



# GMS-2600 SERIES

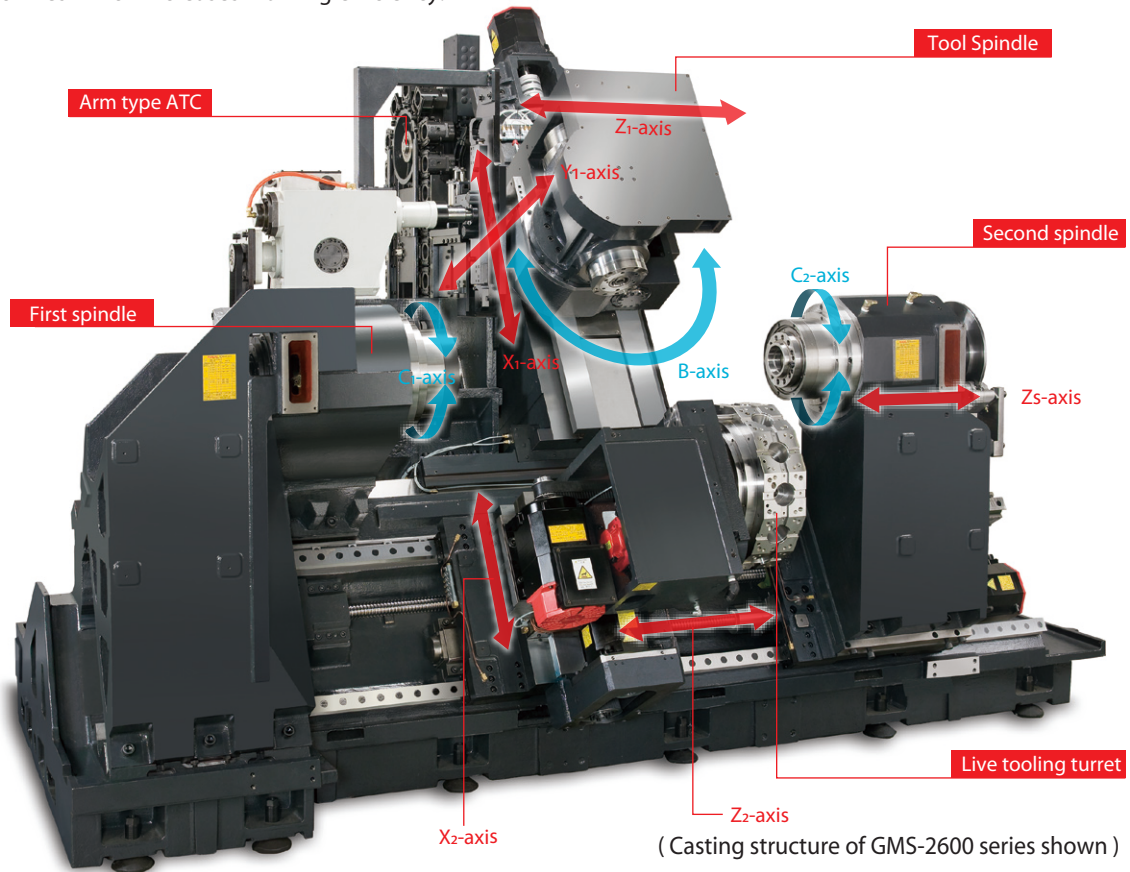
*Maximum Performance Multi-axis Turning Centers*

