CNC 2 Spindle 2 Slide
Precision Lathe

XW series

TAKAMAZ

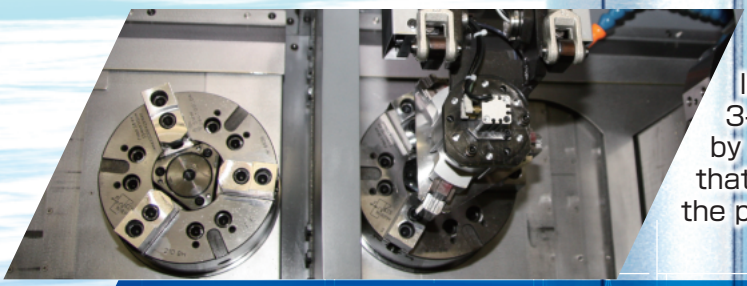
CNC 2-Spindle 2-Slide Precision Lathe

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 8 Drum Type — Medium-sized machine boasting high productivity! P5–P6

YouTube

XW-60M 6 Inch 10 Drum Type — Achieving versatile machining by mounting power tools! P5–P6

XWT-8 NEW 8 Inch 8 Drum Type — "Fastest in class" loading times P7–P8

XW-130M 8 Inch 10 Drum Type — Achieving high productivity with powerful milling! P9–P10

XW-200 10 Inch 8 Drum Type — Long-awaited machine accepting 10-inch chucks! P11–P12

XWT-10 10 Inch 10 Drum Type — Upgraded machine with two 10-station turrets! P13–P14

YouTube

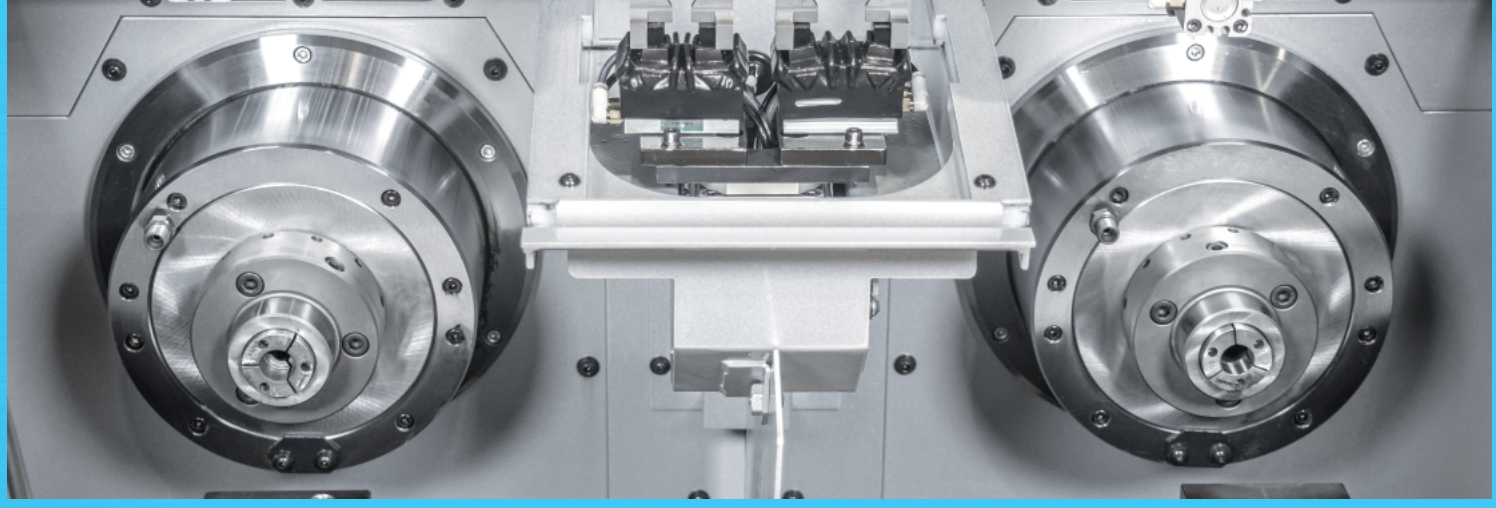
XWG-3

CNC 2-Spindle 2-Slide Precision Lathe

XWG-3

energy saving

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

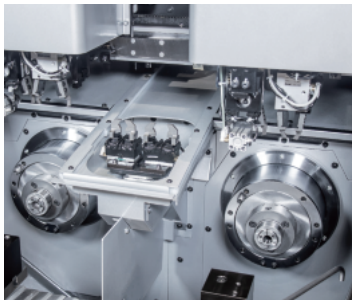
5.5/3.7kW high-efficiency motors are used.
The machine can be equipped with up to 4-inch chucks, and optionally hydraulic cylinders, enabling stable mass production of workpieces that could not be cut previously due to insufficient gripping force. In addition, a review of the cooling circuit has made 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 m^2, 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.

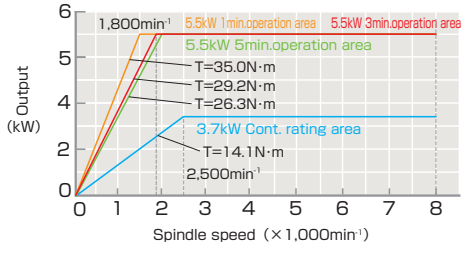
Revamped design for easier setup

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)

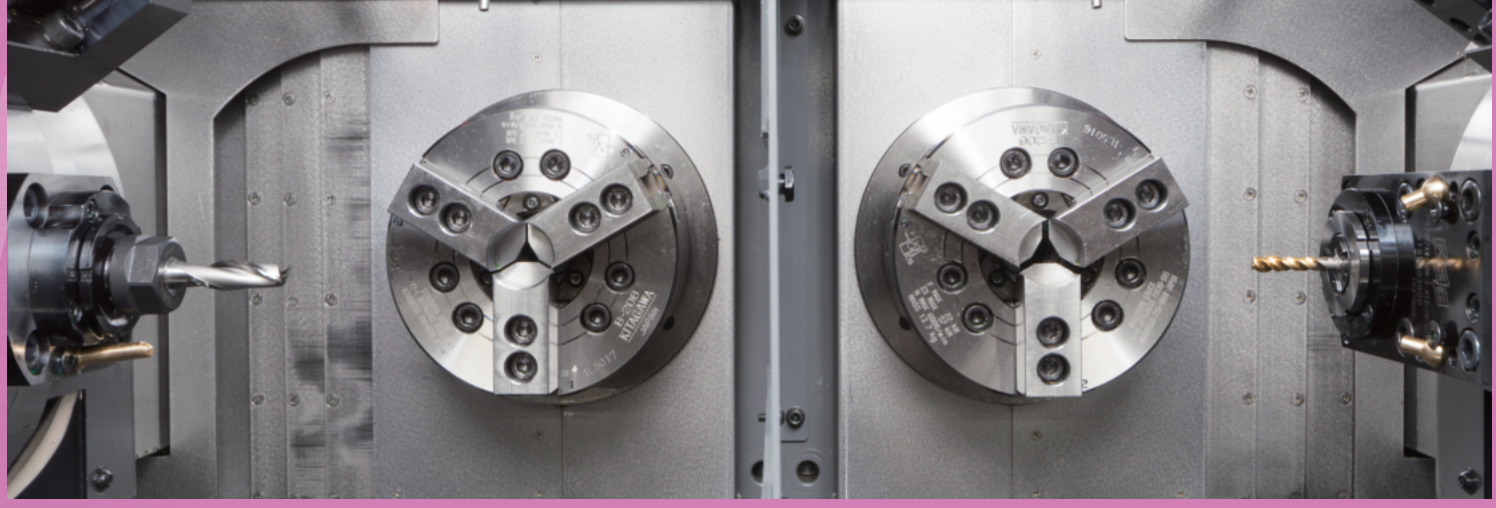


※The photo shows the XW-60M.

CNC 2-Spindle 2-Turret Precision Lathe

XW-60/60M

Chuck size 6 Inch

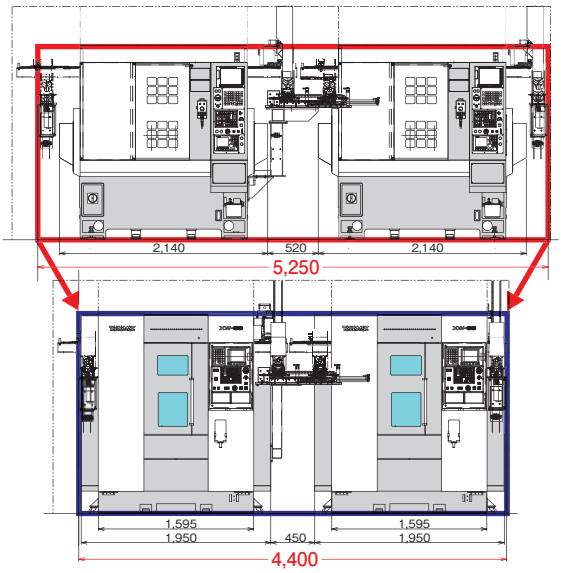


6-inch-chuck medium-sized machine ticking all three boxes: space savings, compound machining, and high-speed automation

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)

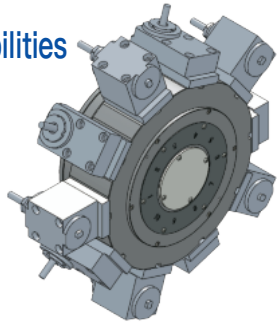


※With 2 machines linked: shortening of 850 mm

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.

