

# SMEC

## SL 2500/3000 series

CNC TURNING CENTER



**SMEC Co., Ltd.**

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<http://www.esmec.com>



- 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

SMEC

Company

Engineering

Machine Tools

Samsung

### SL 2500 series (A Type : 8", B Type : 10")

SL 2500(A/B Type),    SL 2500M(A/B Type),  
SL 2500X(A/B Type),    SL 2500XM(A/B Type),  
SL 2500L(A/B Type),    SL 2500LM(A/B Type)

### SL 3000 series (A Type : 10", B Type : 12")

SL 3000(A/B Type),    SL 3000M(A/B Type),  
SL 3000X(A/B Type),    SL 3000XM(A/B Type),  
SL 3000L(A/B Type),    SL 3000LM(A/B Type)

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

- 45 degree torque tube type bed to support heavy duty turning
- Significantly reduced non-cutting time and efficient turning
- Low-center of gravity reducing vibration, thermal deformation and improving rigidity

### High Accuracy, High Rigidity Spindle

#### Pin Tube Rib Design for Minimal Thermal Deformation

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

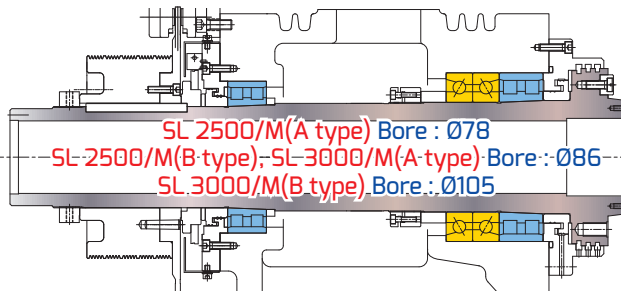


#### C-Axis

With C-axis control, users get synchronized control on 3axes which enables integrated processing, such as milling, drilling & rigid tapping.

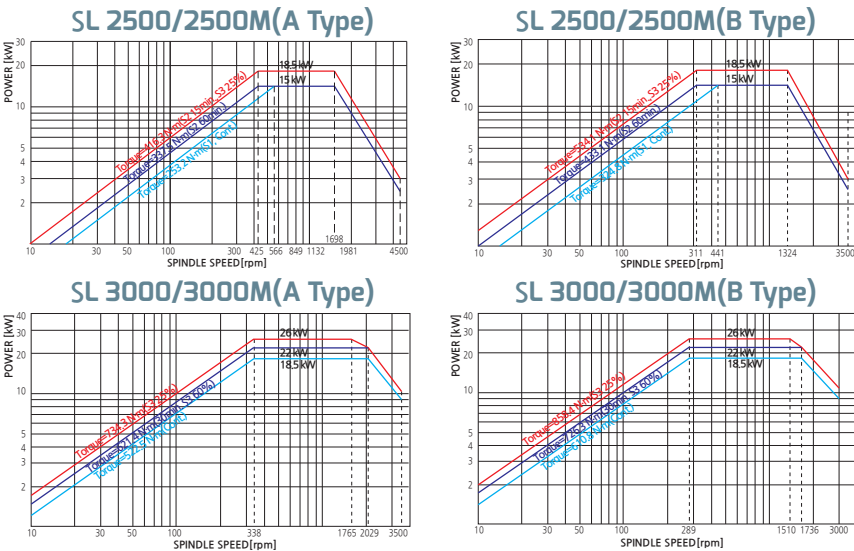
#### SPINDLE & HEADSTOCK

The Spindle and Headstock are machined in a temperature controlled environment and assembled in a clean room.



Precision double row cylindrical roller bearings and angular contact ball bearings are located at the front of the spindle, and a double row of cylindrical roller bearings is located in the rear to ensure heavy cutting capabilities with precision.

