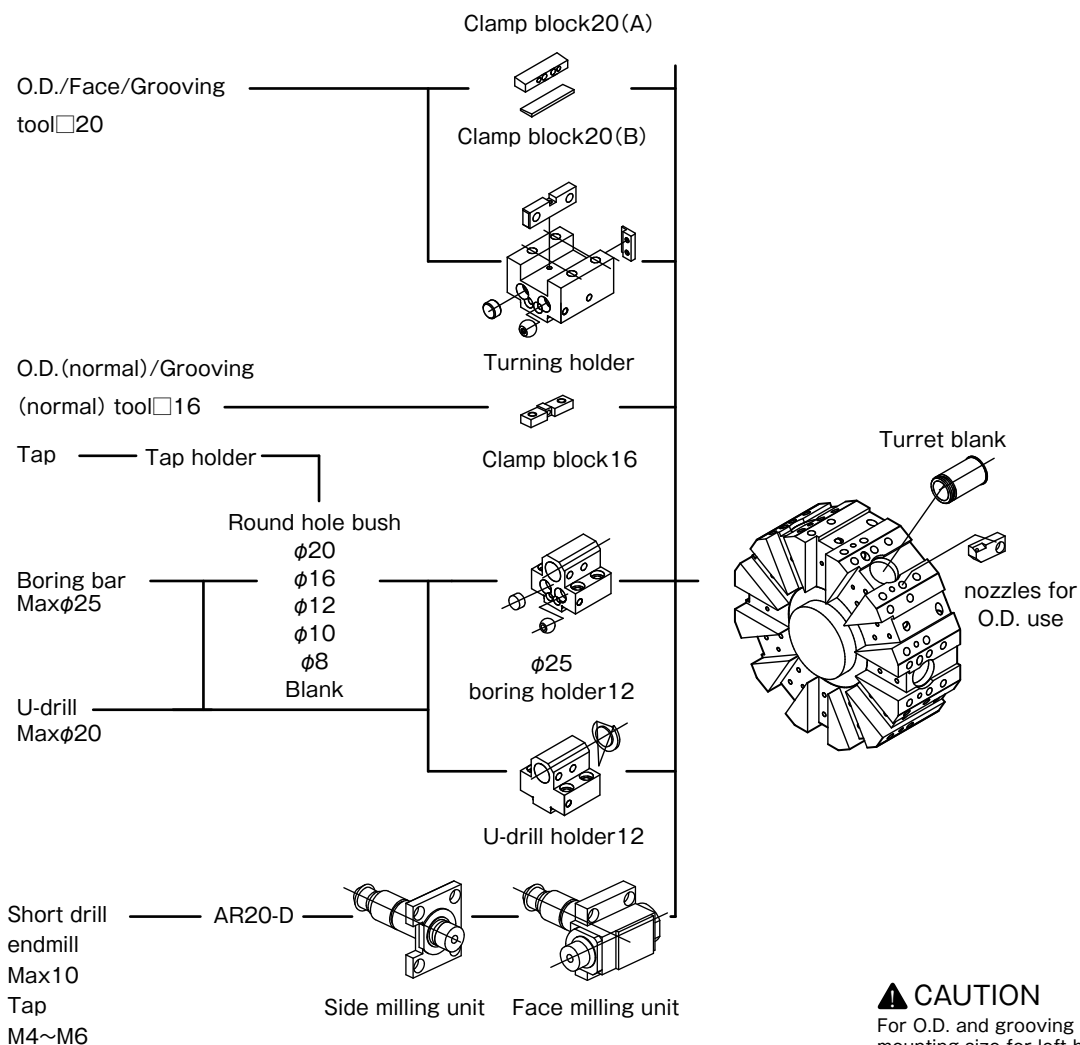
■ Max.6,000min<sup>-1</sup> (AC 11/7.5kW) φ75





## XT-6M

### Tooling system

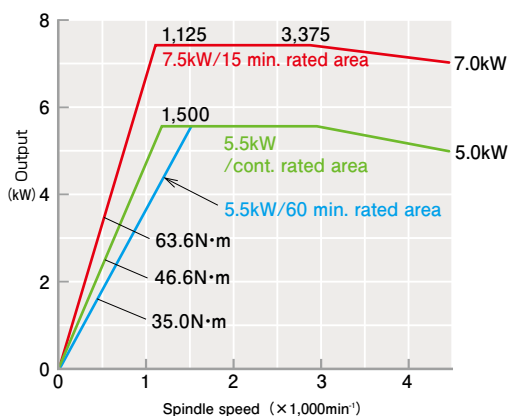


### CAUTION

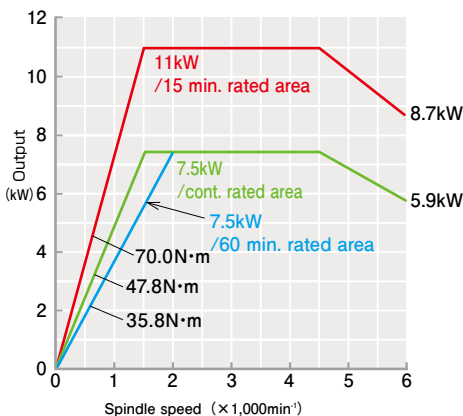
For O.D. and grooving tools, the mounting size for left-hand tools is 20 sq., and for right-hand tools it is 16 sq.

### Spindle power characteristic curve

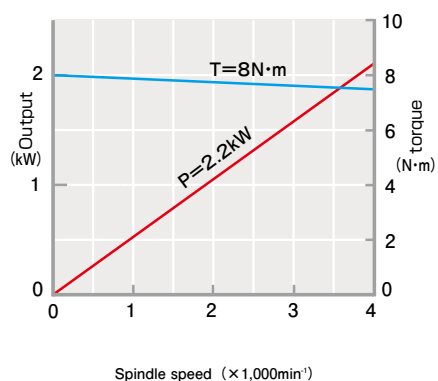
■ Max.4,500min<sup>-1</sup> (5.5/7.5kW) φ75



