SMEC

SL 3500/4500Y Series

Y-AXIS BOX GUIDE TYPE HORIZONTAL TURNING CENTER

SL 3500/4500Y Series

- SL 3500Y
- SL 3500LY
- SL 4500XY
- SL 4500LY
- SL 4500XLY

SMEC

Extensive turning capacity lineup

· Extensive turning capacity lineup to meet customer needs
· Main chuck : 12~24" (including big bore) available
· Turning length : 795~5,000(31.30~196.86 inch)mm available

Y-axis design for complex cutting

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

SL 3500Y Series

SL 3500Y/LY

SL 4500Y Series

SL 4500XY/LY/XLY

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 3500 AY | ALY	SL 3500 BY | BLY	SL 4500 AXY | ALY | AXLY	SL 4500 BXY | BLY | BXLY	SL 4500 CXY | CLY | CXLY
Swing over bed	mm(inch)	850(33.47)	850(33.47)	975(38.39)	975(38.39)	975(38.39)
Max turning length	mm(inch)	795 | 2,125 (31.30 | 83.67)	765 | 2,095 (30.12 | 82.49)	2,140 | 2,930 | 5,000 (84.26 | 115.36 | 196.86)	2,117 | 2,930 | 5,000 (83.35 | 115.36 | 196.86)	2,117 | 2,930 | 5,000 (83.35 | 115.36 | 196.86)
Chuck size	inch	12"	15"	18[15]"	21"	24"
Spindle bore	mm(inch)	115(4.53)	132(5.20)	132(5.20)	181(7.13)	181(7.13)
Spindle speed	rpm	2,500	2,000	1,800[2,000]	1,500	1,200
Main Motor(cont./max)	kW(Hp)	18.5/22(24.81/29.51)	18.5/22(24.81/29.51)	30/37(40.24/49.62)	30/37(40.24/49.62)	30/37(40.24/49.62)
Travels X	mm(inch)	280(11.03)	280(11.03)	350(13.78)	350(13.78)	350(13.78)
Travels Y	mm(inch)	130(±65)(5.13±(2.56))	130(±65)(5.13±(2.56))	200(±100)(7.88±(3.94))	200(±100)(7.88±(3.94))	200(±100)(7.88±(3.94))
Travels Z	mm(inch)	865 | 2,200 (34.06 | 86.62)	865 | 2,200 (34.06 | 86.62)	2,270 | 3,060 | 5,090 (89.38 | 120.48 | 200.40)	2,270 | 3,060 | 5,090 (89.38 | 120.48 | 200.40)	2,270 | 3,060 | 5,090 (89.38 | 120.48 | 200.40)
No of tool positions	EA	12 (BMT65)	12 (BMT65)	12 (BMT75)	12 (BMT75)	12 (BMT75)

High rigidity built-in type tailstock with dead center

· NC controlled servo tailstock (SL 3500Y only) or tow-along built-in type tailstock with dead center
· Quill thrust force can be adjusted to match the length and diameter of the workpiece to maximize cutting efficiency

User-centric options and convenience features

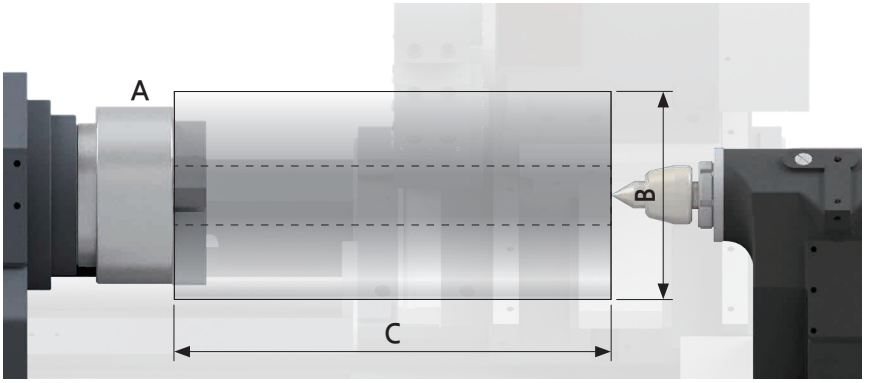
· 15" large-screen LCD standard
· SMEC HMI and Manual Guide i standard

SL 3500/4500Y 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



SL 3500/4500Y Series offers an **extensive lineup** with various **chuck sizes, turning lengths**

A(Chuck size) : **12", 15", 18", 21", 24"**

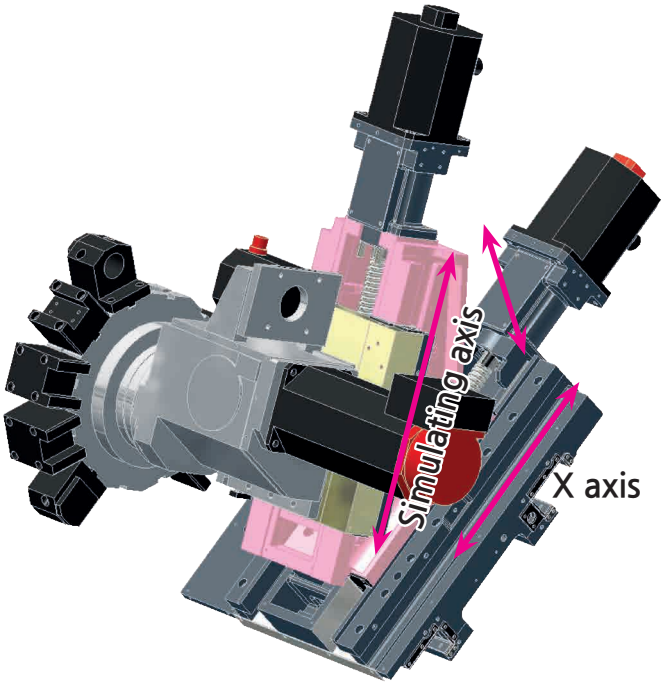
B(Max turning diameter) :

∅430 ~ ∅620mm (Ø16.93 ~ Ø24.41 inch)

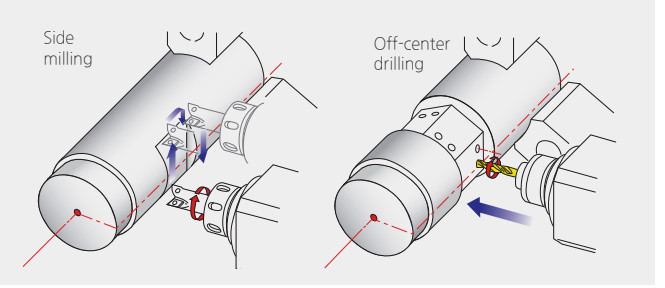
C(Max turning length) :

765 ~ 5,000mm (30.12 ~ 196.86 inch)

Y-axis design for complex cutting



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



Category	Unit	SL 3500Y/LY	SL 4500XY/LY/XLY
No. of tool positions	ea	12(24)	12
Turret type		BMT65	BMT75
SHANK & BORING BAR SIZE	mm (inch)	□25×25, Ø50 (□1×1, Ø1.97)	□32×32, Ø60 (□1.26×1.26, Ø2.37)
Turret indexing time (1 station / full turn)	sec	0.15/1	0.15/1
Rotary tool speed	rpm	4,500	4,000
Rotary tool motor power (cont/max)	kW (Hp)	5.5/7.5 (7.38/10.06)	5.5/7.5 (7.38/10.06)
Rotary tool torque (cont/max)	N.m (lbs.ft)	35.97 (25.82/44.04)	35.97 (25.82/44.04)

High rigidity built-in type tailstock with dead center

High ridigity tailstock

The servo tailstock supports high-speed, high precision machining while the quill thrust force can be adjusted to match the length and diameter of the workpiece to maximize cutting efficiency

Also, the standard built-in type tailstock with dead center offers greater stability when cutting very heavy workpieces

Tailstock Quill Stoke

SL 3500Series :

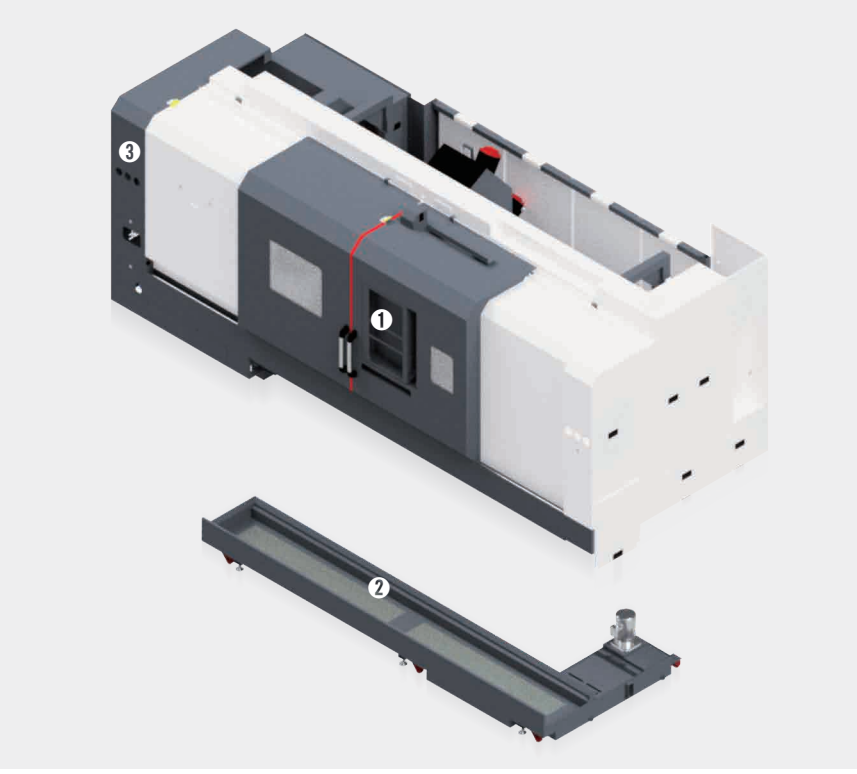
120 mm (4.73 inch)

(for tow-along type only)

SL 4500Series :

150 mm (5.91 inch)

User-centric options and convenience features



❶ User-centric Large 15" OP Panel

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

❷ Easy coolant tank maintenance

Wheeled coolant tank allows makes it easier to add or exchange the coolant

❸ Easy hydraulic valve adjustment

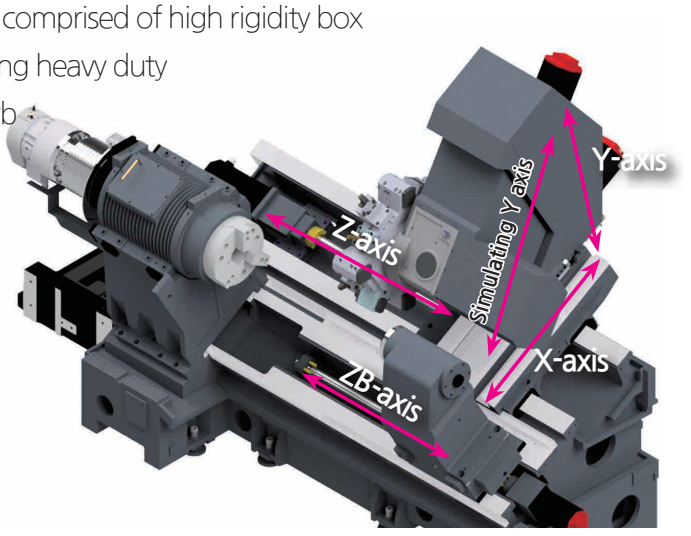
The gauge and hydraulic valves are located at a height that make it easy for the operator to adjust

