

SL 2000/2500SY Series

Y-AXIS BOX GUIDE TYPE
HORIZONTAL TURNING CENTER



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SL 2000/2500SY Series

- SL 2000Y
- SL 2000SY
- SL 2500Y
- SL 2500SY
- SL 2500LY
- SL 2500LSY

SL 2000SY Series

SL 2000Y/SY

SL 2500SY Series

SL 2500Y/SY/LY/LSY



Heavy duty, high productivity Y-axis Box Guide type turning center

- Super stable low-center of gravity 30° slant bed with maximized work area
- Significantly reduced non-cutting time for high efficiency machining
- Servo turret to enhance high-speed performance
- Low center of gravity design minimizing vibration and thermal growth for high precision turning

[] : Option

Category	SL 2000AY ASY	SL 2000BY BSY	SL 2500AY ASY	SL 2500BY BSY	SL 2500ALY ALSY	SL 2500BLY BLSY
Swing over bed	mm(inch) 650(25.60)	650(25.60)	650(25.60)	650(25.60)	650(25.60)	650(25.60)
Max turning length	mm(inch) 490(19.30)	450(17.72)	490(19.30)	476(18.75)	1,284(50.56)	1,271(50.04)
Chuck size (Main/Sub)	inch 6"/- 6"/6"	8"/- 8"/6"	8"/- 8"/6"	10"/- 10"/6[8]"	8"/- 8"/6"	10"/- 10"/6[8]"
Spindle bore (Main)	mm(inch) 61(2.41)	76(3.00)	78(3.08)	86(3.39)	78(3.08)	86(3.39)
Spindle speed (Main)	rpm 6,000	4,500	4,500	3,500	4,500	3,500
Spindle speed (Sub)	rpm - 6,000	- 6,000	- 6,000	- 6,000[4,000]	- 6,000	- 6,000[4,000]
Main Motor (cont./max)	kW(Hp) 11/18.5(14.76/24.81)	11/18.5(14.76/24.81)	11/18.5(14.76/24.81)	18.5/26(24.81/34.87)	11/18.5(14.76/24.81)	18.5/26(24.81/34.87)
Sub-spindle Motor (cont./max)	kW(Hp) - 5.5/7.5(7.38/10.06)	- 5.5/7.5(7.38/10.06)	- 5.5/7.5(7.38/10.06)	- 5.5/7.5[11/15] (7.38/10.06 [14.76/20.12])	- 5.5/7.5(7.38/10.06)	- 5.5/7.5[11/15] (7.38/10.06 [14.76/20.12])
Travels X	mm(inch) 235(9.26)	235(9.26)	235(9.26)	235(9.26)	235(9.26)	235(9.26)
Travels Y	mm(inch) 105[±52.5] (4.14[±0.27])	105[±52.5] (4.14[±0.27])	100[±50] (3.94[±1.97])	100[±50] (3.94[±1.97])	100[±50] (3.94[±1.97])	100[±50] (3.94[±1.97])
Travels Z	mm(inch) 580(22.84)	580(22.84)	580(22.84)	580(22.84)	1,375(54.14)	1,375(54.14)
Travels ZB	mm 580(22.84)	580(22.84)	580(22.84)	580(22.84)	1,388(54.65)	1,346(53.00)
No of tool positions	EA 12[24] (BMT55)	12[24] (BMT55)	12[24] (BMT65)	12[24] (BMT65)	12[24] (BMT65)	12[24] (BMT65)

Extensive turning capacity lineup

- Extensive turning capacity lineup to meet customer needs
- Main chuck : 6~10", Sub chuck : 6~8" available
- Turning length : 450~1,280mm available

Wedge type Y-axis with Superb Cutting Performance

- Side milling, off-center drilling
- Wider off-center work range
- Complex shape machining with a single setup

High rigidity, fast response sub spindle and servo tailstock

- Servo tailstock or built-in type sub-spindle available
- Spindle oil cooling standard for sub-spindle
- NC controlled servo-tailstock allows for high speed, high precision machining

User-centric options and convenience features

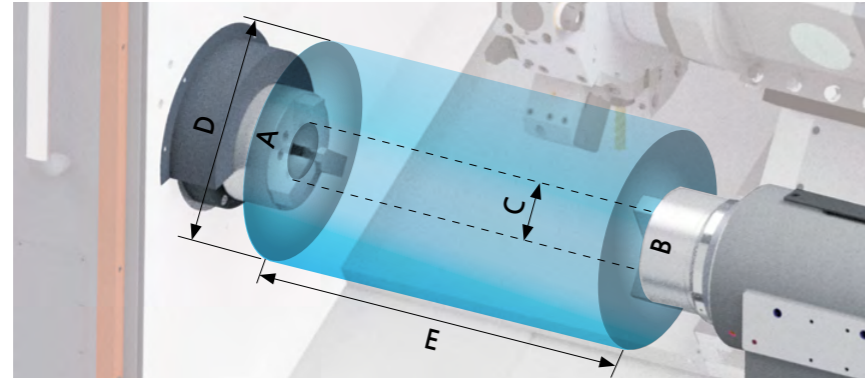
- 15" large-screen LCD standard
- SMEC HMI and Manual Guide i standard

SL 2000/2500SY Series

Y-AXIS HORIZONTAL TURNING CENTER

Extensive turning capacity lineup

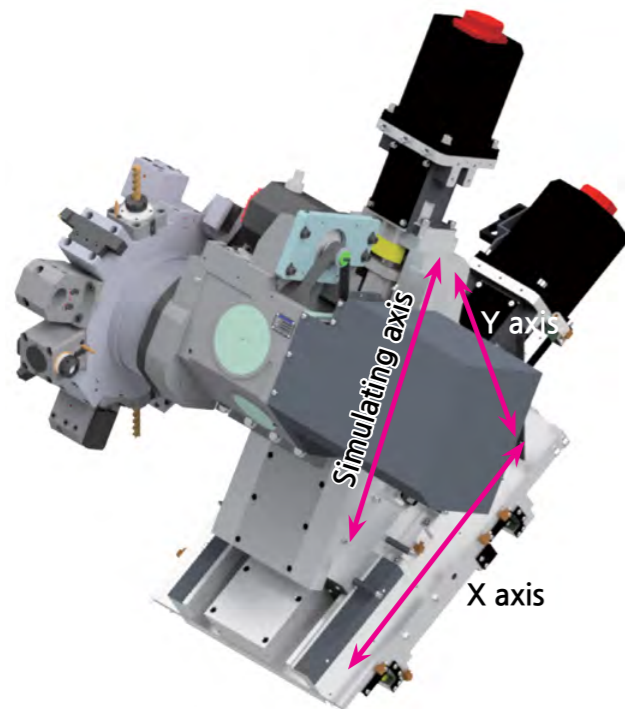
Offers an extensive turning capacity lineup with increased productivity and superb cost-effective performance for customer satisfaction



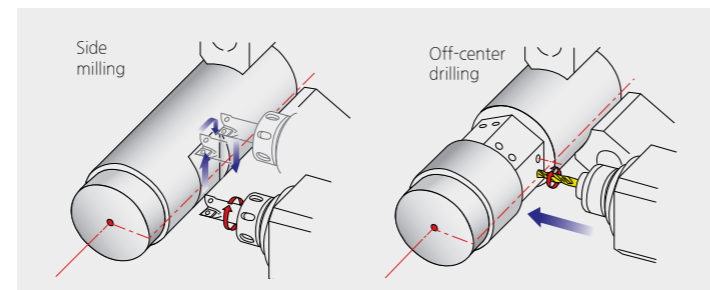
The SL 2000/2500 SY Series offers an **extensive lineup** with various **chuck sizes, turning lengths** and the addition of a **sub-spindle**.

- A(Main chuck size) : **6", 8", 10"**
- B(Sub chuck size) : **6", 8"**
- C(Working bar diameter) : \varnothing **51~76mm(0.21"~3.00")**
- D(Max turning diameter) : \varnothing **360~395mm(14.18"~15.56")**
- E(Max turning length) : **450~1,280mm(17.72"~50.40")**

Wedge type Y-axis with superb cutting performance



- Side milling, off-center drilling
- Wider off-center work range
- Complex shape machining with a single setup



Category		SL 2000Y/SY	SL 2500Y/SY/LY/LSY
No. of tool positions	ea	12(24)	12(24)
Turret type		BMT55	BMT65
SHANK & BORING BAR SIZE	mm (inch)	\square 25x25, \varnothing 40 (\square 1x1, \varnothing 1.58)	\square 25x25, \varnothing 50 (\square 1x1, \varnothing)
Turret indexing time (1station/full turn)	sec	0.15/1	0.15/1
Rotary tool speed	rpm	~6,000	~5,000
Rotary tool motor power (cont/max)	kW (Hp)	3.7/5.5 (4.97/7.38)	3.7/7.5 (4.97/10.06)
Rotary tool torque (cont/max)	N.m (lbs.ft)	17.64/48.42 (694.49/1,890.56)	35.28/95.06 (1,388.98/3,742.52)

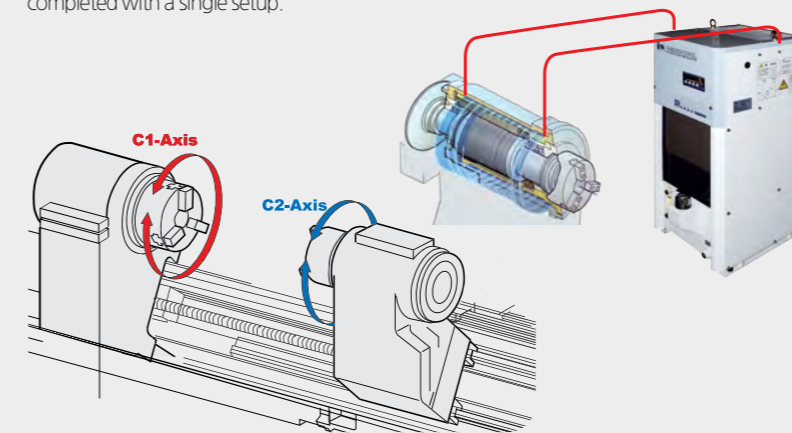
High precision, fast response sub-spindle and servo tailstock

Synchronized C1 and C2-axis indexing

Synchronization of the main spindle (C1) and sub-spindle (C2) indexing allows for machining of a variety of complex shapes. All processes from simple turning and milling to multi-axis simultaneous machining can be completed with a single setup.

Sub-spindle oil cooling unit

The sub-spindle is wrapped by an oil jacket cooling system to minimize thermal growth and to ensure high speed, high-accuracy machining through various machining conditions.



Servo (NC controlled) Tailstock

The servo tailstock supports high-speed, high precision machining where the thrust force is NC controlled. The quill thrust force may be adjusted in accord with the workpiece's length and diameter, reducing the cycle time and increasing the productivity.



User-centric options and convenience features



1 User-centric Large 15" OP Panel

The QWERTY-type keyboard and high visibility buttons and effective button placement enhances ease of use.

2 Easy coolant tank maintenance

When cleaning the coolant tank, the coolant tank may be removed while leaving the chip conveyor attached to the machine, making it easier to clean and maintain.