**GOODWAY MACHINE CORP.**

# MAXIMUM PERFORMANCE MULTI-AXIS TURNING CENTERS

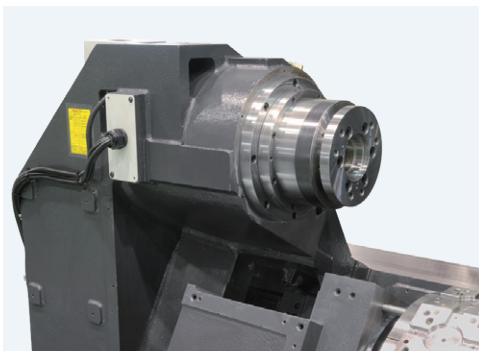
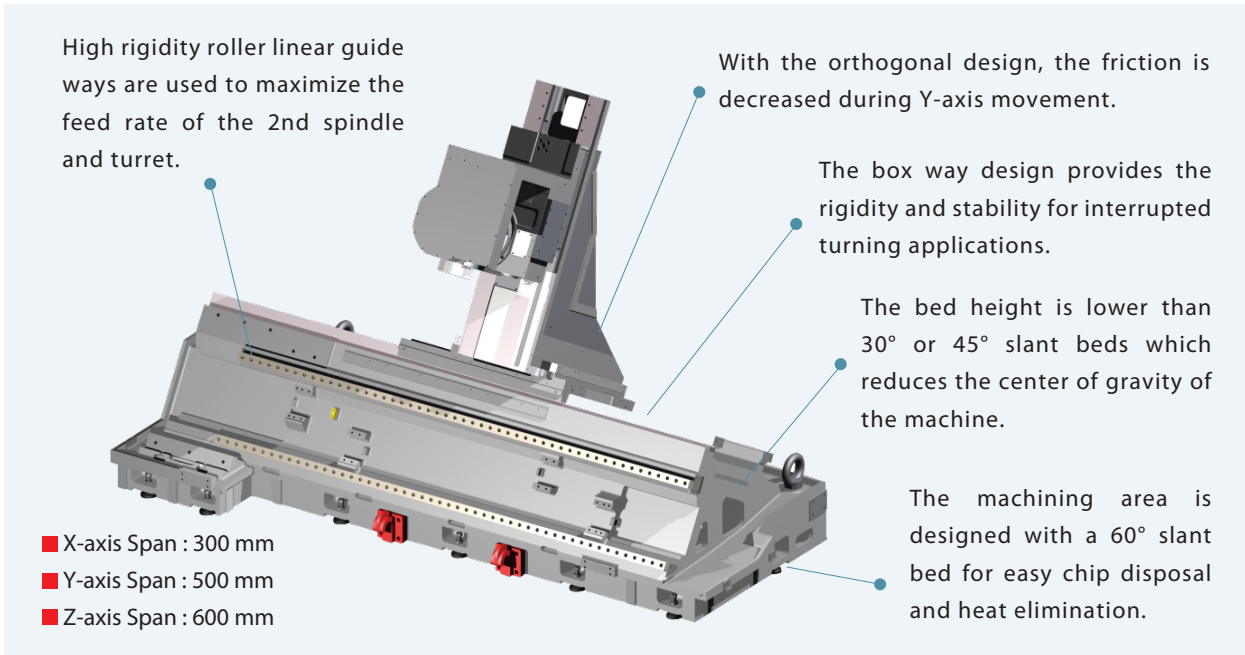
With 30 years of knowledge and experience in the machine tools field, Goodway is proud to present the new GMS-2600ST multi-tasking turning center. This hybrid has the combination of Goodway's exquisite techniques ( X, Y, Z, C axes and live tooling turret ) and the features of a machining center, such as the high-speed spindle, ATC system, and B-axis. Complex free shape machining, tapping, milling, drilling, incline machining, contour machining, and turning can be done easily, hence, done in one is made possible.

- ▶ Simultaneous turning on both spindles can achieve the best cutting condition and increase the machining accuracy and quality of long work pieces.
- ▶ With the advanced double-turret and double-spindle construction, one turret can cut a work piece in one spindle with the other running at the same time. One simultaneous turning machine means replacing two machines which increases working efficiency.



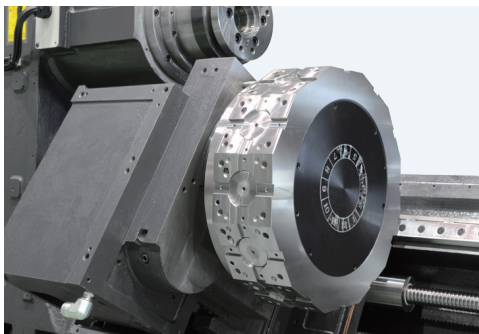
- ▶ Tool spindle uses triple plate curvic coupling with worm gear drive structure.  
Swiveling range :  $\pm 120^\circ$   
Indexing resolution :  $0.001^\circ$
- ▶ Standard KM63 arm type 24 station ATC.  
Index speed : 3 sec ( T-T ) / 7 sec ( C-C )

- ▶ The GMS-2600 series combine turning centers and machining centers' strong features into one single machine, saving floor space and equipment purchase cost while increasing machining accuracy.
- ▶ With the use of the loading/unloading system, the GMS-2600 series is turned into a high-efficiency automation turning center. From work piece transfer to parts finishing, all can be completed in one single set up saving manpower and cycle time, while reducing accuracy lost, which will occur if manually handling the part from one machine to another.



