

CNC ▯ Spindle ▯ 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!*



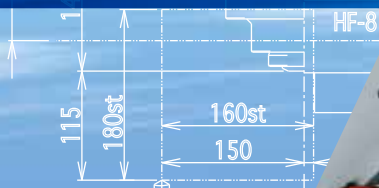
From the original spindle parallel structure, a high rigidity, compact and high precision design is achieved. This qualifies as an expert model for durability on mass production system.

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

XW-30

3

Inch



Gang Type

The best machine for small production!

P3–P4

XW-30PLUS

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

XW-60M

6

Inch



Drum Type

Achieving versatile machining by mounting power tools!

P5–P6

XW-130

8

Inch



Drum Type

Fastest loading time in its class

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



※The photo shows the XW-30PLUS.

CNC 2-Spindle 2-Slide Precision Lathe

XW-30/30

Chuck size 3 / 4 Inch

PLUS

※The XW-30 accepts 3-inch chucks only.





High-speed, high-accuracy machining achieved in an elegant, compact body!

Incorporating a new-type spindle unit (XW-30PLUS)

A high-efficiency motor with an output of 5.5/7 kW is adopted as the built-in motor. The unit is compatible with chucks up to 4 inches, and a hydraulic cylinder can also be equipped as an option to enable stable mass production machining of workpieces that require a strong gripping force. The reviewed cooling circuit has made the oil controller that used to be essential for short-cycle machining unnecessary*, reducing the cost and space requirements.

※An oil controller is still required with some specifications.

Pursuing high precision cutting by incorporating a cooling system in the machine

Generally on a machine with 2 spindles, a heat imbalance arises in cases where different cutting is performed at the left and right sides. This leads to unstable accuracy. The XW-30 series is built with a cooling tank inside the bed for the two spindles to suppress thermal displacement, achieving stable accuracy over the long term (Patented technology).

Production improved by a high-speed loader For details, see page 13. Either a compact “ΣiW loader” or high-speed compact “ΣiWH loader” (option) can be selected. These smallest ever Takamaz loaders have been realized through a 2-stage configuration on the vertical axis. High productivity is assured by a loading time of 4 seconds with the ΣiW loader and 2 seconds with the ΣiWH loader (not including shutter operation). In addition, placing the intermediate turnover unit in the center and providing two reversing hands makes it possible to receive and deliver workpieces simultaneously without the loader going outside the machine at any time, so substantial shortening of cycle times has been achieved.

※The intermediate turnover unit is located in the center on the XW-30PLUS only.

New design with consideration for quick changeover

For setup changes, the top part of the front cover can be opened across the full width of the machine. The door opening has been scaled up from a width of 550mm on existing machines to 900mm, improving the working environment. The shutter also opens up well to the rear, allowing setup work to be performed safely and speedily.



Higher performance control system

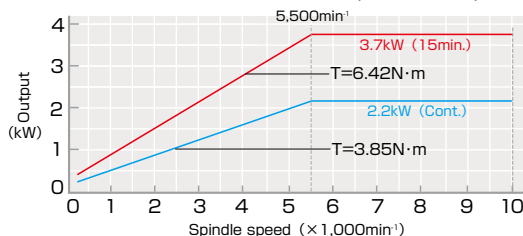
Operating convenience is improved by making the operating box more compact than on previous models, and by adopting a touch panel.

Space-saving design and long-awaited addition of CE specifications (XW-30PLUS)

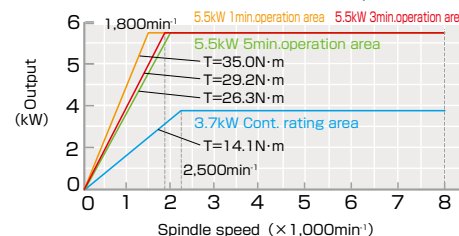
Space savings have been realized with a machine 1,340mm wide (bed width: 1,040mm), 2,120mm deep and 1,500mm high. Compliance with CE standards has been made possible too, enabling safe usage in Europe as well.

※Machines with CE specifications have different dimensions.

XW-30 Spindle power characteristic curve ■ Max.10,000min⁻¹ Standard type (AC3.7/2.2kW)



XW-30PLUS Spindle power characteristic curve ■ Max.8,000min⁻¹ Standard type (AC5.5/3.7kW)





※The photo shows the XW-60m.

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

XW-60/60m

NEW

Chuck size **6** Inch

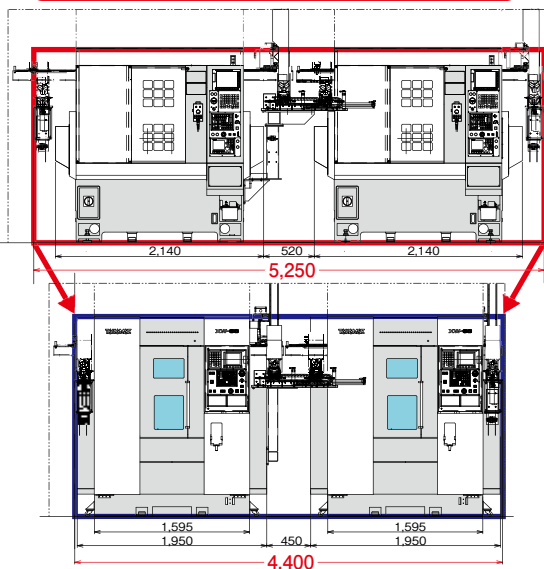


6-inch-chuck medium-sized machine ticking all three boxes: space savings, compound machining, and high-speed automation

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)



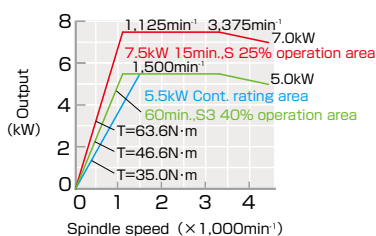
※ With 2 machines linked: shortening of 850 mm

Evolved high-speed automation system

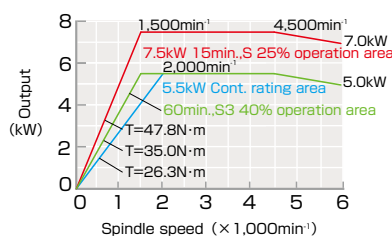
The optimum transfer system is configured by integrating a transfer loader with the machine body, contributing to cycle time reduction. (Y-axis rapid traverse rate: 60% higher than on previous models, Loading time: 10% shorter than on previous models, Shortest cycle time for front and back machining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

XW-60/60M Spindle power characteristic curve

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



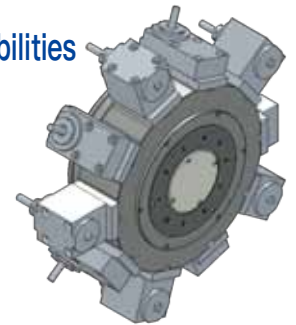
■ Max.6,000min⁻¹ Option type (AC5.5/7.5kW)



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

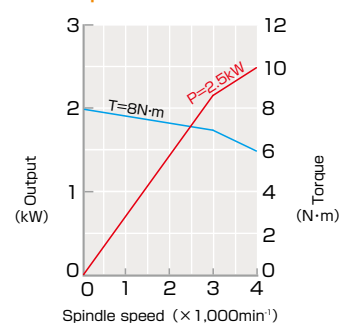
For details, see page 10.

Improved operability for setup changes

For details, see page 10.

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

XW-60M Power tool power characteristic curve ■ Max.4,000min⁻¹ Standard type (AC2.5kW)



XW-130



CNC 2-Spindle 2-Turret Precision Lathe

XW-130

Chuck size 8 Inch





A 2-Spindle 2-Turret Precision Lathe with "high-speed high-power" 8-inch chuck

Loading time with a mark of fastest class at 6 seconds

The XW-130 series is equipped with a newly-developed 3-axis loader dedicated to 2-spindle configurations. High rigidity has been achieved by increasing the rack size, and higher travel speeds have been sought, resulting in the fastest loading time in its class at 6 seconds. In addition, improvement of the intermediate turnover unit has enabled workpiece delivery to be completed in one motion instead of two as was previously necessary, allowing a cycle time of only 18 seconds for processes 1 and 2 in both-side machining (Patented technology). What is more, one of the parallel loader hands has been given an independent drive function, and a configuration that minimizes interference with the stocker, washer unit, etc., during delivery has been adopted.



High-speed shutter installed

The shutter that opens and closes when the loader enters has been made even faster. The combination of solenoid valve control with the ideal cylinder has cut the operating time of previous models in half, to under 0.5 seconds for both opening and closing operations.

Ease of maintenance

For cutting inside the machine, there is no exposure of the slide wipers. Therefore countermeasure for hot chip is perfect. In addition, because of the chip conveyor, stagnation of the chip does not occur directly under the spindle. Furthermore, coolant tank can be pulled out from the front of the machine, which is a structure for coolant tank easy cleaning. With complete opening of rear cover, and the piping concentrated in the machine side, it is the structure that ensures easy maintenance on the rear area of the machine.

Unique thermal displacement suppression construction adopted

For details, see page 6.

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

Vibration damping function installed

For details, see page 10.

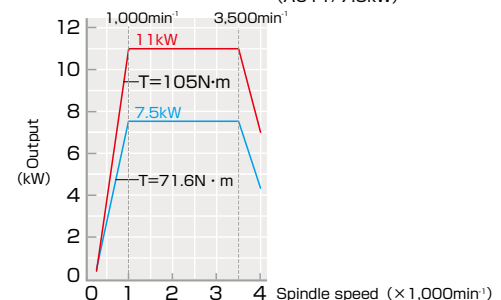
(Technology common to XW-60/XW-60M/XW-130M/XW-200/XWT-10)

Improved operability for setup changes

For details, see page 10.

