

NC Specifications / FANUC Series

Item		Specification	FANUC Series
Controlled axis	Max. feed axes		2 AXIS
	Feed axes		X/Z/(Cs)
	Max. simultaneously controlled axis		4
	Least command increment	0.001mm / 0.0001"	○
Operation functions	Pulse handle feed	X1, X10, X100	○
	Feedrate per minute	G98	○
	Feedrate per revolution	G99	○
	Linear interpolation	G01	○
Interpolation functions	Circular interpolation	G02, G03	○
	Dwell	G04	○
	Polar coordinate interpolation	G12.1, G13.1	○
	Cylindrical interpolation	G70.1	○
	Variable lead thread cutting	G34	○
	Continuous threading		○
	Reference position return	G28	○
	Reference position return check	G27	○
Feed function	Rapid traverse rate override	F0, 25%, 50%, 100%	○
	Feedrate override		0~150%
Spindle function	Spindle orientation		○
	Rigid tapping		○
Tool functions	Tool number command	T4-Digt / T2-Digt	○
	Tool nose radius compensation	G40 ~ G42	○
	Tool offset pairs		○
	Tool geometry/wear offset	GEOMETRY & WEAR DATA	○
	Tool life management		○
	Tool path graphic display		○
	Automatic tool offset	G36, G37	○
	Direct input of tool offset value measured B		○
Program input	Absolute/incremental programming		○
	Multiple repetitive cycle	G70 ~ G76	○
	Canned cycles	G90, G92, G94	○
	Inch/metric conversion	G20 / G21	○
	Program restart		○
	Retraction for rigid tapping		○
	Max. programmable dimension	±99999.999mm/±9999.9999"	○
	M function	M3 digit	○
	Custom macro	#100-#199, #500-#999	○
	Canned cycle for drilling		○
	Direct drawing dimension programming		○
	Programmable data input	G10	○
	Optional block skip		○
	Workpiece coordinate system	G52 ~ G59	○
	Number of registerable programs		○
Setting and display	Alarm & Operator history display	ALARM & OPERATION DISPLAY	○
	Run hour and parts count display	RUNNING TIME & PART NO. DISPLAY	0~150%
	Display spindle & servo overload	SPINDLE & SERVO LOAD DISPLAY	○
	Self-diagnosis function		○
	Extended part program editing	COPY,MOVE, CHANGE OF NC PROGRAM	○
	Display screen		10.4" color
Data input/output	Memory card input/output		○
	USB memory input/output		○
Editing operation	Part program storage size	512Kbyte(1280m)	○
Manual guide i	Manual Guide i		Option



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https://www.youtube.com/c/smecmachinetools



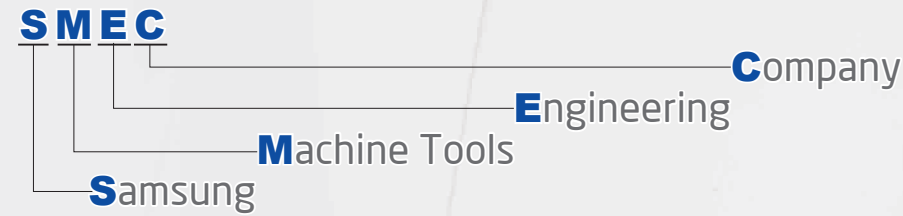
SMEC

SLV 500/500M (RH, LH)

VERTICAL TURNING CENTER



- 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



SLV 500/500M

- A Type : Chuck Size 12"
- B Type : Chuck Size 15"
- C Type : Chuck Size 18"

Strongest in class with superb structural design
Simultaneous heavy duty and precision turning

