

CNC 2 Spindle 2 Slide
Precision Lathe

XXW series



TAKAMAZ

CNC **2**-Spindle **2**-Slide Precision Lathe

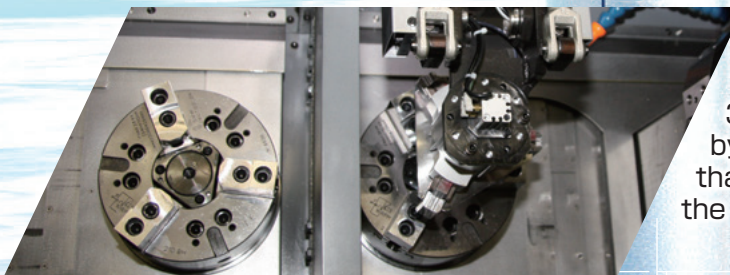
XW series

*Full Lineup of **2**-Spindle and
2-Slide Lathe Machines!*



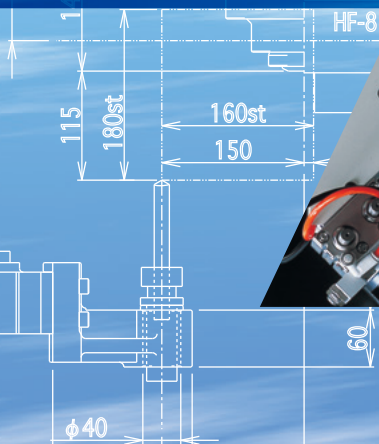
From the original spindle parallel structure, a high rigidity, compact and high precision design is achieved. This qualifies as an expert model for durability on mass production system.

Simultaneous same process machining



“Work in process” is no longer in inventory. The loader is equipped with a 3-axis servo that is realized by a flexible line structure that leads to reduction of the production line.

Simultaneous machining of both sides of the part



Depending on the production requirements, separate left and right cutting is possible.

Independent production form

Chuck size

Type

XWG-3

4

Inch



Gang Type

Achieving high-speed,
high-accuracy machining!

P3–P4

XW-60

6

Inch



Drum Type

Medium-sized machine
boasting high productivity!

P5–P6



YouTube

XW-60M

6

Inch



Drum Type

Achieving versatile machining
by mounting power tools!

P5–P6

XWT-8

NEW

8

Inch



Drum Type

“Fastest in class” loading times

P7–P8

XW-130M

8

Inch



Drum Type

Achieving high productivity
with powerful milling!

P9–P10

XW-200

10

Inch



Drum Type

Long-awaited machine
accepting 10-inch chucks!

P11–P12

XWT-10

10

Inch



Drum Type

Upgraded machine with
two 10-station turrets!

P13–P14



YouTube

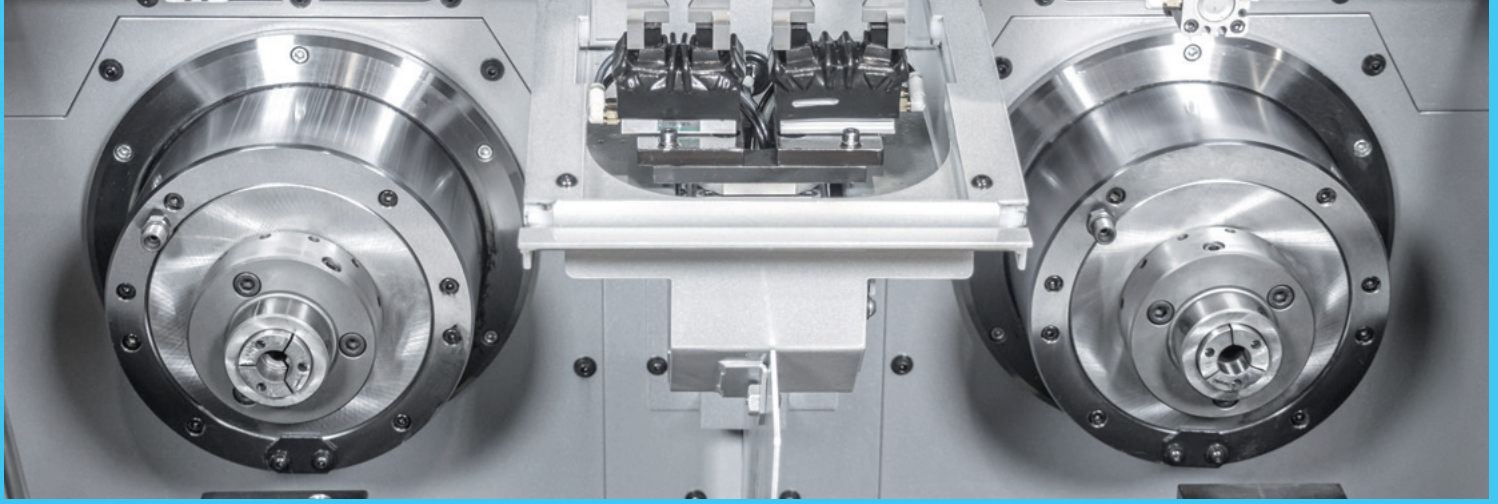


CNC 2-Spindle 2-Slide Precision Lathe

XWG-3



Chuck size 3 / 4 Inch



TAKAMAZ's proposal for contributing to carbon neutrality and building a new style of production

Built-in motor spindles for stable accuracy

5.5/3.7kW high-efficiency motors are used.

The machine can be equipped with up to 4-inch chucks, and optionally hydraulic cylinders, enabling stable mass production of workpieces that could not be cut previously due to insufficient gripping force. In addition, a review of the cooling circuit has made the oil controller that was previously required for short-cycle machining unnecessary*, resulting in cost and space savings.

※An oil controller may still be required for some specifications.

Targeting high accuracy with the in-machine cooling unit

Two-spindle machines are prone to unstable accuracy due to thermal imbalance when different machining is performed on the right and left, but this machine has a cooling tank for the two built-in motor spindles inside the bed to suppress thermal displacement and achieve stable change over time. (Patented technology)

Reduction of the number of parts and enhanced energy saving effect

The new MG loader installed in this machine uses far less parts compared to previous loader systems by integrating parts such as the control PCB, display unit, and battery which is a maintenance part, into the machine.



In addition, the new adoption of a power regeneration system along with higher-speed movements gives greater energy savings than previous models.

Innovation in the mode of production

Featuring a footprint of a mere 2.75 m², this machine needs only enough space for installing a single lathe.

We promise high-precision and high-efficiency production with two built-in motor spindles.

In contrast to machines requiring linking, these machines can be integrated with auxiliary units such as chip conveyors, coolant units or mist collectors.

Large-sized touch panel for improved operability

A large 19-inch touch screen with great visual comfort is adopted to improve operability during setup. The 2-screen multi-display can be switched over according to the purpose of operation. The home screen can be used to check for causes of machine downtime, such as low lubricating oil and counters reaching preset values, before they occur and thereby improve the machine availability rate. In addition, machine status data and traceability data can be saved and utilized such as for quality control and investigating the cause of a machine error, and therefore contribute to enabling stable operation of the equipment.



Revamped design for easier setup

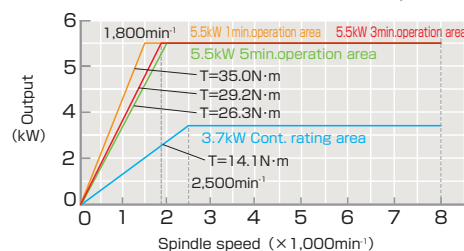
During setup changes, the machine front cover can be opened across the entire width of the machine, enabling safe and speedy setup.



Increased productivity with faster speeds

Slide rapid traverse rate are increased by 33%. The time spent before starting machining can be shortened. The machine is equipped with two new MG30H loaders (optional) that support high-speed operation, enabling shorter cycle times.

XWG-3 Spindle power characteristic curve ■ Max. 8,000min⁻¹ Standard type (AC5.5/3.7kW)





※The photo shows the XW-60M.

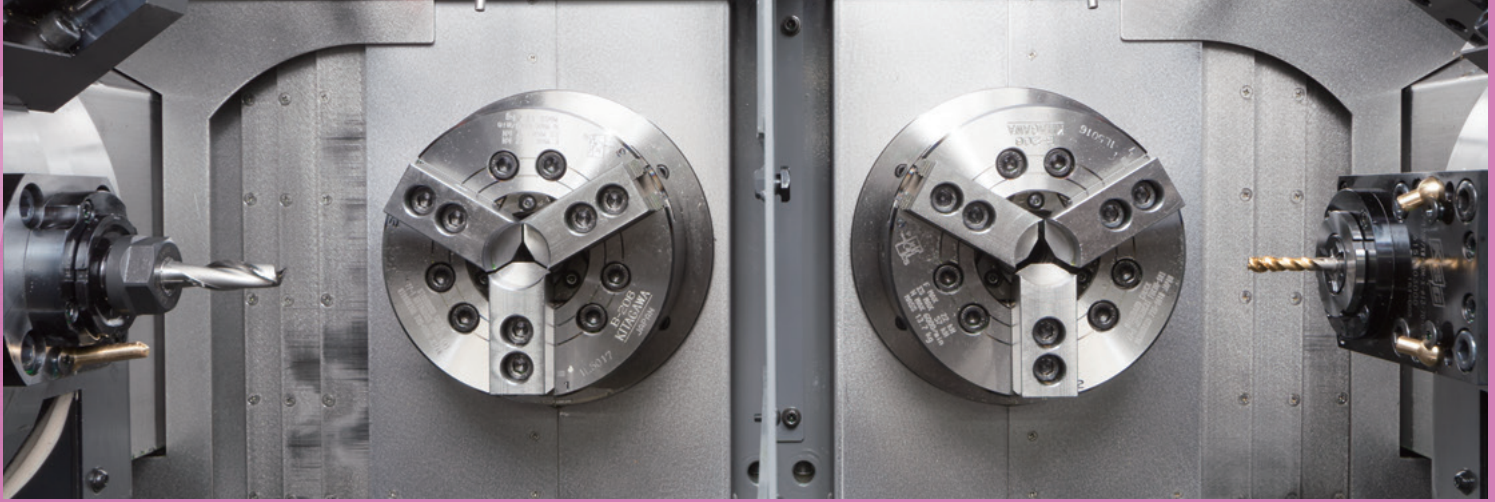


Scan the QR code with your camera phone or smartphone to see videos on YouTube.

CNC **2**-Spindle **2**-Turret Precision Lathe

XW-60/60M

Chuck size **6** Inch

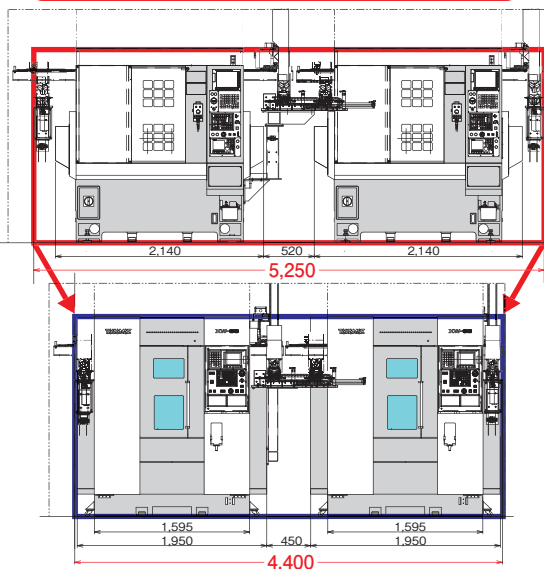


6-inch-chuck medium-sized machine ticking all three boxes: space savings, compound machining, and high-speed automation

Space savings in production lines

Reducing the machine width has expanded the space available for installing peripheral equipment, and also helps to shorten production lines.

Production lines: Up to 15% reduction (comparison with previous lines)



※ With 2 machines linked: shortening of 850 mm

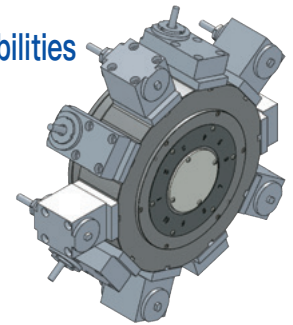
Evolved high-speed automation system

The optimum transfer system is configured by integrating a transfer loader with the machine body, contributing to cycle time reduction. (Y-axis rapid traverse rate: 60% higher than on previous models, Loading time: 10% shorter than on previous models, Shortest cycle time for front and back machining with processes 1 and 2: 8% reduction compared to previous models)

More extensive machining possibilities

A single-tool drive system is used for power tools, which increases the transmission efficiency and improves the machining capacity. Up to 20 power tools can be mounted and with a greater mountable tool size the range of selectable tools is broadened.