#### High precision built-in spindle

The main and sub-spindle module are equipped with cylindrical roller bearings which are better than angular contact bearings. The main spindle is installed with a built-in spindle motor which eliminates power loss and belt slipping problems. The C-axis with high resolution magnetic encoder provides high precision contour machining capability.



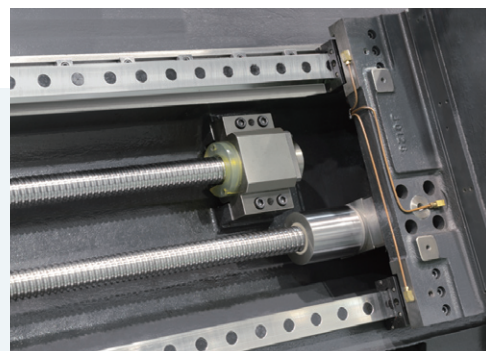
#### High performance built-in live tooling

Large size Ø 250 curvic coupling equipped with main spindle motor driven turret provides the best cutting ability.

- ▶ Tool Square : □ 25 mm ; Tool Round : Ø 40 mm
- ▶ Live Tooling : ER 40

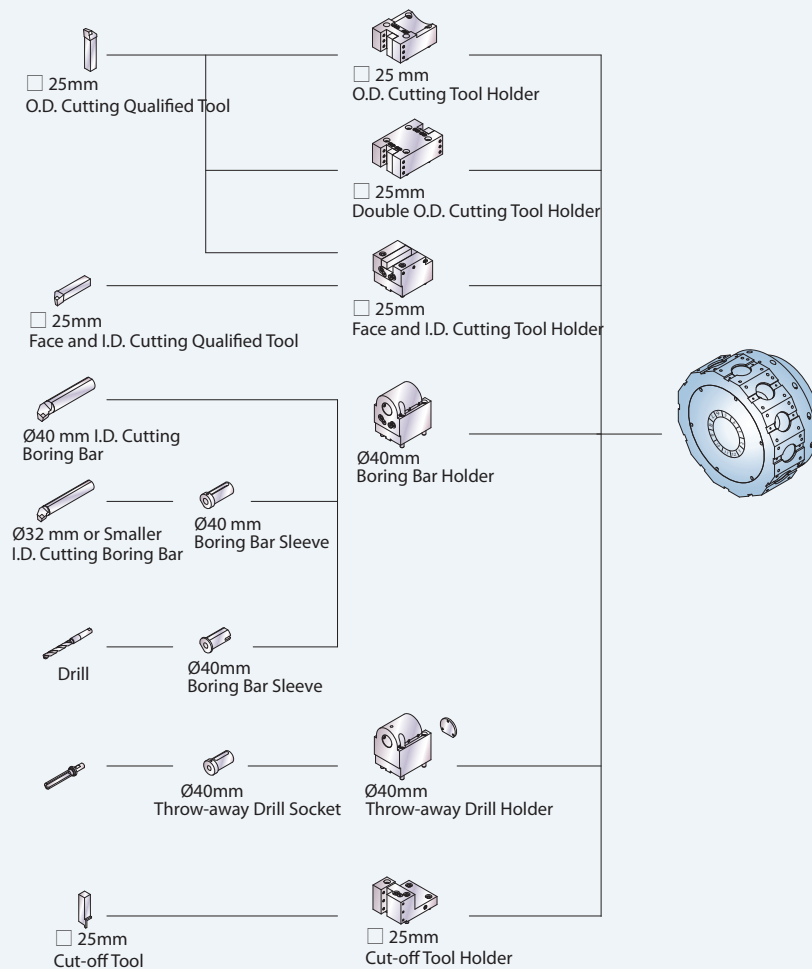
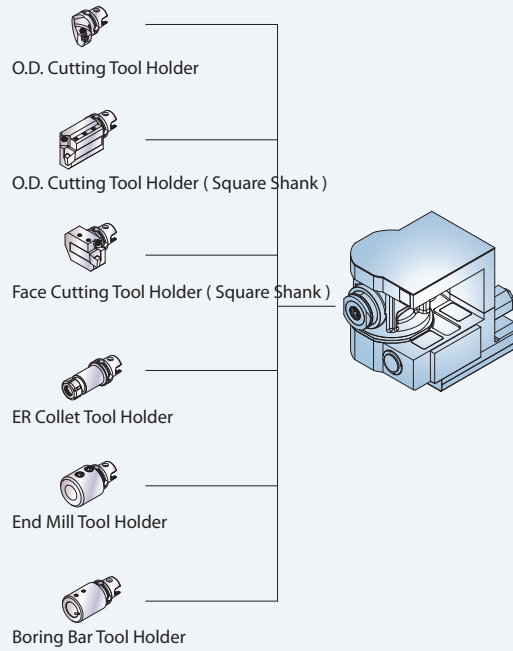
#### Advanced slide way design