SL 3500/4500Y Series

Y-AXIS HORIZONTAL TURNING CENTER

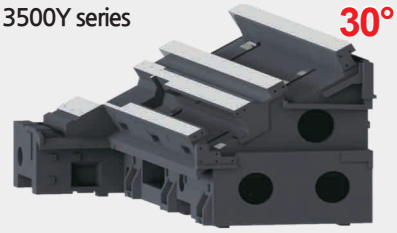
Machine Design

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

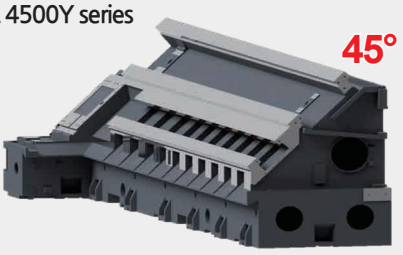


Model	Chuck size	Travel [mm (inch)]		
		X-axis	Y-axis	Z-axis
SL 3500Y/LY (A type)	12"	280(11.30)	130 (±65) (5.12 (±2.56))	865/1,605/2,200 (34.06/63.19/86.62)
SL 3500Y/LY (B type)	15"	280(11.30)	130 (±65) (5.12 (±2.56))	865/1,605/2,200 (34.06/63.19/86.62)
SL 4500XY/LY/XLY (A type)	18"[20"]	350(13.78)	200 (±100) (7.88 (±3.94))	2,270/3,060/5,090 (89.38/120.48/200.40)
SL 4500XY/LY/XLY (B type)	21"	350(13.78)	200 (±100) (7.88 (±3.94))	2,270/3,060/5,090 (89.38/120.48/200.40)
SL 4500XY/LY/XLY (C type)	24"	350(13.78)	200 (±100) (7.88 (±3.94))	2,270/3,060/5,090 (89.38/120.48/200.40)

SL 3500Y series 30°



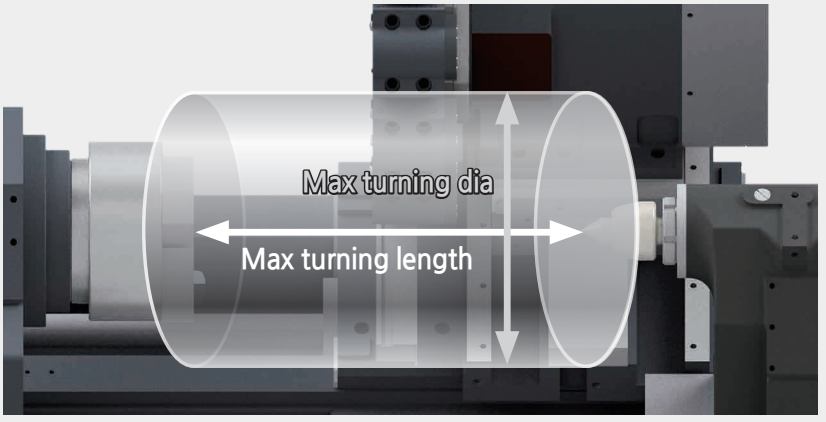
SL 4500Y series 45°



30°/45° slant bed provides excellent stability during heavy duty cutting

The 30°/45° 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

Work Range



Providing a large work envelope, ensuring cost effective productivity

SL 3500Y series(A, B type)

Max turning dia

Ø430mm(16.93 inch)

SL 4500Y series(A, B, C type)

Max turning dia

Ø620mm(24.41 inch)

Unit : mm(inch)

Model	SL 3500Y	SL 3500XY	SL 3500LY	SL 4500XY	SL 4500LY	SL 4500XLY
Max turning dia	Ø430(16.93)	Ø430(16.93)	Ø430(16.93)	Ø620(24.41)	Ø620(24.41)	Ø620(24.41)
Max turning length	795(31.30)	1,530(60.24)	2,125(83.67)	2,140(84.26)	2,930(115.36)	5,000(196.86)

Spindle

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

SL 3500Y/LY (A type)

Max spindle speed (Main) 2,500rpm

Power (cont/Max.) 18.5/26kW (24.81/34.87 Hp)

Torque (cont/Max.) 1,465/2,059N·m (1,080.53/1,518.65 lbs.ft)

SL 3500Y/LY (B type)

Max spindle speed (Main) 2,000rpm

Power (cont/Max.) 18.5/26kW (24.81/34.87 Hp)

Torque (cont/Max.) 1,465/2,059N·m (1,080.53/1,518.65 lbs.ft)

SL 4500XY/LY/XLY (A type)

Max spindle speed (Main) 1,800rpm

Power (cont/Max.) 30/37kW (40.24/49.62 Hp)

Torque (cont/Max.) 2,116/3,174N·m (1,560.69/2,341.03 lbs.ft)

SL 4500XY/LY/XLY (B type)

Max spindle speed (Main) 1,500rpm

Power (cont/Max.) 30/37kW (40.24/49.62 Hp)

Torque (cont/Max.) 2,819/4,229N·m (2,079/.19/3,119.16 lbs.ft)

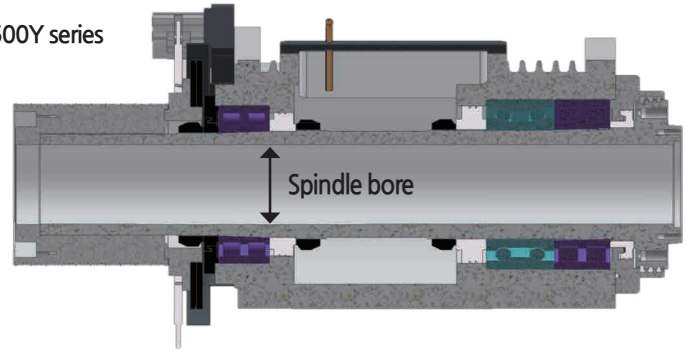
SL 4500XY/LY/XLY (C type)

Max spindle speed (Main) 1,200rpm

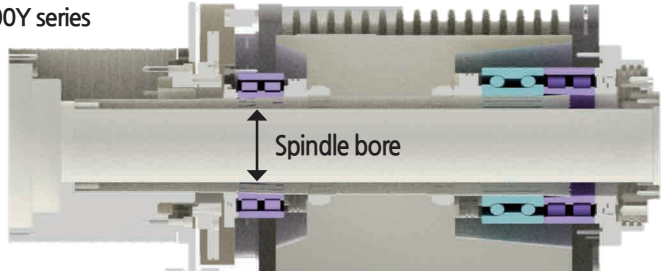
Power (cont/Max.) 30/37kW (40.24/49.62 Hp)

Torque (cont/Max.) 2,819/4,229N·m (2,079/.19/3,119.16 lbs.ft)

SL 3500Y series



SL 4500Y series

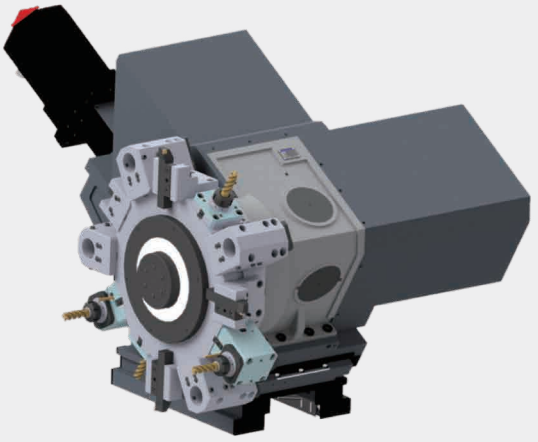


Model	Unit	SL 3500Y Series		SL 4500Y Series		
		A type	B type	A type	B type	C type
Spindle bore	mm (inch)	Ø115 (4.53)	Ø132 (5.20)	Ø132 (5.20)	Ø181 (7.13)	Ø181 (7.13)
Spindle nose	ASA	A2-11	A2-11	A2-11	A2-11	A2-11

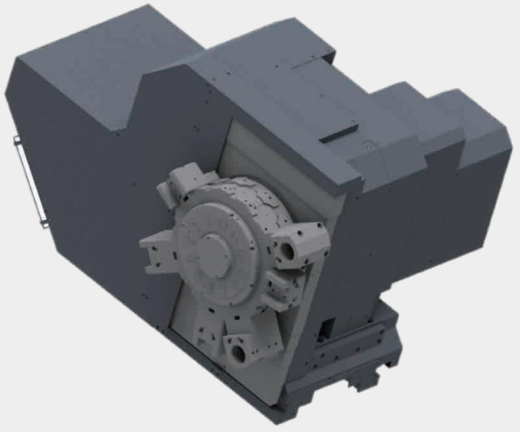
The high precision Double Row of Cylindrical Roller Bearings and Angular Ball Bearings on the front end of the spindle and the Double Row of Cylindrical Roller Bearings on the back end of the spindle ensure high precision, high speed machining performance

Turret

SL 3500Y series
BMT65



SL 4500Y series
BMT75



BMT milling turret

This 12 tool position (BMT65/BMT75) 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 BMT65/BMT75 tool holders ensures high rigidity, high precision machining and with non-stop turret indexing in either direction minimizes the turret index time down to 0.20/0.25 seconds per station.