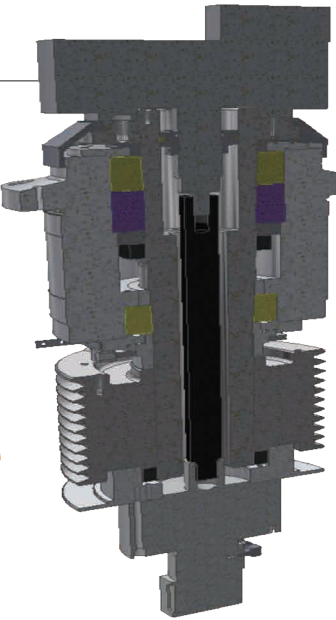
- High speed, precision and high rigidity spindle
- Stable machine structure
- Significantly reduced non-cutting time and high productivity

High Accuracy, High Rigidity Spindle

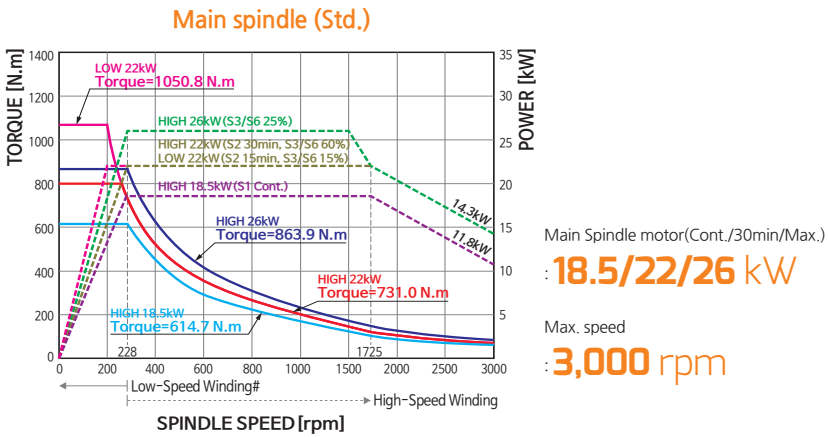
Main Spindle Structure

High torque main spindle motor is supported by strong Double Cylindrial Roller bearings and Angular Thrust bearings which allow heavy duty cutting and minimize acceleration/deceleration times.

- Spindle nose(ASA) : **A2-8**
- Spindle bearing diameter(front) : **Ø130mm**
- A2-8, 12"(15") chuck available**



Spindle Power & Torque Diagram



An innovative high precision, heavy duty CNC Lathe, integrated with all of SMEC's advanced technology - SLV 500/500M



Spindle speed
3,000 rpm (12")
2,000 rpm (15"/18")

Max. machining dia.
500 mm

Max. machining length
465 mm

Rapid traverse(X/Z)
20/20 m/min

Highly Reliable and Rigid Structural Design

Ensure heavy duty and precision cutting with excellent structural design

SERVO TURRET



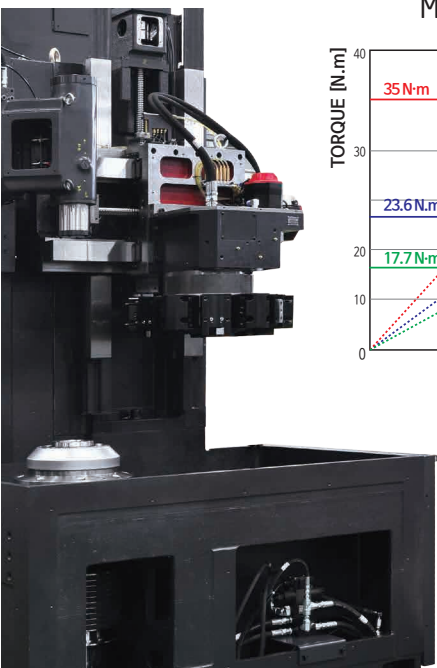
Indexing Time
0.18 sec(60Hz)

