

■ NC Unit Specifications / FANUC 0i-TF

Item	Description	
Controlled axes	Controlled axes	3-axis
	Max. simultaneously controlled axes	Positioning(G00) / Linear Interpolation(G01) Circular Interpolation(G02, G03)
	Least input increment	0.001mm
Spindle function	Spindle speed control	S5 (5 Digit)
	Spindle speed override	50~120%
	Spindle orientation	M19
Feed function	Feedrate override (10% increase)	0~180%
	Dwell	G04
	Reference position return	G27, G28
	Manual pulse generator	0.001/0.01/0.1mm
	Dry run	F0(Fine Feed), 25/50/100%
Tool function	Rapid traverse override	F0(Fine Feed), 25/50/100%
	Tool number command	T2 (2 Digit)
	Tool nose radius compensation	G40 ~ G42
	Tool offset pairs	128EA
Programming function	Tool geometry / wear offset	GEOMETRY & WEAR DATA
	Canned cycle	G70~G72, G74~G76
	Decimal point input	Able to input up to decimal point
	SUB program	4 phase
	Work coordinate system	G52~G59
Tape Functions	Max program dimension	±99999.999mm
	M function	M3 (3 digit)
	Input code	ISO/EIA auto recognition
	I/O interface	RS232C
	Program storage space	1280M(512kb)
Other features	Number of stored programs	400ea
	Display unit / MDI	10.4" color LCD / Soft input type MDI
	Synchronized tapping	Rigid tapping function
	Background editing	Program saving / editing during automatic operation
	Backlash compensation	Pitch error offset compensation for each axis
	Search function	Sequence / program number search
	Safety function	Emergency stop / overtravel
	Program test function	Machine Lock / Single Block
	Control function	Memory / MDI / Manual
	Mirror image	
Run hour and parts count display		
Custom macro	#100 ~ #199, #500 ~ #999	

SMEC

SL 2500/3000 series

10" - 12" HORIZONTAL TURNING CENTER



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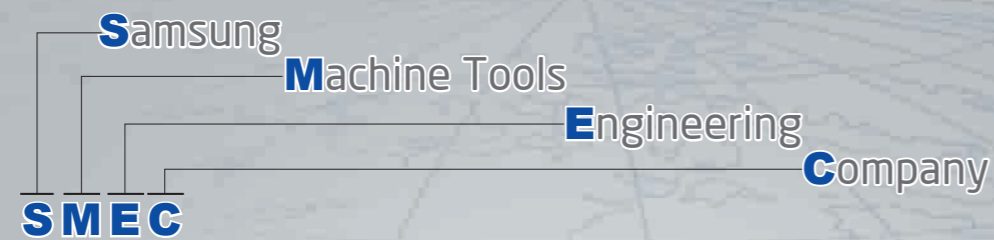


◆ Design and specifications subject to change without notice.

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SMEC
SMEC America Corp.

SMEC



Company History

- 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**
- 2018 - **SMEC America Corp** established to provide factory support to the distributor network and customers

SMEC'S Advanced Engineering and Machine Design

- Cast iron structure for superior dampening characteristics and thermal displacement
- Rigid 45 degree slant bed design for heavy-duty machining
- Torque tube design to minimize bending and twisting
- Integrated box ways for long-term rigidity and heavy-duty machining

SL 2500B(M)
SL 3000BL(M)



SL 2500B(M) / SL 3000BL(M) a compact, ultra precision Turning Center, combined with SMEC's advanced technological features.

Spindle Speed

3,500 rpm [SL 2500B(M)]

3,000 rpm [SL 3000BL(M)]

Spindle Motor

25/20 hp [SL 2500B(M)]

35/25 hp [SL 3000BL(M)]

Feed motor(X/Z)

4/4 hp [SL 2500B(M)]

5.4/5.4 hp [SL 3000BL(M)]

Rapid travel(X/Z)

945/1181 ipm

Max. Turning Diameter

16.9 inch (SL 2500B/3000BL)

15.9 inch (SL 2500BM/3000BLM)

Max. Turning Length

21.8 inch (SL 2500B)

19.5 inch (SL 2500BM)

40.4 inch (SL 3000BL)