SL 3500Y series

Turret indexing time : 0.2sec

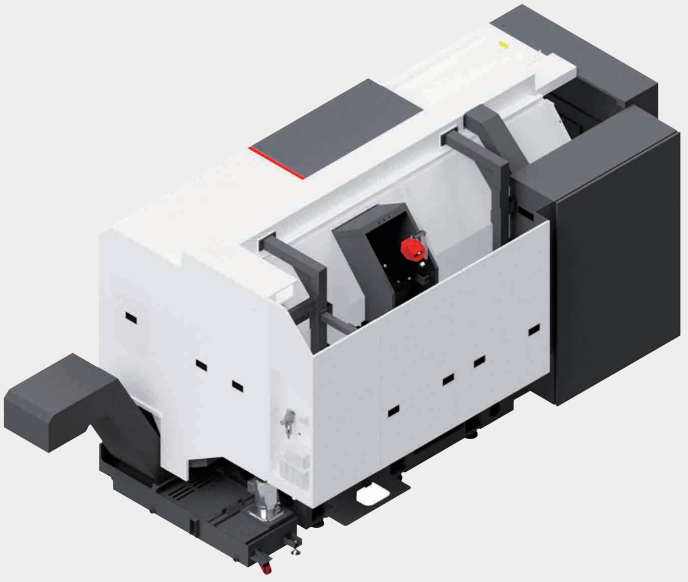
No. of tool positions :
12 (□25×25, Ø50)
(□1"×1", Ø1.97")

SL 4500Y series

Turret indexing time : 0.25sec

No. of tool positions :
12 (□32×32, Ø60)
(□1.26"×1.26", Ø2.37")

Coolant System

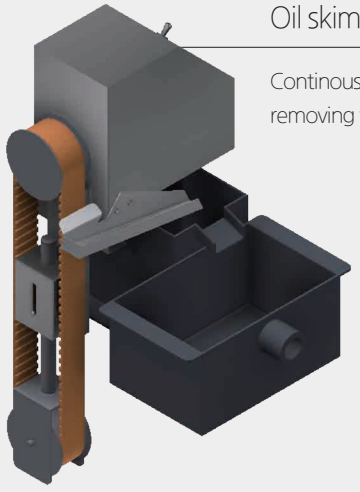


Coolant pump (STD) :
4.5bar(1.1kW)

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

Accessories[Optional]

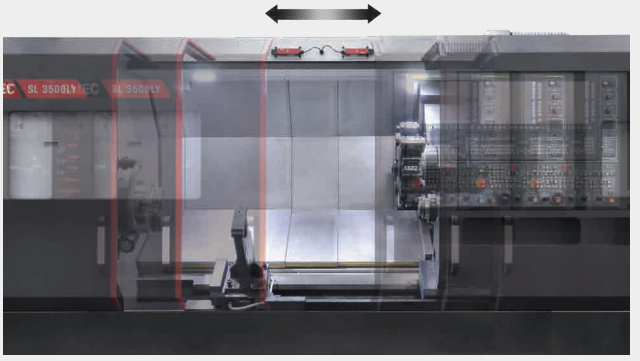
Oil skimmer



Continously cleans the coolant by removing waste oils

Autodoor

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

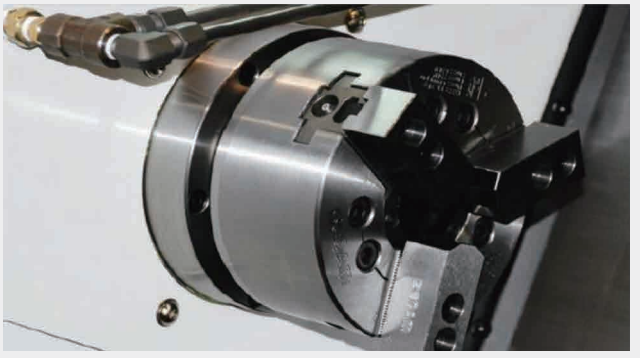


Tool presetter

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

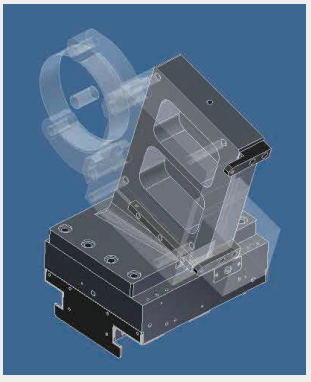
Air blow

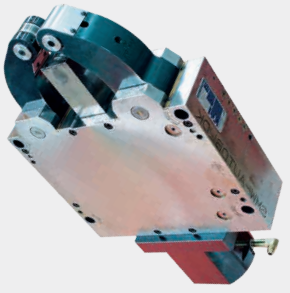
Used to automatically remove chips from the chuck after machining and used for safe loading of the chuck in an automated line.



Steady rest

Provides additional stability when cutting long parts and the size of the steady rest may be selected





Chip conveyor

Used to discharge chips created during machining

SL 3500/4500Y Series

Y-AXIS HORIZONTAL TURNING CENTER

SMEC FANUC i series

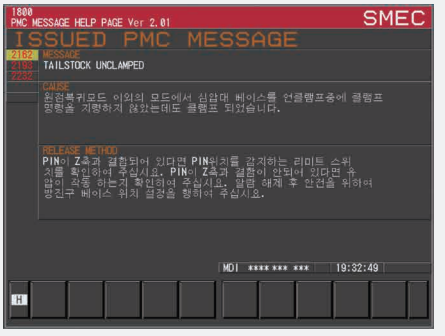
- 15'' LCD color display
- High quality designed OP Panel
- Conversational programming, Manual Guide i
- Part program size 2MB
- SMEC Custom S/W

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

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

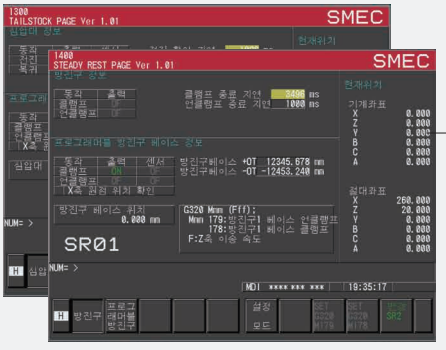
M/G-Code check function

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



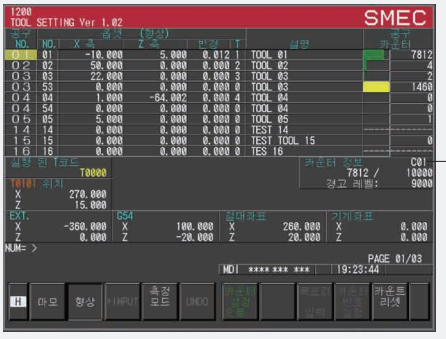
PMC alarm check function

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



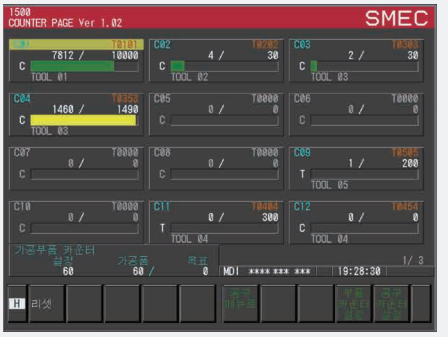
Easy tailstock setting

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

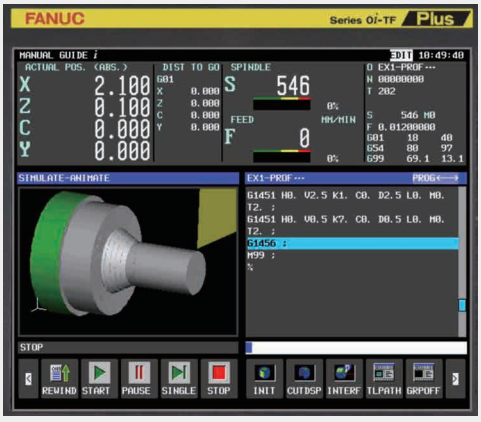
Tool information and setting management mode



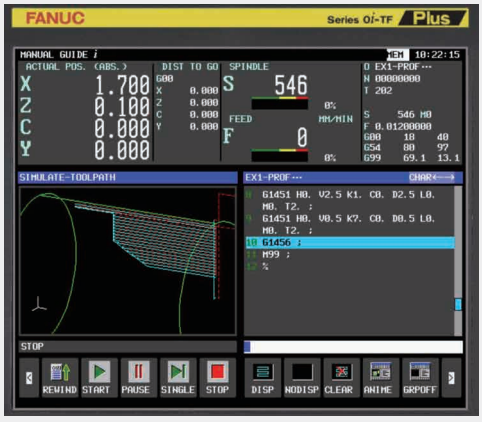
Counter for each T-Code

Manual Guide i (STD)

SMEC'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

Advanced cutting capabilities

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

Check program using cutting simulations

Program pre-check using realistic cutting simulation

Measurement

Feedback of cutting results and tool offset values after cutting

Effective cutting setup

Tool and cutting condition offset data setup based on measurement cycle

IoT Solution (OPT)

NC-Gate
Basic Platform

IoT-Gate
Expansion Platform

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

KPI (Key Performance Indexes)

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

OEE (Overall Equipment Effectiveness)

Provides figures and graphs of overall equipment effectiveness

- Availability, performance, quality, etc.

Realtime Monitoring

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

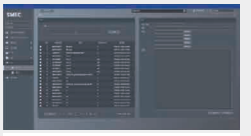
- Provides information about the operation status, speed, production alarms, etc. of each machine

Remote Control/ Management

Remote control and operation

- Emergency stop switch, program editing, etc.

Remote A/S



Problem diagnosis via remote control

- Provide remote diagnosis services to users via the IIoT solution

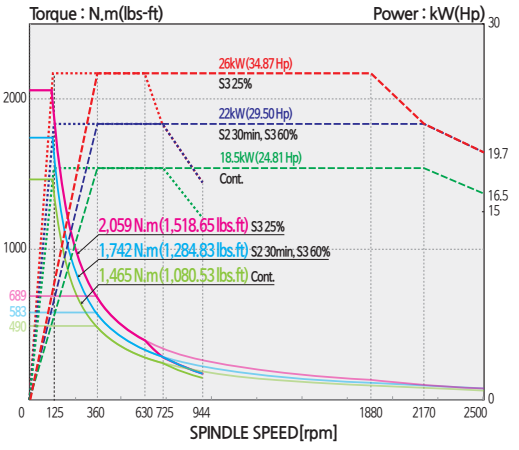
Power-Torque Diagram

SL 3500Y/LY (A type)

Max speed
2,500rpm

Power (cont/Max.)
18.5/26kW
(24.81/34.87 Hp)

Torque (cont/Max.)
1,465/2,059N·m
(1,080.53/1,518.65 lbs-ft)

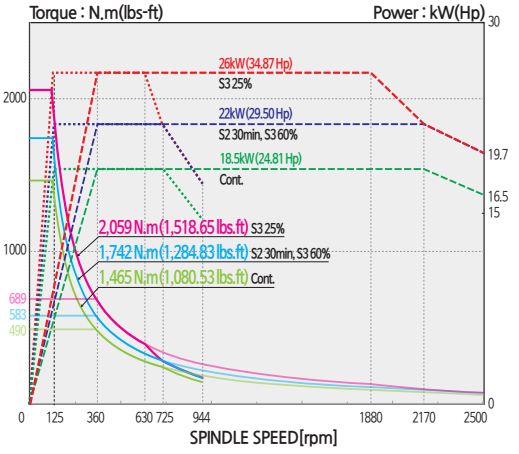


SL 3500Y/LY (B type)

Max speed
2,000rpm

Power (cont/Max.)
18.5/26kW
(24.81/34.87 Hp)

Torque (cont/Max.)
1,465/2,059N·m
(1,080.53/1,518.65 lbs-ft)

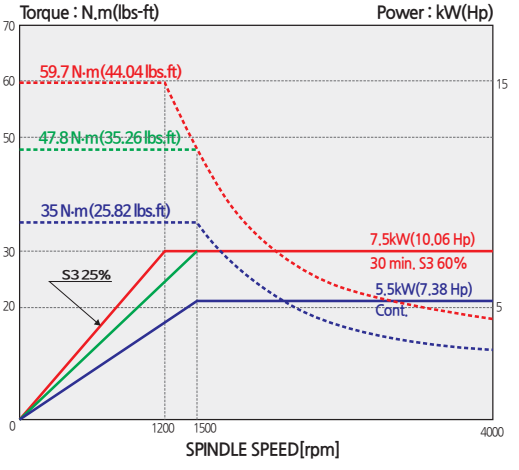


SL 3500Y series_MILL Motor

Max speed
4,500rpm

Power (cont/Max.)
5.5/7.5kW
(7.38/10.06 Hp)

