

## 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
Operation functions	Least command increment	0.001mm / 0.0001"
	Pulse handle feed	X1, X10, X100
	Feedrate per minute	G98
Interpolation functions	Feedrate per revolution	G99
	Linear interpolation	G01
	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
	Display spindle & servo overload	SPINDLE & SERVO LOAD DISPLAY
	Self-diagnosis function	
	Extended part program editing	COPY, MOVE, CHANGE OF NC PROGRAM
Data input/output	Display screen	10.4" color
	Memory card input/output	
Editing operation	USB memory input/output	
	Part program storage size	512Kbyte(1280m)
Manual guide i	Manual Guide i	Option



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www.esmec.com



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

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 Smart One,  
 Global One

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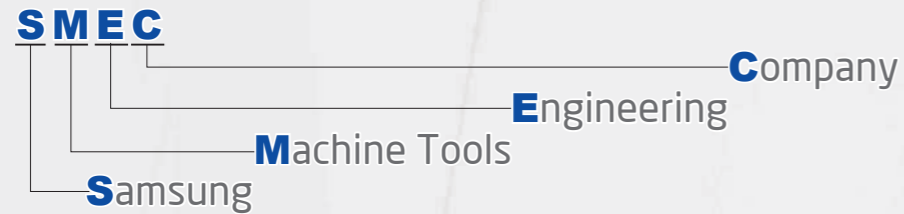
# SMEC

## 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

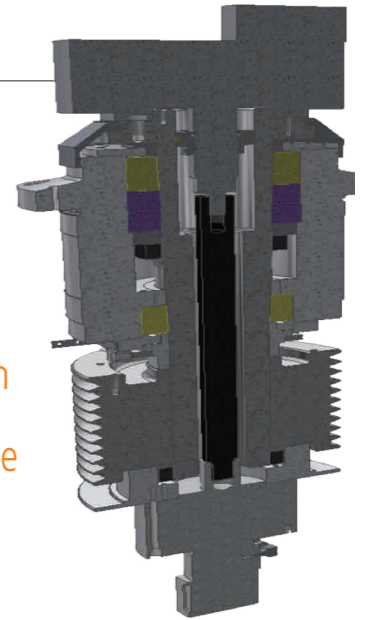
### Main Spindle Structure

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

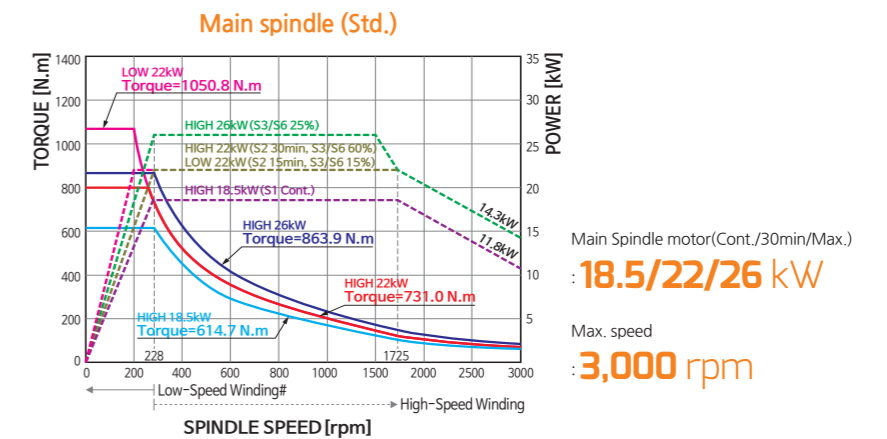
Spindle nose(ASA) : **A2-8**

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)**

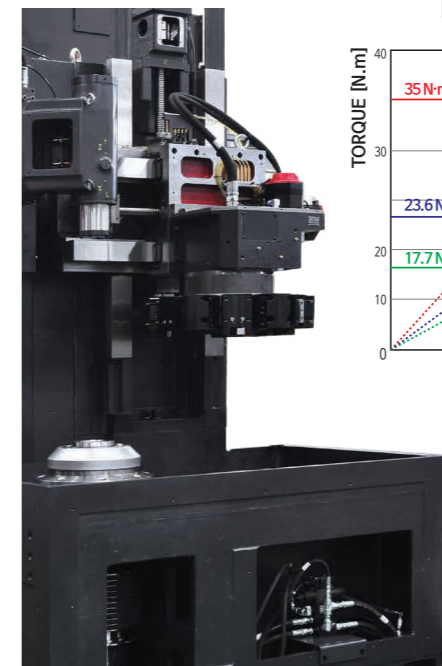
Number of tool positions  
**12 stations**