37.6 inch (SL 3000BLM)

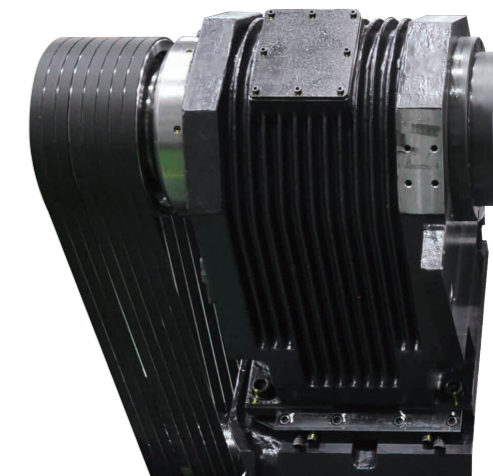
■ **Highly Reliable and Rigid Structural Design**

- One piece Meehanite casting with heavily ribbed torque tube design
- Rigid bed supports for powerful cutting
- Excellent vibration dampening and thermal displacement design

High Accuracy, High Rigidity Spindle

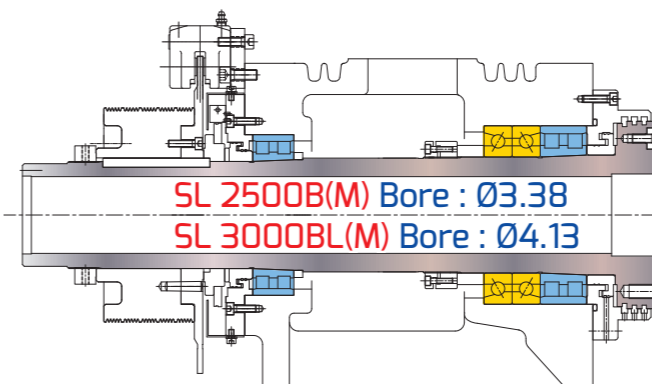
Head assembly with radiator fins to minimize thermal expansion

The radiator fin structure of head assembly minimizes thermal expansion of the spindle, preventing loss of precision due to increasing temperature. Also, thermal expansion is minimized with the symmetric design.



SPINDLE & HEADSTOCK

The Spindle and Headstock are machined and ground in a temperature controlled environment and assembled in a clean room.

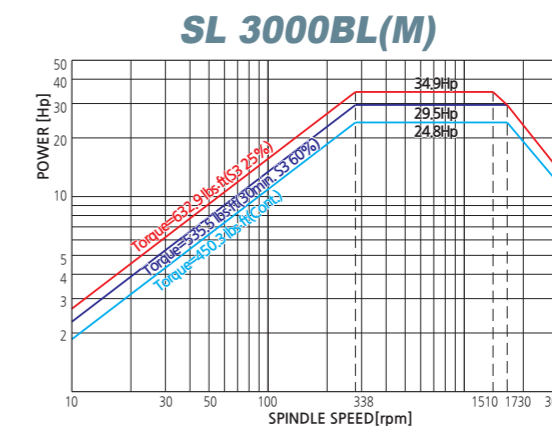
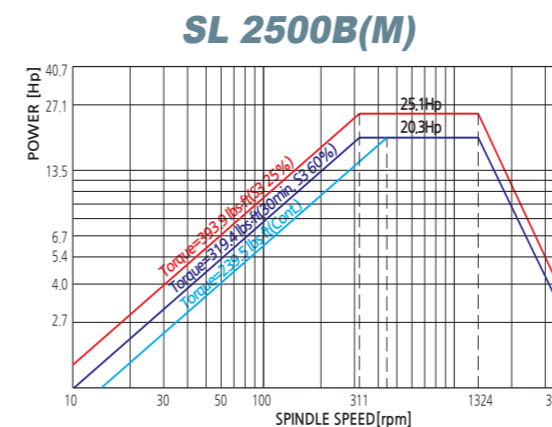


SL 2500B(M) / 3000BL(M)

Precision double row cylindrical roller bearings and angular contact ball bearings are located in the front of the spindle, and a double row of cylindrical roller bearings is located in the rear to ensure heavy cutting capabilities with precision.