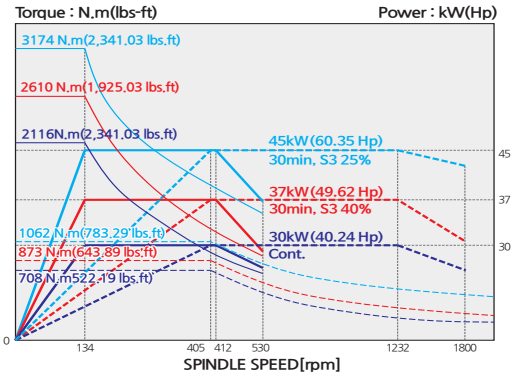
Torque (cont/Max.)
35/59.7N·m
(25.82/44.04 lbs-ft)



Power-Torque Diagram

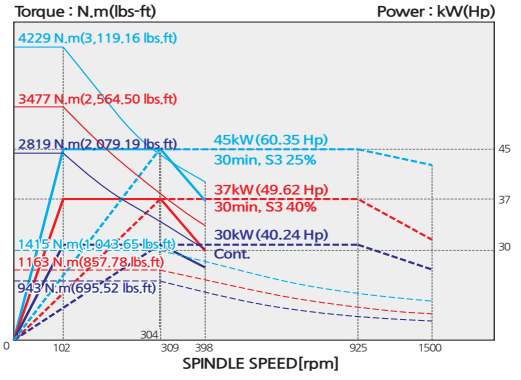
SL 4500XY/LY/XLY (A type)

Max speed
1,800rpm
Power (cont/Max.)
30/45kW(40.24/60.35 Hp)
Torque (cont/Max.)
2,116/3,174N·m
(1,560.69/2,341.03 lbs-ft)



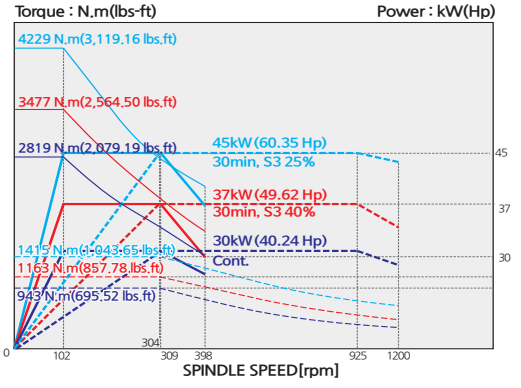
SL 4500XY/LY/XLY (B type)

Max speed
1,500rpm
Power (cont/Max.)
30/45kW(40.24/60.35 Hp)
Torque (cont/Max.)
2,819/4,229N·m
(2,079.19/3,119.16 lbs-ft)



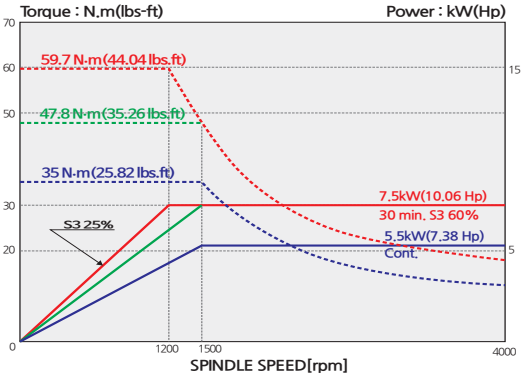
SL 4500XY/LY/XLY (C type)

Max speed
1,200rpm
Power (cont/Max.)
30/45kW(40.24/60.35 Hp)
Torque (cont/Max.)
2,819/4,229N·m
(2,079.19/3,119.16 lbs-ft)



SL 4500Y series_MILL Motor

Max speed
4,000rpm
Power (cont/Max.)
5.5/7.5kW(7.38/10.06 Hp)
Torque (cont/Max.)
35/59.7N·m
(25.82/44.04 lbs-ft)

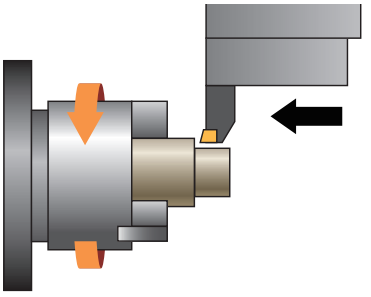


Cutting Performance

Test conditions : SL 4500LY, Material : SM45C

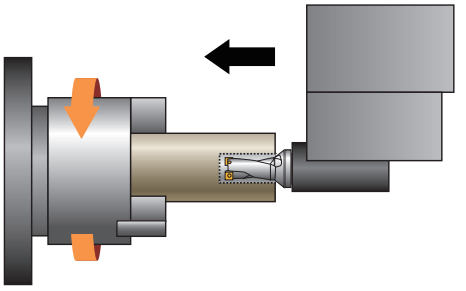
◆ O.D Cutting

Cutting dia.	mm(inch)	Ø214(8.43)
Cutting depth	mm(inch)	9.5(0.38)
Cutting speed	m/min(ipm)	312(1.23)
Spindle speed	rpm	462
Feedrate	mm/rev(inch/rev)	0.4(0.02)
Chip removal rate	cc/min(oz/min)	1,233(41.70)



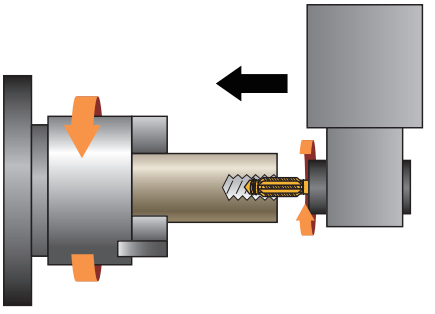
◆ U-Drill Cutting

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)



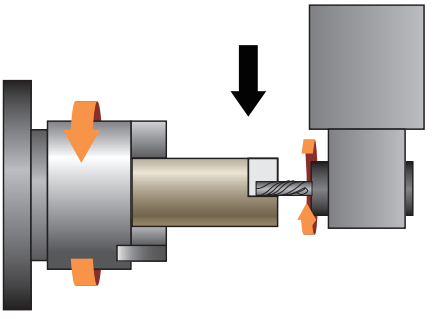
◆ Tap

Tap size	mm	M22×2.5
Cutting depth	mm(inch)	25(0.99)
Cutting speed	m/min(ipm)	8(314.97)
Spindle speed	rpm	120
Feedrate	mm/rev(inch/rev)	2.5(0.10)



◆ Endmill

Endmill dia.	mm(inch)	Ø25(0.99)
Cutting depth	mm(inch)	5(0.20)
Cutting speed	m/min(ipm)	220(8,661.42)
Spindle speed	rpm	2,800
Feedrate	mm/min(ipm)	1,008(39.69)
Chip removal rate	cc/min(oz/min)	151(5.11)

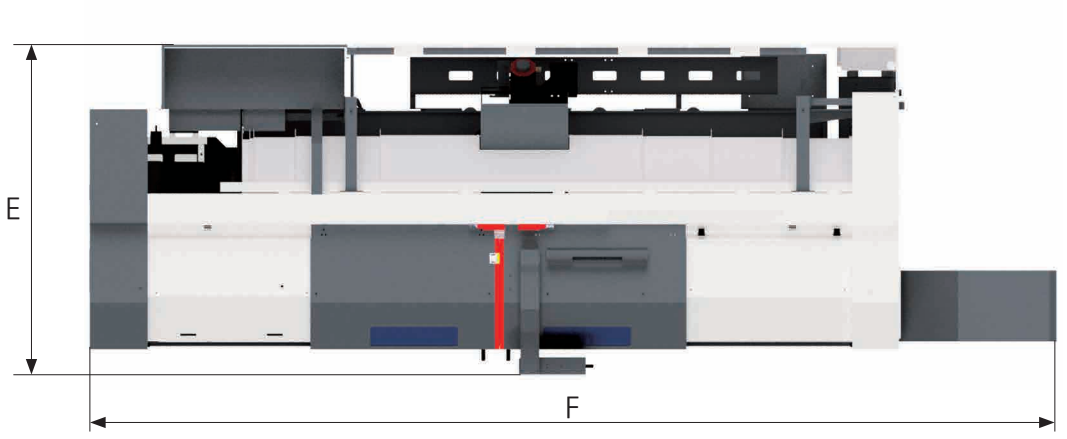


※ The above data is based on internal testing. Values may change depending on cutting conditions.

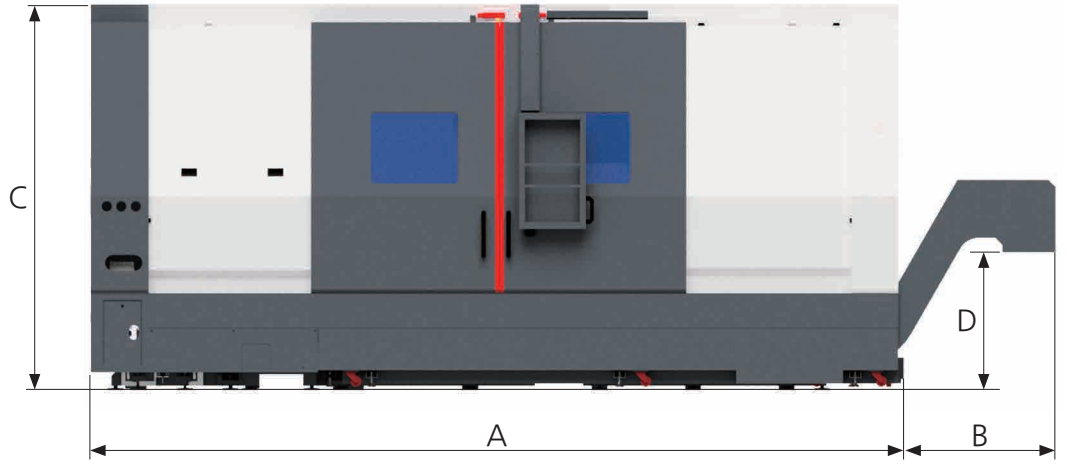
Machine Dimensions

Unit : mm(inch)