#### High Speed, Heavy Duty Servo Turret

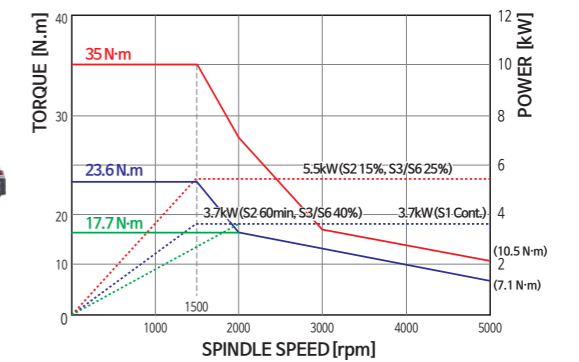
Driven by a reliable high torque servo motor, the 12-station heavy-duty turret indexes nonstop, bi-directionally with a fast 0.18 second from station to station. Large diameter 3 pieces precision Curvic coupling with 44.3KN(9,959 lbs) of turret clamping force enables precision as well as heavy-duty cutting. SLV500\_M is equipped with standard 12-station BMT65 turret, capable of accepting rotary tools at any station.

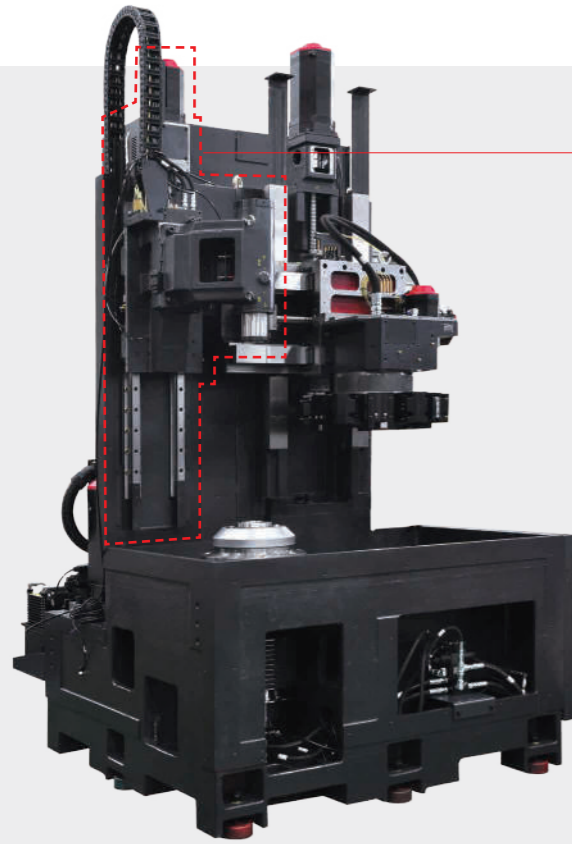
CLAMP FORCE

**44.3KN**



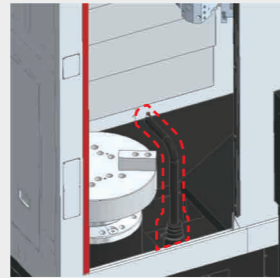
Milling Motor Torque Diagram



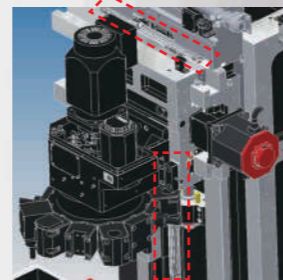


**Servo Tailstock (Special Option)**

- 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)**

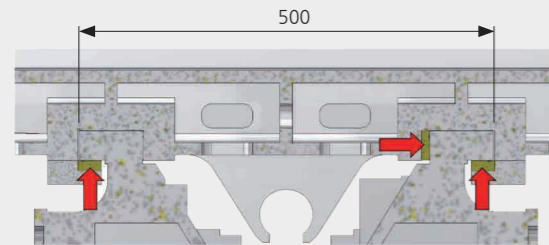


**X/Z Linear Scale (Special Option)**

- Spec. : ±5µm

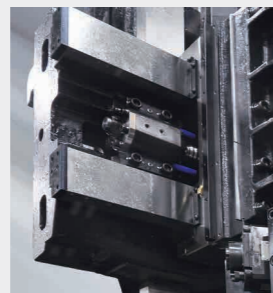
**Main Body Construction**

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.