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

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





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)

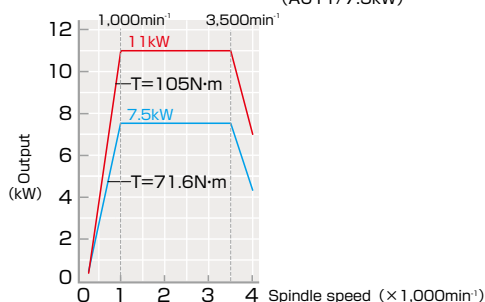
Improved operability for setup changes

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.

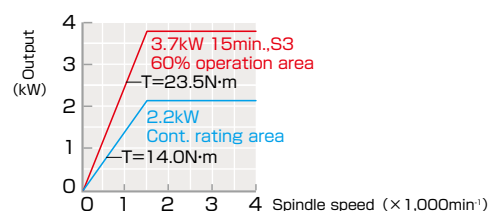
(Technology common to XW-60/XW-60M/XW-130/XW-200/XWT-10)



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

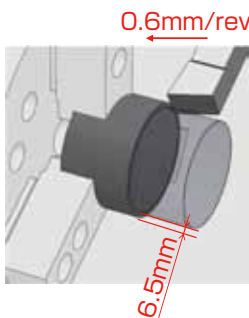
Chuck size 10 Inch



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($t \times f$) **3.9mm^2**

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.

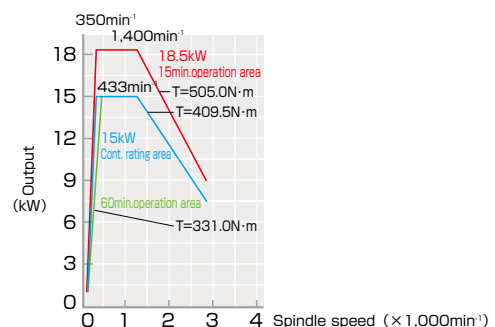
(Technology common to XW-60/XW-60M/XW-130/XW-130M/XWT-10)

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. $2,800\text{min}^{-1}$ Standard type ($\phi 120$ spindle AC18.5/15kW)



XWT-10



CNC 2-Spindle 2-Turret Precision Lathe

XWT-10

NEW

Chuck size 10 Inch



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

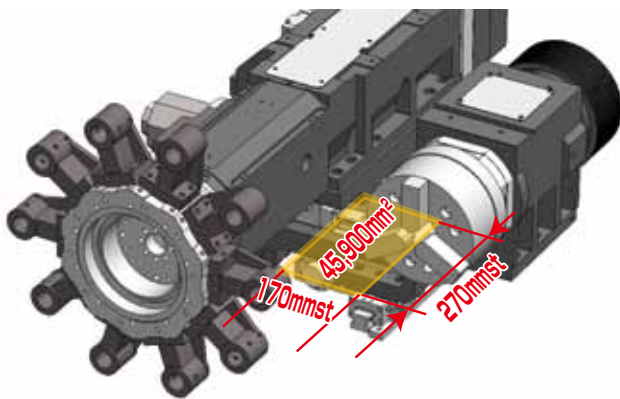
Equipped with 10-station turrets

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)

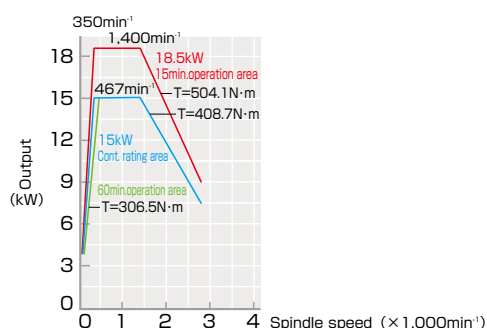
Improved operability for setup changes

For details, see page 10.

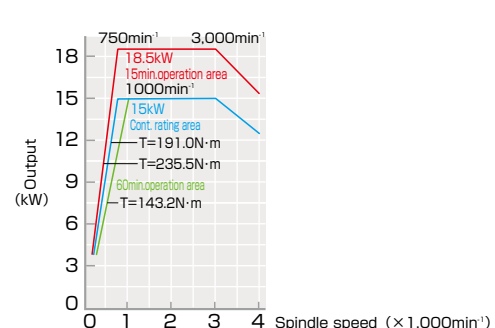
(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

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, “Σi Series”

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

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



Loader transfer capacity

Item	Unit	XW-30/30PLUS		XW-60/60M		XW-130	XW-130M/200	XW-200	XWT-10
Loader Model		ΣIW30*	ΣIW30H*	ΣIGTH60	ΣIGTH60(High speed type)	ΣIGTH150		ΣIGTH200	
Number of axes	axes	2				3			
Loading Time (Reference)	sec.	4	2	6	2	6		7	
Transport	Diameter x Length (Reference)	mm		mm		mm		mm	
Work Dimension	Weight	kg		kg		kg		kg	
	Drive System					Servomotor			
Shoulder (Traverse axis : Z)	Stroke	mm				Depends on specifications			
	Rapid Traverse Rate	m/min							
	Drive System					Servomotor			
Forward/Backward axis : X	Stroke	mm				235			
	Rapid Traverse Rate	m/min				35		30	
	Drive System					Servomotor			
Arm (Vertical axis: Y)	Stroke	mm				690	760	780	
	Rapid Traverse Rate	m/min				125		80	
	Drive System					Air cylinder			
Hand	Angle	deg.				90			
	Jaw Stroke	mm				16(One side)		12(One side)	
Hand Type						ΣIGTH dedicated L Hand			

※The loader installed on the XW-30 is the ΣW30/ΣW30H.

※The loader for the XW-30PLUS with CE specifications is the ΣW30/ΣW30H.

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(CR)

XW-30 XW-30PLUS



ΣiGTH dedicated L Hand

XW-60 XW-60M
XW-130 XW-130M XW-200 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**
By stacking per pallet, scratches on parts are prevented because of better stacking resulting to an efficient form of delivery system.



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



● **Elevator Hopper**
Through the stocker as first process (parts supply), the stocker is suitable for production of short delivery cycle.



● **Rotary Stocker**
The space-saving, low-cost stocker. The position can be adjusted easily according to the size of the part.

Cutting Efficiency / Chip Disposal



● **Alloyed Clamp Holder for vibration suppression**
Inhibiting the progression of wear boundary is expected to extend cutting tool life in high speed machining.



● **Chip Conveyor (Spiral Type)**
Chip disposal is done semi-automatically at a minimum space. Floor type is also available.

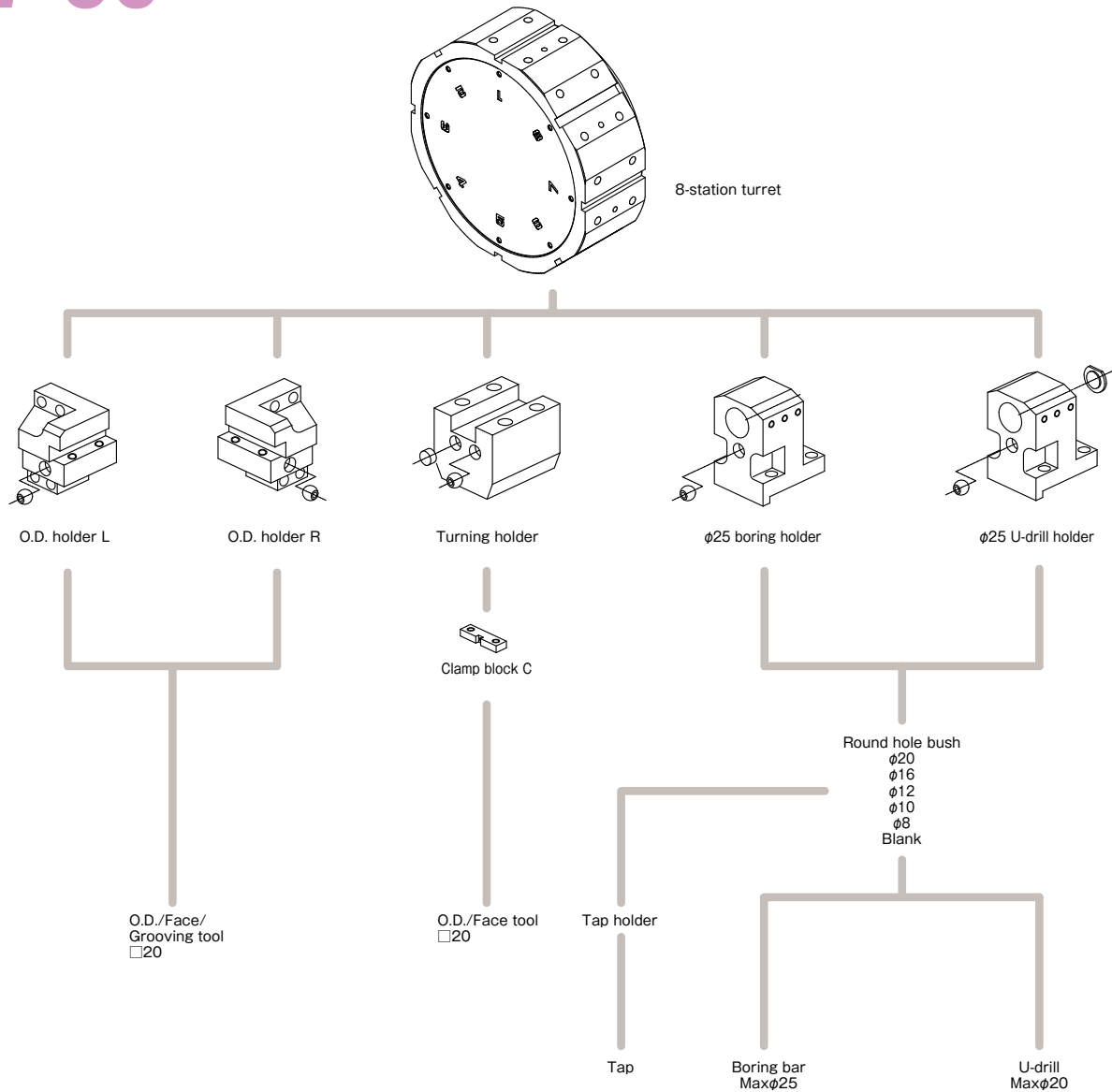


● **High-pressure coolant**
Constantly cooled coolant is discharged at high pressure so that the tool life is significantly prolonged.