Number of tool positions
12 stations

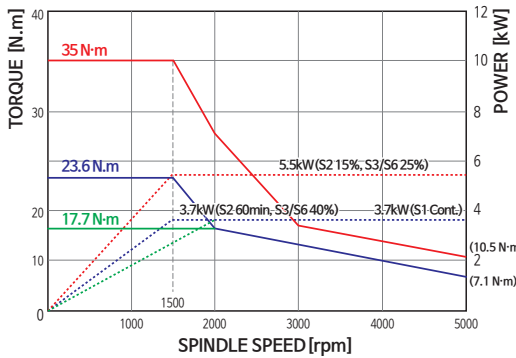
High Speed, Heavy Duty Servo Turret

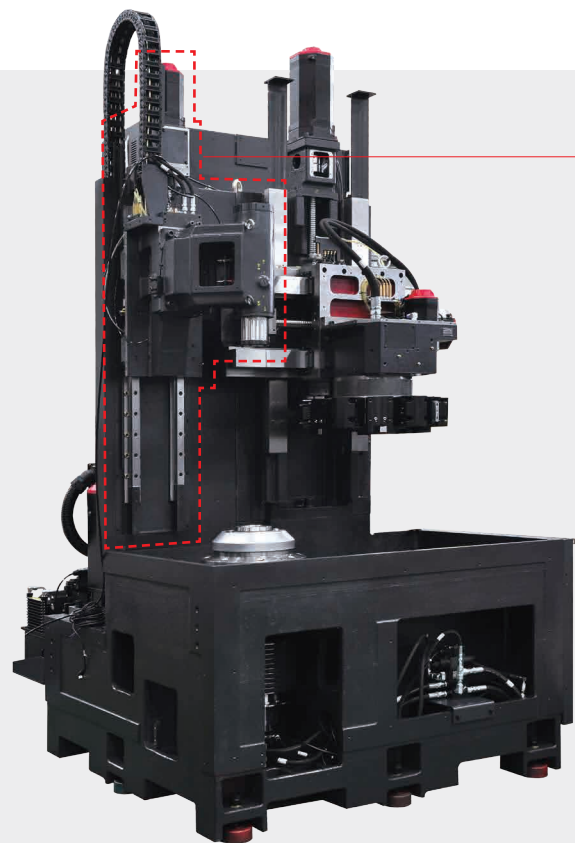
Driven by a reliable high torque servo motor, the 12-station heavy-duty turret indexes nonstop, bi-directionally with a fast 0.18 second from station to station. Large diameter 3 pieces precision Curvic coupling with 44.3KN(9,959 lbs) of turret clamping force enables precision as well as heavy-duty cutting. SLV500_M is equipped with standard 12-station BMT65 turret, capable of accepting rotary tools at any station.

CLAMP FORCE
44.3KN



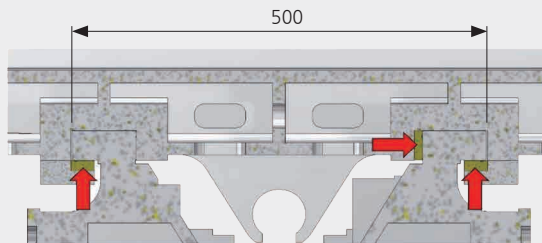
Milling Motor Torque Diagram





Main Body Construction

The main body of SLV 500/500M is consisted of one piece meehanite cast iron bed, wide column, anti-heat displacement spindle and headstock, and integral Box way construction with anti-friction mating way surfaces that ensure unsurpassed long term rigidity and superior accuracy.

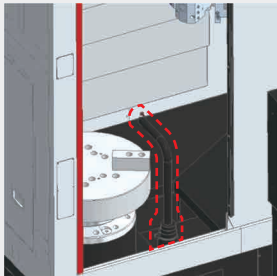


Three(3) adjustable Gibs on X and Z axis provide easier maintenance as well as long term rigidity and accuracy

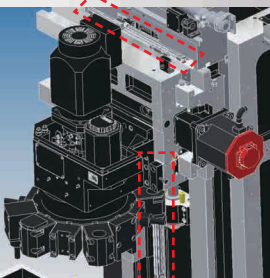
Column Span : The largest in its class
500mm

Servo Tailstock (Special Option)