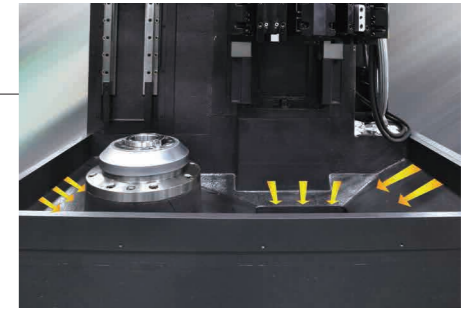
Three(3) adjustable Gibs on X and Z axis provide easier maintenance as well as long term rigidity and accuracy

Column Span : The largest in its class  
**500mm**



**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.

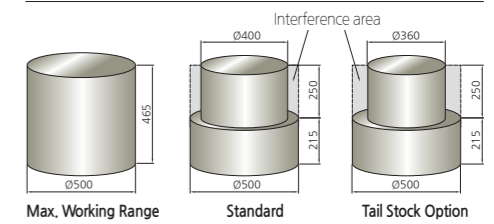


Motor  
**1.1 kW**

Discharge Capacity  
**165L/min[60Hz]**

**Working Range**

Unit : mm



**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**

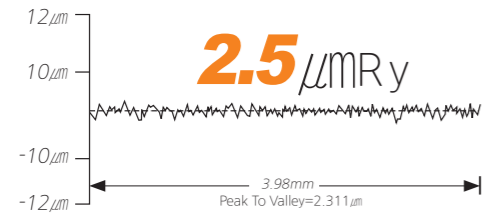
Lubrication pump adopted which is one of the most reliable brand and offers exact amount of oil on each face.

Capacity : **4 Liter**



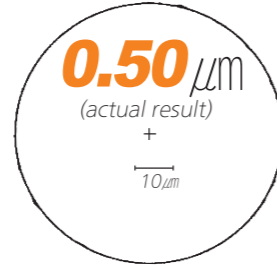
**High Precision**

Surface Roughness



Model : SLV 500

Roundness

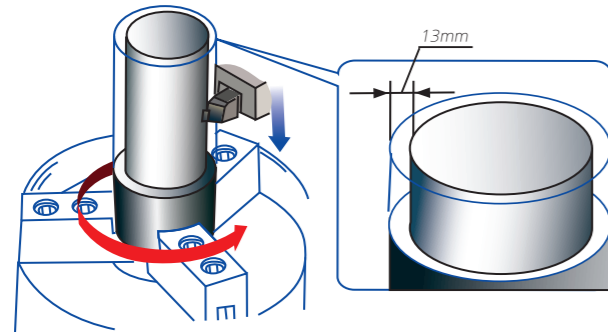


Cutting condition	
Tool	Diamond tool <nose radius 0.020 inch>
Material	AL150<Aluminum>
Cutting speed	198 m/min
Feedrate	0.05 mm/rev
Depth of cut	0.1 mm
Outer diameter	200 mm
Filter	1-50