■ Max.6,000min<sup>-1</sup> (7.5/11kW) φ75



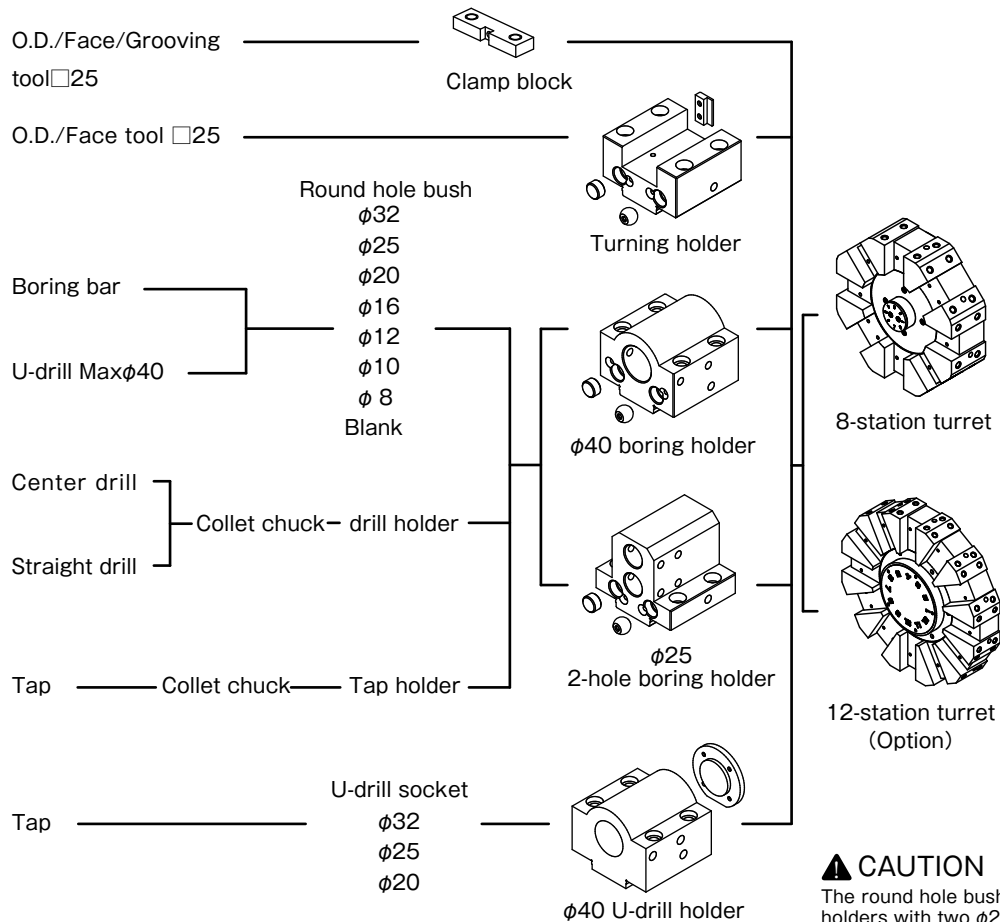
### Power tool power characteristic curve



# XT-8

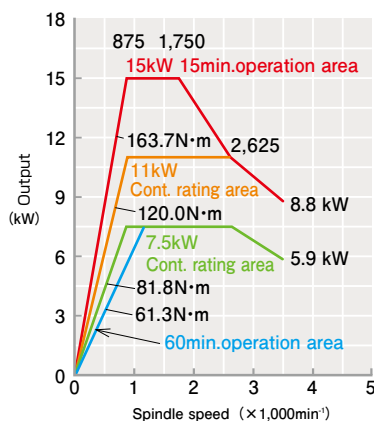
## Tooling system

[8-station turret]  
[12-station turret(Optional)]

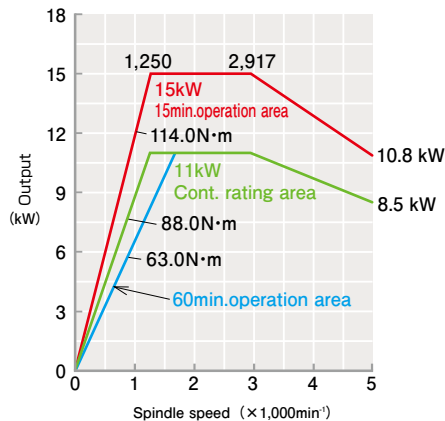


## Spindle power characteristic curve

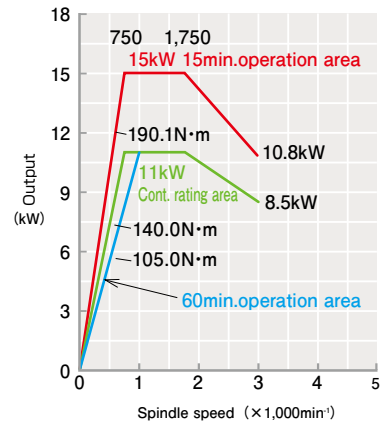
■ Max.3,500min<sup>-1</sup> (AC 11/7.5kW) φ100



■ Max.5,000min<sup>-1</sup> (AC 15/11kW) φ100



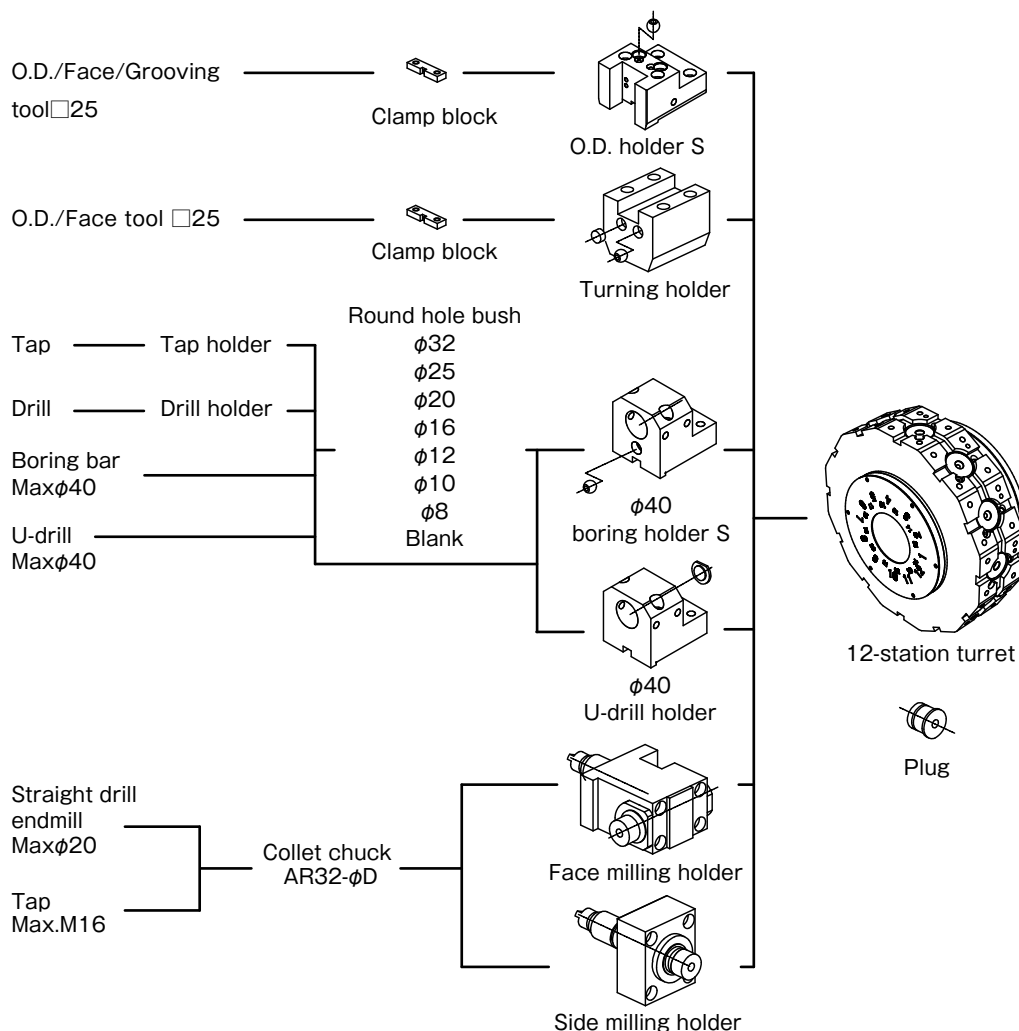
■ Max.3,000min<sup>-1</sup> (15/11kW) φ120



