

■ NC Unit Specifications / FANUC Series

	Item	Specification	Oi-TF
Controlled axis	Max. feed axes		4 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/±9999.999"	○
	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

SL 3500 series

CNC TURNING CENTER



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◆ Design and specifications subject to change without notice.

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SMEC
SMEC America Corp.

SMEC



Company History

- 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**
- 2018 - **SMEC America Corp** established to provide factory support to the distributor network and customers

SMEC'S Advanced Engineering and Machine Design

- Cast iron structure for superior dampening characteristics and thermal displacement
- Rigid 45 degree slant bed design for heavy-duty machining
- Torque tube design to minimize bending and twisting
- Integrated box ways for long-term rigidity and heavy-duty machining

SL 3500BL
SL 3500BLM



SL 3500BL/3500BLM is a heavy duty, ultra precision Turning Center, combined with SMEC's advanced technological features.

Spindle Speed
2,000 rpm

Spindle Motor(30min/cont.)
35.4/25.2 hp

Feed motor(X/Z)
4.1/9.5 hp (SL 3500BL)
5.4/9.5 hp (SL 3500BLM)

Rapid travel(X/Z)
472.4/590.5 ipm (SL 3500BL)
787.4/944.9 ipm (SL 3500BLM)



Max. Turning Diameter
19.7 inch

Max. Turning Length
60.2 inch (SL 3500BL)
59.1 inch (SL 3500BLM)

Highly Reliable and Rigid Structural Design

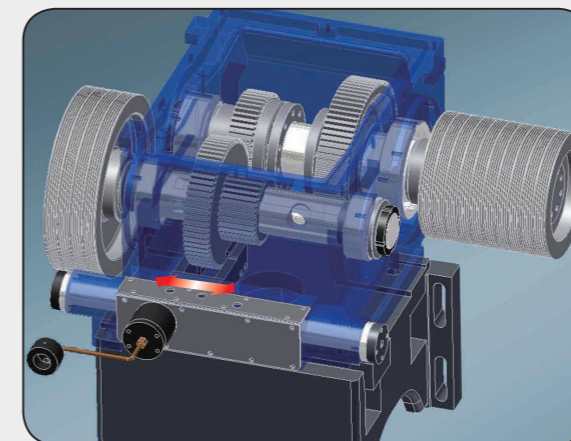
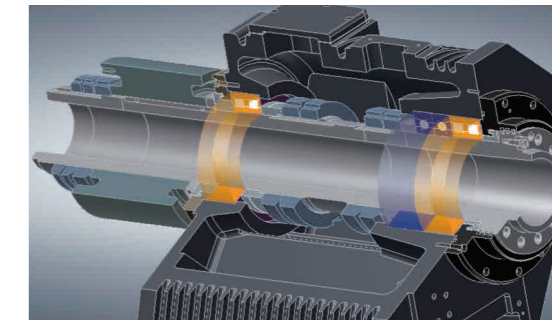
- One piece Meehanite casting with heavily ribbed torque tube design
- Rigid bed supports for powerful cutting
- Excellent vibration dampening and thermal displacement design

High Accuracy, High Rigidity Spindle



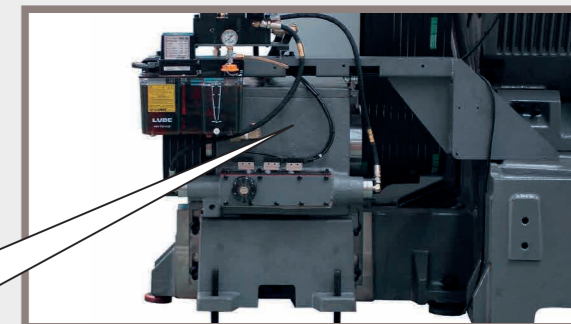
Pin Tube Rib Design for Minimal Axis Heat Transfer

Radiator fan-like pin tube rib design dissipates heat, maintaining minimal thermal expansion.