Top view



Front view

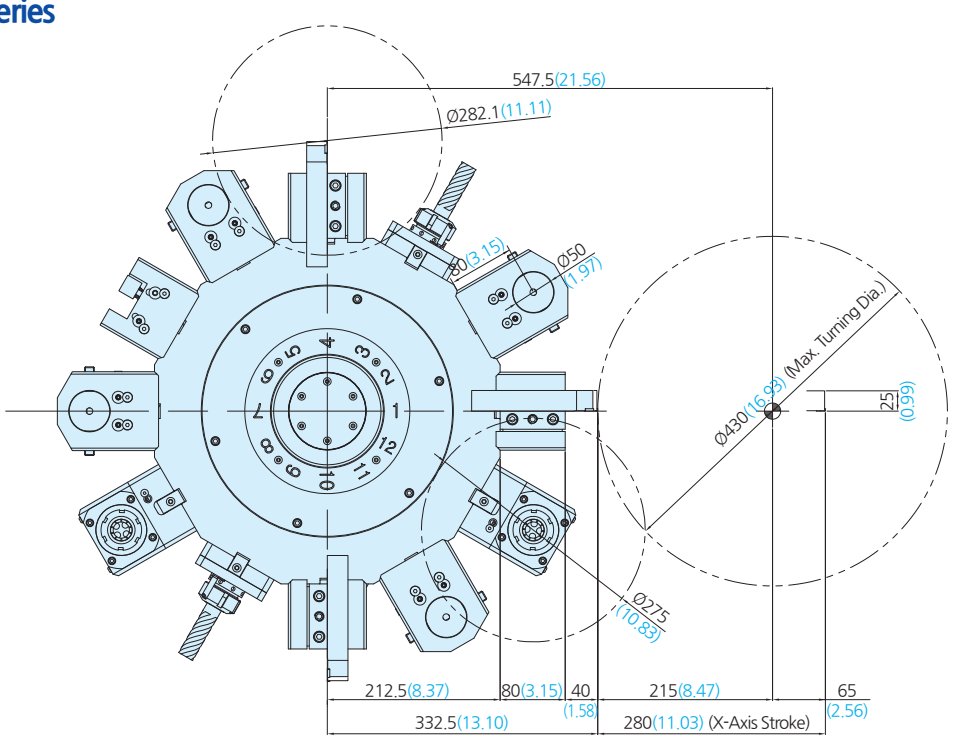


Model	A (Machine front)	B	C (Machine height)	D	E (Machine side)	F
SL 3500Y	4,009(157.84)	977(38.47)	2,289(90.12)	860(33.86)	2,162(85.12)	4,986(196.30)
SL 3500LY	5,450(214.57)	1,056(41.58)	2,289(90.12)	860(33.86)	2,165(85.24)	6,506(256.15)
SL 4500XY	5,569(219.26)	961(37.80)	2,656(104.57)	790(31.11)	2,270(89.38)	6,530(257.09)
SL 4500LY	6,350(250.00)	977(38.47)	2,629(103.51)	844(33.23)	2,379(93.67)	7,327(288.47)
SL 4500XLY	8,700(342.52)	1,197(47.13)	2,683(105.63)	854(33.63)	2,493(98.15)	9,897(389.65)

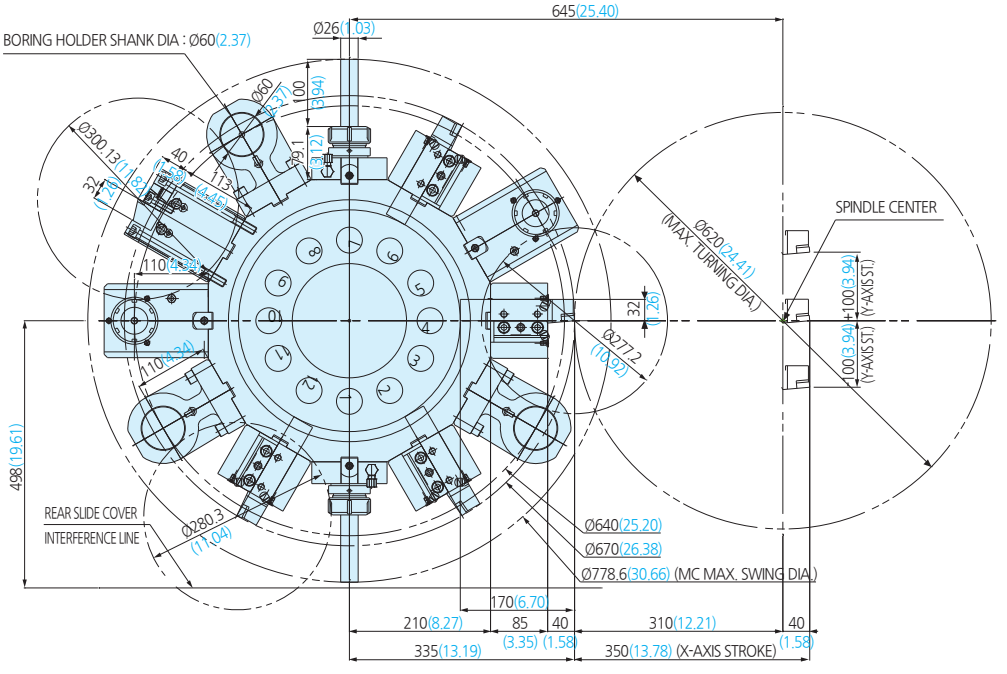
Turret Interference

Unit : mm(inch)

SL 3500Y series



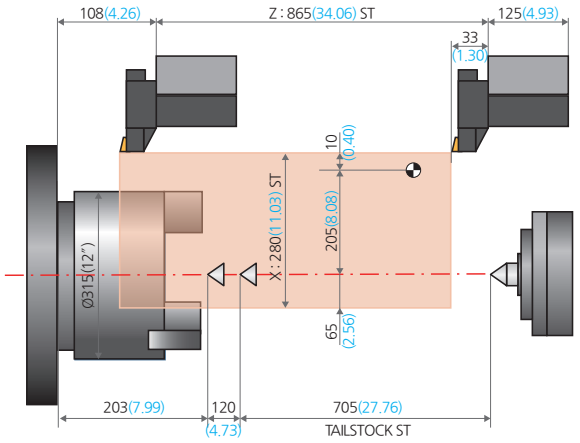
SL 4500Y series



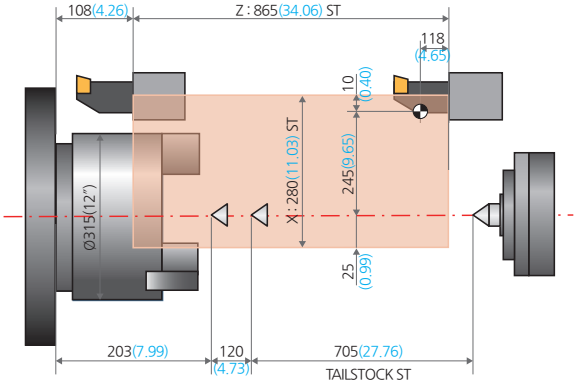
Unit : mm(inch)

SL 3500Y

O.D Tool

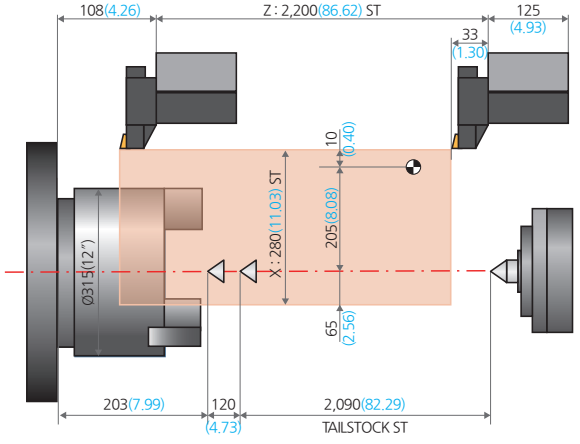


I.D Tool

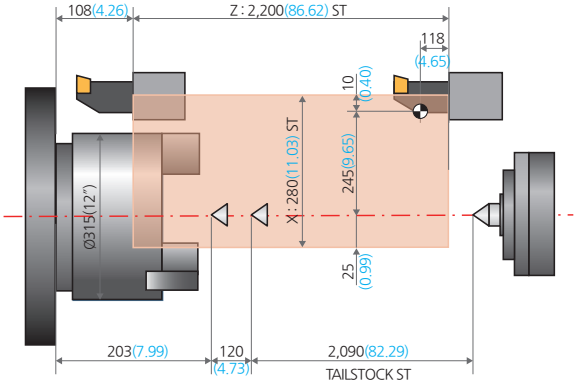


SL 3500LY

O.D Tool



I.D Tool

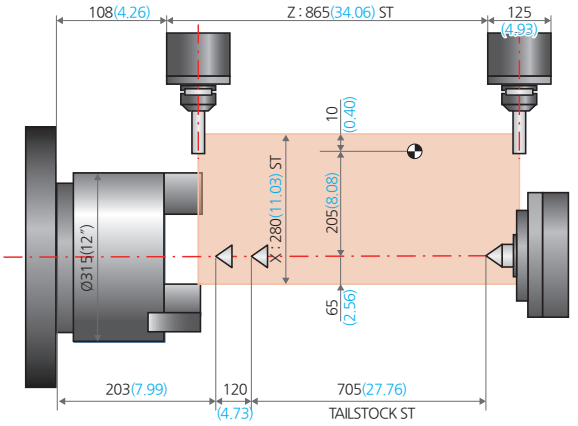


Work Range

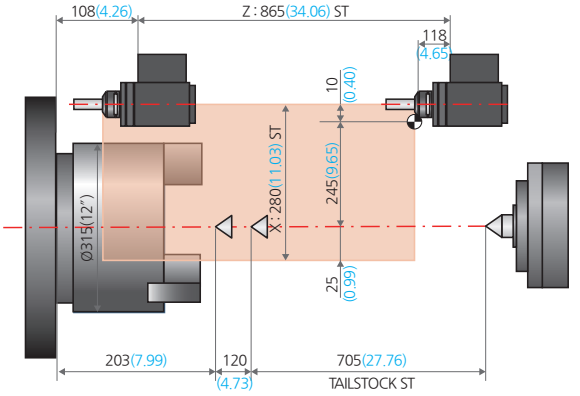
Unit : mm(inch)

SL 3500Y

AXIAL DRIVEN CUT

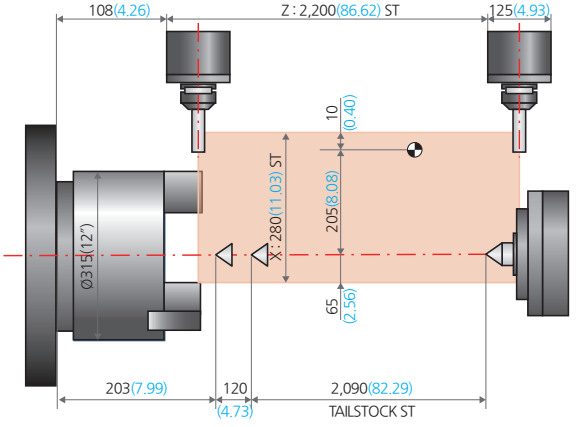


RADIAL DRIVEN CUT

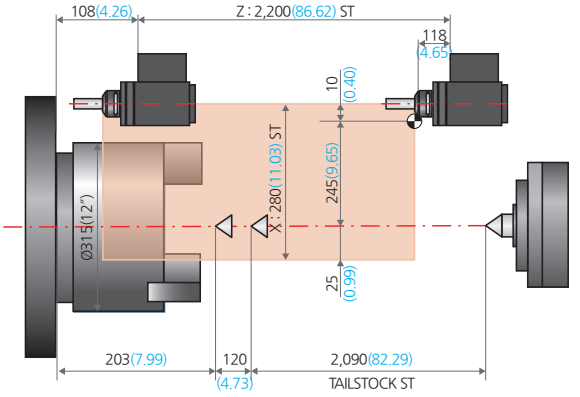


SL 3500LY

AXIAL DRIVEN CUT



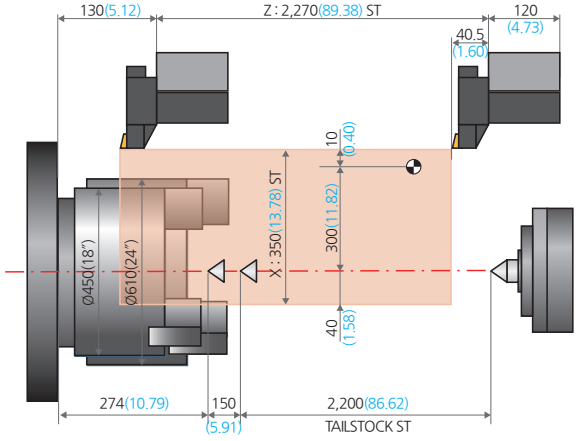
RADIAL DRIVEN CUT



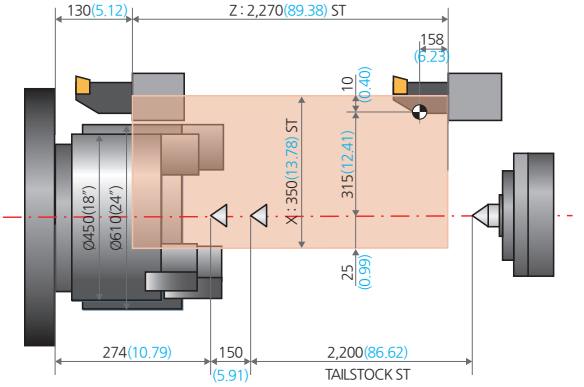
Unit : mm(inch)