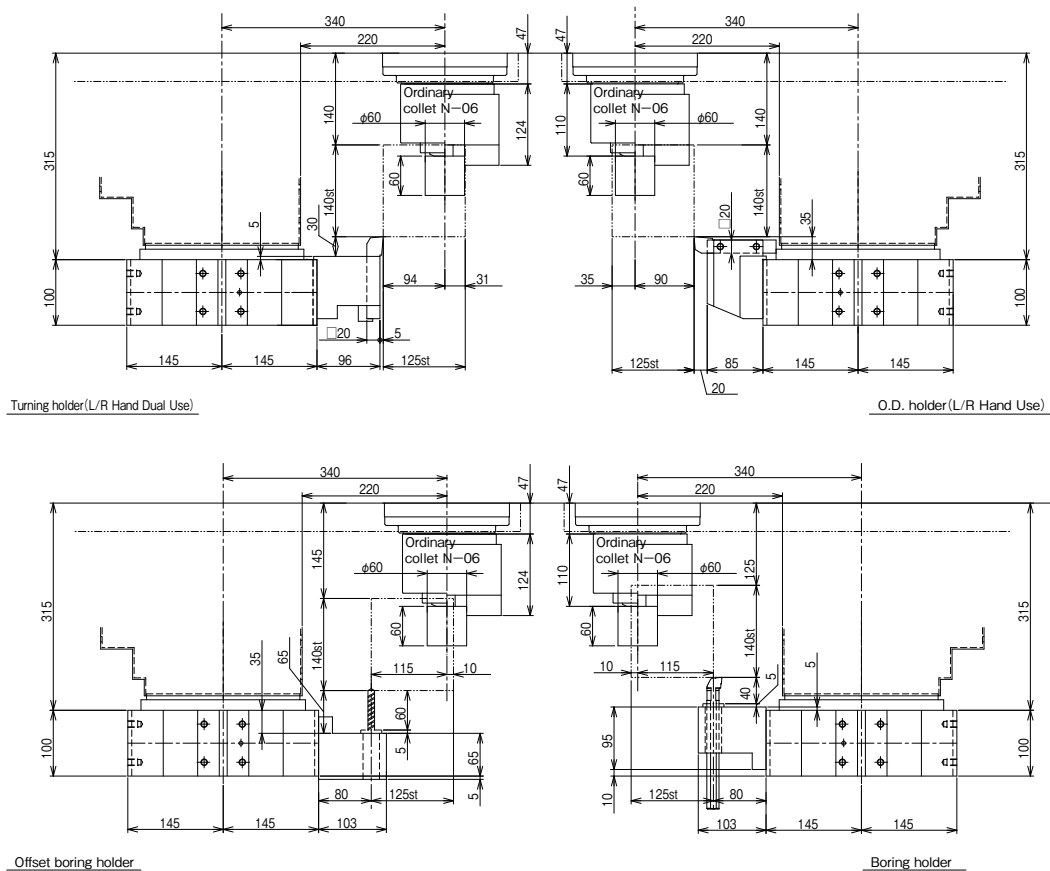
● **Semi-dry machining**
Ultrathin, highly-lubricating vegetable coolant is applied to the correct point on the cutting edge, realizing semi-dry machining.

XW-60

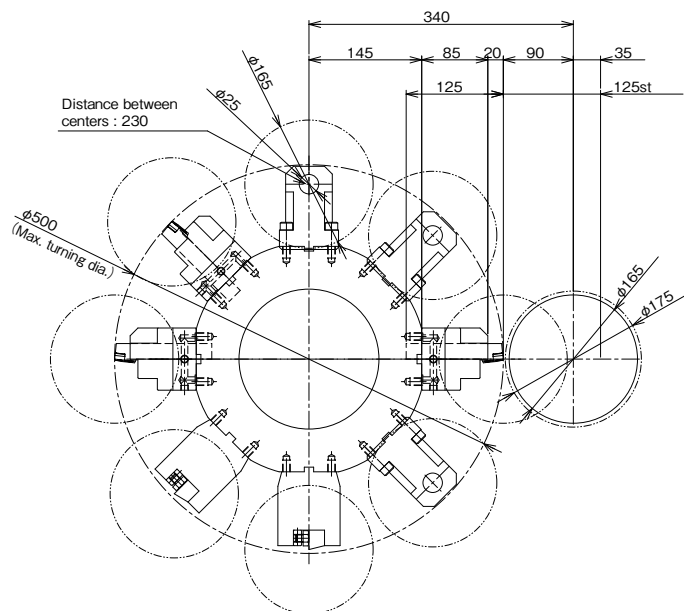


Stroke-Related Drawing

XW-60

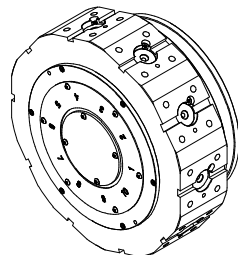


Turret Interference

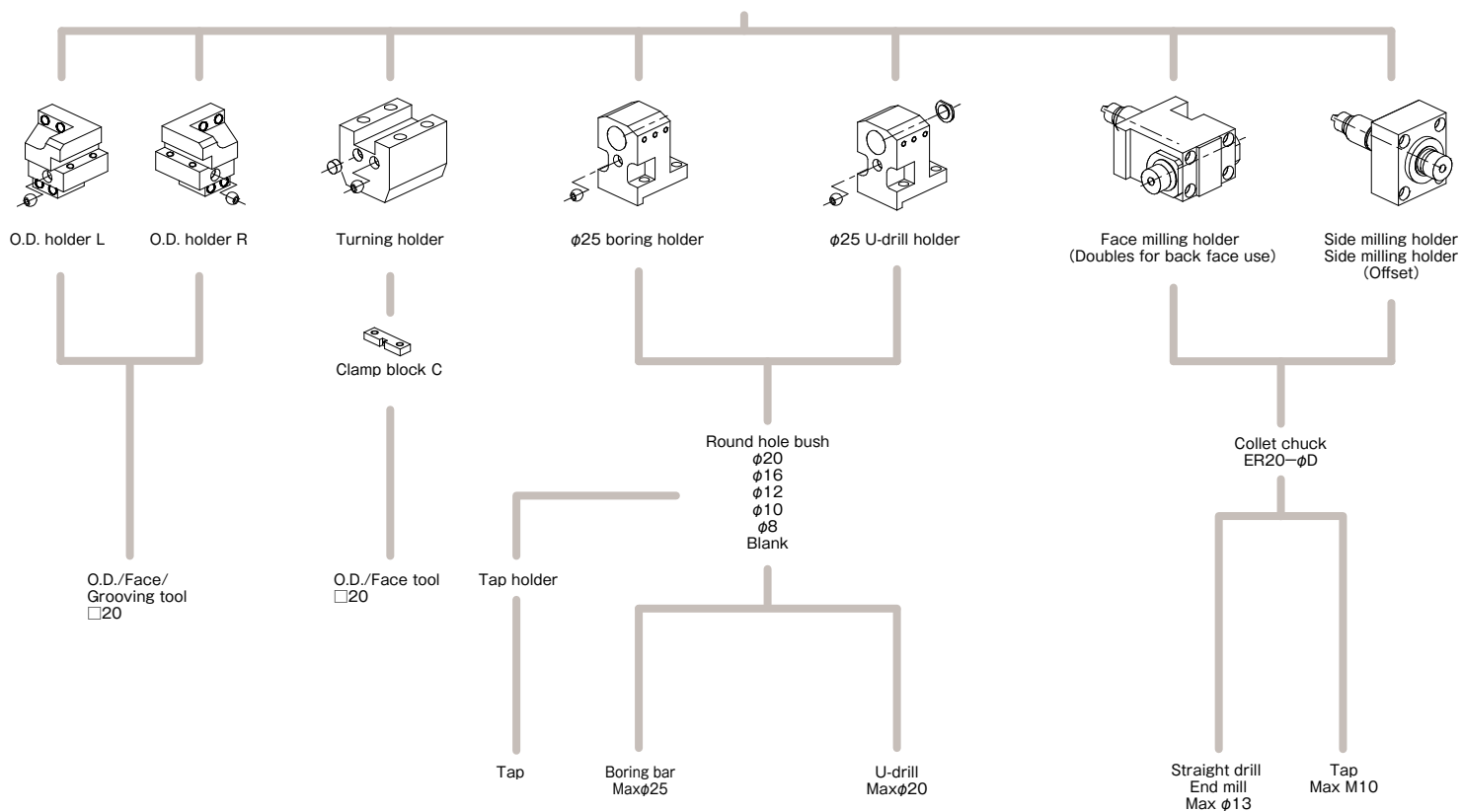


Unit(mm)

