

NC Specifications / Fanuc Series

Item	Specification	FANUC
Controlled axis	Controlled axes	3(X1,Z1,Y1)+3(X2,Z2,Y2)+(XB,ZB)
	Max. controlled axes	4(6) AXIS
	Max. simultaneously controlled axes	4
	Least input increment	0.001mm / 0.0001*
Operation functions	Manual handle feed	X1, X10, X100
	Feed per minute	G94
	Feed per revolution	G95
Interpolation functions	Linear interpolation	G01
	Circular interpolation	G02, G03
	Dwell	G04
	Cylindrical interpolation	G70.1
	Reference position return	G28
	Reference position return check	G27
Feed function	Rapid traverse feedrate override	F0, 25%, 50%, 100%
	Feedrate override	0~200%
Spindle function	Spindle override	○
	Rigid tapping	○
Tool functions	Tool function	T4-Digt / T2-Digt
	Tool nose radius compensation	G40 ~ G42
	Tool offset pairs	400
	Tool geometry / wear offset	GEOMETRY & WEAR DATA
	Tool life management	○
	Tool path graphic display	○
	Automatic tool compensation	○
Program input	Absolute / incremental programming	○
	Multiple repetitive cycle	G70 ~ G76
	Canned cycle	G90, G92, G94
	Inch / metric conversion	G20 / G21
	Program restart	○
	Retraction for rigid tapping	○
	Max. programmable dimension	±99999.999mm/±9999.9999"
	M function	M3 digit
	Custom macro	○
	Canned cycle for drilling	○
	Direct drawing dimension programming	○
	Programmable data input	G10
	Optional block skip	○
	Workpiece coordinate system	G52 ~ G59
	Number of registerable programs	400EA
Setting and display	Help function	ALARM & OPERATION DISPLAY
	Run hour / parts count display	RUNNING TIME & PART NO. DISPLAY
	Spindle & servo load display	SPINDLE & SERVO LOAD DISPLAY
	Self-diagnosis function	○
	Extended part program editing	COPY, MOVE, CHANGE OF NC PROGRAM
	Display screen	10.4" color
Data input/output	Memory card input / output	○
	USB memory input / output	○
Editing operation	Part program storage size	512Kbyte, 256Kbyte
Manual guide i	Manual Guide I	Opt.

SMEC

SL 2000T2Y2

MULTI-AXIS HORIZONTAL TURNING CENTER



SMEC
SMEC CO.,LTD.

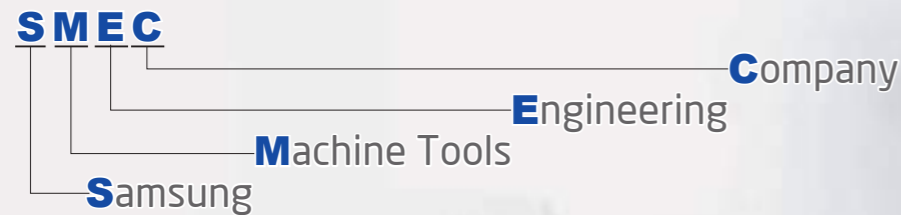
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SMEC
Smart One,
Global One

SMEC
SMEC CO.,LTD.

- 1988 - Started as Samsung Heavy Industries Machine Tools Business
- 1989 - Horizontal and vertical machining center technology partnership with OKK Japan
- 1991 - Turning center and vertical machining center technology partnership with Mori Seiki
- 1996 - 5-sided processing center technology partnership with Toshiba
- 1999 - Spun out from Samsung Aerospace Industries and established SMEC Co., Ltd



SL 2000T2Y2

Twin Spindle and Turrets for High Productivity

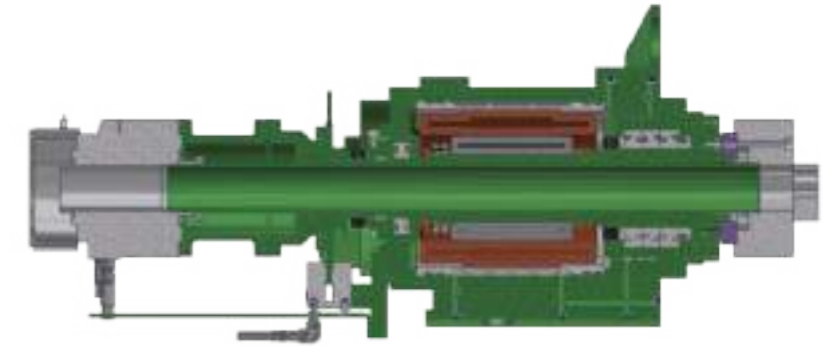
2-Spindle /2-Turret/2-Y axis

- With a process-intensive structure that includes two turrets (Upper/Lower) with symmetrical bilateral and Y-axis, all processes can be completed in one setup.
- Multi-axis Turning center for high productivity in complex cutting.