SL 4500XY

O.D Tool

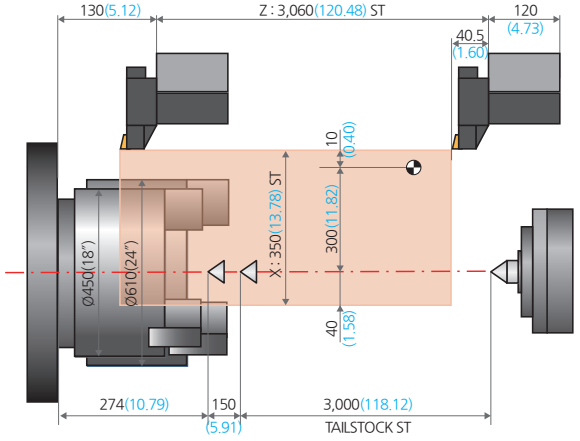


I.D Tool

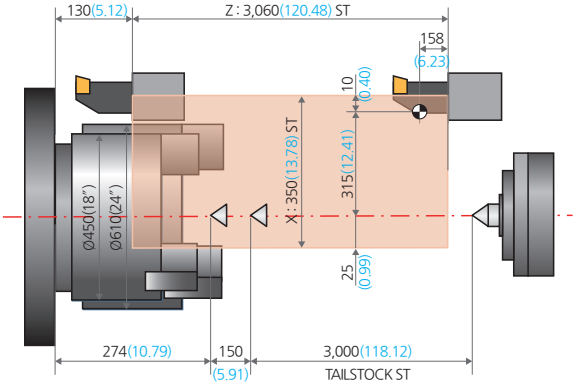


SL 4500LY

O.D Tool

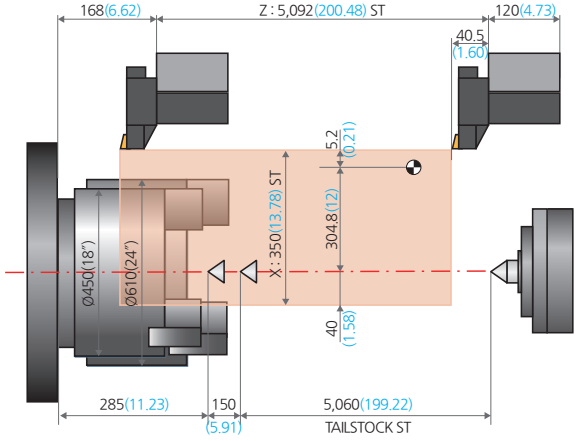


I.D Tool

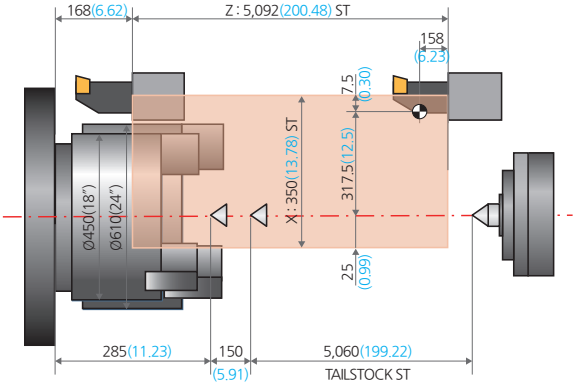


SL 4500XLY

O.D Tool



I.D Tool

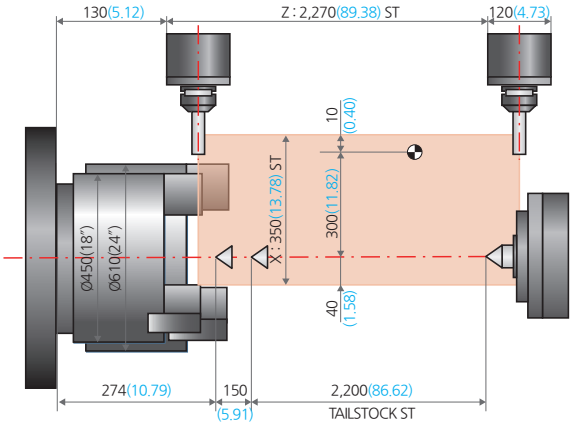


Work Range

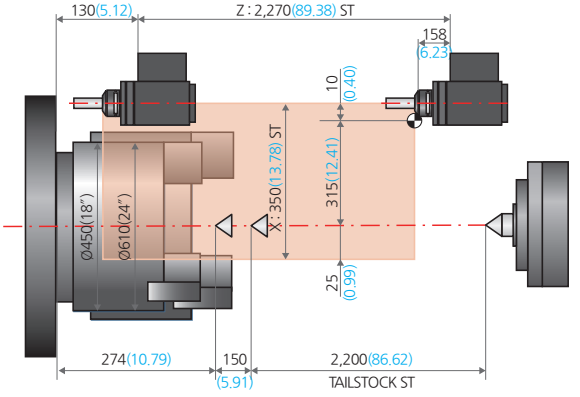
Unit : mm(inch)