#### Spindle Power & Torque Diagram





An innovative high precision, heavy duty CNC Lathe,  
integrated with all of SMEC's advanced technology  
- SL 2500/3000 series

Spindle motor(Cont./Max.)  
**15/18.5 kW** (SL 2500 series)  
**18.5/26 kW** (SL 3000 series)

Spindle speed  
**4,500 rpm** [SL 2500 Series(A Type)]  
**3,500 rpm** [SL 2500 Series(B Type)  
SL 3000 Series(A Type)]  
**3,000 rpm** [SL 3000 Series(B Type)]

Rapid traverse(X/Z)  
**24/30 m/min**

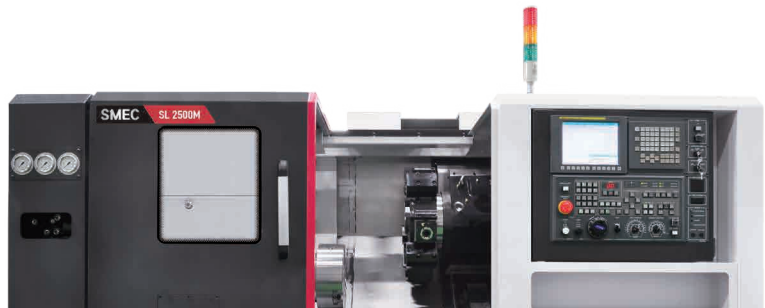
Bar working diameter  
**67 mm** [SL 2500 Series(A Type)]  
**76 mm** [SL 2500 Series(B Type)  
[SL 3000 Series(A Type)]  
**90 mm** [SL 3000 Series(B Type)]

Max. machining diameter  
**Ø430 mm** (SL 2500/2500X/2500L(A, B Type)  
SL 3000/3000X/3000L(A, B Type)]  
**Ø405 mm** [SL 2500M/2500XM/2500LM(A, B Type)  
SL 3000M/3000XM/3000LM(A, B Type)]

※ SL 2500 Series (A Type : 8", B Type : 10") / SL 3000 Series (A Type : 10", B Type : 12")

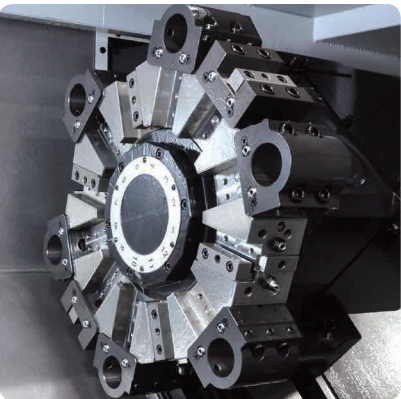
Highly Reliable and Rigid Structural Design

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



SL 2500/3000 Series (A, B Type)

High Speed, Heavy Duty Index Turret



Number of tool positions

**12stations**

Indexing Time

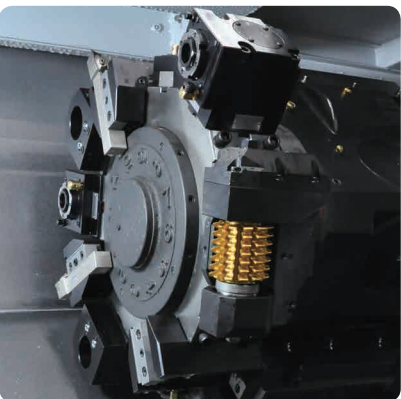
**0.2sec (60Hz)**

Non-Cutting Time Significantly Reduced  
with Installation of High Speed Turret  
with 0.2 Sec Indexing Time

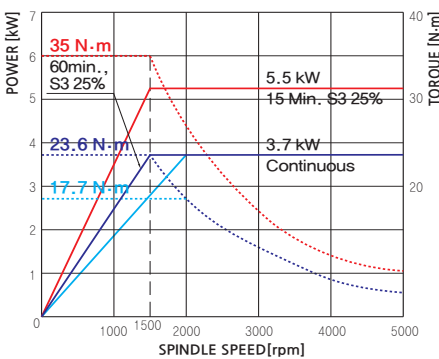
A 0.2 second 1 station indexing time is made possible by employing the Nonstop Random Index method using the SMEC developed high-power Servo Index Motor. The large diameter Curvic Coupling significantly improves the clamping power and indexing precision.