3 Easy hydraulic valve adjustment

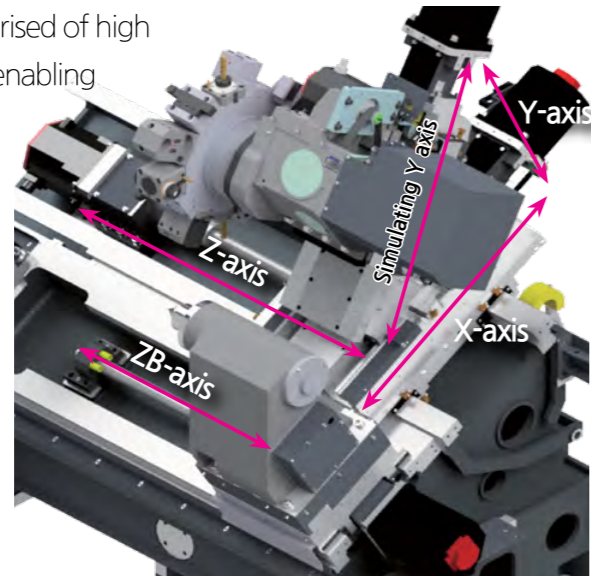
The gauge and hydraulic valves are located at a height that make it easy for the operator to adjust.

SL 2000/2500SY Series

Y-AXIS HORIZONTAL TURNING CENTER

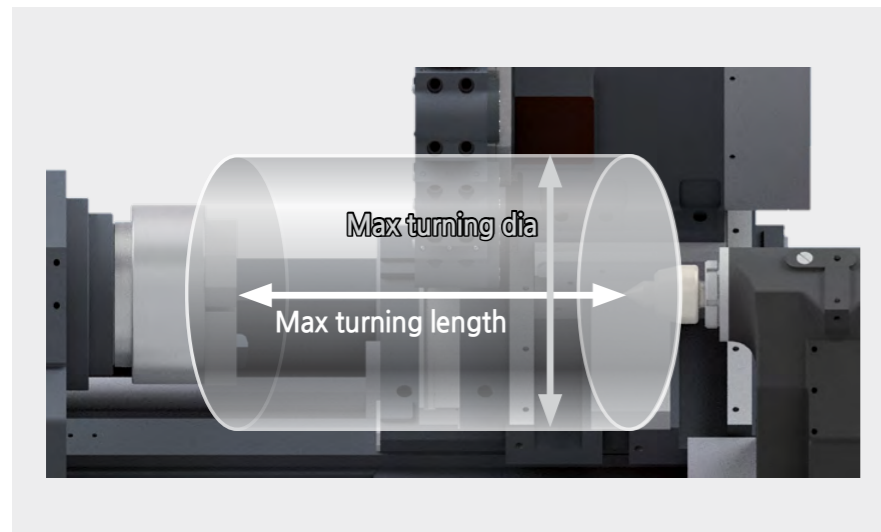
Machine Design

All travel axes are comprised of high rigidity box guideways enabling heavy duty cutting and superb productivity



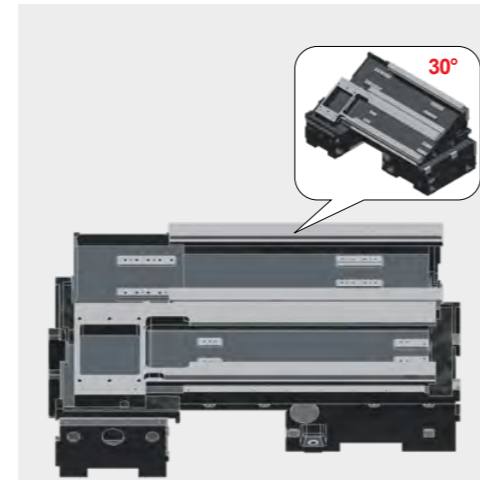
Model	Main/sub chuck size (inch)	Travel [mm (inch)]			
		X-axis	Y-axis	Z-axis	ZB-axis
SL 2000AY ASY	6/- 6/6	235(9.26)	105[±52.5](4.14[±2.07])	580(22.84)	580(22.84)
SL 2000BY BSY	8/- 8/6	235(9.26)	105[±52.5](4.14[±2.07])	580(22.84)	580(22.84)
SL 2500AY ASY	8/- 8/6	235(9.26)	100[±50](3.94[±1.97])	580(22.84)	580(22.84)
SL 2500BY BSY	10/- 10/6	235(9.26)	100[±50](3.94[±1.97])	580(22.84)	565(22.25)
SL 2500ALY ALSY	8/- 8/6	235(9.26)	100[±50](3.94[±1.97])	1,375(54.14)	1,388(54.65)
SL 2500BLY BLSY	10/- 10/6	235(9.26)	100[±50](3.94[±1.97])	1,375(54.14)	1,346(53.00)

Work Range



Unit : mm (inch)

Model	SL 2000 AY/ASY	SL 2000 BY/BSY	SL 2500 AY/ASY	SL 2500 BY/BSY	SL 2500 AY/ALSY	SL 2500 BY/BLSY
Max turning dia	Ø395(15.56)	Ø395(15.56)	Ø360(14.18)	Ø360(14.18)	Ø360(14.18)	Ø360(14.18)
Max turning length	490(19.30)	450(17.72)	490(19.30)	476(18.75)	1,280(50.40)	1,265(49.81)



30° slant bed provides excellent stability during heavy duty cutting

The 30° slant bed with high-torque tubing and ribbed structure provides superb rigidity against twisting and bending, dampening vibration during heavy duty cutting for high precision machining

The use of a slant bed allows for easier access to the workpiece and excellent chip discharge

Providing a large work envelope, ensuring cost effective productivity

SL 2000SY Series(A, B type)

Max turning dia
Ø395mm(15.56 inch)

SL 2500SY Series(A, B type)

Max turning dia
Ø360mm(14.18 inch)

Spindle



The high power motor allows both high precision and high torque machining, improving operator productivity.

SL 2000AY/ASY

Max spindle speed
6,000rpm
Power (cont/Max.)
11/18.5kW
(14.76/24.81 Hp)
Torque (cont/Max.)
69.58/156.8N·m(51.32/115.65 lbs-ft)

SL 2000BY/BSY

Max spindle speed
4,500rpm
Power (cont/Max.)
11/18.5kW
(14.76/24.81 Hp)
Torque (cont/Max.)
84.45/208.74N·m(62.29/153.96 lbs-ft)

SL 2500AY/ASY/ALY/ALSY

Max spindle speed
4,500rpm
Power (cont/Max.)
11/18.5kW
(14.76/24.81 Hp)
Torque (cont/Max.)
186.2/313.1N·m(137.34/230.94 lbs-ft)

SL 2500BY/BSY/BLY/BLSY

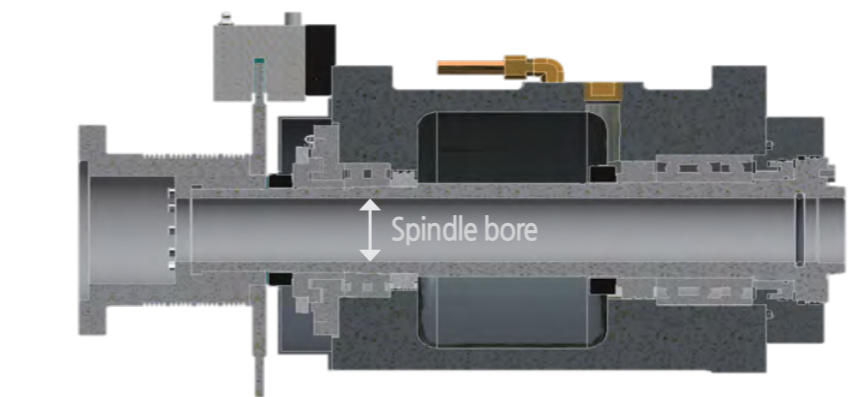
Max spindle speed
3,500rpm
Power (cont/Max.)
18.5/26kW
(24.81/34.87 Hp)
Torque (cont/Max.)
522.3/734.1N·m(385.23/541.45 lbs-ft)

SL 2000SY_6" SUB Spindle

Max spindle speed
6,000rpm
Power (cont/Max.)
5.5/7.5kW
(7.38/10.06 Hp)
Torque (cont/Max.)
40.18/51.94N·m(29.64/38.31 lbs-ft)

SL 2500SY_8" SUB Spindle

Max spindle speed
4,000rpm
Power (cont/Max.)
11/15kW
(14.76/20.12 Hp)
Torque (cont/Max.)
140.1/207.8N·m(103.34/153.27 lbs-ft)

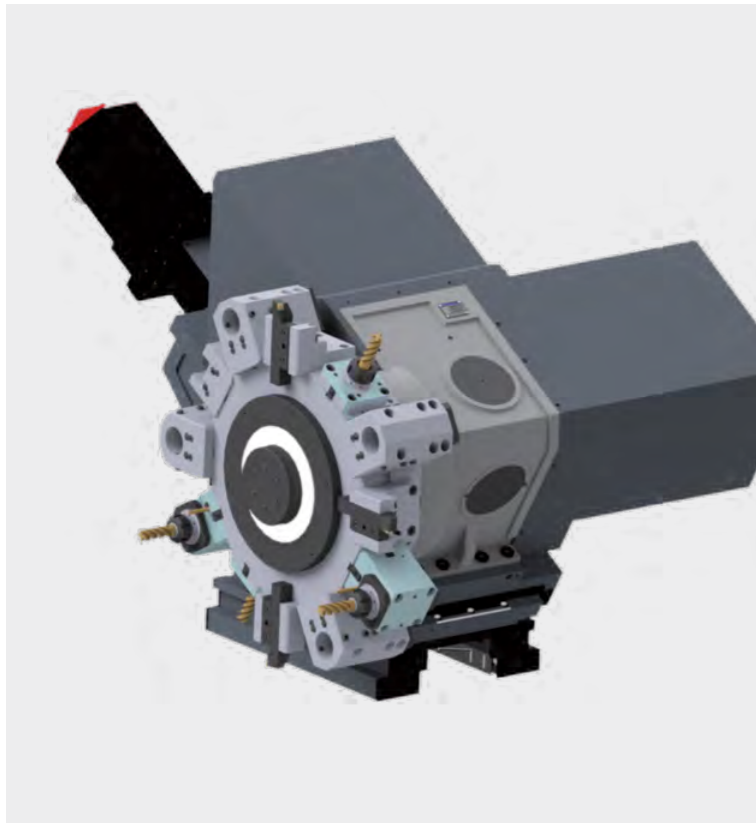


[] : Option

Category	Unit	SL 2000AY SL 2000ASY	SL 2000BY SL 2000BSY	SL 2500AY SL 2500ASY	SL 2500BY SL 2500BSY	SL 2500ALY SL 2500ALSY	SL 2500BLY SL 2500BLSY
Spindle bore (main)	mm (inch)	61(2.41)	76(3.00)	78(3.08)	86(3.39)	78(3.08)	86(3.39)
Spindle nose (main/sub)	ASA	A2-5/- A2-5/A2-5	A2-6/- A2-6/A2-5	A2-6/- A2-6/A2-5	A2-8/- A2-8/A2-5[A2-6]	A2-6/- A2-6/A2-5	A2-8/- A2-8/A2-5[A2-6]

The high precision Double Row of Cylindrical Roller Bearings and Angular Ball Bearings on the front end of the spindle and the Double Row of Cylindrical Roller Bearings on the back end of the spindle ensure high precision, high speed machining performance

Turret



BMT milling turret

This 24 tool position (BMT55/BMT65) turret with the largest in class curvic coupling and power hydraulic clamping force is capable of accepting a rotary tool in every tool position and allows a variety of machining operations with a single set-up

The best in class BMT55/BMT65 tool holders ensures high rigidity, high precision machining and with non-stop turret indexing in either direction minimizes the turret index time down to 0.15 seconds per station.