■ Spindle Power & Torque Diagram

Unit : inch



Machine Structure

SL 2500B / SL 3000BL
High Speed, Servo Index Turret

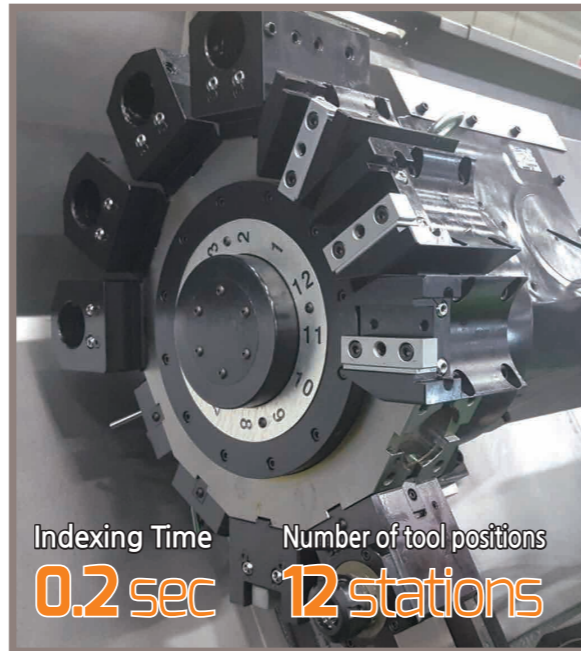


Indexing Time: **0.2 sec**
Number of tool positions: **12 stations**

Non-Cutting Time Significantly Reduced with Installation of High Speed Turret with 0.2 Sec Indexing Time

A 0.15 second 1 station indexing time is made possible by employing the Nonstop Random Index method using a high-power Servo Index Motor. The Ø5" large diameter Curvic Coupling significantly improves the clamping power and indexing precision.

SL 2500BM / SL 3000BLM
High Speed Servo Turret (Tool Holder BMT65)



Indexing Time: **0.2 sec**
Number of tool positions: **12 stations**

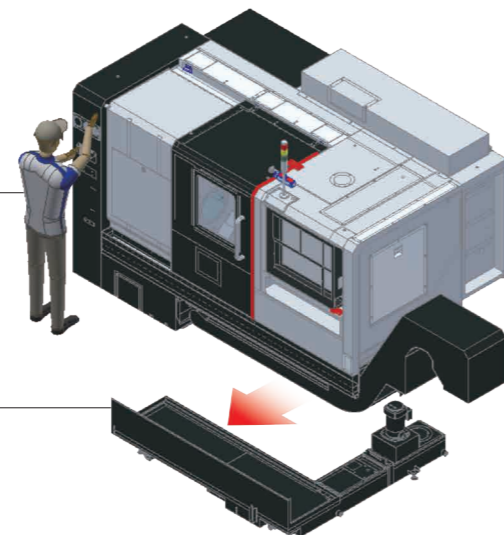
SL2500M/3000M is equipped with standard 12-station BMT65 turret capable of accepting rotary tools at any station, providing flexible machining thru various machining operations in just one set-up. Each BMT holder is securely tightened by 4 screws, allowing the turret to perform heavy-duty cutting, milling and drilling operations. Turret indexing is non-stop, bi-directional with a fast 0.2 second next station index time.

Easier Hydraulic Valve Control

The gauge and control valve for Hydraulic valve is raised to the operator's height making maintenance easier.

Easier Coolant Tank Cleaning

Cleaning the coolant tank is made easier with a coolant tank that can be removed while leaving the chip conveyor bolted to the machine.

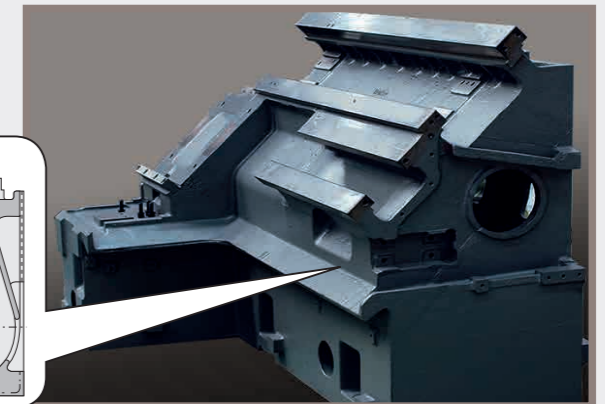
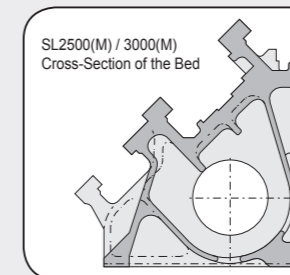


Machine Structure

Rigid 45 degree Slant Bed

45 degree slant torque tube design bed and wide guide slide way ensure long term rigidity and machining accuracy.

