

A large, three-dimensional blue logo consisting of the letters 'X' and 'T' in a bold, sans-serif font. The letters have a metallic finish and are set against a background of flowing, wavy white lines on a light gray surface.

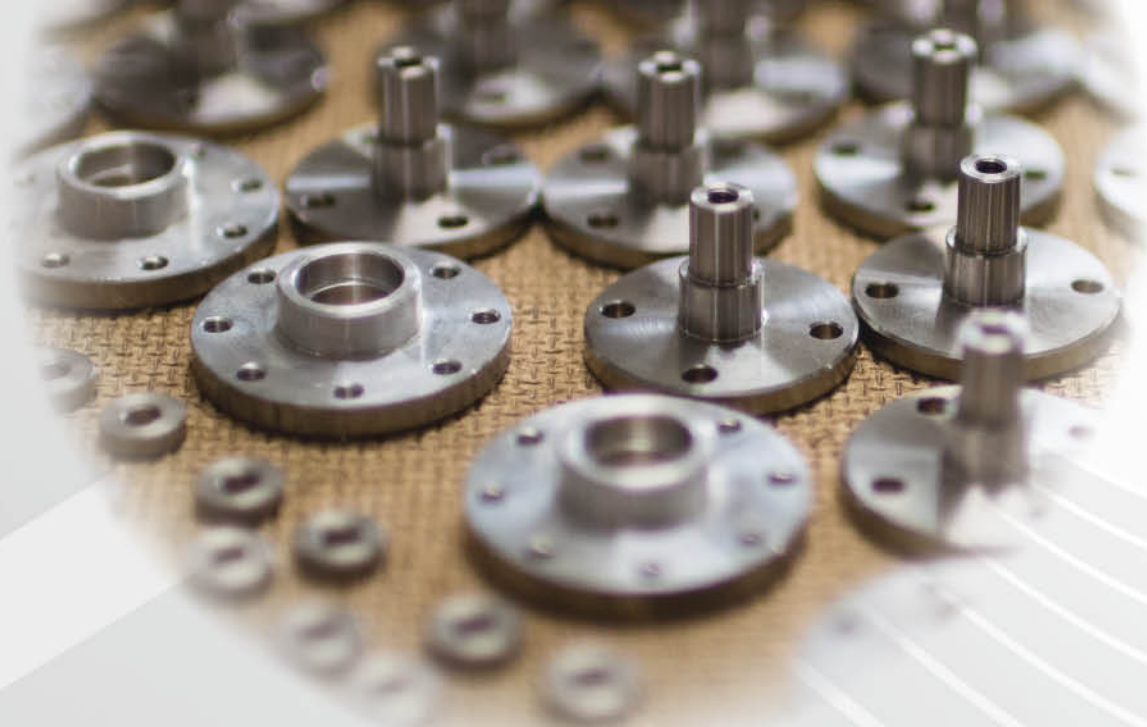
XT

SERIES

CNC 1 SPINDLE 1 TURRET PRECISION LATHE

The Takamiz logo, featuring the word 'TAKAMIZ' in a stylized, blocky font. The letters are light gray with a darker gray outline, giving it a three-dimensional 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

  1-spindle 1-turret

- 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)

XTS-6

NEW



XTS-6 with compact F loader installed

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

  1-spindle 1-turret

- 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



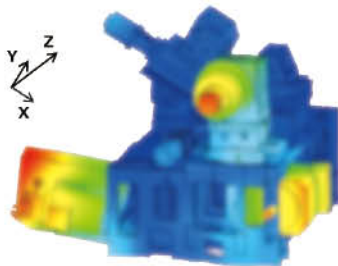
XT-8MY with gantry F loader installed

Dynamic Performance

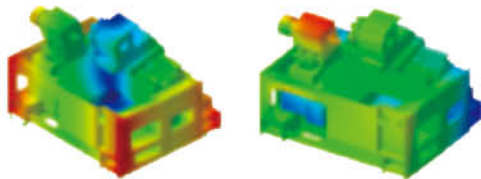
Bed Construction Resistant to Thermal Displacement

●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⁻¹

Spindle acceleration/deceleration time

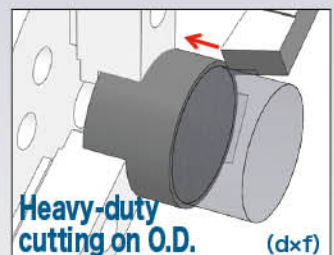
Built-in spindle (8,000min⁻¹) 4,500min⁻¹ : 0.72s

Standard specification (4,500min⁻¹) 4,500min⁻¹ : 1.53s

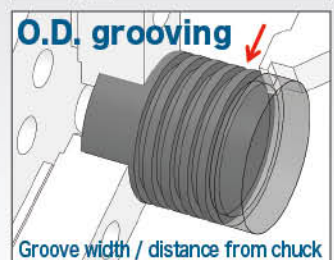


XT-6

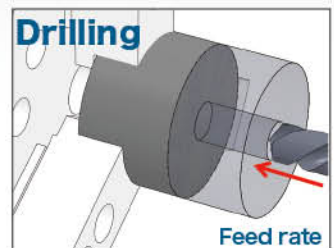
Depth of cut: 4 mm
Feed rate: 0.4 mm/rev
Cutting cross sectional area: 1.6mm²
(for short-term rating)



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

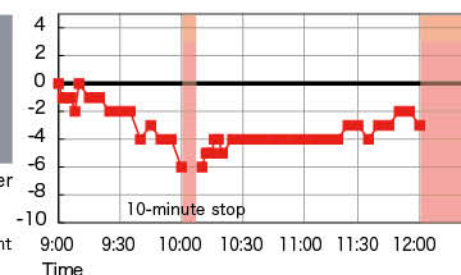


Drill diameter: 25mm
Feed rate: 0.3mm/rev

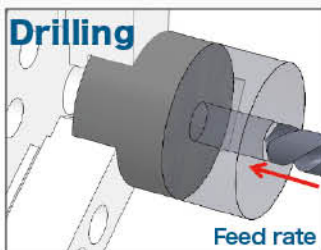
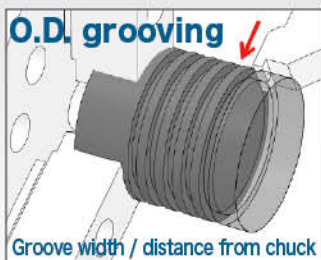
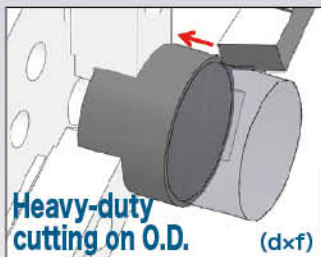
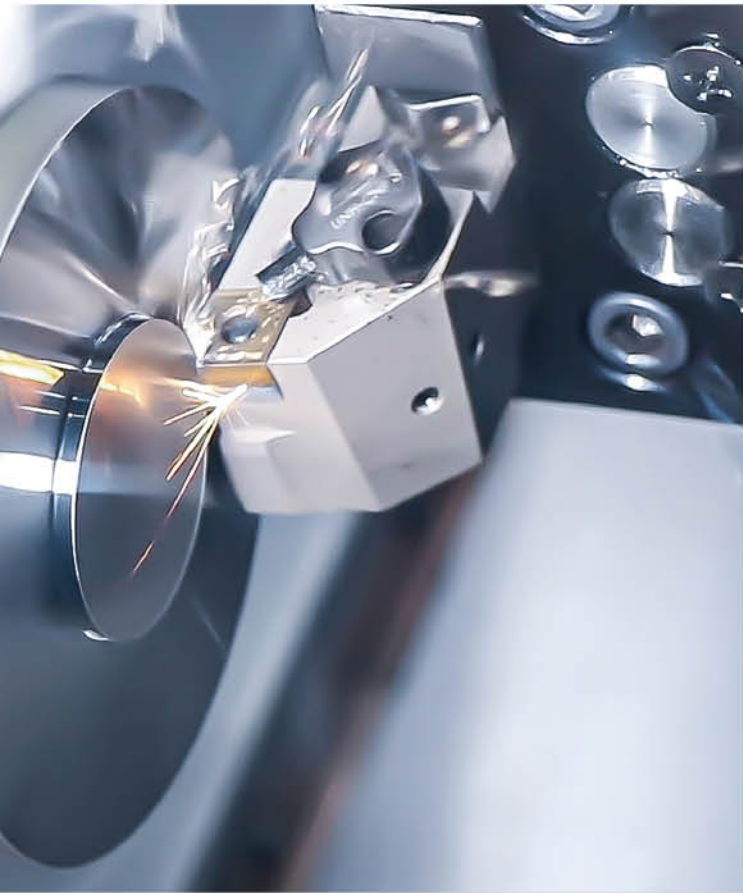


Change in diameter for workpieces requiring continuous machining (XT-6)

Change of diameter (μ m)



* In the environment inside our plant

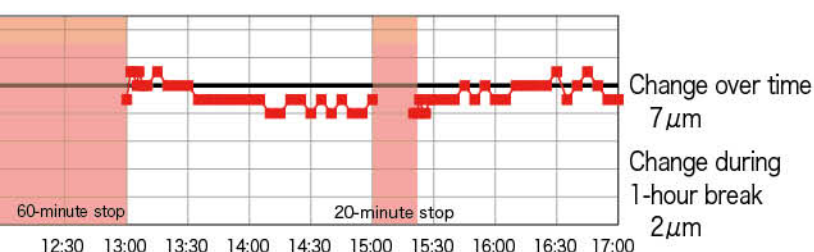


XT-8MY

Depth of cut: 5mm
Feed rate: 0.4mm/rev
Cutting cross sectional area: 2.0mm²
(for short-term rating)

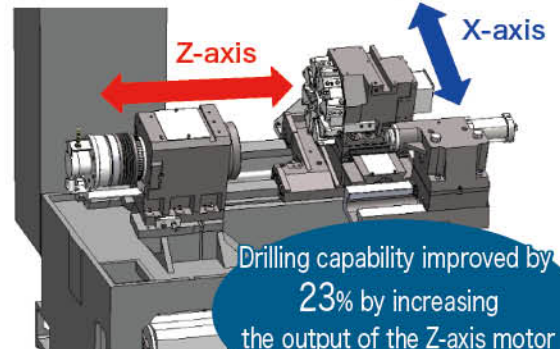
Depth of cut: 7mm
Feed rate: 0.1mm/rev
Groove width: 5mm
Distance from chuck nose: 94mm

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



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)

Spindle acceleration/ deceleration time (XTS-6)

(To 4,500 min⁻¹)

Spindle acceleration time: Shortened by 35% (comparison with ^{※1} existing model)

Spindle deceleration time: Shortened by 25% (comparison with ^{※1} existing model)
(compared to XC-100)

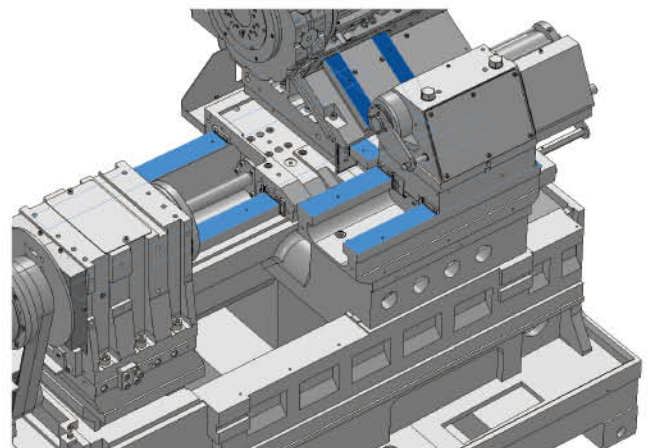
※1 Comparison at the maximum spindle speed of the existing model, 4,500 min⁻¹

Improved Durability

X, Z, Y and Tailstock Axes

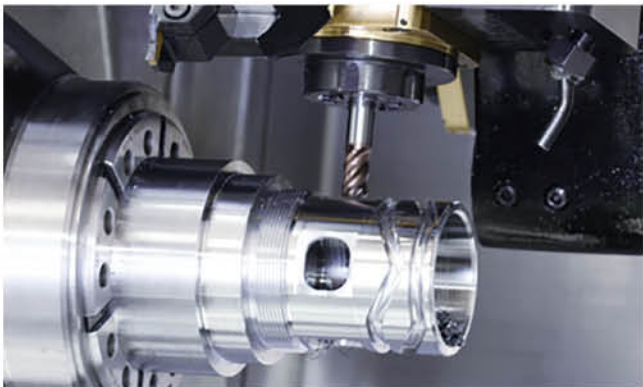
All Use Square Box-way Slides (XT-8MY)

●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.



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



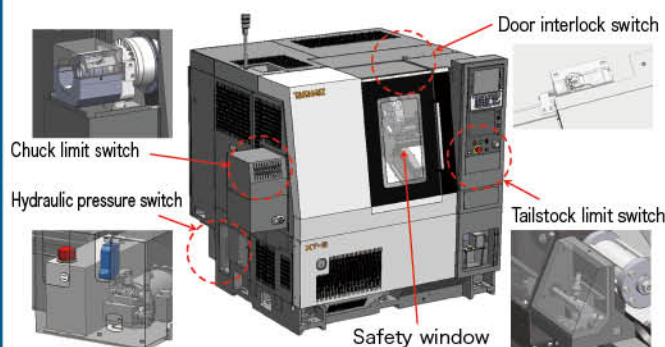
- PC with a 10.4-inch panel suited to TAKAMAZ products adopted
- Convenient functions featured in consideration of automation and ease of setup
- Improved working efficiency utilizing IT and IoT technology

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

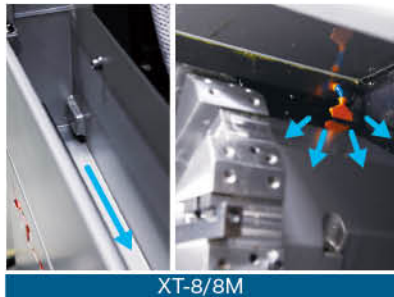
An adjustable-stroke hollow chucking cylinder is equipped as standard. Multiple types of chucks can be mounted without changing the cylinder. And because the cylinder is hollow, it can also accommodate bar stock.

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 (XTS-6, XT-8/8M)
- Installed on 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)

A chip flushing circuit is provided as standard.



XT-8/8M



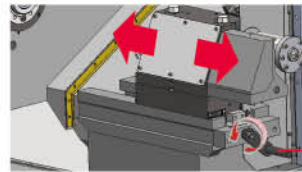
XT-8MY

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)



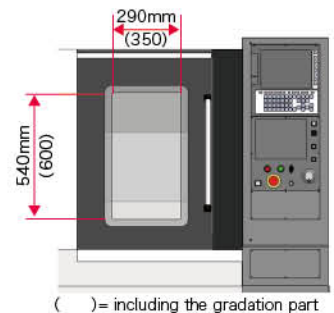
Turn the handle to move the tailstock slide.