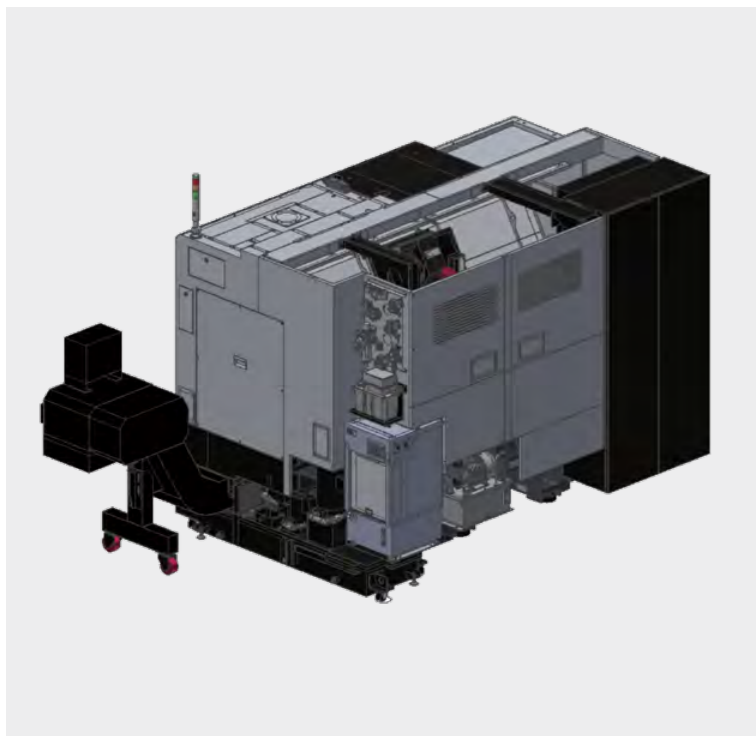
Turret indexing time : **0.15sec**

No. of tool positions :

NS 200SY : **12ea**
 (□25×25, Ø40)
 (□1"×1", Ø1.58")

NS 2500Y/LY/SY/LSY : **12ea**
 (□25×25, Ø50)
 (□1"×1", Ø1.97")

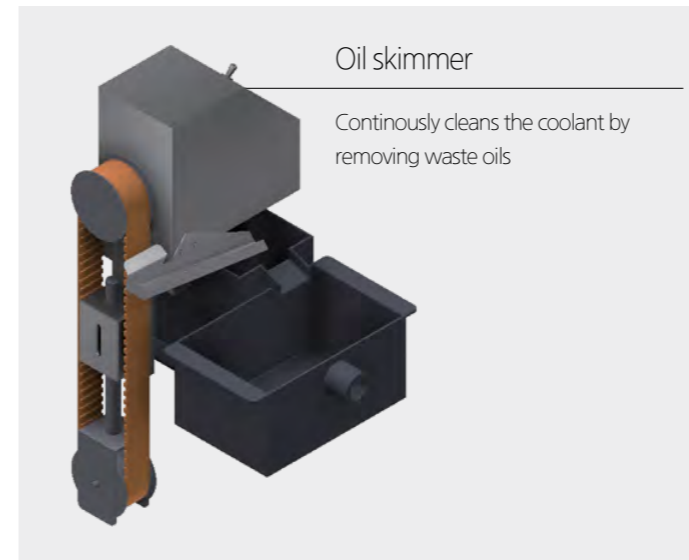
Coolant System



Coolant pump (STD) :
4.5bar(1.1kW)

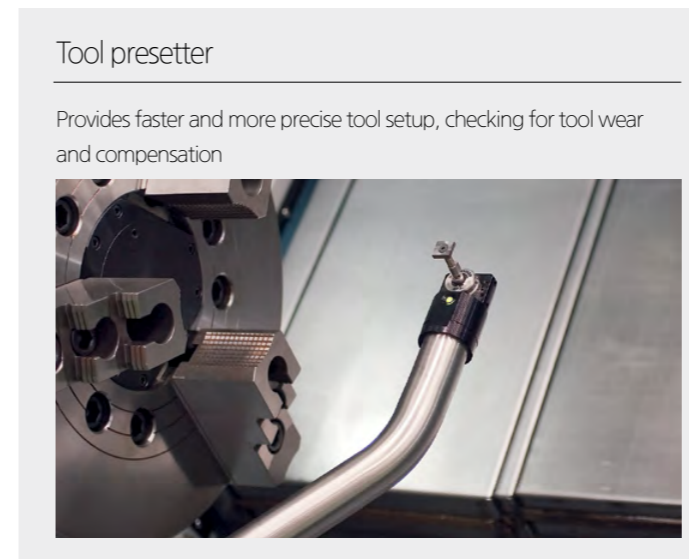
Coolant pump (OPT) :
7, 10, 14.5, 20bar
 → **60Hz(Submerged)**
30~70bar
 → **60Hz(Independent)**

Accessories[Optional]



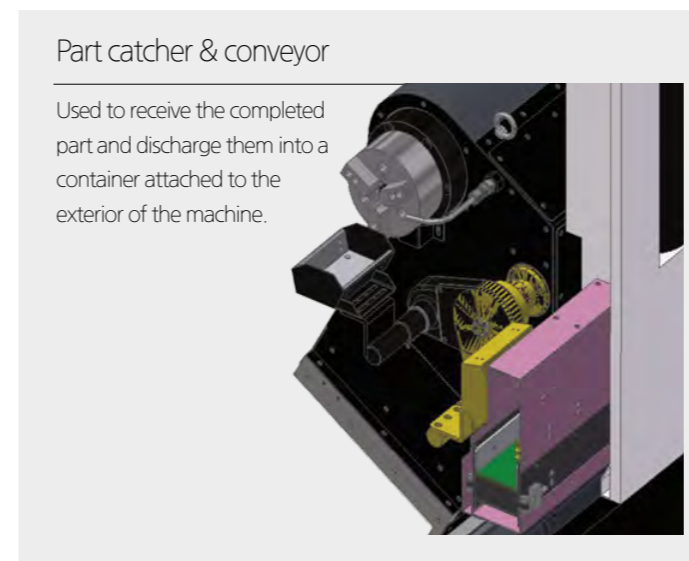
Oil skimmer

Continuously cleans the coolant by removing waste oils



Tool presetter

Provides faster and more precise tool setup, checking for tool wear and compensation



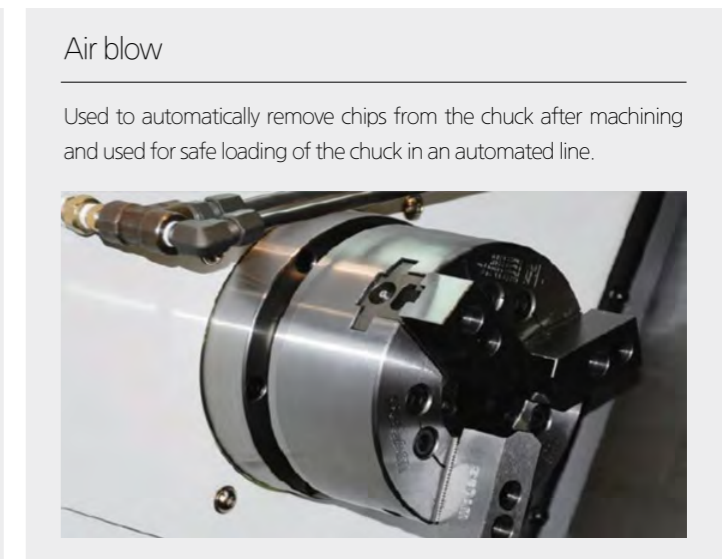
Part catcher & conveyor

Used to receive the completed part and discharge them into a container attached to the exterior of the machine.



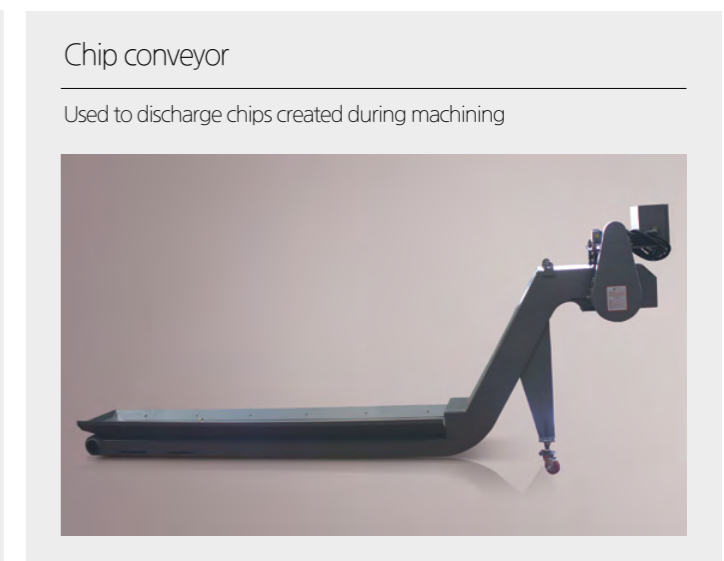
Autodoor

Used to quickly open/close the operator door via program to increase productivity in an automation line.



Air blow

Used to automatically remove chips from the chuck after machining and used for safe loading of the chuck in an automated line.



Chip conveyor

Used to discharge chips created during machining

SMC FANUC i series



- 15" LCD color display
- High quality designed OP Panel
- Conversational programming, Manual Guide i
- Part program size 2MB
- SMC Custom S/W

SMC Custom S/W displayed using MDI's **S1** button or OP Panel's **CUSTOM** button

CUSTOM : Provide operator convenience and improve productivity using the support function for tool management and additional device setting.



M/G-Code check function

Allows the operator to directly read the M/G-Code on the machine for easy application programming



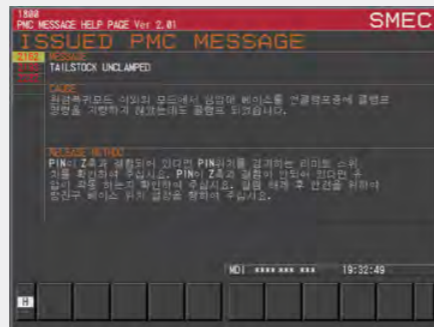
Easy tailstock setting

Easily configure a variety of functions such as travel limiting, origin setting and signal check



Display only the necessary tools and offsets and check the configured counter at the same time

Tool information and setting management mode



PMC alarm check function

When a PMC alarm occurs, the cause and countermeasures are described in detail, making operation and maintenance more convenient



Counter for each T-Code

Manual Guide i (STD)

SMC's Manual Guide i system enables advanced part program creation and more efficient and faster machining with conversational programming



Check cutting result using cutting simulation



Check cutting path using cutting simulation

Easy program creation and editing

Program creation using advanced part program editing and extensive cutting cycles

Check program using cutting simulations

Program pre-check using realistic cutting simulation

Effective cutting setup

Tool and cutting condition offset data setup based on measurement cycle

Advanced cutting capabilities

Check cutting status such as cutting cycle name and tool icon during the cutting process

Measurement

Feedback of cutting results and tool offset values after cutting

IoT Solution (OPT)



NC-Gate / IoT-Gate

The NC-Gate / IoT-Gate that was developed in-house with our ICT technology is a universal gateway that not only interworks with our machine tools, but machine tools from other manufacturers, robots, automation equipment, and analog / digital sensors as a network device capable of bi-directional communication.

