

NC Specifications / FANUC Series

Item		Specification	0i-TF
Controlled axis	Max. feed axes		4 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	○
Interpolation functions	Linear interpolation	G01	○
	Circular interpolation	G02, G03	○
	Dwell	G04	○
	Polar cordinate 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		○
	Canned cycle for drilling		○
	Direct drawing dimension programming		○
	Programmable data input	G10	○
	Optional block skip		○
	Workpiece coordinate system	G52 ~ G59	○
	Number of registerable programs		400EA
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	○
	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		○



SMEC Co., Ltd.
157-10, Goldenroot-ro, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, Korea
Tel +82 55 340 4800 Fax +82 55 340 4740
<http://www.esmec.com>



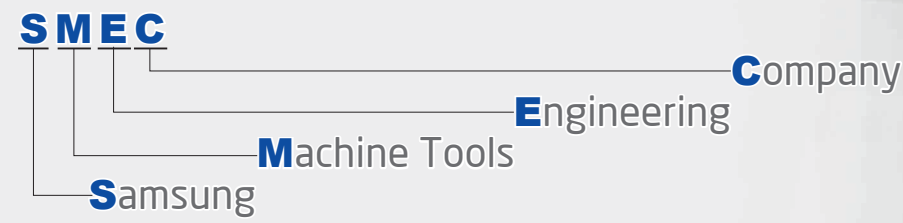
SMEC

SLV 250/250M

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 250
SLV 250M

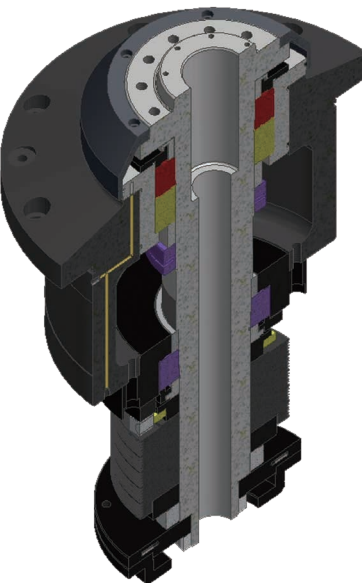
Strongest in class with superb structural design
Simultaneous heavy duty and precision turning

- 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/decelleration times.



SLV 250/250M

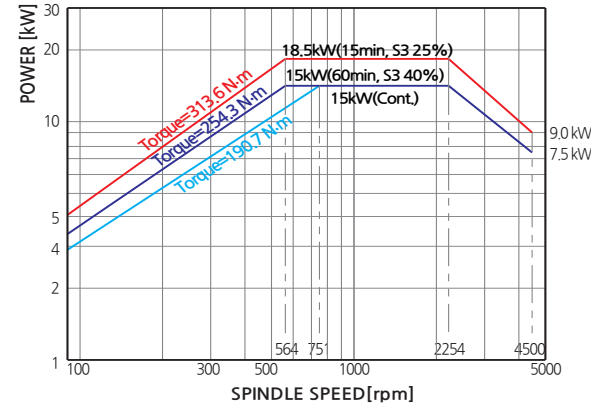
Spindle Motor(Max/cont.)

18.5/15 kW

Spindle Speed

4,500 rpm

Main Spindle Power & Torque Diagram



An innovative high precision, heavy duty CNC Lathe, integrated with all of **SMEC's** advanced technology - **SLV 250/250M**