SL 2500M/3000M Series (A, B Type)

High Speed Servo Turret (Tool Holder BMT65)

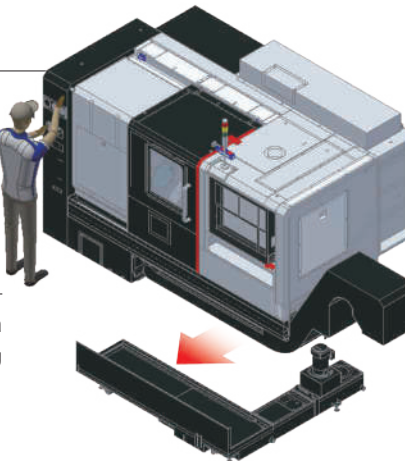


Turret Torque Diagram



Easier HYD Valve Control

The gauge and control valve for HYD valve is raised to the operator's eye-level making maintenance easier.



Easier Coolant Tank Cleaning

Cleaning the coolant tank is made easier with a coolant tank that can be removed while leaving the chip conveyor bolted to the machine. (AL/ALM/BL/BLM Series not included)





Centralized Operation Panel

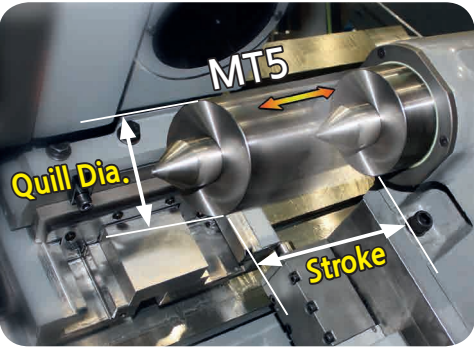
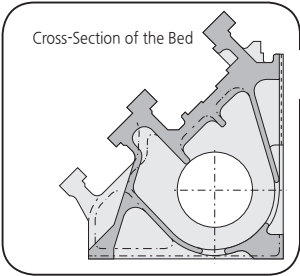
The centralized operation panel with its 10.4 inch color TFT LCD monitor is able to swivel 90 degrees, providing operators with easy access to the control panel while working on the machine.



Main spindle height  
to minimize worker's  
fatigability  
1,021mm

Rigid 45 degree Slant Bed

45 degree slant torque tube design bed and wide guide slide way ensure long term rigidity and machining accuracy. Also, the Slant Type structure allows for easier access to the workpiece and superb chip discharge.



Programmable Tailstock

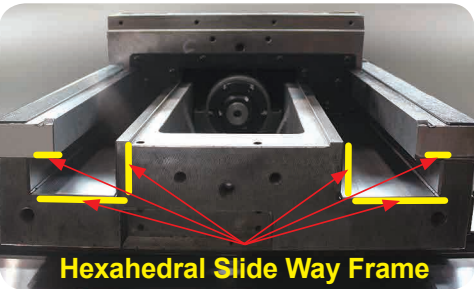
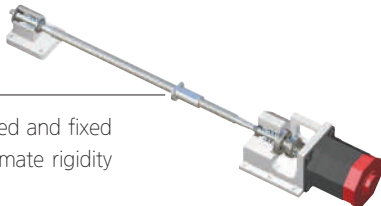
The tailstock that maintains superb high precision during heavy duty cutting can be manually traversed using the MPG handle. Also, when the programmable tailstock option is mounted, the tailstock and quill may be operated back and forth automatically using M-codes. (SL2500M/SL3000M : Std.)

| Model                                    | Quill Diameter | Stroke    |
|------------------------------------------|----------------|-----------|
| SL 2500/3000 (A, B Type) [Programmable]  | Ø85(110)mm     | 80(100)mm |
| SL 2500/3000 X/XM(A, B Type)             | Ø110mm         | 100mm     |
| SL 2500/3000 L/LM(A, B Type)             | Ø110mm         | 100mm     |
| SL 2500/3000 M(A, B Type) [Programmable] | Ø110mm         | 100mm     |

※ SL 2500 Series (A Type : 8", B Type : 10") / SL 3000 Series (A Type : 10", B Type : 12")

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.