SL 4500XY

AXIAL DRIVEN CUT

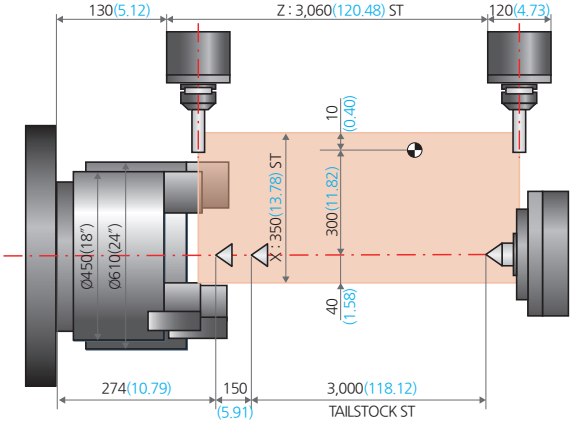


RADIAL DRIVEN CUT

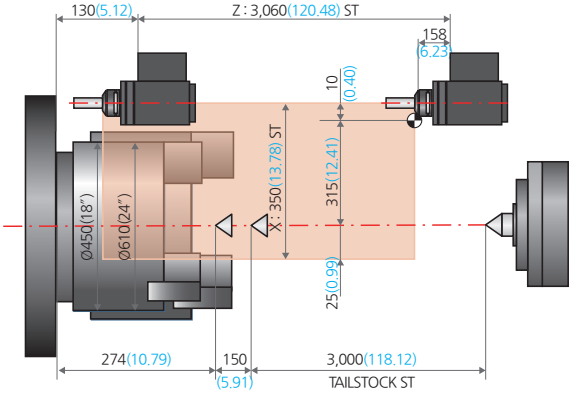


SL 4500LY

AXIAL DRIVEN CUT

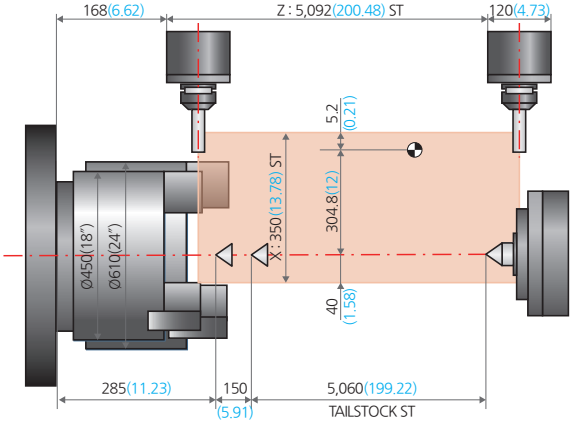


RADIAL DRIVEN CUT

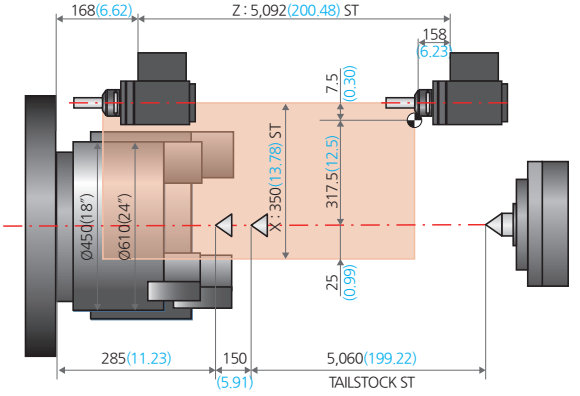


SL 4500XLY

AXIAL DRIVEN CUT

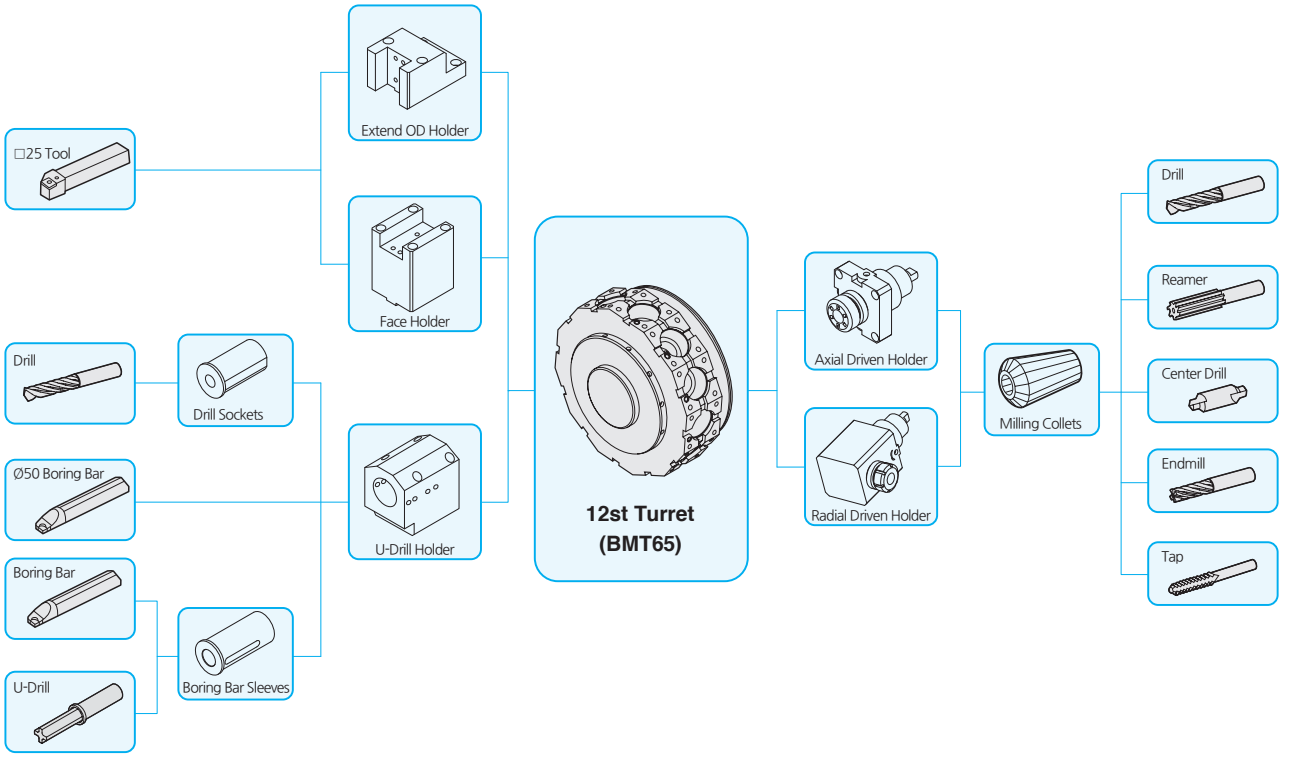


RADIAL DRIVEN CUT



Tooling System

Unit : mm(inch)

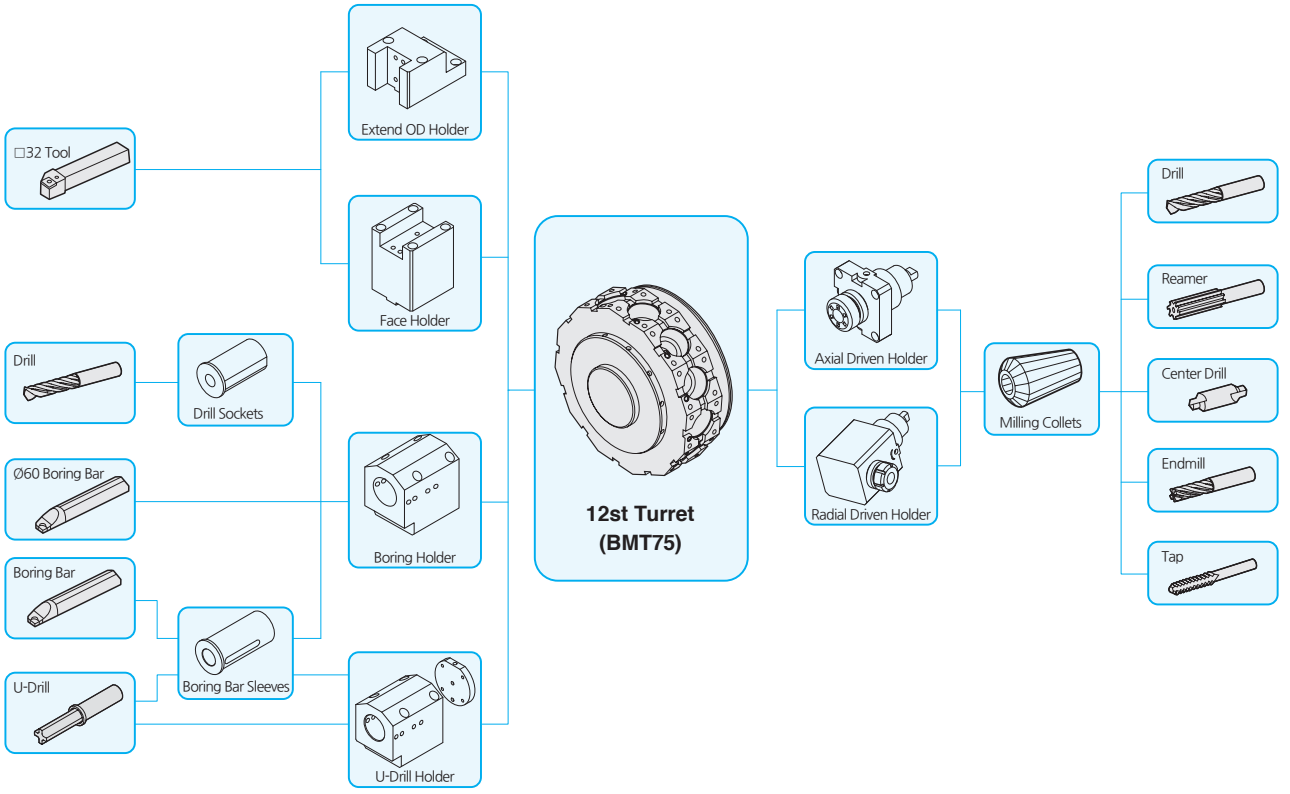


Standard Tooling

Item / Description			SL 3500Y/LY
Turning Holder	EXTENSION OD HOLDE	-	3
	Facing Holder	-	1
Boring Holder	BORING HOLDER	-	-
	U-Drill Holder	-	4
Driven Holder	AXIAL DRIVEN HOLDER	-	2
	RADIAL DRIVEN HOLDER	-	2
Socket	Boring	Ø10 (Ø3/8″)	1
		Ø12 (Ø1/2″)	1
		Ø16 (Ø5/8″)	1
		Ø20 (Ø3/4″)	1
		Ø25 (Ø1″)	1
		Ø32 (Ø1 1/4″)	1
		Ø40 (Ø1 1/2″)	1
	Drill	MT3	1
		MT4	1

Tooling System

Unit : mm(inch)



Standard Tooling

Item / Description			SL 4500XY/LY/XLY
Turning Holder	EXTENSION OD HOLDE	-	4
	Facing Holder	-	1
Boring Holder	BORING HOLDER	-	2
	U-Drill Holder	-	1
Driven Holder	AXIAL DRIVEN HOLDER	-	2
	RADIAL DRIVEN HOLDER	-	2
Socket	Boring	Ø12 (Ø1/2″)	1
		Ø16 (Ø5/8″)	1
		Ø20 (Ø3/4″)	1
		Ø25 (Ø1″)	1
		Ø32 (Ø1 1/4″)	1
		Ø40 (Ø1 1/2″)	1
		Ø50 (Ø2″)	1
	Drill	MT 2	1
		MT 3	1
		MT 4	1
		MT 5	1

Standard / Optional

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

Category			SL 3500Y series	SL 4500Y series
Spindle	3 jaw open-center chuck		●	●
	3 jaw closed-center chuck		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)		●	●
	Rotary holder (radial)		●	●
	Boring bar sleeve (same as U-drill holder sleeve)		●	●
	Drill socket		●	●
	U-drill holder		●	●
Tailstock	NC(Servo Motor) tailstock		●	X
	Dead center		●	●
	Live center		●	X
	High rigidity live center		X	X
	Dual pressure tailstock		X	X
	Quill forward/reverse confirmation		X	X
	Tailstock footswitch		X	X
Coolant & Air Blow	Standard coolant (nozzle)		○	○
	Coolant above chuck		○	○
	Coolant gun		○	○
	Bed flushing		○	○
	Air blower		○	○
	Rotary tool holder TSC		○	○
	Air gun		○	○
	Coolant pump	4.5Bar	●	●
		7Bar	○	○
		10Bar	○	○
		14.5Bar	○	○
		20Bar	○	○
	Coolant chiller		○	○
Chip Disposal	Coolant tank		●	●
	Chip conveyor (Hinge / Scraper)	Side	●	●
		Rear	△	△
	Special chip conveyor (drum filter)		△	△
	Chip bucket	Fixed 380L	○	○

Category			SL 3500Y series	SL 4500Y series
Safety Features	Door interlock		●	●
	Backspin torque limiter(BST)		○	○
	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		○	○
	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	○	○
Hydraulic Supply	Standard hydraulic cylinder	Open-center	○	○
	Standard hydraulic unit	35Bar	○	○

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

SL 3500/4500Y Series

Y-AXIS HORIZONTAL TURNING CENTER

Machine Specifications

[ ] : Option

Category			SL 3500Y		SL 3500LY	
			A type	B type	A type	B type
Chuck	Chuck size	inch	12"	15"	12"	15"
Capacity	Swing over bed	mm(inch)	850(33.47)	850(33.47)	850(33.47)	850(33.47)
	Swing over cross-slide	mm(inch)	850(33.47)	850(33.47)	850(33.47)	850(33.47)
	Max turning diameter	mm(inch)	430(16.93)	430(16.93)	430(16.93)	430(16.93)
	Max milling diameter	mm(inch)	539(21.23)	539(21.23)	539(21.23)	539(21.23)
	Max turning length	mm(inch)	795(31.30)	765(30.12)	2,125(83.67)	2,095(82.49)
Spindle	Spindle speed	rpm	2,500	2,000	2,500	2,000
	Spindle nose	ASA	A2-11	A2-11	A2-11	A2-11
	Draw tube ID	mm(inch)	103(4.06)	117.5(4.63)	103(4.06)	117.5(4.63)
	Spindle bore	mm(inch)	115(4.53)	132(5.20)	115(4.53)	132(5.20)
	Main spindle motor (cont/max)	kW(Hp)	18.5/22(24.81/29.51)	18.5/22(24.81/29.51)	18.5/22(24.81/29.51)	18.5/22(24.81/29.51)
Travels	X-axis stroke	mm(inch)	280(11.03)	280(11.03)	280(11.03)	280(11.03)
	Y-axis stroke	mm(inch)	130(±65)(5.12(±2.56))	130(±65)(5.12(±2.56))	130(±65)(5.12(±2.56))	130(±65)(5.12(±2.56))
	Z-axis stroke	mm(inch)	865(34.06)	865(34.06)	2,200(86.62)	2,200(86.62)
	X-axis rapid traverse	m/min(ipm)	30(1,181.11)	30(1,181.11)	30(1,181.11)	30(1,181.11)
	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)
Turret	No of tool positions	ea	12 (BMT65)	12 (BMT65)	12 (BMT65)	12 (BMT65)
	OD tool size	mm(inch)	25(0.99)	25(0.99)	25(0.99)	25(0.99)
	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	4,500	4,500	4,500	4,500
	Rotary tool 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(7.38/10.06)
Tailstock	Quill diameter	mm(inch)	110(4.34)	110(4.34)	110(4.34)	110(4.34)
	Quill stroke	mm(inch)	100(3.94)	100(3.94)	100(3.94)	100(3.94)
	Quill taper	MT	MT4 (Built-in)	MT4 (Built-in)	MT4 (Built-in)	MT4 (Built-in)
Machine	Size (with SIDE chip conveyor) L×W×H	mm(inch)	4,009(4,986)×2,162×2,289 (157.84(196.30)×85.12×90.12)		5,450(6,506)×2,162×2,289 (214.57(256.15)×85.12×90.12)	
	Weight	kg(lb)	7,000(15,432.36)	7,000(15,432.36)	10,500(23,148.54)	10,500(23,148.54)
	Coolant tank capacity	Liter(gal)	180(47.56)	180(47.56)	261(68.95)	261(68.95)
Electric power supply		kVA/V	50/220	50/220	50/220	50/220
Controller			FANUC 0i-TF+, SIEMENS			

※ Design and specifications are subject to change without notice.