→ **Saves labor in setup work**



Tailstock handle

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



() = including the graduation part

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

Expanded door window area → **Improved visibility**

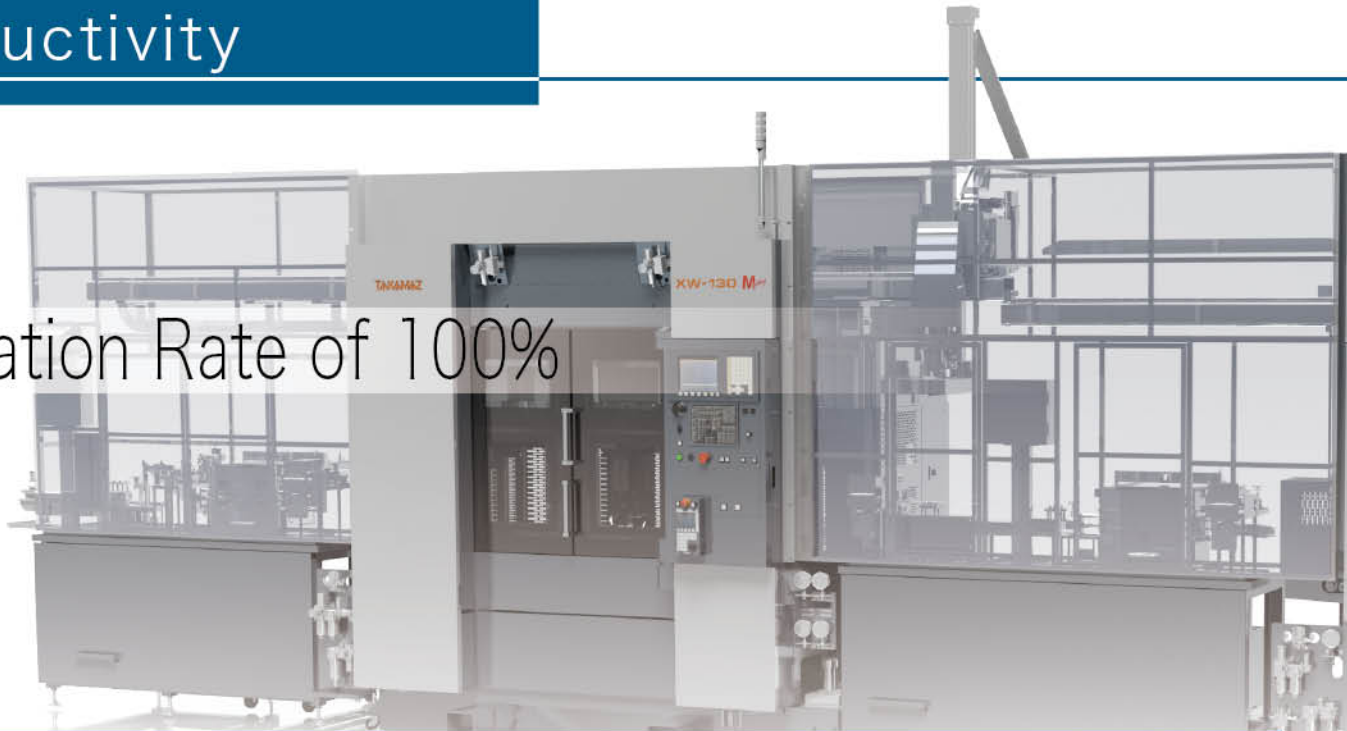
Green Technology equipped as Standard

Reduced Energy Consumption to Achieve Carbon Neutrality (XTS-6)

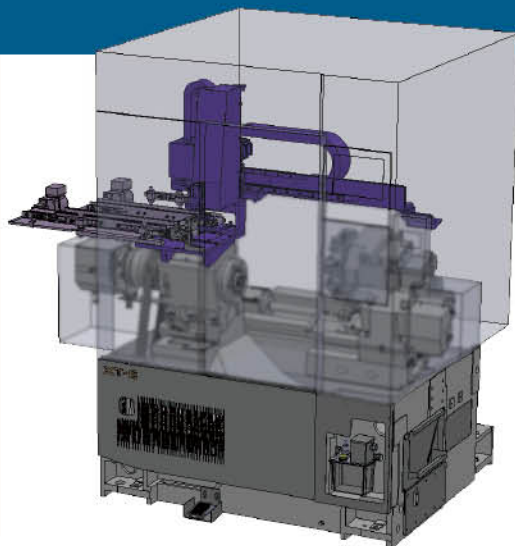
- An "idle stop function" that automatically stops power supply to the hydraulic pump when the machine is stopped is now incorporated. This provides a power conservation effect when the machine is stopped, such as during machine setup work.
- The spindle acceleration/deceleration time can be adjusted as required to switch between operation that prioritizes machining time and operation that prioritizes energy savings.
 - ※ In lines comprising multiple machines in sequence, when there are waiting times for material loading due to differences in process cycle times, operation that prioritizes energy savings can be used effectively to achieve power savings without increasing the line cycle time.
- With F loaders, the regenerative energy generated during deceleration is returned to the power supply and can be used by other units and machines to achieve power savings. (Σi loaders employ a resistance regeneration system.)
- The F loader speed optimization function aims to save energy and prolong service life. The loader itself learns and automatically adjusts its speed outside the machine to meet the requirements without affecting the cycle time. The loader speed optimization function can be switched ON and OFF.



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.



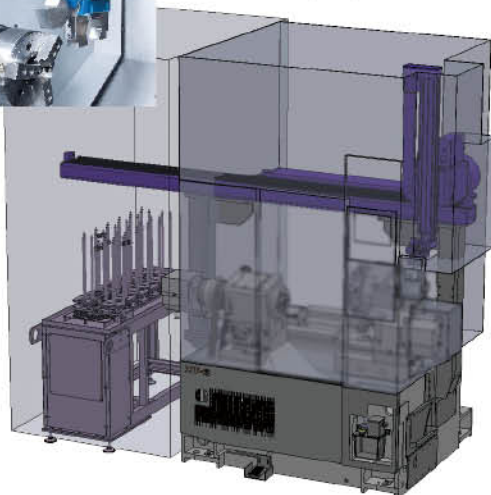
| Item | | ΣiC60 | FC60※ | ΣiC80 |
|--|-----------------|---------------|---------------|---------|
| Compatible models | Unit | XTS-6・XT-6/6M | XTS-6・XT-6/6M | XT-8/8M |
| Transferable workpiece dimensions (reference values) | Diameter | mm | φ60 | φ80 |
| | Length | mm | 50 | 70 |
| | Mass (one side) | kg | 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



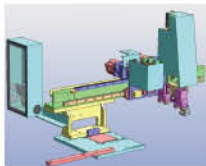
Hand for shaft work

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

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

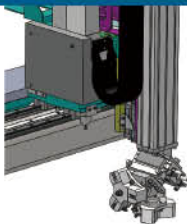


FC60 Loader



- ▶ 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

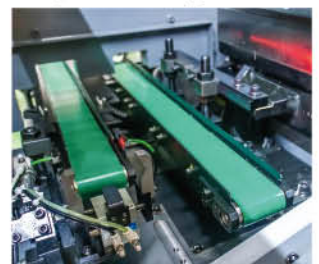


Tray changer



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.



New vision

Making products with a shared future vision!

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.

Only one

Easier to use



Request

Tell us your requirements.

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: XT-8 + bar feeder (ALPS TOOL)

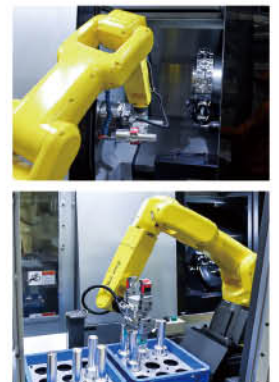
Unloader

Unloads fully machined workpieces safely outside the machine.



Bucket type for feeder devices

Robots



Example of use : ServoROT-00

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.)

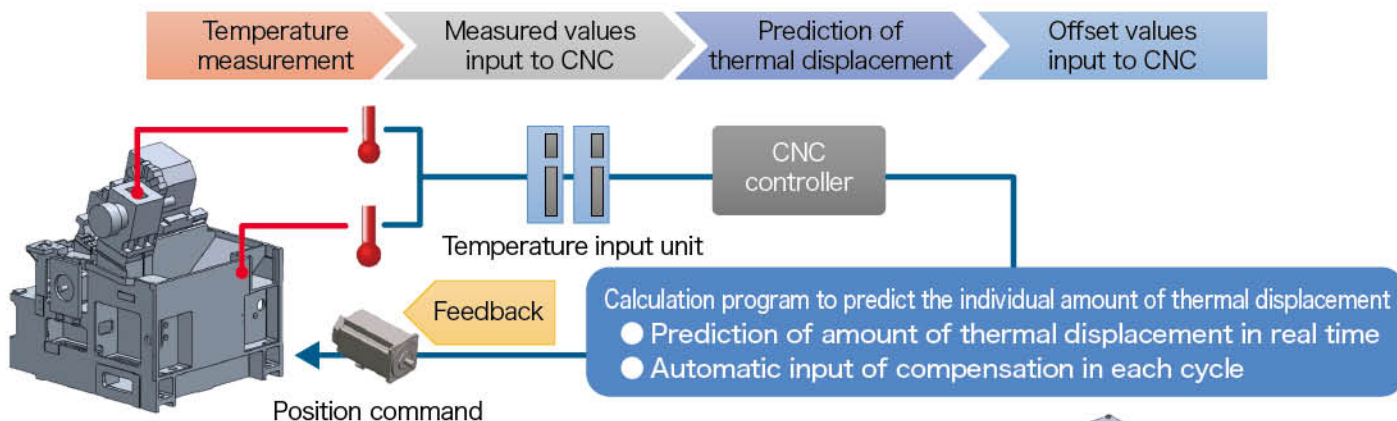
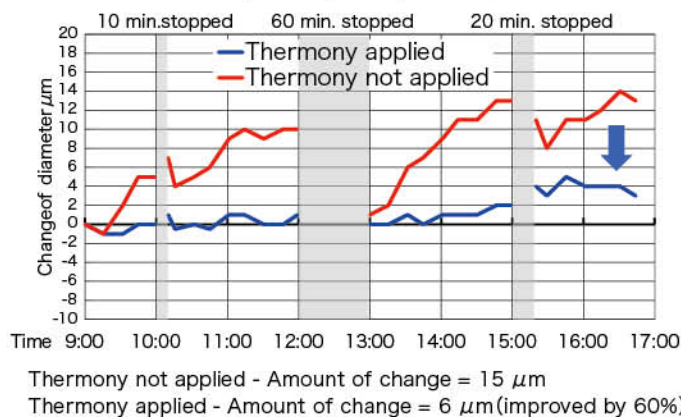
In addition, a full range of options are available. For details, ask our sales personnel.

Thermomy



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 μm , but when it is applied the amount of change is suppressed to 6 μm , exhibiting an improvement of 60%.

Evaluated machine: X Series 6-inch machine (machine for in-house evaluations)
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

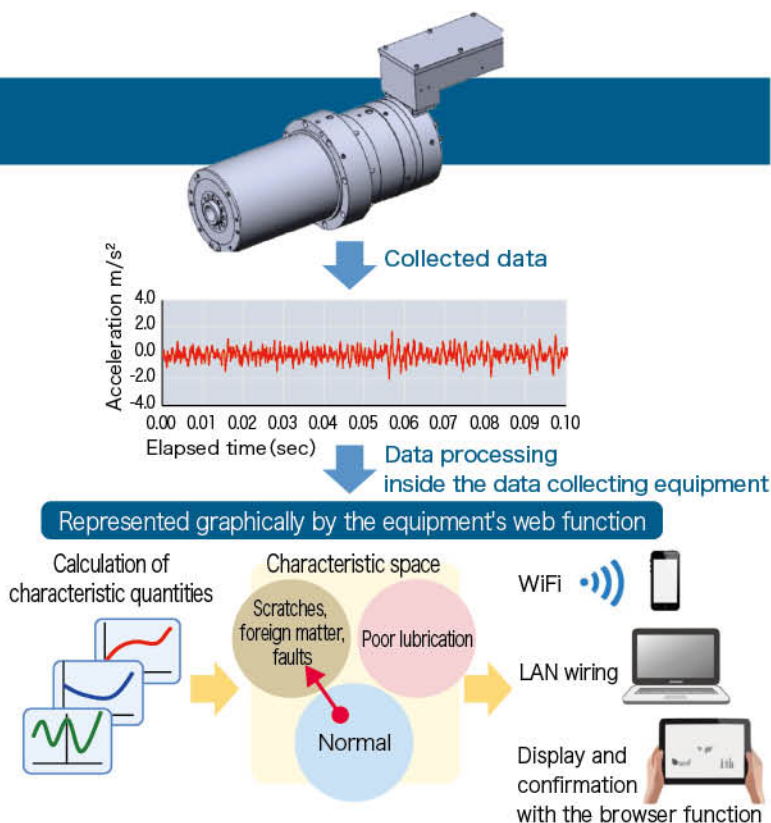


Spimony



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.