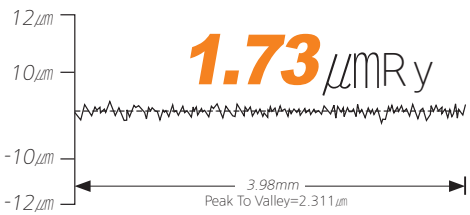


Hexagonal Slide Way  
Frame (X-axis)

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

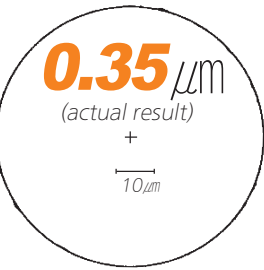
High Precision

Surface Roughness



Model : SL 2500M

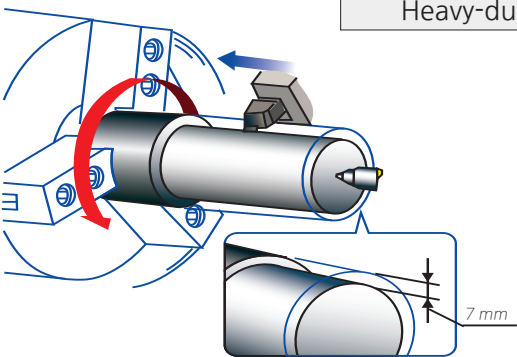
Roundness



| Cutting condition |                                          |
|-------------------|------------------------------------------|
| Tool              | Diamond tool<br><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                                     |

Processing Speed

Turning Performance (material:SM45C) SL 2500A



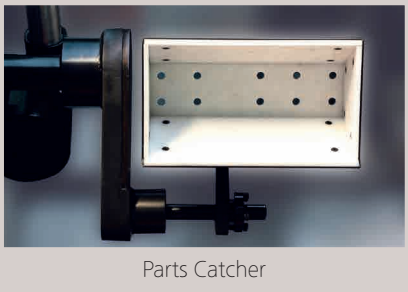
Heavy-duty cutting (O.D) <25mm×25mm qualified tool>

Spindle speed  
**524 rpm**  
Cutting speed  
**250m/min**  
Depth of cut  
**4 mm <Spindle Load 50%>**  
Feedrate  
**0.4 mm/rev**

Optional Accessories



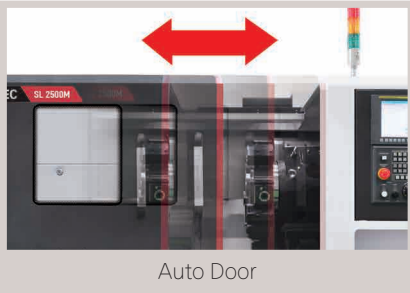
Tool Presetter



Parts Catcher



Programmable Tailstock  
(SL 2500A/B:OPT. SL 2500AM/BM:STD.)