(60M: Power tool specifications)



Shorter machining cycles

A 7.5/5.5 kW spindle motor is installed, and the increased power reduces spindle acceleration/deceleration times by 22% at the maximum speed (4,500 min⁻¹) compared to previous models. The reduction in non-cutting time shortens cycle times and improves productivity.

Unique thermal displacement suppression construction adopted

An original spindle base cooling system that forcibly circulates coolant (patented technology) is featured as standard, suppressing thermal displacement of the bed, minimizing changes over time, and achieving stable dimensional accuracy. In addition, a vibration damping structure that suppresses vibration by incorporating functional materials in each part of the machine (patented technology) has been adopted.

(Technology common to XW-130/XW-130M/XW-200/XWT-10)

Vibration damping function installed

For details, see page 10.

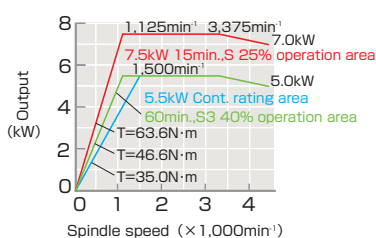
Improved operability for setup changes

For details, see page 10.

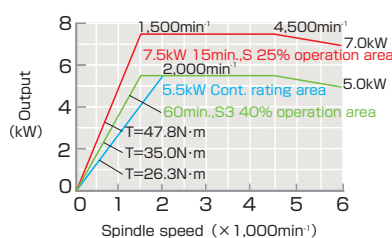
(Technology common to XW-130/XW-130M/XW-200/XWT-10)

XW-60/60M Spindle power characteristic curve

■ Max.4,500min⁻¹ Standard type (AC5.5/7.5kW)

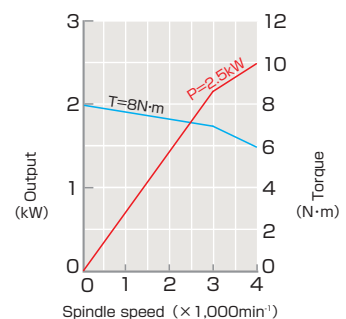


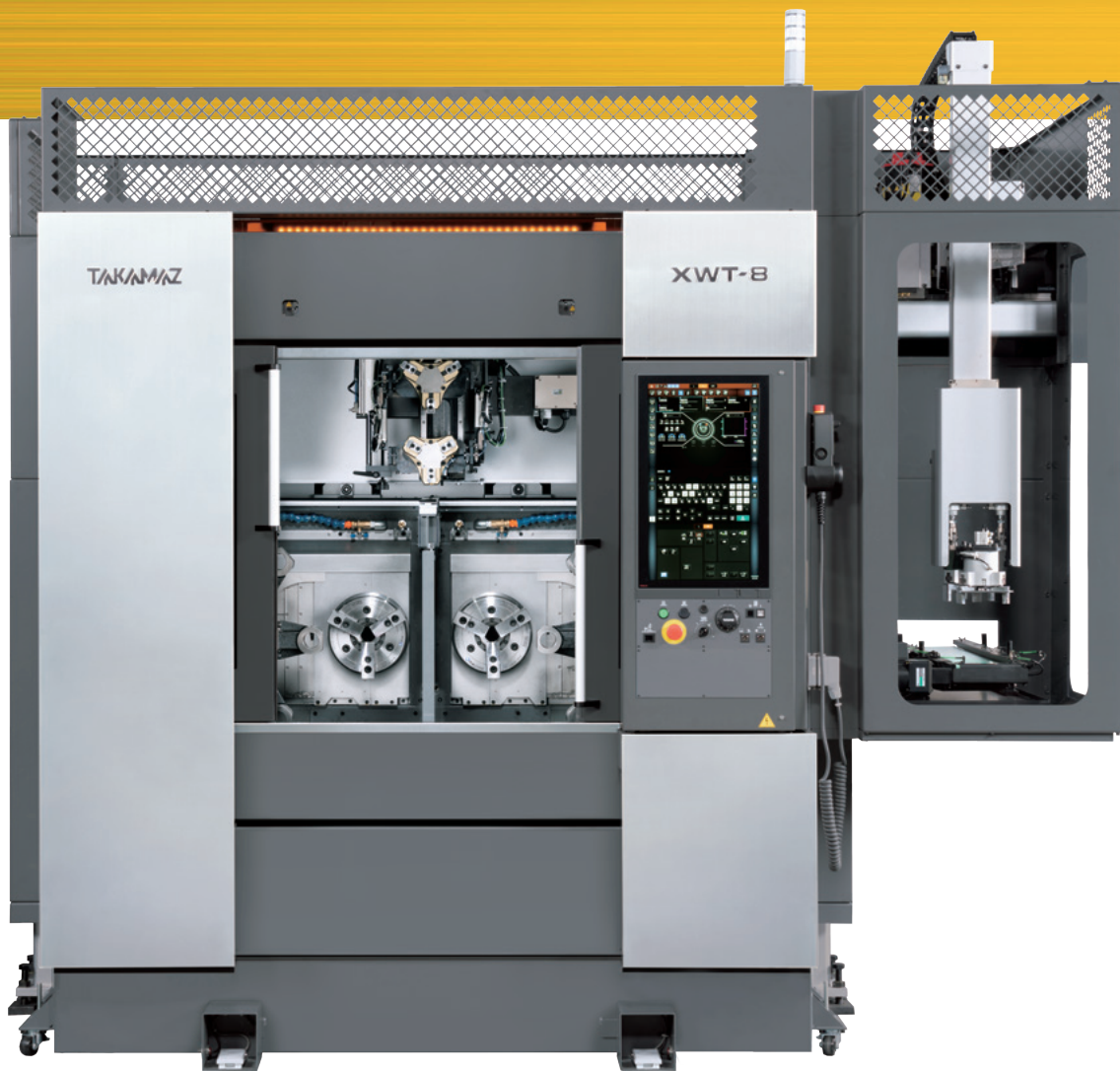
■ Max.6,000min⁻¹ Option type (AC5.5/7.5kW)



XW-60M Power tool power characteristic curve

■ Max.4,000min⁻¹ Standard type (AC2.5kW)





CNC 2-Spindle 2-Turret Precision Lathe

XWT-8



Chuck size **8** Inch



8-inch lathe combining digital transformation and measures for carbon neutrality on a highly productive 2-spindle configuration

Large-sized Touch Panel for Improved Operability

A 21.5-inch touch panel providing excellent visibility is adopted for better operating convenience during setup. The 3-screen multi-display allows the operator to switch among screens depending on the operation purpose. The home screen makes operation status information including the "start conditions", "estimated time to machine stop", "production progress" and "machine operating status" available on a single screen for more efficient checking. In addition, traceability data is saved to track changes in the machining status of individual workpieces and other information to help run facilities smoothly.



Introduction of a New 3-axis Loader System

Installing a new loader system has increased the rapid traverse speed on all axes, and the shortest loading time is only 5.5 seconds, which is 10% faster than on existing models. For improved operability, this system is centrally managed by using the same controller for the machine and loader. The handle retrace function enables confirmation of operations with a high level of safety. Incorporating the loader operations into NC programs allows flexibility in handling the operation and timing changes associated with workpiece setup changes. These functions result in improved operability and productivity. The automatic adjustment function for the loader Y and Z axes enables shorter teaching times and flexibility in loader operations, improving operating convenience. Previously we used regenerative energy in the form of conversion to heat through resistance regeneration, but this system uses power regeneration to achieve energy savings. We have confirmed a 22% reduction compared to existing models in yearly energy savings.

*1 These are results obtained using TAKAMAZ' s running program for measurement.

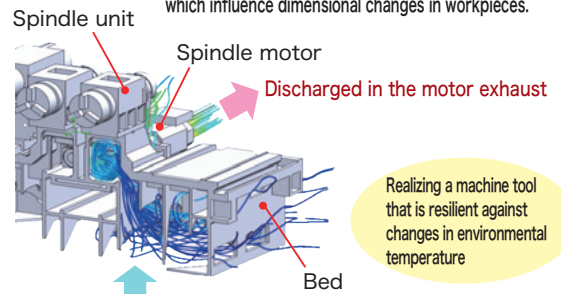
Reductions in Machining Defects and Energy Consumption

The new version of our unique thermal displacement compensation system, Thermony® 2.0, is installed as standard. 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 effects on the machining dimension values. To give an example, applying Thermony® resulted in an approximately 60% reduction in the amount of change in a machined diameter.

*2 In the measuring environment configured at TAKAMAZ.

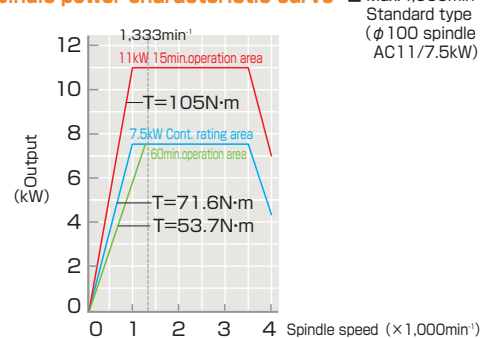
In addition, adopting an air-cooled construction for the spindle center, where heat sources are concentrated, makes cooling water unnecessary, reducing running costs as well as energy consumption.

Creating a flow of air . . . Cooling the bed and headstock base, which influence dimensional changes in workpieces.



Air near the ground surface, the most stable, is used for cooling.

XWT-8 Spindle power characteristic curve





CNC 2-Spindle 2-Turret Precision Lathe

XW-130M

Chuck size 8 Inch



Support for Diverse Compound Machining Needs through Mounting of Power Tools

High productivity with powerful milling

The machine is equipped with a power tool unit suitable for 8-inch chucks. It has a maximum capacity of 20 power tools, and supports the requirements of process integration through compound machining. In addition, in-process inventory has been reduced to zero by simultaneous front and back machining, delivering high productivity.

Tool post construction enabling sustained heavy-duty cutting

A construction with square box-way slides for exceptional rigidity, and realizing little center of gravity displacement of the tool post with the X axis resting on the Z axis, is adopted for differentiation from competitors' products. This helps to resist secular changes and to dampen chattering in cutting.

(Technology common to XW-200)

Unique thermal displacement suppression construction adopted

For details, see page 6.

(Technology common to XW-60/XW-60M/XW-130/XW-200/XWT-10)

Vibration damping function installed

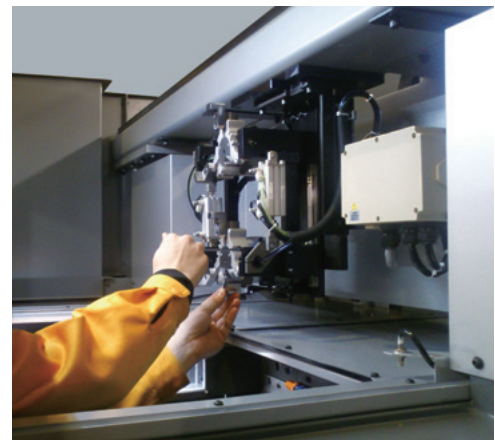
When finish machining, commands to ameliorate the effects of vibrations due to the operation of the spindle at the other side, or reduce them to zero, are available. They can be selected and programmed in various cases (prioritizing accuracy, prioritizing cycle time).

(Technology common to XW-60/XW-60M/XW-130/XW-200/XWT-10)

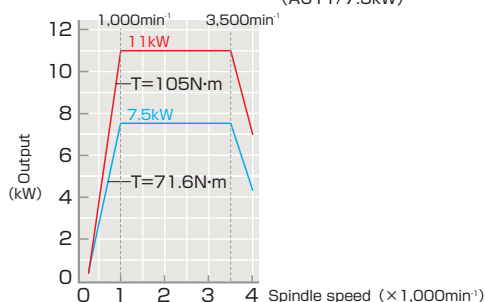
Improved operability for setup changes

A low center of gravity construction with the spindle center height restricted to 1,000 mm allows chucks and workpieces to be changed in a comfortable posture. The work can also be done in a bright machine interior since overhead lighting is featured as standard, and this helps to shorten working times and greatly improve operating efficiency. In addition, the adoption as standard of a swiveling operation panel and a pendant operation panel for the transfer loader enables simple and accurate teaching.