## XT-8M

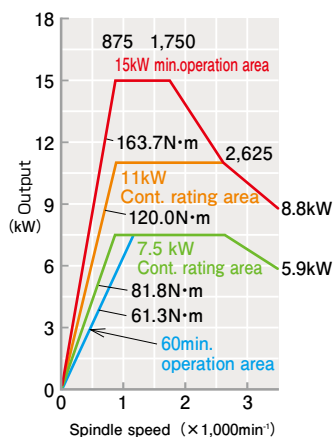
### Tooling system

#### [12-station turret]

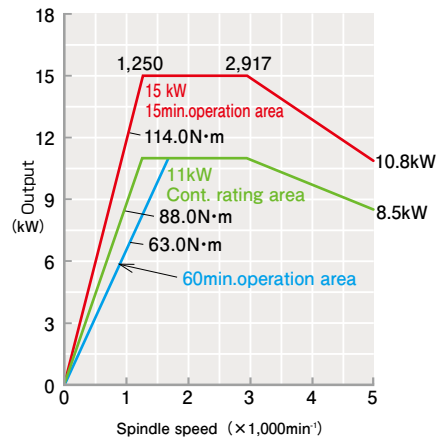


### Spindle power characteristic curve

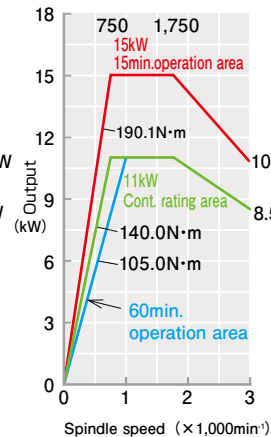
■ Max.3,500min<sup>-1</sup>  
(AC 11/7.5kW) φ100



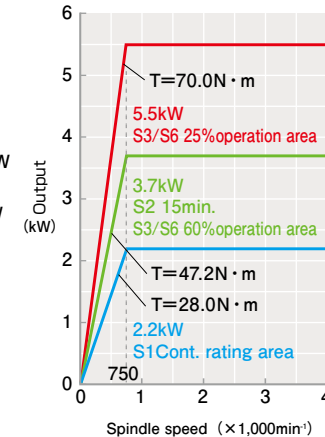
■ Max.5,000min<sup>-1</sup>  
(AC 15/11kW) φ100



■ Max.3,000min<sup>-1</sup>  
(15/11kW) φ120



■ Max.4,000min<sup>-1</sup>  
(AC 5.5/3.7/2.2kW)



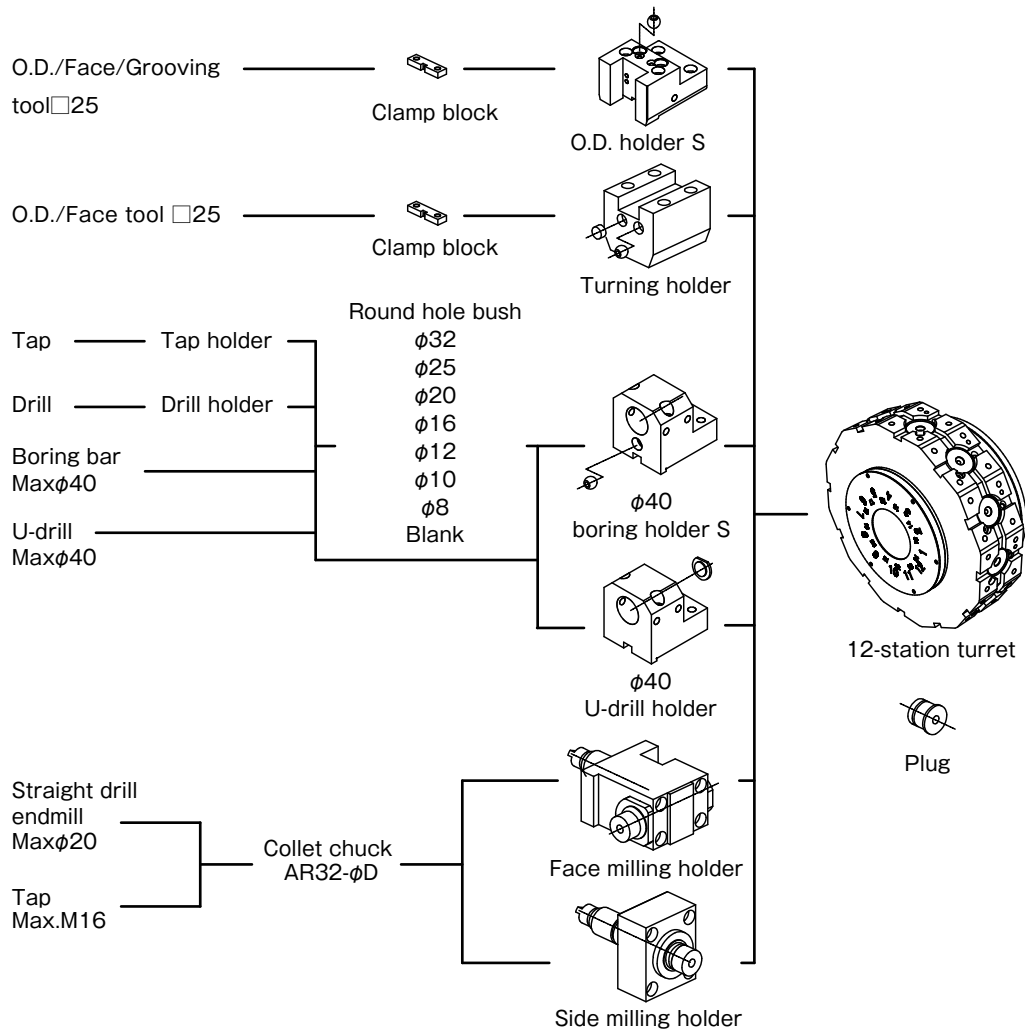
### Power tool power characteristic curve



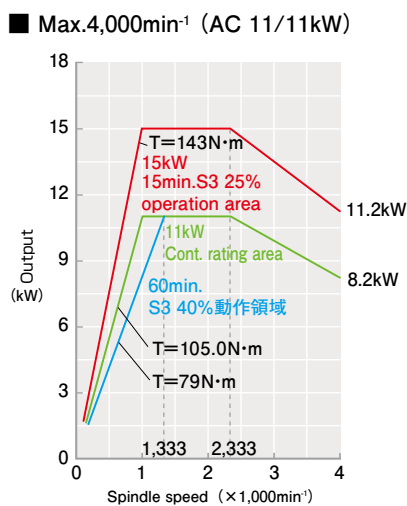
# XT-8MY

## Tooling system

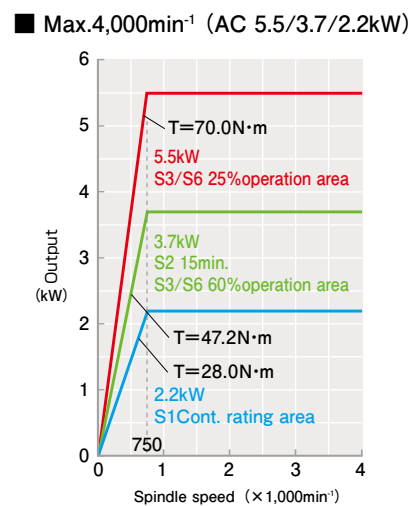
### [12-station turret]