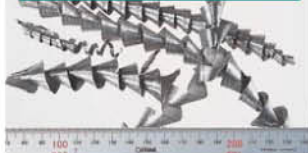
Spiral Type



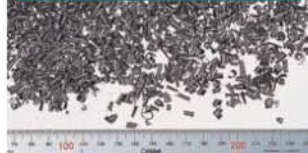
Floor Type



Steel : Curly, long



Castings : Chip-shaped



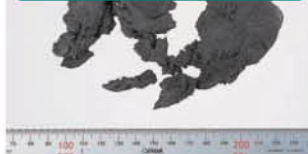
Aluminum : Chip-shaped



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

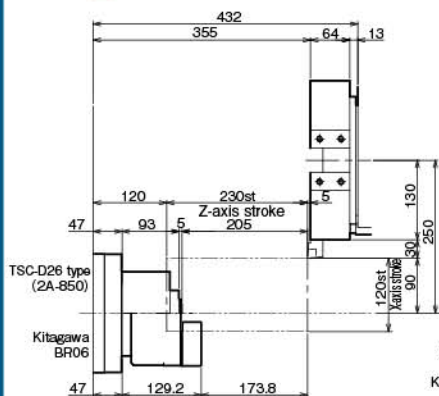
| | Magnetic | | | | | | Non-magnetic | | | | | | |
|------------------------|-------------|--------------|-------------|------------------------|-------------|------------------------|--------------|--------------|-------------|------------------------|--------------|-------------|------------------------|
| | 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 | — | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | — | — | — | — | — |

XTS-6/XT-6

Stroke-Related Drawing

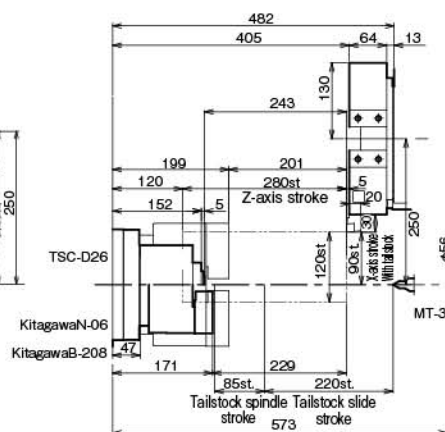
XTS-6

- 8-station turret



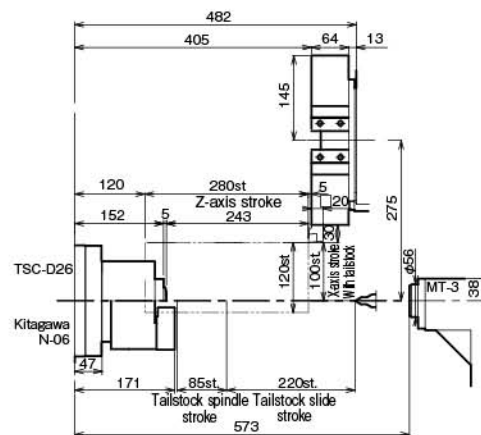
XT-6

- 8-station turret



XT-6

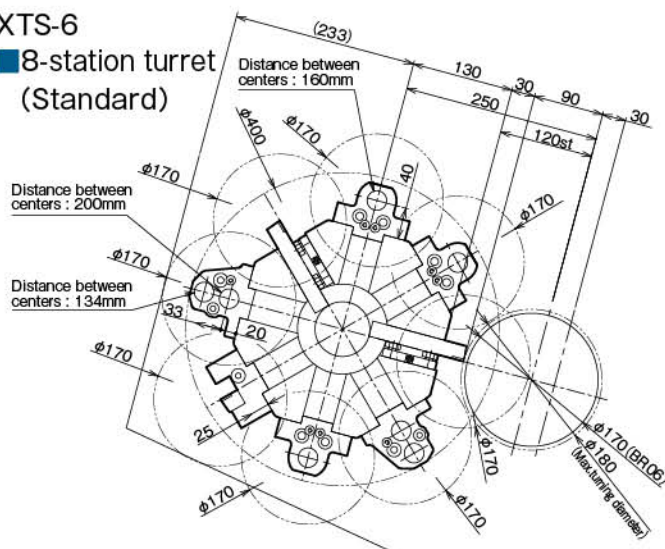
- 12-station turret



Turret Interference

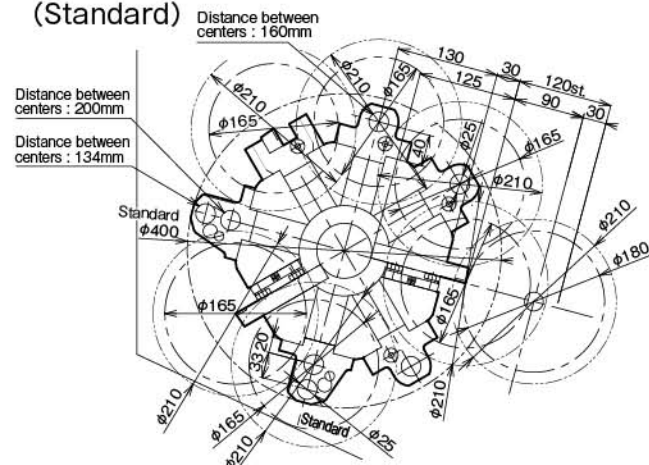
XTS-6

■ 8-station turret
(Standard) /



XT-6

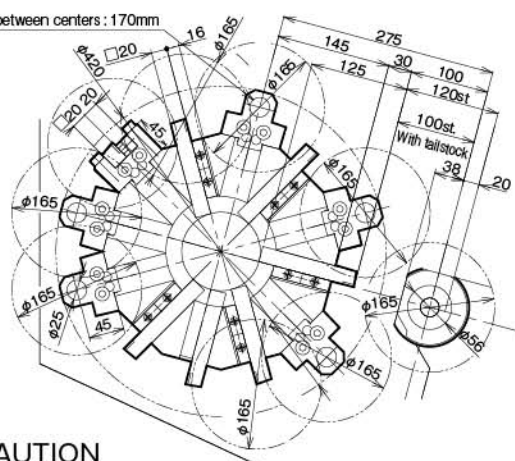
■ 8-station turret
(Standard) Distance



XT-6

- 12-station turret

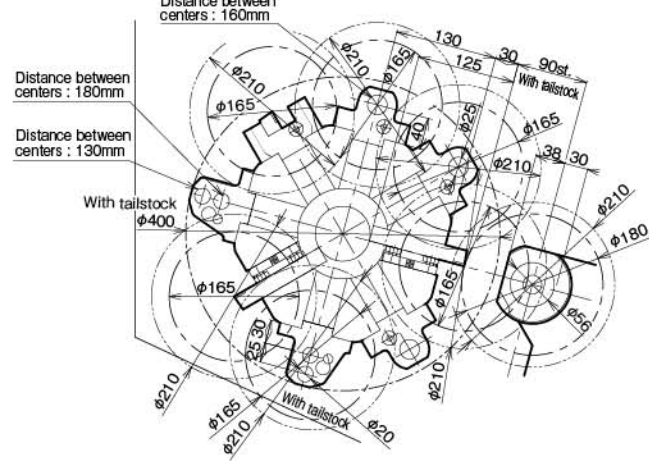
Distance between centers : 170mm



XT-6

(With tailstock)

Distance between
centers : 160mm



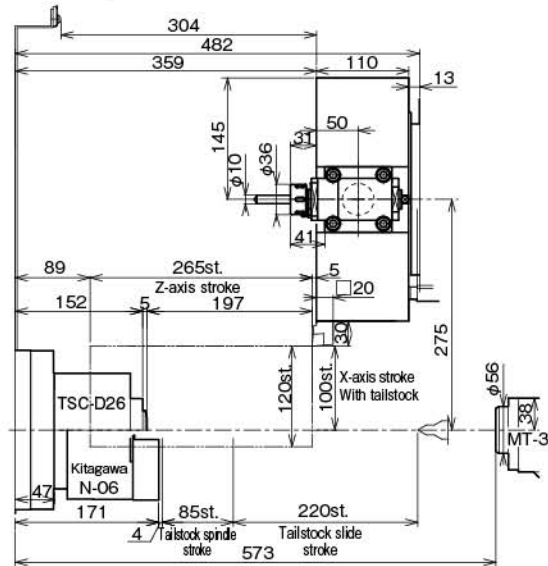
The figure above shows the tooling when an OD(reverse)cutting tool (20 sq.)is mounted. When an OD(normal)cutting tool is mounted, the tool size is limited to 16 sq.

Unit (mm)

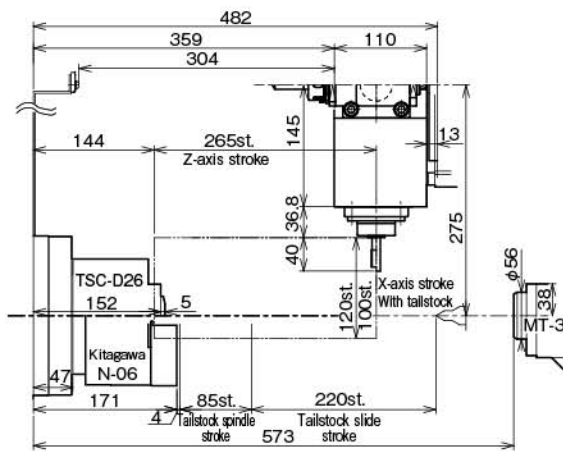
XT-6M

Stroke-Related Drawing

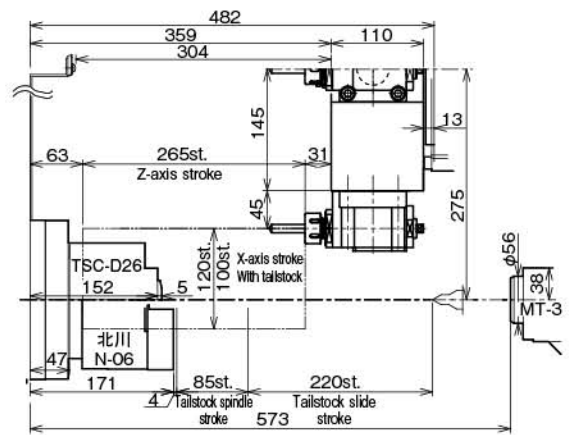
■ O.D. turning range



■ Side milling range

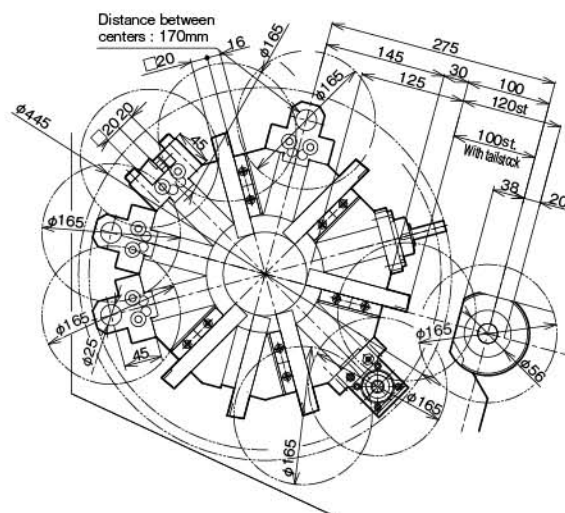


■ Face milling range



Turret Interference

■ Power Tool type
12-station turret

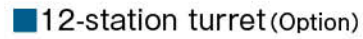


⚠ CAUTION

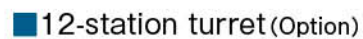
The figure above shows the tooling when an OD (reverse) cutting tool (20 sq.) is mounted. When an OD (normal) cutting tool is mounted, the tool size is limited to 16 sq.

Unit (mm)

■ 8-station turret



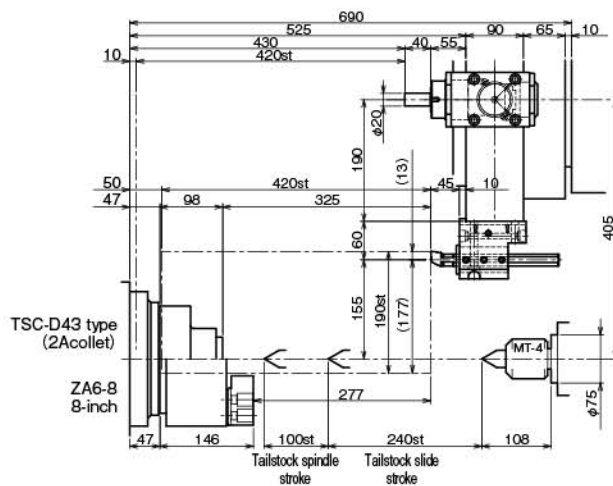
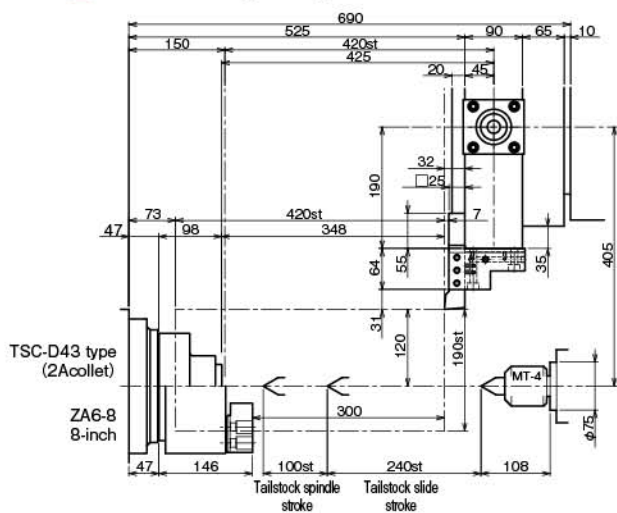
■ 8-station turret