- Tailstock Drive Mechanism : Servo Motor (1.6kW)
- Tailstock travel : 450mm
- Tail stock Diameter : Ø110
- Tail stock taper type : MT-5
- Quill Drive Mechanism : Hydraulic
- Quill travel : 80mm



Tool Presetter (Special Option)



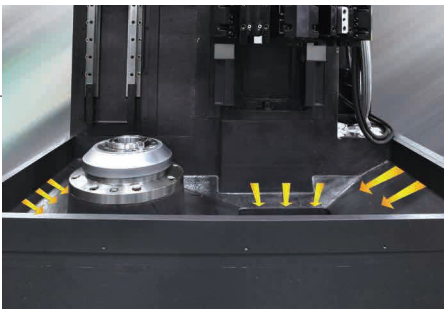
X/Z Linear Scale (Special Option)

- Spec. : ±5µm

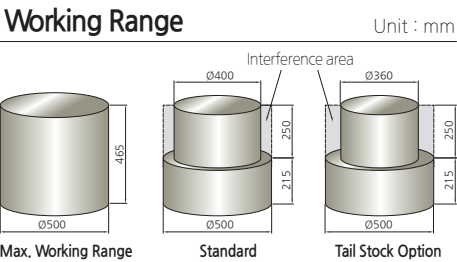


Easy Chip Removal and High Volume Coolant System.

Large volume of flushing coolant allows minimal chip build-up, and slanted splash guard design effectively removes the chip out from the machine.



Motor
1.1 kW
Discharge Capacity
165L/min[60Hz]



Operator convenience pendant type control panel

- High-Speed and High Quality Machining Excellent Control Functions
- Focusing on Minimizing Downtime High Reliability and Easy Maintenance
- Operator convenient pendant type control panel

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.



Reliable Lubrication Dispenser

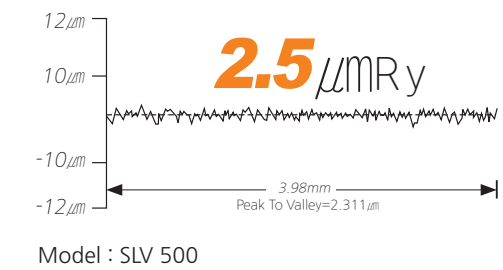
Lubrication pump adopted which is one of the most reliable brand and offers exact amount of oil on each face.

Capacity : **4 Liter**

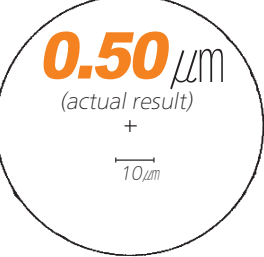


High Precision

Surface Roughness



Roundness

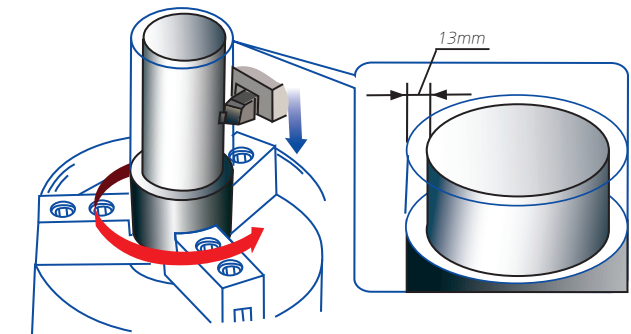


Cutting condition	
Tool	Diamond tool <nose radius 0.020 inch>
Material	AL150<Aluminum>
Cutting speed	198 m/min
Feedrate	0.05 mm/rev
Depth of cut	0.1 mm
Outer diameter	200 mm
Filter	1-50