## Spindle power characteristic curve

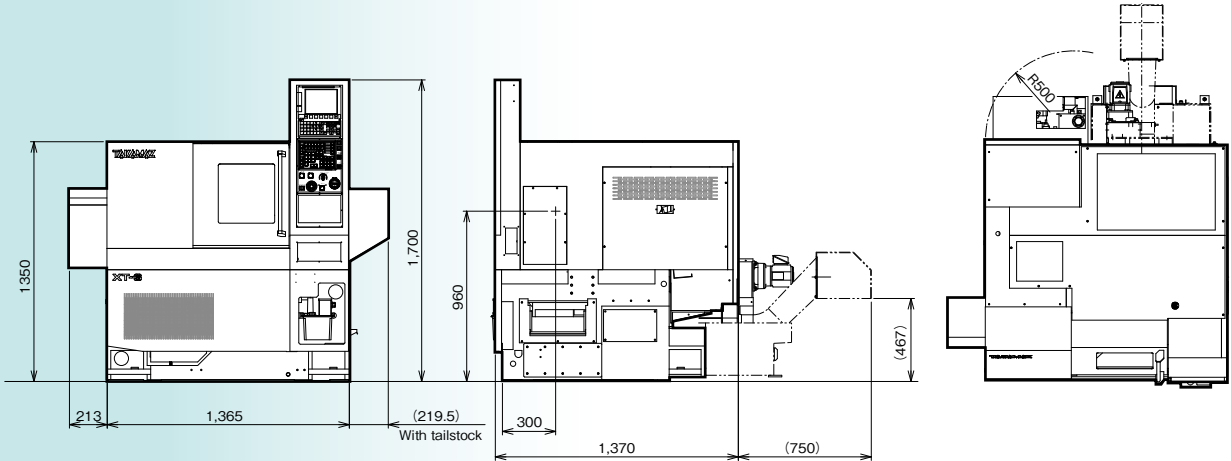


## Power tool power characteristic curve

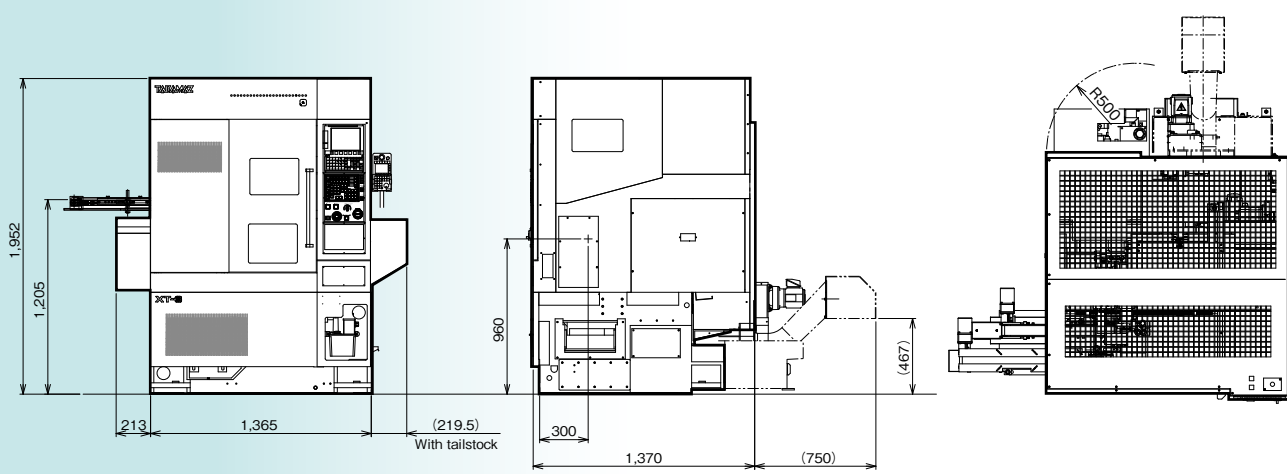


# XT-6/6M

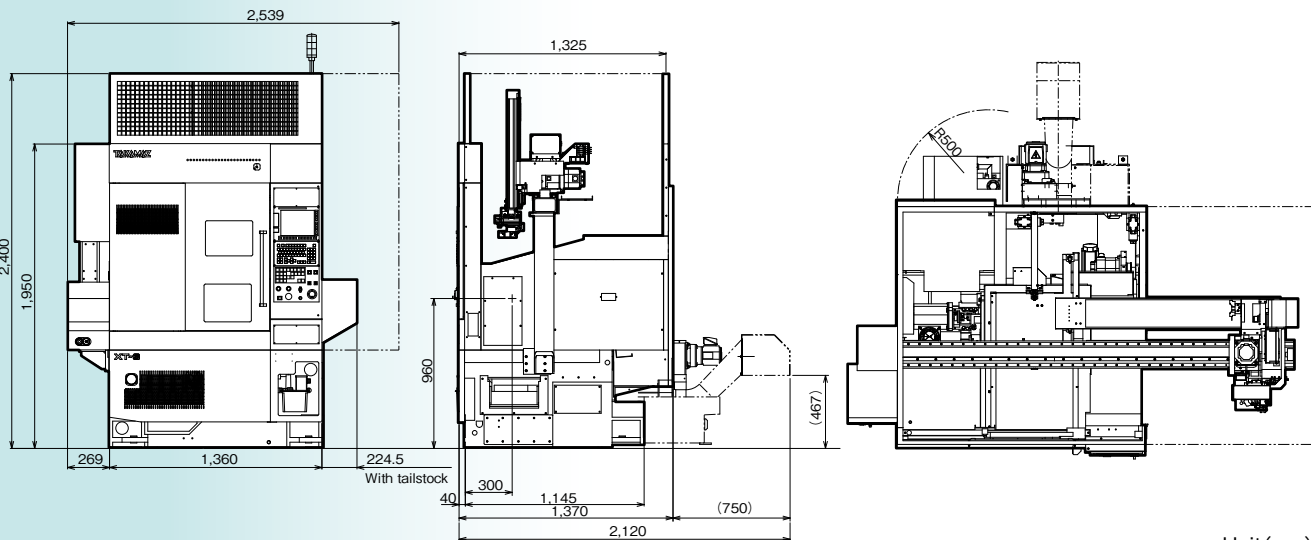
## Standard type



## Compact Loader type



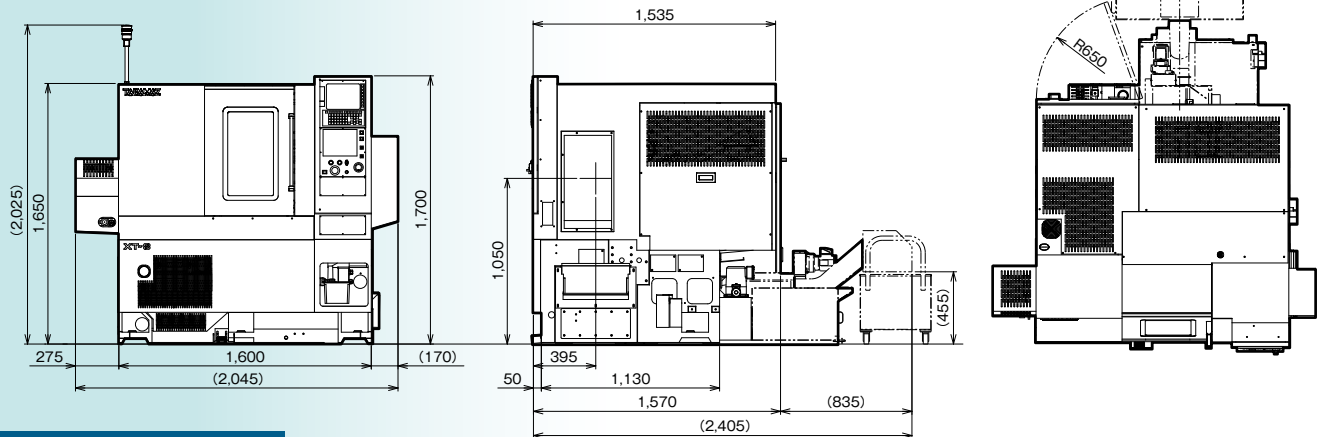
## Gantry Loader type



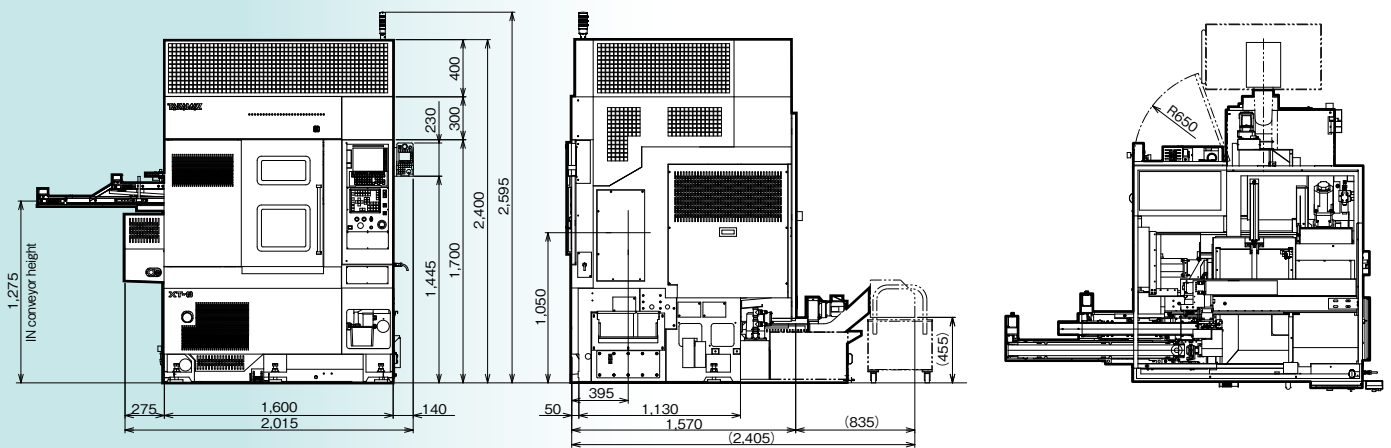
Unit (mm)