Featuring superior workability and chip-discharging capability, the bed is designed in a single tube structure boasting strong durability even in heavy-duty cutting.



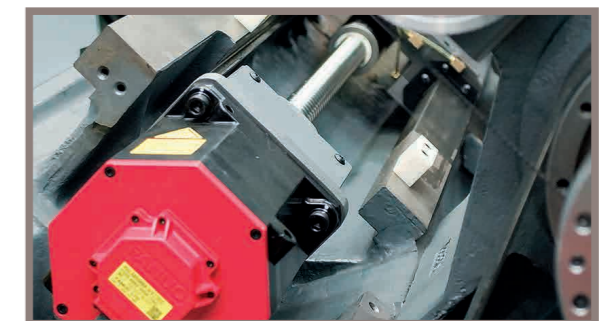
Swivel Operation Panel

Swivel operation panel of 10.4 inch color TFT LCD monitor can turn to 90 degree, providing operators with easy access to the control panel while working on the machine.



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.



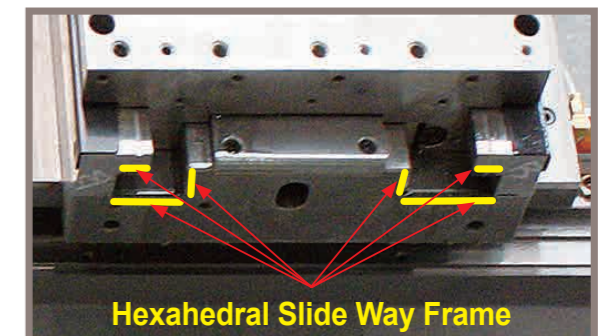
Programmable Tailstock (carriage direct-coupled)

The programmable tailstock is mounted on wide guide ways to ensure rigid work piece support.



Hexahedral Slide Way Frame

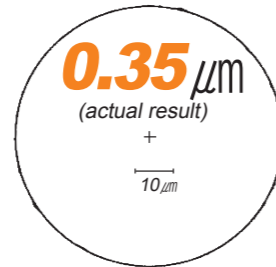
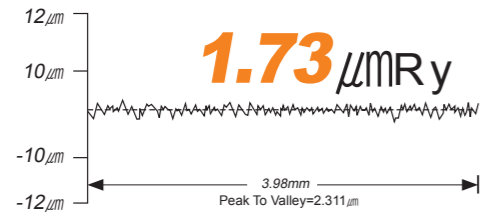
Wide integral way is machined from the casting, induction hardened and precision ground to ensure long-term rigidity, machining accuracy and heavy-duty machining.



■ High Precision

Surface Roughness <O.D. cutting>

Roundness



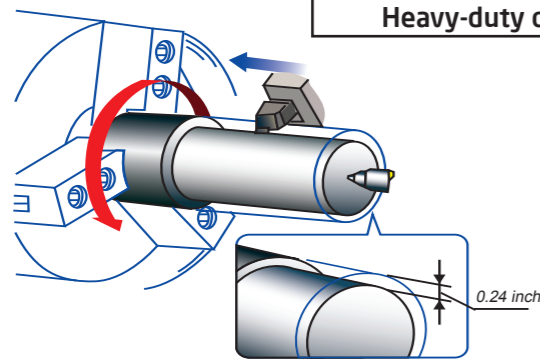
Cutting condition	
Tool	Diamond tool (nose radius 0.020 inch)
Material	AL150(Aluminum)
Cutting speed	745.6 fpm
Feedrate	0.0020 ipr
Depth of cut	0.004inch
Outer diameter	7.9inch
Filter	1-50

