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**TAKAMAZ**

**GENERAL CATALOG**

**TAKAMAZ**

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# Infinite Possibility For Customization


In the never ending evolution in the World of Manufacturing Setting.  
Creating products that take advantage of original technology are in big demand.  
TAKAMAZ can offer solid customized oriented demands  
to meet the needs of all manufacturing sectors.  
TAKAMAZ is asking you to build one-of-a-kind product from the  
infinite selection of designs that meets your specific need.

TAKAMAZ


LINE UP




**Xseries**  
1 spindle 1 turret PAGE 03  
Our total production count is a proof of reliability. This is a TAKAMAZ standard that has evolved for single lathes.




**XWseries**  
2 spindle 2 slide PAGE 05  
Simultaneous machining of both or the same sides of the parts for total complete process machining. The functions of two units within the space of a single unit.




**XDseries**  
2 spindle 1 slide PAGE 06  
One spindle performs loading while the other is machining. Production rates doubled within the same space!



**XYseries**  
Multi-turning PAGE 07  
With 2 spindle and 2 turret, there are lots of possible cutting methods. Complex parts can be processed at shorter amount of time.



**GSLseries**  
1 spindle 1 turret PAGE 07  
A simple machine best in its class among manual operated machines, focusing the cost performance.



**GANG TYPEseries**  
1 spindle 1 slide PAGE 08  
Gang type precision lathe that has honed the essentials.



**SKIVING MACHINE**  
1 spindle 1 turret PAGE 08  
Introducing a Special Machine Specifically Designed for Skiving.

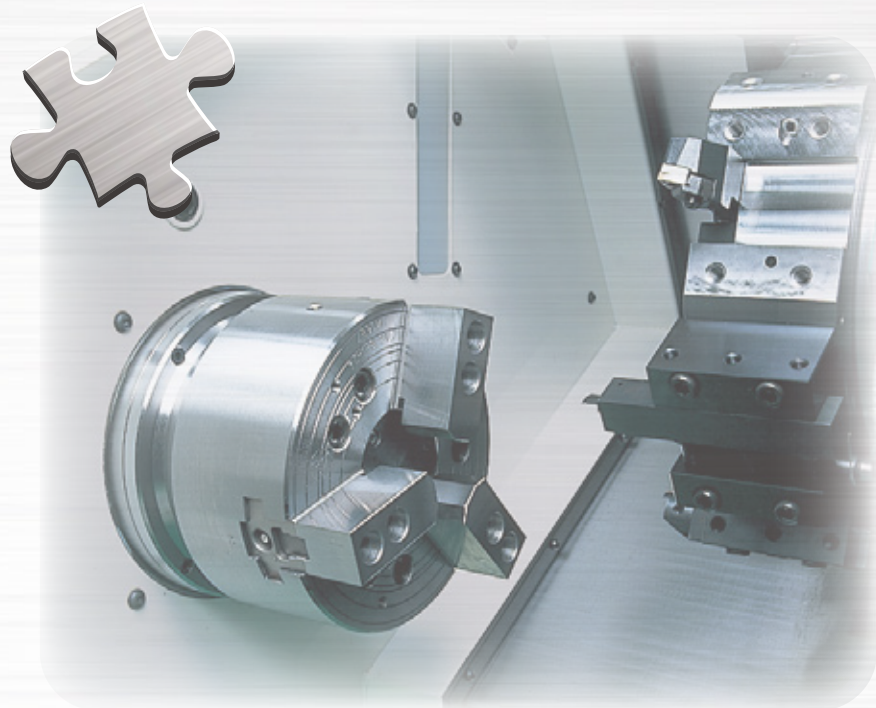
OPTIONsystem ..... PAGE 09

LOADERsystem ..... PAGE 10



# X series

1-spindle 1-turret



Our total production count is proof of reliability.  
This is a TAKAMAZ standard that has evolved for single lathes.