The X / Y axes are adopted with high-rigidity, extra-wide box way design to provide solid foundation for heavy-duty cutting. The Z<sub>2</sub> / Z<sub>s</sub> axes are adopted with high-speed, high-precision roller linear guideway design to increase work piece overall accuracy and maintain excellent cutting rigidity.

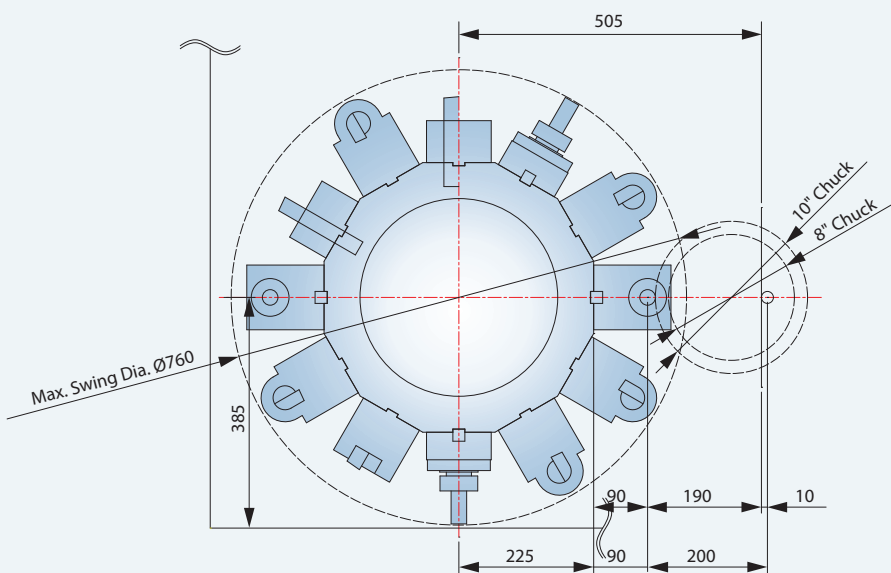
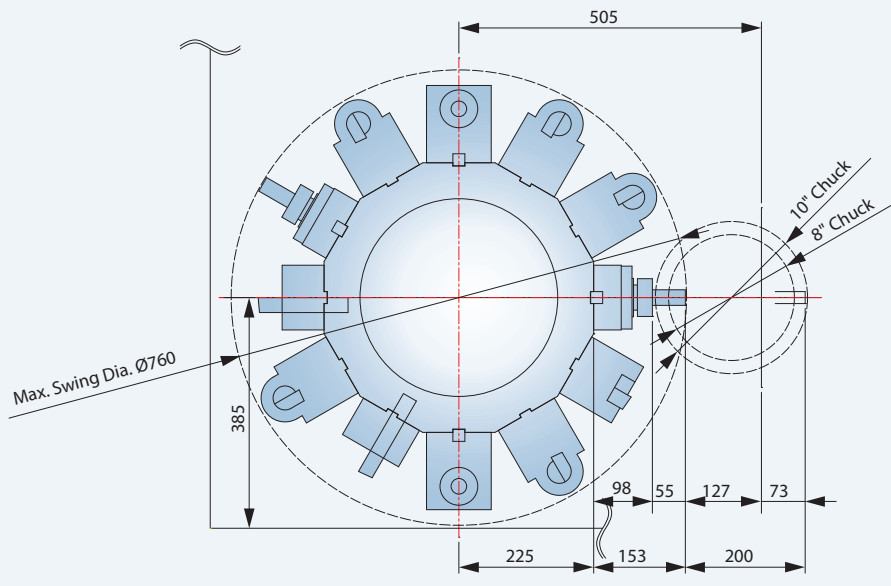
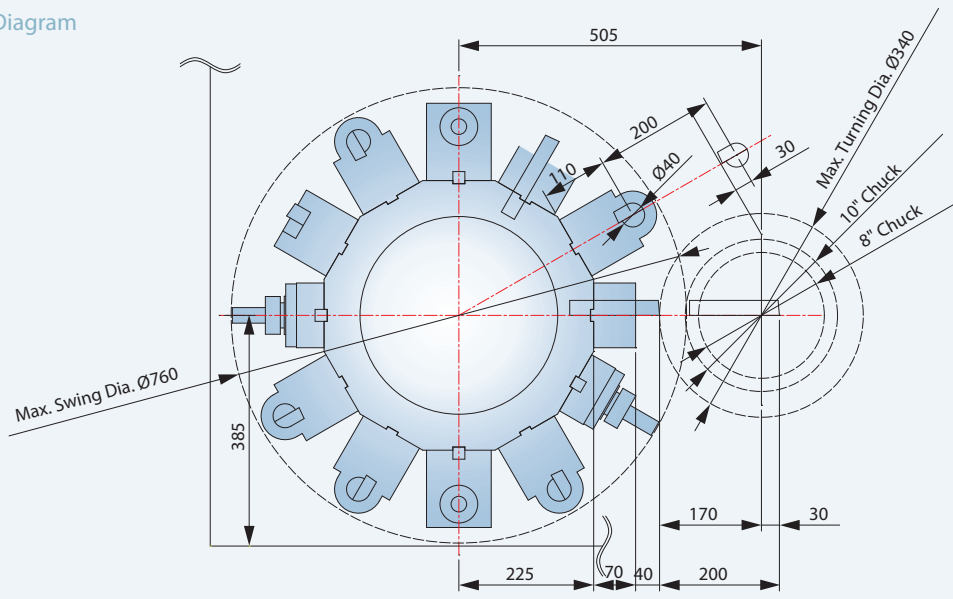