Processing Speed

Turning Performance (material:SM45C) SLV 500

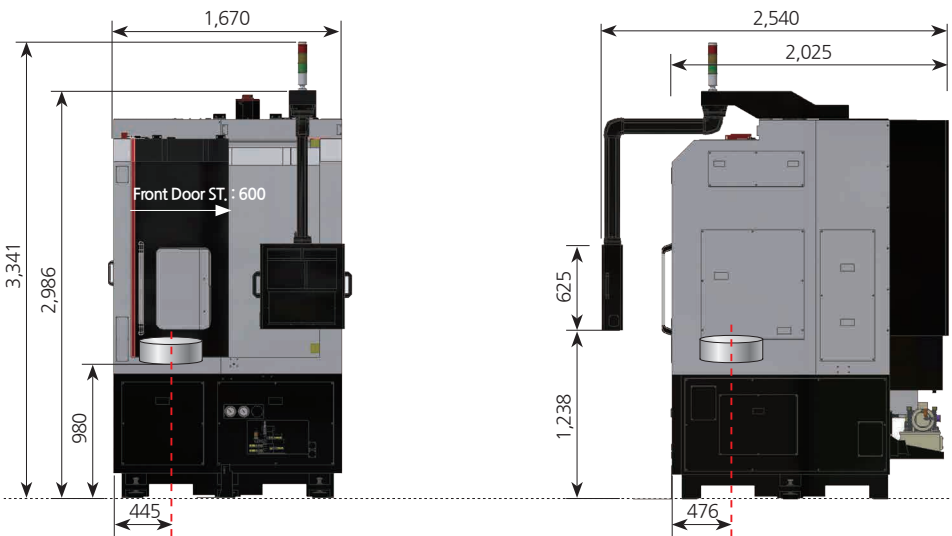
Heavy-duty cutting (O.D) <25mm×25mm qualified tool>



Spindle speed
357 rpm
Cutting speed
142 m/min
Depth of cut
13 mm <Spindle Load 65%>
Feedrate
0.3 mm/rev