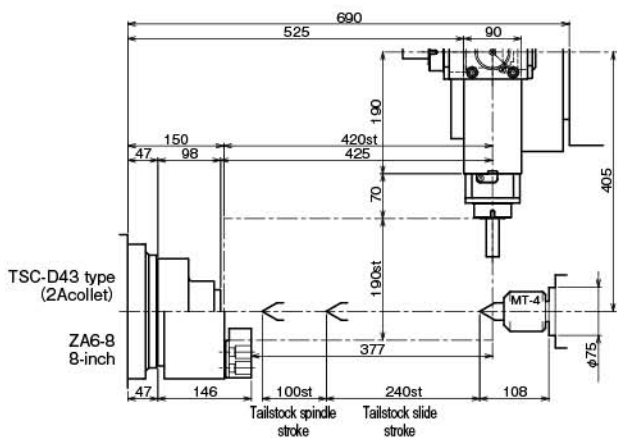
XT-8M

Stroke-Related Drawing

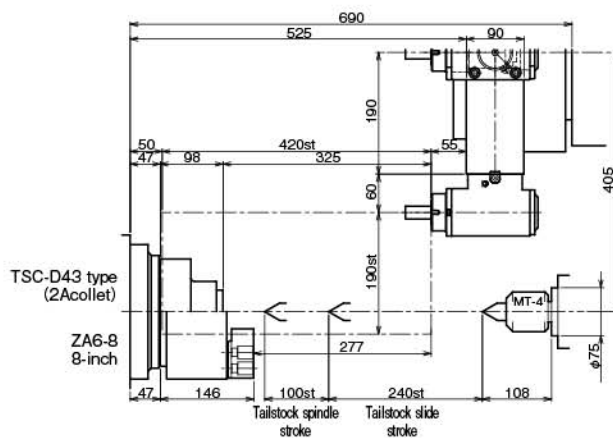
■ O.D. turning range



■ Side milling range

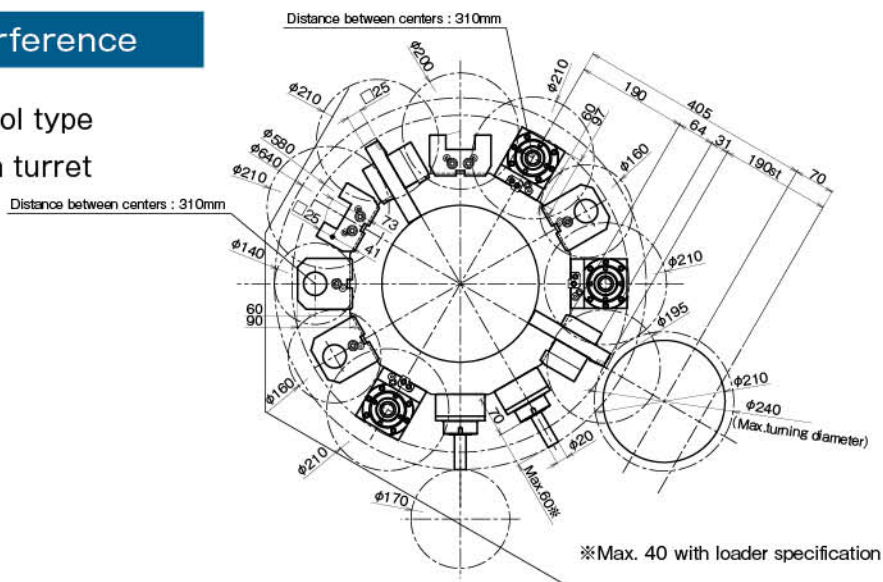


■ Face milling range



Turret Interference

■ Power Tool type
12-station turret



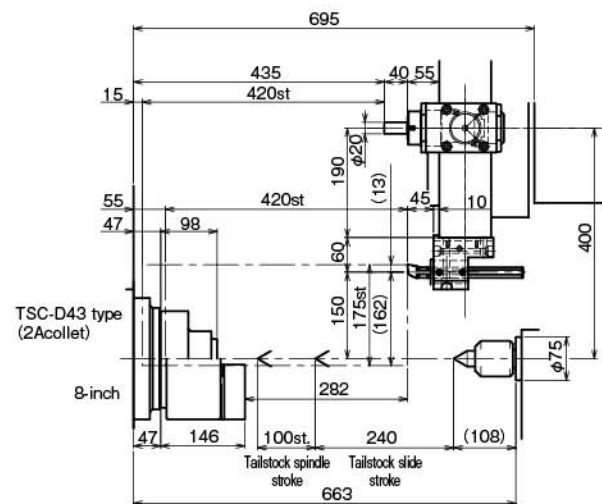
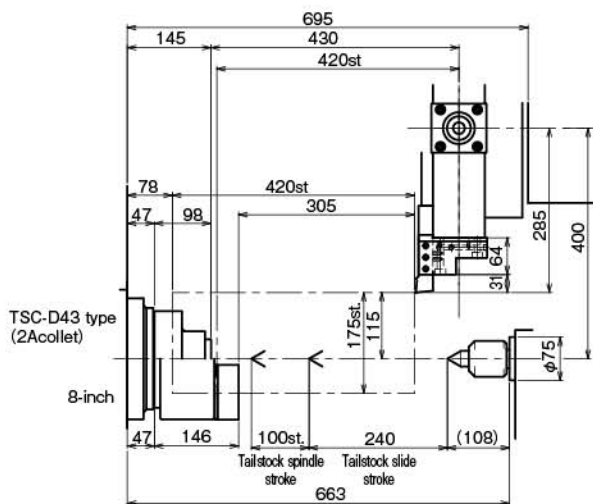
※Max. 40 with loader specification

Unit (mm)

XT-8MY

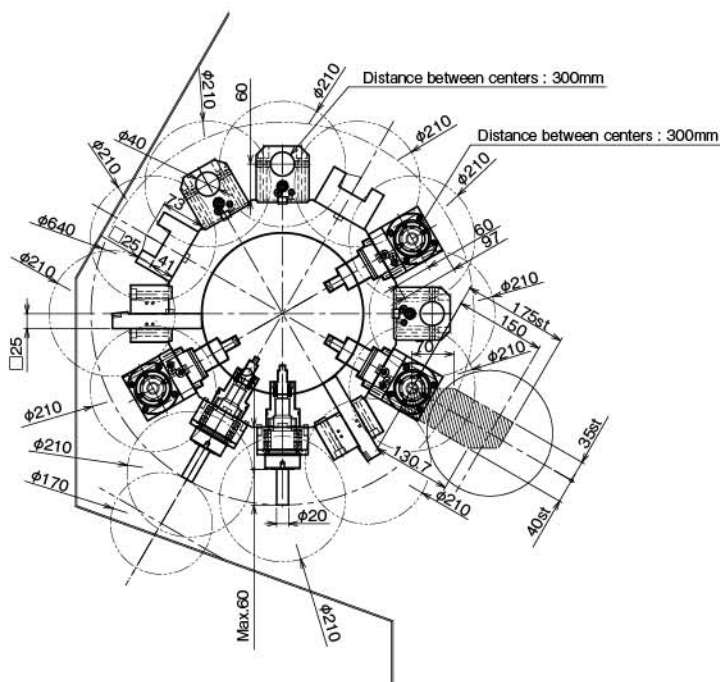
Stroke-Related Drawing

■ O.D. turning range



Turret Interference

■ Power Tool type
12-station turret



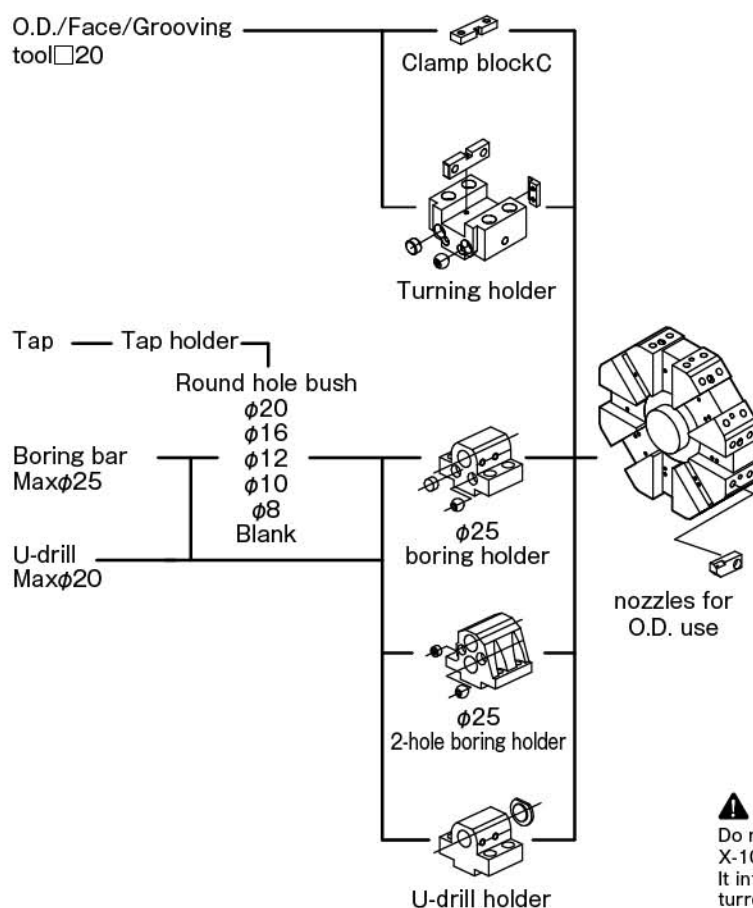
※ The shaded area is the travel range of the X and Y axes.

Unit (mm)

XTS-6

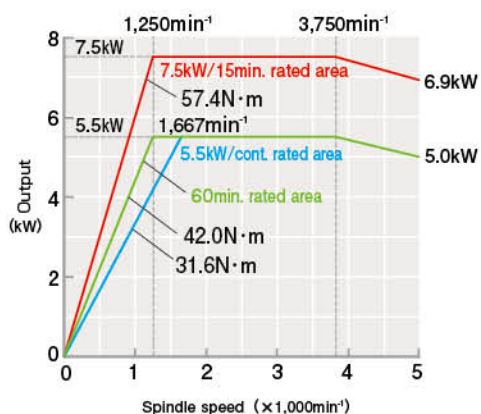
Tooling system

[8-station turret]



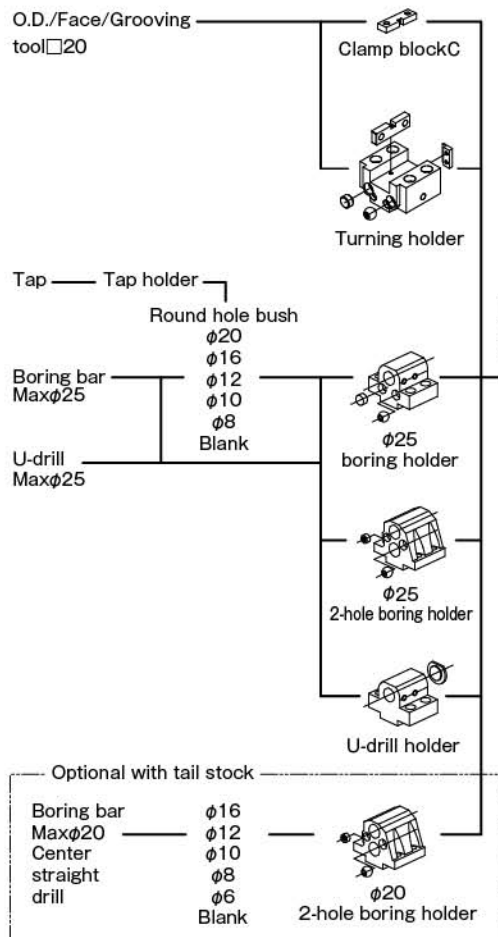
Spindle power characteristic curve

■ Max. 5,000 min⁻¹
 (AC 7.5/5.5 kW) $\phi 75$

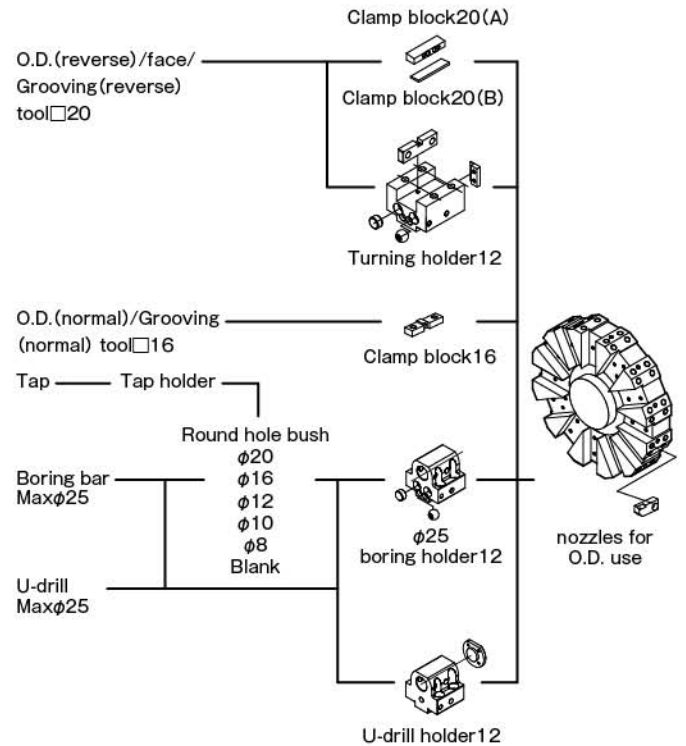


Tooling system

[8-station turret]



[12-station turret (Option)]

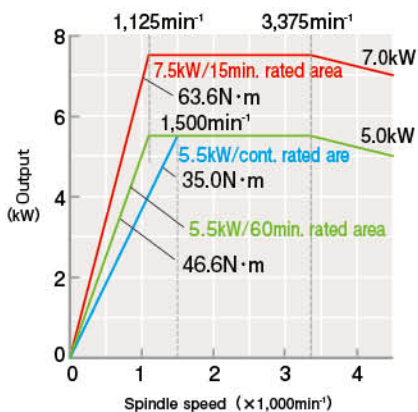


CAUTION

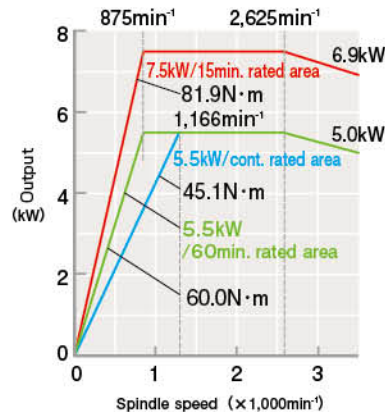
Do not use an ID holder provided for X-100 (X-10i or X-10). It interferes with the cover when the turret turns.