Spindle motor(Max./Cont.)
18.5/15 kW

Spindle speed
4,500 mm

Max. machining diameter
400 mm

Max. machining length
245 mm

Rapid traverse(X/Z)
24/24 m/min

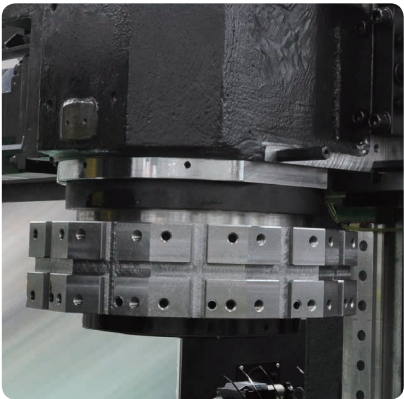
Feed motor (X/Z)
3.0/3.0 kW

Highly Reliable and Rigid Structural Design

Ensure heavy duty and precise cutting with excellent structural design



Standard Turret



Mill Turret



Indexing Time

1.5sec at 60Hz

Number of tool positions

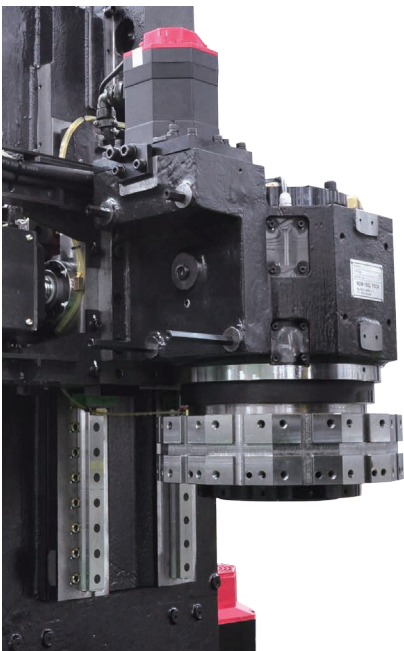
12stations

High Speed, Heavy Duty Servo Turret

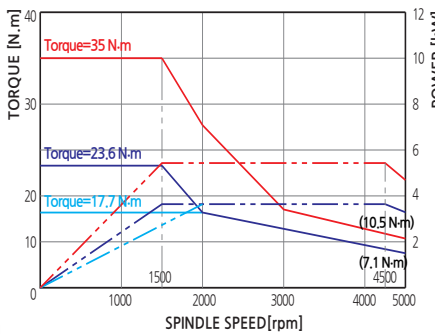
Driven by a reliable high torque servo motor, the 12-station heavy-duty turret indexes nonstop, bi-directionally with a fast 0.15 second from station to station. Large diameter precision Curvic coupling with 6,350kg-f of turret clamping force enables precision as well as heavy-duty cutting.

PL250M is equipped with standard 12-station BMT 55 turret, capable of accepting rotary tools at any station.

Option : 12-station BMT65



Milling Motor Torque Diagram



User friendly centralized control panel.



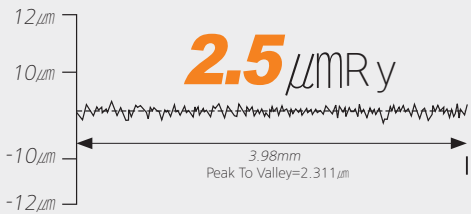
Swivel Operation Panel

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

- 1 CRT : 10.4 inch color LCD
- 2 Bigger BEZEL switch size : 50% larger than the conventional switch size
- 3 Addition of MG stand-by tool No
- 4 Addition of MG change button
- 5 Spindle Override 50~120% (15 step) → 50~150% (20 step change)
Feed Override 0~1260 (16 step) → 0~5000 (21 step)
- 6 Addition of spare buttons for fixtures

High Precision

Surface Roughness



Roundness

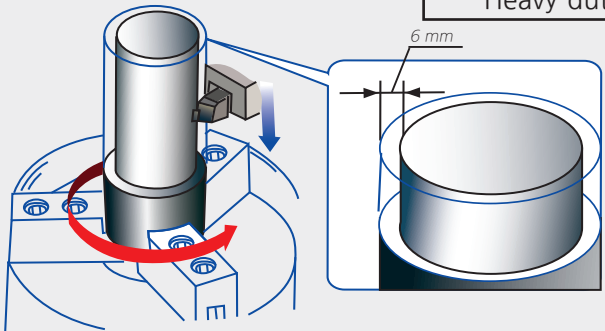


Cutting condition	
Tool	Diamond tool <nose radius 0.020 inch>
Material	AL150<Aluminum>
Cutting speed	230 m/min
Feedrate	0.05 mm/rev
Depth of cut	0.1 mm
Outer diameter	200 mm
Filter	1-50

Cutting speed

Turning Performance (material:SM45C)

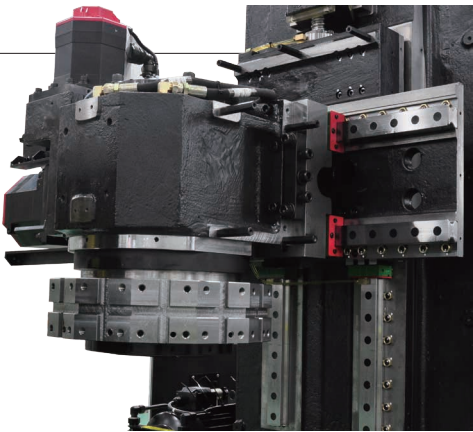
Heavy-duty cutting (O.D) <20mm×20mm qualified tool>