Auto Door

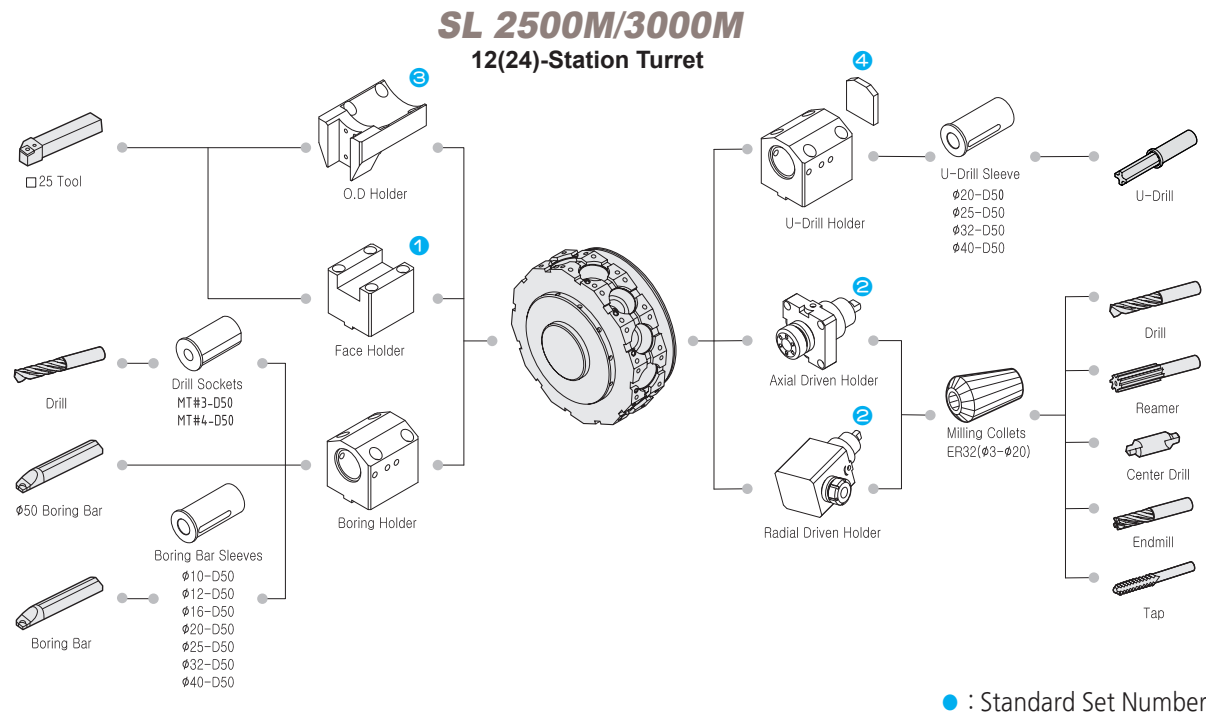
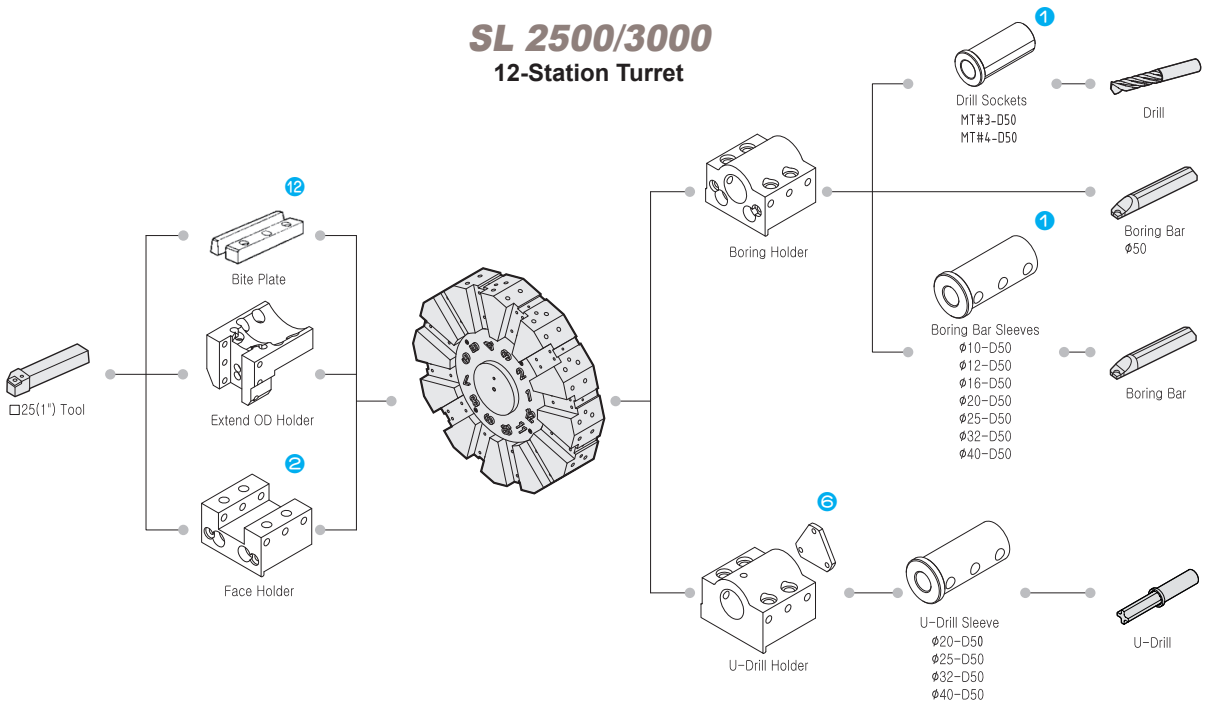