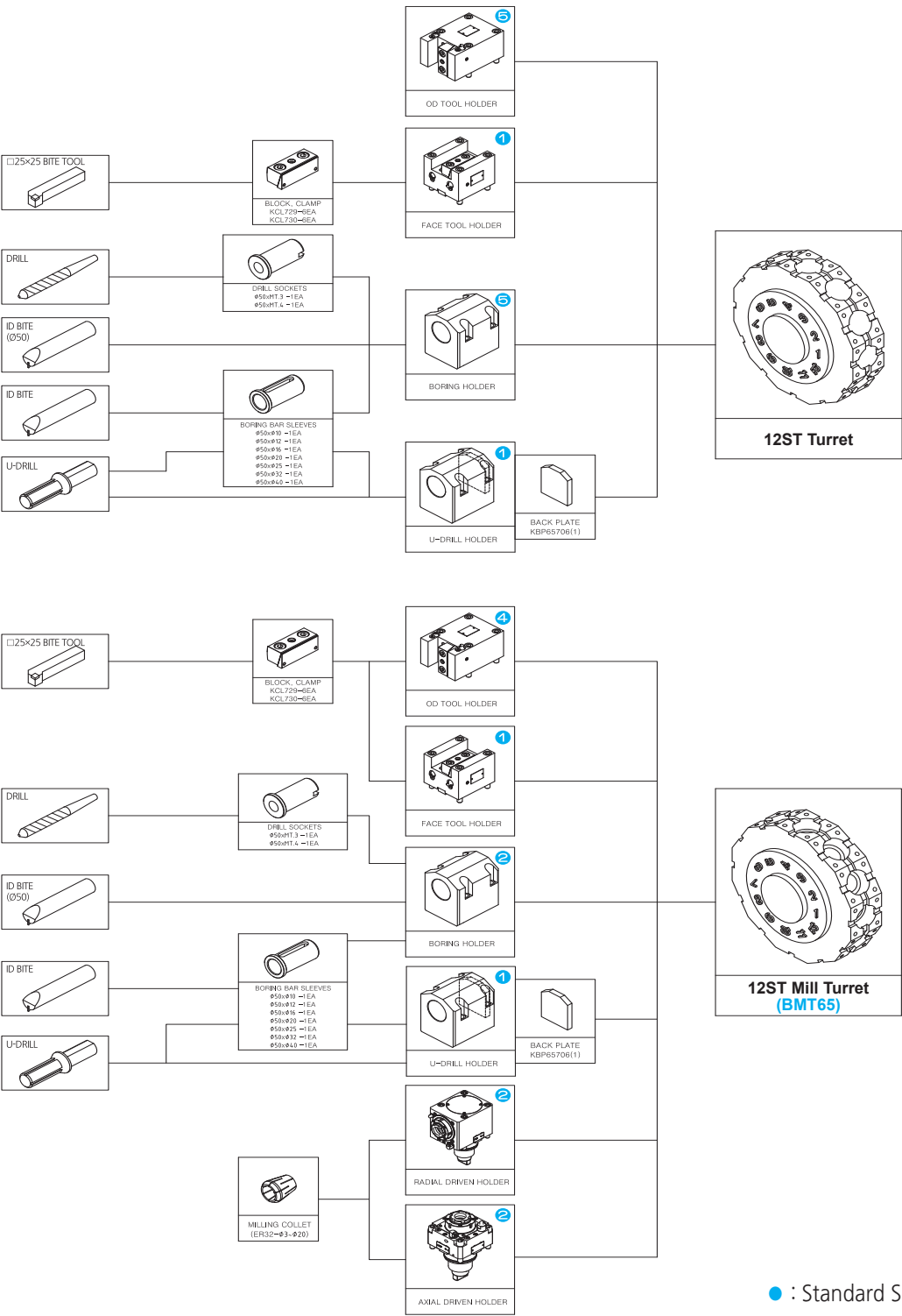
Machine Dimensions

Unit : mm



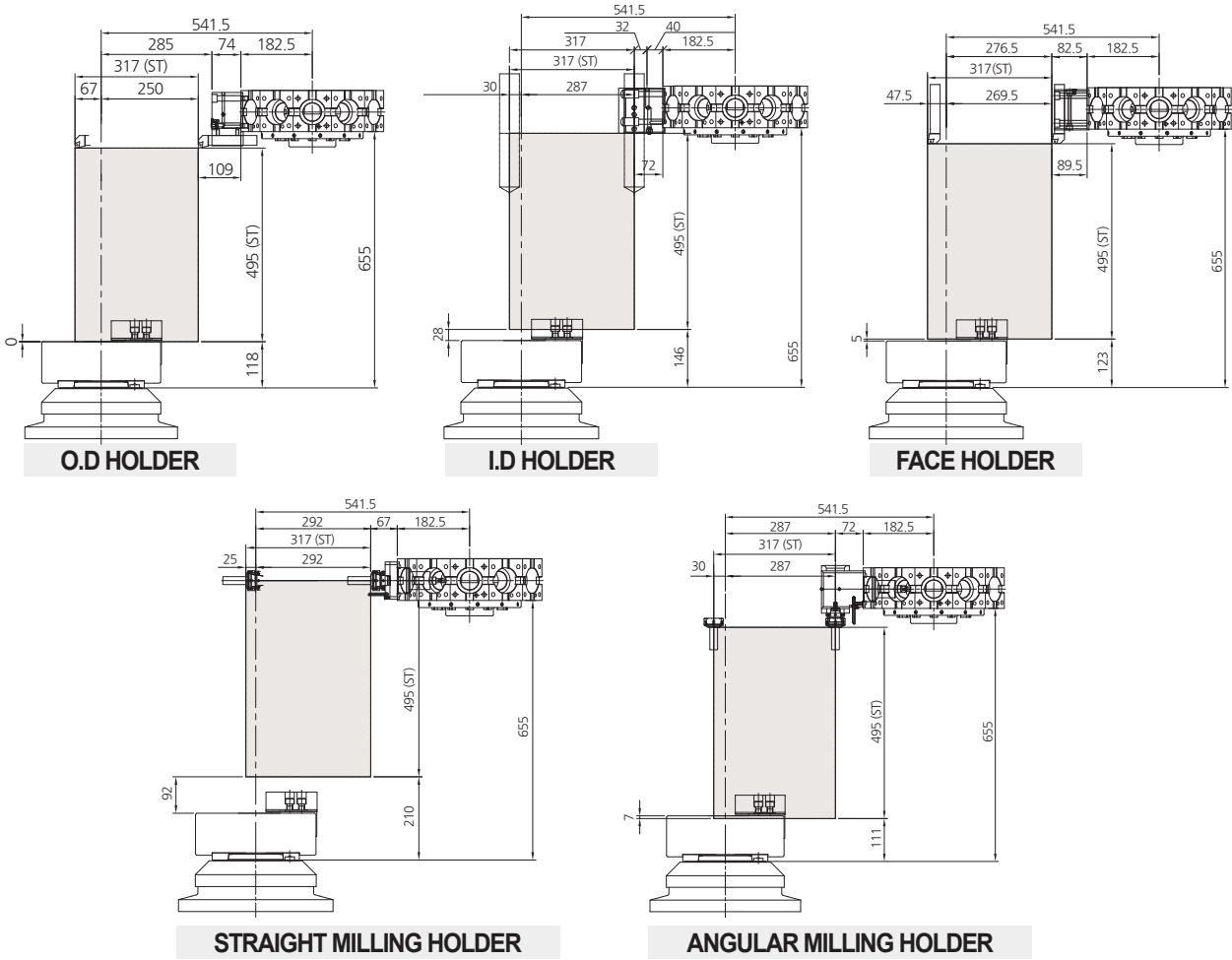
Tool Holders & Sleeves

Unit : mm



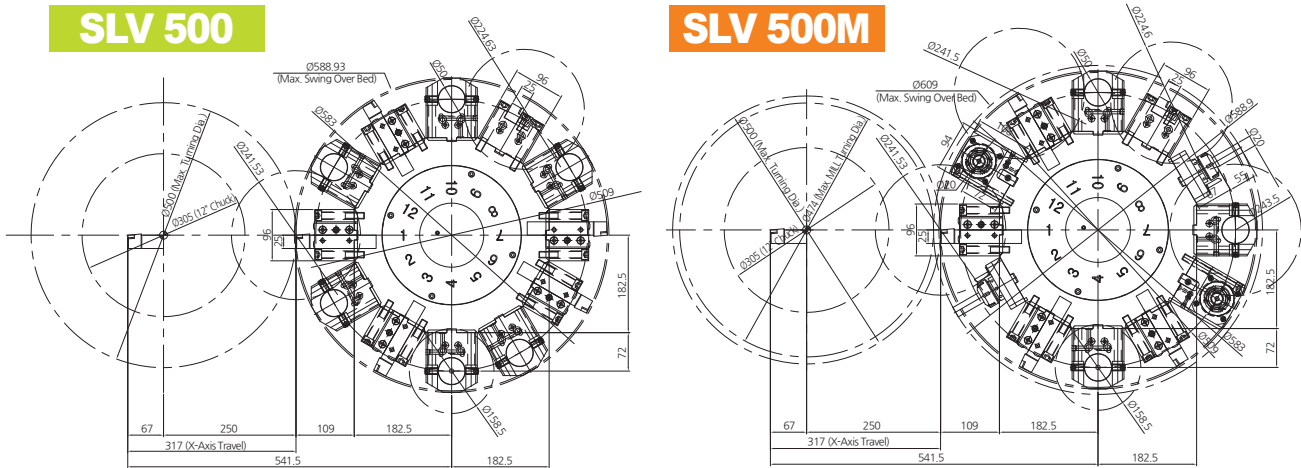
Work Range

Unit : mm



Turret Interference

Unit : mm



Major Specifications

DESCRIPTION			SLV 500 RH/LH			SLV 500M RH/LH		
			A type	B type	C type	A type	B type	C type
Chuck	Chuck size	inch	12"	15"	18"	12"	15"	18"
Capacity	Swing over bed	mm	700	700	700	700	700	700
	Swing over cross slide (with Tailstock)	mm	400(360)	400(360)	400(360)	400(360)	400(360)	400(360)
	Max. turning diameter	mm	500	500	500	500	500	500
	Max. milling diameter	mm	-	-	-	474	474	474
	Max. machining length	mm	465	465	465	465	465	465
Spindle	Spindle speed	rpm	3,000	2,000	2,000	3,000	2,000	2,000
	Spindle nose	ASA	A2-8	A2-8	A2-8	A2-8	A2-8	A2-8
	Draw tube ID	mm	-	-	-	-	-	-
	Spindle bore diameter	mm	60	60	60	60	60	60
	Spindle motor (Cont./Max)	kW	18.5/26	18.5/26	18.5/26	18.5/26	18.5/26	18.5/26
Travels	X-axis travel	mm	317	317	317	317	317	317
	Z-axis travel	mm	495	495	495	495	495	495