- Spindle speed **868 rpm**
- Cutting speed **120 m/min (383 fpm)**
- Depth of cut **6 mm <Spindle Load 50%>**
- Feedrate **0.3 mm/rev (0.08 ipr)**

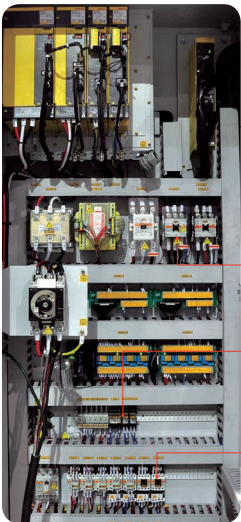
Roller Guide System

SLV 250/250M has Roller Guide to ensure longer life time, fast and precise cutting.



Fuse Box Made with Highly Reliable Components

- Magnet switch, circuit breaker, Key S/W(Fuji)
- Relay(Widemuller, Omron)



Reliable Lubrication Dispenser

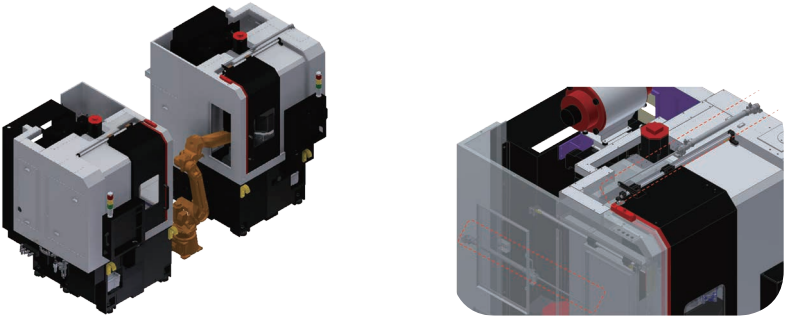
Lubrication pump adopted LUBE which is one of the most reliable brand and offers exact amount of oil on each face.

- Capacity : **3 Liter**
- Pressure : **1.5 Mpa**



Optimal automation line

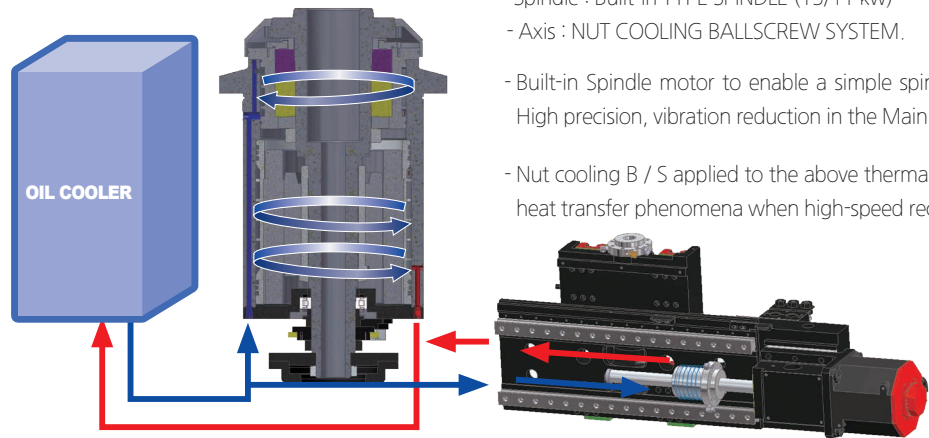
Perfect installation in narrow space.
Optimal solution for automation line such as automotive, electrical devices.
Also for multi axis robot and gantry robot.



High power air cylinder(Side/Front door)

Optimized for auto parts automated production line configuration.Excellent utilization of vertical multi-articulated robots, SCARA robots. GANTRY ROBOT must also be applied

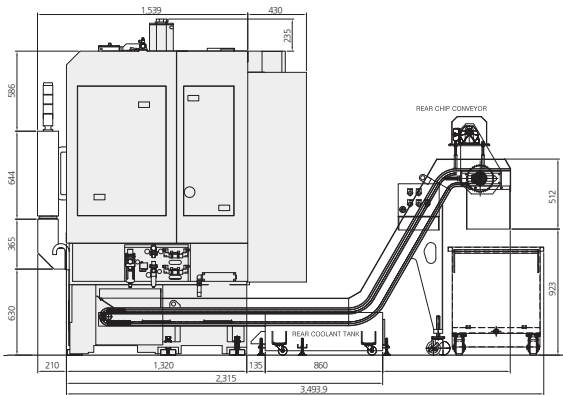
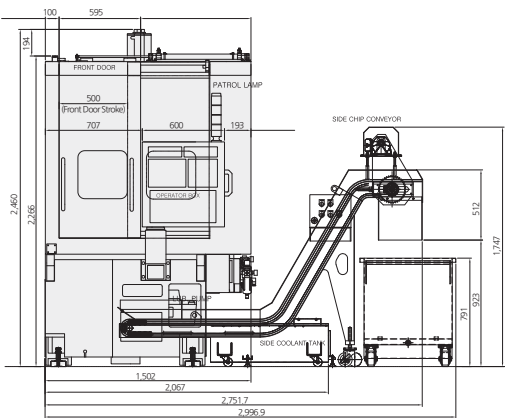
Special Option (Cooling System)