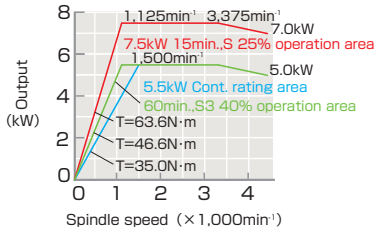
(Technology common to XW-130/XW-130M/XW-200/XWT-10)

Improved operability for setup changes For details, see page 10.

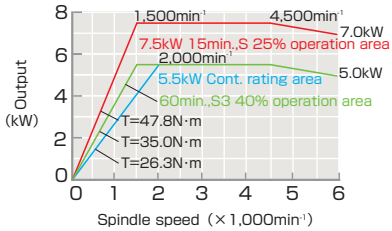
(Technology common to XW-130/XW-130M/XW-200/XWT-10)

XW-60/60M Spindle power characteristic curve

■ Max.4,500min^{-1}Standard type (AC5.5/7.5kW)

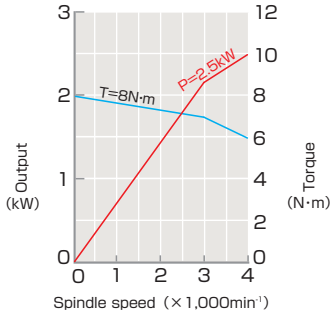


■ Max.6,000min^{-1}Option type (AC5.5/7.5kW)



XW-60M Power tool power characteristic curve

■ Max.4,000min^{-1} Standard type (AC2.5kW)



XWT-8

CNC 2-Spindle 2-Turret Precision Lathe

XWT-8

NEW

energy saving

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.

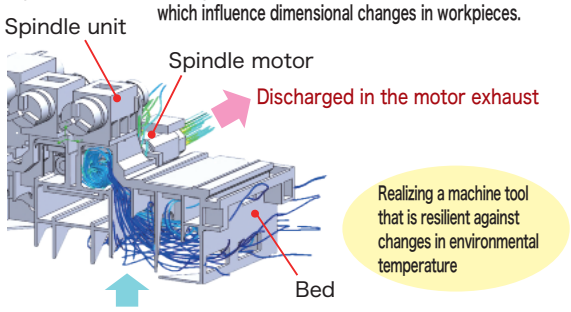
Reductions in Machining Defects and Energy Consumption

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

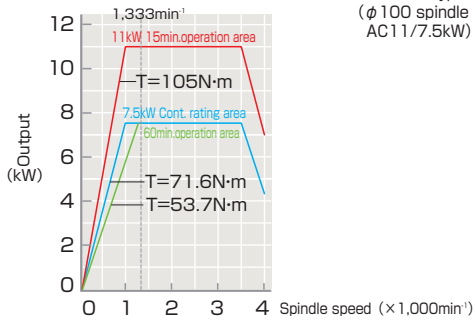
In addition, adopting an air-cooled construction for the spindle center, where heat sources are concentrated, makes cooling water unnecessary, reducing running costs as well as energy consumption.

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 ■ Max.4,000min⁻¹ Standard type (φ100 spindle 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

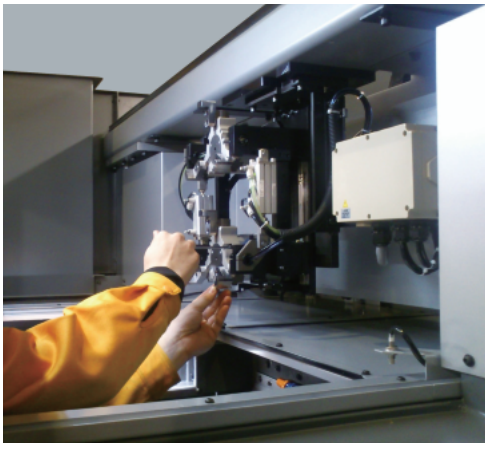
When finish machining, commands to ameliorate the effects of vibrations due to the operation of the spindle at the other side, or reduce them to zero, are available. They can be selected and programmed in various cases (prioritizing accuracy, prioritizing cycle time).

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

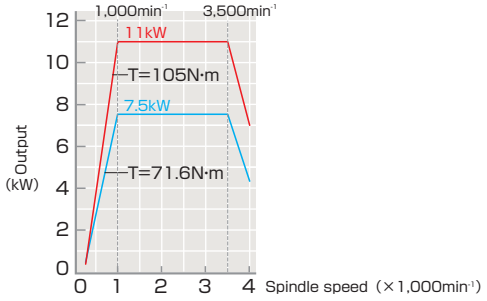
Improved operability for setup changes

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.

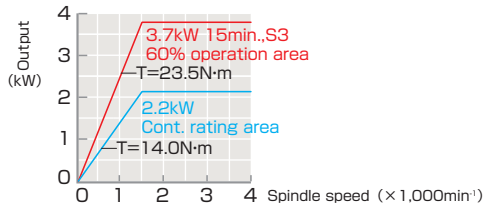
(Technology common to XW-60/XW-60M/XW-130/XW-200/XWT-10)



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)



XW-200

CNC 2-Spindle 2-Turret Precision Lathe

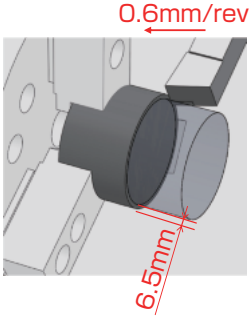
XW-200

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 ϕ120mm 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)



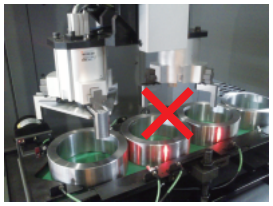
3 x previous area

Cutting surface area(t*f) **3.9mm²**

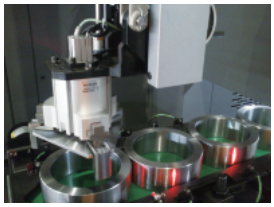
Short time rating result

Transfer of large workpieces enabled

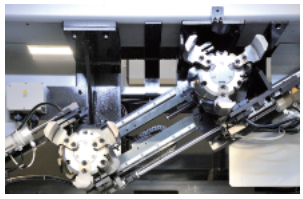
The largest workpieces that Takamaz machines can handle, measuring ϕ200 mm and up to 8 kg, can be transferred on each side. Since hands can be folded back in addition to being turned, workpieces arranged in a line can be picked up easily without interfering with the loader on one side.
(Technology common 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)

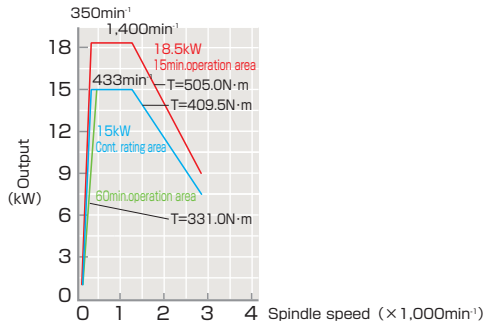
Vibration damping function installed

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 (ϕ120 spindle AC18.5/15kW)



XWT-10

CNC 2-Spindle 2-Turret Precision Lathe

XWT-10

Chuck size 10 Inch

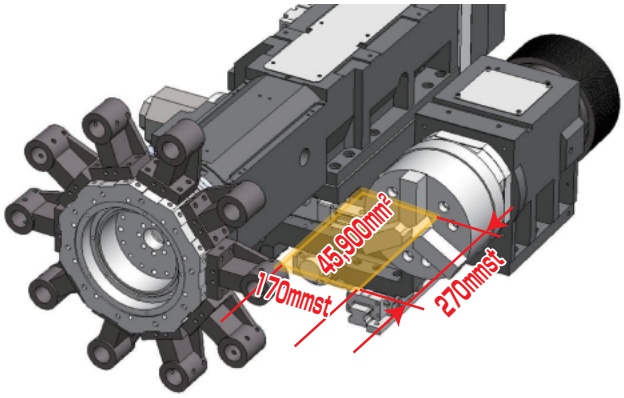
Upgraded machine realizing the largest OD turning range of the XW series!