# DIMENSIONS

## Tooling System

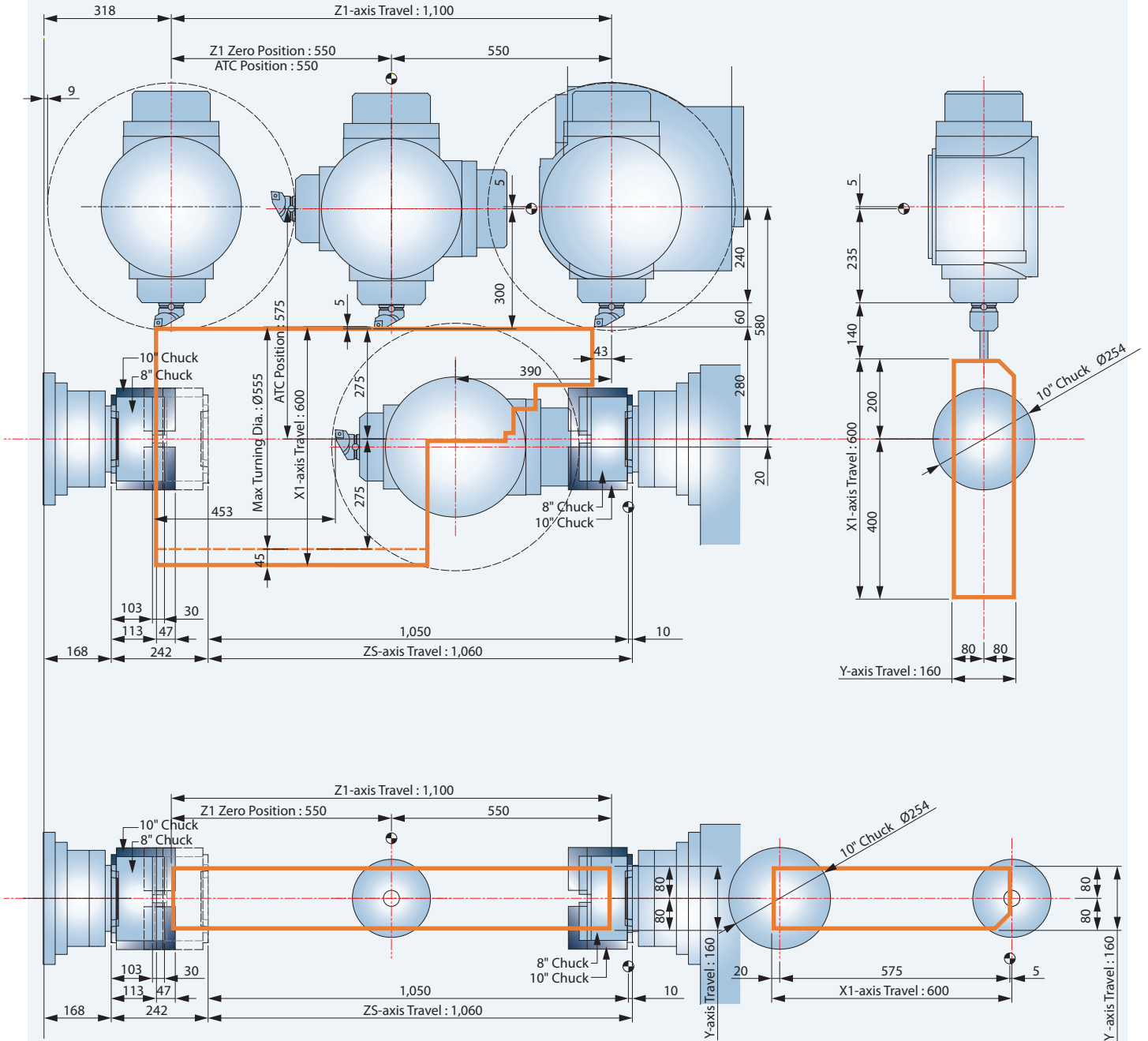


Interference Diagram