Xe axis for two separate work areas

- With the Xe axis, the second spindle moves up and down. This provides an independent working environment for machining.

High Accuracy, High Rigidity Spindle



1st/2nd spindle construction

► Thermotropic symmetry, Built-in construction

- The main axis of the thermally displaced symmetrical structure type is exposed to the air in all directions of the cartridge, minimizing the thermal deformation of the main shaft by anticipating the heat dissipation effect, thereby preventing the precision change due to the temperature rise.

- High-speed, high-output, high-response Built-in spindle motor achieves high productivity by minimizing acceleration / deceleration time.

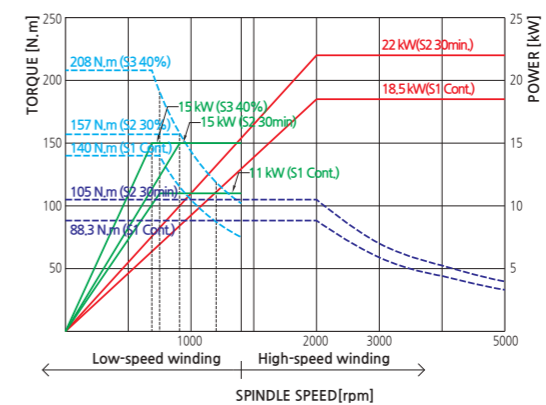
► 1st/2nd spindle synchronization

- 1st and 2nd spindle can be machined into various shapes by synchronizing them with the same structure.

► Oil cooling system

- Two spindles are wrapped around the oil cooling system to minimize thermal displacement, enabling high-speed, high-precision machining under a variety of working conditions.

1st & 2nd Main Spindle Power & Torque Diagram



1st/2nd spindle motor(Cont./Max)

Low : 11/15 kW

High : 18.5/22 kW

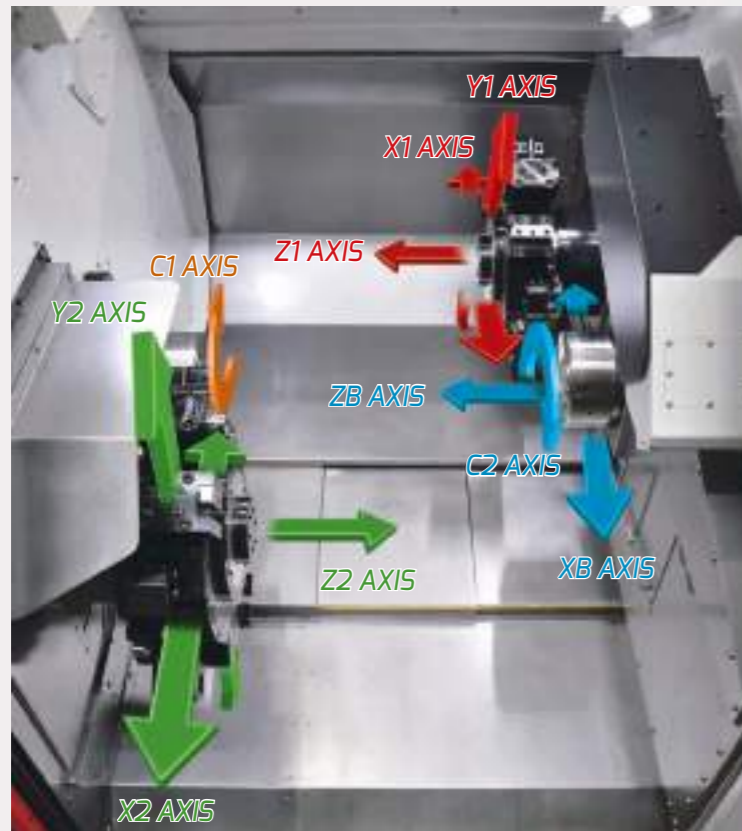
Max. speed

5,000 rpm

SL 2000T2Y2

MULTI-AXIS HORIZONTAL TURNING CENTER

SL 2000T2Y2 is a heavy duty, ultra precision Turning Center, combined with SMEC's advanced technological features.