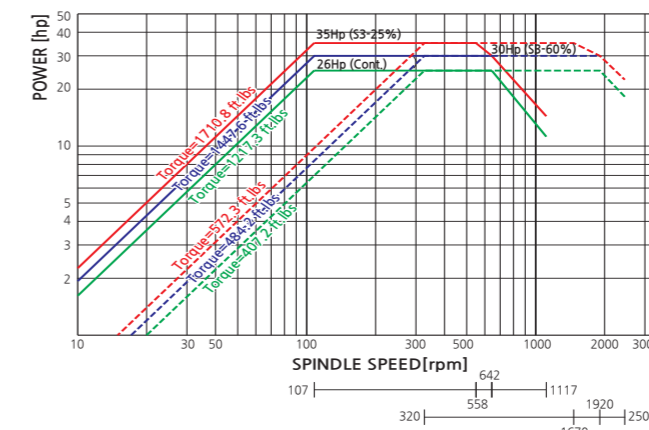
Output Converting Transmission

Equipped as standard feature, high Output Converting Transmission provides heavy-duty machining.



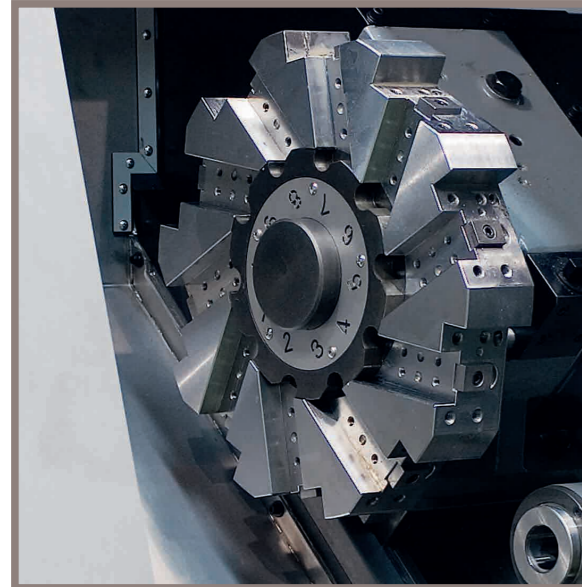
Spindle Power & Torque Diagram

Unit : inch



Machine Structure

Rigid Turret Design(SL 3500BL)

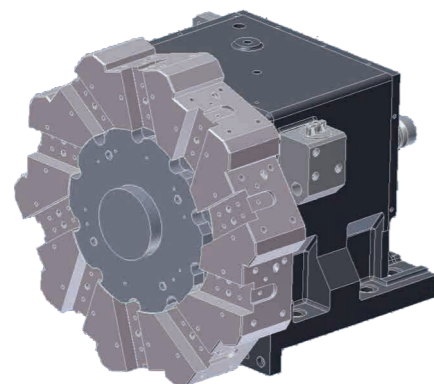


Indexing time
0.25 sec.

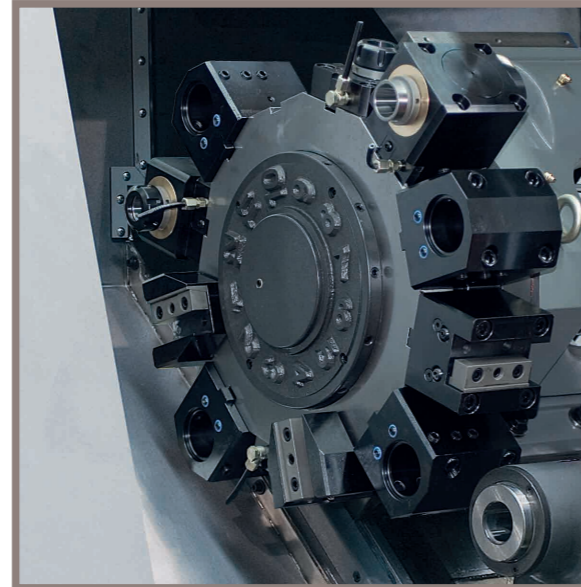
Number of tool positions
12 stations

High Speed, Heavy Duty Hyd. Index Turret

Driven by a high torque hydraulic index motor, the 12-station heavy-duty turret can accept tools on both left and right side of each station. Turret indexing (repeatability $\pm 0.0002''$) is non-stop, bi-directional with a fast 0.25 second next station index time. A large diameter ($\varnothing 9.84''$) Curvic coupling with 10,494 lbs clamping force enables precision as well as heavy-duty cutting.