Chip Conveyor



Air Blow

Tooling System



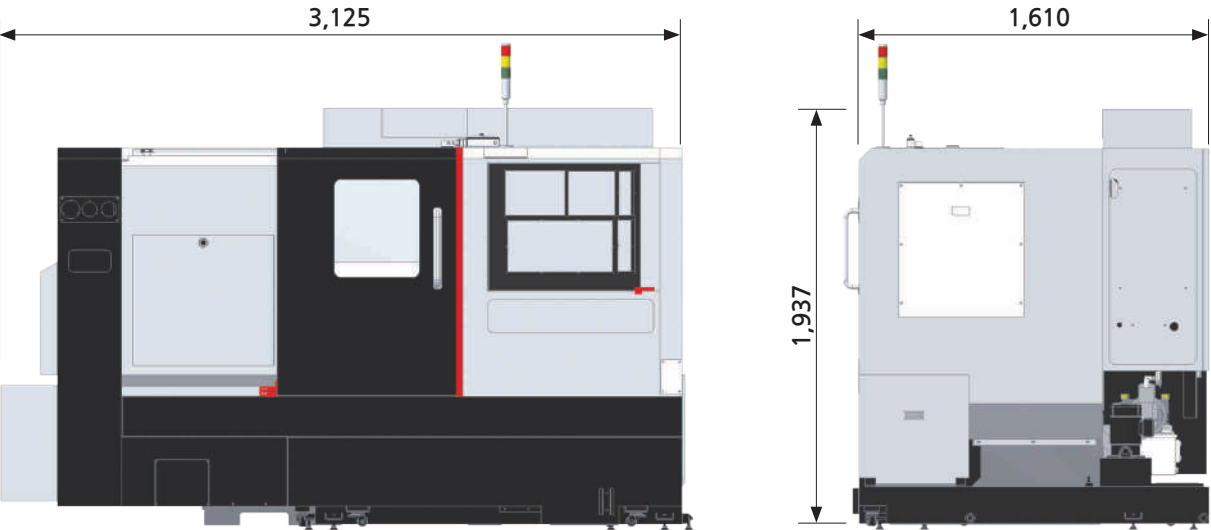
● : Standard Set Numbers



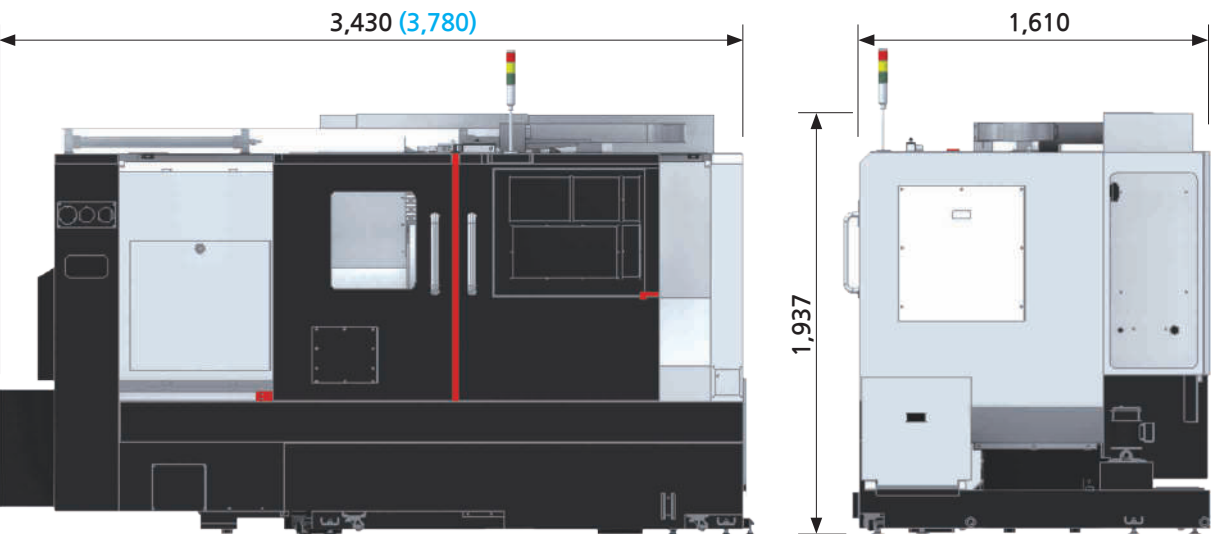
Machine Dimensions

Unit : mm

SL 2500/3000 series



SL 2500X/3000X(2500L/3000L) series



Standard Accessories

- Coolant unit (4.5bar-60Hz)
- Work light (Led lamp)
- Splash guard with side coolant tank
- Tool/Work box
- Hyd. Hollow chuck
  - 8" :SL 2500/2500M(A Type)
  - 10" :SL 2500/2500M(B Type),  
SL 3000/3000M(A Type)
  - 12" :SL 3000/3000M(B Type)
- Soft Jaw