•Model : SL 3000BL

■ Processing Speed

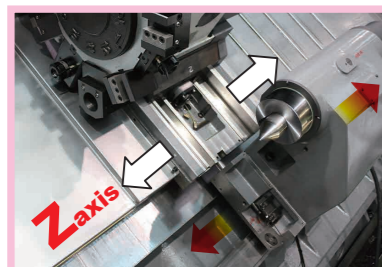
Turning Performance (material:SM45C) SL3000BLM

Heavy-duty cutting (O.D) <1 inch×1 inch qualified tool>



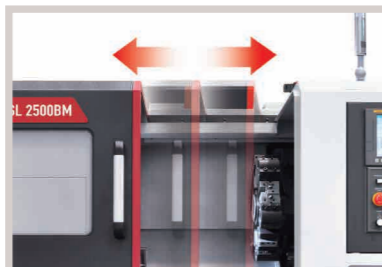
Spindle Speed
524 rpm
Cutting Speed
250 m/min (820 fpm)
Depth Of cut
0.24 inch <Spindle Load 50%>
Feedrate
0.4mm/rev (0.016 ipr)

■ Standard Accessories

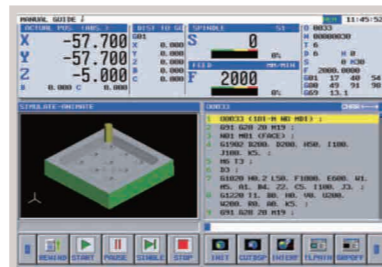


Programmable Tailstock

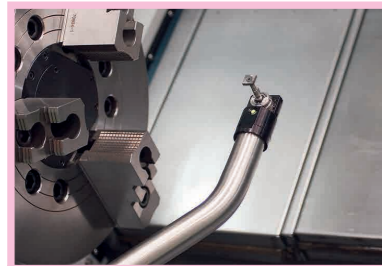
■ Optional Accessories



Auto Door



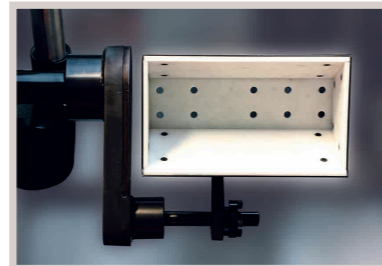
Manual Guide i



Tool Presetter



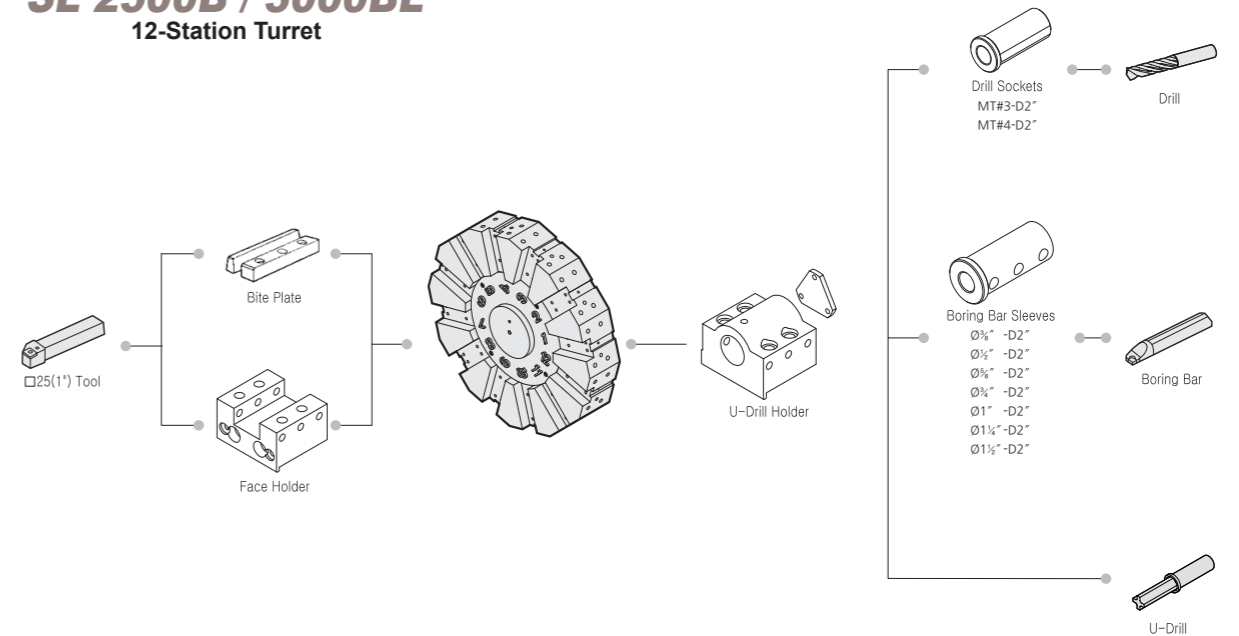
Chip Conveyor



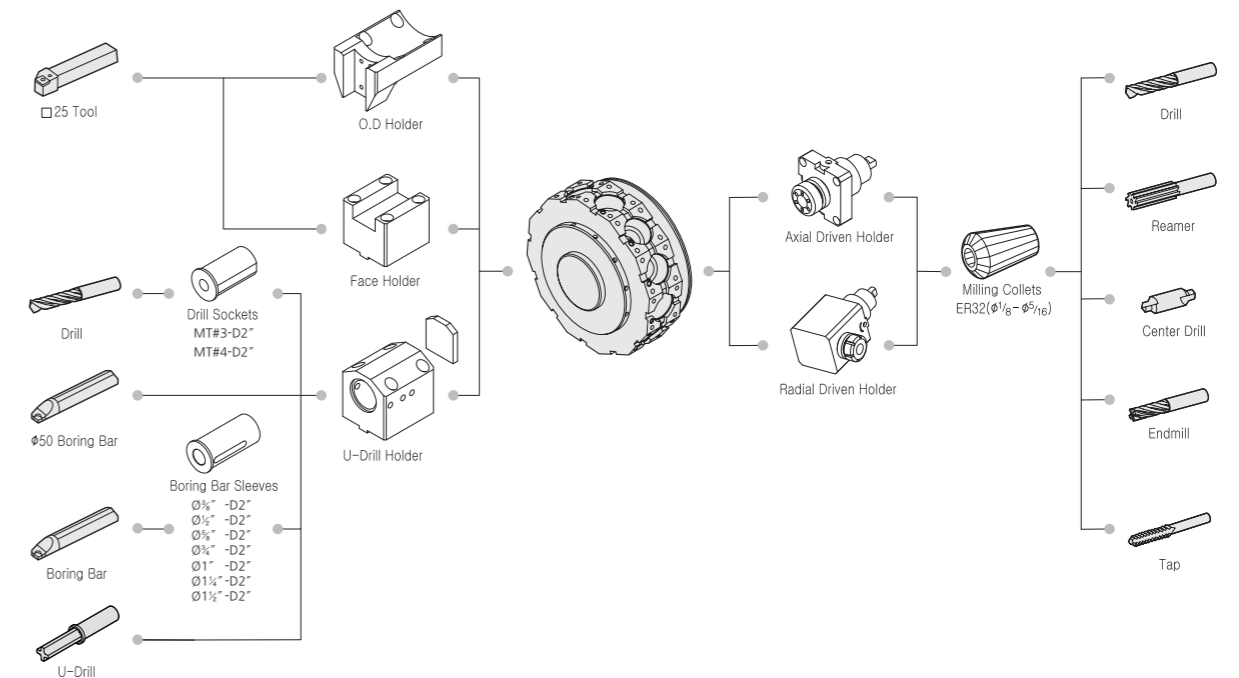
Parts Catcher

■ Tooling System