- Spindle : Built-in TYPE SPINDLE (15/11 kw)
- Axis : NUT COOLING BALLSCREW SYSTEM.
- Built-in Spindle motor to enable a simple spindle structure realized by applying a High precision, vibration reduction in the Main Spindle.
- Nut cooling B / S applied to the above thermal deformation suppression caused by heat transfer phenomena when high-speed reciprocating.

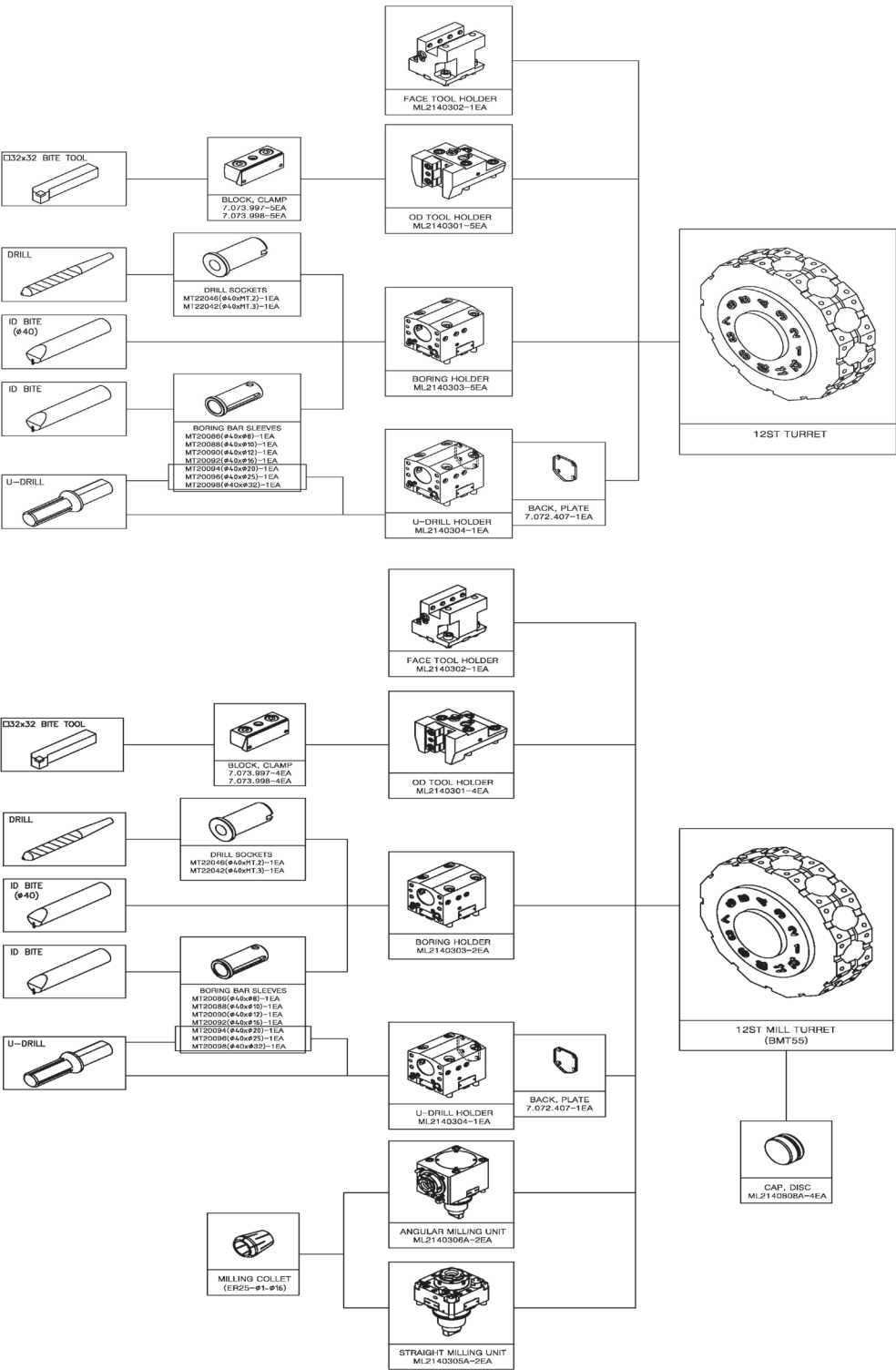
Machine Dimensions [SLV 250/250M(RH)]