Machine Specifications

[ ] : Option

Category			SL 4500XY			SL 4500LY		
			A type	B type	C type	A type	B type	C type
Chuck	Chuck size	inch	18[15]"	21"	24"	18[15]"	21"	24"
Capacity	Swing over bed	mm(inch)	975(38.39)	975(38.39)	975(38.39)	975(38.39)	975(38.39)	975(38.39)
	Swing over cross-slide	mm(inch)	830(32.68)	830(32.68)	830(32.68)	830(32.68)	830(32.68)	830(32.68)
	Max turning diameter	mm(inch)	620(24.41)	620(24.41)	620(24.41)	620(24.41)	620(24.41)	620(24.41)
	Max milling diameter	mm(inch)	704(27.72)	704(27.72)	704(27.72)	704(27.72)	704(27.72)	704(27.72)
	Max turning length	mm(inch)	2,140(84.26)	2,117(83.35)	2,117(83.35)	2,930(115.36)	2,930(115.36)	2,930(115.36)
Spindle	Spindle speed	rpm	1,800[2,000]	1,500	1,200	1,800[2,000]	1,500	1,200
	Spindle nose	ASA	A2-11	A2-15	A2-15	A2-11	A2-15	A2-15
	Draw tube ID	mm(inch)	117.5(4.63)	140(5.52)	166.5(6.56)	117.5(4.63)	140(5.52)	166.5(6.56)
	Spindle bore	mm(inch)	132(5.20)	181(7.13)	181(7.13)	132(5.20)	181(7.13)	181(7.13)
	Main spindle motor (cont/max)	kW(Hp)	30/37(40.24/40.62)			30/37(40.24/40.62)		
Travels	X-axis stroke	mm(inch)	350(13.78)	350(13.78)	350(13.78)	350(13.78)	350(13.78)	350(13.78)
	Y-axis stroke	mm(inch)	200(±100)(7.88(±3.94))			200(±100)(7.88(±3.94))		
	Z-axis stroke	mm(inch)	2,270(89.38)	2,270(89.38)	2,270(89.38)	3,060(120.48)	3,060(120.48)	3,060(120.48)
	X-axis rapid traverse	m/min(ipm)	20(787.41)	20(787.41)	20(787.41)	20(787.41)	20(787.41)	20(787.41)
	Y-axis rapid traverse	m/min(ipm)	15(590.56)	15(590.56)	15(590.56)	15(590.56)	15(590.56)	15(590.56)
	Z-axis rapid traverse	m/min(ipm)	18(708.67)	18(708.67)	18(708.67)	18(708.67)	18(708.67)	18(708.67)
Turret	No of tool positions	ea	12 (BMT75)	12 (BMT75)	12 (BMT75)	12 (BMT75)	12 (BMT75)	12 (BMT75)
	OD tool size	mm(inch)	32(1.26)	32(1.26)	32(1.26)	32(1.26)	32(1.26)	32(1.26)
	Boring bar diameter	mm(inch)	60(2.37)	60(2.37)	60(2.37)	60(2.37)	60(2.37)	60(2.37)
	Indexing time	sec	0.25	0.25	0.25	0.25	0.25	0.25
	Rotary tool speed	rpm	4,000	4,000	4,000	4,000	4,000	4,000
	Rotary tool motor (cont/max)	kW(Hp)	5.5/7.5(7.38/10.06)			5.5/7.5(7.38/10.06)		
Tailstock	Quill diameter	mm(inch)	160(6.30)	160(6.30)	160(6.30)	160(6.30)	160(6.30)	160(6.30)
	Quill stroke	mm(inch)	150(5.91)	150(5.91)	150(5.91)	150(5.91)	150(5.91)	150(5.91)
	Quill taper	MT	MT5 (Built-in)	MT5 (Built-in)	MT5 (Built-in)	MT5 (Built-in)	MT5 (Built-in)	MT5 (Built-in)
Machine	Size (with SIDE chip conveyor) L×W×H	mm(inch)	5,570(6,530)×2,303×2,659 (219.30(257.09)×90.67×104.69)			6,350(7,327)×2,303×2,659 (250(288.47)×90.67×104.69)		
	Weight	kg(lb)	17,000(37,478.59)			22,000(48,501.70)		
	Coolant tank capacity	Liter(gal)	400(105.67)	400(105.67)	400(105.67)	600(158.51)	600(158.51)	600(158.51)
Electric power supply		kVA/V	63/220	63/220	63/220	63/220	63/220	63/220
Controller			FANUC 0i-TF+, SIEMENS					

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SL 3500/4500Y Series

Y-AXIS HORIZONTAL TURNING CENTER

Machine Specifications

[ ] : Option

Category			SL 4500XLY		
			A type	B type	C type
Chuck	Chuck size	inch	18[15]"	21"	24"
Capacity	Swing over bed	mm(inch)	975(38.39)	975(38.39)	975(38.39)
	Swing over cross-slide	mm(inch)	830(32.68)	830(32.68)	830(32.68)
	Max turning diameter	mm(inch)	620(24.41)	620(24.41)	620(24.41)
	Max milling diameter	mm(inch)	704(27.72)	704(27.72)	704(27.72)
	Max turning length	mm(inch)	5,000(196.86)	5,000(196.86)	5,000(196.86)
Spindle	Spindle speed	rpm	1,800[2,000]	1,500	1,200
	Spindle nose	ASA	A2-11	A2-15	A2-15
	Draw tube ID	mm(inch)	117.5(4.63)	140(5.52)	166.5(6.56)
	Spindle bore	mm(inch)	132(5.20)	181(7.13)	181(7.130
	Main spindle motor (cont/max)	kW(Hp)	30/37(40.24/49.62)	30/37(40.24/49.62)	30/37(40.24/49.62)
Travels	X-axis stroke	mm(inch)	350(13.78)	350(13.78)	350(13.78)
	Y-axis stroke	mm(inch)	200(±100)(7.88(±3.94))	200(±100)(7.88(±3.94))	200(±100)(7.88(±3.94))
	Z-axis stroke	mm(inch)	5,090(200.40)	5,090(200.40)	5,090(200.40)
	X-axis rapid traverse	m/min(ipm)	20(787.41)	20(787.41)	20(787.41)
	Y-axis rapid traverse	m/min(ipm)	15(590.56)	15(590.56)	15(590.56)
	Z-axis rapid traverse	m/min(ipm)	18(708.67)	18(708.67)	18(708.67)
Turret	No of tool positions	ea	12 (BMT75)	12 (BMT75)	12 (BMT75)
	OD tool size	mm(inch)	32(1.26)	32(1.26)	32(1.26)
	Boring bar diameter	mm(inch)	60(2.37)	60(2.37)	60(2.37)
	Indexing time	sec	0.25	0.25	0.25
	Rotary tool speed	rpm	4,000	4,000	4,000
	Rotary tool 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)
Tailstock	Quill diameter	mm(inch)	160(6.30)	160(6.30)	160(6.30)
	Quill stroke	mm(inch)	150(5.91)	150(5.91)	150(5.91)
	Quill taper	MT	MT5 (Built-in)	MT5 (Built-in)	MT5 (Built-in)
Machine	Size (with SIDE chip conveyor) L×W×H	mm(inch)	8,700(9,897)×2,493×2,683 (342.52(389.65)×98.15×105.63)		
	Weight	kg(lb)	25,000(55,115.57)	25,000(55,115.57)	25,000(55,115.57)
	Coolant tank capacity	Liter(gal)	850(224.55)	850(224.55)	850(224.55)
Electric power supply		kVA/V	63/220	63/220	63/220
Controller			FANUC 0i-TF+, SIEMENS		

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NC Specification / FANUC

● : STD ○ : Optional X : N/A

Functions		0*i*-TF+
Controlled axis	Controlled axes	X, Z, Y, C
	Max simultaneously controlled axes	4
	Least input increment	0.001mm / 0.0001"
	Built-in stroke limit	Soft overtravel 1, 2, 3, 4
	Machine lock	●
Operation functions	Manual handle feed	X1, X10, X100
	Dry run	●
	Single block	●
	Feed per minute	G94
	Feed per revolution	G95
	DNC operation	Ethernet, CF card
	Thread cutting pause	○
Interpolation functions	Linear interpolation	G01
	Circular interpolation	G02, G03
	Dwell	G04
	Cylindrical interpolation	G70.1
	Skip	G31
	Nano smoothing	X
	Polar coordinate interpolation	●
	Reference position (zero) return	G28
	Reference position (zero) return check	G27
	2nd, 3rd, 4th reference point return	G30
	Variable lead thread cutting	●
	Thread repair	●
Feed function	Rapid traverse override	F0, 25%, 50%, 100%
	Feedrate override	0~200%
	Jog override	●
	AI look ahead	X
	AI contour control II	○ (200 block)
Spindle function	Spindle orientation	●
	Rigid tapping	M29
	Spindle override	S0 ~ 150%
	Arbitrary speed threading	○
Tool functions	Tool number command	T4-Digt Tool number
	Tool nose radius compensation	G40 ~ G42
	Tool offset pairs	128-pairs
	Tool geometry / wear offset	●
	Tool length compensation	●
	Tool life management	●
	Tool path graphic display	●

Functions		0*i*-TF+
Program input	Absolute / incremental command	G90/G91
	Repeating canned cycle	●
	Repeating canned cycle 2	●
	Canned cycles	●
	Drilling canned cycle	●
	Decimal point input	●
	Inch / metric conversion	G20 / G21
	Program restart	●
	Sub program call	●
	Max programmable value	±99999.999mm/± 9999.9999"
	M function	3 digit
	Custom macro	●
	Addition of custom macro common variables	#100~#199, #500~#999
	Direct drawing dimension programming	●
	Programmable data input	G10
	Tape code	ISO / EIA
	Optional block skip	●
	Workpiece coordinate system	G52 ~ G59
	Addition of workpiece coordinate system	X
Interface function	Embedded ethemet	●
	Fast ethernet	X
Setting and display	Alarm and operator history display	●
	Run hour and parts count display	●
	Loadmeter display	●
	Self diagnosis function	●
	Extended part program editing	●
	Machining condition selection function	○
	Machining quality level adjustment	X
	Display screen	15" color LCD
	Multi-language display	25 language
Data input/ output	Fast data server	X
	RS232C interface	●
	Memory card input / output	●
	USB memory input / output	●
Editing operation	Part program storage size	512Kbyte(2Mbyte)
	Number of registered programs	400(1,000) EA
	Manual guide 0i	○
	Manual guide i	●

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