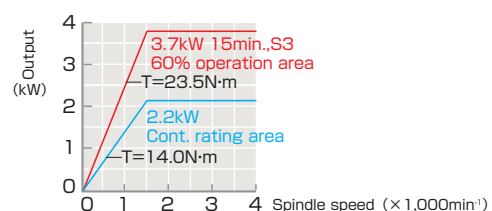
(Technology common to XW-60/XW-60M/XW-130/XW-200/XWT-10)



XW-130M Spindle power characteristic curve ■ Max.4,000min⁻¹ Standard type (AC11/7.5kW)



XW-130M Power tool power characteristic curve ■ Max.4,000min⁻¹ Standard type (AC3.7/2.2kW)

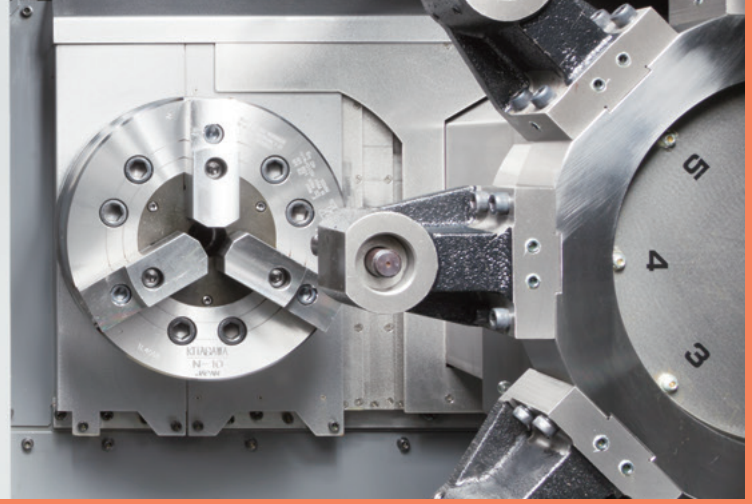
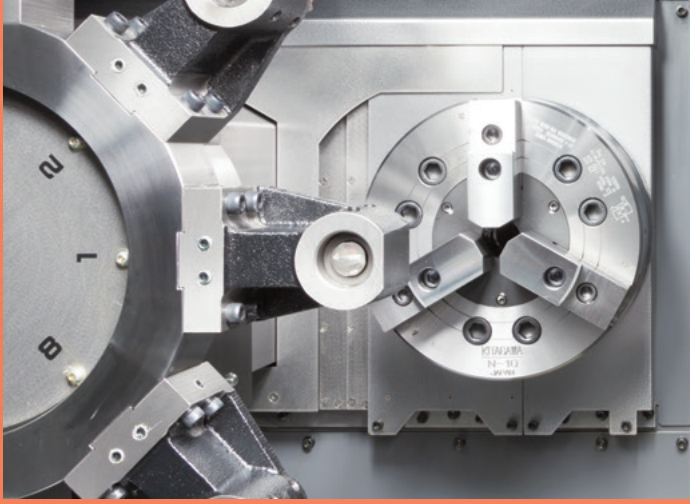




CNC 2-Spindle 2-Turret Precision Lathe

XW-200

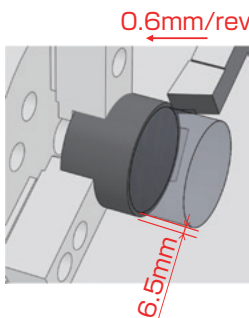
Chuck size 10 Inch



Long-awaited 10-inch chuck compatible machines in the XW series enable high productivity with large-diameter workpieces

Powerful heavy-duty cutting capability

The adoption of large-diameter $\phi 120\text{mm}$ bearings and an 18.5/15 kW motor has realized stable machining of large workpieces. With stable spindle output in the mid- and low-speed ranges allow cutting across three times the cutting surface area of existing models is achieved, showing their outstanding power in the heavy-duty machining of large flange-type workpieces. (Technology common to XWT-10)



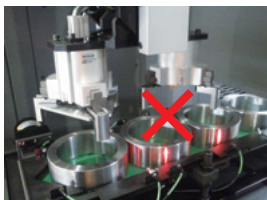
3 x previous area

Cutting surface area (t*f) **3.9mm²**

Short time rating result

Transfer of large workpieces enabled

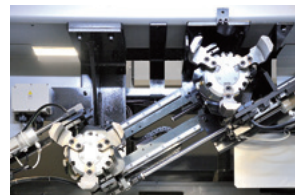
The largest workpieces that Takamaz machines can handle, measuring $\phi 200\text{ mm}$ and up to 8 kg, can be transferred on each side. Since hands can be folded back in addition to being turned, workpieces arranged in a line can be picked up easily without interfering with the loader on one side. (Technology common to XWT-10)



Interference with the loader on one side



Easy transfer when folded back



Intermediate turnover unit that can handle large-diameter workpieces

A high-speed shutter with patented technology is used, cutting the operating time of previous models in half, to under 0.5 seconds for both opening and closing operations, so cycle times are shortened.

Tool post construction enabling sustained heavy-duty cutting

For details, see page 10.

(Technology common to XW-130M)

Unique thermal displacement suppression construction adopted

For details, see page 6.

(Technology common to XW-60/XW-60M/XW-130/XW-130M/XWT-10)

Vibration damping function installed

For details, see page 10.

(Technology common to XW-60/XW-60M/XW-130/XW-130M/XWT-10)

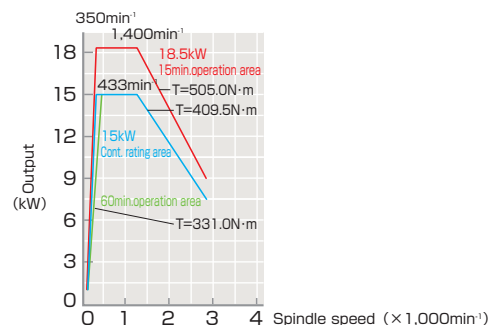
Improved operability for setup changes

For details, see page 10.

(Technology common to XW-60/XW-60M/XW-130/XW-130M/XWT-10)

XW-200 Spindle power characteristic curve

Max. 2,800min⁻¹ Standard type ($\phi 120$ spindle AC18.5/15kW)



XWT-10



Scan the QR code with your camera phone or smartphone to see videos on YouTube.

CNC **2**-Spindle **2**-Turret Precision Lathe

XWT-10

Chuck size **10** Inch



Upgraded machine realizing the largest OD turning range of the XW series!

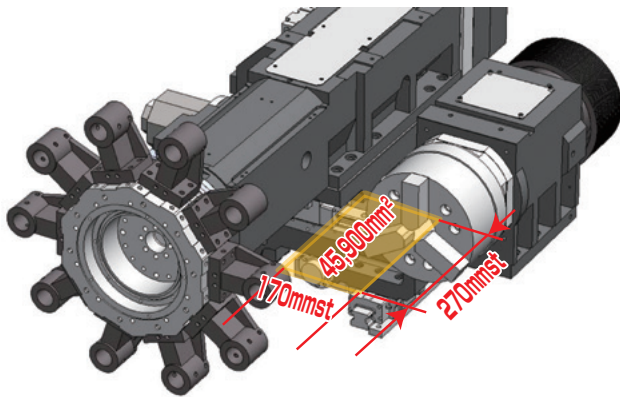
Equipped with 10-station turrets

With two 10-station turrets, tool capacity is increased, boosting production efficiency.

The largest turning range of the XW series

The maximum turning range in the XW series is secured, making it possible to handle workpieces that require simultaneous deep ID and OD turning, such as differential cases and brake calipers.

You can also take advantage of the spacious machine interior to mount chucks of various designs.



Improved chip disposal

In addition to chip flushing inside the machine, a chip flushing circuit is installed behind the cover under the door to prevent chip retention and promote a straight drop of chips into the chip conveyor (optional) below the spindle.

Powerful heavy-duty cutting capability

For details, see page 12.

(Technology common to XW-200)

Transfer of large workpieces enabled

For details, see page 12.

(Technology common to XW-200)

Unique thermal displacement suppression construction adopted

For details, see page 6.

(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

Vibration damping function installed

For details, see page 10.

(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

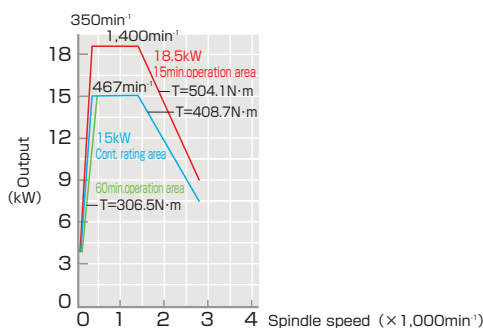
Improved operability for setup changes

For details, see page 10.

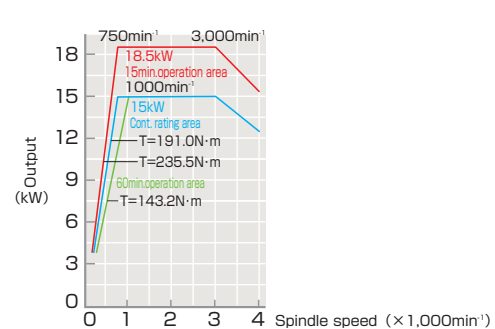
(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

XWT-10 Spindle power characteristic curve

■ Max. 2,800min⁻¹ Standard type
(ϕ 120 spindle AC18.5/15kW)



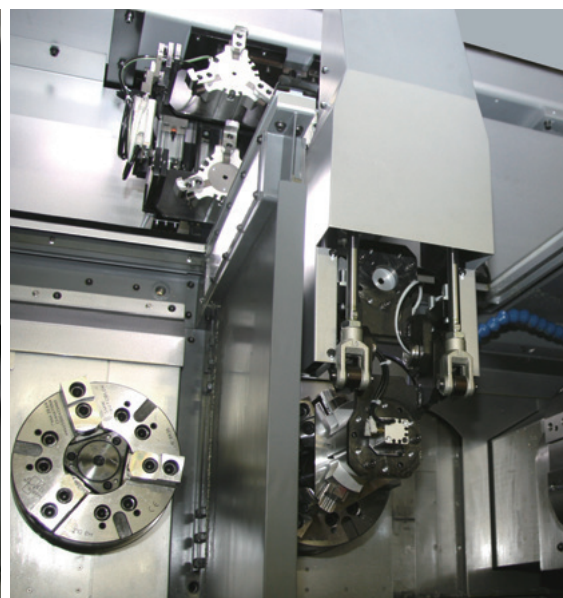
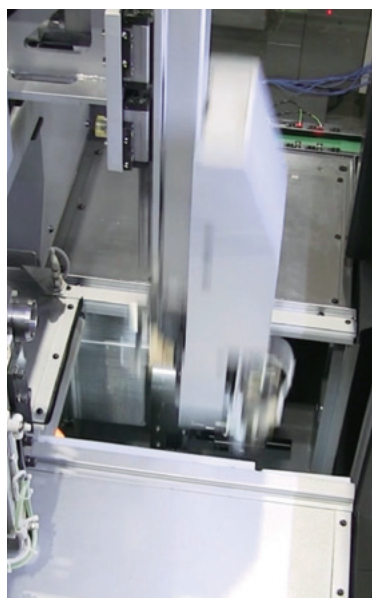
■ Max. 4,000min⁻¹ Option type
(ϕ 120 spindle AC18.5/15kW)



Equipped with the [Speed] and [Small Footprint] Servo Loader

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

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



Loader transfer capacity

Item	Unit	XWG-3		XW-60/60m		XWT-8	XW-130m/200	XW-200	XWT-10
Loader Model		MG30	MG30H(High speed type)	ΣiGTH60	ΣiGTH60(High speed type)	FGT150	ΣiGTH150	ΣiGTH200	
Number of axes	axes	2		3					
Loading Time (Reference)	sec.	4	2	6	2	5.5	6	7	
Transport Diameter x Length (Reference)	mm	φ30×40		φ60×60	φ55(φ60)×60	φ150×80	φ150×50	φ200×120	φ200×220
Work Dimension Weight	kg	0.3(One side)		1.0(One side)		3.0(One side)		8.0(One side)	
Shoulder (Traverse axis : Z)	Drive System	Servomotor							
	Stroke	Depends on specifications							
	Rapid Traverse Rate	m/min	85	170	120	170	180	170	100
Forward/ Backward axis : X	Drive System	—		Servomotor					
	Stroke	—		200	235				
	Rapid Traverse Rate	m/min	—		45	35	45	35	30
Arm (Vertical axis: Y)	Drive System	Servomotor							
	Stroke	240		590		690	760	780	
	Rapid Traverse Rate	m/min	85	170	125	170	160	125	80
Hand	Drive System	Air cylinder							
	Angle	deg.		90					
	Jaw Stroke	mm	9(One side)	—	10(One side)		16(One side)		12(One side)
Hand Type		Parallel Hand	Pivoting open/close hand	Dedicated L Hand					

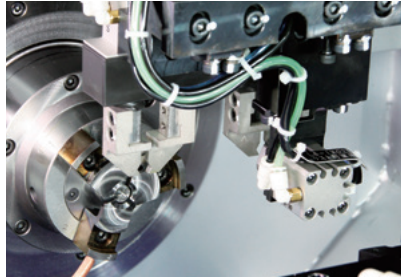
The loading time, transport and work dimensions are the indicators.