SL 2500B / 3000BL
12-Station Turret

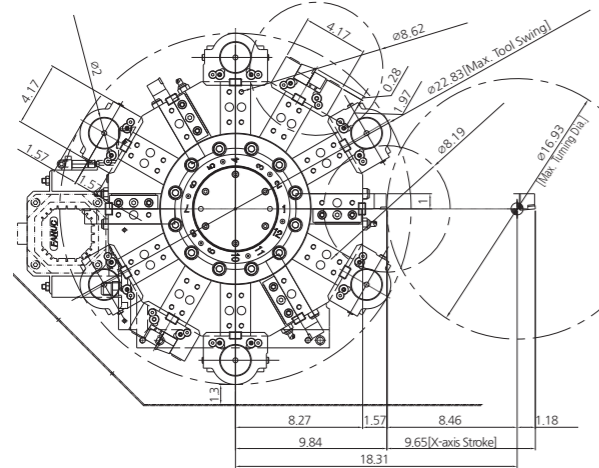


SL 2500BM / 3000BLM
12-Station Turret



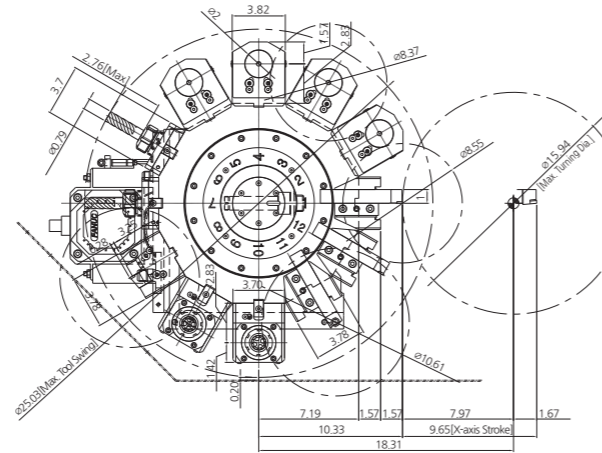
■ Turret Head Interference

SL 2500B / 3000BL



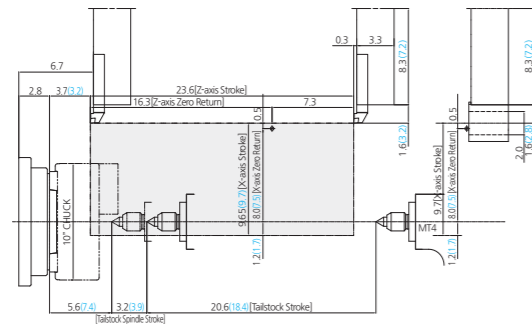
SL 2500BM / 3000BLM

Unit : inch



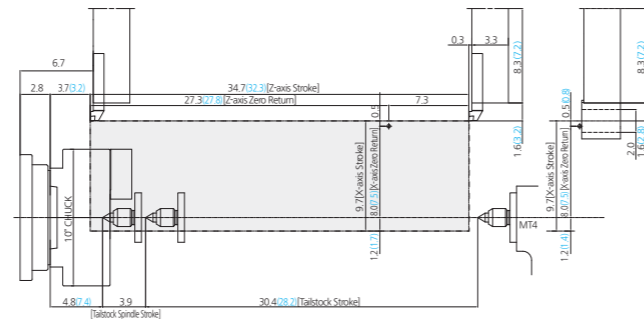
■ Work Range

SL 2500B(M)



SL 3000BL(M)