Supported drivers : Fanuc / Mitsubishi / Siemens NC, Modbus TCP, DeviceNet, Profibus, Ethernet, AI/DI/DO



Provides key performance indicators and displays target achievement

Indicators : achievement rate, productivity, process defect rate, equipment and factory usage, quality defect rate, lead time, and average cycle time



Provides figures and graphs of overall equipment effectiveness

Availability, performance, quality, etc.



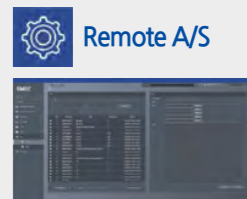
Provides operation status and alarm information in case of problems in the production line

Provides information about the operation status, speed, production alarms, etc. of each machine



Remote control and operation

Emergency stop switch, program editing, etc.



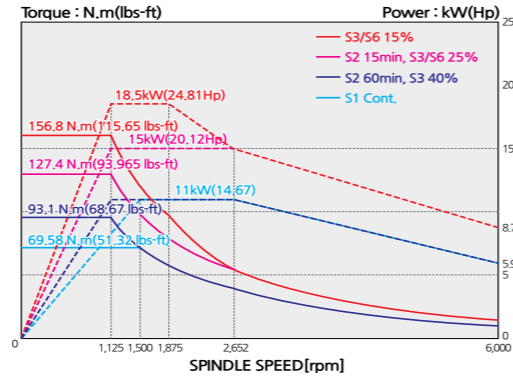
Problem diagnosis via remote control

Provide remote diagnosis services to users via the IIoT solution

Power-Torque Diagram

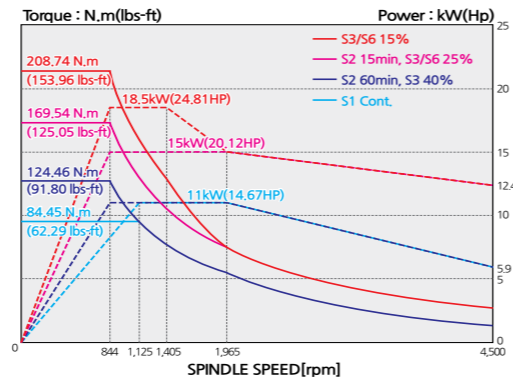
SL 2000AY/ASY

Max spindle speed
6,000rpm
Power (cont/Max.)
11/18.5kW(14.67/24.81 Hp)
Torque (cont/Max.)
69.58/156.8N·m
(51.32/115.65 lbs-ft)



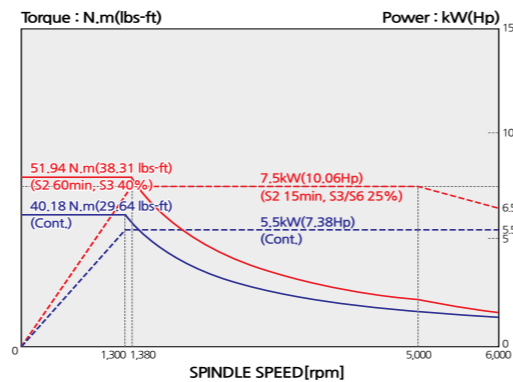
SL 2000BY/BSY

Max spindle speed
4,500rpm
Power (cont/Max.)
11/18.5kW(14.67/24.81 Hp)
Torque (cont/Max.)
84.45/208.74N·m
(62.29/153.96 lbs-ft)



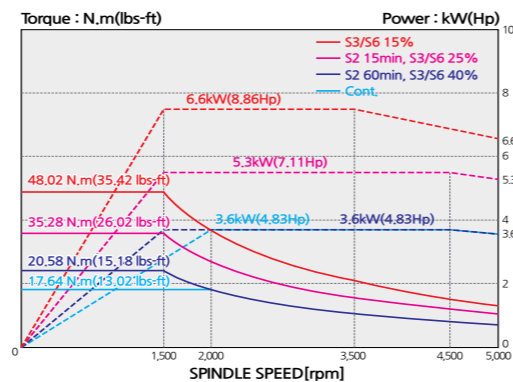
SL 2000SY_6" SUB Spindle

Max spindle speed
6,000rpm
Power (cont/Max.)
5.5/7.5kW(7.38/10.06 Hp)
Torque (cont/Max.)
40.18/51.94N·m
(29.64/38.31 lbs-ft)



SL 2000SY_MILL Motor

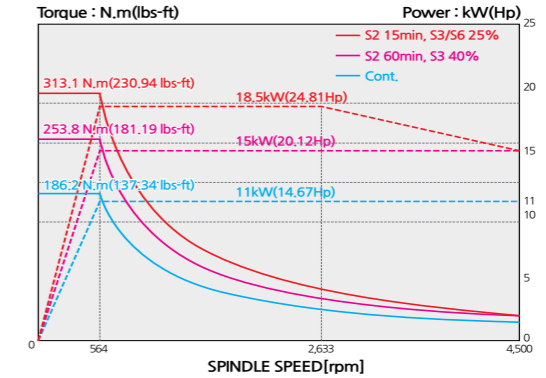
Max spindle speed
5,000rpm
Power (cont/Max.)
3.6/6.6kW(4.83/8.86 Hp)
Torque (cont/Max.)
17.64/48.02N·m
(13.02/35.42 lbs-ft)



Power-Torque Diagram

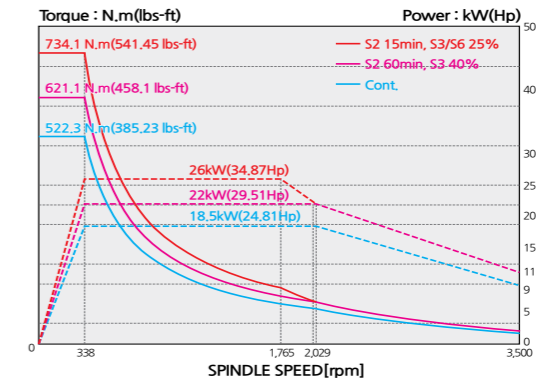
SL 2500AY/ASY/ALY/ALS

Max spindle speed
4,500rpm
Power (cont/Max.)
11/18.5kW(14.76/24.81 Hp)
Torque (cont/Max.)
186.2/313.1N·m
(137.34/230.94 lbs-ft)



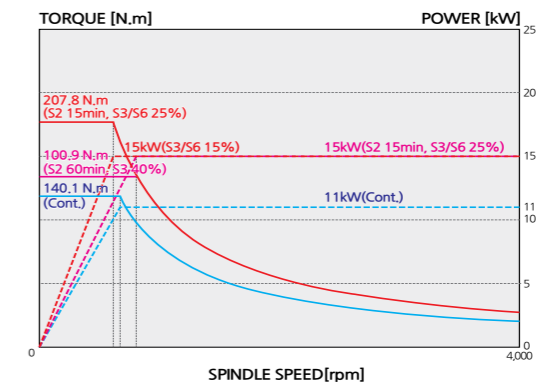
SL 2500BY/BSY/BLY/BLS

Max spindle speed
3,500rpm
Power (cont/Max.)
18.5/26kW(24.81/34.87 Hp)
Torque (cont/Max.)
522.3/734.1N·m
(385.23/541.45 lbs-ft)



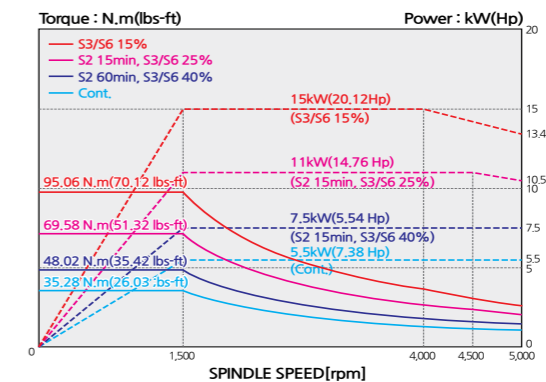
SL 2500SY_8" SUB Spindle

Max spindle speed
4,000rpm
Power (cont/Max.)
11/15kW(14.76/20.12 Hp)
Torque (cont/Max.)
140.1/207.8N·m
(103.34/153.27 lbs-ft)



SL 2500SY_MILL Motor

Max spindle speed
5,000rpm
Power (cont/Max.)
5.5/15kW(7.38/20.12 Hp)
Torque (cont/Max.)
35.28/95.06N·m
(26.03/70.12 lbs-ft)

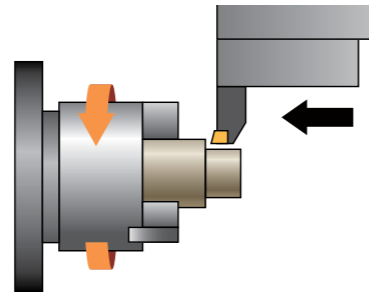


Cutting Performance

Test conditions : SL 2500BSY(8"), Material : SM45C

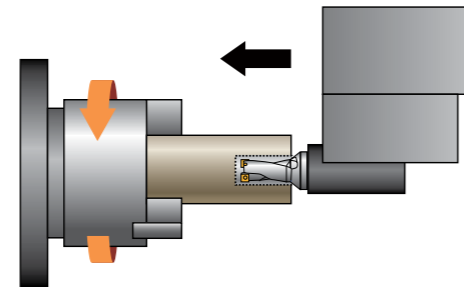
O.D Cutting

Cutting dia.	mm(inch)	Ø67(2.64)
Cutting depth	mm(inch)	5(0.20)
Cutting speed	m/min(ipm)	210(8,267.72)
Spindle speed	rpm	998
Feedrate	mm/rev(inch/rev)	0.5(0.020)
Chip removal rate	cc/min(oz/min)	525(17.56)



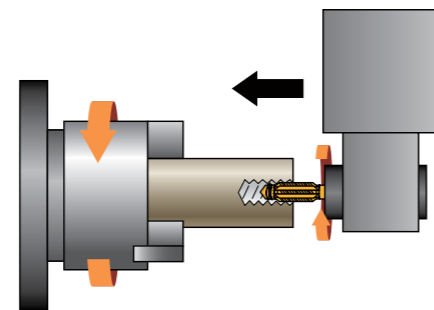
U-Drill Cutting

U-drill dia.	mm(inch)	Ø60(2.37)
Cutting speed	m/min(ipm)	130(5,118.12)
Spindle speed	rpm	670
Feedrate	mm/rev(inch/rev)	0.22(0.009)
Chip removal rate	cc/min(oz/min)	286(9.68)