Spindle power characteristic curve

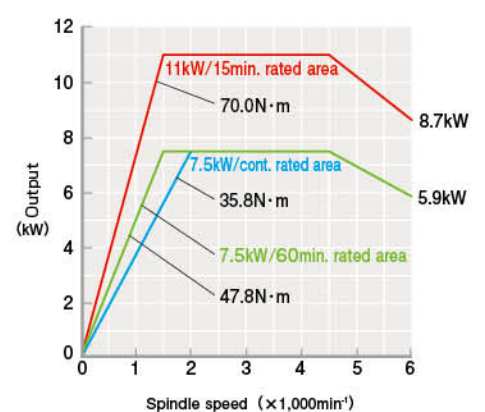
■ Max. 4,500min⁻¹ (AC 7.5/5.5kW) φ75



■ Max. 3,500min⁻¹ (AC 7.5/5.5kW) φ85

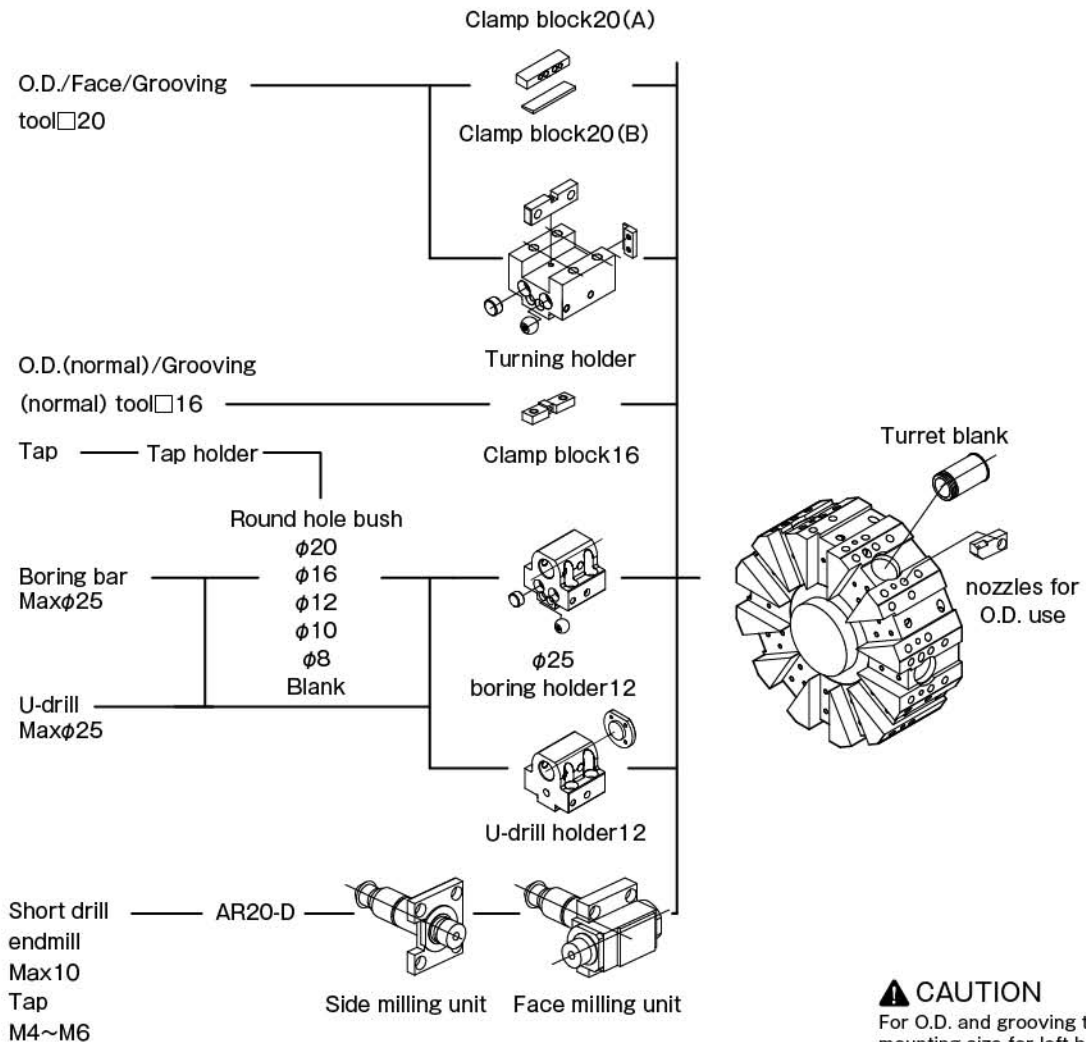


■ Max. 6,000min⁻¹ (AC 11/7.5kW) φ75



XT-6M

Tooling system

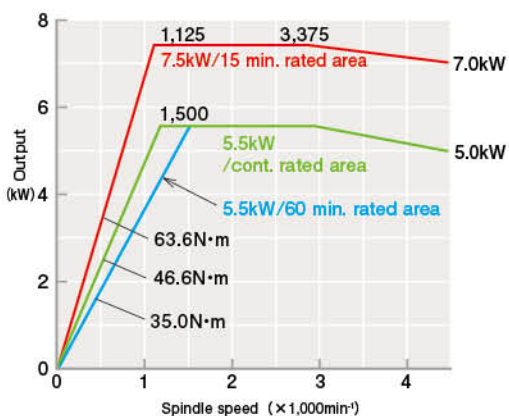


CAUTION

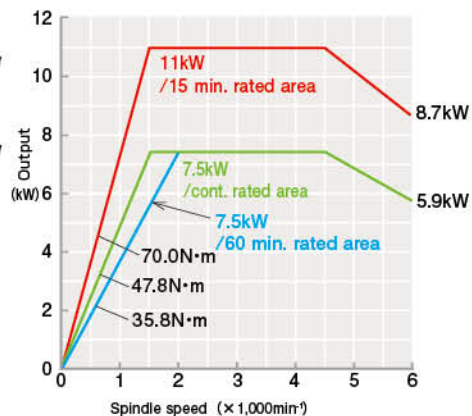
For O.D. and grooving tools, the mounting size for left-hand tools is 20 sq., and for right-hand tools it is 16 sq.

Spindle power characteristic curve

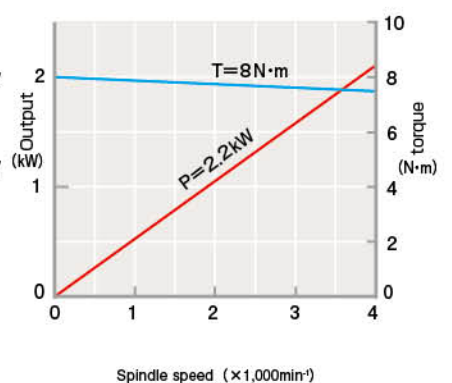
■ Max.4,500min⁻¹ (7.5/5.5kW) φ75



■ Max.6,000min⁻¹ (11/7.5kW) φ75



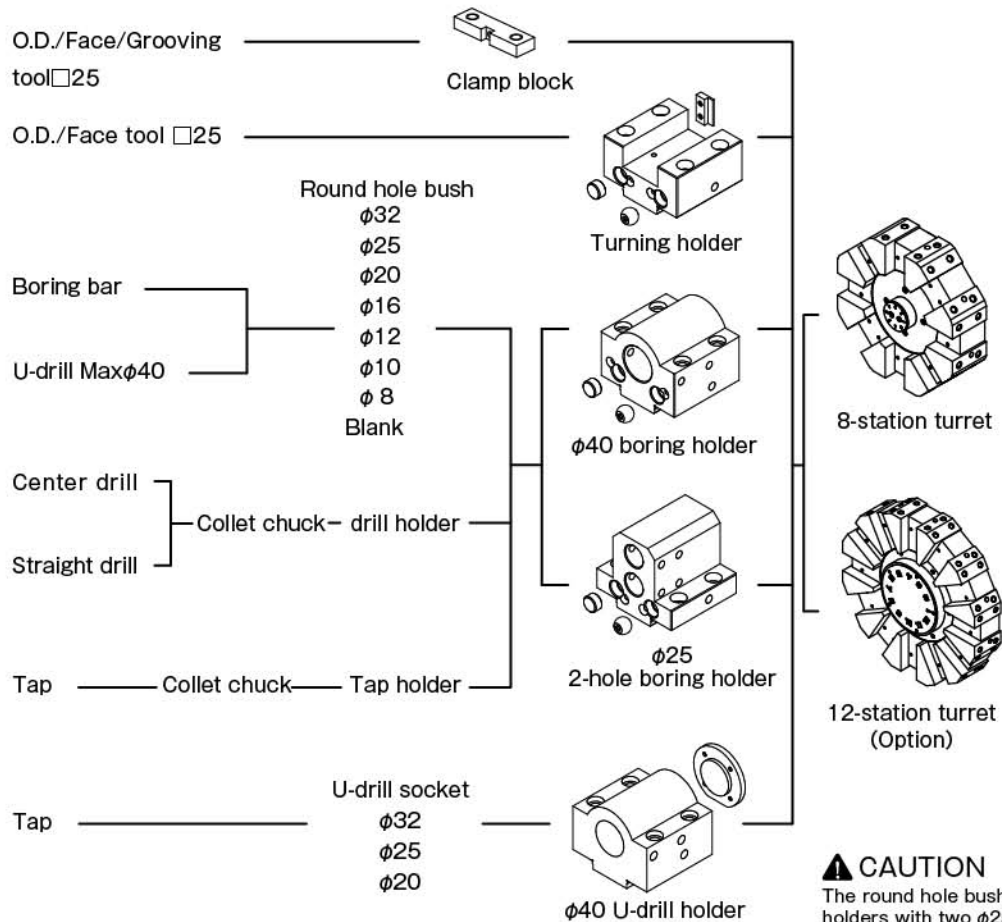
Power tool power characteristic curve



XT-8

Tooling system

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

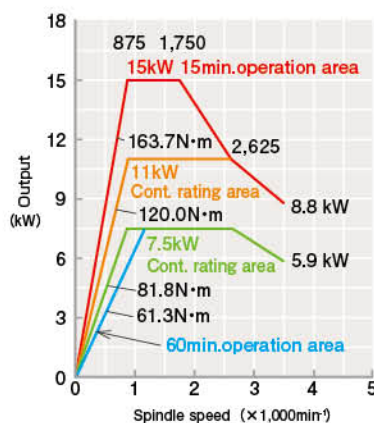


CAUTION

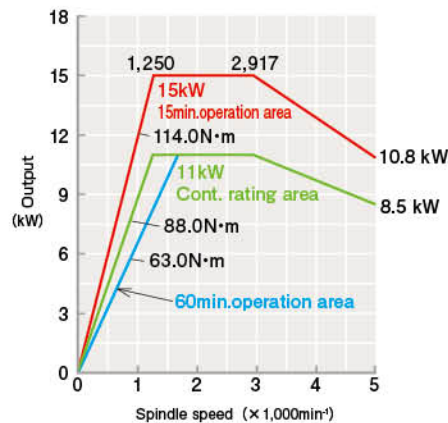
The round hole bush diameters for holders with two $\phi 25$ mm holes are $\phi 20$ mm or smaller.

Spindle power characteristic curve

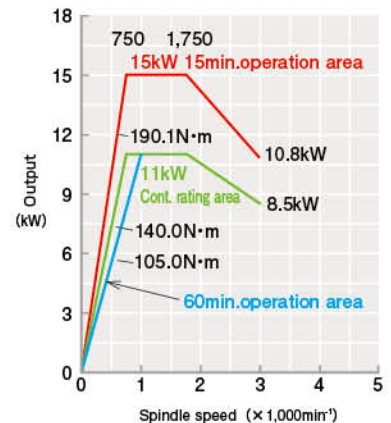
■ Max. 3,500 min⁻¹ (AC 11/7.5 kW) $\phi 100$



■ Max. 5,000 min⁻¹ (AC 15/11 kW) $\phi 100$



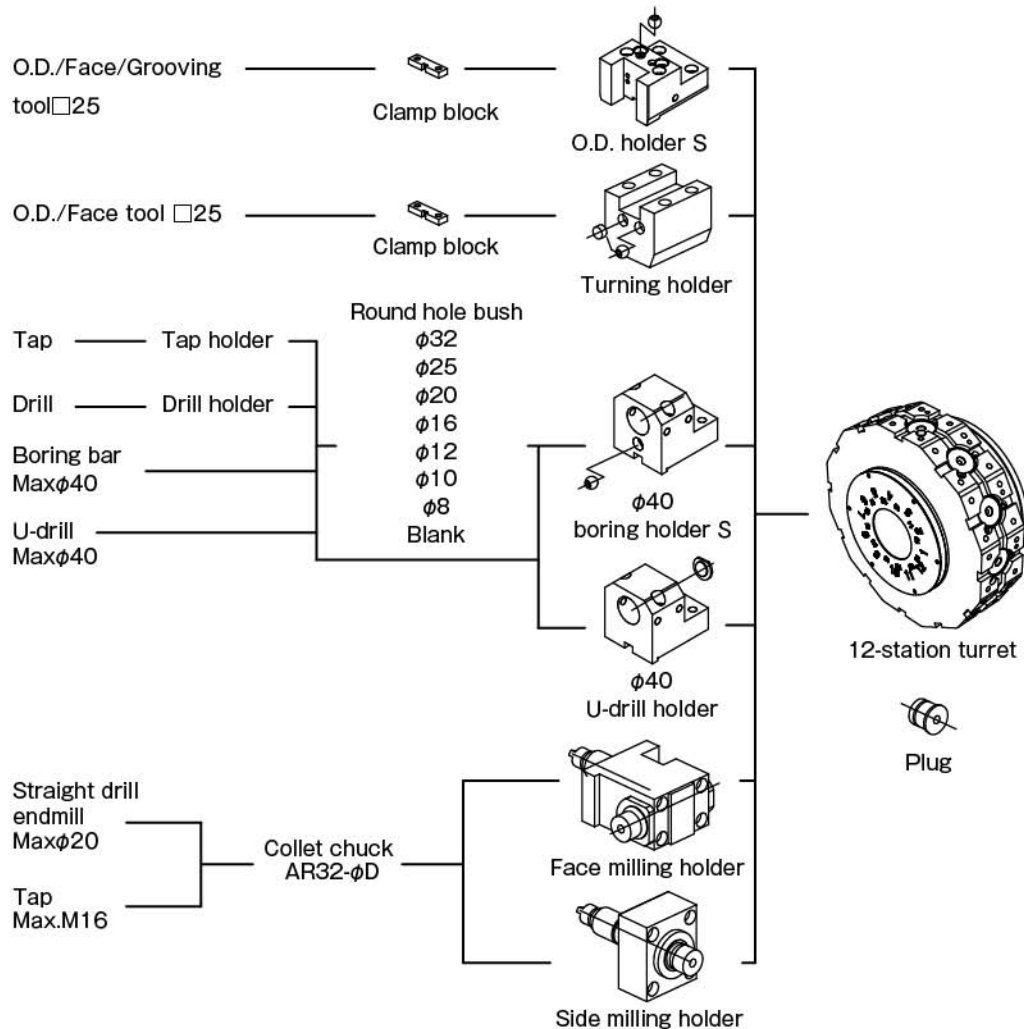
■ Max. 3,000 min⁻¹ (15/11 kW) $\phi 120$



XT-8M

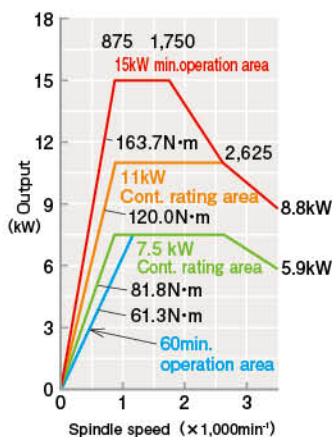
Tooling system

[12-station turret]