- 10 axis
- 1st & 2nd spindle (Built-in type)
- Roller guide & Box guide
- Upper turret (X1, Z1, Y1 axis)
- Lower turret (X2, Z2, Y2 axis)
- 2nd spindle (XB, ZB axis)

Feed construction

- The Z-axis has improved rigidity and feed speed by adopting the roller guide method. At the same time, a strong box guide structure is applied to the X and Y axes to maintain the high accuracy during cutting.
- To achieve high reliability, high precision ballscrews are applied and both ends are supported by P4 class angular bearings to deliver powerful output and torque of servo motor.



Upper/Lower turret construction

Upper turret



- Y axis : **Compensation type (30° Slant)**
- Number of tool stations : **12(24)** ea
- Shank size : **□ 25X25/Ø40** mm
- Indexing time : **0.15** sec
- Clamping force : **5,411** kgf
- Rotary tool spindle speed : **5,000** rpm

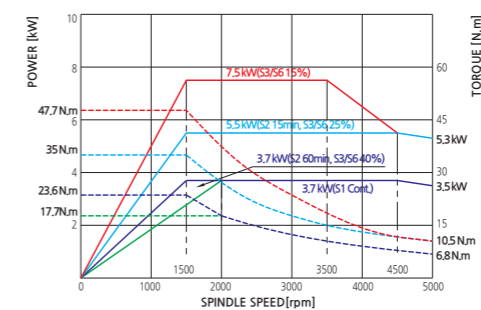
Lower turret



- Y axis : **Orthogonal type (90° Slant)**
- Number of tool stations : **12(24)** ea
- Shank size : **□ 25X25/Ø40** mm
- Indexing time : **0.15** sec
- Clamping force : **5,411** kgf
- Rotary tool spindle speed : **5,000** rpm

- For turret division, TOOL can be selected in 0.15 seconds per side in both directions of NON-STOP using high-output servo motor.
- BMT65 12(24) turret can be mounted as standard and mounted in any position or rotary tool.
- Highest strength and high precision machining are ensured by using the same maximum curvic coupling and powerful hydraulic clamp(Clamp force:5,411kgf(11,929lbs)).

Upper/Lower Turret Mill Spindle Power & Torque Diagram



Mill spindle motor (Cont./Max)
3.7/5.5/7.5 kW
 Max. speed
5,000 rpm



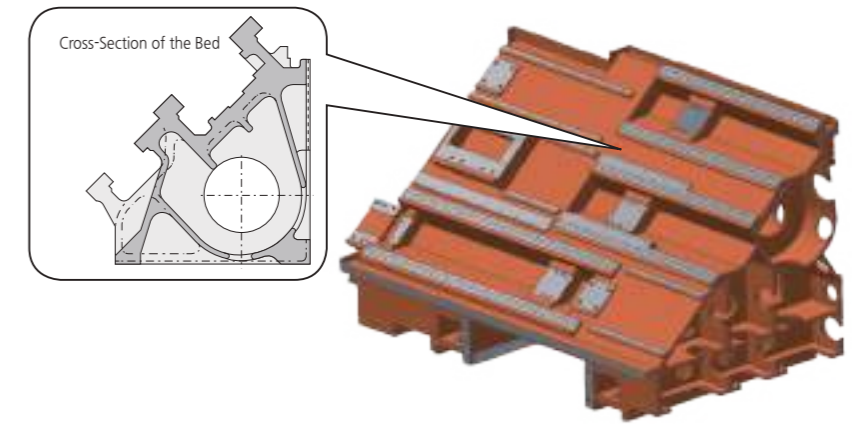
Centralized Operation Panel

The centralized operation panel with its 15 inch color TFT LCD monitor [Opt.] is able to swivel 90 degrees, providing operators with easy access to the control panel while working on the machine.