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

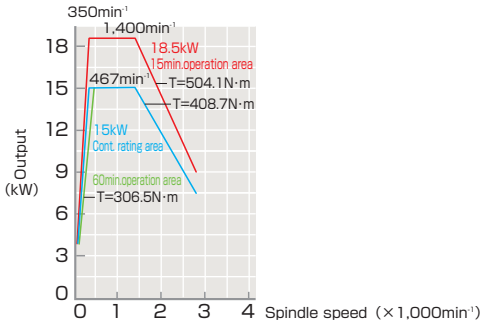
For details, see page 10.
(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

Improved operability for setup changes

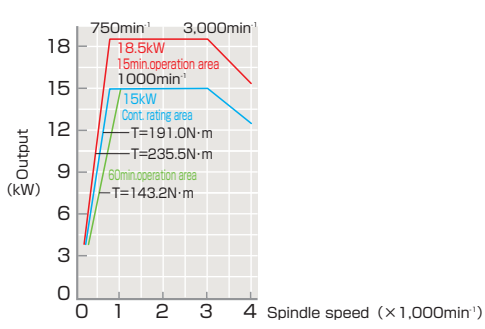
For details, see page 10.
(Technology common to XW-60/XW-60M/XW-130/XW-130M/XW-200)

XWT-10 Spindle power characteristic curve

■ Max.2,800min⁻¹ Standard type
(φ120 spindle AC18.5/15kW)



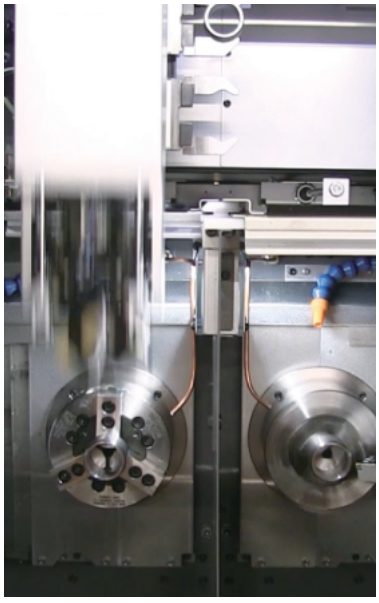
■ Max.4,000min⁻¹ Option type
(φ120 spindle AC18.5/15kW)

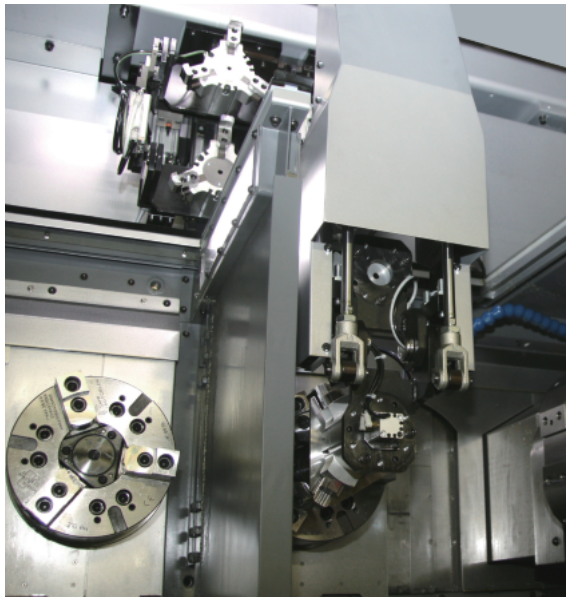


Equipped with the [Speed] and [Small Footprint] Servo Loader

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 Work Dimension	Diameter x Length (Reference)	mm	ϕ30×40		ϕ60×60	ϕ55(ϕ60)×60	ϕ150×80	ϕ150×50	ϕ200×120	ϕ200×220
	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	mm	Depends on specifications							
	Rapid Traverse Rate	m/min	85	170	120	170	180	170	100	
Forward/ Backward axis : X	Drive System		—		Servomotor					
	Stroke	mm	—		200	235				
	Rapid Traverse Rate	m/min	—		45	35	45	35	30	
Arm (Vertical axis: Y)	Drive System		Servomotor							
	Stroke	mm	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					

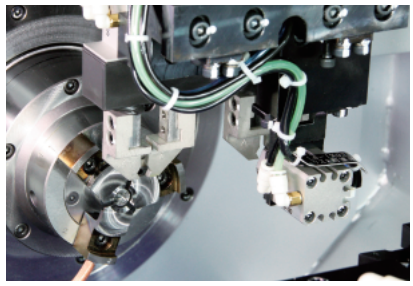
The loading time, transport and work dimensions are the indicators.

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.

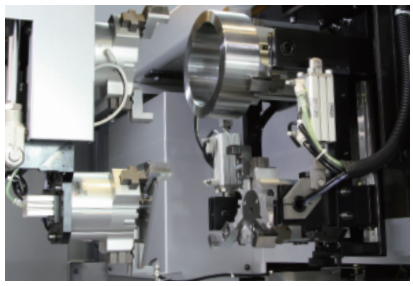
Parallel Hand

XWG-3 Standard loader



Dedicated L Hand

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



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

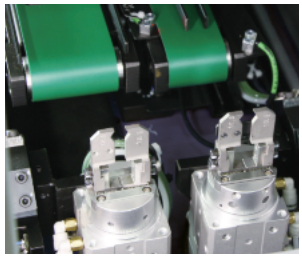
Machining Flow \ Machining Type	Continuous Front and Rear Machining Line	Same Process Machining Line
L → R	IN, OP1 Transfer OP2, OUT	IN, OP1 Turn OP1, OUT
L ← R	OUT, OP1 Transfer OP2, IN	OUT, OP1 Turn OP1, IN
L L	OUT, IN, OP1 Transfer OP2	OUT, IN, OP1 Turn OP1
R R	OP1 Transfer OP2, OUT, IN	OP1 Turn OP1, OUT, IN
L → ← R		OUT, IN, OP1 Turn OP1, OUT, IN

Automation Peripheral Devices

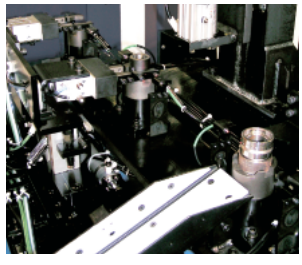
◆A production line with different varieties of peripheral devices and loading variations can be designed.

In / Out Stocker

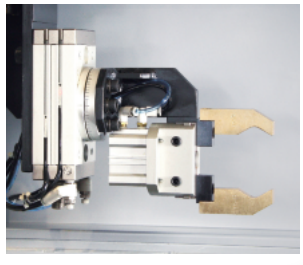
In / Out Conveyor



Auto measurement unit

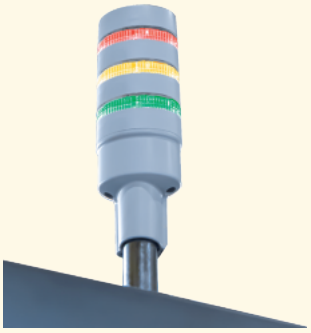


External turning device

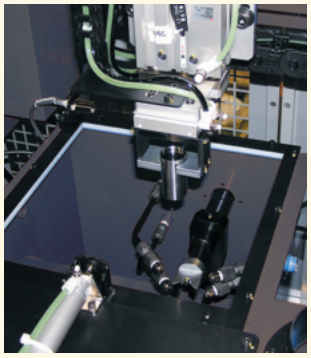


OPTIONAL PARTS

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.

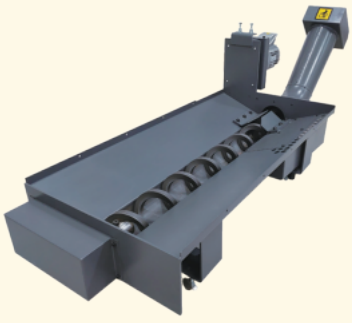
● "Rakuchin" Stocker
Reasonably priced bucket for easy bucket transport management.

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

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

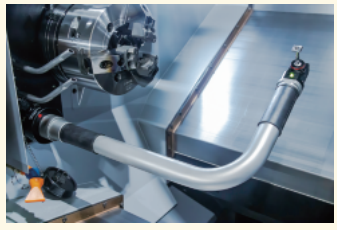
Cutting Efficiency / Chip Disposal / Reduced setup man hours

● 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.

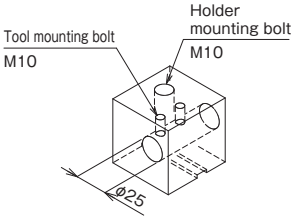
● High-pressure coolant
Constantry cooled coolant is discharged at high pressure so that the tool life is significantly prolonged.



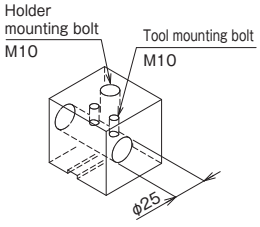
● Tool presetter
Adjusts the position of the tool tip to substantially shorten setup times. In-machine (touch sensor method) and external types are available.