Different Varieties of Loader Hand that can Handle Different Shapes of Parts

◆ Loader hands that can handle a wide range of shapes, including flange workpieces, are available.

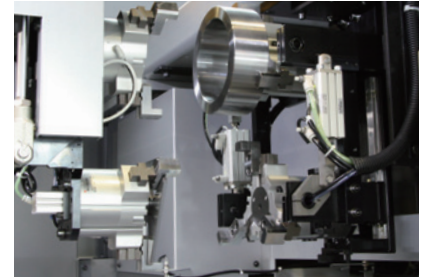
Parallel Hand

XWG-3 Standard loader



Dedicated L Hand

XW-60 XW-60M XW-130M XW-200 XWT-8 XWT-10



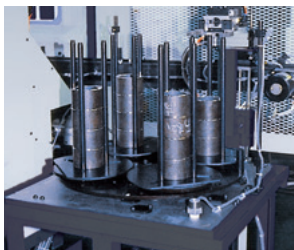
Flexible Variation for Automated Large-Variety and Small-Lot Production

Machining Type Machining Flow	Continuous Front and Rear Machining Line	Same Process Machining Line
L → R		
L ← R		
L ↻ L		
↻ R R		
L ↔ R	—	

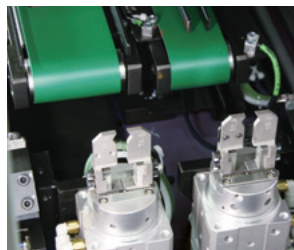
Automation Peripheral Devices

◆ A production line with different varieties of peripheral devices and loading variations can be designed.

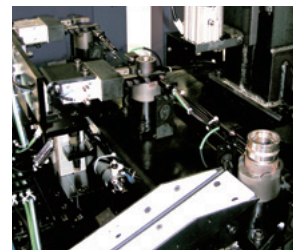
In / Out Stocker



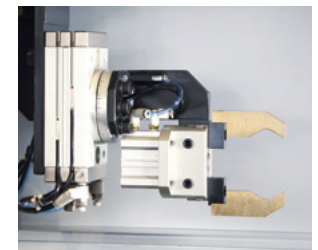
In / Out Conveyor



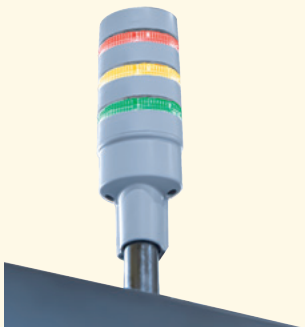
Auto measurement unit



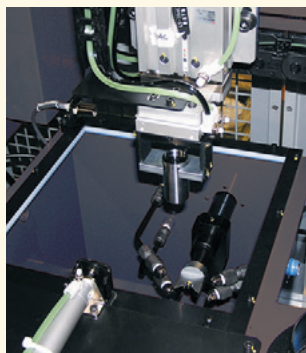
External turning device



Quality / Environment Control Unit



● **Signal Tower**
The solid and flashing lights for the operating conditions.



● **Cleaning Unit**
Without operator intervention, cleaning is performed automatically.



● **Oil Mist Collector**
Oil mist collection facilities a clean production environment.



● **Automatic Fire Extinguisher**
If fire breaks out in the machine during automatic operations, fire extinguishing agent is automatically discharged.

Work Stocker / Transfer Unit



● **Tray Changer**
Workpieces can be stored in individual trays.



● **“Rakuchin” Stocker**
Reasonably priced bucket for easy bucket transport management.



● **Parts Feeder**
Workpieces can be stored together with the tray.

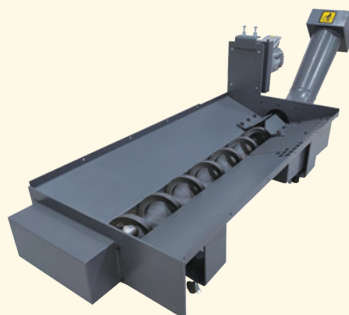


● **Station Stocker**
Flexible Multi-layer stocker to accommodate different part diameter sizes.

Cutting Efficiency / Chip Disposal / Reduced setup man hours



● **Chip Conveyor (Floor type)**
The system where linked steel plates are moved to transport chips has the advantage of efficient transport regardless of the material or status of the chips.



● **Chip Conveyor (Spiral Type)**
Mounted on the rear side
Chip disposal is done semi-automatically in minimal space.



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



● **Tool presetter**
Adjusts the position of the tool tip to substantially shorten setup times. In-machine (touch sensor method) and external types are available.

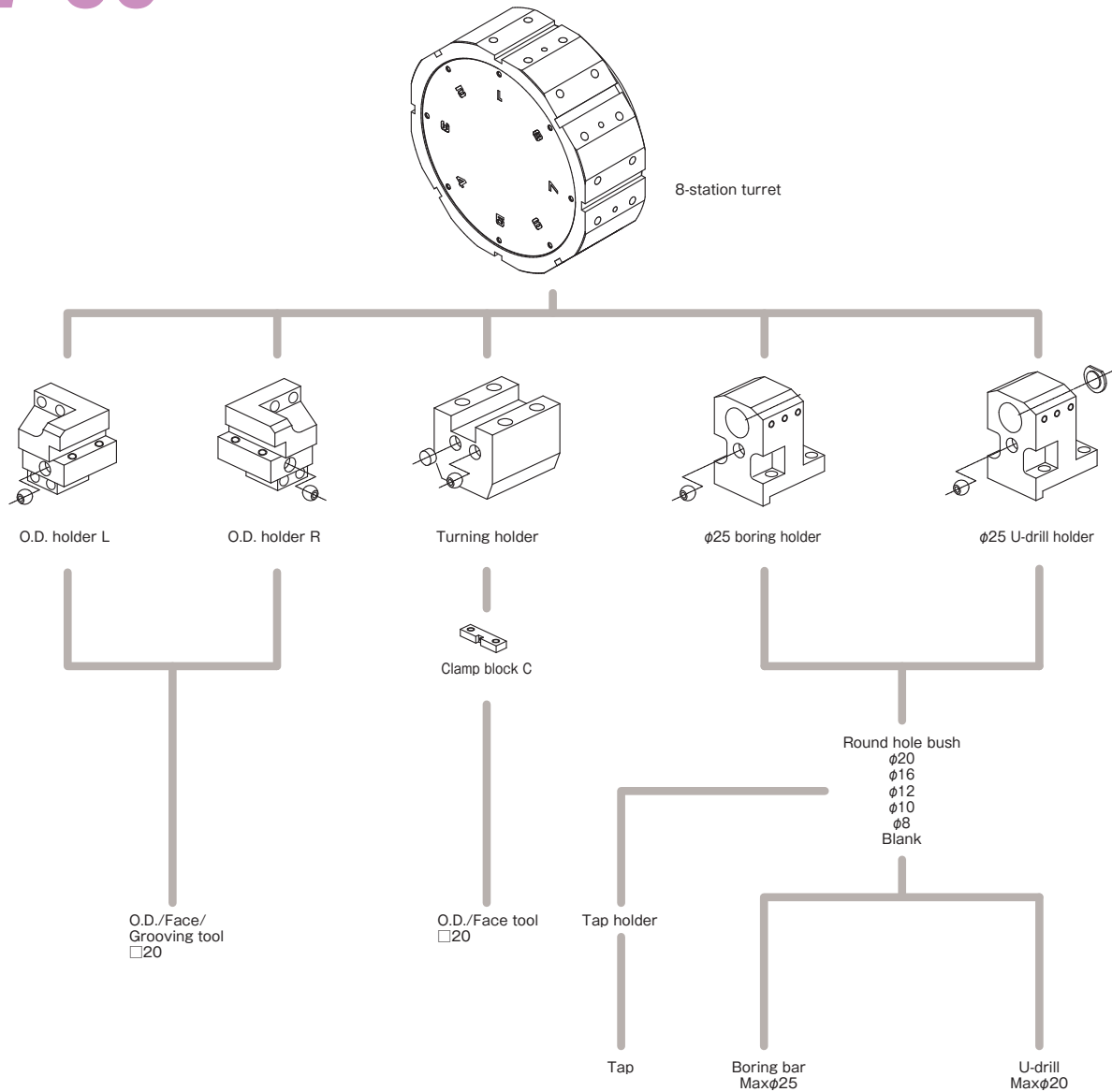
Tooling System

Technical drawings of five lathe tool holders:

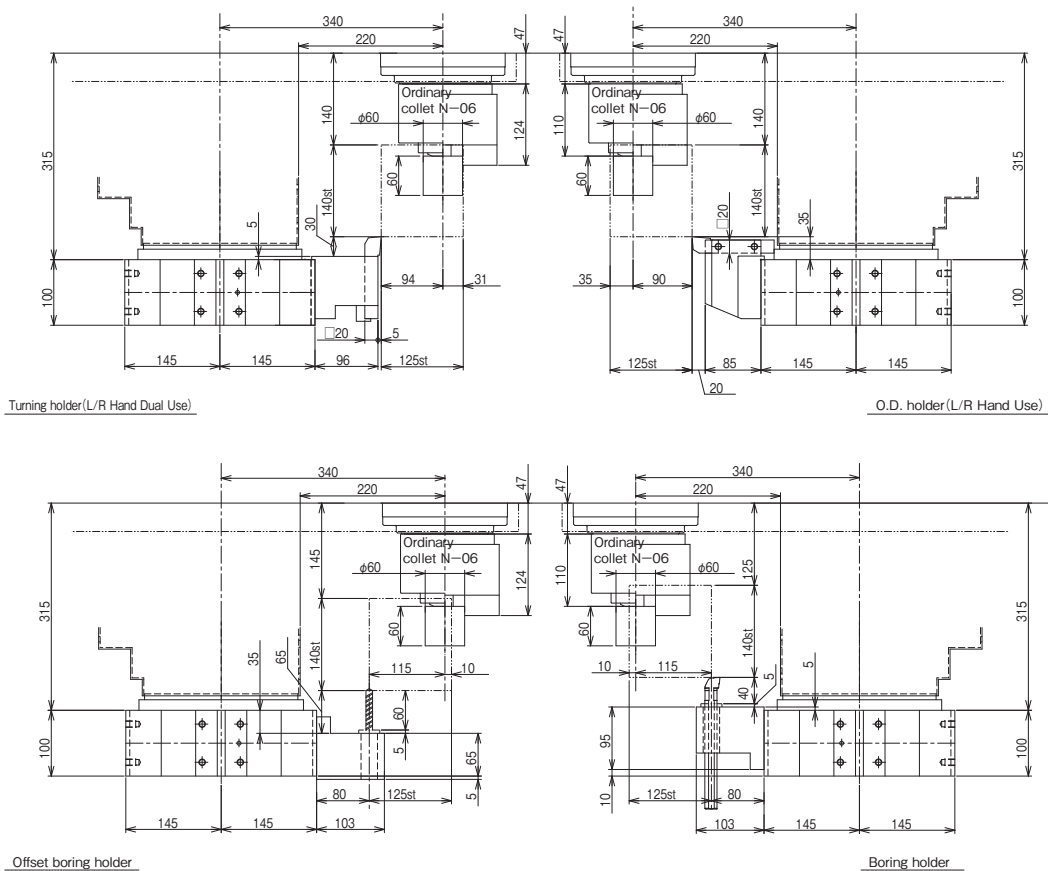
- Boring holder1**: Shows a tool holder with a tool mounting bolt (M10) and a holder mounting bolt (M10). The diameter is $\varnothing 25$.
- Boring holder2**: Shows a tool holder with a tool mounting bolt (M10) and a holder mounting bolt (M10). The diameter is $\varnothing 25$.
- O.D. holder ($\square 16 \cdot \square 20$)**: Shows a tool holder with a tool mounting bolt (M10) and a holder mounting bolt (M10). The diameter is $\varnothing 25$.
- Turning holder L ($\square 16 \cdot \square 20$)**: Shows a tool holder with a tool mounting bolt (M10) and a holder mounting bolt (M10). The diameter is $\varnothing 25$.
- Turning holder R ($\square 16 \cdot \square 20$)**: Shows a tool holder with a tool mounting bolt (M10) and a holder mounting bolt (M10). The diameter is $\varnothing 25$.