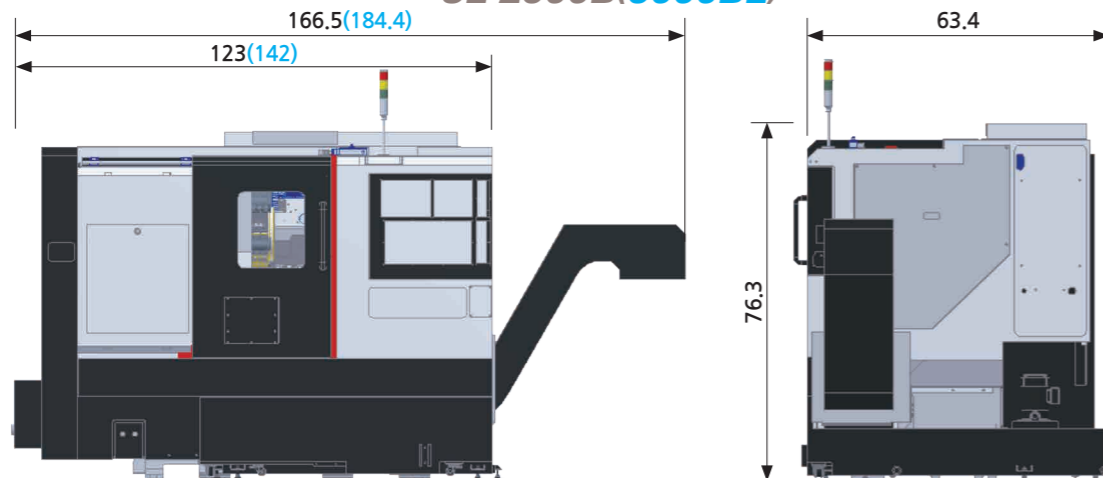
Unit : inch



■ Machine Dimensions

SL 2500B(3000BL)

Unit : inch



■ Major Specifications

DESCRIPTION		SL 2500B	SL 2500BX	SL 2500BM	SL 2500BMX	SL 3000BL	SL 3000BLM
CAPACITY	Swing over the bed	inch	25.6	25.6	25.6	25.6	25.6
	Swing over the cross slide	inch	18.9	18.9	18.9	18.9	18.9
	Max. machining diameter	inch	16.9	16.9	15.9	15.9	16.9
	Max. machining length	inch	21.8	32.8	19.5	30.2	40.4
MAIN SPINDLE	Chuck size	inch	10	10	10	12	12
	Speed	rpm	3,500	3,500	3,500	3,500	3,000
	Spindle nose	ASA	A2-8	A2-8	A2-8	A2-8	A2-8
	Bore diameter	inch	3.38	3.38	3.38	3.38	4.13
	Draw tube I.D.	inch	3.0	3.0	3.0	3.0	3.5
	Motor(30min/cont.)	hp	25 / 20	25 / 20	25 / 20	25 / 20	35 / 25
TRAVEL	X/Z axis travel	inch	9.6/23.6	9.6/34.6	9.6/21.2	9.6/32.3	9.6/43.3
	X/Z rapid traverse rate	ipm	945 / 1,181	945 / 1,181	945 / 1,181	945 / 1,181	945 / 1,181
	X/Z feed motor	hp	4 / 4	4 / 4	4 / 4	4 / 4	5.4 / 5.4
TURRET	Number of tool positions	st.	12	12	12(BMT65)	12(BMT65)	12(BMT65)
	Indexing time	sec	0.2	0.2	0.2	0.2	0.2
	Shank size for square tool	inch	□1	□1	□1	□1	□1
	Shank diameter for boring bar	inch	∅2	∅2	∅2	∅2	∅2
	Rotary Tool Speed Moter(Max/cont.)	-	-	-	7.3 / 5	7.3 / 5	-
	Rotary Tool Speed	rpm	-	-	5,000	5,000	-
TAILSTOCK	Tailstock travel	inch	20.5	30.4	18.3	28.2	20.5
	Tailstock quill travel	inch	3.1	3.9	3.9	3.9	3.9
	Tailstock quill diameter	inch	3.3	4.3	4.3	4.3	4.3
ELECTRIC POWER SUPPLY	kVA/V	41/220	41/220	41/220	41/220	41/220	41/220
REQUIRED FLOOR SPACE(with conveyor)	inch	123(166.5)×63.4	135(178.5)×63.4	123(166.5)×63.4	135(178.5)×63.4	142(184.4)×63.4	142(184.4)×63.4
MACHINE WEIGHT	lbs	11,240	12,560	11,460	12,780	14,110	14,330
CONTROLLER		Fanuc Oi-TF [10.4']					

• Figures in inches are converted from metric measurements.
• Design and specifications are subject to change without notice.

■ Standard Accessories

- COOLANT SYSTEM
- BUILT-IN WORK LIGHT
- SPLASH GUARD
- HAND TOOLS
- TOOL HOLDERS
- 3JAW HYDRAULIC CHUCK

- SOFT JAWS 3 SETS
- LEVELING BLOCK
- PROGRAMMABLE TAILSTOCK
- TOOL PRESETTER

■ Optional Accessories

- HARD JAWS 1 SET
- CHIP CONVEYOR
- PARTS CATCHER
- AUTO DOOR
- AIR BLOW UNIT
- AUTO MEASURING SYSTEM