Tooling System

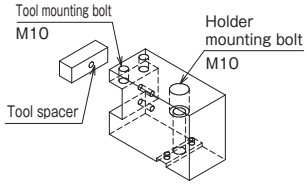
XWG-3



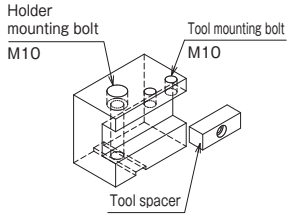
Boring holder1



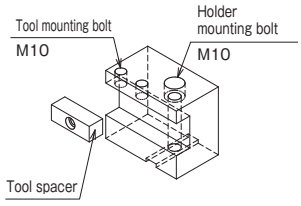
Boring holder2



O.D. holder
(□16・□20)

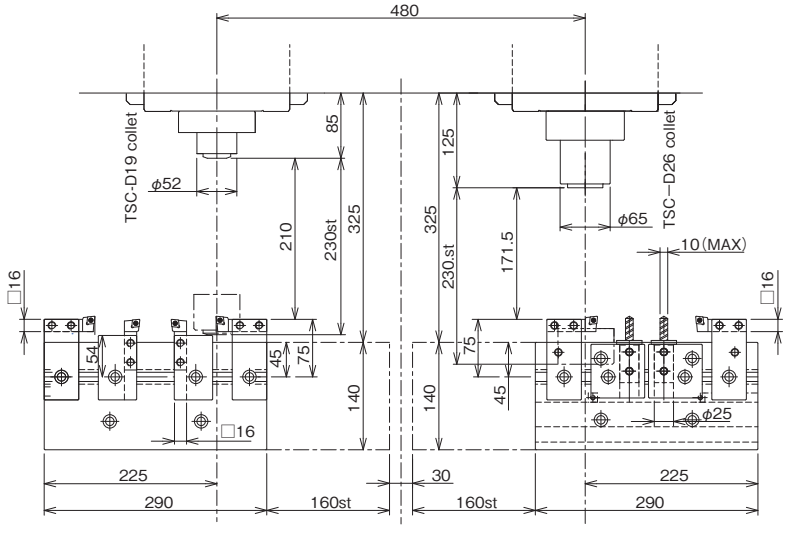


Turning holder L
(□16・□20)



Turning holder R
(□16・□20)

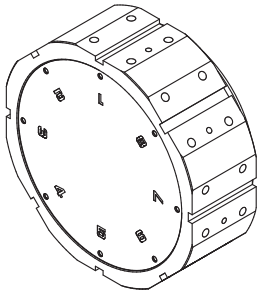
Stroke-Related Drawing



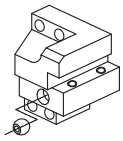
Unit(mm)

Tooling System

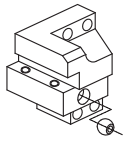
XW-60



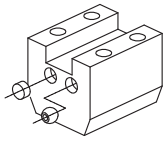
8-station turret



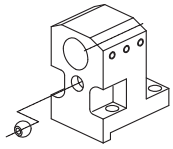
O.D. holder L



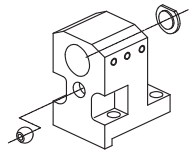
O.D. holder R



Turning holder



ϕ25 boring holder



ϕ25 U-drill holder

Clamp block C

O.D./Face/
Grooving tool
□20

O.D./Face tool
□20

Tap holder

Round hole bush
ϕ20
ϕ16
ϕ12
ϕ10
ϕ8
Blank

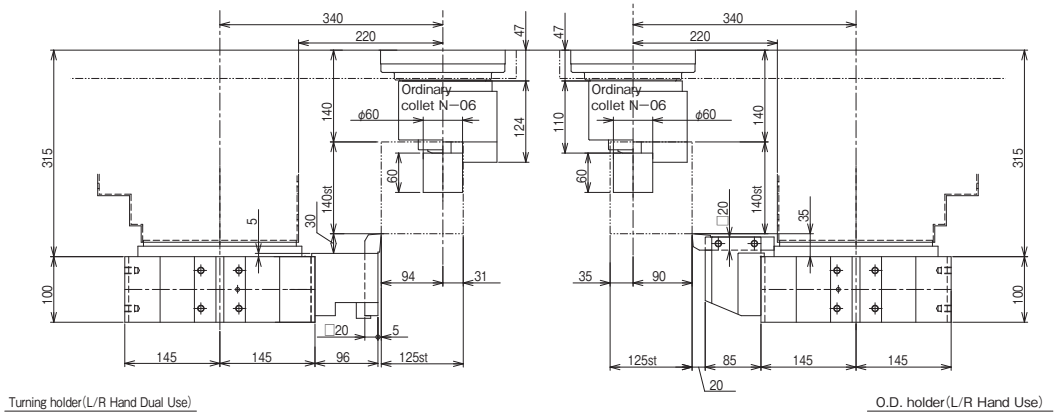
Tap

Boring bar
Maxϕ25

U-drill
Maxϕ20

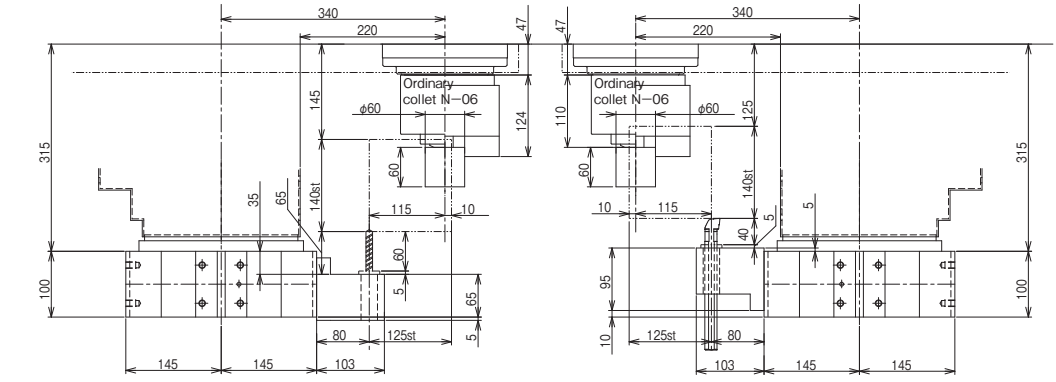
Stroke-Related Drawing

XW-60



Turning holder(L/R Hand Dual Use)

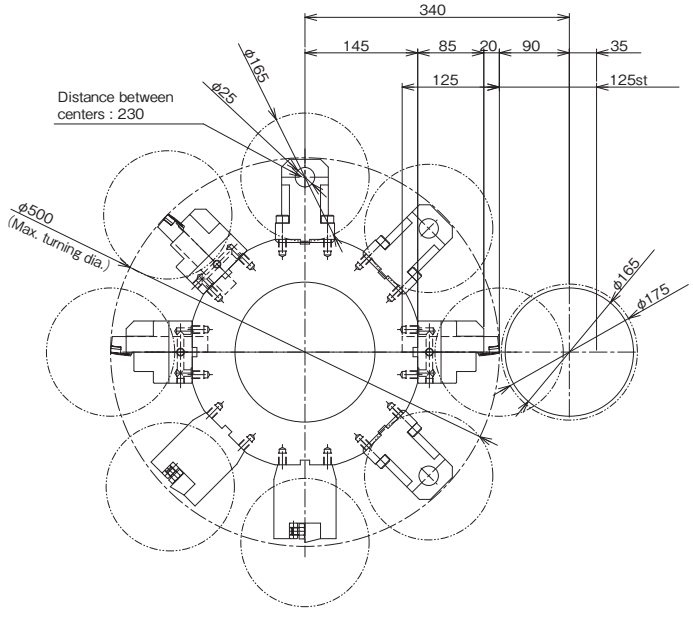
O.D. holder(L/R Hand Use)



Offset boring holder

Boring holder

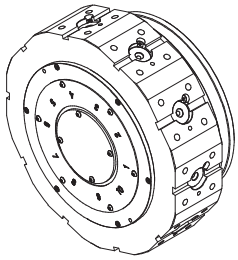
Turret Interference



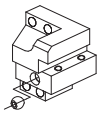
Unit(mm)

Tooling System

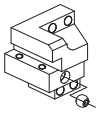
XW-60M



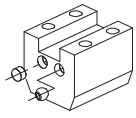
10-station turret



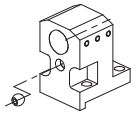
O.D. holder L



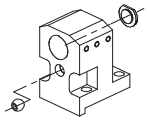
O.D. holder R



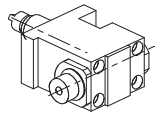
Turning holder



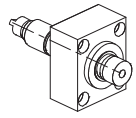
ϕ25 boring holder



ϕ25 U-drill holder



Face milling holder
(Doubles for back face use)



Side milling holder
Side milling holder
(Offset)

Clamp block C

O.D./Face/
Grooving tool
□20

O.D./Face tool
□20

Tap holder

Round hole bush
ϕ20
ϕ16
ϕ12
ϕ10
ϕ8
Blank

Collet chuck
ER20—ϕD

Tap

Boring bar
Maxϕ25

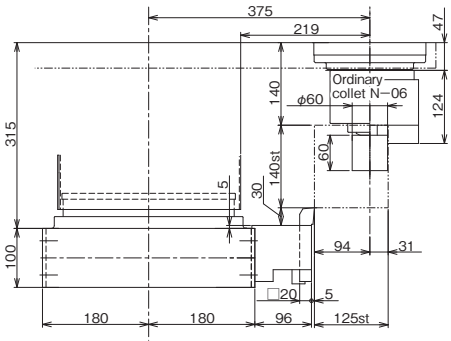
U-drill
Maxϕ20

Straight drill
End mill
Max ϕ13

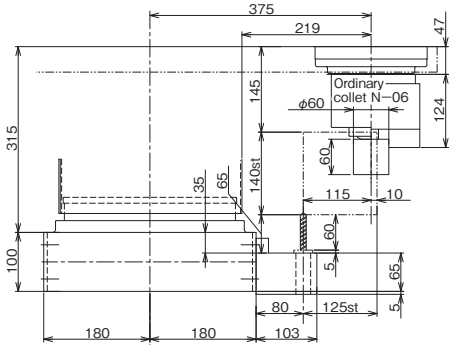
Tap
Max M10

Stroke-Related Drawing

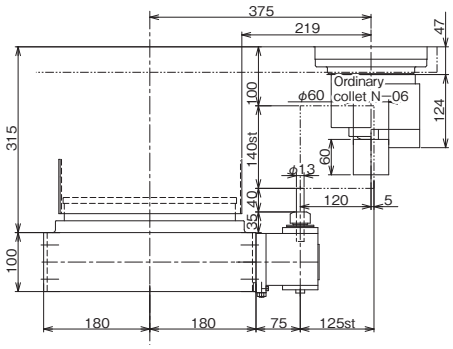
XW-60M



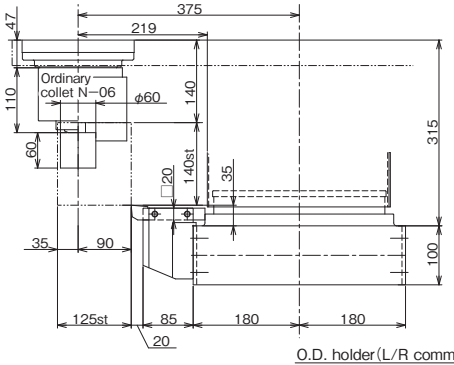
Turning holder (L/R commonness)