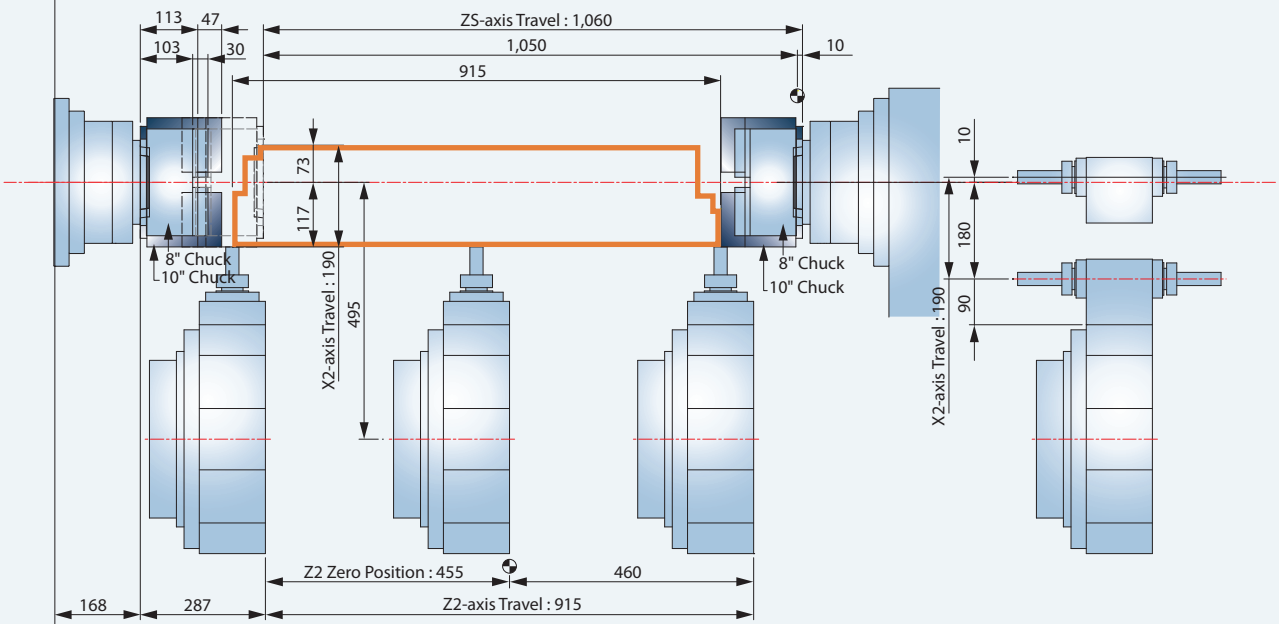
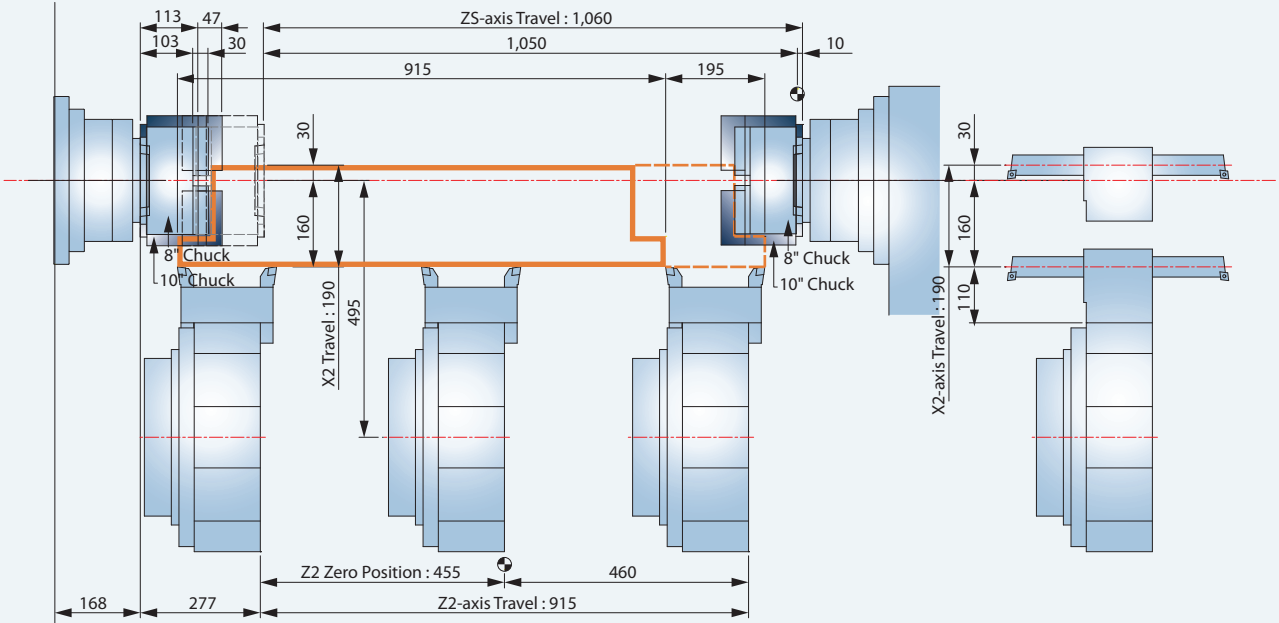