Unit : mm



Tooling System

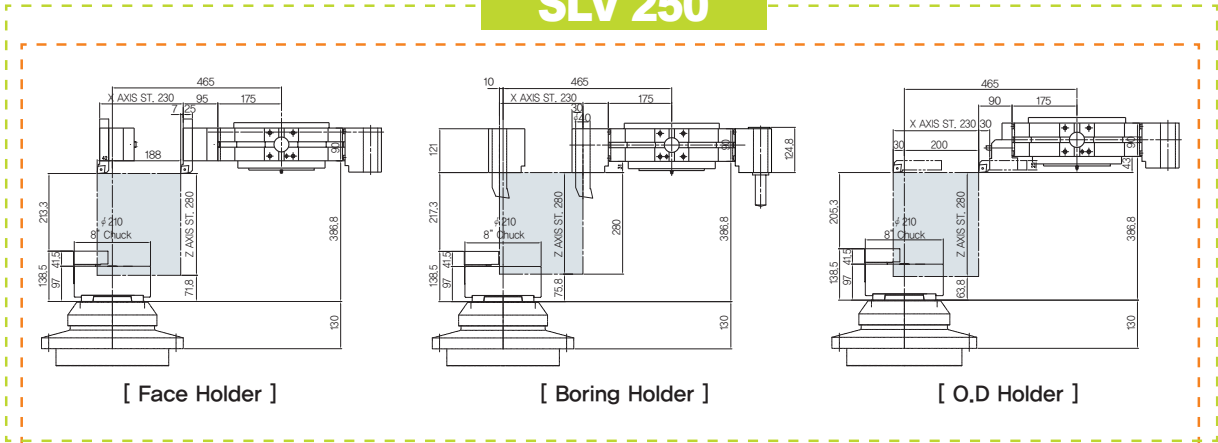
Unit : mm



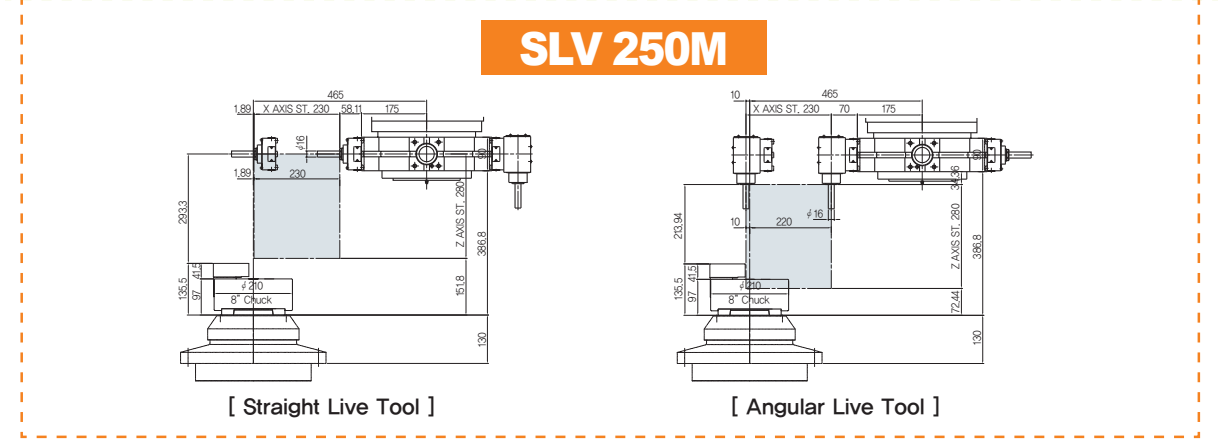
Work Range

Unit : mm

SLV 250



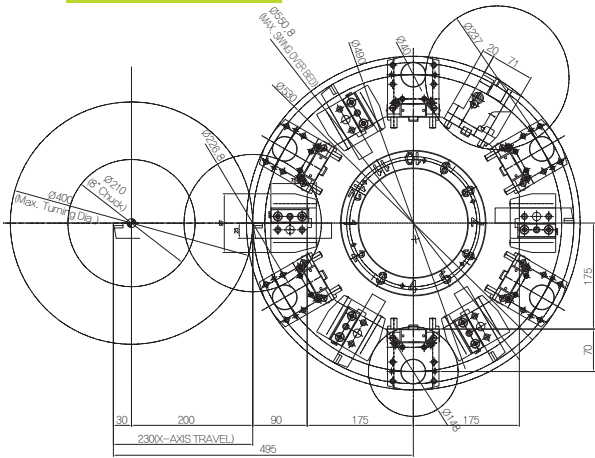
SLV 250M



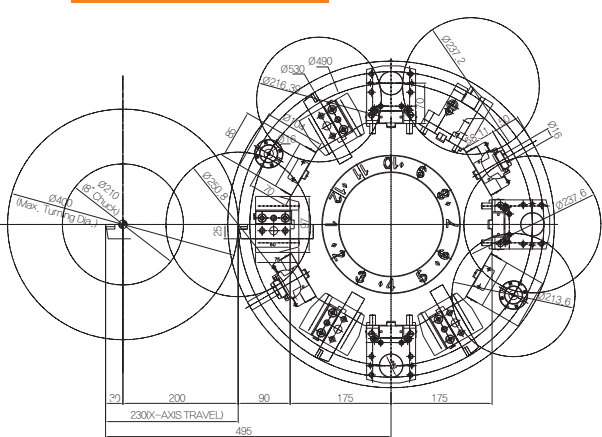
Turret Head Interference

Unit : mm

SLV 250



SLV 250M



Major Specifications

DESCRIPTION			SLV 250	SLV 250V
CAPACITY	Swing over bed	mm	Ø550	
	Swing over saddle	mm	Ø400	
	Max. Turning diameter	mm	Ø400	
	Max. Milling diameter	mm	-	364
	Max. Turning length	mm	245	
	Chuck size	inch	8" [10"]	
MAIN SPINDLE	Spindle speed	rpm	4,500 [3,500]	
	Spindle nose	ASA	A2-6	
	Spindle bearing diameter (Front)	mm	Ø100	
	Spindle drive	-	Belt Drive	
TRAVEL	Cs spindle index angle	deg	-	0.001
	X-axis travel	mm	230	
	Z-axis travel	mm	280	
	Rapid traverse rate (X/Z)	m/min	24/24	
	Guide way type	-	Roller Guide	
	Max. number of tool	-	12	12 (BMT55)
	OD tool shank size	mm	□ 25X25	
TOOL POST	Boring bar diameter	mm	Ø40	
	Turret clamping force	kg.f	6,350	
	Rotary tool spindle speed	rpm	-	5,000
	Indexing time	sec	0.15	
MOTOR	Main spindle motor (Cont./Max.)	kW	18.5/15	
	Servo motor (X/Z)	kW	3/3	