High Speed Servo Turret(SL 3500BLM)



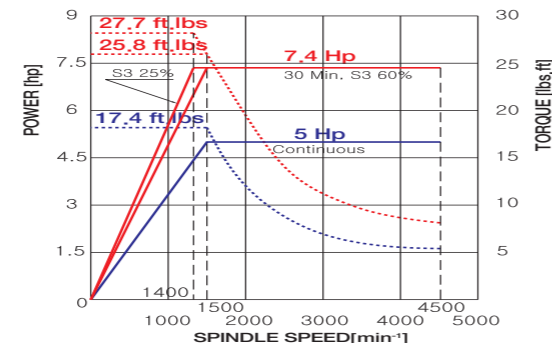
Indexing time
0.2 sec.

Number of tool positions
12 stations

BMT Milling Turret (M Type)

SL 3500BLM is equipped with standard 12-station BMT turret capable of accepting rotary tools at any station, providing flexible machining thru various machining operations in just one set-up. Each BMT holder is securely tightened by 4 screws, allowing the turret to perform heavy-duty cutting, milling and drilling operations. Turret indexing is non-stop, bi-directional with a fast 0.2 second next station index time.

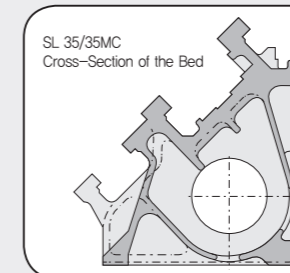
Turret Torque Diagram



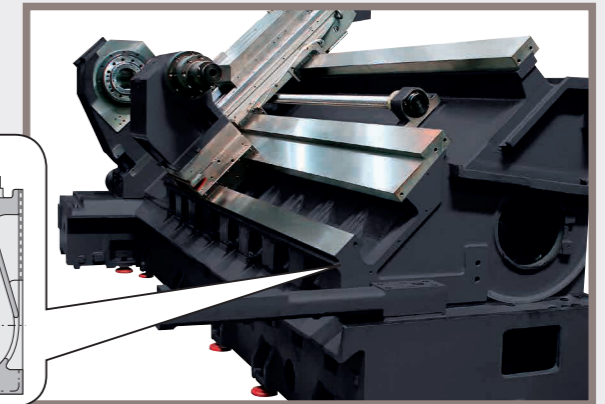
Machine Structure

Rigid 45 degree Slant Bed

45 degree slant torque tube design bed and wide guide slide way ensure long term rigidity and machining accuracy.

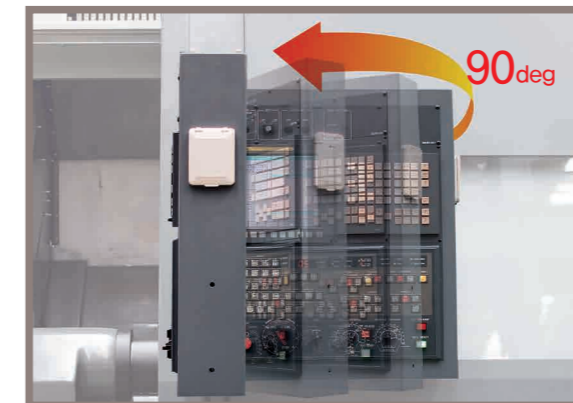


Featuring superior workability and chip-discharging capability, the bed is designed in a single tube structure boasting strong durability even in heavy-duty cutting.



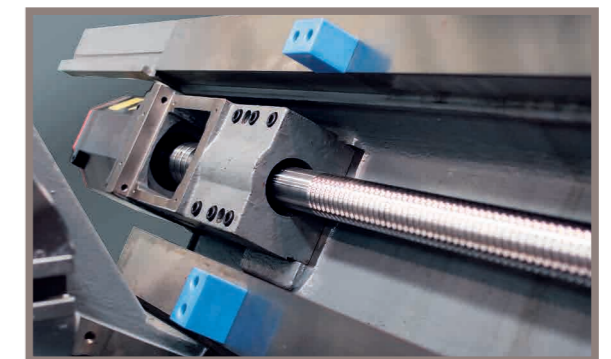
Swivel Operation Panel

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.