XW-60_M

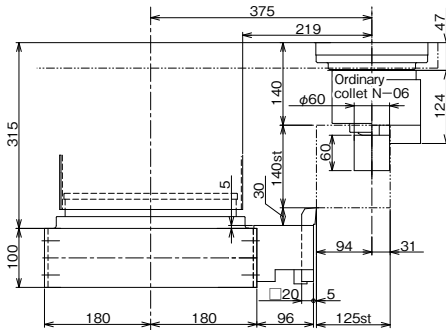


10-station turret

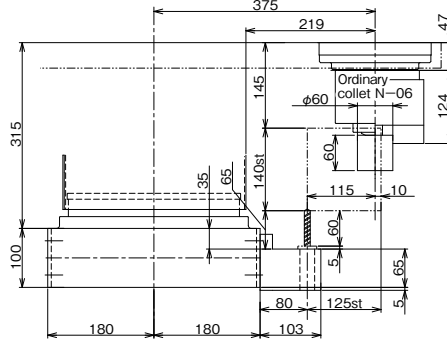


Stroke-Related Drawing

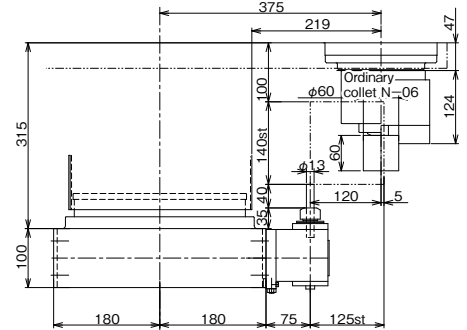
XW-60_M



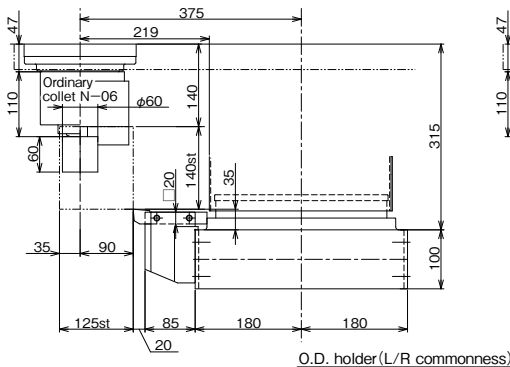
Turning holder (L/R commonness)



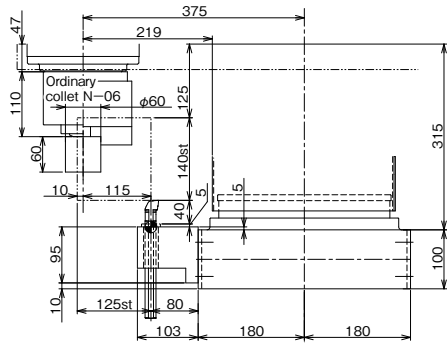
Offset boring holder



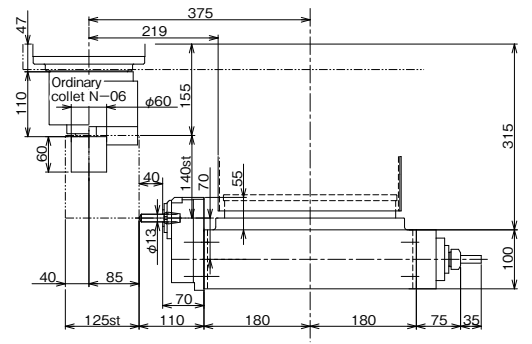
Face milling holder



O.D. holder (L/R commonness)

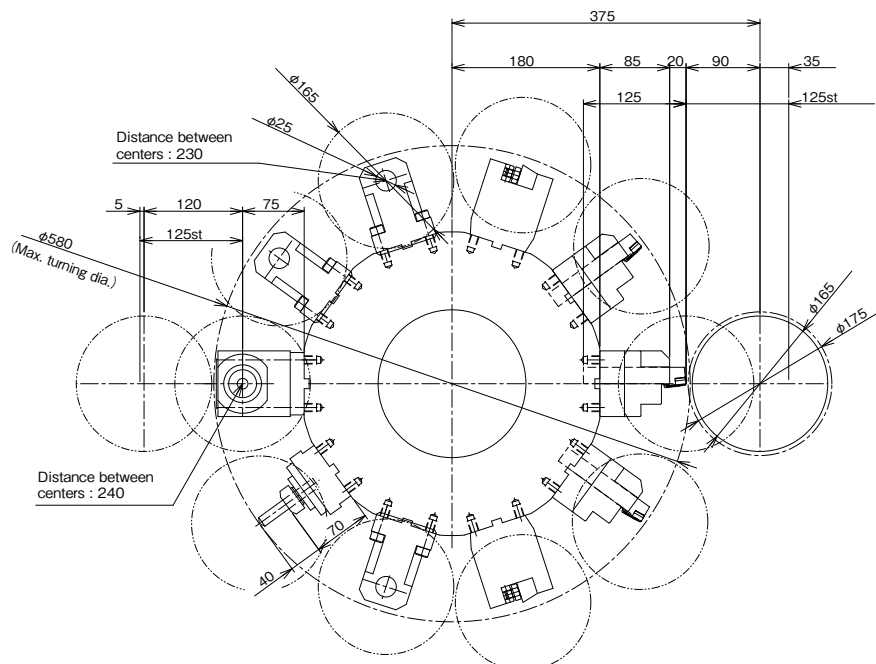


Boring/U-drill holder



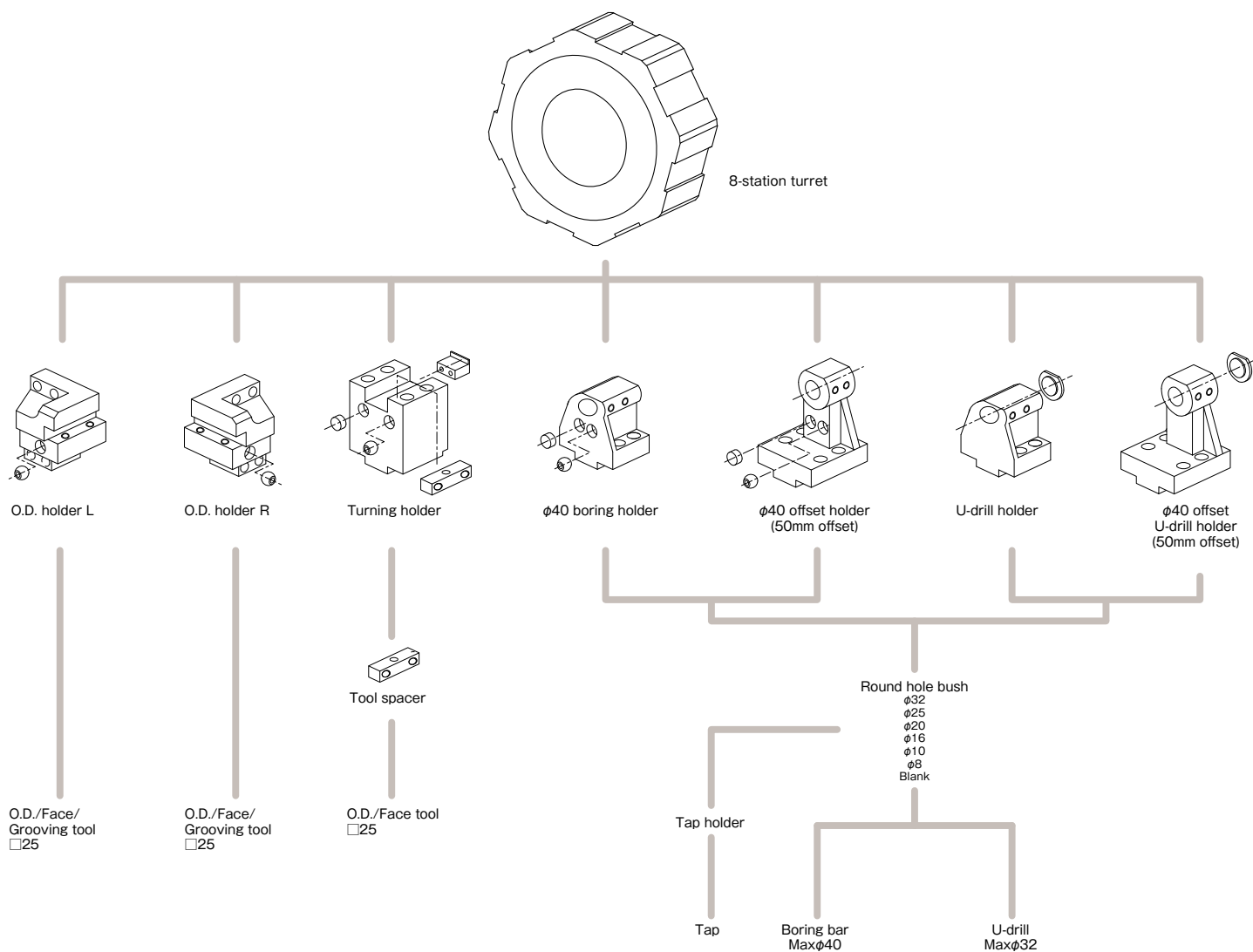
Side milling holder

Turret Interference



Unit (mm)