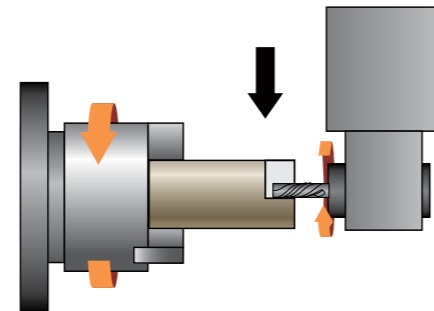
Tap

Tap size	mm	M22x2.5
Cutting depth	mm(inch)	30(1.19)
Cutting speed	m/min(ipm)	25(984.26)
Spindle speed	rpm	362
Feedrate	mm/rev(inch/rev)	2.5(0.099)



Endmill

Endmill dia.	mm(inch)	Ø20(0.79)
Cutting depth	mm(inch)	5(0.20)
Cutting speed	m/min(ipm)	100(3,937.008)
Spindle speed	rpm	1,592
Feedrate	mm/min(ipm)	100(3.94)
Chip removal rate	cc/min(oz/min)	64(2.17)

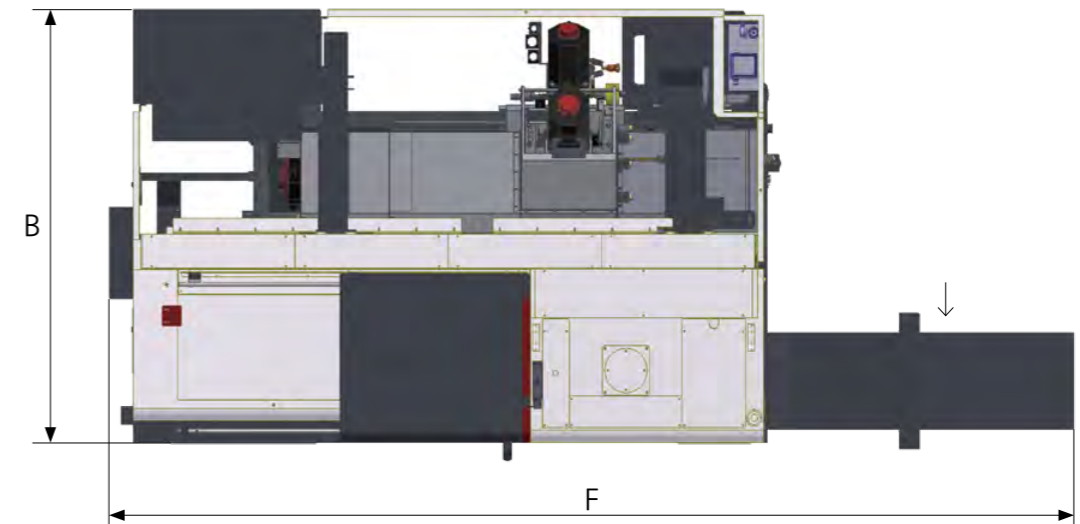


※ The above data is based on internal testing. Values may change depending on cutting conditions.

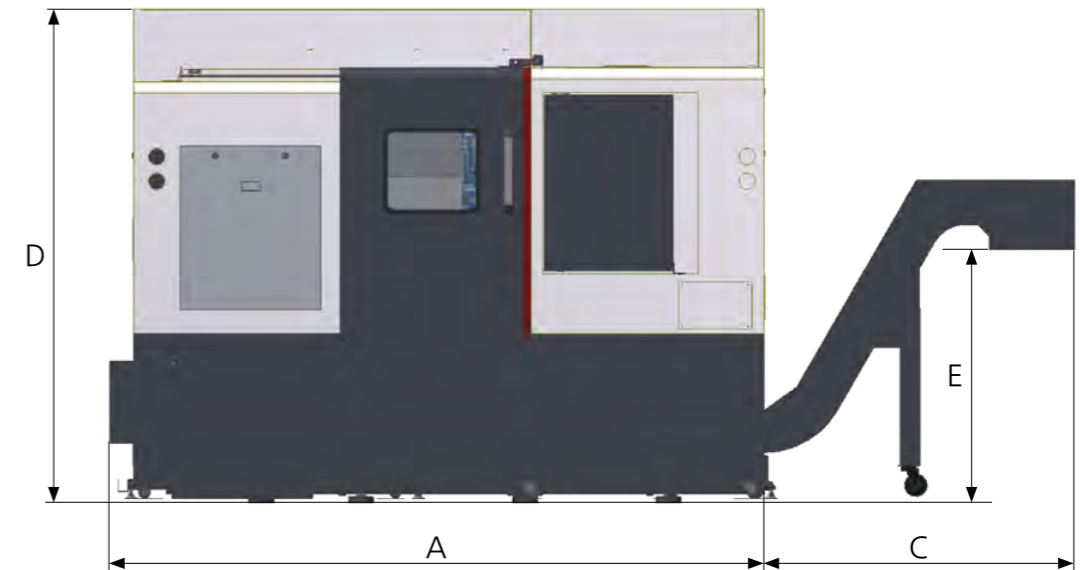
Machine Dimensions

Unit : mm(inch)

Top view



Front view



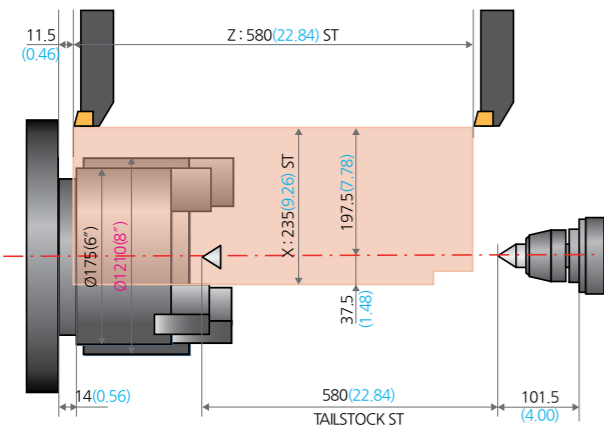
Model	A (Machine front)	B (Machine side)	C	D (Machine height)	E	F
SL 2000Y/SY	2,790(109.85)	1,752(68.98)	1,324(52.13)	2,095(82.49)	860(33.86)	4,114(161.97)
SL 2500Y/SY	3,643(143.43)	1,930(75.99)	1,204(47.41)	2,085(82.19)	913(35.95)	4,847(190.83)
SL 2500LY/LSY	4,123(162.33)	2,030(79.93)	1,436(56.54)	2,090(82.29)	885(34.85)	6,153(242.25)

Work Range

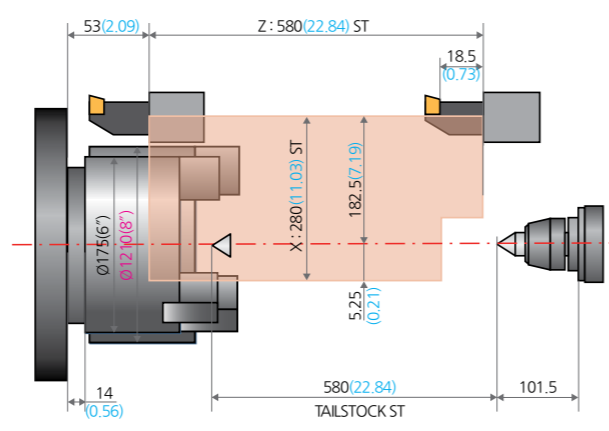
SL 2000AY/BY

Unit : mm(inch)

O.D Tool

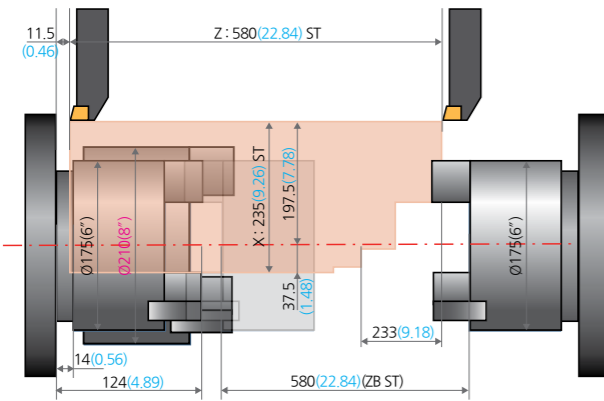


I.D Tool

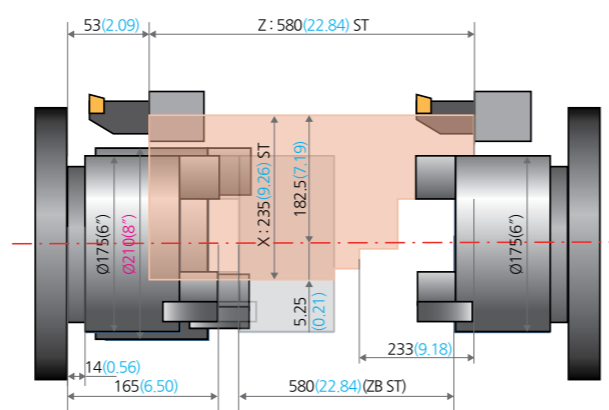


SL 2000ASY/BSY

O.D Tool



I.D Tool

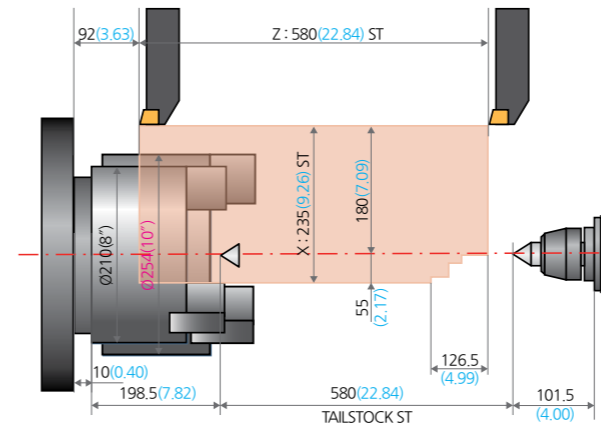


Work Range

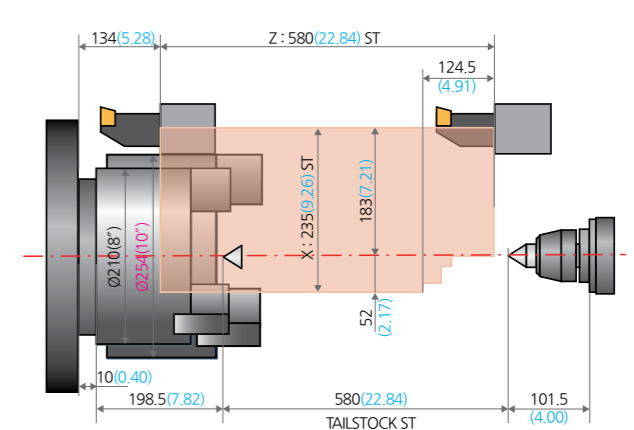
SL 2500AY/BY

Unit : mm(inch)