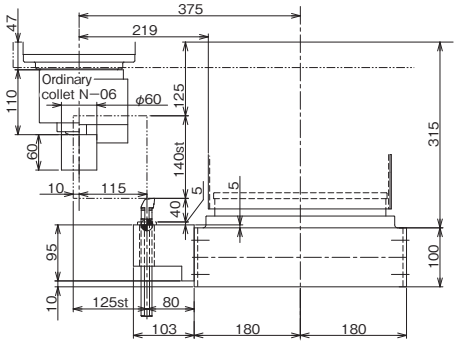
Offset boring holder



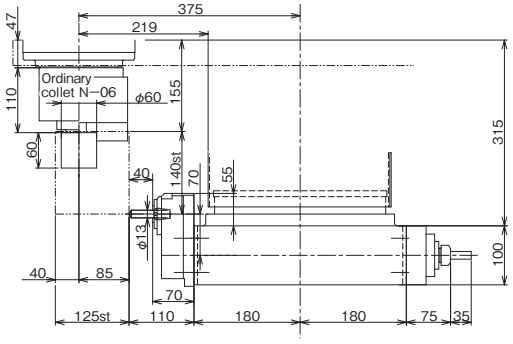
Face milling holder



O.D. holder (L/R commonness)

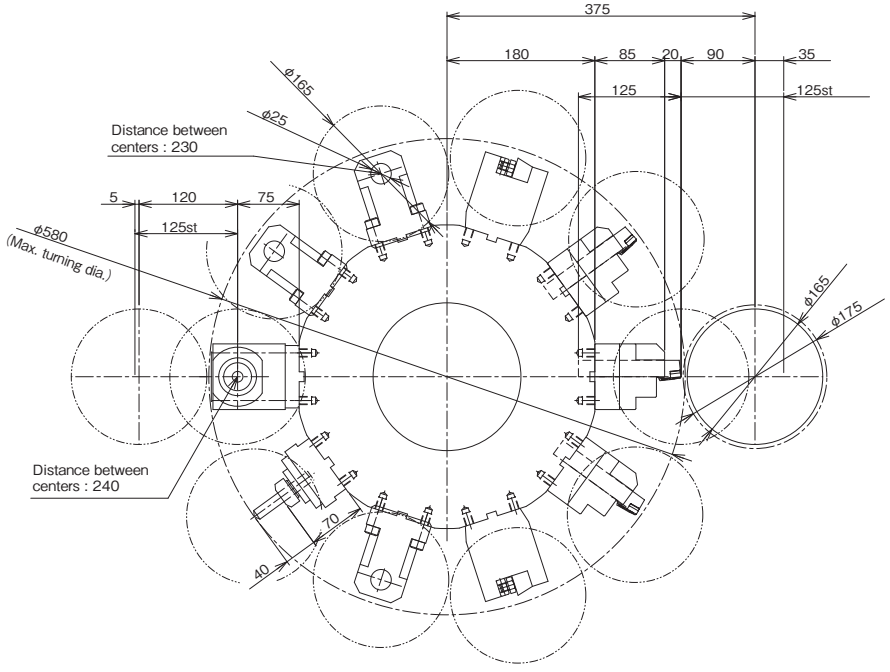


Boring/U-drill holder



Side milling holder

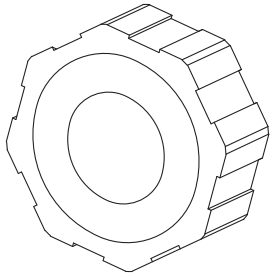
Turret Interference



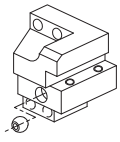
Unit (mm)

Tooling System

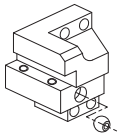
XWT-8



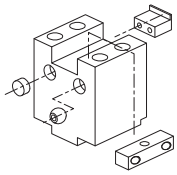
8-station turret



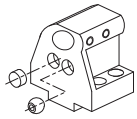
O.D. holder L



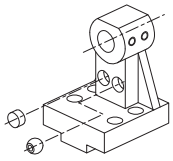
O.D. holder R



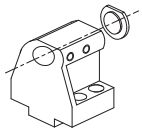
Turning holder



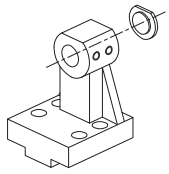
ϕ40 boring holder



ϕ40 offset holder
(50mm offset)



U-drill holder



ϕ40 offset
U-drill holder
(50mm offset)

O.D./Face/
Grooving tool
□25

O.D./Face/
Grooving tool
□25

Tool spacer

O.D./Face tool
□25

Round hole bush
ϕ32
ϕ25
ϕ20
ϕ16
ϕ10
ϕ8
Blank

Tap holder

Tap

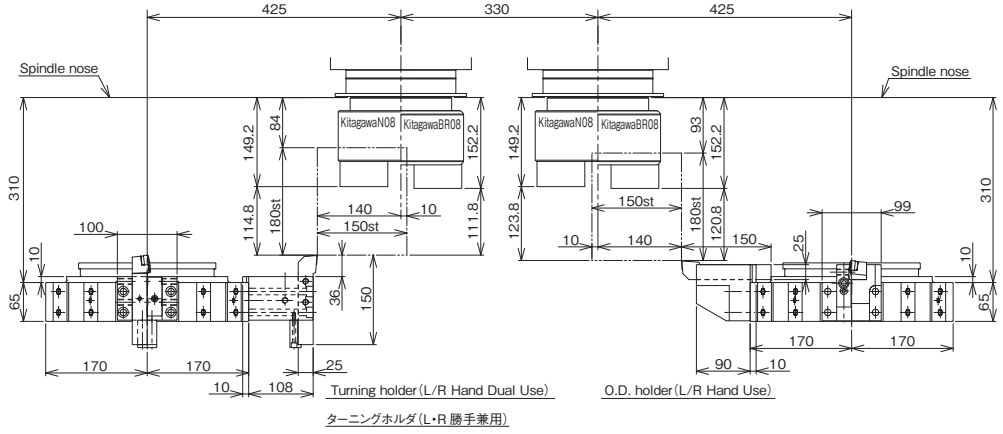
Boring bar
Maxϕ40

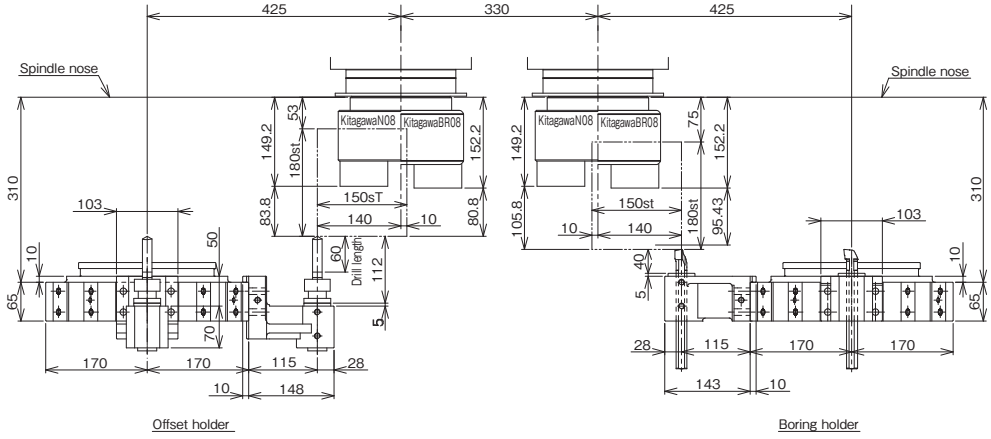
U-drill
Maxϕ32

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

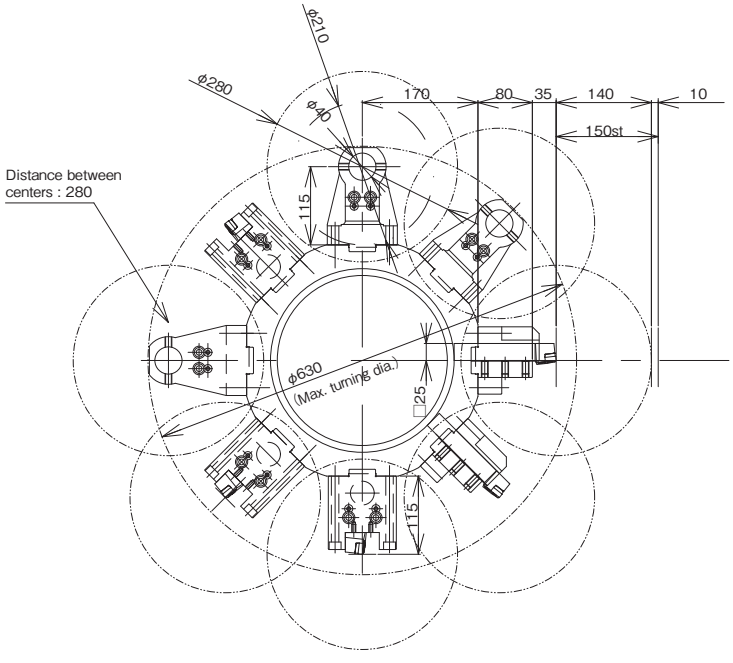
Stroke-Related Drawing

XWT-8





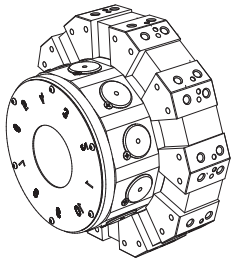
Turret Interference



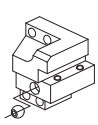
Unit (mm)