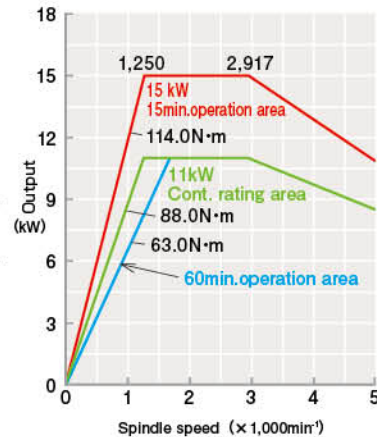


Spindle power characteristic curve

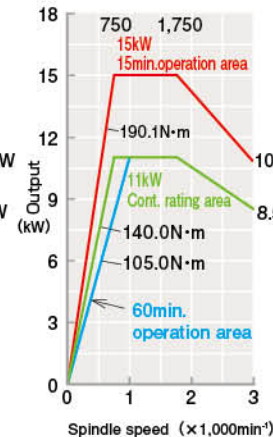
■ Max.3,500min⁻¹
(AC 11/7.5kW) φ100



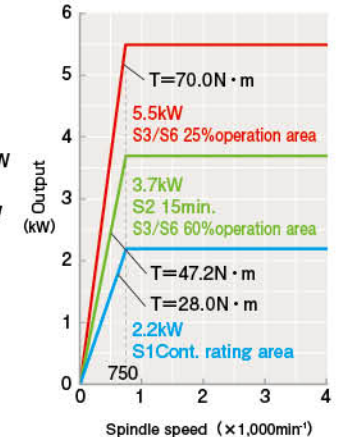
■ Max.5,000min⁻¹
(AC 15/11kW) φ100



■ Max.3,000min⁻¹
(15/11kW) φ120



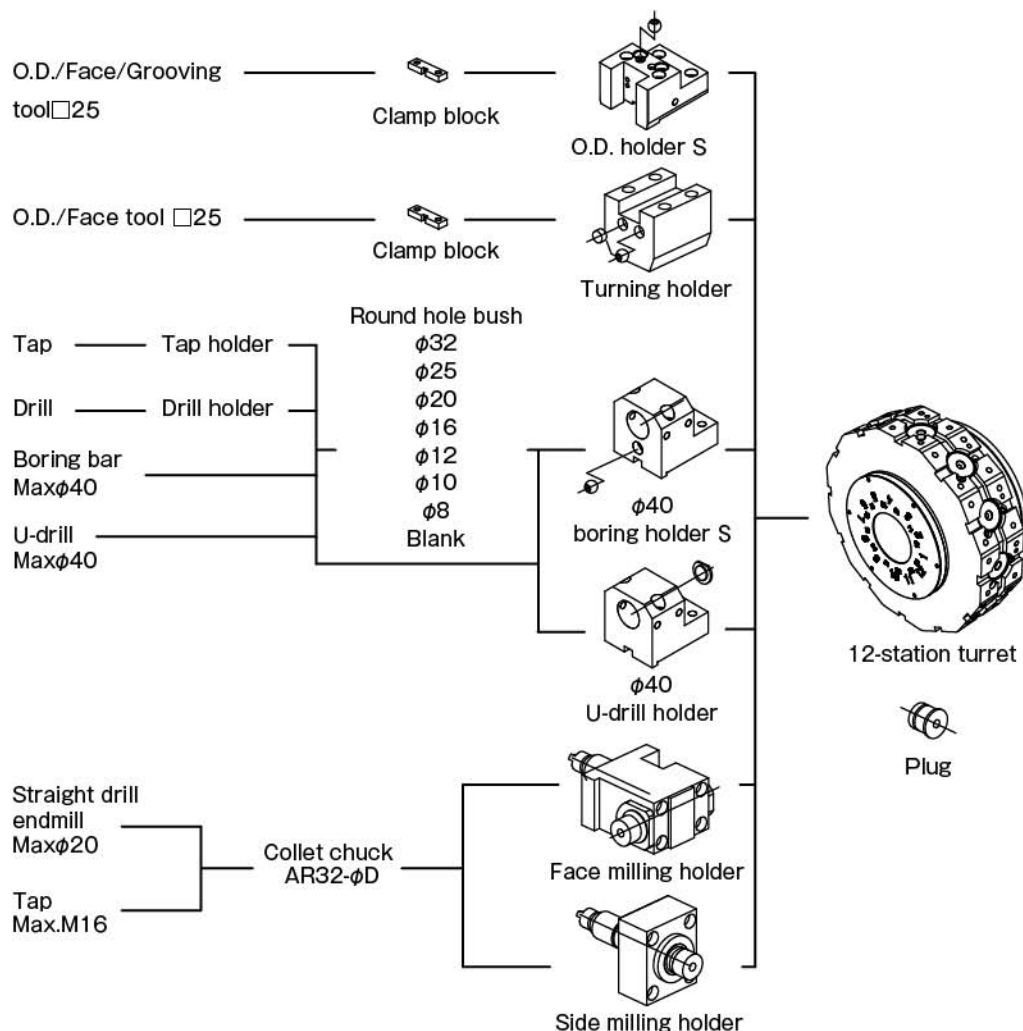
■ Max.4,000min⁻¹
(AC 5.5/3.7/2.2kW)



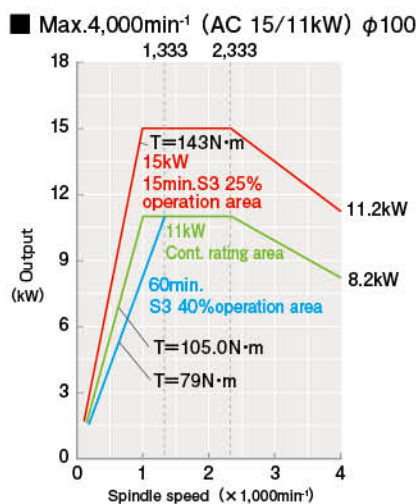
XT-8MY

Tooling system

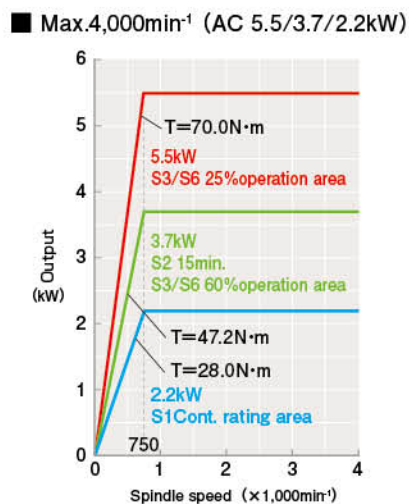
[12-station turret]



Spindle power characteristic curve

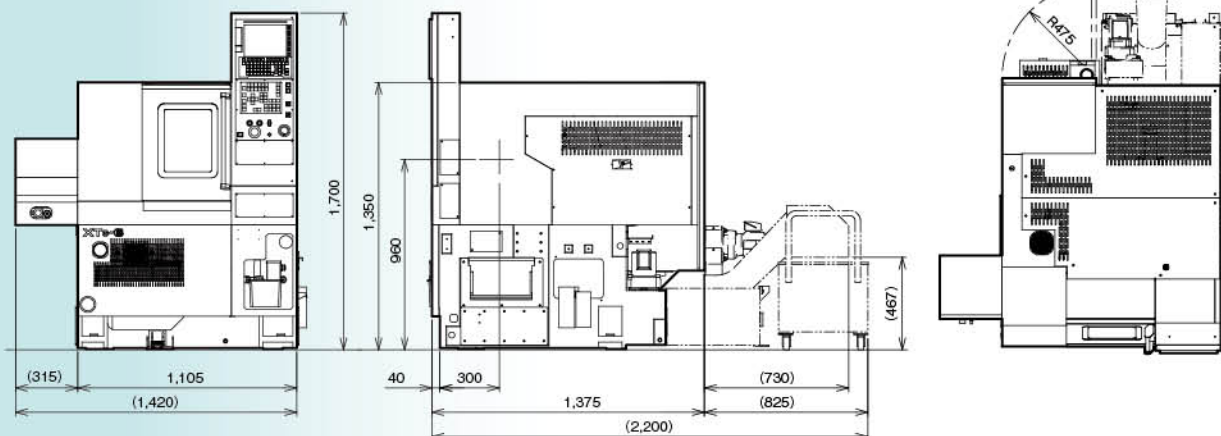


Power tool power characteristic curve

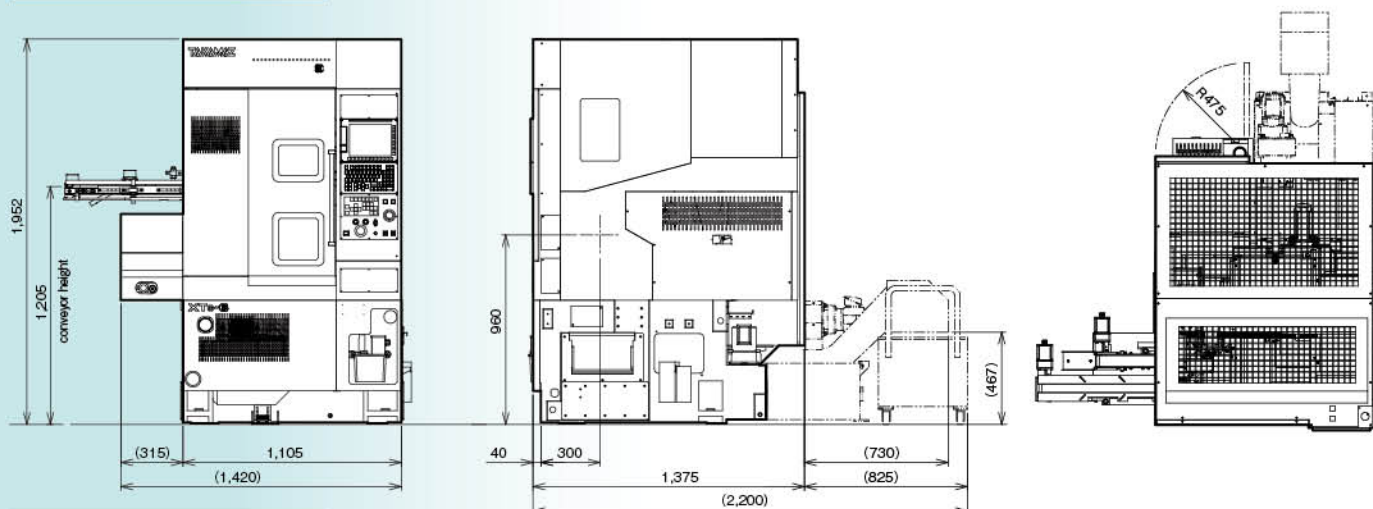


XTS-6

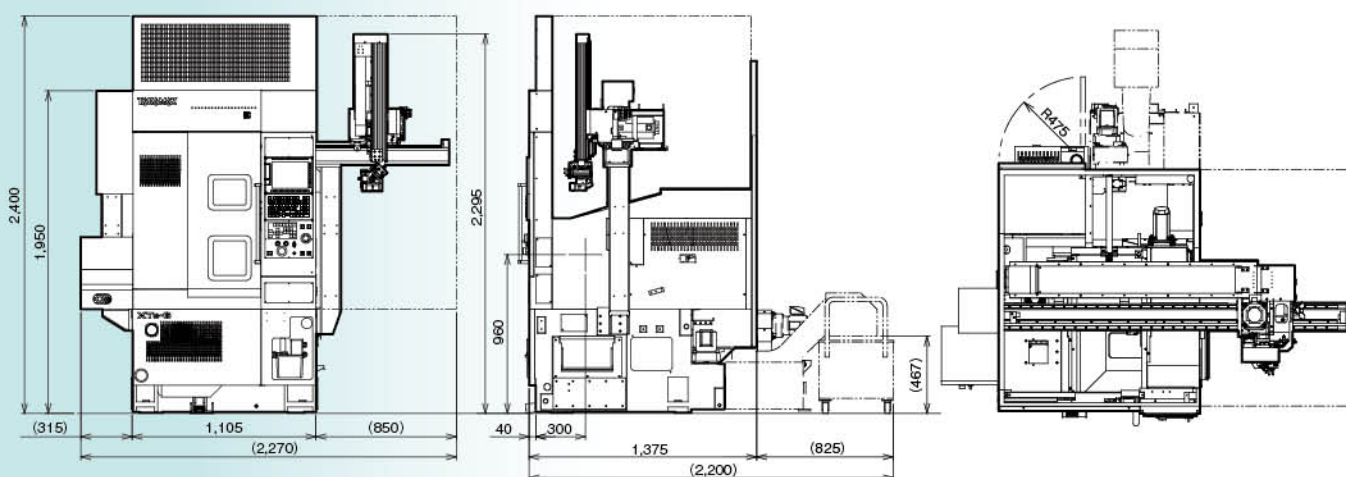
Standard type



Compact Loader type



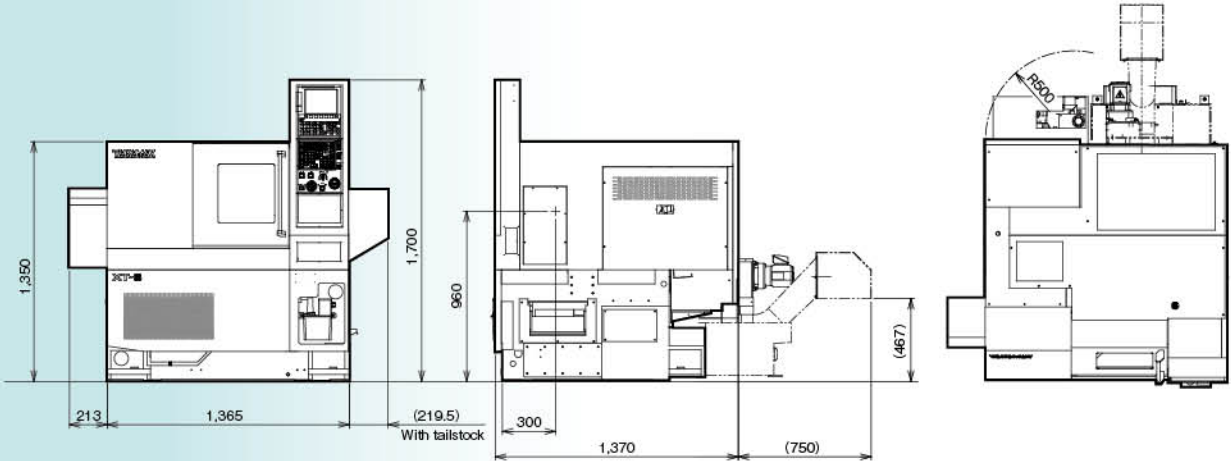
Gantry Loader type



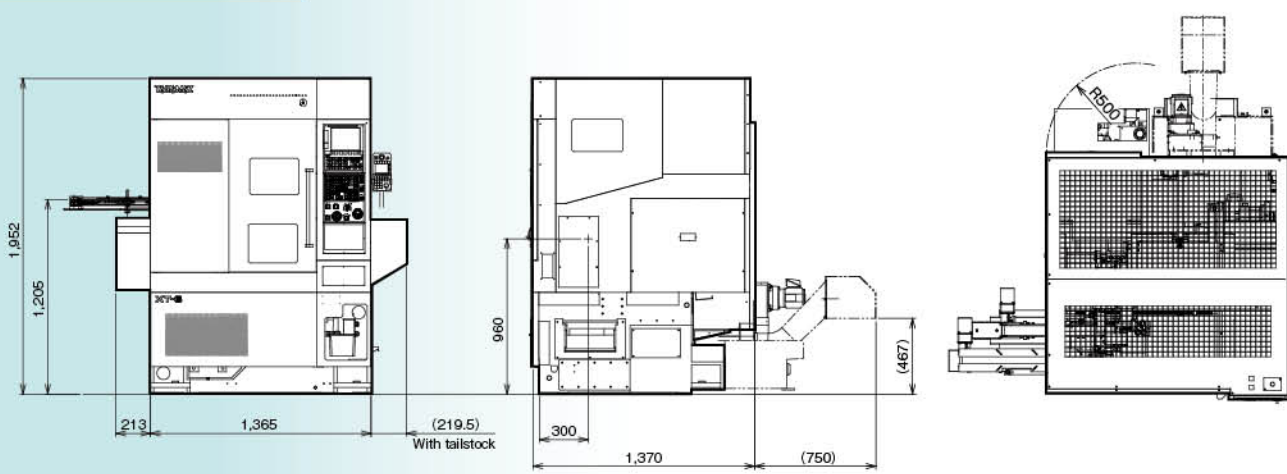
Unit (mm)