- Leveling unit
- Main spindle orientation
- Chuck clamp foot switch
- Chuck clamp confirmation
- Chuck pressure switch
- Manual/Part list
- Safety precaution name plate
- Door interlock

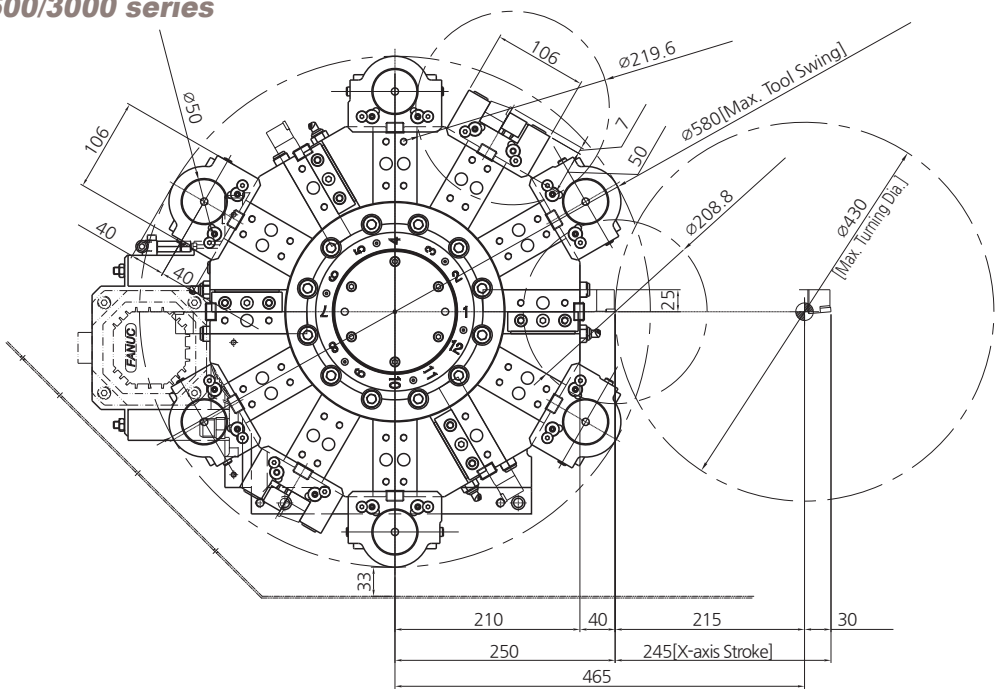
Optional Accessories

- Chip conveyor
- Rear chip conveyor with coolant tank
- Chip bucket
- Special chuck
- Dual pressure chucking
- Autodoor with Edge Sensor
- Air gun
- Air blower
- Part catcher
- Oil skimmer
- Chuck coolant
- Shower coolant
- Coolant gun
- Coolant chiller
- 3 step patrol light
- Hard Jaw