Unit : mm

Work Range



Unit : mm



# MACHINE SPECIFICATIONS

CAPACITY	GMS-2600ST	GTS-2800ST
Max.swing diameter	Ø 900 mm	
Swing over saddle	Ø 700 mm	
Distance between spindle nose	1,302 mm	
Max. turning diameter	Tool spindle : Ø 550 mm ( KM63 ) Turret : Ø 340 mm	
Max. turning length	1,066 mm	
SPINDLE		
Bar capacity	Ø 52 mm	Ø 65 mm
Hole through spindle	Ø 61 mm	Ø 76 mm
Spindle bearing diameter ( Front / Rear )	Ø 100 / 80 mm	Ø 120 / 100 mm
Chuck size	8"	10"
Spindle nose	A2-6	
Spindle motor type	Bi1170S / 6,000	
Spindle motor output ( Con. / 30 min. )	11 / 25 ( 22 / 25 ) Kw	
Gear ratio	1:1	
Spindle speed range	4,800 rpm	4,000 rpm
Spindle motor torque ( Con. / 30 min. )	157 / 223 ( 131 / 149 ) N-m	
X & Z AXES		
X <sub>1</sub> / X <sub>2</sub> axes travel	600 / 190 mm	
Z <sub>1</sub> / Z <sub>2</sub> axes travel	1,100 / 915 mm	
Z <sub>s</sub> -axis / Tailstock travel	1,060 mm	
X <sub>1</sub> / Z <sub>1</sub> / Z <sub>2</sub> / Z <sub>s</sub> axes rapids	24 m/min.	
Slide way type	Box way ( Linear way : Z <sub>2</sub> / Z <sub>s</sub> axes )	
X <sub>1</sub> -axis servo motor	AC 4.5 Kw ( 5.4 HP, Fanuc $\alpha$ 22B/4,000is, Absolute encoder, 1,000,000 / rev. )	
X <sub>2</sub> / Z <sub>2</sub> / Z <sub>s</sub> axes servo motor	AC 3.0 Kw ( 4.0 HP, Fanuc $\alpha$ 12/3,000i, Absolute encoder, 1,000,000 / rev. )	
Z <sub>1</sub> -axis servo motor	AC 4.5 Kw ( 5.4 HP, Fanuc $\alpha$ 22/4000is, Absolute encoder, 1,000,000 / rev. )	
X <sub>1</sub> / X <sub>2</sub> axes ball screw Ø / pitch	Ø 36 mm / 10 mm	
Z <sub>1</sub> / Z <sub>2</sub> / Z <sub>s</sub> axes ball screw Ø / pitch	Ø 45 mm / 10 mm	
X <sub>1</sub> / Z <sub>1</sub> axes thrust	1,410 kgf	
X <sub>2</sub> / Z <sub>2</sub> / Z <sub>s</sub> axes thrust	1,153 / 768 / 768 kgf	
Y-AXIS		
Y-axis travel	± 80 mm	
Y-axis rapids	16 m/min.	
Slide ways type	Box way	
Y-axis servo motor	AC 4.5 Kw ( 5.4 HP, Fanuc $\alpha$ 22/4000is, Absolute encoder, 1,000,000 / rev. )	
Y-axis ball screw Ø / pitch	Ø 36 mm / 10 mm	
Y-axis thrust	2,114 kgf	



TOOL SPINDLE	GMS-2600ST	GTS-2800ST
B-axis travel	± 120 °	
B-axis speed range	27 rpm	
B-axis servo motor	AC 2.7 Kw ( 3.6 HP, Fanuc $\alpha$ 12/3,000is, Absolute encoder, 1,000,000 / rev. )	
Min. indexing of B-axis	0.001°	
Max. spindle speed	10,000 rpm ( 12,000 rpm Opt. )	
Machining capacity	Face mill : Ø 80 mm End mill : Ø 20 mm Drill : 37 mm Tap : M27 mm	
Tool spindle taper	KM63	
Tool spindle motor output ( Con. / 30 min. )	11 / 15 Kw	
Magazine capacity	24	
Max. tool diameter ( adj. )	Ø 100 ( Ø 150 ) mm	
Max. tool length / weight	300 mm / 7 Kg	
TURRET		
Stations	12	
Shank of tool	<input type="checkbox"/> 25 / Ø 40 mm	
Index speed ( adj. )	0.3 sec.	
Live tooling stations	12	
Live tooing shank size	ER 40	
Max. tooling speed	6,000 rpm	
TAILSTOCK		
Quill diameter	Ø 110 mm	
Quill type	MT#4 ( Dead center ) ; MT#5 ( Live center )	
GENERAL		
Hydraulic / Lubrication capacity	50 L / 3 L	
Coolant tank capacity	305 L	
Machine weight	13,000 kg	
Dimensions ( L × W × H )	4,245 × 2,720 × 2,730 mm	

Specifications are subject to change without notice.



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