O.D Tool

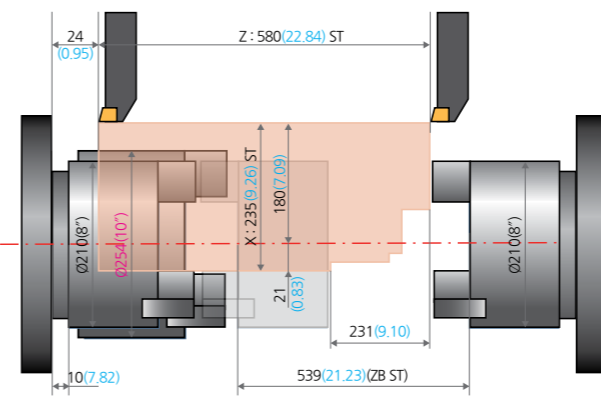


I.D Tool

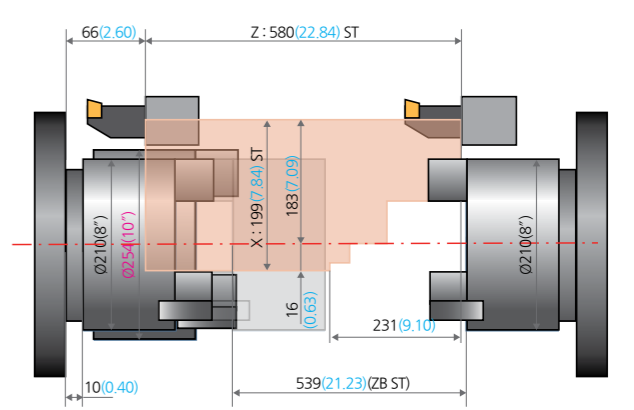


SL 2500ASY/BSY

O.D Tool



I.D Tool

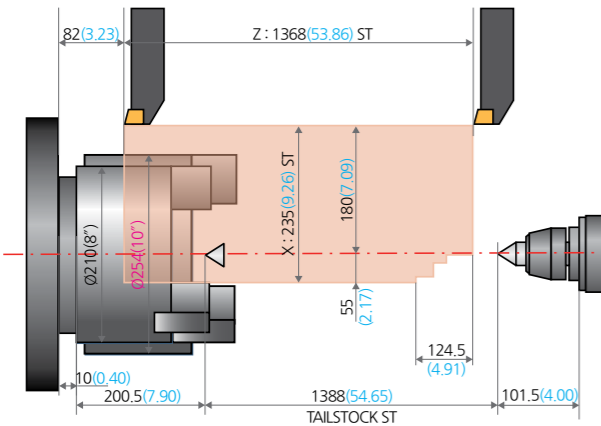


Work Range

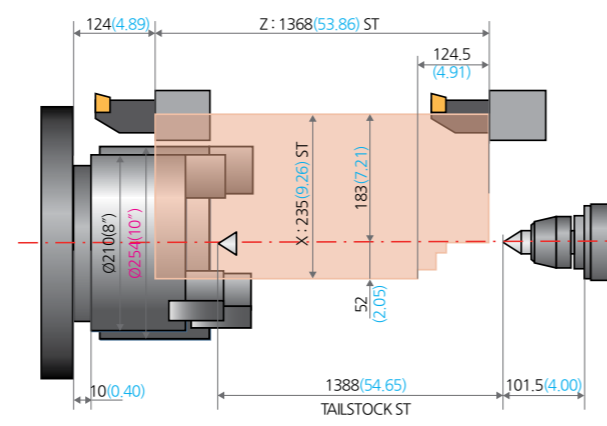
SL 2500ALY/BLY

Unit : mm(inch)

O.D Tool

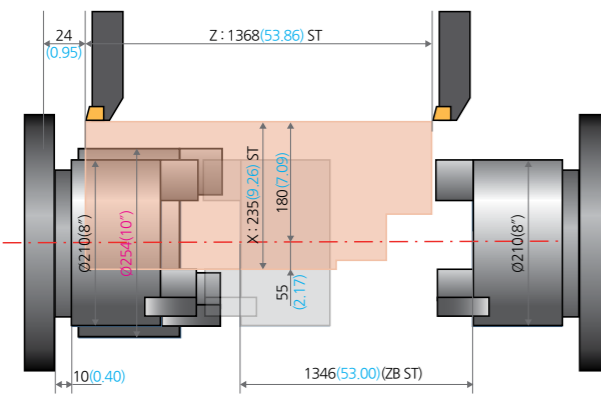


I.D Tool

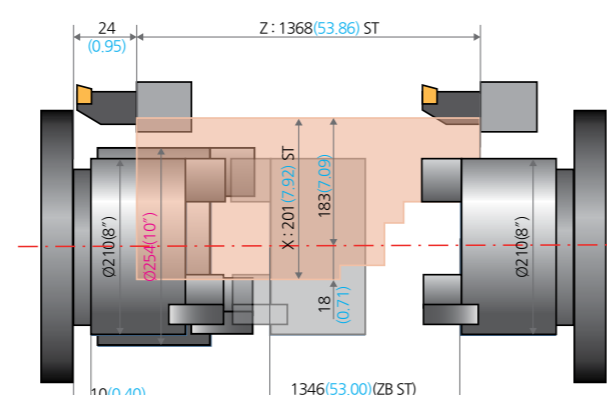


SL 2500ALSY/BSLY

O.D Tool

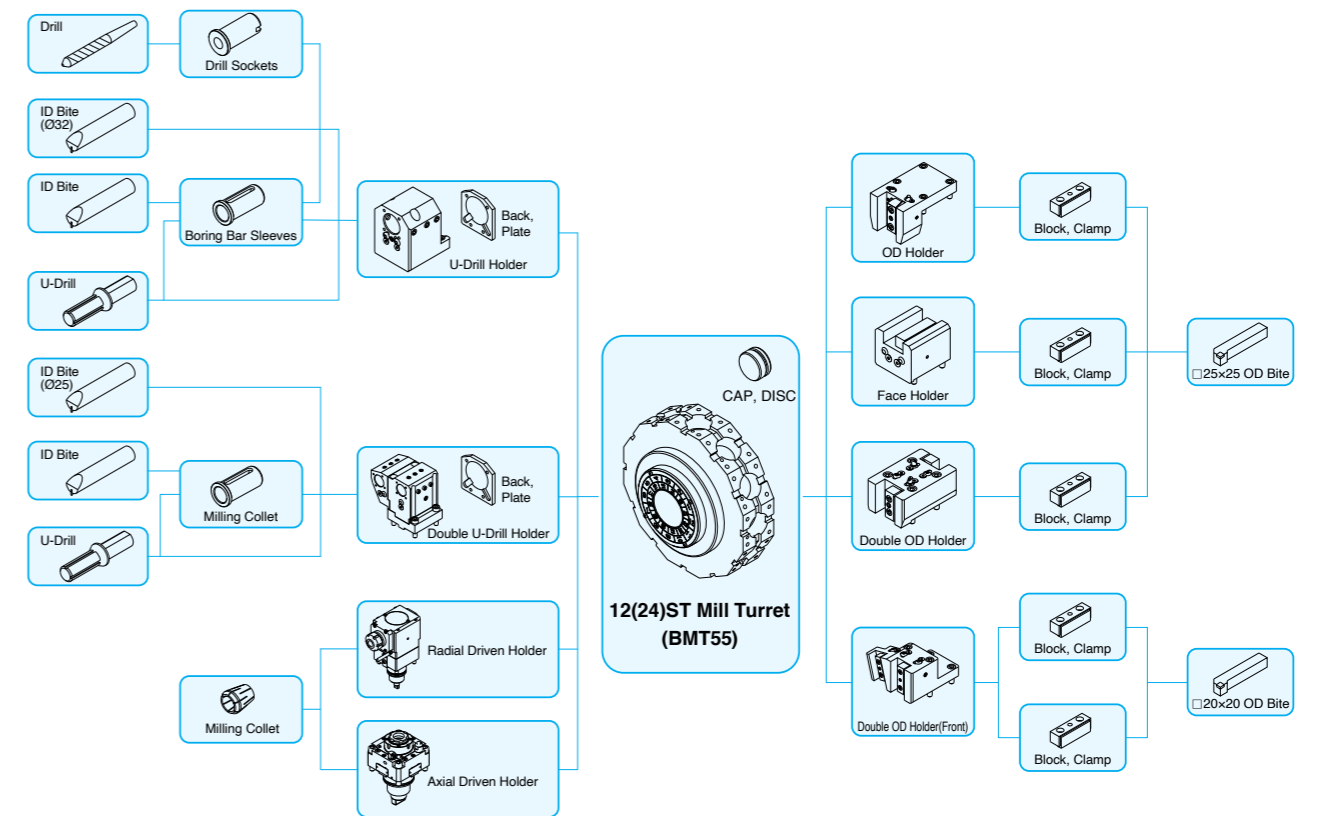


I.D Tool



Tooling System

Unit : mm(inch)



Standard Tooling

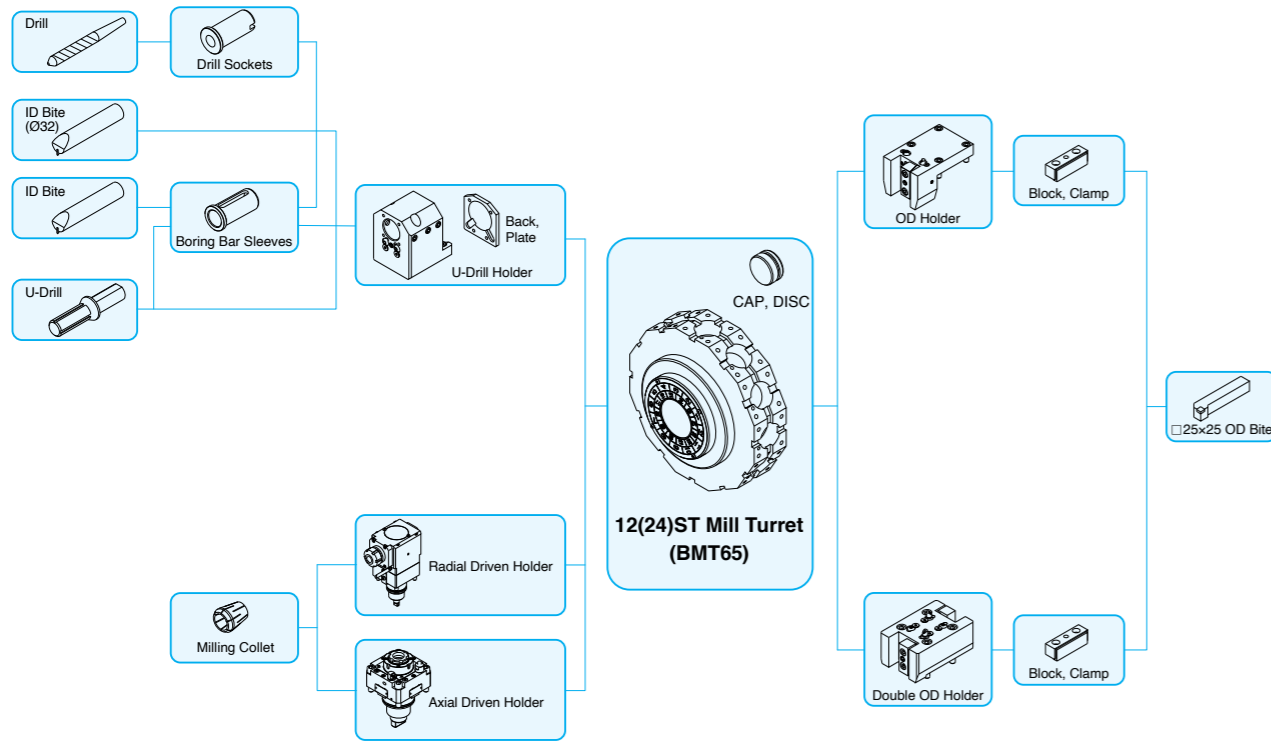
Item / Description	SL 2000Y/SY			
	Y	SY		
Static Holder	Block, Clamp	4	7	
	OD Holder	2	1	
	OD Holder Double	-	1	
	OD Holder Double (Front)	1	1	
	OD Holder Double (Sub)	-	1	
Boring Holder	Face Holder	1	1	
	ID Holder	2	1	
	ID Holder Double	1	1	
Milling Holder	U-Drill Holder	1	-	
	U-Drill Holder Double	-	1	
Milling Holder	Axial Milling Holder	2	2	
	Radial Milling Holder	2	2	
Socket	Boring	Ø10 (Ø3/8")	1	1
		Ø12 (Ø1/2")	1	1
		Ø16 (Ø5/8")	1	1
		Ø20 (Ø3/4")	1	1
		Ø25 (Ø1")	1	1
		Ø32 (Ø1 1/4")	1	1
	Drilling	MT2	1	1
MT3		1	1	
ER Collet	-	-	-	