	Live Tool Speed	rpm	-	5.5/3.7
	Turret Index Servo Motor	kW	1.2	
Electric power supply		kVA	29	33
Machine dimension (L×W×H)		mm	1,500×1,970×2,460	
Machine weight		kg	5,000	5,100
CONTROLLER			Fanuc Oi-TF	

※Design and specifications subject to change without notice.

() : Option

Standard Accessories

- Door interlock
- Foot switch
- Leveling bolt & Plate
- Spindle air curtain
- Tooling system
- 3 color patrol lamp
- 10.4" LCD monitor
- Coolant pump
- 12 std. turret
- Auto lubrication pump
- Tool & work box
- S/G & side coolant tank
- Hyd. Solid chuck (8")
- Soft jaw (1 set)
- Manual & Parts list
- Safety precaution name plate
- Auto Door(Side)

Optional Accessories

- Air blower
- Air gun
- Chip conveyor & bucket (side/rear)
- Coolant gun
- Coolant blower
- Tool & Work counter
- Tool life management
- Transformer
- NC box airconditioner
- Auto Door(Front)
- Mist Collector
- 80mm High Column
- High pressure coolant pump (4, 5, 7, 10, 14.5, 20bar-60Hz)
- Linear scale (X,Z)
- Oil skimmer
- Coolant chiller
- Coolant level switch
- Nut cooling ballscrew(X,Z)
- A2-6, A2-8 Built-in motor
- Tool presetter (removable)
- BMT65 Turret