**NEW**  
XT-6



XC-100



XC-150



XL-150



XL-200



X-S700



XTT-500M

## “Starting Point of TAKAMAZ” Integration of the Power of Technology.



### Xseries Machine Specifications

Item	Unit	XC-100	XC-150	XT-6 (Standard)	XT-6M (Power tool type)	XL-150		XL-200		X-S700	XTT-500 (Standard)	XTT-500M (Power tool type)
Chuck Size	inch	6	8	6(8)		8(10)	8	8(10)		8 (10)	8(10)	8
Spindle bearing I.D.	mm	φ75	φ100	φ75(φ85)		φ100 (φ120)	φ100	φ100 (φ120)		φ100 (φ120)	φ100 (φ120)	φ100
Spindle speed	min <sup>-1</sup>	Max.4,500	Max.3,500	Max.4,500(6,000)(3,500)		Max.3,500(5,000-4,000)	Max.3,500(5,000)	Max.3,500 (5,000-4,000)		Max.3,500 (3,000)	Max.4,000(3,500)	Max.4,000
Tool post type		8-station turret	8-station turret	8-station (12-station)turret	12-station turret	8-station (12-station)turret	12-station turret	12-station turret		10-station turret x2	8-station turret x2	
Max. stroke	mm	X:120 Z:230	X:175 Z:250	X:120 Z:280		X:190 Z:400		X:225 Z:800		X:115 Z:650	X:105 Z:450	
Rapid traverse	m/min	X:12 Z:18	X:18 Z:24	X:18 Z:24		X:18 Z:24		X:18 Z:24		X:16 Z:30	X:18 Z:24	
Spindle motor	kW	AC7.5/5.5	AC11/7.5	AC7.5/5.5(11/7.5)		AC11/7.5(15/11)		AC11/7.5 (18.5/15)		AC15/11 (18.5/15)	AC15/11 (18.5/15)	AC15/11
Power tools capacity	Milling mm	—	—	—	φ10	—	φ20	—	φ20	—	—	φ10
	Tap mm	—	—	—	M6	—	M4 ~ M16	—	M4 ~ M16	—	—	M4 ~ M8
Dimensions(LxW)	mm	1,150 × 1,360	1,250 × 1,480	1,360 × 1,370		1,600 × 1,535	1,690 × 1,535	2,900(3,100*) × 1,845		1,960 × 1,720	1,695 × 1,830	
Controller		TAKAMAZ & FANUC Oi-TD	TAKAMAZ & FANUC Oi-TD	TAKAMAZ & FANUC Oi-TF		TAKAMAZ & FANUC Oi-TD		TAKAMAZ & FANUC Oi-TD		TAKAMAZ & FANUC Oi-TD	TAKAMAZ & FANUC Oi-TF	

\* With sub spindle mounted

### Display of Main Attachments



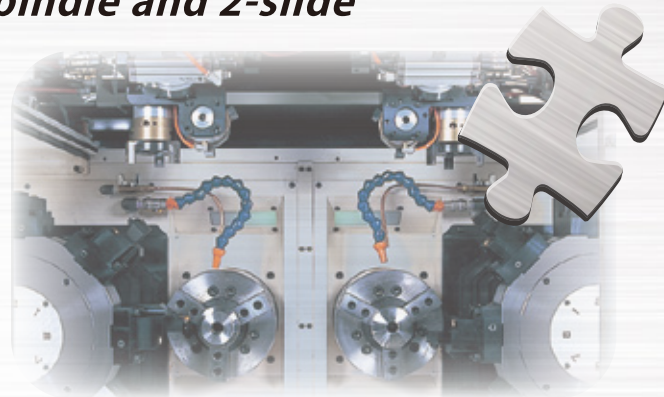
( ):Option



# XW series

2-spindle 2-slide

From high volume machining to heavy cutting.  
Revolutionary machine with 2-spindle and 2-slide



Simultaneous machining of both or the same sides of the parts for total complete process machining. The functions of two units within the space of a single unit.