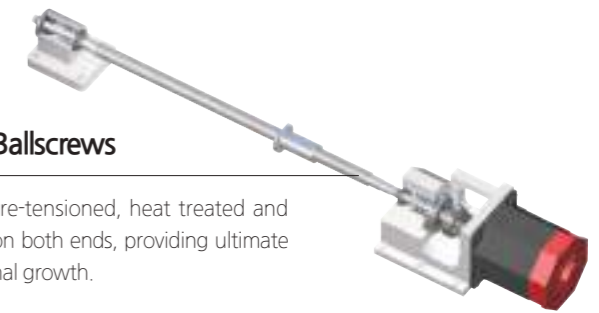
Rigid 45 degree Slant Bed

It is made of meehanite cast material with minimized thermal deformation. It has 45 degree inclined bed with high torque tube type rib structure, and it has excellent rotational rigidity and flexural rigidity.



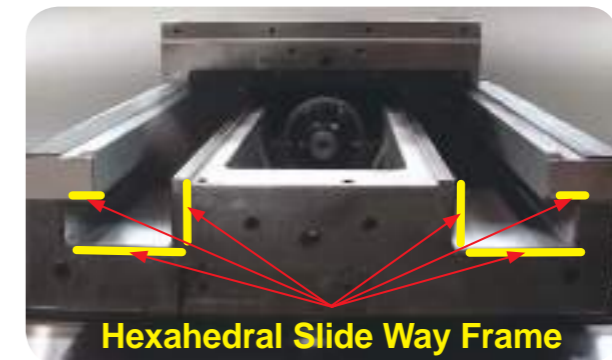
Pre-tensioned and Double Anchored Ballscrews

All axes ballscrews are pre-tensioned, heat treated and fixed by double anchors on both ends, providing ultimate rigidity and minimal thermal growth.



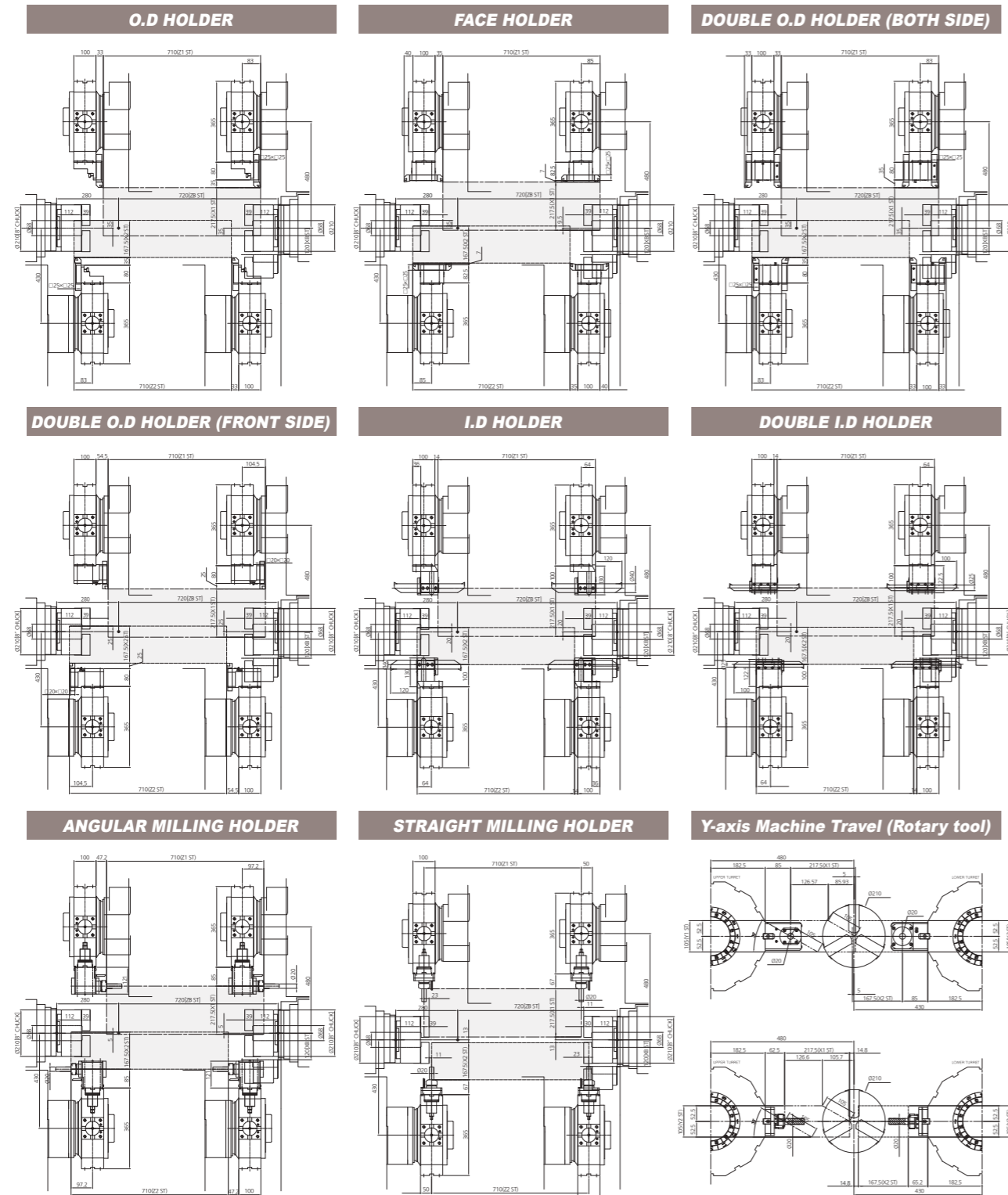
Hexahedral Slide Way Frame (X,Y-axis)