**Processing Speed**

Turning Performance (material:SM45C) SLV 500

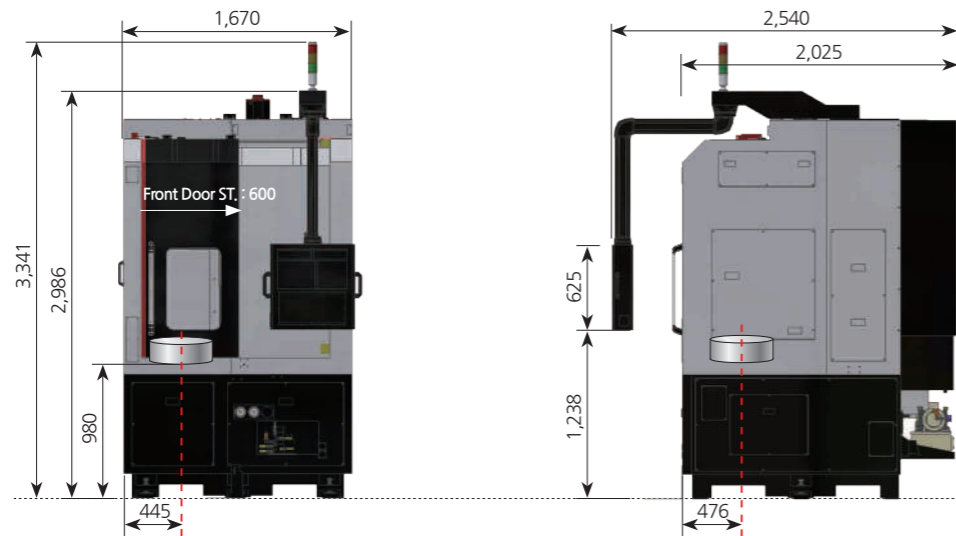
Heavy-duty cutting (O.D) <25mm×25mm qualified tool>