# XT-8

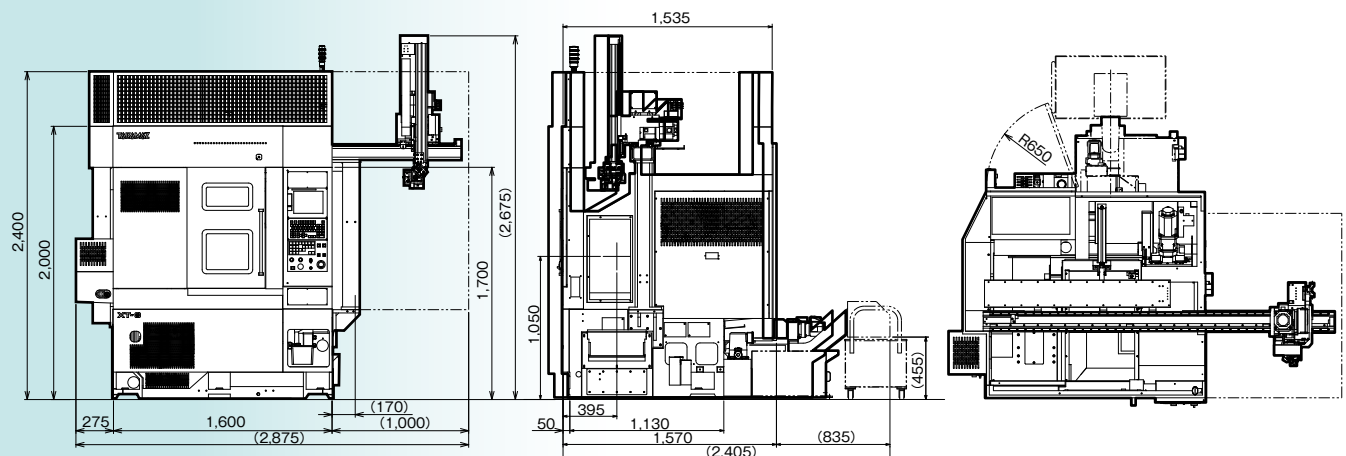
## Standard type



## Compact Loader type



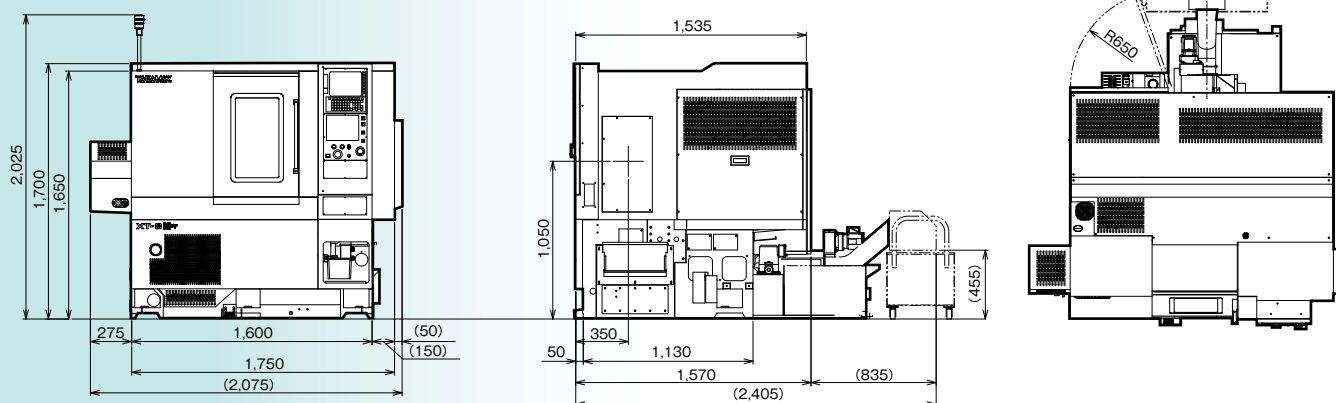
## Gantry Loader type



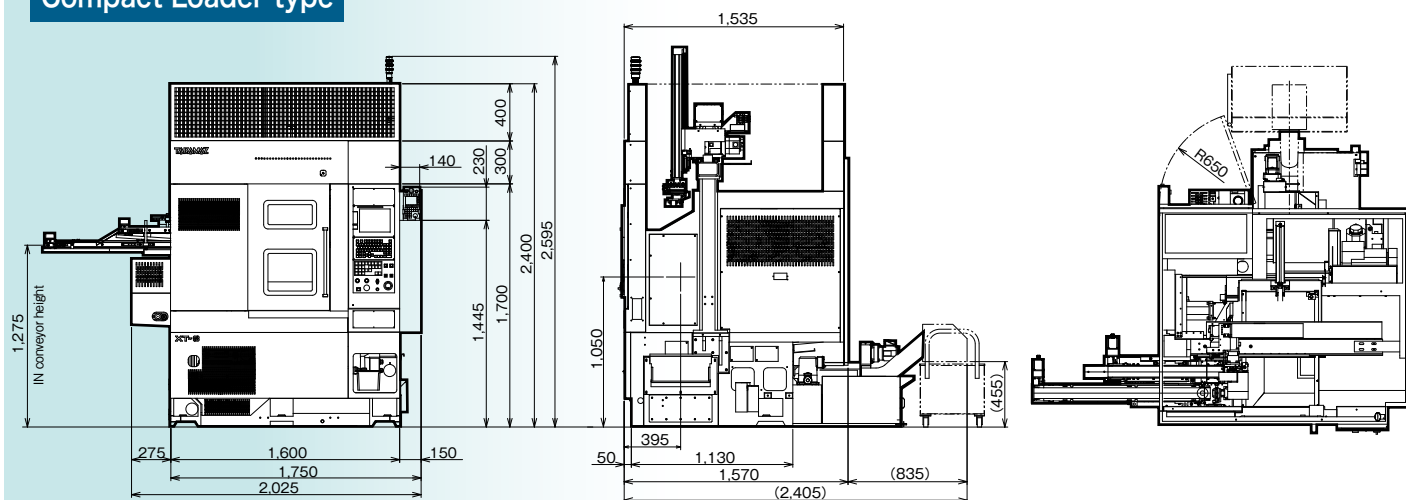


## XT-8M

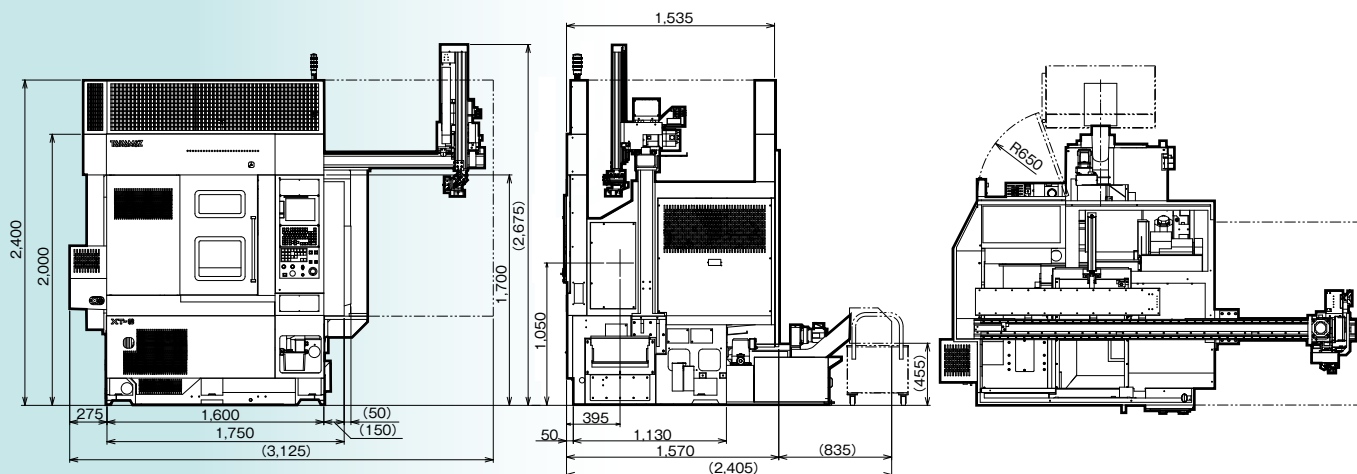
### Standard type



### Compact Loader type



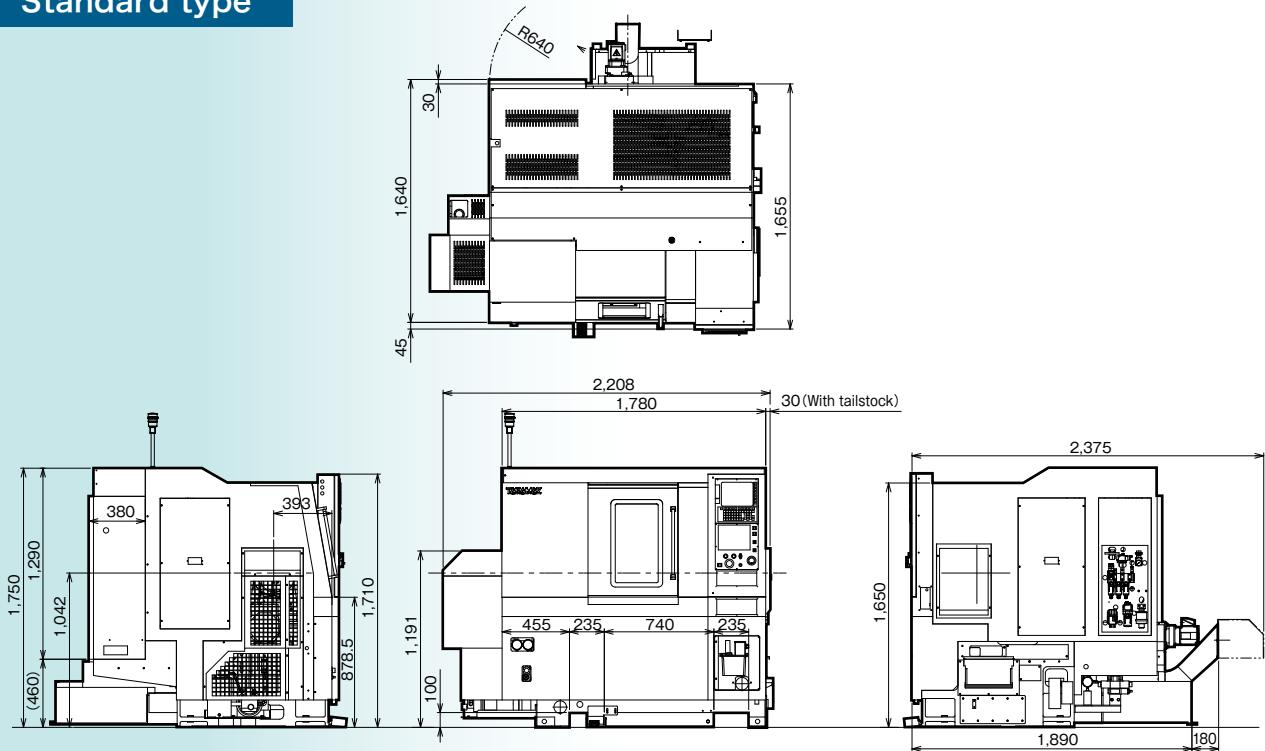
### Gantry Loader type



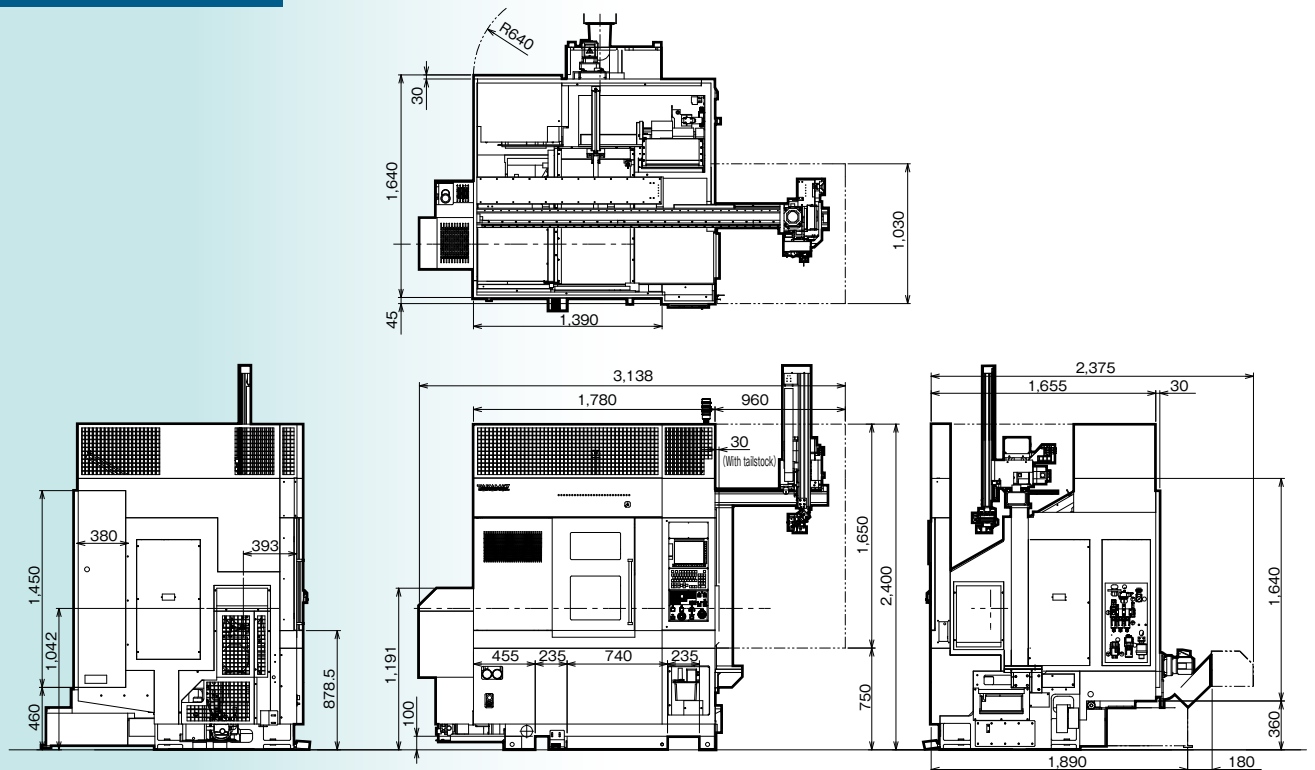
Unit (mm)

# XT-8MY

## Standard type



## Gantry Loader type



# SPECIFICATION

Machine Specifications									
Item		Unit	XT-6		XT-6M	XT-8		XT-8M	XT-8MY
			6-inch type	(8-inch type)	6-inch type	8-station turret (Option)	12-station turret (Option)		
Capacity	Max. turning diameter	mm	φ180 (With 12-station φ200)		φ200	φ340	φ300	φ240	φ220
	Max. turning length	mm	240		195	370		348	353 (420)
	Max. bar diameter	mm	φ26 (φ35)	(φ42)	φ26 (φ35)	Solid (φ42,φ51,φ65)			Solid (φ42,φ51)
	Chuck size	inch	6	8	6	8 (10)		8	