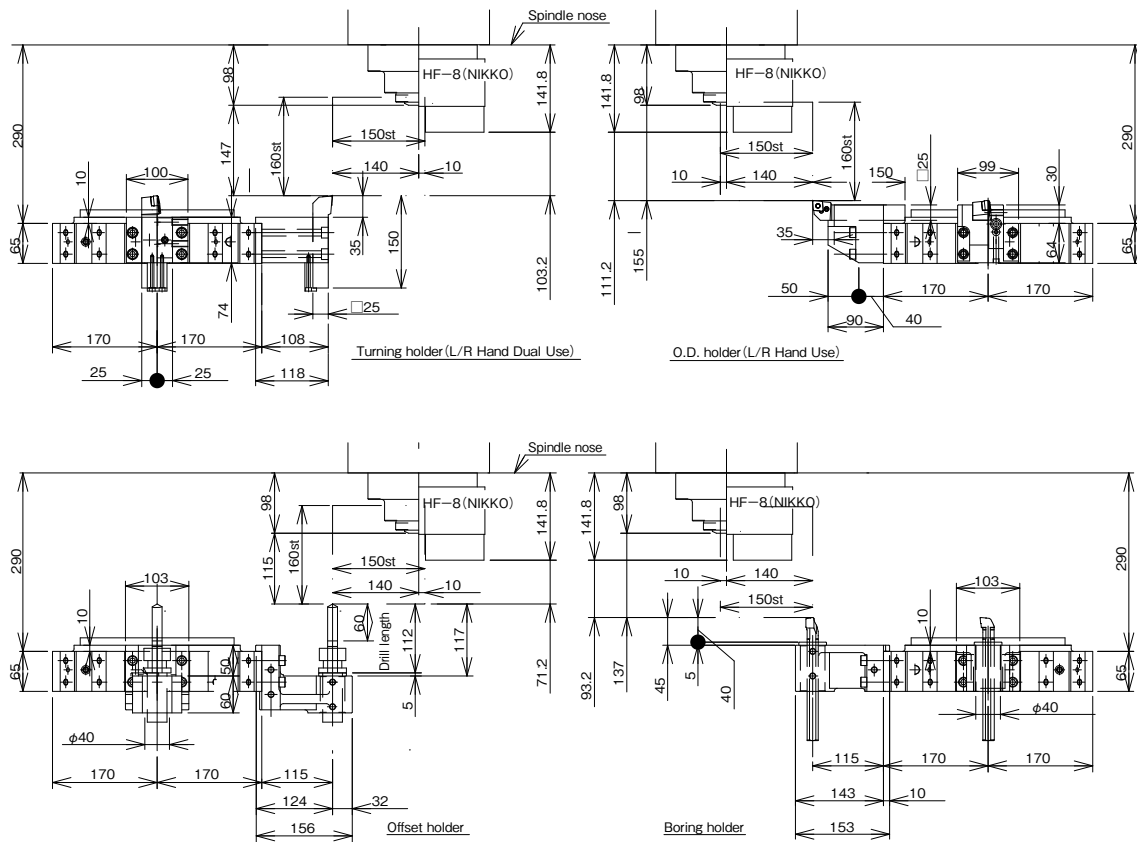
XW-130



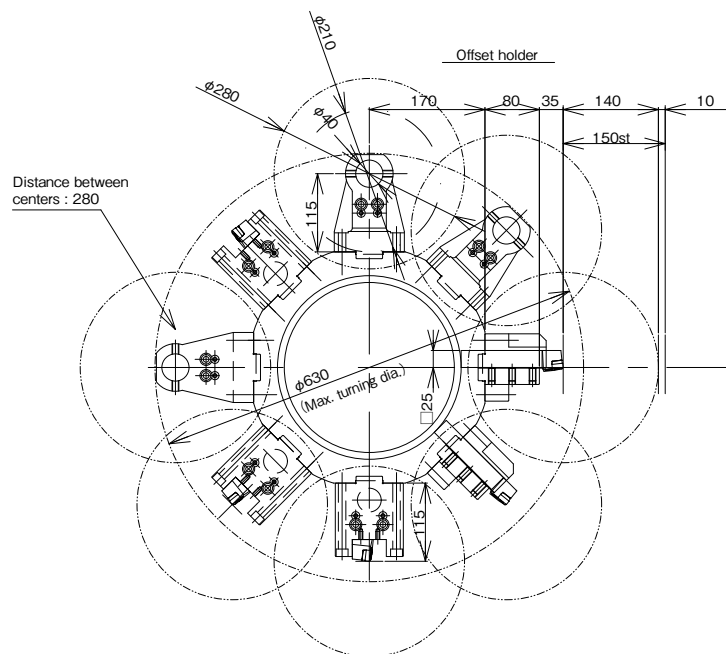
※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

XW-130

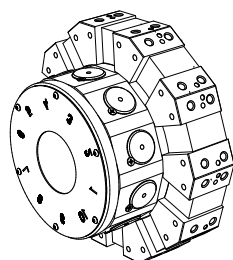


Turret Interference

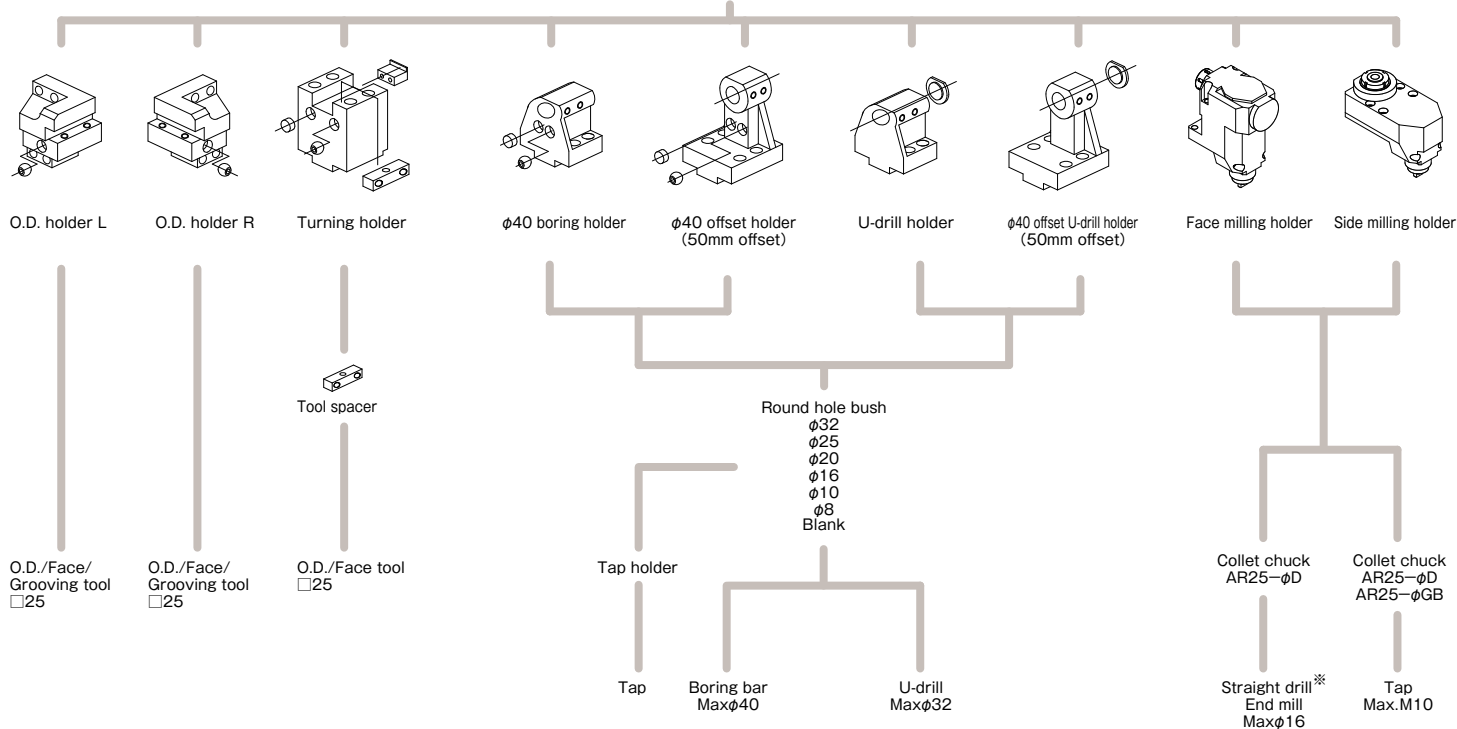


Unit(mm)

XW-130M



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 dimensions and components. The drawing includes a side view and a top view. Key dimensions and components are labeled:

- Spindle nose**: Indicated by a leader line pointing to the top of the holder.
- Dimensions**:
 - Overall width: 445
 - Overall height: 321
 - Distance from spindle nose to center of rotation: 140
 - Distance from center of rotation to the right side: 170
 - Distance from center of rotation to the left side: 170
 - Distance from center of rotation to the right side of the holder: 170st
 - Distance from center of rotation to the right side of the holder: 160
 - Distance from center of rotation to the right side of the holder: 115
 - Distance from center of rotation to the right side of the holder: 10
 - Distance from center of rotation to the right side of the holder: 7
 - Distance from center of rotation to the right side of the holder: 150
 - Distance from center of rotation to the right side of the holder: 85
 - Distance from center of rotation to the right side of the holder: 25
 - Distance from center of rotation to the right side of the holder: 130
 - Distance from center of rotation to the right side of the holder: 42
 - Distance from center of rotation to the right side of the holder: 104
 - Distance from center of rotation to the right side of the holder: 98
 - Distance from center of rotation to the right side of the holder: 220st
 - Distance from center of rotation to the right side of the holder: 178
 - Distance from center of rotation to the right side of the holder: 74
 - Distance from center of rotation to the right side of the holder: 10
- Components**:
 - Z6-8 (MATSUMOTO)**: A component mounted on the holder.
 - 25**: A component mounted on the holder.

Turning holder (L/R Hand Dual Use)

[illegible][illegible]

Technical drawing of the Z6-8 (MATSUMOTO) tool holder assembly. The drawing shows a side view of the holder and a top view of the tool holder. Dimensions are given in millimeters.

Side View Dimensions:

- Total length: 445
- Height: 98
- Distance from base to center: 186
- Distance from base to tool center: 220st
- Distance from base to tool center (alternative): 170st
- Distance from base to tool center (alternative): 138
- Distance from base to tool center (alternative): 104
- Distance from base to tool center (alternative): 42

Top View Dimensions:

- Width: 140
- Distance from center to edge: 170
- Distance from center to edge: 170
- Distance from center to edge: 90
- Distance from center to edge: 35
- Distance from center to edge: 25
- Distance from center to edge: 74

Labels:

- Z6-8 (MATSUMOTO)
- Spindle nose
- 321
- 10
- 160
- 115
- 170
- 170

Notes:

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

Technical drawing of the Boring holder assembly. The drawing shows two main views: a side view (top) and a front view (bottom). Dimensions are given in millimeters.