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

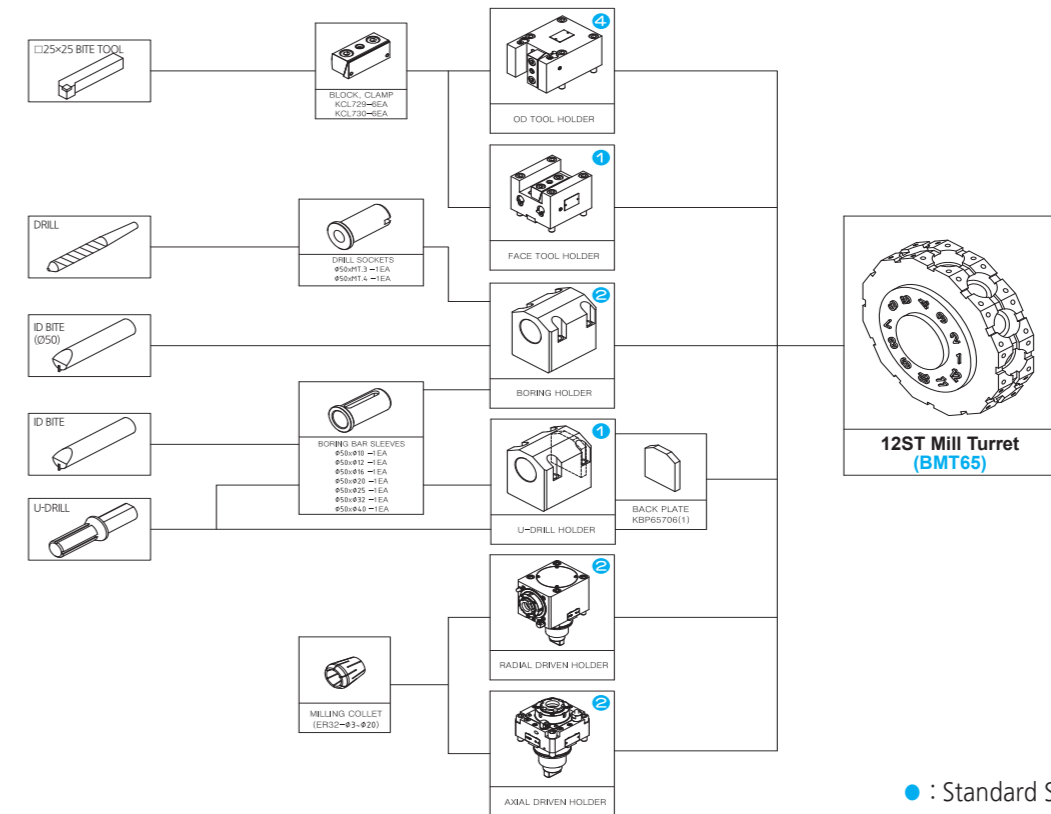
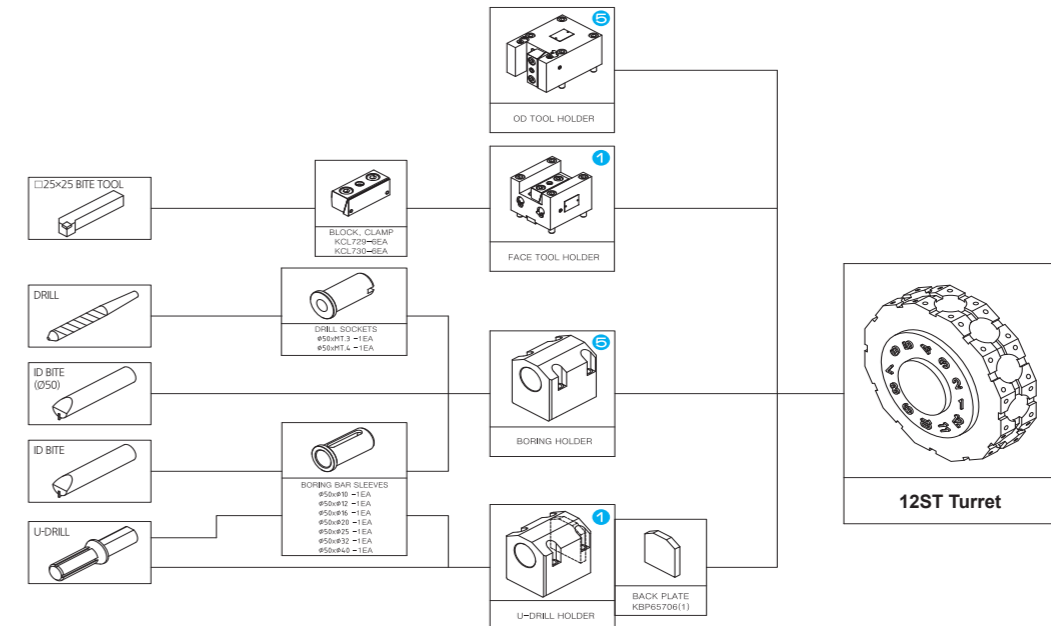
**Machine Dimensions**