XT-6/6M

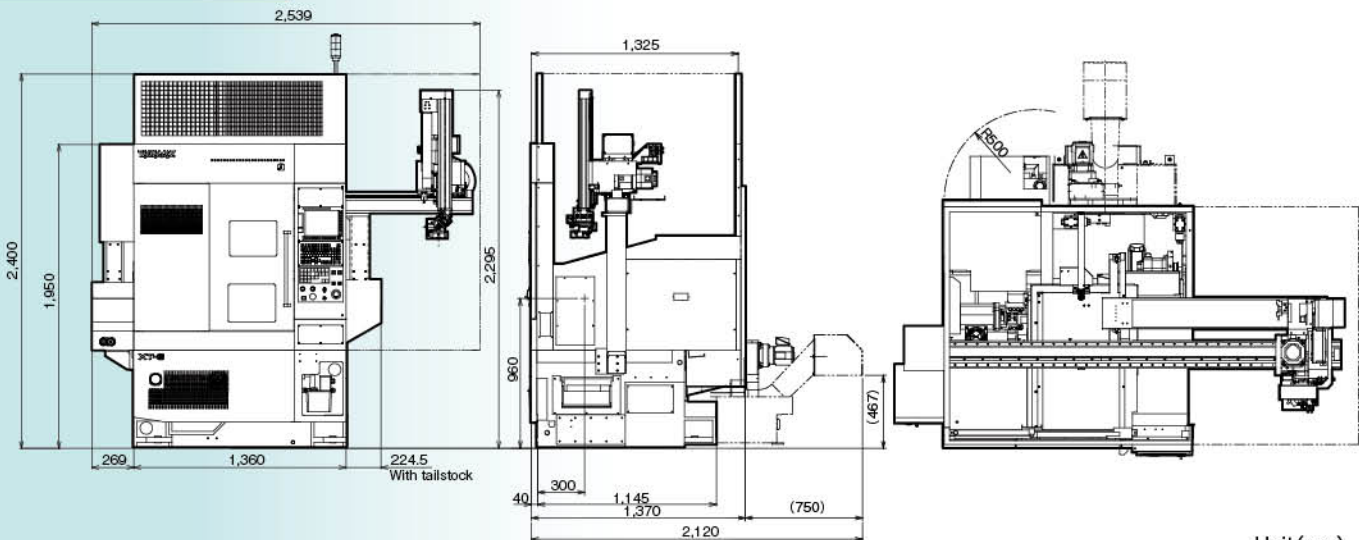
Standard type



Compact Loader type



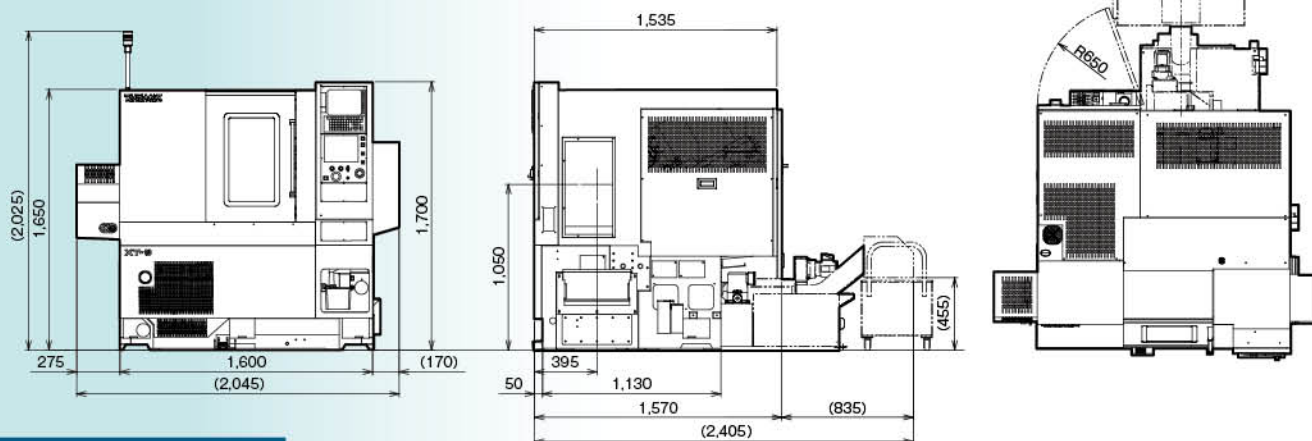
Gantry Loader type



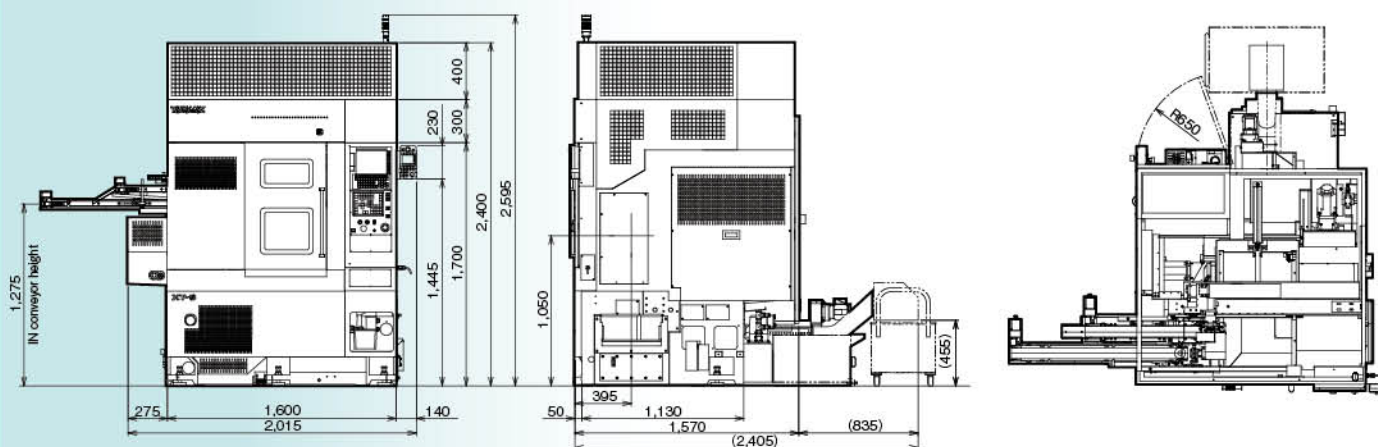
Unit (mm)