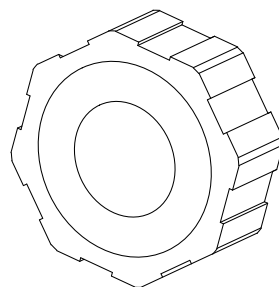
- Side View (Top):** Shows the profile of the boring holder. Key dimensions include:
 - Total width: 445 mm
 - Spindle nose diameter: 98 mm
 - Distance from spindle nose to centerline: 220st mm
 - Distance from centerline to end face: 170st mm
 - End face thickness: 5.40 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 143 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 160 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 115 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 170 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 170 mm
- Front View (Bottom):** Shows the top view of the boring holder. Key dimensions include:
 - Distance from spindle nose to centerline: 321 mm
 - Distance from centerline to end face: 140 mm
 - End face thickness: 74 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 143 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 160 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 115 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 170 mm
 - Internal hole offset: 10 mm
 - Internal hole diameter: $\phi 40$
 - Internal hole length: 170 mm

The drawing also includes labels for "Spindle nose" and "Boring holder".

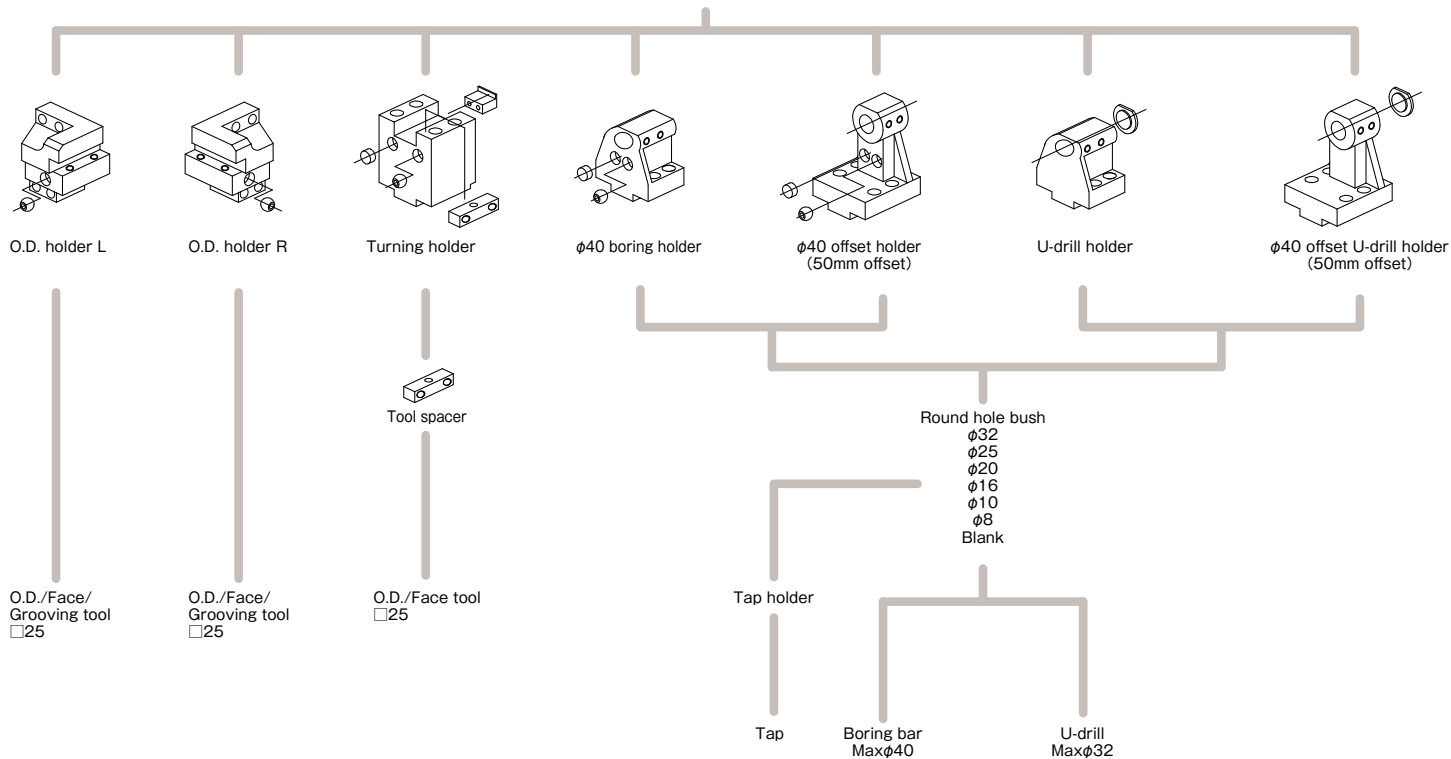
[illegible][illegible]

26

XW-200



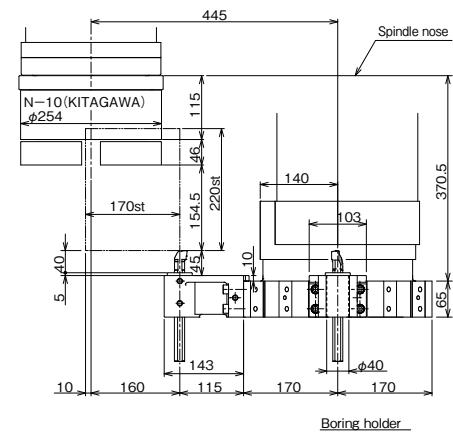
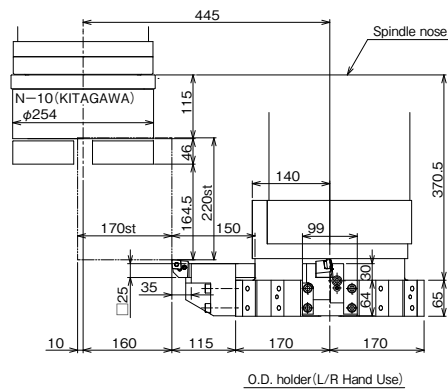
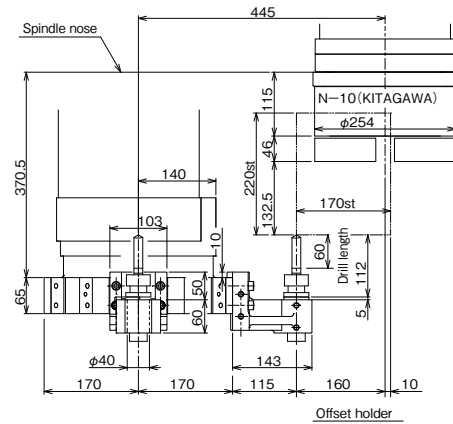
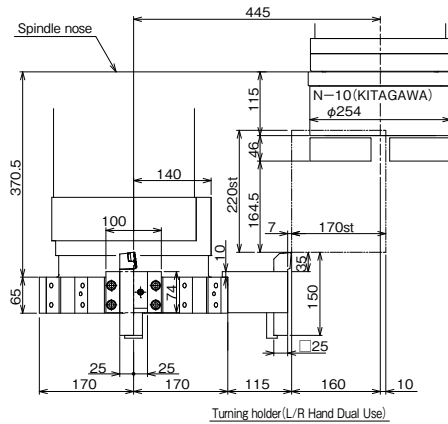
8-station turret



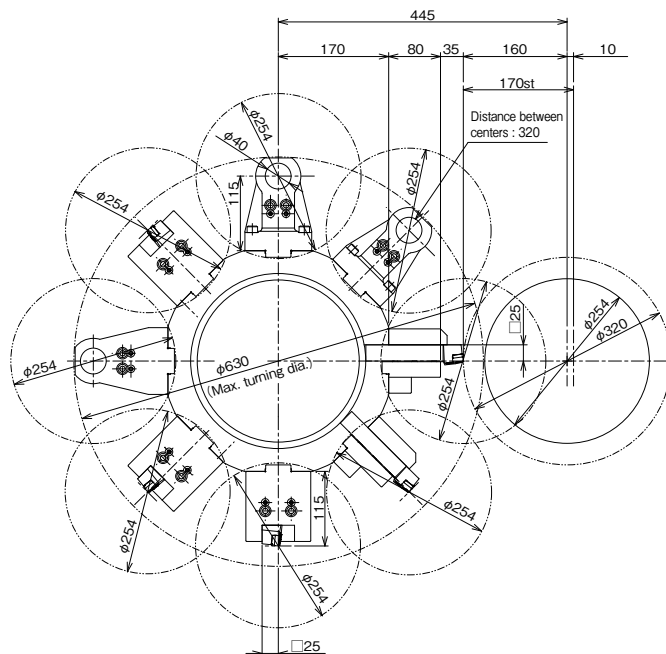
※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