SL 2000/2500SY Series

Y-AXIS HORIZONTAL TURNING CENTER

Tooling System

Unit : mm(inch)



Standard Tooling

Item / Description		SL 2500Y/SY		SL 2500LY/LSY		
		Y	SY	LY	LSY	
Static Holder	Block, Clamp	4	7	4	7	
	OD Holder	4	1	4	1	
	OD Holder Double	-	3	-	3	
	OD Holder Double (Front)	-	-	-	-	
	OD Holder Double (Sub)	-	-	-	-	
	Face Holder	-	-	-	-	
Boring Holder	ID Holder	-	-	-	-	
	ID Holder Double	-	-	-	-	
	U-Drill Holder	4	-	4	-	
	U-Drill Holder Double	-	4	-	4	
Milling Holder	Axial Milling Holder	2	2	2	2	
	Radial Milling Holder	2	2	2	2	
Socket	Boring	Ø10(Ø3/8")	1	1	1	1
		Ø12(Ø1/2")	1	1	1	1
		Ø16(Ø5/8")	1	1	1	1
		Ø20(Ø3/4")	1	1	1	1
		Ø25(Ø1")	1	1	1	1
		Ø32(Ø1 1/4")	1	1	1	1
	Drilling	MT3	1	1	1	1
		MT4	1	1	1	1
	ER Collet	-	-	-	-	

Standard / Optional

● : Standard ○ : Optional △ : Discuss X : N/A

Category		SL 2000SY	SL 2500SY	SL 2500LSY	
Spindle	3 jaw open-center chuck	●	●	●	
	3 jaw closed-center chuck	X	X	X	
	Soft jaw (3set)	●	●	●	
	Hard jaw (1set)	○	○	○	
	Chuck clamp footswitch	●	●	●	
	Dual pressure chucking	○	○	○	
	C-axis control (0.001")	●	●	●	
	Chuck clamp confirmation	●	●	●	
	Chuck dual footswitch	○	○	○	
Turret	Tool holder	●	●	●	
	Rotary holder type	BMT	●	●	●
	Rotary holder (axial)	Collet-type, 2EA	●	●	●
	Rotary holder (radial)	Collet-type, 2EA	●	●	●
	Rotary holder (axial)	Adapter-type	X	X	X
	Rotary holder (radial)	Adapter-type	X	X	X
	Boring bar sleeve (same as U-drill holder sleeve)	●	●	●	
	Drill socket	●	●	●	
	U-drill holder	●	●	●	
	U-drill cap	X	X	X	
	Swivel head holder	△	△	△	
Tailstock	NC(Servo Motor) tailstock	●	●	●	
	Live center (standard with tailstock)	●	●	●	
	Tailstock 2 step pressure system	X	X	X	
	Quill forward/reverse confirmation	X	X	X	
	Tailstock footswitch	X	X	X	
Coolant & Air Blow	Standard coolant (nozzle)	○	○	○	
	Coolant above chuck	○	○	○	
	Coolant gun	○	○	○	
	TSC for chuck (for special chuck)	△	△	△	
	TSC for sub-spindle (work ejector required)	○	○	○	
	Bed flushing	X	X	X	
	Air blower	○	○	○	
	Rotary tool holder TSC	○	○	○	
	Sub-spindle air blower	○	○	○	
	Turret tool air blower	X	X	X	
Automation	Air gun	○	○	○	
	Through spindle air blower (for special chuck)	△	△	△	
	Through spindle air blower for sub-spindle (work ejector required)	X	X	X	
	Coolant pump	4.5Bar	●	●	●
		7Bar	○	○	○
		10Bar	○	○	○
		14.5Bar	○	○	○
		20Bar	○	○	○
	Power coolant system (for automation solutions)	△	△	△	
	Coolant chiller	○	○	○	
Chip Disposal	Coolant tank	●	●	●	
	Chip conveyor (Hinge / Scraper)	Side	●	●	●
		Rear	△	△	△
	Special chip conveyor (drum filter)	△	△	△	
	Chip bucket	Fixed 380L	○	○	○
	Safety Features	Door interlock	●	●	●
		Torque limiter	●	●	●
		Full splash guard	●	●	●
		Chuck hyd pressure interlock	△	△	△
	Electrical	3 step patrol lamp and buzzer	●	●	●
Lamp for electrical cabinet		○	○	○	
Remote MPG		○	○	○	
Work counter		Digital	○	○	○
Total counter		Digital	○	○	○
Tool counter		Digital	○	○	○
Multi counter		6EA	○	○	○
		9EA	○	○	○
Grounded circuit breaker		○	○	○	
AVR(Auto Voltage Regulator)		○	○	○	
Transformer	25kVA	○	○	○	
	30kVA	○	○	○	
Auto Power Off	○	○	○		
Measurement	Tool Presetter	Manual	○	○	○
	Tool Presetter	Auto	○	○	○
	Air zero measuring device (for special chuck)	TACO	△	△	△
		SMC	△	△	△
	Linear scale	X-axis	○	○	○
		Y-axis	○	○	○
		Z-axis	○	○	○
Coolant level gauge (requires chip conveyor)	○	○	○		
Environmental	Air conditioner for electrical cabinet	○	○	○	
	Dehumidifier	△	△	△	
	Oil mist collector	○	○	○	
	Oil skimmer	○	○	○	
	MQL(Minimal Quantity Lubrication)	△	△	△	
Automation	Auto door	○	○	○	
	Auto shutter (for automation solutions)	△	△	△	
	Sub controller	△	△	△	
	Barfeeder interface	●	●	●	
	Additional M-codes (4 pairs)	○	○	○	
	Automation interface	○	○	○	
	I/O expansion (including both IN and OUT)	16 contacts	○	○	○
		32 contacts	○	○	○
	Parts catcher	○	○	○	
	Parts conveyor (parts catcher required)	○	○	X	
Hydraulic Supply	Standard hydraulic cylinder	Open-center	●	●	●
	Standard hydraulic unit	35Bar	●	●	●

※ For detailed information, please contact your local SMEC dealer.

SL 2000/2500SY Series

Y-AXIS HORIZONTAL TURNING CENTER

Machine Specifications

[] : Option

Category			SL 2000Y		SL 2000SY	
			A type	B type	A type	B type
Chuck	Chuck size (main/sub)	inch	6"/-	8"/-	6"/6"	8"/6"
Capacity	Swing over bed	mm(inch)	650(25.60)	650(25.60)	650(25.60)	650(25.60)
	Swing over cross-slide	mm(inch)	540(21.26)	540(21.26)	540(21.26)	540(21.26)
	Max turning diameter	mm(inch)	395(15.56)	395(15.56)	395(15.56)	395(15.56)
	Max milling diameter	mm(inch)	310(12.21)	310(12.21)	310(12.21)	310(12.21)
	Max turning length	mm(inch)	490(19.30)	450(17.72)	490(19.30)	450(17.72)
Spindle	Spindle speed (main/sub)	rpm	6,000/-	4,500/-	6,000/6,000	4,500/6,000
	Spindle nose (main/sub)	ASA	A2-5/-	A2-6/-	A2-5/A2-5	A2-6/A2-5
	Draw tube ID (main/sub)	mm(inch)	52/-(2.05/-)	68/-(2.68/-)	52/36(2.05/1.42)	68/36(2.68/1.42)
	Spindle bore	mm(inch)	61(2.41)	76(3.00)	61(2.41)	76(3.00)
	Main spindle motor (cont/max)	kW(Hp)	11/18.5(14.76/28.41)	11/18.5(14.76/28.41)	11/18.5(14.76/28.41)	11/18.5(14.76/28.41)
	Sub-spindle motor (cont/max)	kW(Hp)	-	-	5.5/7.5(7.38/10.06)	5.5/7.5(7.38/10.06)
Travels	X-axis stroke	mm(inch)	235(9.26)	235(9.26)	235(9.26)	235(9.26)
	Y-axis stroke	mm(inch)	105(±52.5)(4.14(±2.07))	105(±52.5)(4.14(±2.07))	105(±52.5)(4.14(±2.07))	105(±52.5)(4.14(±2.07))
	Z-axis stroke	mm(inch)	580(22.84)	580(22.84)	580(22.84)	580(22.84)
	ZB-axis stroke	mm(inch)	580(22.84)	580(22.84)	580(22.84)	580(22.84)
	X-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
	Y-axis rapid traverse	m/min(ipm)	10(393.71)	10(393.71)	10(393.71)	10(393.71)
	Z-axis rapid traverse	m/min(ipm)	30(1,181.11)	30(1,181.11)	30(1,181.11)	30(1,181.11)
	ZB-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
	Turret	No of tool positions	ea	12[24] (BMT55)	12[24] (BMT55)	12[24] (BMT55)
OD tool size		mm(inch)	25(1)	25(1)	25(1)	25(1)
Boring bar diameter		mm(inch)	40(1.58)	40(1.58)	40(1.58)	40(1.58)
Indexing time		sec	0.15	0.15	0.15	0.15
Rotary tool speed		rpm	5,000	5,000	5,000	5,000
Rotary tool motor (cont/max)		kW(Hp)	3.7/7.5(4.97/10.06)	3.7/7.5(4.97/10.06)	3.7/7.5(4.97/10.06)	3.7/7.5(4.97/10.06)
Tailstock		Quill diameter	mm(inch)	-	-	-
	Quill stroke	mm(inch)	580(22.84)	580(22.84)	-	-
	Quill taper	MT	MT5 (Servo motor)	MT5 (Servo motor)	-	-
Machine	Size [with SIDE chip conveyor] L×W×H	mm(inch)	2,790[4,125]×1,752×2,085 (109.85[162.41]×68.98×82.09)		2,790[4,125]×1,752×2,085 (109.85[162.41]×68.98×82.09)	
	Weight	kg(lb)	5,600(12,345.89)	5,600(12,345.89)	5,800(12,786.82)	5,800(12,786.82)
	Coolant tank capacity	Liter(gal)	170(44.91)	170(44.91)	170(44.91)	170(44.91)
	Electric power supply	kVA/V	34/220	34/220	42/220	42/220
Controller	FANUC Oi-TF+, SIEMENS					

※ Design and specifications are subject to change without notice.