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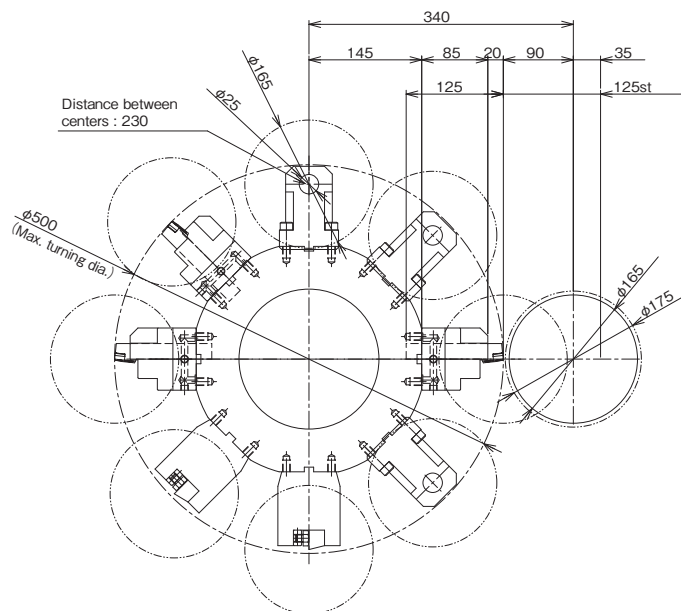
XW-60



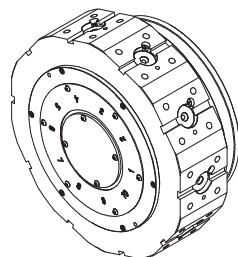
XW-60



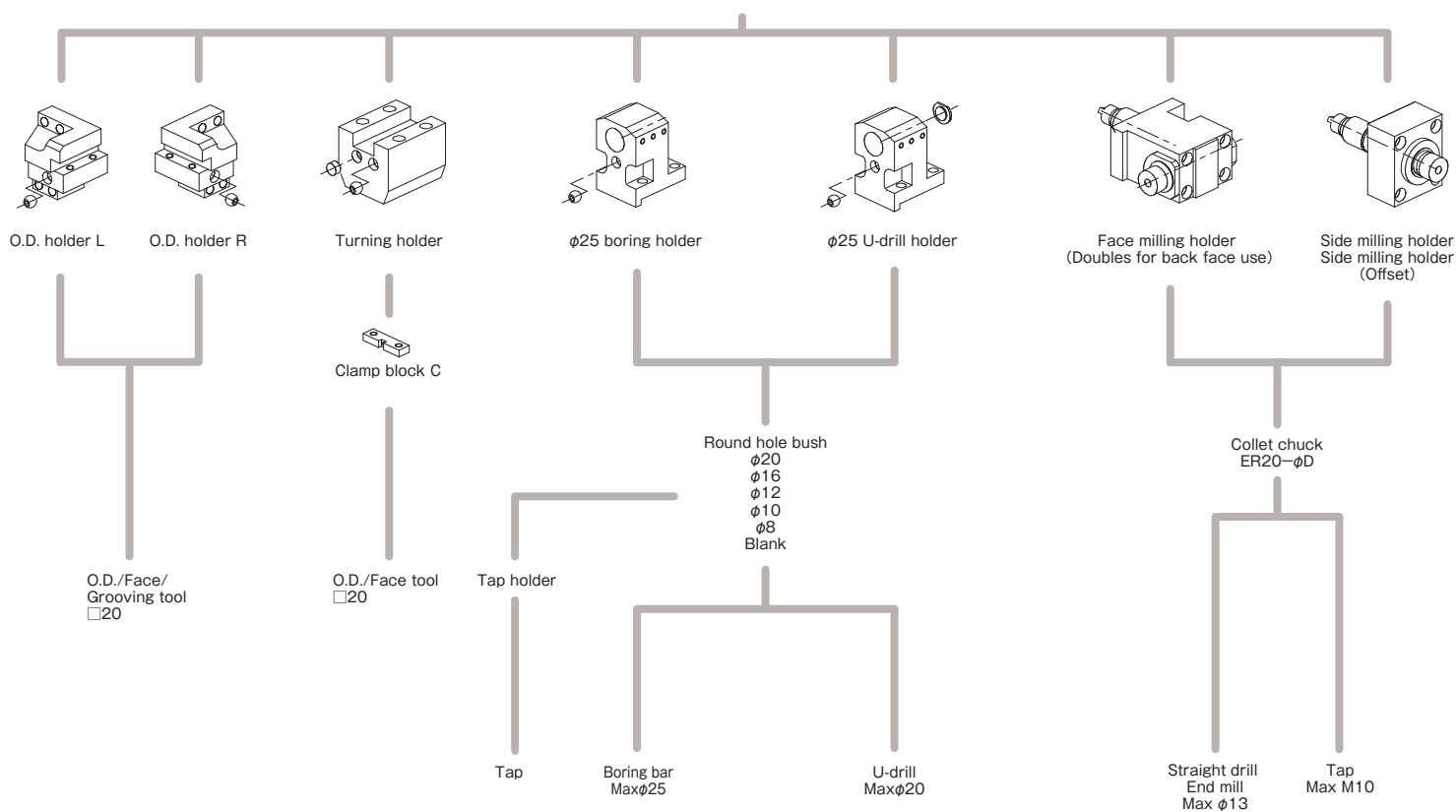
Turret Interference



XW-60_M



10-station turret



Stroke-Related Drawing

[illegible]

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and features. The drawing includes a side view and a top view. Key dimensions include overall width 375, overall height 315, and various internal features like a hole of diameter 60 and a slot of width 10. The part is labeled "Ordinary collet N-06".

Technical drawing of a mechanical assembly showing a cross-section of a shaft with a collar and a nut. The drawing includes dimensions for the shaft diameter ($\phi 60$), collar diameter ($\phi 13$), and various lengths (180, 180, 75, 125st, 375, 219, 47, 124, 100, 140st, 35, 40, 120, 5). A label "Ordinary collet N-06" points to the collar.

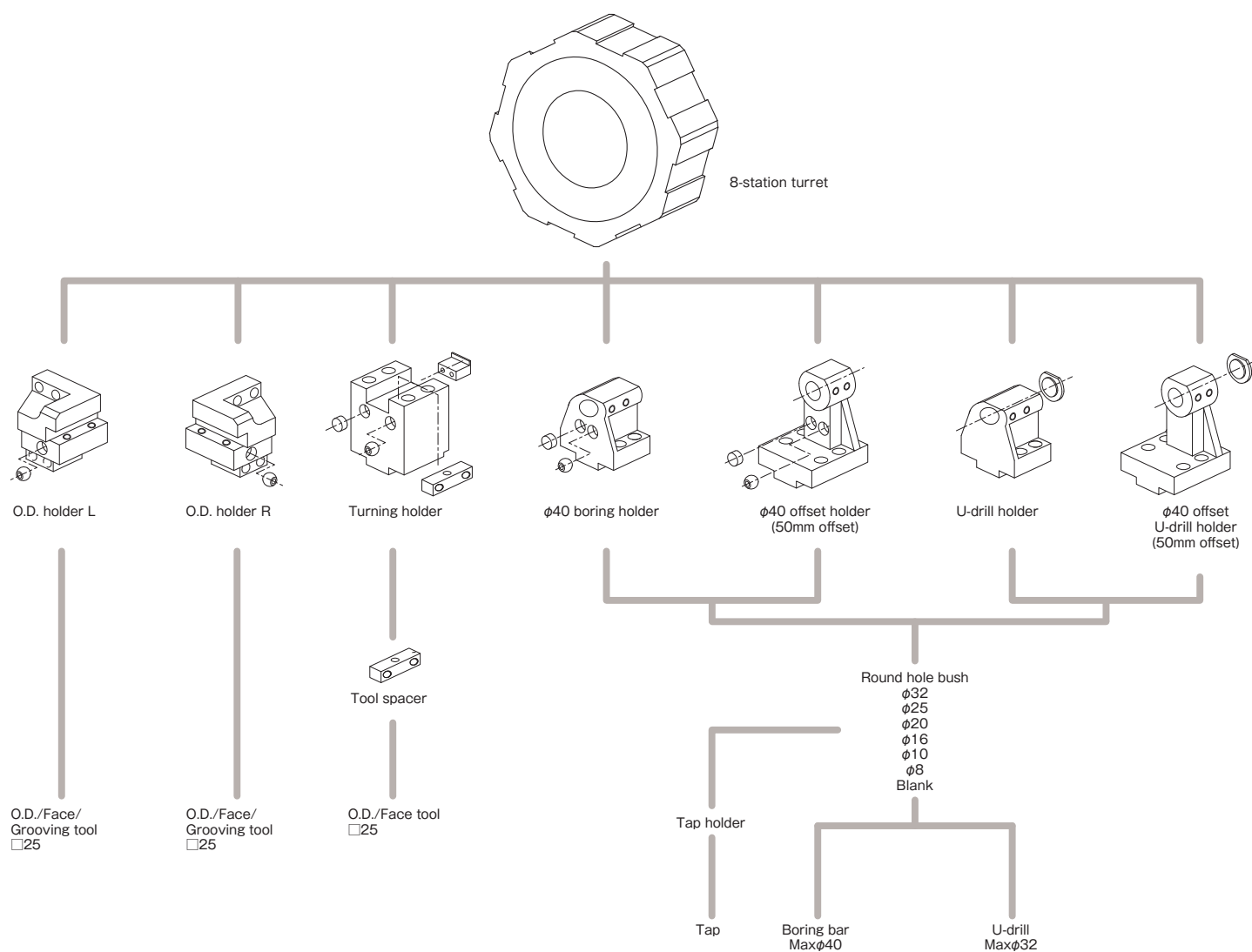
[illegible]

Technical drawing of the front view of a 12-spindle turret lathe. The diagram shows 12 tool heads arranged in a circle. Key dimensions include:

- Overall width: 375
- Distance between centers: 230 (for the top row of tool heads) and 240 (for the bottom row).
- Tool head diameters: $\phi 165$ and $\phi 175$.
- Offsets and distances: 180, 85, 20, 90, 35, 125st, 5, 120, 75, 125st, 70, 40.
- Maximum turning diameter: $\phi 580$ (Max. turning dia.).

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XWT-8



※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

Technical drawings of four types of holders, showing dimensions in millimeters (mm).