XW-200

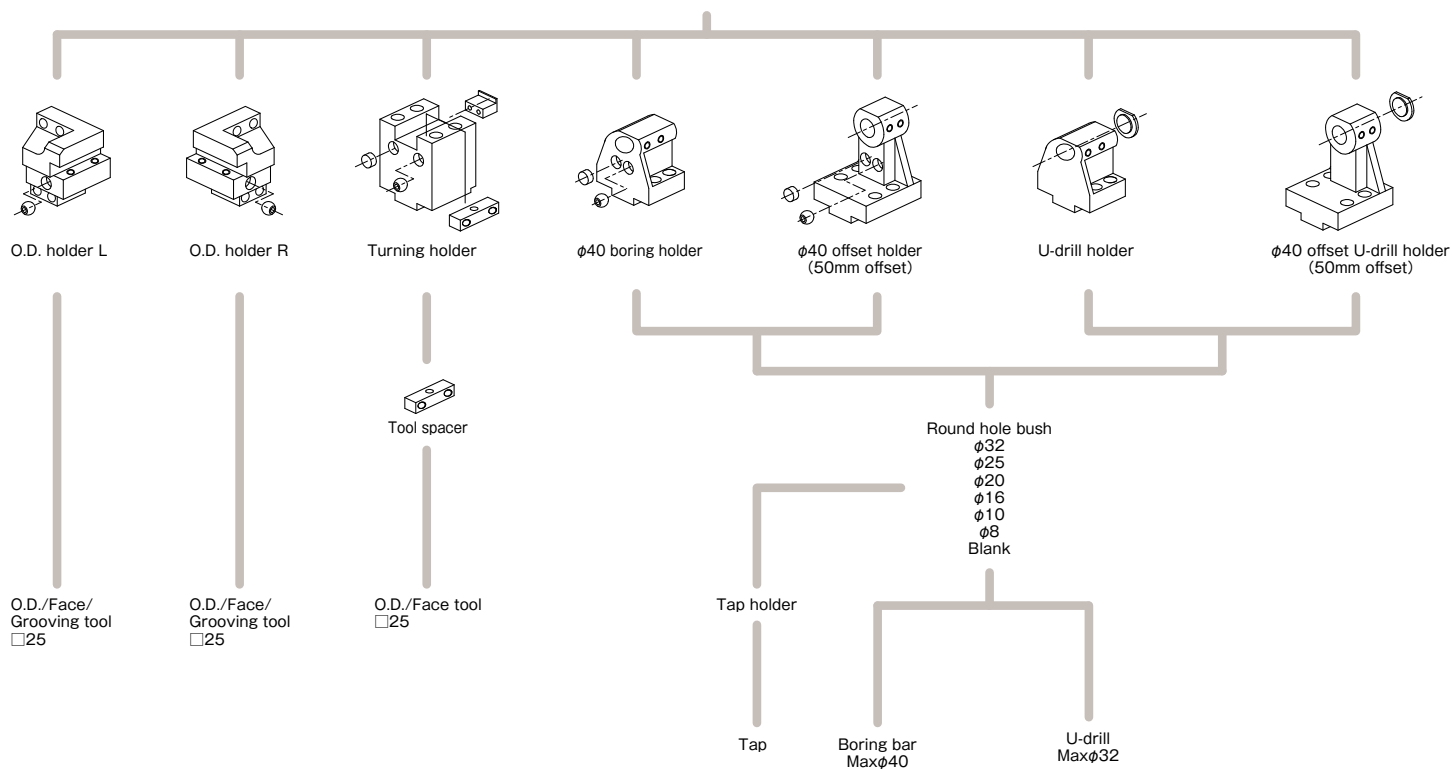


Turret Interference



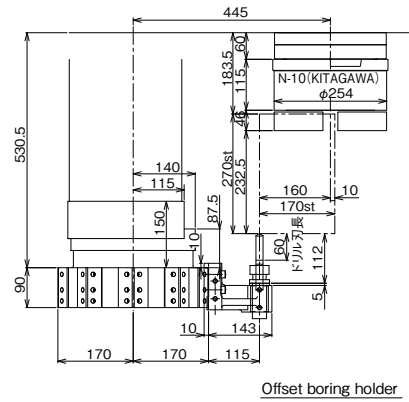
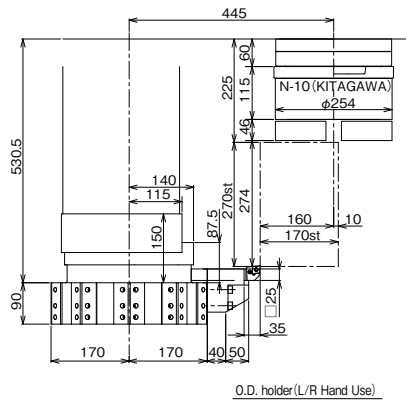
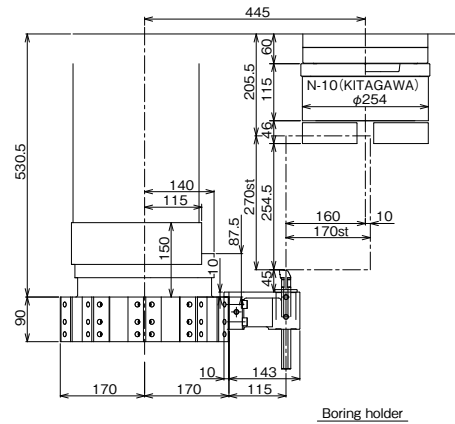
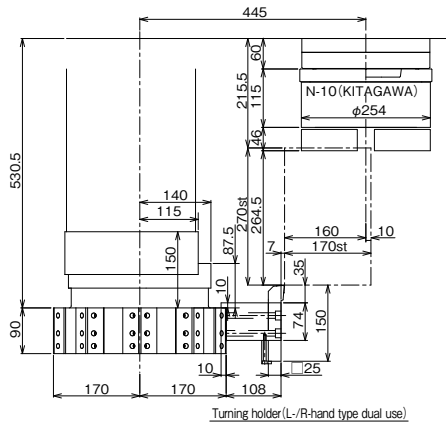
Unit (mm)

10-station turret

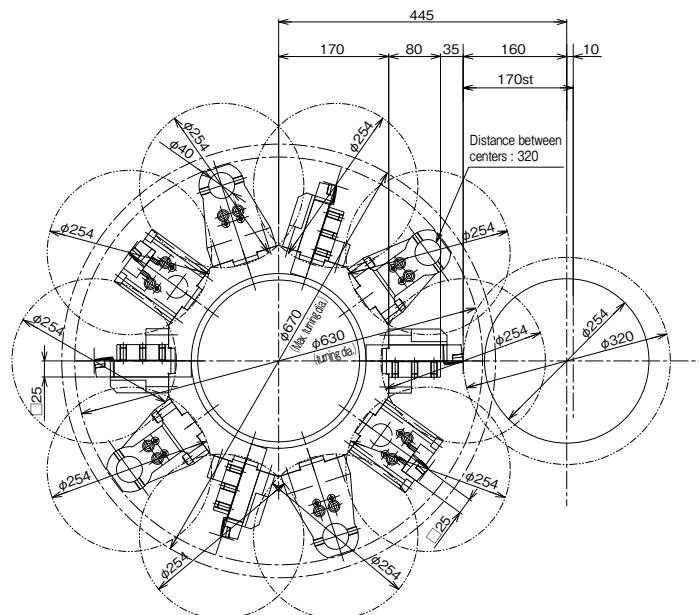


※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

XWT-10



Turret Interference



Unit (mm)

SPECIFICATION

Machine Specifications

Item		Unit	XW-30	XW-30PLUS	XW-60	XW-60M
Capacity	Optimum turning diameter	mm	φ30 ^{*1}	φ30	φ60	
	Max. turning diameter	mm	φ50		φ175	
	Max. turning length	mm	50		130	
	Chuck size	inch	3: Air ×2	Collet, 3.4×2	Collet, 6 (5) ×2	
Spindle	Spindle nose	JIS	A3-S2	A2-3	A2-5 (A2-4)	
	Spindle bearing I.D.	mm	φ50	φ60	φ75 (φ65)	
	Through-hole on spindle	mm	φ20 ^{*2}	φ25	φ46 (φ36)	
	Spindle speed	min ⁻¹	Max. 10,000 ^{*3}	Max. 8,000 (6,000 ^{*4})	Max. 4,500 (6,000)	
	Spindle indexing	deg./min	—		Cs-axis 18,000	
Tool post	Type		Gang type ×2		8-station turret ×2	10-station turret ×2
	Tool shank	mm	□16		□20	
	Boring holder I.D.	mm	φ25		φ25	
	Max. stroke	mm	X:160 Z:200	X:160 Z:230	X:125 Z:140	
	Rapid traverse rate	m/min	X:12 Z:15	X:12 Z:20	X:21 Z:18	
Power tools	Tool storage capacity	pcs.	—		—	
	Rotation speed	min ⁻¹	—		—	
	Drill	mm	—		—	
	Capacity Endmill	mm	—		—	
	Tap	mm	—		—	
Motors	Spindle motor	kW	AC3.7/2.2 ×2	AC5.5/3.7 ×2	AC7.5/5.5 ×2	
	Feed motor	kW	X:AC0.75×2 Z:AC0.75×2	X:AC0.4×2 Z:AC0.75×2	X:AC0.75×2 Z:AC1.2×2	
	Coolant motor	kW	AC0.18 ×2	AC0.25×2	AC0.25×2	
	Hydraulic motor	kW	—		AC0.75×2	
	Power tools motor	kW	—		—	
Size	L×W×H	mm	1,000 (1,300 ^{*5}) ×2,000×1,500	1,040 (1,340 ^{*5}) ×2,120×1,500	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	2,700	3,400	4,700	4,800
Total electric capacity		KVA	20	20 (23 ^{*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	XW-30	XW-30PLUS	XW-60	XW-60M
☐ Tool holder	4sets		—	
☐ Boring holder	—		4sets	
☐ O.D. holder	—		4sets	
☐ Collet flange	1set (TZ650)		1set	
☐ Hydraulic chucking cylinder	—	(Option)	1set	
☐ Air chucking cylinder	1set		—	
☐ TAKAMAZ loader system			1 unit	
☐ Spindle indexing device	—		1set (Cs-axis)	
☐ Power tools drive unit	—		1set	
☐ Spindle cooling device※			1set	
☐ Thread cutting unit(Including constant surface speed control)			1set	
☐ Front air blower	1set		(Option)	
☐ Coolant unit	1set (140lit.)		1set (160lit.)	
☐ Work light	(Option)		1set	
☐ Service tool kit			1set	
☐ TAKAMAZ Instruction manual			1set	

※ Oil Temperature Control Type is available as an option.