Spindle	Spindle nose	JIS	A2-5			A2-6 (A2-8)			A2-6
	Spindle bearing I.D.	mm	φ75	φ85	φ75	φ100 (φ120)			φ100
	Through-hole on spindle	mm	φ46	φ52	φ46	φ61 (φ80)			φ61
	Spindle speed	min <sup>-1</sup>	4,500 (6,000)	3,500	4,500 (6,000)	3,500 (5,000)(3,000)			4,000
	Type		8-station(12-station)	8-station	12-station	8-station turret	12-station turret	12-station turret 24st.	
Tool post	Tool shank	mm	8-station: □20 (12-station: □20/□16)	□20	12-station: □20/□16	□25			
	Boring holder I.D.	mm	φ25			φ40			
	Max. stroke	mm	X:120 (tailstock: 90<8-station>, 100<12-station>) Z:280		X:120 (tailstock100) Z:265	X:190 Z:400		X:190 Z:420	X:175 Z:420 Y:±35,—40
	Rapid traverse rate	m/min	X:18 Z:24			X:18 Z:24			X:18 Z:24 Y:10
Power tools	Tool storage capacity	pcs.	—		6	—		12	
	Rotation speed	min <sup>-1</sup>	—		4,000	—		4,000	
	Drill	mm	—		φ10	—		φ20	
	Capacity Endmill	mm	—		φ10	—		φ20	
	Tap	mm	—		M6	—		M16	