Turning holder (L/R Hand Dual Use)

O.D. holder (L/R Hand Use)

Offset holder

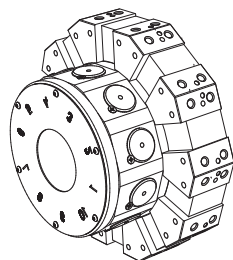
Boring holder

Technical drawing of a circular machine tool layout. The central feature is a circle with a diameter of $\phi 630$ and a note "(Max. turning dia.)". Surrounding this central circle are six identical machine tool components arranged in a circular pattern. The distance between the centers of these components is $\phi 280$. Dimensions for the components and their arrangement are provided:

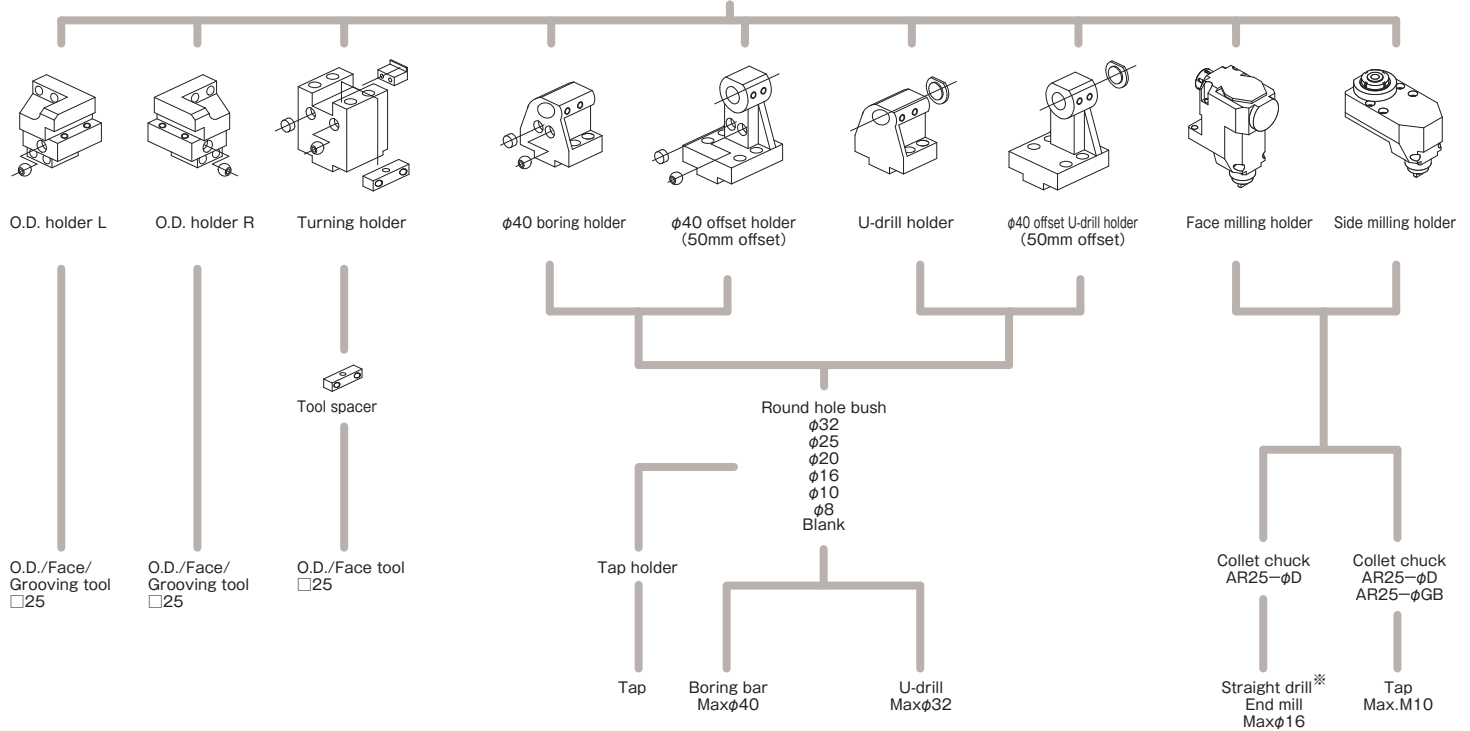
- Distance between centers: $\phi 280$
- Radius of the central circle: $\phi 630$ (Max. turning dia.)
- Radius of the component arrangement circle: $\phi 280$
- Radius of the component mounting holes: $\phi 40$
- Distance from the center of the central circle to the center of a component: 170
- Distance from the center of a component to the center of its mounting holes: 80
- Distance from the center of a component to the center of its mounting holes (alternative): 35
- Distance from the center of a component to the center of its mounting holes (alternative): 140
- Distance from the center of a component to the center of its mounting holes (alternative): 150st
- Distance from the center of a component to the center of its mounting holes (alternative): 10
- Distance from the center of a component to the center of its mounting holes (alternative): 115
- Distance from the center of a component to the center of its mounting holes (alternative): 25

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XW-130_M



10-station turret



※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

Technical drawing of the turning holder (L/R Hand Dual Use) showing front and side views with dimensions.

Front View Dimensions:

- Spindle nose
- 445
- 321
- 140
- 10
- 74
- 170
- 170
- 115
- 160
- 10

Side View Dimensions:

- 104
- 42
- 130
- 170st
- 220st
- 178
- 98
- 150
- 25
- Z
- Z6-8 (MATSUMOTO)

Turning holder (L/R Hand Dual Use)

[illegible]

Technical drawing of the 26-B (MATSUMOTO) tool holder. The drawing shows a side view of the tool holder with various dimensions. Key dimensions include: overall length 445, overall width 321, spindle nose width 74, tool holder width 140, tool holder length 170, tool holder offset 170, tool holder offset 110, tool holder offset 165, tool holder offset 5, tool holder offset 143, tool holder offset 113, tool holder offset 42, tool holder offset 104, tool holder offset 220st, tool holder offset 98, tool holder offset 60, tool holder offset 170st, tool holder offset 26-B (MATSUMOTO), tool holder offset AR25, tool holder offset 170, tool holder offset 170, tool holder offset 110, tool holder offset 165, tool holder offset 5.

Technical drawing of the O.D. holder (L/R Hand Use) showing side and front views with dimensions.

Side View Dimensions:

- Overall length: 445
- Spindle nose (indicated by a leader line)
- Top flange thickness: 98
- Distance from top flange to start of thread: 186
- Thread length: 220st
- Distance from thread end to center of hole: 170st
- Distance from thread end to end of holder: 138
- Distance from thread end to center of hole: 104
- Distance from thread end to end of holder: 42
- Material: Z6-8 (MATSUMOTO)

Front View Dimensions:

- Overall width: 321
- Distance from center to outer edge: 140
- Distance from center to outer edge: 74
- Distance from center to outer edge: 170
- Distance from center to outer edge: 170
- Distance from center to outer edge: 90
- Distance from center to outer edge: 115
- Distance from center to outer edge: 160
- Distance from center to outer edge: 10
- Distance from center to outer edge: 35
- Distance from center to outer edge: 25

O.D. holder (L/R Hand Use)

Technical drawing of a boring holder assembly. The drawing shows a side view of the assembly with various dimensions and labels.

Dimensions (mm):

- Overall length: 445
- Spindle nose (indicated by an arrow)
- 98 (height of the upper part)
- 26-8 (MATSUMOTO) (label on the upper part)
- 104 (height of the upper part)
- 168 (height of the lower part)
- 220st (height of the lower part)
- 170st (height of the lower part)
- 42 (height of the lower part)
- 120 (height of the lower part)
- 5,40 (height of the lower part)
- 140 (width of the lower part)
- 10 (width of the lower part)
- 160 (width of the lower part)
- 143 (width of the lower part)
- 115 (width of the lower part)
- 170 (width of the lower part)
- 170 (width of the lower part)
- 74 (width of the lower part)
- 391 (height of the lower part)

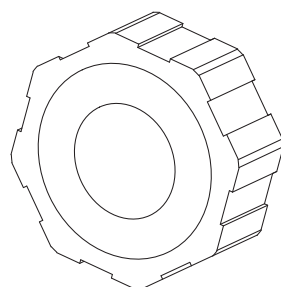
Labels:

- Boring holder
- Spindle nose
- 26-8 (MATSUMOTO)
- $\phi 40$

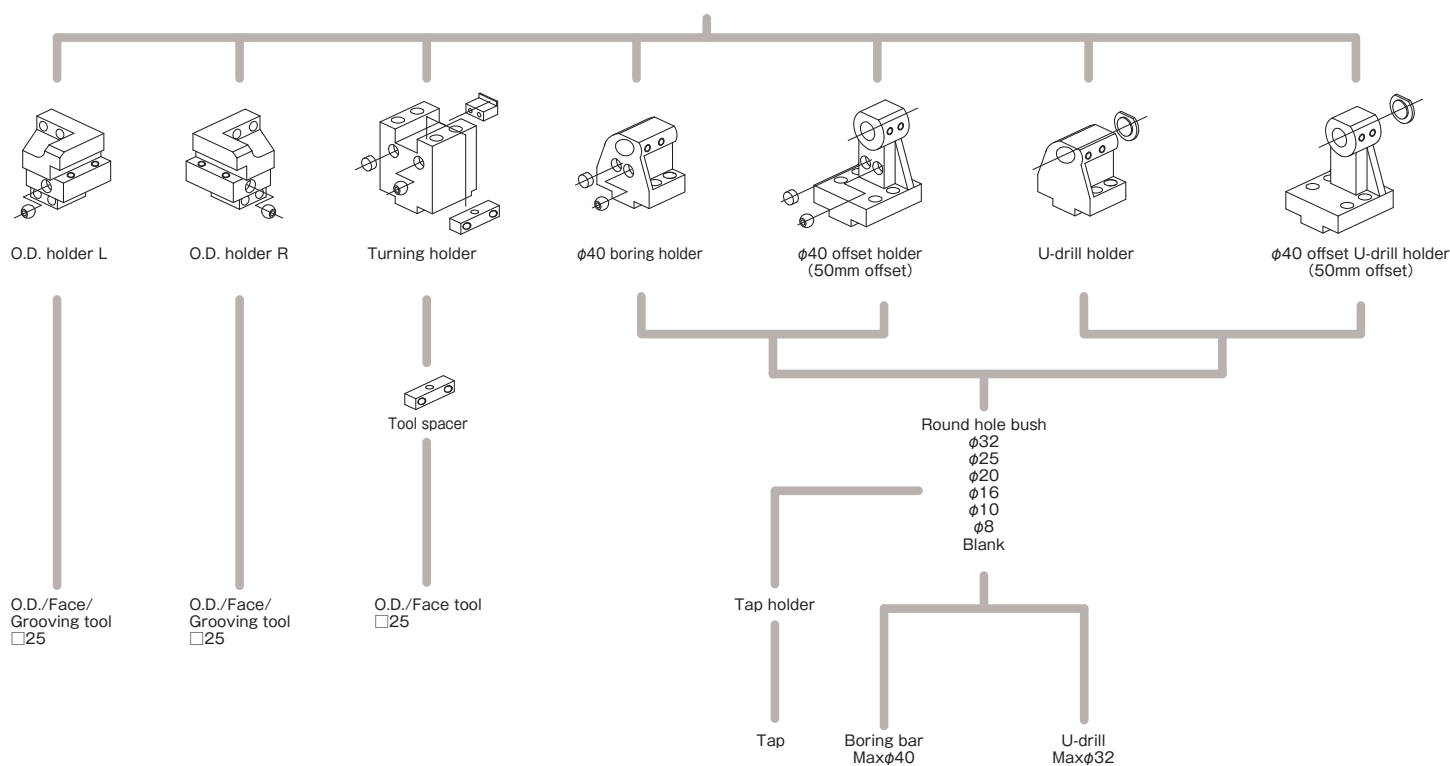
[illegible]

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XW-200



8-station turret



※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

[illegible]

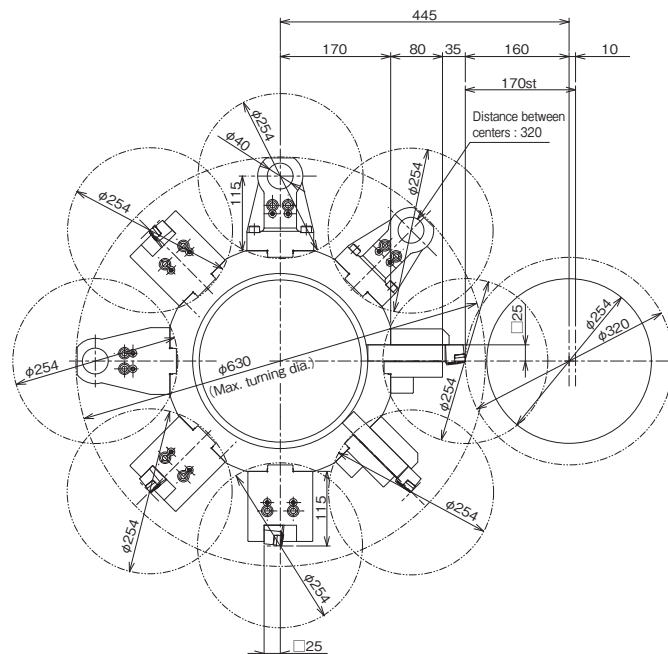
Technical drawing of a lathe tool setup for a 10mm diameter hole. The drawing shows a side view of the tool assembly with various dimensions. Key dimensions include: total length 445, distance from spindle nose to tool tip 370.5, tool diameter 10, hole diameter 10 (KITAGAWA), hole length 254, tool length 170st, drill length 112, and offset holder dimensions. The drawing is labeled "Offset holder" at the bottom.