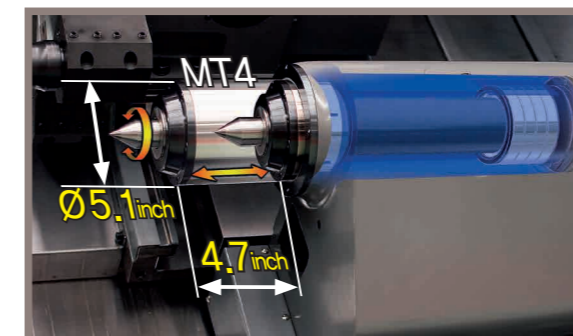
Pre-tensioned and Double Anchored Ballscrews

All axes ballscrews are pre-tensioned, heat treated, and fixed by double anchors on both ends, providing ultimate rigidity and minimal thermal growth.



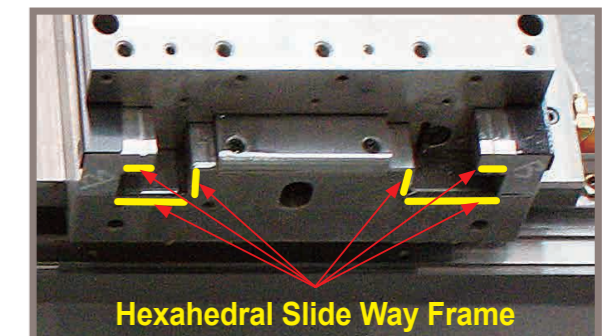
Programmable Tailstock (carriage direct-coupled)

The programmable tailstock body is mounted on wide guide ways to ensure rigid work piece support.



Hexahedral Slide Way Frame

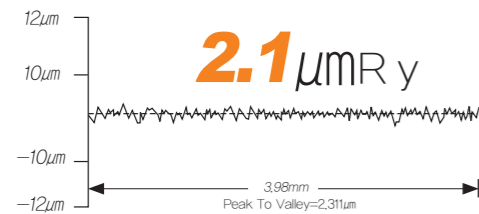
Wide integral way is machined from the casting, induction hardened and precision ground to ensure long-term rigidity and machining accuracy and heavy-duty machining.



■ High Precision

Surface Roughness <O.D. cutting>

Roundness



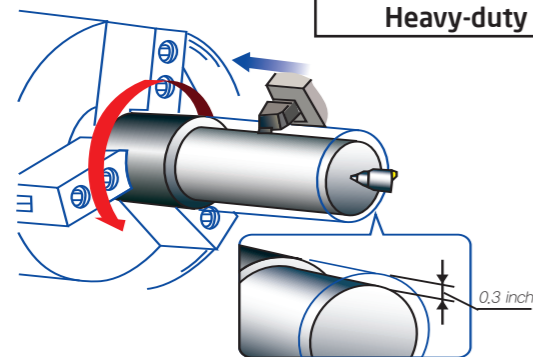
Cutting condition	
Tool	Diamond tool (nose radius 0.020 inch)
Material	AL150(Aluminum)
Cutting speed	745.6 fpm
Feedrate	0.0020 ipr
Depth of cut	0.004inch
Outer diameter	7.9inch
Filter	1-50

•Model : SL 3500BL / 3500BLM

■ Processing Speed

Turning Performance (material:SM45C) SL 3500BL

Heavy-duty cutting (O.D) <1 inch×1 inch qualified tool>

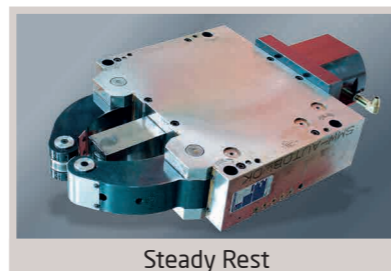


Spindle Speed
530 rpm
Cutting Speed
140 m/min (459 fpm)
Depth Of cut
0.3 inch <Spindle Load 70%>
Feedrate
0.3mm/rev (0.08 ipr)

■ Standard Accessories



■ Optional Accessories



■ Tooling System