Tooling System

XW-130M

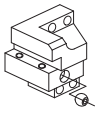


10-station turret



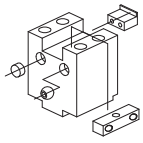
O.D. holder L

O.D./Face/
Grooving tool
□25



O.D. holder R

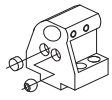
O.D./Face/
Grooving tool
□25



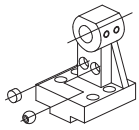
Turning holder

Tool spacer

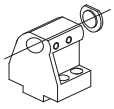
O.D./Face tool
□25



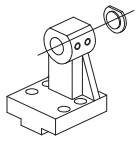
ϕ40 boring holder



ϕ40 offset holder
(50mm offset)



U-drill holder



ϕ40 offset U-drill holder
(50mm offset)

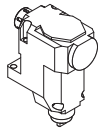
Round hole bush
ϕ32
ϕ25
ϕ20
ϕ16
ϕ10
ϕ8
Blank

Tap holder

Tap

Boring bar
Maxϕ40

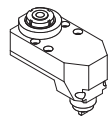
U-drill
Maxϕ32



Face milling holder

Collet chuck
AR25–ϕD

Straight drill※
End mill
Maxϕ16



Side milling holder

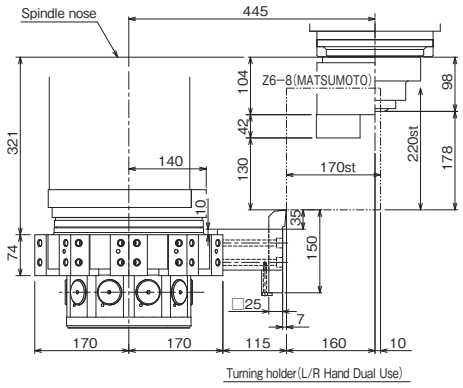
Collet chuck
AR25–ϕD
AR25–ϕGB

Tap
Max.M10

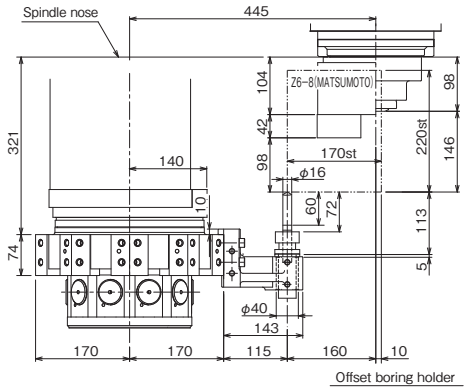
※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

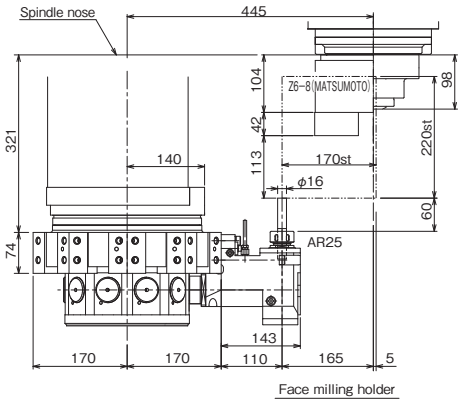
XW-130M



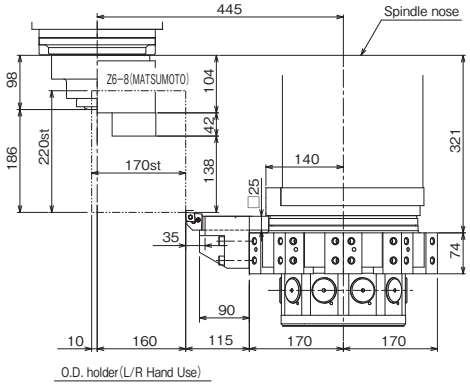
Turning holder(L/R Hand Dual Use)



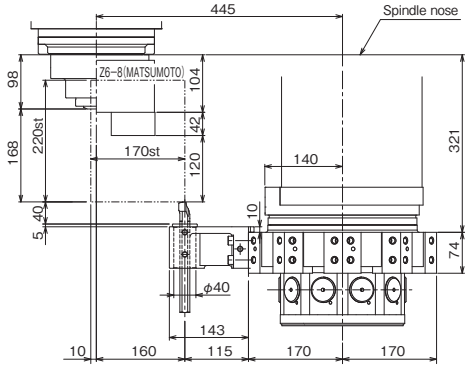
Offset boring holder



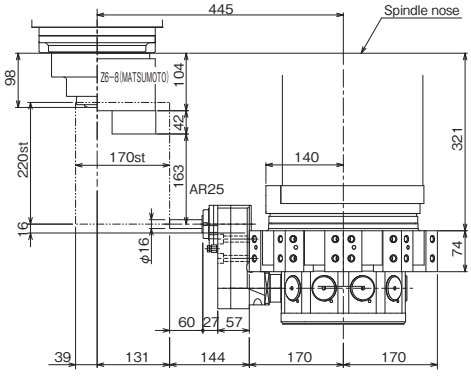
Face milling holder



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

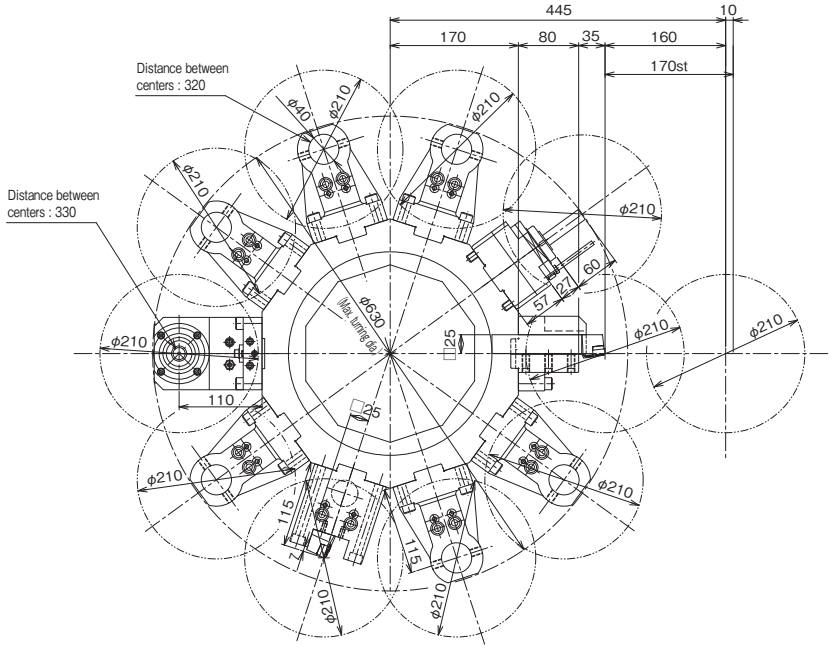


Boring holder



Side milling holder

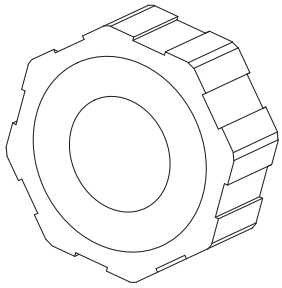
Turret Interference



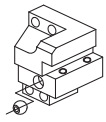
Unit(mm)

Tooling System

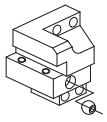
XW-200



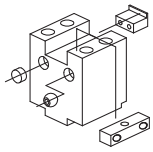
8-station turret



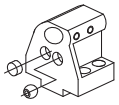
O.D. holder L



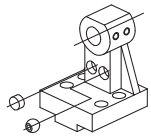
O.D. holder R



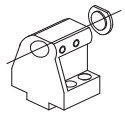
Turning holder



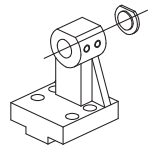
ϕ40 boring holder



ϕ40 offset holder
(50mm offset)



U-drill holder



ϕ40 offset U-drill holder
(50mm offset)