	Chuck Size	Model	Attachment
Ideal for small part processing	3 inch	<b>XW-30</b> Recipient of Superior Energy Saver Equipment Award JMF Chairman's Award Recipient of 2010 fiscal year The Japan Society of Mechanical Engineers Superior Product Award	
	4 inch	<b>XW-30 PLUS</b>	
Integrating Various Process	6 inch	<b>XW-60</b> <b>XW-60M</b>	
	8 inch	<b>XW-130</b> <b>XW-130M</b> Recipient of the 44th Machine Design Award Special Award by Awarding Committee	
Fastest Loading Cycle in its Class	10 inch	<b>XW-200</b>	
	10 inch	<b>XWT-10</b>	
Large flange-like workpiece	10 inch	<b>XW-200</b>	
	10 inch	<b>XWT-10</b>	

# XD series

2-spindle 1-slide

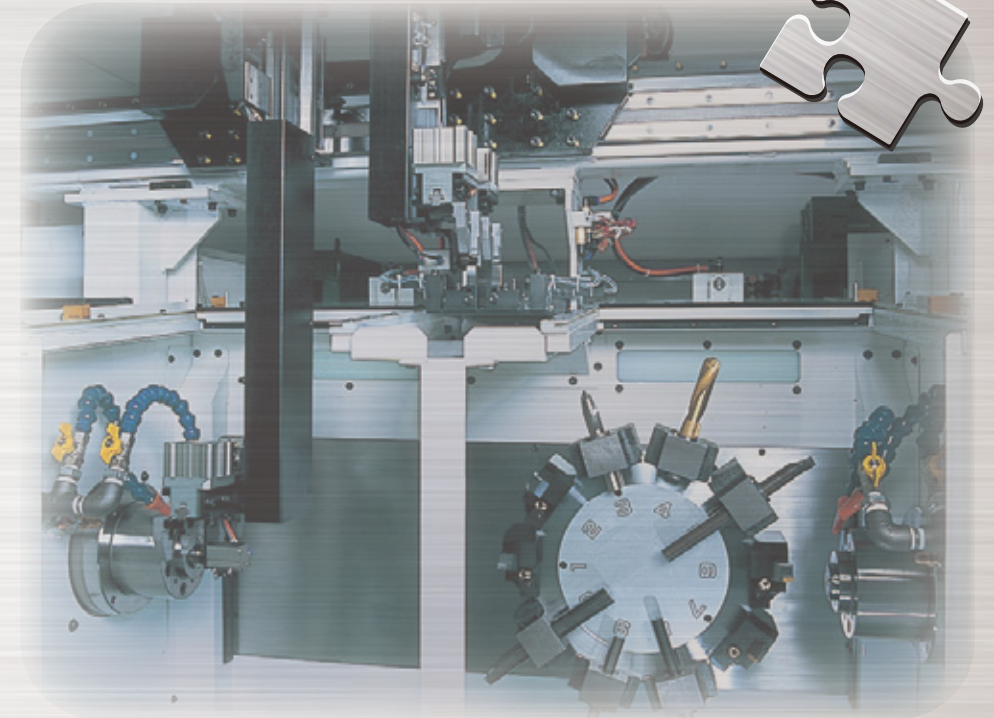
2-spindle and 1-slide  
TAKAMAZ Specialized Structure



XD-8 PLUS



XD-10i



One spindle performs loading while the other is machining. Production rates doubled within the same space!

	Chuck Size	Model	Attachment
Flexible Usability depending on Production Needs	5 inch	<b>XD-8 PLUS</b>	
	5 inch	<b>XD-8T PLUS</b>	
Power Tools Option	6 inch	<b>XD-10i</b>	