Technical drawing of the O.D. holder (L/R Hand Use) showing dimensions and components. The drawing includes a side view and a top view. Key dimensions and components are labeled:

- Overall Dimensions:**
 - Top view width: 445
 - Side view height: 370.5
- Components:**
 - Spindle nose
 - N-10 (KITAGAWA)
 - $\phi 254$
 - 220st
 - 164.5
 - 170st
 - 140
 - 99
 - 65
 - 54
 - 30
 - 35
 - 25
 - 10
 - 160
 - 115
 - 170
 - 170
- Notes:**
 - O.D. holder (L/R Hand Use)

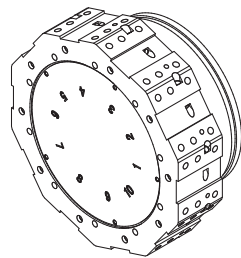
[illegible]

Turret Interference

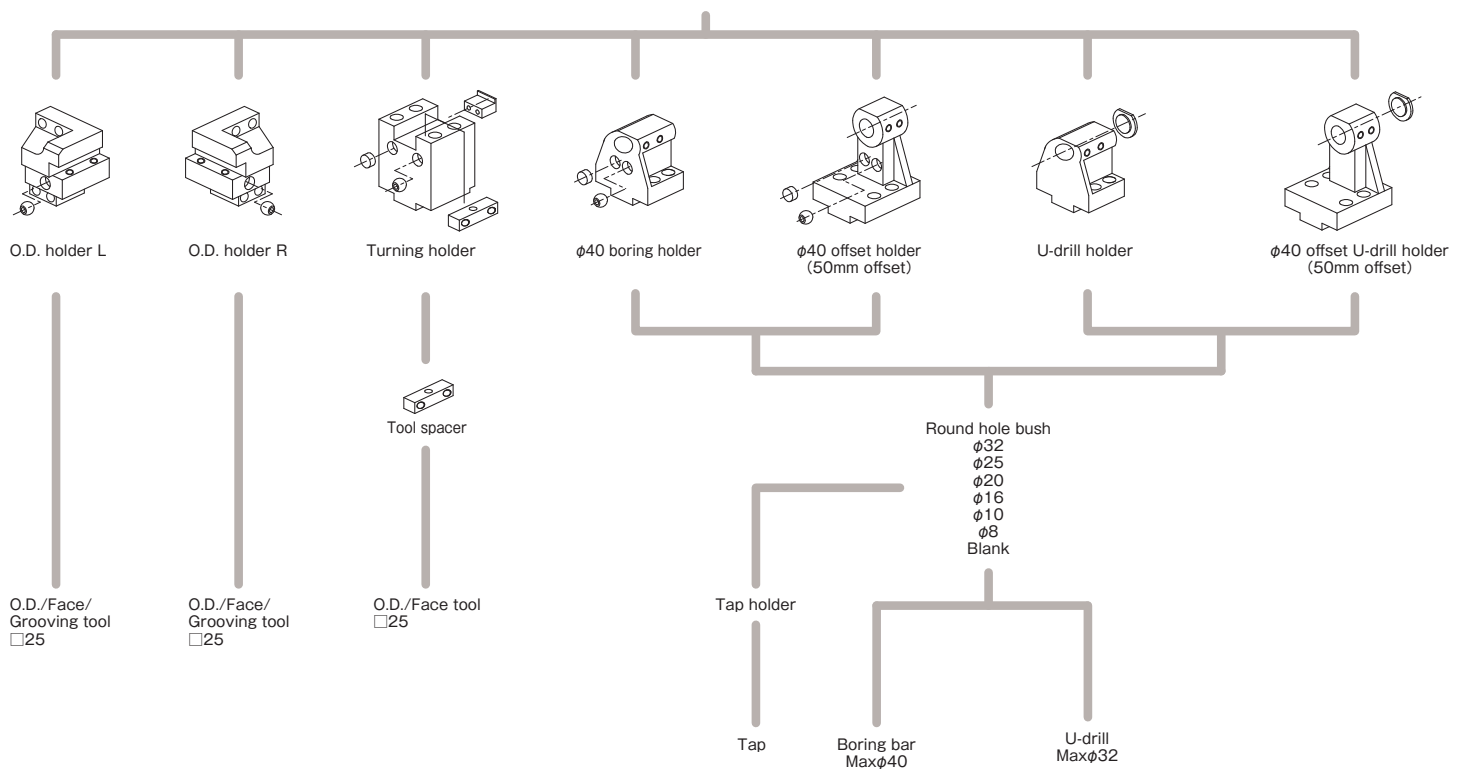


Unit(mm)

XWT-10



10-station turret



※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

[illegible][illegible][illegible]

Turret Interference



SPECIFICATION

Machine Specifications

Item		Unit	XWG-3	XW-60	XW-60M
Capacity	Optimum turning diameter	mm	φ30	φ60	
	Max. turning diameter	mm	φ50	φ175	
	Max. turning length	mm	50	130	
	Chuck size	inch	Collet, 3.4×2	Collet, 6 (5) ×2	
Spindle	Spindle nose	JIS	A2-3	A2-5 (A2-4)	
	Spindle bearing I.D.	mm	φ60	φ75 (φ65)	
	Through-hole on spindle	mm	φ30	φ46 (φ36)	
	Spindle speed	min ⁻¹	Max.8,000 (6,000※4)	Max.4,500 (6,000)	
	Spindle indexing	deg./min	(Cs-axis) (108,000)	—	Cs-axis 18,000
Tool post	Type		Gang type×2	8-station turret×2	10-station turret×2
	Tool shank	mm	□16・□20	□20	
	Boring holder I.D.	mm	φ25	φ25	
	Max. stroke	mm	X:160 Z:230	X:125 Z:140	
	Rapid traverse rate	m/min	X:12 Z:20	X:21 Z:18	
Power tools	Tool storage capacity	pcs.	—	—	10 (One side)
	Rotation speed	min ⁻¹	—	—	Max.4,000
	Drill	mm	—	—	φ13
	Capacity Endmill	mm	—	—	φ13
	Tap	mm	—	—	M4~M10
Motors	Spindle motor	kW	AC5.5/3.7×2	AC7.5/5.5×2	
	Feed motor	kW	X:AC0.4×2 Z:AC0.75×2	X:AC0.75×2 Z:AC1.2×2	
	Coolant motor	kW	AC0.25×2	AC0.25×2	
	Hydraulic motor	kW	(AC0.75×2)	AC0.75×2	
	Power tools motor	kW	—	—	AC2.5
Size	L×W×H	mm	1,040 (1,340※5) ×2,130×1,750	1,595 (1,950※5) ×2,005×2,400 (2,650※6)	1,695 (1,950※5) ×2,005×2,400 (2,650※6)
	Machine weight	kg	3,500	4,700	4,800
Total electric capacity		KVA	16 (19※4)	28	30

※1 Some restrictions may apply depending on the chuck type or tool storage capacity. ※2 Air blow only. Bar materials cannot be handled.

※3 Some restrictions may apply depending on the chucking cylinder type. ※4 The value when the hydraulic unit is mounted. ※5 Machine width with loader spec. ※6 Height including loader.

() : Option

Standard Accessories

Item	XWG-3	XW-60	XW-60M
□Tool holder	4sets	—	—
□Boring holder	—	4sets	—
□O.D. holder	—	4sets	—
□Collet flange	1set (TSC-D19)	1set	—
□Hydraulic chucking cylinder	(Option)	1set	—
□Air chucking cylinder	1set	—	—
□TAKAMAZ loader system	—	1 unit	—
□Spindle indexing device	(Option)	—	1 set
□Power tools drive unit	—	—	1 set
□Spindle cooling device※	—	1 set	—
□Thread cutting unit(Including constant surface speed control)	—	1 set	—
□Front air blower	1 set	—	(Option)
□Coolant unit	1 set (170lit.)	—	1 set (160lit.)
□Work light	—	1 set	—
□Service tool kit	—	1 set	—
□TAKAMAZ Instruction manual	—	1 set	—

※ Oil Temperature Control Type is available as an option.

Optional Accessories

Item	XWG-3	XW-60	XW-60M
□Tool holders	—	○	—
□Collet chucks	—	○	—
□Hydraulic chucks	—	○	—
□Thermony®(Thermal displacement system)	—	—	○
□Chuck clamp detector(with restrictions depending on the cylinder)	○	—	(Standard)
□High-speed loader system	○(One or two)	—	○
□Spimony®(Spindle condition monitoring system)	○	—	○(Consultation required)
□Spindle indexing device	○	—	(Standard)
□Power tools	—	—	○
□Rear chip conveyor(Floor type/Spiral type)	—	○	—
□Front air blower	(Standard)	—	○
□Rear air blower	—	○	—
□Rear coolant unit	—	○	—
□Signal light(1-tier/2-tier/3-tier)	—	○	—
□Automatic fire extinguisher	—	○	—
□Automatic power shut-off device	—	○	—
□Special color	—	○	—
□Others※	—	○	—

※ For more information on attachments, consult our sales representative.

Machine Specifications

Item		Unit	XWT-8	XW-130M	XW-200	XWT-10
Capacity	Optimum turning diameter	mm	ϕ 150		ϕ 200	
	Max. turning diameter	mm	ϕ 280	ϕ 320	ϕ 320	
	Max. turning length	mm	180	220	220	270
	Chuck size	inch	Collet, 8 × 2		10 × 2	
Spindle	Spindle nose	JIS	A2-6		A2-8	
	Spindle bearing I.D.	mm	ϕ 100		ϕ 120	
	Through-hole on spindle	mm	ϕ 61		ϕ 80	
	Spindle speed	min ⁻¹	Max.4,000		Max.2,800	Max.2,800(4,000)
	Spindle indexing	deg./min	—	C-axis 18,000	—	—
Tool post	Type		8-station turret×2	10-station turret×2	8-station turret×2	10-station turret×2
	Tool shank	mm	$\square$ 25		$\square$ 25	
	Boring holder I.D.	mm	ϕ 40		ϕ 40	
	Max. stroke	mm	X:150 Z:180	X:170 Z:220	X:170 Z:220	X:170 Z:270
	Rapid traverse rate	m/min	X:24 Z:24		X:24 Z:24	
Power tools	Tool storage capacity	pcs.	—	10 (One side)	—	
	Rotation speed	min ⁻¹	—	Max.4,000	—	
	Drill	mm	—	ϕ 16	—	
	Capacity Endmill	mm	—	ϕ 16	—	
	Tap	mm	—	M4~M10	—	
Motors	Spindle motor	kW	AC11/7.5×2		AC18.5/15×2	
	Feed motor	kW	X:AC1.2×2 Z:AC1.8×2		X:AC1.2×2 Z:AC1.8×2	
	Coolant motor	kW	AC0.25 × 2		AC0.25 × 2	
	Hydraulic motor	kW	AC0.75 × 2		AC0.75 × 2	
	Power tools motor	kW	—	AC3.7/2.2	—	
Size	L×W×H	mm	1,890 (2,250 ^{※1}) × 2,187 × 2,400 (Overall height: 2,935)	1,990 (2,350 ^{※1}) × 2,330 × 2,400 (3,080 ^{※2})	1,990 (2,350 ^{※1}) × 2,330 × 2,400 (3,080 ^{※2})	2,030 (2,350 ^{※1}) × 2,370 × 2,400 (3,080 ^{※2})
	Machine weight	kg	5,800	6,900	6,900	
Total electric capacity		KVA	33	47	62	

※1 Machine width with loader spec. ※2 Height including loader.