Optional Accessories

Item	XW-30	XW-30PLUS	XW-60	XW-60M
☐ Tool holders			○	
☐ Collet chucks			○	
☐ Hydraulic chucks	—		○	
☐ Thermal displacement system		—		○
☐ Chuck clamp detector(with restrictions depending on the cylinder)		○		(Standard)
☐ High-speed loader system			○	
☐ Spindle indexing device			Electrical	
☐ Power tools		—		○
☐ Rear chip conveyor(Floor type／Spiral type)			○	
☐ Front air blower		(Standard)		○
☐ Rear air blower			○	
☐ Rear coolant unit			○	
☐ Work light		○		(Standard)
☐ Signal light(1-color／2-color／3-color)			○	
☐ Automatic fire extinguisher			○	
☐ Automatic power shut-off device			○	
☐ Special color			○	
☐ Others※			○	

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

Machine Specifications

Item		Unit	XW-130	XW-130M	XW-200	XWT-10
Capacity	Optimum turning diameter	mm	φ150	φ200	φ200	φ200
	Max. turning diameter	mm	φ280	φ320	φ320	φ320
	Max. turning length	mm	155	220	220	270
	Chuck size	inch	Collet, 8 × 2		10 × 2	10 × 2
Spindle	Spindle nose	JIS	A2-6		A2-8	A2-8
	Spindle bearing I.D.	mm	φ100		φ120	φ120
	Through-hole on spindle	mm	φ61		φ80	φ80
	Spindle speed	min ⁻¹	Max.4,000		Max.2,800	Max.2,800(4,000)
	Spindle indexing	deg./min	—		—	—
			—		18,000	—
Tool post	Type		8-station turret×2	10-station turret×2	8-station turret×2	10-station turret×2
	Tool shank	mm	□25		□25	□25
	Boring holder I.D.	mm	φ40		φ40	φ40
	Max. stroke	mm	X:150 Z:160	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	—	φ16	—	—
	Capacity Endmill	mm	—	φ16	—	—
	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}) × 2,140 × 2,050 (2,925 ^{*2})	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	5,600	6,900	6,900	6,900
Total electric capacity		KVA	44	47	62	62

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

(): Option

Standard Accessories

Item	XW-130	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)	(Option)		1set	
☐ TAKAMAZ loader system			1unit	
☐ 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 (160lit.)		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	XW-130	XW-130M	XW-200	XWT-10
☐ Tool holders			○	
☐ Hydraulic chucks			○	
☐ Collet chucks		○		—
☐ Thermal displacement system			○	
☐ Chuck clamp detector (with restrictions depending on the cylinder)	○		(Standard)	
☐ Spindle indexing device			Electrical	
☐ Power tools	—	○		—
☐ Rear chip conveyor (Floor type / Spiral type)			○	
☐ Front air blower			○	
☐ Rear air blower			○	
☐ Rear coolant unit			○	
☐ Signal light (1-color / 2-color / 3-color)			○	
☐ Automatic fire extinguisher			○	
☐ Automatic power shut-off device			○	
☐ Special color			○	
☐ Others※			○	

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

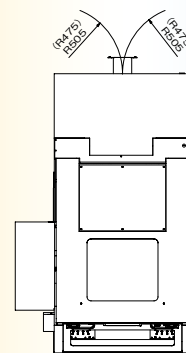
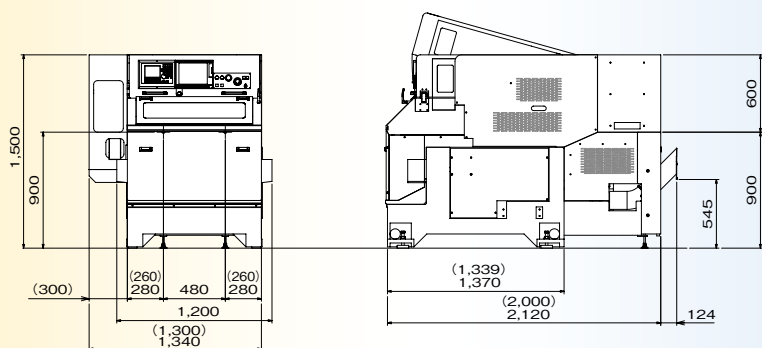
SPECIFICATION

Controller Specifications

Item	XW-30 TAKAMAZ & MITSUBISHI M70	XW-30PLUS TAKAMAZ & MITSUBISHI M70V	XW-60 TAKAMAZ & FANUC Oi-TF	XW-60M TAKAMAZ & FANUC Oi-TD	XW-130 TAKAMAZ & FANUC Oi-TD	XW-130M TAKAMAZ & FANUC Oi-TD	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 5 digit				S-code 4 digit			
Tool function	T-code 2 digit				T-code 4 digit			
Tape code					EIA(RS232C)/ISO(840)automatic recognition			
Cutting feedrate					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				4 digit		Program file name 32 characters	
Backlash compensation	0~999,999.9μm				0~9,999μm			
Program memory capacity	230Kbyte(600m)	500Kbyte(1,280m)			1Mbyte(2,560m)(Dual systems total)			
Tool offsets	80sets(Dual systems total)				128sets (Dual systems total)			
Registered programs	400pcs.(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			
Additional 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	—		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)	Standard				(Option)			
Input/Output interface(USBFlash Memory)	—				Standard			
Alarm message					Standard			
Graphic display(FANUC)					Standard			
Graphic trace(MITSUBISHI)					(Option)			
Spindle orientation					(Option)			
G code guidance	Standard				—			
Simple programming function(FANUC)					—			
NAVI LATHE(MITSUBISHI)	Standard							
Dynamic graphic display(FANUC)	Standard		(Option)		—		(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			
TAKAMAZ management support function	—				Work/Tool counter,Tool load monitor,Other			
TAKAMAZ maintenance functions	—				Standard			
Set of Instruction Manuals for Control Device	CD-ROM		DVD-ROM(Bound:Option)		CD-ROM(Bound:Option)		DVD-ROM(Bound:Option)	

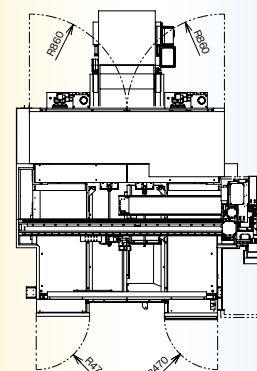
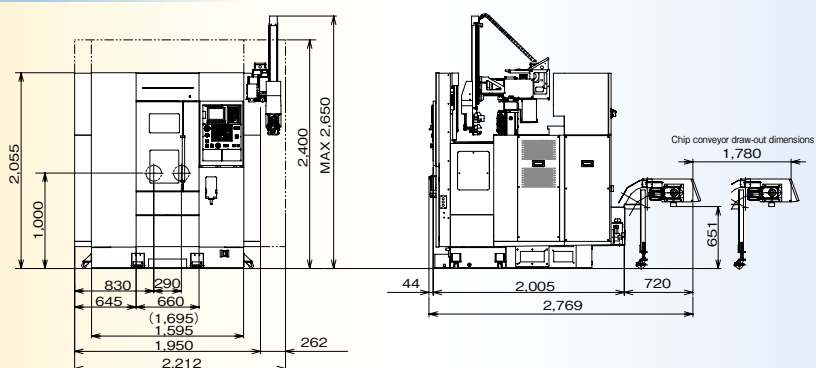
FLOOR SPACE

XW-30/XW-30PLUS



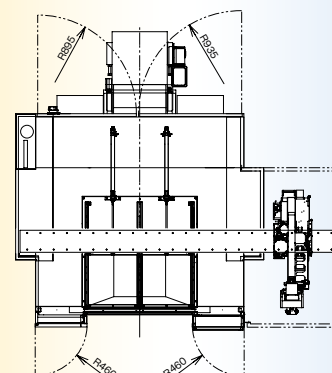
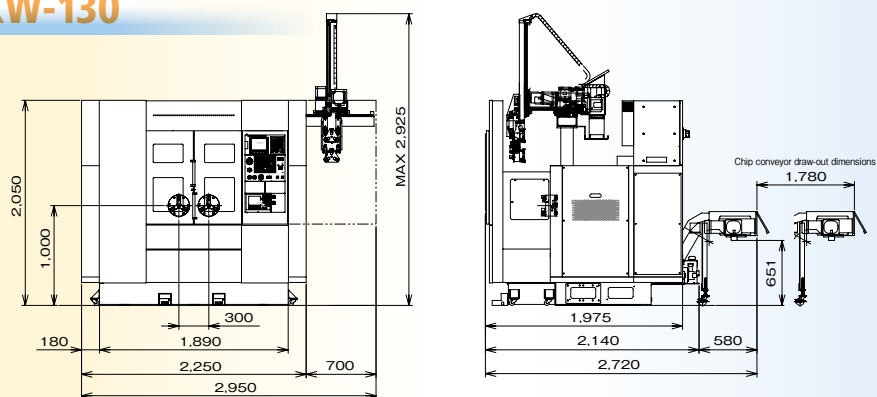
Data in parentheses is for XW-30.

XW-60/XW-60M

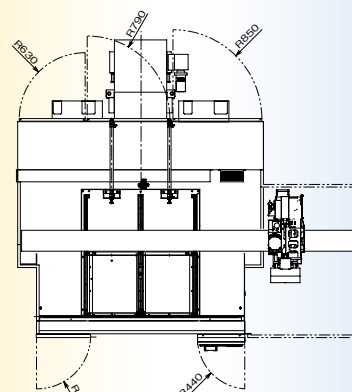
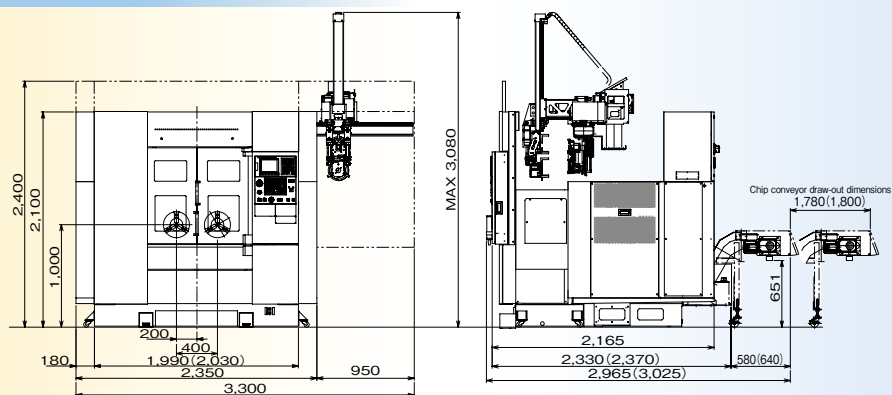


Date in parentheses is for XW-60M.

XW-130



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



Date in parentheses is for XWT-10.

Unit(mm)