## XWseries Machine Specifications

Item	Unit	XW-30	XW-30 PLUS	XW-60 (Standard)	XW-60M (Power tool type)	XW-130 (Standard)	XW-130M (Power tool type)	XW-200	XWT-10
Chuck Size	inch	Collet,3 (Air) × 2	Collet,3.4 × 2	Collet,6(5)×2		Collet,8 × 2		10 × 2	10 × 2
Spindle bearing I.D.	mm	φ50	φ60	φ75(φ65)		φ100		φ120	φ120
Spindle speed	min <sup>-1</sup>	Max.10,000※1	Max.8,000	Max.4,500 (6,000)		Max.4,000		Max.2,800	Max.2,800 (4,000)
Tool post type		Gang type × 2	Gang type × 2	8-station turret × 2	10-station turret × 2	8-station turret × 2	10-station turret × 2	8-station turret × 2	10-station turret × 2
Max. stroke	mm	X:160 Z:200	X:160 Z:230	X:125 Z:140	X:125 Z:140	X:150 Z:160	X:170 Z:220	X:170 Z:220	X:170 Z:270
Rapid traverse	m/min	X:12 Z:15	X:12 Z:20	X:21 Z:18	X:21 Z:18	X:24 Z:24		X:24 Z:24	X:24 Z:24
Spindle motor	kW	AC3.7/2.2 × 2	AC5.5/3.7 × 2	AC 7.5/5.5×2		AC11/7.5 × 2		AC18.5/15 × 2	AC18.5/15 × 2
Power tools capacity	Milling	—	—	—	φ13	—	φ16	—	—
	Tap	—	—	—	M4~M10	—	M4~M10	—	—
Dimensions(L×W)	mm	1,300 × 2,000	1,340 × 2,120	1,595(1,950)×2,005	1,695(1,950)×2,005	1,890(2,250※2) × 2,140	1,990(2,350※2) × 2,330	1,990(2,350※2) × 2,330	2,040(2,350※2) × 2,370
Controller		TAKAMAZ & MITSUBISHI M70	TAKAMAZ & MITSUBISHI M70V	TAKAMAZ & FANUC Oi-TF		TAKAMAZ & FANUC Oi-TD(Oi-TF※3)		TAKAMAZ & FANUC Oi-TF	TAKAMAZ & FANUC Oi-TF

※1. Available as an option depending on the chucking cylinder. ※2. Machine width with loader spec. ※3. Optional with power tools.

( ):Option

## XDseries Machine Specifications

Item	Unit	XD-8 PLUS	XD-8T PLUS	XD-10 i
Chuck Size	inch	Collet,(5) × 2		Collet,6 × 2
Spindle bearing I.D.	mm	φ65		φ75
Spindle speed	min <sup>-1</sup>	Max.4,500 (8,000)		Max.4,500 (6,000)
Tool post type		Gang type		10-station turret
Max. stroke	mm	X:200 Z:380 (±190)	X:140 Z:380 (±190)	X:120 Z:520
Rapid traverse	m/min	X:18 Z:24		X:18 Z:24
Spindle motor	kW	AC3.7/2.2 (5.5/3.7※) × 2		AC5.5/3.7(7.5/5.5) × 2
Dimensions(L×W)	mm	1,580×1,550		2,310×1,695
Controller		TAKAMAZ & FANUC Oi-TD		TAKAMAZ & FANUC Oi-TD

※ XD-8 PLUS : 5.5/3.7kW is exclusive to the specifications for spindle rotations speed of 8,000 min<sup>-1</sup> ( ):Option



# XY series

**Multi-turning**

## TAKAMAZ Compact Machines

Suitable for Compound Machining



With 2 spindle and 2 turret, there are lots of possible cutting methods. Complex parts can be processed at shorter amount of time.