Wide integral way is machined from the casting, induction hardened and precision ground to ensure long-term rigidity, machining accuracy and heavy-duty machining.

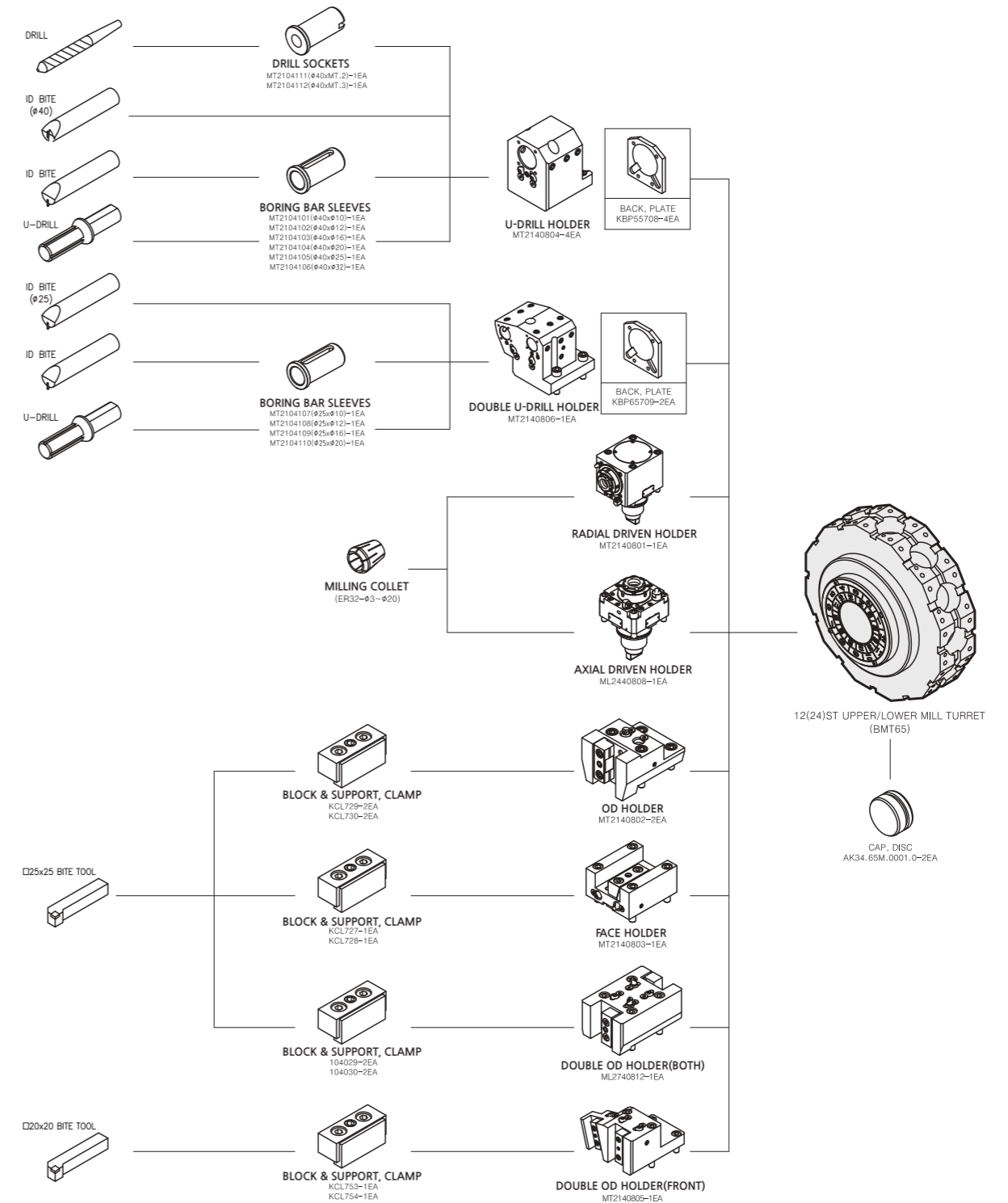


Work Range

Unit : mm

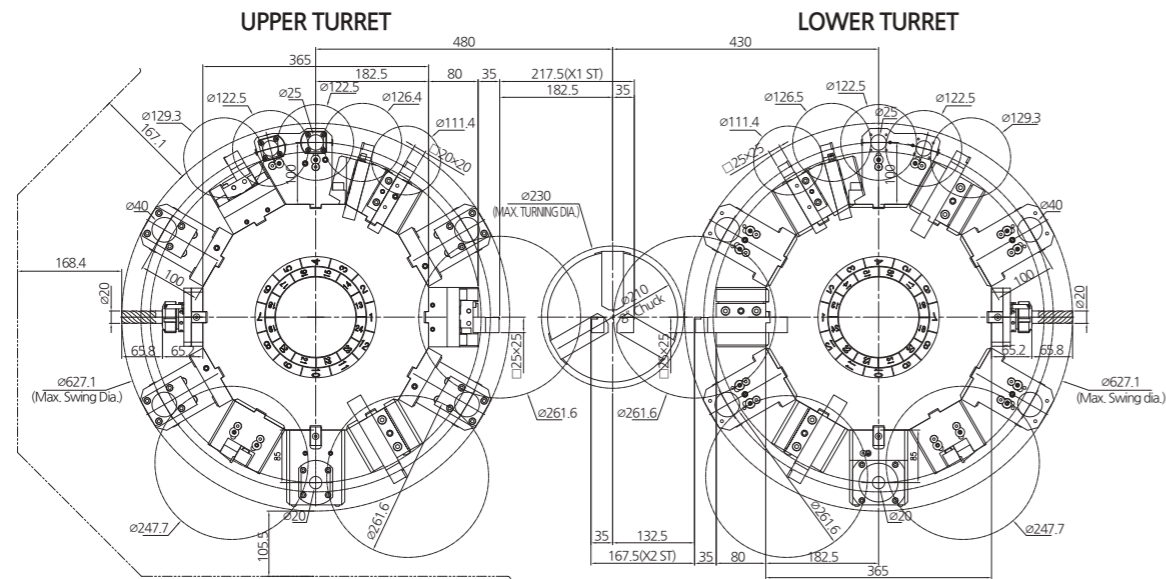


Tooling System



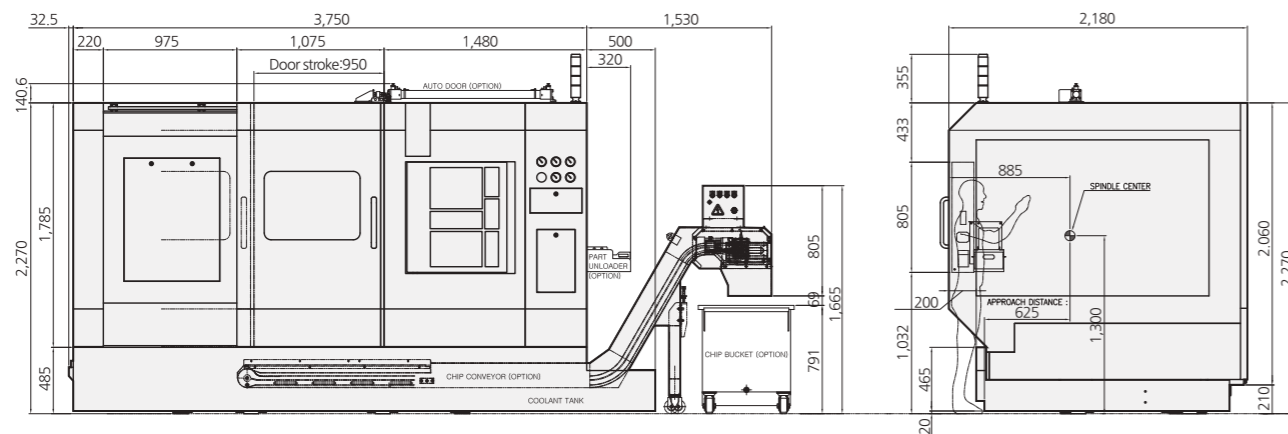
Turret Interference

Unit : mm



Machine Dimensions

Unit : mm



Standard Accessories

- 8" hollow 3 jaws chuck
- 15" LCD color monitor
- Chuck clamp confirmation
- Chuck clamp foot switch
- Chuck pressure switch
- Coolant system
- Door interlock
- Full splash guard with coolant tank
- Jaw (soft 3set, hard 1set)
- Levelling unit
- Manual/Part list (1set)
- Patrol lamp (3colors)
- Safety precaution name plate
- Spindle orientation
- Tool box
- Tool holders
- Work light (LED lamp)

Optional Accessories

- Air blower
- Air conditioners (electric cabinet)