Machine Specifications

[] : Option

Category			SL 2500Y		SL 2500SY	
			A type	B type	A type	B type
Chuck	Chuck size (main/sub)	inch	8"/-	10"/-	8"/6"	10"/6[8]"
Capacity	Swing over bed	mm(inch)	650(25.60)	650(25.60)	650(25.60)	650(25.60)
	Swing over cross-slide	mm(inch)	540(21.26)	540(21.26)	540(21.26)	540(21.26)
	Max turning diameter	mm(inch)	360(14.18)	360(14.18)	360(14.18)	360(14.18)
	Max milling diameter	mm(inch)	374(14.73)	374(14.73)	374(14.73)	374(14.73)
	Max turning length	mm(inch)	490(19.30)	476(18.75)	490(19.30)	476(18.75)
Spindle	Spindle speed (main/sub)	rpm	4,500/-	3,500/-	4,500/6,000	3,500/6,000[4,000]
	Spindle nose (main/sub)	ASA	A2-6/-	A2-8/-	A2-6/A2-5	A2-8/A2-5[A2-6]
	Draw tube ID (main/sub)	mm(inch)	68/-(2.68/-)	77/-(3.04/-)	68/36(2.68/1.42)	77/36[52](3.04/1.42[2.05])
	Spindle bore	mm(inch)	78(3.08)	86(3.09)	78(3.08)	86(3.09)
	Main spindle motor (cont/max)	kW(Hp)	11/18.5(14.76/28.41)	18.5/26(24.81/34.87)	11/18.5(14.76/28.41)	18.5/26(24.81/34.87)
	Sub-spindle motor (cont/max)	kW(Hp)	-	-	5.5/7.5(7.38/10.06)	5.5/7.5(7.38/10.06)
Travels	X-axis stroke	mm(inch)	235(9.26)	235(9.26)	235(9.26)	235(9.26)
	Y-axis stroke	mm(inch)	100(±50)(3.94(±1.97))	100(±50)(3.94(±1.97))	100(±50)(3.94(±1.97))	100(±50)(3.94(±1.97))
	Z-axis stroke	mm(inch)	580(22.84)	580(22.84)	580(22.84)	580(22.84)
	ZB-axis stroke	mm(inch)	580(22.84)	580(22.84)	580(22.84)	580(22.84)
	X-axis rapid traverse	m/min(ipm)	18(708.67)	18(708.67)	18(708.67)	18(708.67)
	Y-axis rapid traverse	m/min(ipm)	12(472.45)	12(472.45)	12(472.45)	12(472.45)
	Z-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
	ZB-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
	Turret	No of tool positions	ea	12[24] (BMT65)	12[24] (BMT65)	12[24] (BMT65)
OD tool size		mm(inch)	25(1)	25(1)	25(1)	25(1)
Boring bar diameter		mm(inch)	50(1.97)	50(1.97)	50(1.97)	50(1.97)
Indexing time		sec	0.20	0.20	0.20	0.20
Rotary tool speed		rpm	5,000	5,000	5,000	5,000
Rotary tool motor (cont/max)		kW(Hp)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)
Tailstock		Quill diameter	mm(inch)	-	-	-
	Quill stroke	mm(inch)	-	-	-	-
	Quill taper	MT	MT5 (Servo motor)	MT5 (Servo motor)	-	-
Machine	Size [with SIDE chip conveyor] L×W×H	mm(inch)	3,643[4,667]×1,930×2,085 (143.43[183.75]×75.99×82.09)		3,643[4,667]×1,930×2,085 (143.43[183.75]×75.99×82.09)	
	Size [with REAR chip conveyor] L×W×H	mm(inch)	3,358×2,478[2,820]×2,085 (132.21×97.56[111.03]×82.09)		3,358×2,478[2,820]×2,085 (132.21×97.56[111.03]×82.09)	
	Weight	kg(lb)	5,600(12,345.89)	5,800(12,786.82)	5,800(12,786.82)	6,000(13,227.74)
	Coolant tank capacity	Liter(gal)	173(45.71)	173(45.71)	173(45.71)	173(45.71)
Electric power supply	kVA/V	37/220	45/220	45/220	53[61]/220	
Controller	FANUC Oi-TF+, SIEMENS					

※ Design and specifications are subject to change without notice.

SL 2000/2500SY Series

Y-AXIS HORIZONTAL TURNING CENTER

Machine Specifications

[] : Option

Category			SL 2500LY		SL 2500LSY	
			A type	B type	A type	B type
Chuck	Chuck size (main/sub)	inch	8"/-	10"/-	8"/6"	10"/6[8]"
Capacity	Swing over bed	mm(inch)	650(25.60)	650(25.60)	650(25.60)	650(25.60)
	Swing over cross-slide	mm(inch)	540(21.26)	540(21.26)	540(21.26)	540(21.26)
	Max turning diameter	mm(inch)	360(14.18)	360(14.18)	360(14.18)	360(14.18)
	Max milling diameter	mm(inch)	374(14.73)	374(14.73)	374(14.73)	374(14.73)
	Max turning length	mm(inch)	1,284(50.56)	1,271(50.04)	1,284(50.56)	1,271(50.04)
Spindle	Spindle speed (main/sub)	rpm	4,500/-	3,500/-	4,500/6,000	3,500/6,000[4,500]
	Spindle nose (main/sub)	ASA	A2-6/-	A2-8/-	A2-6/A2-5	A2-8/A2-5[A2-6]
	Draw tube ID (main/sub)	mm(inch)	68/-(2.68/-)	77/-(3.04/-)	68/36(2.68/1.42)	77/36[52](3.04/1.42[2.05])
	Spindle bore	mm(inch)	78(3.08)	86(3.09)	78(3.08)	86(3.09)
	Main spindle motor (cont/max)	kW(Hp)	11/18.5(14.76/28.41)	18.5/26(24.81/34.87)	11/18.5(14.76/28.41)	18.5/26(24.81/34.87)
	Sub-spindle motor (cont/max)	kW(Hp)	-	-	5.5/7.5(7.38/10.06)	5.5/7.5[11/15] (7.38/10.06[14.76/20.12])
Travels	X-axis stroke	mm(inch)	235(9.26)	235(9.26)	235(9.26)	235(9.26)
	Y-axis stroke	mm(inch)	100<±50>(3.94<±1.97>)	100<±50>(3.94<±1.97>)	100<±50>(3.94<±1.97>)	100<±50>(3.94<±1.97>)
	Z-axis stroke	mm(inch)	1,375(54.14)	1,375(54.14)	1,375(54.14)	1,375(54.14)
	ZB-axis stroke	mm(inch)	1,388(54.65)	1,346(53.00)	1,388(54.65)	1,346(53.00)
	X-axis rapid traverse	m/min(ipm)	18(708.67)	18(708.67)	18(708.67)	18(708.67)
	Y-axis rapid traverse	m/min(ipm)	10(393.71)	10(393.71)	10(393.71)	10(393.71)
	Z-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
	ZB-axis rapid traverse	m/min(ipm)	24(944.89)	24(944.89)	24(944.89)	24(944.89)
Turret	No of tool positions	ea	12[24] (BMT65)	12[24] (BMT65)	12[24] (BMT65)	12[24] (BMT65)
	OD tool size	mm(inch)	25(1)	25(1)	25(1)	25(1)
	Boring bar diameter	mm(inch)	50(1.97)	50(1.97)	50(1.97)	50(1.97)
	Indexing time	sec	0.15	0.15	0.15	0.15
	Rotary tool speed	rpm	5,000	5,000	5,000	5,000
	Rotary tool motor (cont/max)	kW(Hp)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)	3.7/5.5(9.47/7.38)
	Tailstock	Quill diameter	mm(inch)	-	-	-
Quill stroke		mm(inch)	1,390(54.73)	1,375(54.14)	-	-
Quill taper		MT	MT5 (Servo motor)	MT5 (Servo motor)	-	-
Machine	Size [with SIDE chip conveyor] L×W×H	mm(inch)	4,123[5,559]×2,030×2,090 (162.33[218.86]×79.93×82.29)		4,123[5,559]×2,030×2,090 (162.33[218.86]×79.93×82.29)	
	Weight	kg(lb)	7,500(16,534.67)	7,600(16,755.14)	7,500(16,534.67)	5,800(12,786.82)
	Coolant tank capacity	Liter(gal)	250(66.05)	250(66.05)	250(66.05)	250(66.05)
Electric power supply	kVA/V	38/220	46/220	46/220	54[63]/220	
Controller		FANUC Oi-TF+, SIEMENS				

* Design and specifications are subject to change without notice.

NC Specification / FANUC

● : STD ○ : Optional X : N/A

Functions		Oi-TF+	Functions		Oi-TF+
Controlled axis	Controlled axes	X, Z, Y, B, C	Program input	Absolute / incremental command	G90/G91
	Max simultaneously controlled axes	4		Repeating canned cycle	●
	Least input increment	0.001mm / 0.0001"		Repeating canned cycle 2	●
	Built-in stroke limit	Soft overtravel 1, 2, 3		Canned cycles	●
	Machine lock	●		Drilling canned cycle	●
Operation functions	Manual handle feed	X1, X10, X100		Decimal point input	●
	Dry run	●		Inch / metric conversion	G20 / G21
	Single block	●		Program restart	●
	Feed per minute	G94		Sub program call	●
	Feed per revolution	G95		Max programmable value	±99999.999mm/±9999.9999"
	DNC operation	Ethernet, CF card		M function	3 digit
Interpolation functions	Thread cutting pause	○		Custom macro	●
	Linear interpolation	G01		Addition of custom macro common variables	#100~#199, #500~#999
	Circular interpolation	G02, G03		Direct drawing dimension programming	●
	Dwell	G04		Programmable data input	G10
	Cylindrical interpolation	G70.1	Tape code	ISO / EIA	
	Skip	G31	Optional block skip	●	
	Nano smoothing	X	Workpiece coordinate system	G52 ~ G59	
	Polar coordinate interpolation	●	Addition of workpiece coordinate system	X	
	Reference position (zero) return	G28	Interface function	Embedded ethernet	●
	Reference position (zero) return check	G27		Fast ethernet	X
	2nd, 3rd, 4th reference point return	G30	Setting and display	Alarm and operator history display	●
	Variable lead thread cutting	●		Run hour and parts count display	●
	Thread repair	●		Loadmeter display	●
	Feed function	Rapid traverse override		F0, 25%, 50%, 100%	Self diagnosis function
Feedrate override		0~200%		Extended part program editing	●
Jog override		●		Machining condition selection function	○
AI look ahead		X		Machining quality level adjustment	X
AI contour control II		○ (200 block)	Display screen	15" color LCD	
Spindle function	Spindle orientation	●	Multi-language display	25 language	
	Rigid tapping	M29	Data input/output	Fast data server	X
	Spindle override	S0 ~ 150%		RS232C interface	●
Arbitrary speed threading	○	Memory card input / output		●	
Tool functions	Tool number command	T4-Digt Tool number	USB memory input / output	●	
	Tool nose radius compensation	G40 ~ G42	Editing operation	Part program storage size	2Mbyte
	Tool offset pairs	128-pairs		Number of registered programs	1,000 EA
	Tool geometry / wear offset	●		Manual guide Oi	X
	Tool length compensation	X	Manual guide i	●	
	Tool life management	●			
Tool path graphic display	●				