	X-axis Rapid traverse rate	m/min	20	20	20	20	20	20
	Z-axis Rapid traverse rate	m/min	20	20	20	20	20	20
Turret	Number of tool stations	ea	12	12	12	12(BMT65)	12(BMT65)	12(BMT65)
	Turning tool shank size	mm	25	25	25	25	25	25
	Boring bar diameter	mm	50	50	50	50	50	50
	Turret index time(next station swivel time)	sec	0.18	0.18	0.18	0.18	0.18	0.18
	Rotary tool speed	rpm	-	-	-	5,000	5,000	5,000
	Rotary tool motor (Cont./Max)	kW	-	-	-	3.7/5.5	3.7/5.5	3.7/5.5
Tailstock	Quill diameter	mm	[110]	[110]	[110]	[110]	[110]	[110]
	Quill stroke	mm	[450]	[450]	[450]	[450]	[450]	[450]
	Spindle taper	MT	[MT5]	[MT5]	[MT5]	[MT5]	[MT5]	[MT5]
Machine	Size (with Side Chip conveyor) L×W×H	mm	1,670(2,750) × 2,540 × 3,341			1,670(2,750) × 2,540 × 3,341		
	Size (with Rear Chip conveyor) L×W×H	mm	1,670 × 2,540(4,080) × 3,341			1,670 × 2,540(4,080) × 3,341		
	weight	kg	7,100	7,100	7,100	7,200	7,200	7,200
	Coolant tank capacity	Liter	250			250		
Electric power supply		kVA/V	40/220	40/220	40/220	45/220	45/220	45/220
Controller			FANUC					

※Design and specifications subject to change without notice.

[] : Option

Standard Accessories

- 12" hollow 3 jaws chuck (A Type)
- 15" hollow 3 jaws chuck (B Type)
- 18" hollow 3 jaws chuck (C Type)
- Chuck clamp confirmation
- Chuck clamp foot switch
- Chuck pressure switch
- Coolant system
- Door interlock
- Full splash guard with coolant tank
- Jaw (soft 3set, hard 1set)
- Leveling unit
- Manual/Part list (1set)
- Patrol lamp (3 colors)
- Safety precaution name plate
- Shower coolant unit
- Spindle orientation
- Tool box
- Tool holders
- Work light (LED lamp)

Optional Accessories

- Air blower
- Air conditioners (electric cabinet)
- Air gun
- Auto door
- Bar Feeder Interface
- Chip bucket
- Chip conveyor
- Coolant blower
- Coolant chiller
- Coolant gun
- Coolant level switch
- Coolant pressure switch
- Counter (total, multi, tool, work)
- Dual pressure chucking
- Linear scale (X, Z)
- Oil mist collector
- Oil skimmer
- Robot interface
- Special chuck
- Tailstock (servo)
- Tool presetter (removable)
- Transformer