Sub-spindle + Power Tools

Chuck Size

6 inch

Model

XY-120 PLUS

Attachment

12

Y

P

T

CE

Best for Processing Large Bar Materials

Chuck Size

6 inch

Model

XYT-51

Attachment

12

Y

P

T

CE

Earth

Best for Processing Large Bar Materials

Chuck Size

8 inch

Model

XY-2000 PLUS

Attachment

12

Y

P

T

CE

Recipient of the 39th Machine Design Award Special Award by Awarding Committee

# Global Strategy Lathe

## GSL series

1-spindle 1-turret

Excellent Cost Performance

Chuck Size

6 inch

Model

GSL-10 H

Attachment

8

Excellent Cost Performance

Chuck Size

8 inch

Model

GSL-15 PLUS

Attachment

8

P

T

Earth

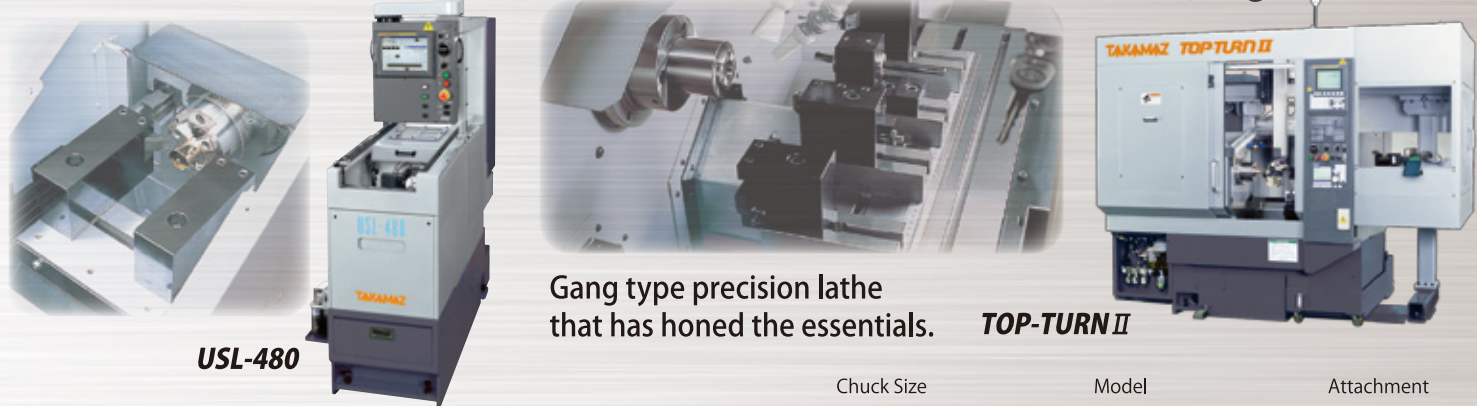
XYseries Machine Specifications							
Item	Unit	XY-120 PLUS		XYT-51		XY-2000 PLUS	
Chuck Size	inch	Collet,6	Collet,5	Collet,6		8	
Spindle bearing I.D	mm	φ85(φ100)	φ65	φ100	φ85	φ100(φ120)	φ100
Spindle speed	min <sup>-1</sup>	Max.5,000 (4,000)	Max.5,000	Max.5,000		Max.4,000	
Tool post type		12-station turret,24ST		12-station turret,24ST		12-station turret	
Max. stroke	mm	X1:150 Z1:330 Y:±35 X2:150 Z2:440		X1:162.5 Z1:500 Y:±35 X2:170 Z2:500 A:560		X:175 Z:510 Y:±40 X:175 Z:510 A:570	
Rapid traverse	m/min	X1:18 Z1:24 Y:±12 X2:18 Z2:18		X1:18 Z1:30 Y:12 X2:18 Z2:30 A:30		X:18 Z:24 Y:12 X:18 Z:24 A:30	
Spindle motor	kW	AC7.5/5.5 (AC11/7.5)	AC5.5/3.7	AC18.5/15/11	AC9/7.5/5.5	AC18.5/15	AC11/7.5
Power tools capacity	mm	φ13		φ13		φ16	
	mm	M8		M12		M16	
Dimensions(L×W)	mm	2,630×1,950		2,995×2,250		3,060×2,145	
Controller		TAKAMAZ & FANUC Oi-TD		TAKAMAZ & FANUC 32i-B		TAKAMAZ & FANUC 31i-A	

(.):Option

# GANG TYPE series

1-spindle 1-slide

Gang type



Gang type precision lathe that has honed the essentials.

Super Compact Machine Body

Chuck Size

3 inch

Model

USL-480

Attachment

Earth

P

T

Earth

Recipient of 2010 fiscal year The Japan Society of Mechanical Engineers Superior Product Award

High-accuracy turning with built-in motors

Chuck Size

4 inch

Model

XG-4

Attachment

Earth

P

T

Earth

High-accuracy turning with built-in motors

Chuck Size

4 inch

Model

J-WAVE PLUS

Attachment

Earth

P

T

Earth

Suited for Powerful Heavy Cutting

Chuck Size

6 (8) inch

Model

TOP-TURN II

Attachment

Earth

P

# SKIVING MACHINE

1-spindle 1-turret

Process integration with turning + grinding

Chuck Size

8 inch

Model

SKV-8

Limited exclusively to domestic sales in Japan



Introducing a Special Machine Specifically Designed for Skiving.