XT-8

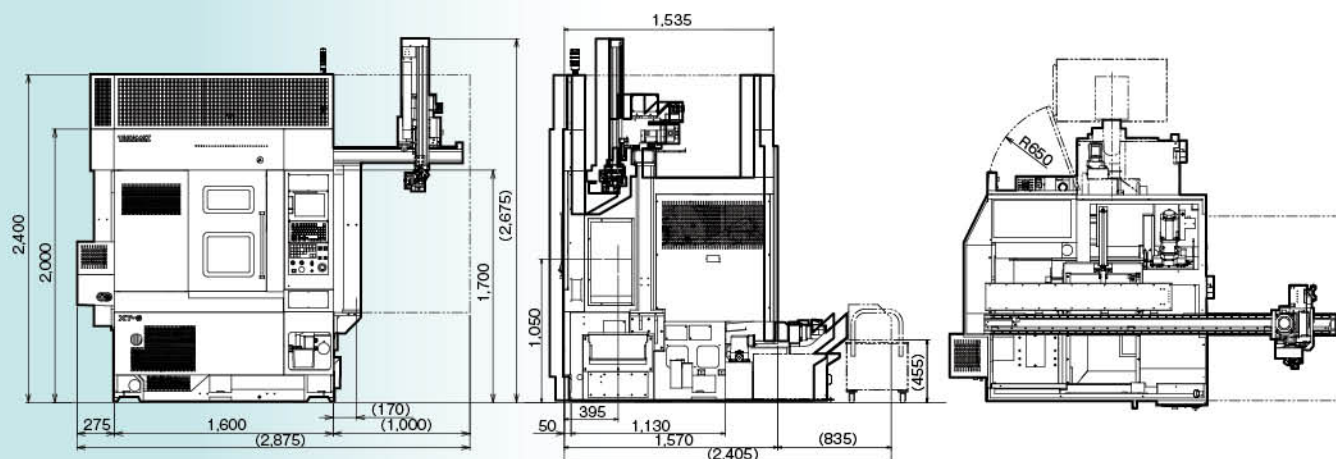
Standard type



Compact Loader type

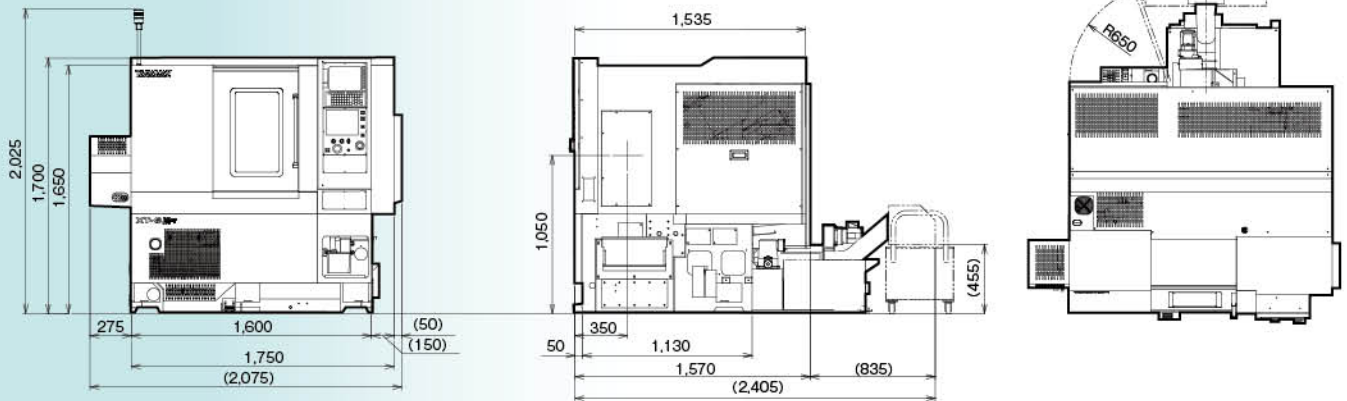


Gantry Loader type

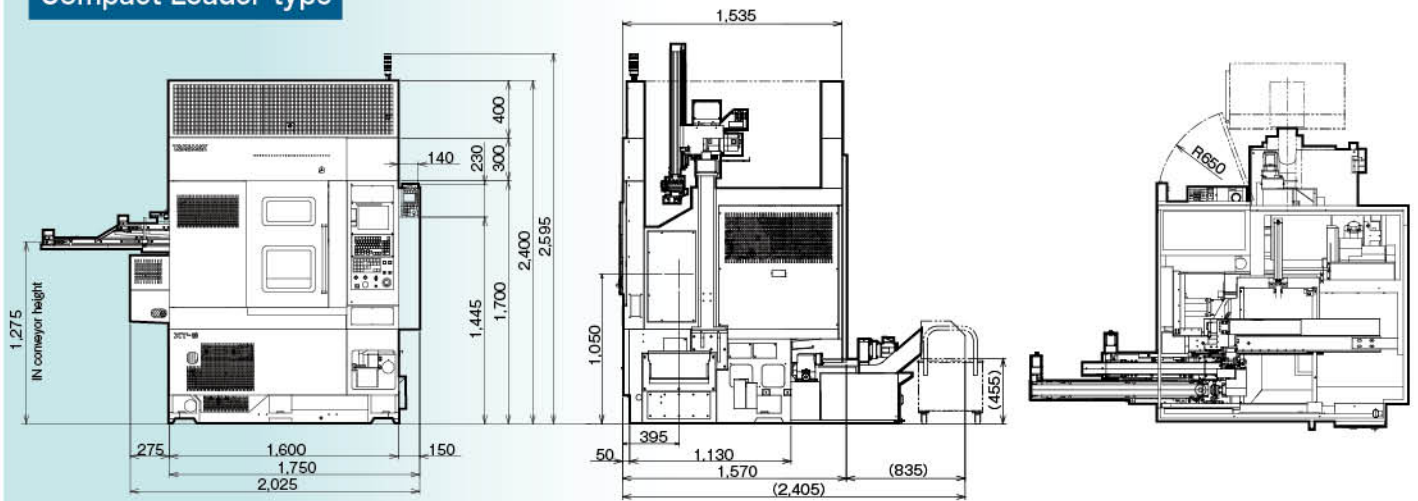


XT-8M

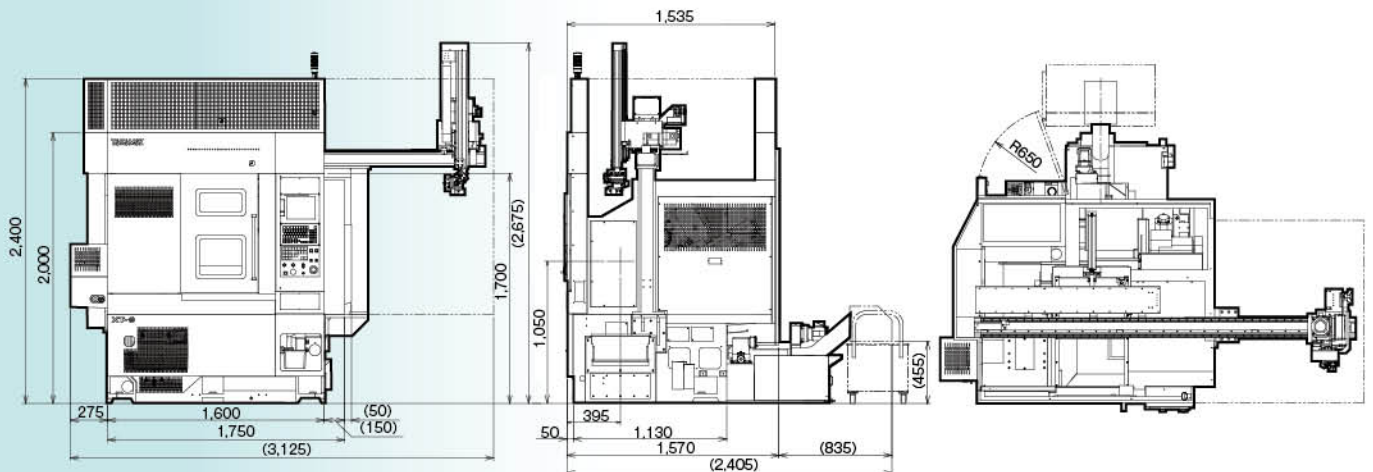
Standard type



Compact Loader type



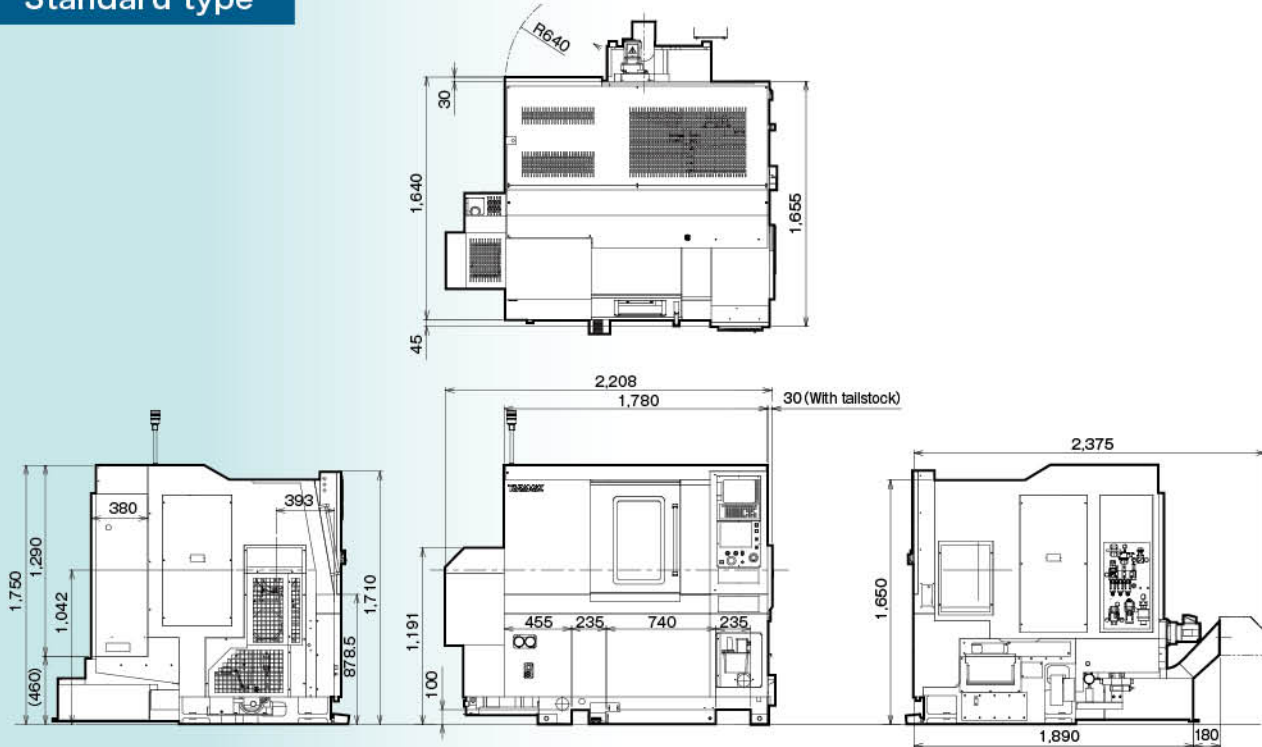
Gantry Loader type



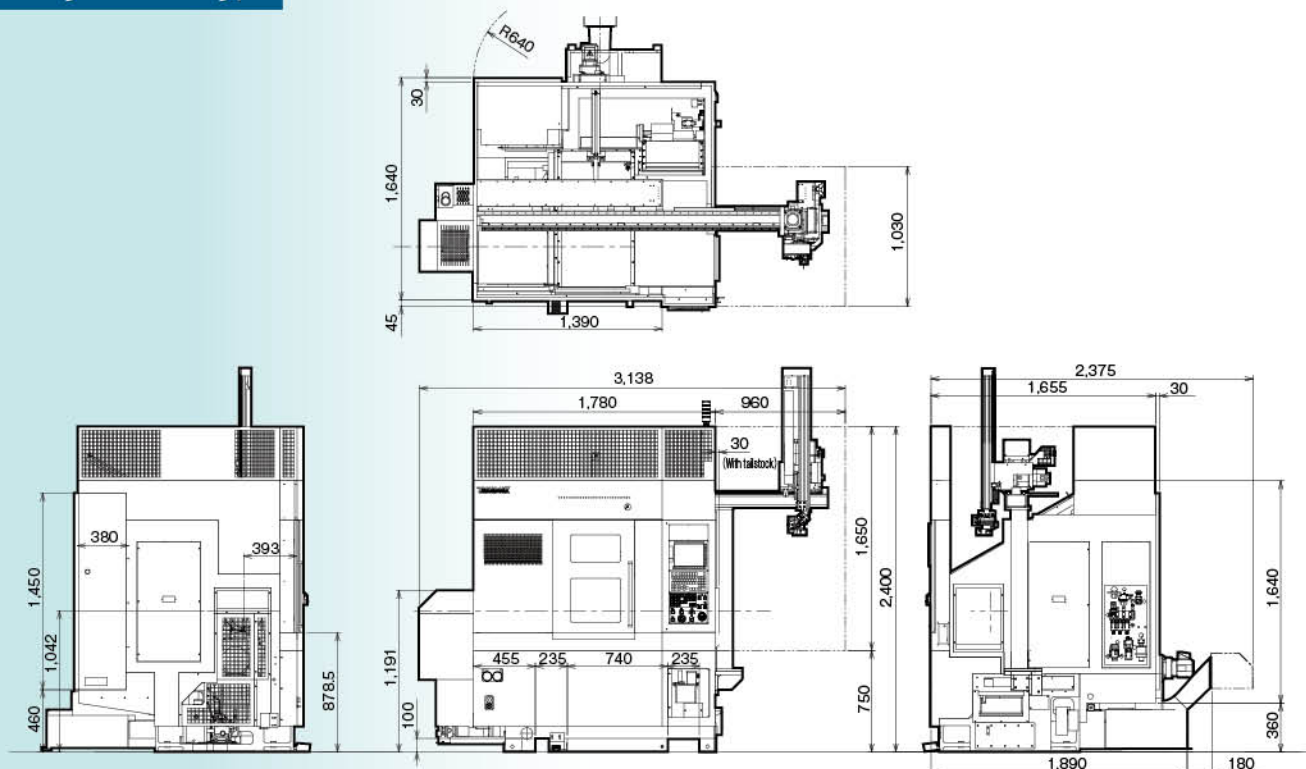
Unit (mm)

XT-8MY

Standard type



Gantry Loader type



SPECIFICATION

Machine Specifications

| Item | Unit | XTS-6 | XT-6 | | XT-6M | XT-8 | | XT-8M | XT-8MY |
|-------------|-------------------------|-------------------|---------------------------------------|--|---|-----------------------------|------------------------------------|-----------------------------|---------------------------|
| | | | 6-inch type | (8-inch type) | | 8-station type | (12-station type) | | |
| Capacity | Max. turning diameter | mm | φ180 | φ180 (With 12-station φ200) | φ200 | φ340 | φ300 | φ240 | φ220 |
| | Max. turning length | mm | 200 | 240 | 195 | 370 | 348 | 353 (420) | 353 (420) |
| | Max. bar diameter | mm | φ26 | φ26 (φ35) (φ42) | φ26 (φ35) | Solid (φ42, φ51, φ65) | | | Solid (φ42, φ51) |
| | Chuck size | inch | 6 | 8 | 6 | 8 (10) | 8 | 8 | 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 ⁻¹ | 5,000 | 4,500 (6,000) | 3,500 | 4,500 (6,000) | 3,500 (5,000) (3,000) | 4,000 | 4,000 |
| | Type | | 8-station | 8-station (12-station) | 8-station | 12-station | 8-station turret 12-station turret | 12-station turret | 24st. |
| Tool post | Tool shank | mm | □20 | 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 Z:230 | X:120 (tailstock: 90<8-station> 100<12-station>) Z:280 | X:120 (tailstock: 100) 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 Y:10 | | | |
| Power tools | Tool storage capacity | pcs. | 6 | | | 12 | | | |
| | Rotation speed | min ⁻¹ | 4,000 | | | 4,000 | | | |
| | Drill | mm | φ10 | | | φ20 | | | |
| | Endmill | mm | φ10 | | | φ20 | | | |
| | Tap | mm | M6 | | | M16 | | | |
| Cs-axis | Rapid traverse rate | deg/min | 18,000 | | | 18,000 | | | 36,000 |
| Motors | Spindle motor | kW | AC7.5/5.5 | AC7.5/5.5 (AC11/7.5) | AC7.5/5.5 | AC11/7.5 (AC15/11) | | | 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 | | | AC 0.75 (tailstock: AC1.5) | | | |
| | 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 | | | 240 | | | |
| | Tailstock stroke | mm | 220 | | | 5.3 | | | |
| | Max. thrust | kN | 3.5 | | | | | | |
| Size | L×W×H | mm | 1,105×1,380×1,700 (2,080※2) | 1,360×1,370×1,700 (2,080※2) | 1,600×1,535×1,700 (2,400※1) | 1,750×1,535×1,700 (2,400※1) | 1,780×1,685×1,750 (2,400※1) | 1,780×1,685×1,750 (2,400※1) | |
| | Machine weight | kg | 1,900 (2,100※2) | 2,300 (2,500※2) | 2,500 (2,700※2) | 3,200 (3,700※1) | 3,400 (3,900※1) | 4,000 (4,400※1) | |
| | Total electric capacity | KVA | 12~15 (depends on the specifications) | 12~19 (depends on the specifications) | 16~27 (18~26※1) (depends on the specifications) | 25 (27※1) | | | |

※ With FGH Loader specifications ※ 2 FC60 specification

() : Option

Standard Accessories

| Item | XTS-6 | XT-6 | XT-6M | XT-8 | XT-8M | XT-8MY |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
| □ Boring holder | 2 sets | | | | | |
| □ O.D. holder | - | | | | | |
| □ Clamp block | 8 sets | 8 sets (12 sets) | - | - | - | 2 sets |
| □ Coolant block (nozzles for O.D. use) | 1 set | | | | | |
| □ Collet flange | 1 set | | | | | |
| □ Stroke adjust cylinder | 1 set | | | | | |
| □ Hydraulic chucks | (Option) | | | | | |
| □ Hydraulic unit | 1 set (8-inch) | | | | | |
| □ Chuck clamp detector | 1 set | | | | | |
| □ Spindle indexing device | - | 1 set (Cs-axis) | - | 1 set (C-axis) | 1 set (Cs-axis) | 1 set (Cs-axis) |
| □ Power tools drive unit | - | 1 set | - | 1 set | 1 set | 1 set |
| □ Thread cutting unit (including constant surface speed control) | 1 set | | | | | |
| □ Coolant unit | 1 set (130 lit.) | 1 set (140 lit.) | 1 set (145 lit.) | 1 set (145 lit.) | 1 set (140 lit.) | 1 set (140 lit.) |
| □ Work light | 1 set | | | | | |
| □ Service tool kit | 1 set | | | | | |
| □ TAKAMAZ Instruction manual | 1 set | | | | | |

Optional Accessories

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

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

| Controller Specifications | | | | | | |
|--|--|------|----------------------|---------------------|---|---|
| TAKAMAZ & FANUC Oi-TF Plus FLoader:Type0 Standard.ΣiLoader:Type1 | | | | | | |
| Item | XTs-6 | 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(Except F loader specifications) | | | | | |
| 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 | XTs-6 | 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 specification only | | | | | |
| Helical interpolation | — | ○ | — | — | ○ | — |
| FANUC Instruction manual | Bound | | | | | |

Head Office and Plant

■ TAKAMATSU MACHINERY CO., LTD.

• HEAD OFFICE

1-8 ASAHIGAOKA HAKUSAN-CITY ISHIKAWA JAPAN. 924-8558
TEL +81-(0)76-207-6155 FAX +81-(0)76-274-1418

• ASAHI PLANT

4-13 ASAHIGAOKA HAKUSAN-CITY ISHIKAWA JAPAN. 924-0004
TEL +81-(0)76-274-0123 FAX +81-(0)76-274-8530



Overseas Bases

■ TAKAMATSU MACHINERY U.S.A., INC.

• CHICAGO HEAD OFFICE

1280 LANDMEIER ROAD ELK GROVE VILLAGE, IL 60007 USA
TEL +1-(0)847-981-8577 FAX +1-(0)847-981-8599

■ TAKAMAZ MACHINERY EUROPE GmbH

IM HÜLSENFELD 19, 40721 HILDEN, GERMANY
TEL +49-(0)2103-789-4882 FAX +49-(0)2103-789-4883

■ TAKAMAZ MACHINERY (HANGZHOU) CO., LTD.

• HANGZHOU HEAD OFFICE

NO.6800, JIANGDONG 3RD ROAD, JIANGDONG INDUSTRIAL PARK,
XIAOSHAN, HANGZHOU, ZHEJIANG, CHINA
TEL +86-(0)571-8287-9709 FAX +86-(0)571-8215-3732

■ TAKAMATSU MACHINERY (THAILAND) CO., LTD.

• BANGKOK HEAD OFFICE

888/59 MOO 9, TAMBOL BANGPLA, AMPHUR BANGPLEE,
SAMUTPRAKARN PROVINCE, THAILAND
TEL +66-(0)2-136-7831 FAX +66-(0)2-136-7834

■ PT. TAKAMAZ INDONESIA

JL. FESTIVAL BOULEVARD BLOK AA 11 NO.30.31 GRAND WISATA TAMBUN, BEKASI 17510
TEL +62-(0)21-8261-6431 FAX +62-(0)21-8261-6430

■ TAKAMAZ MACHINERY MEXICO, S.A.DE C.V.

AVENIDA DE LOS INDUSTRIALES 522, LOCAL 4, INDUSTRIAL JULIAN DE OBREGON,
37290 LEON, GUANAJUATO MEXICO
TEL +52-477-784-0468

■ TAKAMATSU MACHINERY VIETNAM CO., LTD

NO.76 M HOANG QUOC VIET, PHU MY WARD, DISTRICT 7, HO CHI MINH CITY, VIETNAM
TEL +84-(0)28-3620-5671 FAX +84-(0)28-3620-5673

Affiliated Companies

■ HANGZHOU FEELER TAKAMATSU MACHINERY CO., LTD.

NO.6800, JIANGDONG 3RD ROAD, JIANGDONG INDUSTRIAL PARK,
XIAOSHAN, HANGZHOU, ZHEJIANG, CHINA
TEL +86-(0)571-8215-3760 FAX +86-(0)571-8286-5311

More detailed information is available on our website.

<https://www.takamaz.co.jp>