- Air gun
- Auto door
- Bar Feeder Interface
- Chip bucket
- Chip conveyor
- Coolant blower
- Coolant chiller
- Coolant gun
- Coolant level switch
- Coolant pressure switch
- Counter (total, multi, tool, work)
- Dual pressure chucking
- Linear scale (X, Y, Z)
- Oil mist collector
- Oil skimmer
- Parts unloader & Parts conveyor (Gripper/Bucket)
- Robot interface
- Special chuck
- Tool presetter (Removable/Manual)
- Transformer

Major Specifications

DESCRIPTION		SL 2000T2Y2	
Chuck	Chuck size	inch	8"
Capacity	Swing over bed	mm	230
	Swing over cross slide	mm	230
	Max. turning diameter (Upper/Low)	mm	230/230
	Max. milling diameter	mm	230
Capacity	Max. machining length (1st SPD/2nd SPD)	mm	662/662
	Spindle speed	rpm	5,000
Spindle	Spindle nose	ASA	A2-6
	Draw tube ID	mm	68
	Spindle bore diameter	mm	76
	Main spindle motor (Cont./Max)	kW	18.5/22
	Sub spindle motor (Cont./Max)	kW	18.5/22
	X1/X2/XB-axis travel	mm	217.5/167.5/120
Travels	Y1/Y2-axis travel	mm	105(±52.5)/105(±52.5)
	Z1/Z2/ZB-axis travel	mm	710/710/720
	X1/X2/XB-axis Rapid traverse rate	m/min	24/24/24
	Y1/Y2-axis Rapid traverse rate	m/min	10/10
	Z1/Z2/ZB-axis Rapid traverse rate	m/min	40/40/40
	Turret	Number of tool stations	ea
Turning tool shank size		mm	25
Boring bar diameter		mm	40
Turret index time(next station swivel time)		sec	0.15
Rotary tool speed		rpm	5,000
Rotary tool motor (Cont./Max)		kW	3.7/7.5
Tailstock	Quill diameter	mm	-
	Quill stroke	mm	-
	Spindle taper	MT	-
Machine	Size (with Side Chip conveyor) L×W×H	mm	4,250(5,100) × 2,180 × 2,270
	Size (with Rear Chip conveyor) L×W×H	mm	-
	weight	kg	8,800
	Coolant tank capacity	Liter	420
ELECTRIC POWER SUPPLY		kVA/V	80/220
CONTROLLER			FANUC

※Design and specifications subject to change without notice.