GSLseries Machine Specifications				
Item	Unit	GSL-10 H	GSL-15 PLUS	
Chuck Size	inch	Collet,6	Collet,8	
Spindle bearing I.D.	mm	φ75	φ100	
Spindle speed	min <sup>-1</sup>	Max.4,500	Max.3,500	
Tool post type		8-station turret	8-station turret	
Max. stroke	mm	X:120 Z:230	X:175 Z:330	
Rapid traverse	m/min	X:12 Z:18	X:18 Z:24	
Spindle motor	kW	AC5.5/3.7	AC7.5/5.5	
Dimensions(L×W)	mm	1,610×1,390	1,875(With tallstock:1,990)×1,680	
Controller		TAKAMAZ & FANUC Oi Mate-TD	TAKAMAZ & FANUC Oi-TF	

GANG TYPEseries Machine Specifications						
Item	Unit	USL-480	XG-4	J-WAVE PLUS	TOP-TURN II	
Chuck Size	inch	Collet,3	Collet,4		6	8
Spindle bearing I.D.	mm	φ50	φ65		φ75	φ85
Spindle speed	min <sup>-1</sup>	Max.10,000	Max.8,000	Max.4,500	Max.6,000	Max.4,500
Tool post type		Gang type	Gang type		Gang type	
Max. stroke	mm	X:160 Z:200	X:200 Z:250		X:300 Z:300	
Rapid traverse	m/min	X:12 Z:15	X:18 Z:18		X:12 Z:18	
Spindle motor	kW	AC5.5/3.7	AC7.5/5.5/3.7	AC5.5/3.7	AC7.5/5.5	
Dimensions(L×W)	mm	480×1,941	1,506×1,250(780×1,735*)		1,820×1,510	
Controller		TAKAMAZ & FANUC Oi-TD / TAKAMAZ & MITSUBISHI M64		TAKAMAZ & MITSUBISHI M80	TAKAMAZ & FANUC Oi-TD	

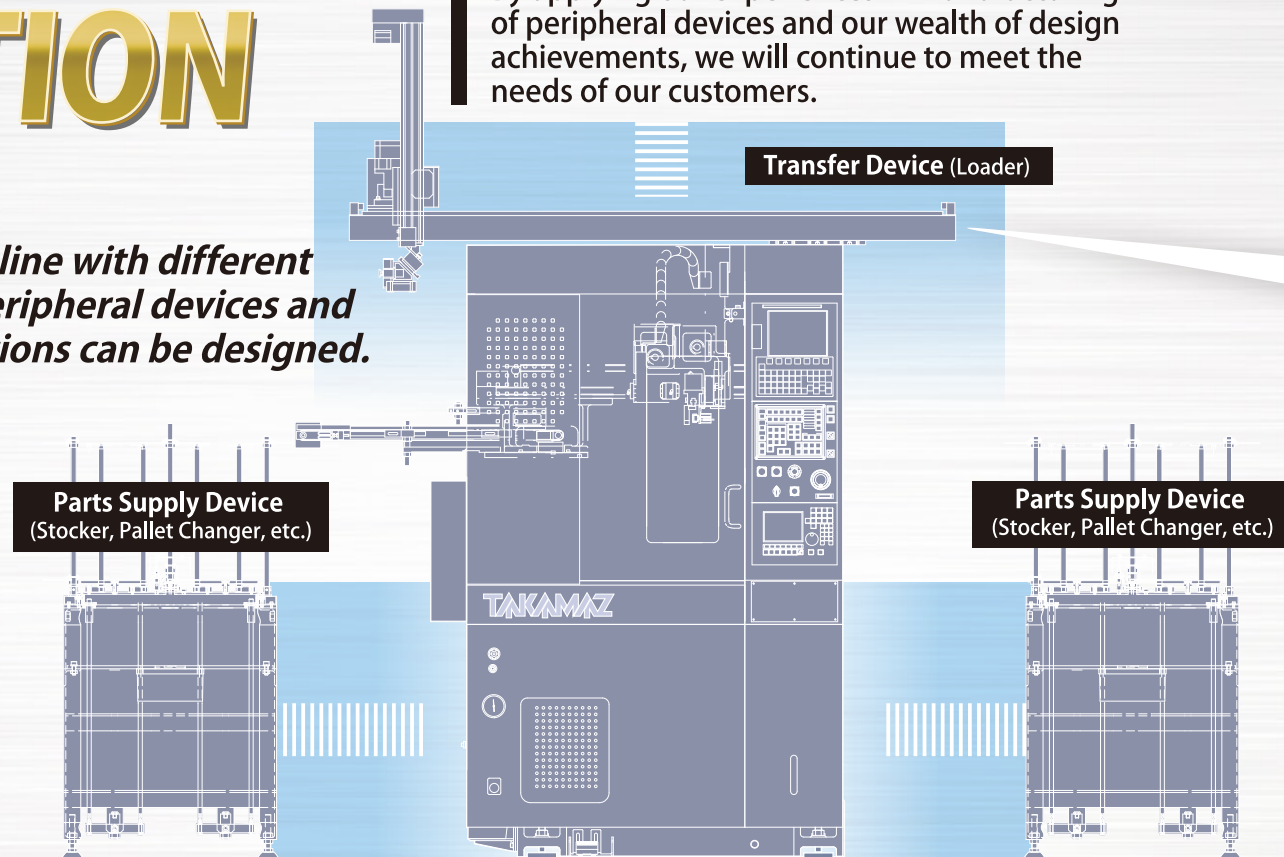
\* When the loader is mounted.