Cs-axis	Rapid traverse rate	deg./min	—		18,000	—		18,000 (C-axis)	36,000
Motors	Spindle motor	kW	AC7.5/5.5 (AC11/7.5)	AC7.5/5.5		AC11/7.5:φ100 3,500min <sup>-1</sup> (AC15/11:φ100 5,000min <sup>-1</sup> ) (AC15/11:φ120 3,000min <sup>-1</sup> )			AC15/11
	Feed motor	kW	X:AC 0.75 Z:AC1.8			X:AC1.2 Z:AC1.8			X:AC1.2 Z:AC1.8 Y:AC 0.75
	Coolant motor	kW	AC 0.25						
	Hydraulic motor	kW	AC 0.75			AC 0.75 (tailstock : AC1.5)			
	Power tools motor	kW	—		AC 2.2	—		AC 5.5/3.7/2.2	
Tailstock	Front taper		MT-3			MT-4			
	Quill O.D.	mm	φ56			φ75			
	Quill stroke	mm	85			—			
	Tailstock stroke	mm	220			240			
	Max. thrust	kN	3.5			5.3			
Size	L×W×H	mm	1,360×1,370×1,700			1,600×1,535×1,700 (2,400※)		1,750×1,535×1,700 (2,400※)	1,780×1,685×1,750 (2,400※)
	Machine weight	kg	2,300		2,500	3,200 (3,700※)		3,400 (3,900※)	4,000 (4,400※)
Total electric capacity		KVA	12~19 (14~18※) (depends on the specifications)			16~27 (18~26※) (depends on the specifications)			25 (27※)