O.D./Face/
Grooving tool
□25

O.D./Face/
Grooving tool
□25

Tool spacer

O.D./Face tool
□25

Round hole bush
ϕ32
ϕ25
ϕ20
ϕ16
ϕ10
ϕ8
Blank

Tap holder

Tap

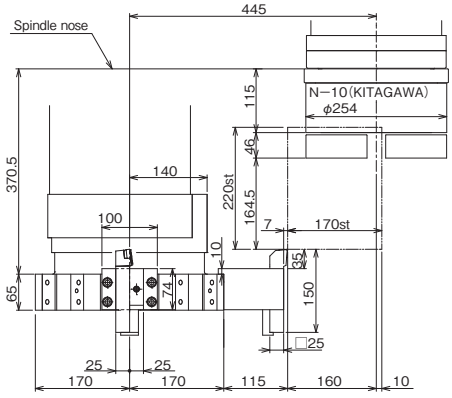
Boring bar
Maxϕ40

U-drill
Maxϕ32

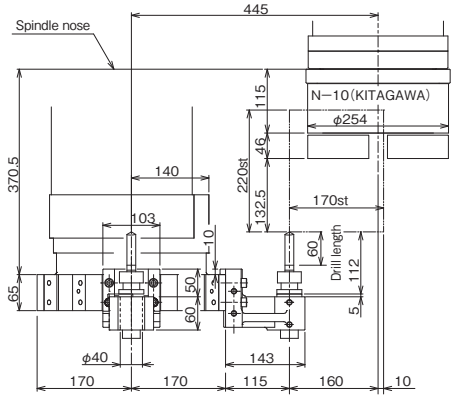
※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

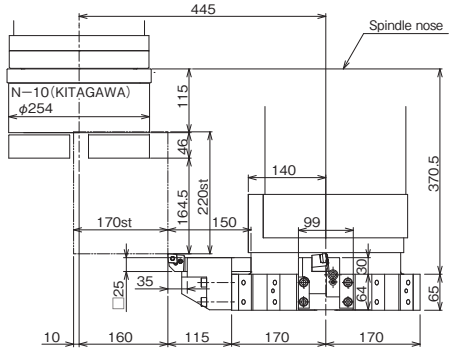
XW-200



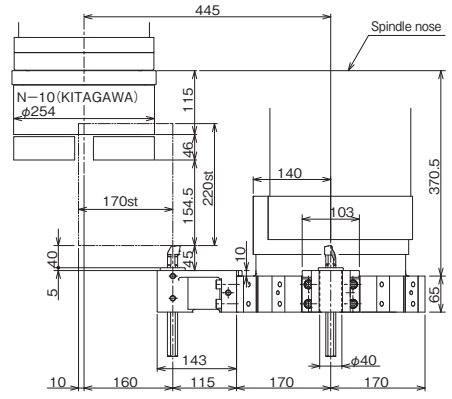
Turning holder(L/R Hand Dual Use)



Offset holder

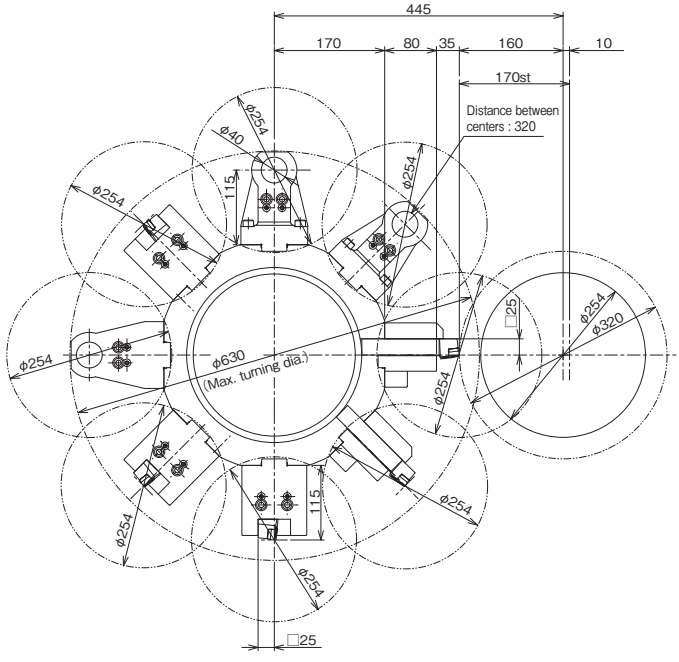


O.D. holder(L/R Hand Use)



Boring holder

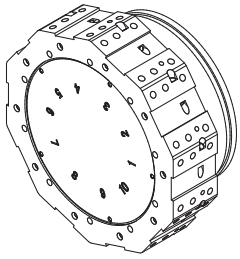
Turret Interference



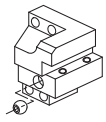
Unit(mm)

Tooling System

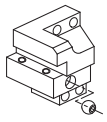
XWT-10



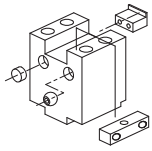
10-station turret



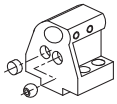
O.D. holder L



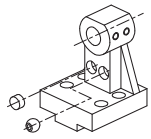
O.D. holder R



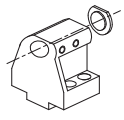
Turning holder



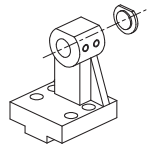
ϕ40 boring holder



ϕ40 offset holder
(50mm offset)



U-drill holder



ϕ40 offset U-drill holder
(50mm offset)

O.D./Face/
Grooving tool
□25

O.D./Face/
Grooving tool
□25

Tool spacer

O.D./Face tool
□25

Round hole bush
ϕ32
ϕ25
ϕ20
ϕ16
ϕ10
ϕ8
Blank

Tap holder

Tap

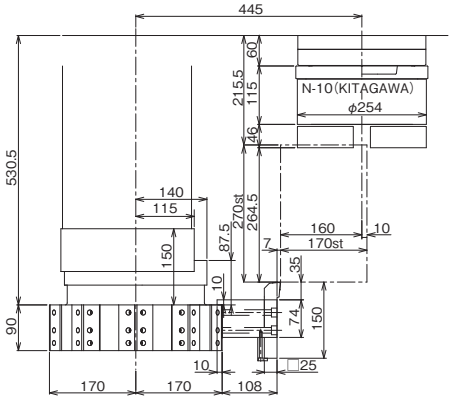
Boring bar
Maxϕ40

U-drill
Maxϕ32

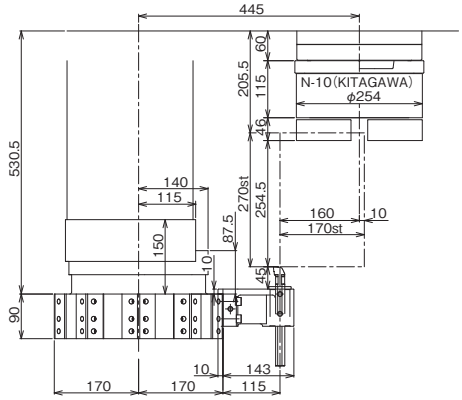
※When setup the drill, tooling space has prohibited zone.
If you need more information, please contact to TAKAMAZ.

Stroke-Related Drawing

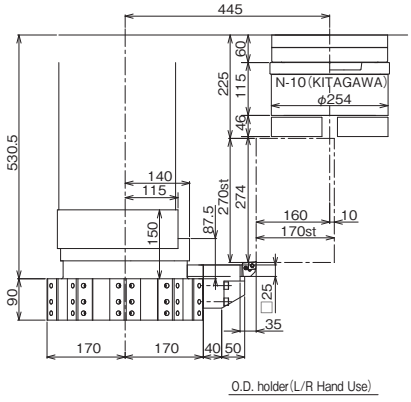
XWT-10



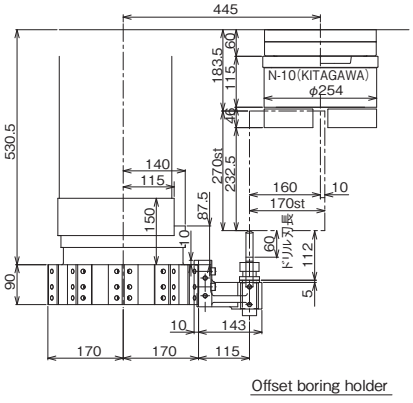
Turning holder(L-/R-hand type dual use)



Boring holder

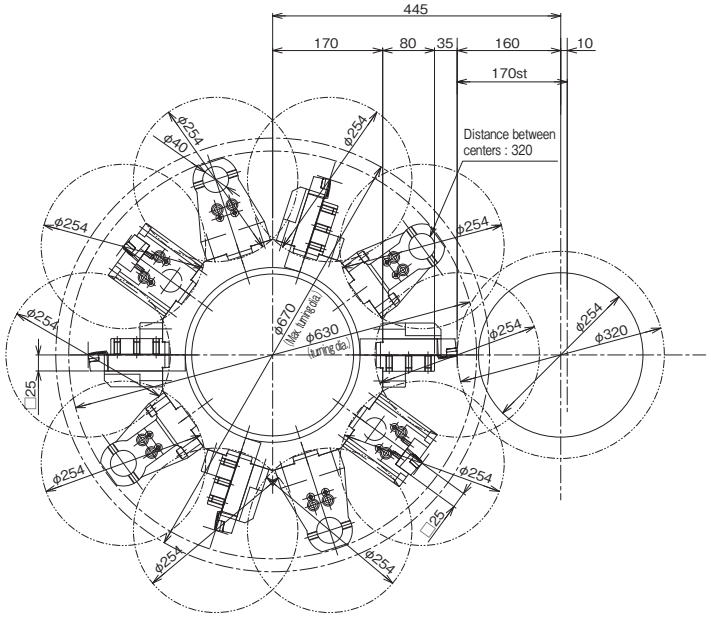


O.D. holder(L/R Hand Use)



Offset boring holder

Turret Interference



Unit(mm)

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		(Cs-axis)	—	Cs-axis
			deg./min	(108,000)	—	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
		Capacity Drill	mm	—	—	φ13
		Capacity Endmill	mm	—	—	φ13
		Capacity 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		W×D×H	mm	1,040 (1,340※5) ×2,130×1,750	1,595 (1,950※5) x2,005x2,400 (2,650※6)	1,695 (1,950※5) x2,005x2,400 (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. ( ): Option
※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.