SKV-8 Machine Specifications		
Item	Unit	SKV-8
Chuck Size	inch	8
Spindle bearing I.D.	mm	φ100
Spindle speed	min <sup>-1</sup>	Max.5,000
Tool post type		12-station turret
Max. stroke	mm	X:150 Y:±35 Z:400
Rapid traverse	m/min	X:18 Y:12 Z:24
Spindle motor	kW	AC 15/11
Dimensions(L×W)	mm	2,270×1,690
Controller		TAKAMAZ & FANUC Oi-TF



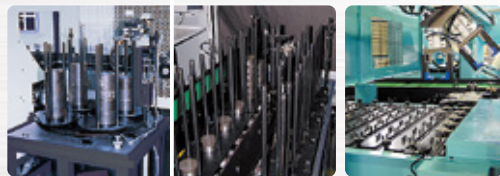
# TAKAMAZ OPTION system

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



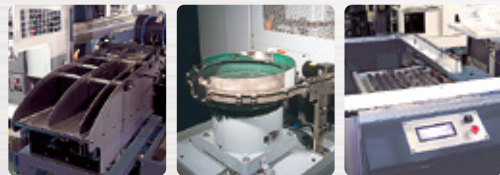
By applying our experiences in manufacturing of peripheral devices and our wealth of design achievements, we will continue to meet the needs of our customers.

## Automation Peripheral Devices



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

■ **Flat stocker**



■ **Stocker for Shaft type parts**

■ **Parts feeder**  
A cylindrical stocker with minimum footprint for storing small parts.

■ **Tray changer**  
Workpieces can be stored together with the tray.

## Quality/Environment control unit



■ **External measurement instrument**  
Dimensional errors are fed back to the machine to maintain high dimensional accuracy.

■ **Cleaning unit**  
Without operator intervention, cleaning is performed automatically.



■ **Oil mist collector**  
Oil mist collection facilitates a clean production environment.

■ **Automatic fire extinguisher**  
If fire breaks out in the machine during automatic operations, fire extinguishing agent is automatically discharged.

## Cutting efficiency/Chip disposal



■ **Alloyed Clamp Holder for vibrations 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 in the minimum space.

■ **Chip conveyor (Floor type)**  
Chips are reliably discharged outside the machine.



■ **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 organic coolant is applied to the correct point on the cutting edge, realizing semi-dry machining.



## TAKAMAZ Collet Chuck

The collet chuck developed and marketed under the TAKAMAZ brand is manufactured in the factory where an integrated system is used to streamline every part of the production, from machining to heat treatment. Collet run-off accuracy conforms to TAKAMAZ standard, which is even higher than Japanese Industrial Standards (JIS), allowing us to provide our customers with exceptionally dependable products.

# TAKAMAZ LOADER system

Encouraged from sales of more than 65 years, with "Integral loader" design philosophy in mind, TAKAMAZ will lead the consistent support service follow up and support system built on trust, leading to increased productivity.