Unit : mm



**Tool Holders & Sleeves**

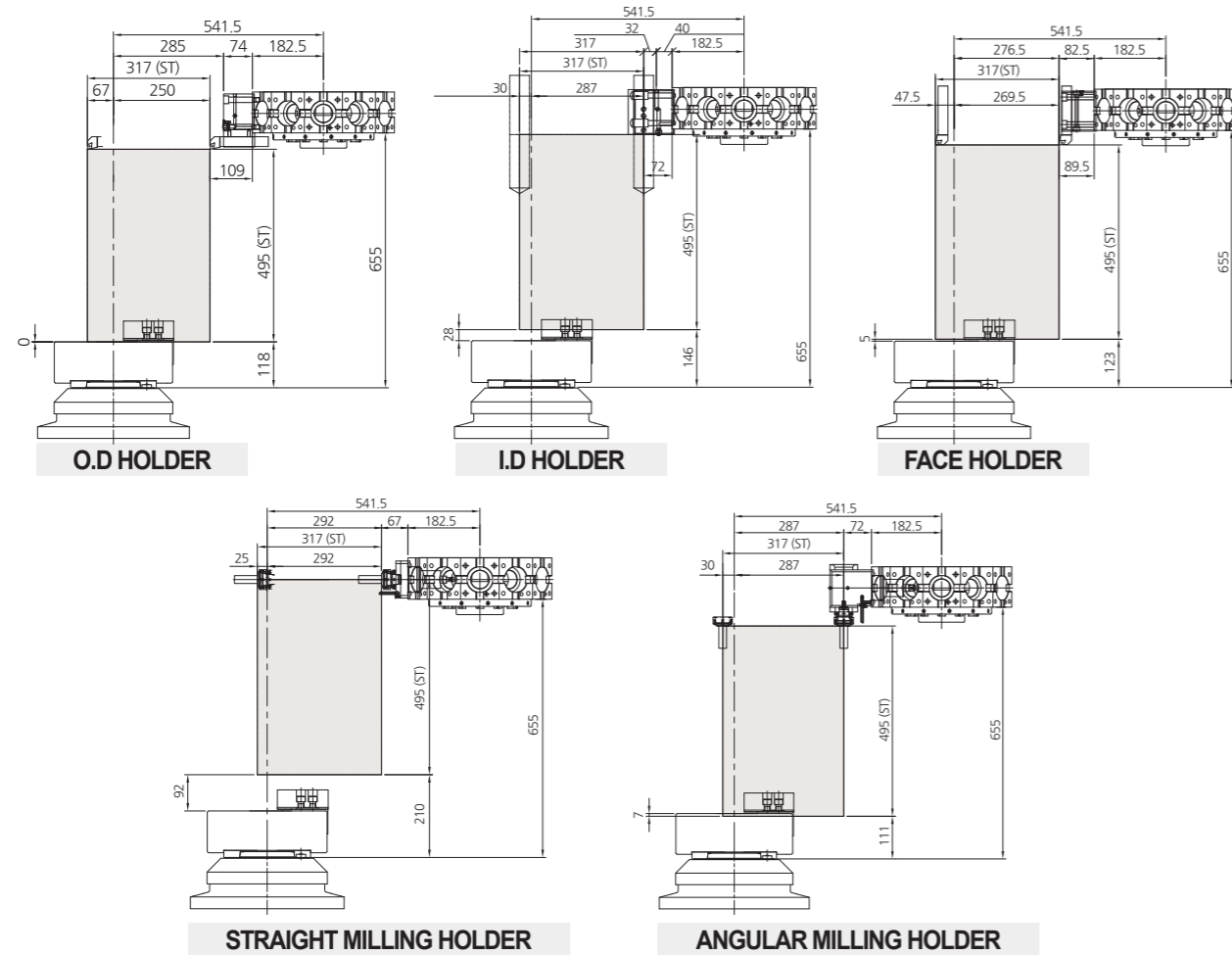
Unit : mm



● : Standard Set Numbers

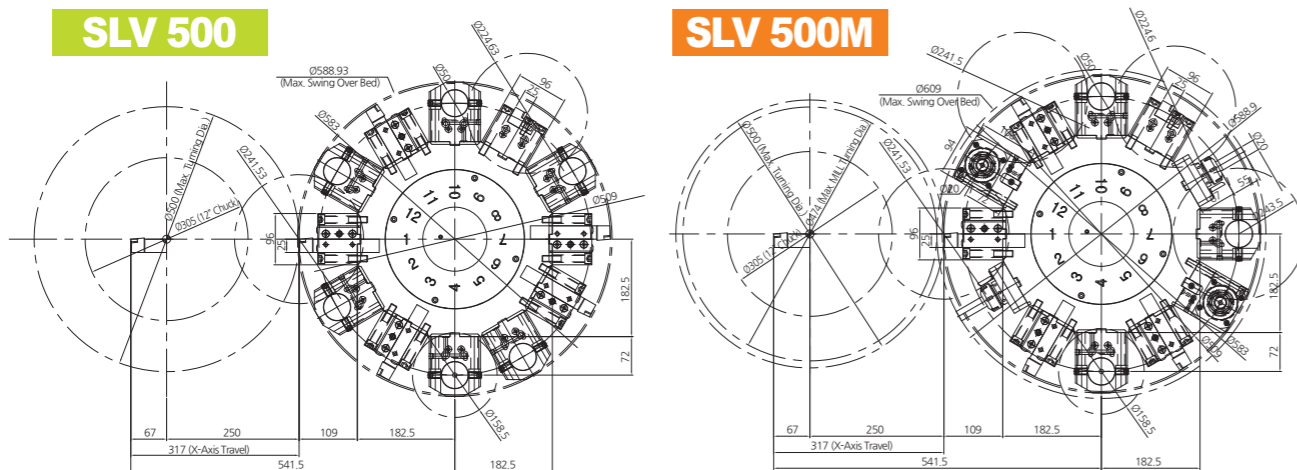
**Work Range**

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
Spindle	Max. machining length	mm	465	465	465	465	465	465
	Spindle speed	rpm	3,000	2,000	2,000	3,000	2,000	2,000
Spindle	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) LxWxH	mm	1,670(2,750) x 2,540 x 3,341			1,670(2,750) x 2,540 x 3,341		
	Size (with Rear Chip conveyor) LxWxH	mm	1,670 x 2,540(4,080) x 3,341			1,670 x 2,540(4,080) x 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