(): Option

Standard Accessories

Item	XWT-8	XW-130M	XW-200	XWT-10
☐ Boring holder			4sets	
☐ O.D. holder			4sets	
☐ Hydraulic power chuck (Solid)			1set	
☐ Hydraulic chucking cylinder			1set	
☐ Chuck clamp detector (with restrictions depending on the cylinder)			1set	
☐ Thermony® (Thermal displacement system)	○		(Option)	—
☐ TAKAMAZ loader system			1 unit	
☐ Spindle indexing device	—	1set (C-axis)		—
☐ Power tools drive unit	—	1set		—
☐ Spindle cooling device※	—		1set	
☐ Thread cutting unit (Including constant surface speed control)			1set	
☐ Coolant unit	1set (180lit.)		1set (200lit.)	
☐ Work light			1set	
☐ Service tool kit			1set	
☐ TAKAMAZ Instruction manual			1set	

※ Oil Temperature Control Type is available as an option.

Optional Accessories

Item	XWT-8	XW-130M	XW-200	XWT-10
☐ Tool holders			○	
☐ Hydraulic chucks			○	
☐ Collet chucks		○		—
☐ Thermony® (Thermal displacement system)	(Standard)		○	—
☐ Chuck clamp detector (with restrictions depending on the cylinder)			(Standard)	
☐ Spimony® (Spindle condition monitoring system)	—		○ (Consultation required)	—
☐ Power tools	—	○		—
☐ Rear chip conveyor (Floor type / Spiral type)			○	
☐ 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			○	
☐ Special color			○	
☐ Others※			○	

※ For more information on attachments, consult our sales representative.

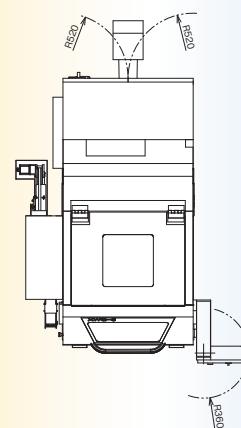
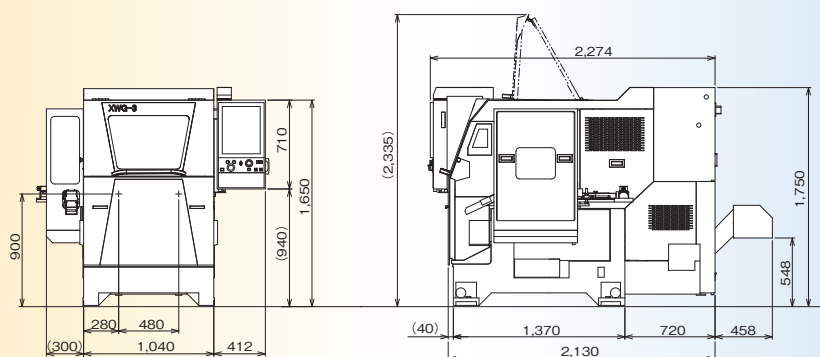
SPECIFICATION

Controller Specifications

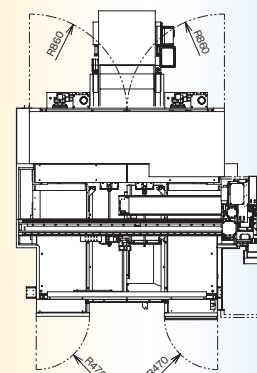
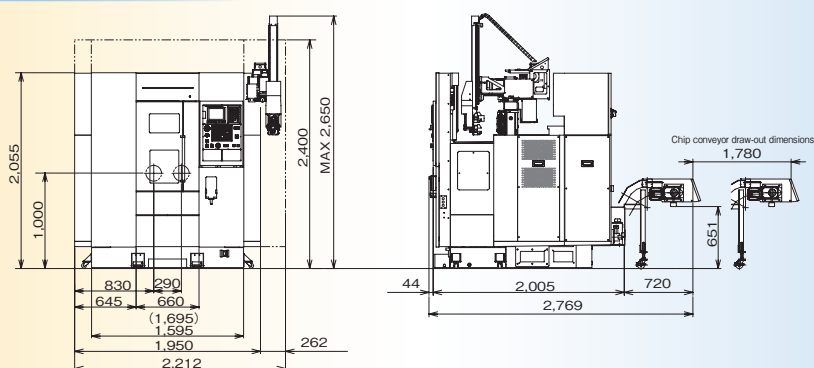
Item	XWG-3 TAKAMAZ & MITSUBISHI M830VW	XW-60 TAKAMAZ & FANUC Oi-TF	XW-60M TAKAMAZ & FANUC Oi-TF Plus	XWT-8 TAKAMAZ & FANUC Oi-TF Plus	XW-130M TAKAMAZ & FANUC Oi-TF	XW-200 TAKAMAZ & FANUC Oi-TF	XWT-10 TAKAMAZ & FANUC Oi-TF
Controlled axes	2axes(X,Z) ×2		3axes(X,Z,C) ×2	2axes(X,Z) ×2	3axes(X,Z,C) ×2	2axes(X,Z) ×2	
Simultaneously controllable axes	Simultaneous 2 axes ×2		Simultaneous 3 axes ×2	Simultaneous 2 axes ×2	Simultaneous 3 axes ×2	Simultaneous 2 axes ×2	
Least input increment	0.0001mm(X in diameter)		0.001mm (X in diameter)				
Least command increment	X:0.00005mm Z:0.0001mm		X:0.0005mm Z:0.001mm				
Auxiliary function	M-code 3 digit						
Spindle function	S-code 4 digit						
Tool function		T-code 4 digit					
Tape code	EIA(RS232C)/ISO(840)automatic recognition						
Cutting feedrate	1~7,000mm/min		1~5,000mm/min				
Command system	Incremental/Absolute						
Linear interpolation	G01						
Circular interpolation	G02,G03						
Cutting feedrate override	0~150%						
Rapid traverse override	F0,100%						
Program number	Program file name 32 characters						
Backlash compensation	0~999,999.9μm		0~9,999μm				
Program memory capacity	500Kbyte(1,280m)		1Mbyte(2,560m)(Dual systems total)		2Mbyte(5,120m)(Dual systems total)		1Mbyte(2,560m)(Dual systems total)
Tool offsets	64sets(Dual systems total)		128sets (Dual systems total)				
Registered programs	1,000pcs.(Dual systems total)		800pcs.(Dual systems total)		1,000pcs.(Dual systems total)		800pcs.(Dual systems total)
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						
Custom macro common variables	#100~#199,#500~#999						
Pattern data input	Standard(Equivalent Functions)		Standard				
Nose R compensation	G40,G41,G42						
Inch/Metric conversion	G20/G21						
Programmable data input	G10						
Run hour/Parts count display	Standard(Equivalent Functions)		Standard				
Extended part program editing	Standard						
Multiple repetitive cycle	G70~G76						
Multiple repetitive cycle II	Pocket-shaped						
Canned drilling cycle	Standard						
Chamfering/Corner R	Standard		(Option)				
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	512pcs.		50pcs.				
Self-diagnosis function	Standard						
Sub-program call	Up to 8 loops		Up to 10 loops				
Decimal point input	Standard						
2nd reference point return	G30						
Work coordinate system setting	G50,G54~G59						
Rigid tapping	(Spindle:Option)	—	For Power Tools only	—	For Power Tools only	—	
Polar coordinate interpolation	—	—	Standard	—	Standard	—	
Cylindrical interpolation	—	—	Standard	—	Standard	—	
Stored stroke check 1	Standard						
Input/Output interface	Memory card,Ethernet						
Input/Output interface(RS232C)	(Option)						
Input/Output interface(USBFlash Memory)	Standard						
Alarm message	Standard						
Graphic display(FANUC)	Standard						
Graphic trace(MITSUBISHI)	Standard						
Spindle orientation	(Option)						
G code guidance	Standard		—				
Simple programming function(FANUC)	Standard		—				
NAVI LATHE(MITSUBISHI)							
Dynamic graphic display(FANUC)	Standard		(Option)				
Graphic check(MITSUBISHI)							
Tool life management	Standard		(Option)				
Multiple M codes in one block	Max. 3		(Max. 3:Option)				
Conversational programming with graphic function	—		Standard				
Abnormal load detection	—		Standard				
Manual handle trace	—		Standard				
Automatic data backup	Standard						
Automatic screen deletion function	—		Standard		—		Standard
TAKAMAZ management support function	Work/Tool counter		Work/Tool counter,Tool load monitor,Other				
TAKAMAZ maintenance functions	Standard						
Set of Instruction Manuals for Control Device	CD-ROM(Bound:Option)		DVD-ROM(Bound:Option)				

FLOOR SPACE

XWG-3

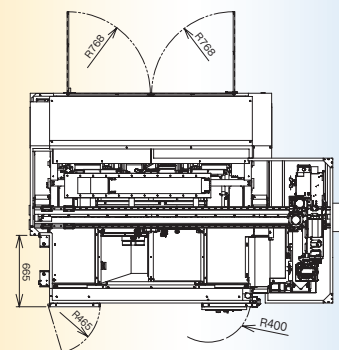
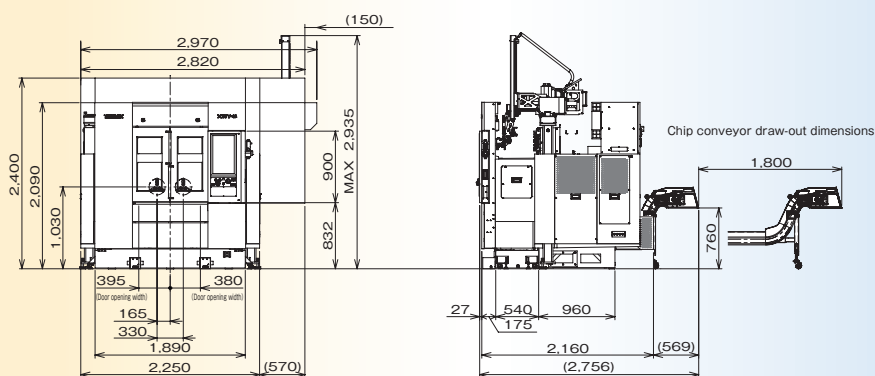


XW-60/XW-60M

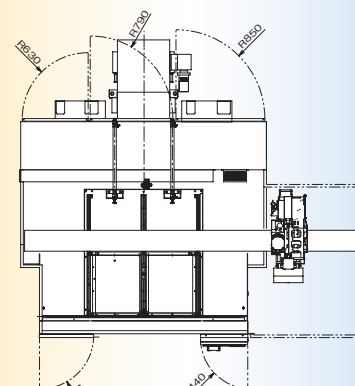
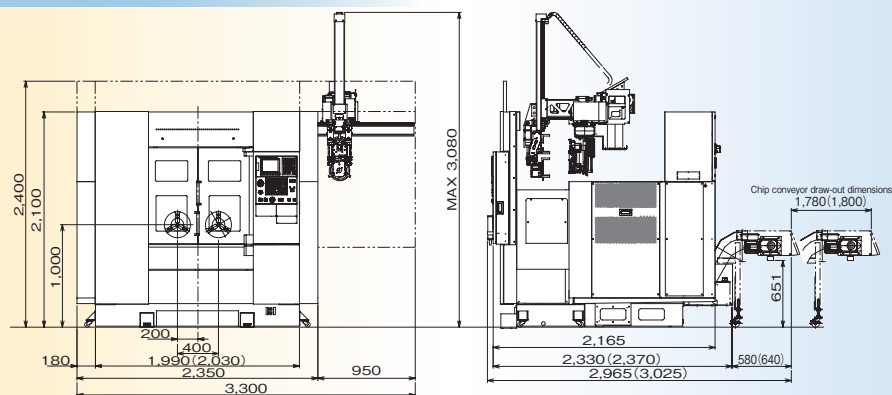


Date in parentheses is for XW-60M.

XWT-8



XW-130M/XW-200/XWT-10



Date in parentheses is for XWT-10.

Unit(mm)



XW series

TAKAMAZ

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The user must not export, sell, or relocate the product, to any country with different regulations or standards.