Space Saving  
Accessory Devices

Improving  
Durability

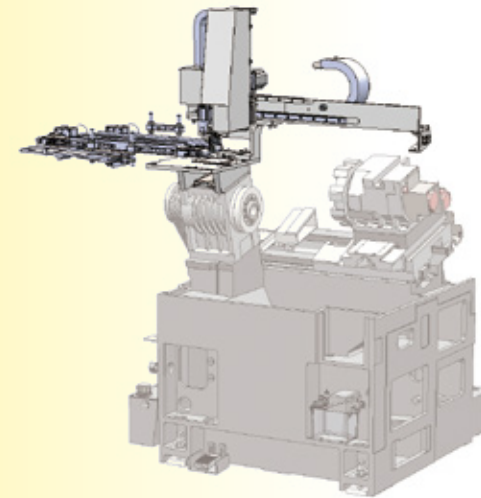
Pursuing of  
the Low Cost

Short  
Loading Time

Flexible System  
Line Configuration

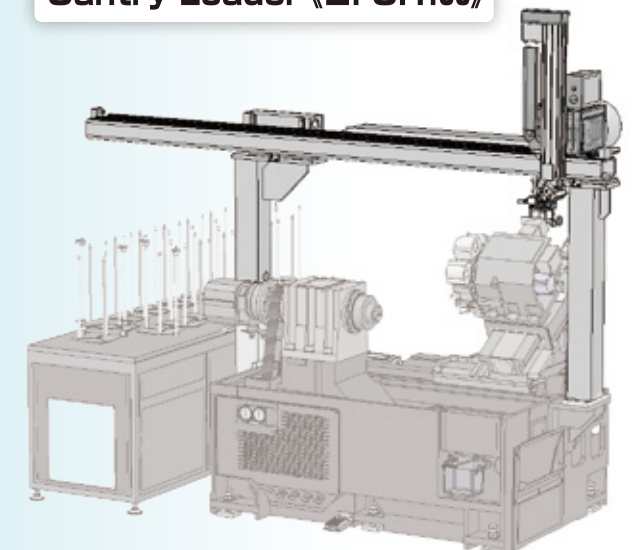
Improving  
Operability

## Compact Loader 《Σi》



- Hi Speed Loader mounted on the machine to save space.
- A dedicated servo controller allows speedy setup.

## Gantry Loader 《Σi GH150》



- Gantry-type servo loader with high rigidity.
- The traverse distance can be extended, ensuring extremely flexible line configuration and systemization of peripheral equipment.

## For Small and Short Workpiece



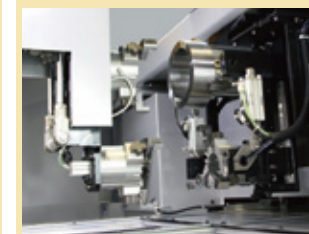
Parallel Hand

## For Flange Workpiece



L Hand

## For Front and Back Cutting Workpiece



Σi GTH Hand

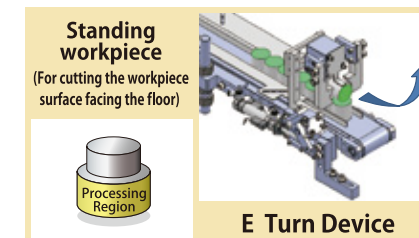
## For Shaft Workpiece



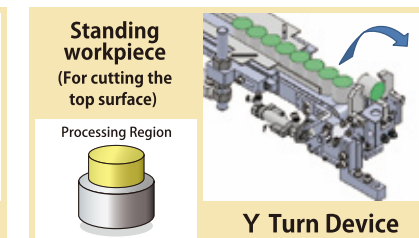
Pendulum Hand

## Workpiece delivery from transport unit using a conveyor

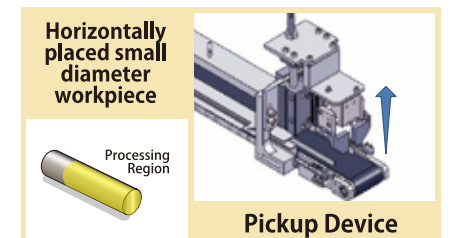
To transport the workpieces with different shapes and cutting points, a variety of turn devices are available to provide a reliable workpiece delivery system.



E Turn Device



Y Turn Device



Pickup Device