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)	—	1set
□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 (170lit.)	1set (160lit.)	
□Work light	1set		
□Service tool kit	1set		
□TAKAMAZ Instruction manual	1set		

※ 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 repres entative.

Machine Specifications

	Item	Unit	XWT-8	XW-130M	XW-200	XWT-10
Capacity	Optimum turning diameter	mm	φ150		φ200	
	Max. turning diameter	mm	φ280	φ320	φ320	
	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	φ100		φ120	
	Through-hole on spindle	mm	φ61		φ80	
	Spindle speed	min-1	Max.4,000		Max.2,800	Max.2,800(4,000)
	Spindle indexing		—	C-axis	—	
		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	
	Boring holder I.D.	mm	φ40		φ40	
	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	—	
	Capacity Drill	mm	—	φ16	—	
	Capacity Endmill	mm	—	φ16	—	
	Capacity 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	W×D×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 repres entative.

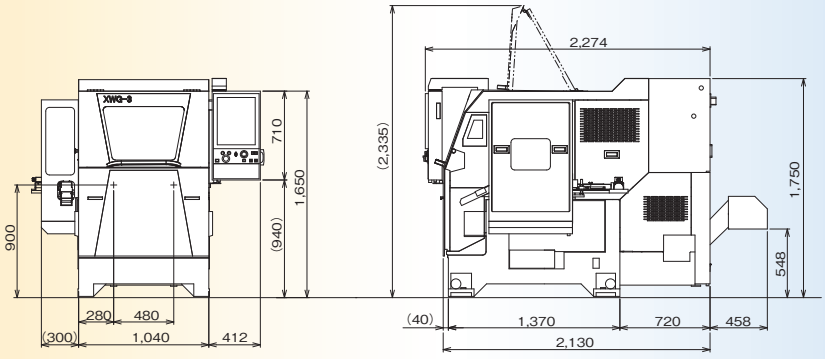
SPECIFICATION

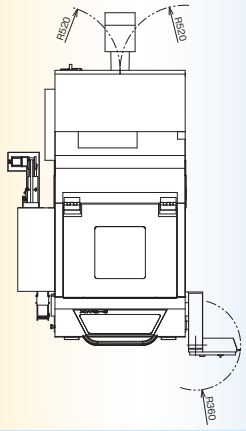
Controller Specifications

Item	XWG-3	XW-60	XW-60M	XWT-8	XW-130M	XW-200	XWT-10
	TAKAMAZ & MITSUBISHI M830VW	TAKAMAZ & FANUC Oi-TF		TAKAMAZ & FANUC Oi-TF Plus	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) Graphic trace(MITSUBISHI)	Standard						
Spindle orientation	(Option)						
G code guidance	Standard	—					
Simple programming function(FANUC) NAVI LATHE(MITSUBISHI)	Standard	—					
Dynamic graphic display(FANUC) Graphic check(MITSUBISHI)	Standard	(Option)					
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 retrace	—	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)					

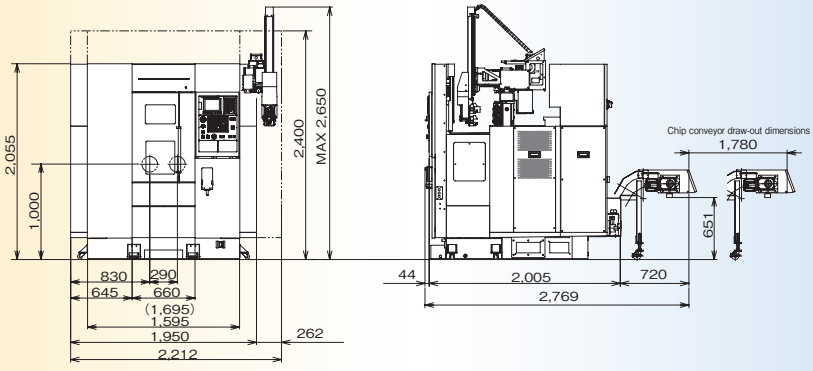
FLOOR SPACE

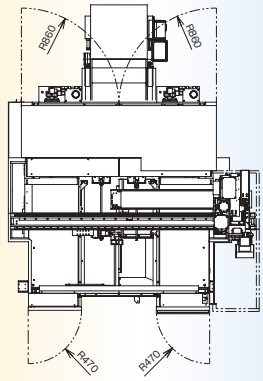
XWG-3





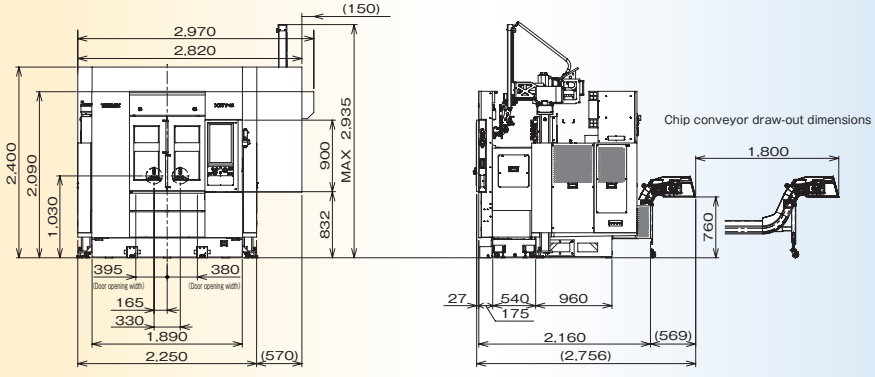
XW-60/XW-60M

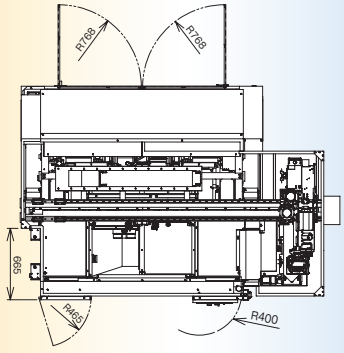




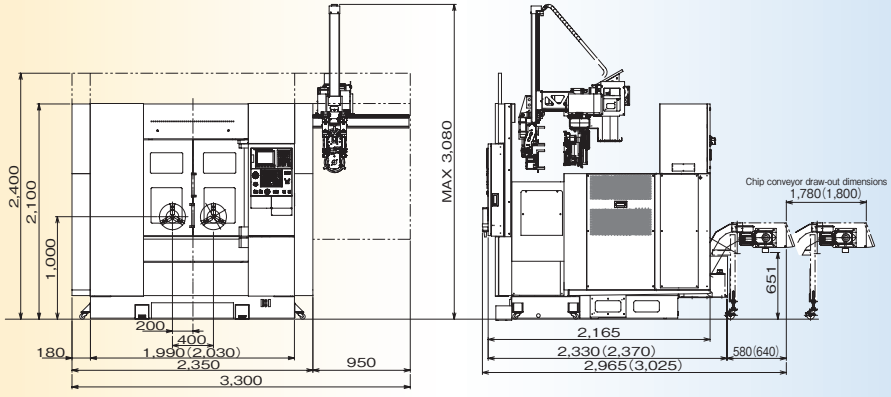
Date in parentheses is for XW-60M.

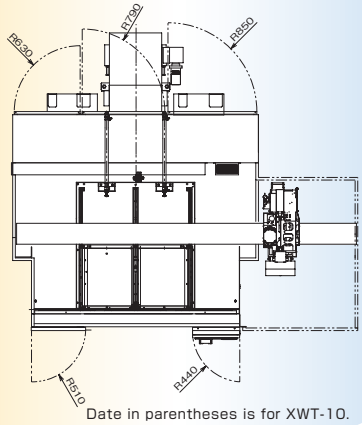
XWT-8





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





Date in parentheses is for XWT-10.

Unit (mm)

TAKAMAZ

www.takamaz.co.jp

TAKAMATSU MACHINERY CO., LTD.

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

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

TAKAMATSU MACHINERY U.S.A., INC.

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

TAKAMAZ MACHINERY EUROPE GmbH

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

TAKAMAZ MACHINERY (HANGZHOU) CO., LTD.

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

TAKAMATSU MACHINERY (THAILAND) CO., LTD.

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

PT. TAKAMAZ INDONESIA

JL. FESTIVAL BOULEVARD BLOK AA 11 NO.30,31 GRAND WISATA TAMBUN, BEKASI 17510
TEL +62-(0)21-8261-6431 FAX +62-(0)21-8261-6430

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

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

TAKAMATSU MACHINERY VIETNAM CO., LTD

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

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