※ With F Loader specifications

( ) : Option

Standard Accessories					
Item	XT-6	XT-6M	XT-8	XT-8M	XT-8MY
<input type="checkbox"/> Boring holder	2 sets				
<input type="checkbox"/> O.D.holder	—				2 sets
<input type="checkbox"/> Clamp block	8 sets (12 sets)			—	8 sets (12 sets)
<input type="checkbox"/> Coolant block (nozzles for O.D. use)	1 set			—	
<input type="checkbox"/> Collet flange	1 set		—		
<input type="checkbox"/> Stroke adjust cylinder			1 set		
<input type="checkbox"/> Hydraulic chucks	(Option)		1 set (8-inch)		
<input type="checkbox"/> Hydraulic unit			1 set		
<input type="checkbox"/> Chuck clamp detector			1 set		
<input type="checkbox"/> Spindle indexing device	—	1 set (Cs-axis)	—	1 set (C-axis)	1 set (Cs-axis)
<input type="checkbox"/> Power tools drive unit	—	1 set	—	1 set	
<input type="checkbox"/> Thread cutting unit(Including constant surface speed control)			1 set		
<input type="checkbox"/> Coolant unit	1 set (140 lit.)		1 set (145 lit.)		1 set (140 lit.)
<input type="checkbox"/> Work light			1 set		
<input type="checkbox"/> Service tool kit			1 set		
<input type="checkbox"/> TAKAMAZ Instruction manual			1 set		

Optional Accessories					
Item	XT-6	XT-6M	XT-8	XT-8M	XT-8MY
<input type="checkbox"/> Tool holders				○	
<input type="checkbox"/> Collet chucks				○	
<input type="checkbox"/> Hydraulic chucks				○	
<input type="checkbox"/> Vibration-suppressing alloy clamp holder	○				—
<input type="checkbox"/> Built-In Spindle motors	○		—		
<input type="checkbox"/> Thermony® (Thermal displacement system)				○	
<input type="checkbox"/> Hydraulic chucking cylinder				○	
<input type="checkbox"/> TAKAMAZ loader system				○	
<input type="checkbox"/> Bar feeder system				○	
<input type="checkbox"/> Unloader				○	
<input type="checkbox"/> Work set detector				○	
<input type="checkbox"/> Power tools	—	○※1	—	Face/Side milling	
<input type="checkbox"/> Chip conveyor (Floor type/Spiral type)				Rear/Right	
<input type="checkbox"/> Front air blower				○	
<input type="checkbox"/> Rear air blower				○	
<input type="checkbox"/> Rear coolant unit				○	
<input type="checkbox"/> Signal light(1-tier/2-tier/3-tier)				○	
<input type="checkbox"/> Automatic fire extinguisher				○	
<input type="checkbox"/> Automatic power shut-off device				○	
<input type="checkbox"/> Automatic door system(Auto door/Shutter)				○	
<input type="checkbox"/> Special color				○	
<input type="checkbox"/> Others				○※2	

※1 This is a special accessory with power tool specifications only. ※2 For more information on attachments, consult our sales representative.



Machine Specifications		TAKAMAZ & FANUC Oi-TF Plus FLoader:Type0 Standard.ΣiLoader:Type1			
Item	XT-6	XT-6M	XT-8	XT-8M	XT-8MY
Controlled axes	2 axes(X,Z)	3 axes(X,Z,C)	2 axes(X,Z)	3 axes(X,Z,C)	4 axes(X,Z,C,Y)
Simultaneously controllable axes	Simultaneous 2 axes	Simultaneous 3 axes	Simultaneous 2 axes	Simultaneous 3 axes	Simultaneous 4 axes
Least input increment	0.001mm(X in diameter)				
Least command increment	X : 0.0005mm Z : 0.001mm			X : 0.0005mm Z : 0.001mm C : 0.001deg.	X : 0.0005mm Z,Y : 0.001mm C : 0.001deg.
Auxiliary function	M-code 3 digit				
Spindle function	S-code 4 digit				
Tool function	T-code 4 digi				
Tape code	EIA(RS232C)/ISO(840)automatic recognition				
Cutting feedrate	1~7,000mm/min				1~7,000mm/min (Y-axis Max.5,000mm/min)
Command system	Incremental/Absolute				
Linear interpolation	G01				
Circular interpolation	G02, G03				
Cutting feedrate override	0~150%				
Rapid traverse override	F0,100%				
Program file name	32 characters				
Backlash compensation	0~9,999μm				
Program memory capacity	2Mbyte (5,120m)				
Tool offsets	64 sets				
Registered programs	1,000 pcs.				
Tool geometry/Wear offset	Standard				
Canned cycle	G90, G92, G94				
Radius designation on arc	Standard				
Tool offset measurement input	Standard				
Background editing	Standard				
Direct drawing dimension programming	Standard				
Custom macro	Standard				
Additional custom macro common variables	#100~#199, #500~#999				
Pattern data input	Standard				
Nose R compensation	G40,G41,G42				
Inch/Metric conversion	G20/G21				
Programmable data input	G10				
Run hour/Parts count display	Standard				
Extended part program editing	Standard				
Multiple repetitive cycle	G70~G76				
Multiple repetitive cycle II	Pocket-shaped				
Y-axis offsets	—				Standard
Canned drilling cycle	Standard				
Constant surface speed control	G96,G97				
Continuous thread cutting	G32				
Variable lead thread cutting	G34				
Thread cutting retract	Standard				
Clock function	Standard				
Help function	Standard				
Alarm history display	50 pcs.				
Self-diagnosis function	Standard				
Sub-program call	Up to 10 loops				
Decimal point input	Standard				
2nd reference point return	G30				
Work coordinate system setting	G50,G54~G59				
Rigid tapping	—	For Power Tools only	—	For Power Tools only	
Polar coordinate interpolation	—	Standard	—	Standard	
Cylindrical interpolation	—	Standard	—	Standard	
Stored stroke check 1	Standard				
Stored stroke check 2,3	Standard				
Input/Output interface	USB Memory,Memory card※1,Easernet※1				
Alarm message	Standard (Smart Alarm Diagnostic)				
Graphic display	Standard				
Conversational programming with graphic function	Standard				
Abnormal load detection	Standard				
Manual handle trace	Standard				
Automatic data backup	Max. 3				
Automatic screen deletion function	Standard				
TAKAMAZ management support function	Work/Tool counter,Tool load monitor,Others				
TAKAMAZ maintenance functions	Standard				
TAKAMAZ OS	Machine stoppage warning,Traceability,Others※2				
FANUC set of manuals	DVD-ROM				

※ 1 In the case of F loader specification, this is in the electric cabinet. ※ 2 F Loader specifications only

Optional Specifications					
Item	XT-6	XT-6M	XT-8	XT-8M	XT-8MY
Input/Output interface	RS232C				
Tool life management					
Multiple M codes in one block	Max. 3				
Spindle orientation	1set/6sets				
Dynamic graphic display	Compatible with standard / Σi Loader specifications only				
Helical interpolation	—		—		
FANUC Instruction manual	Bound				

## Head office and plant

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