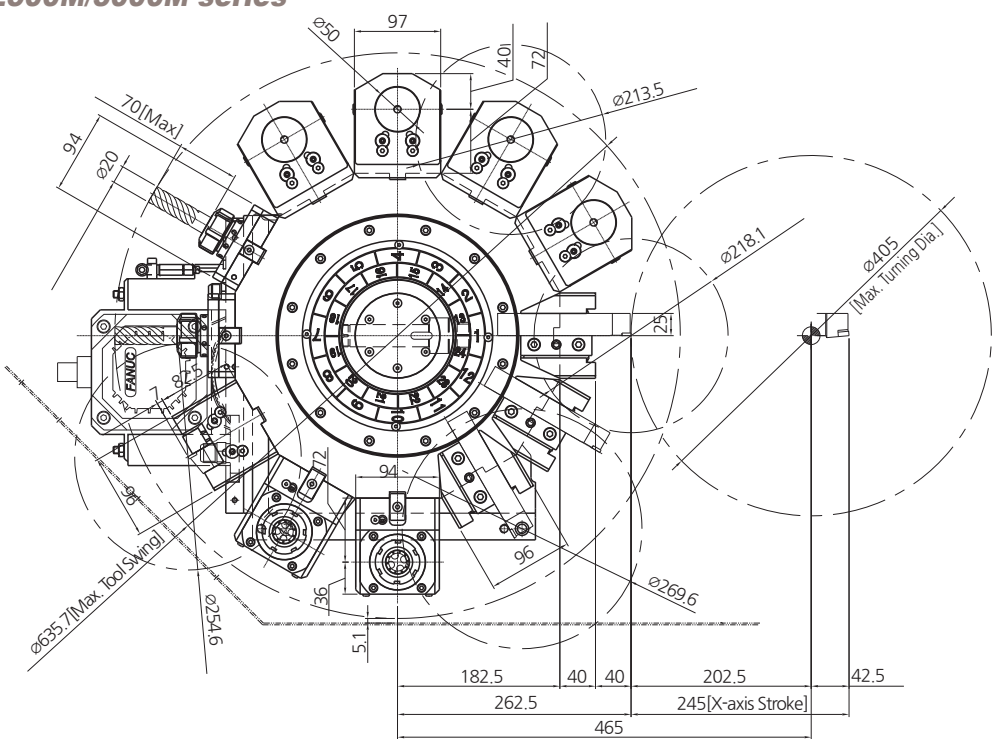
Turret Interference

Unit : mm

SL 2500/3000 series



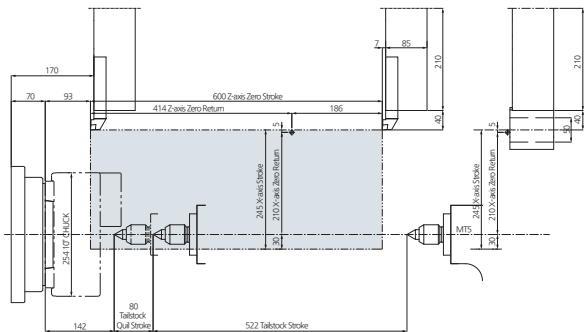
SL 2500M/3000M series



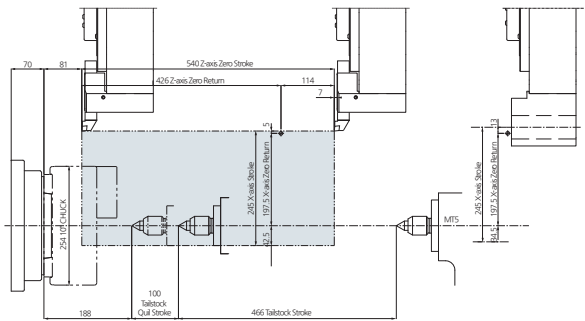
Work Range

Unit : mm

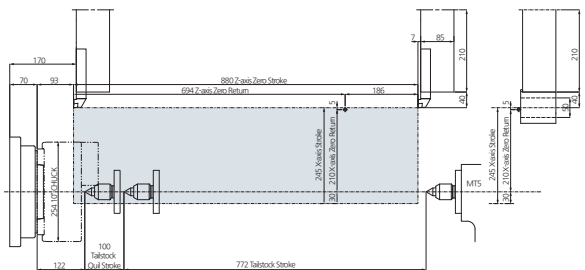
SL 2500/3000 series



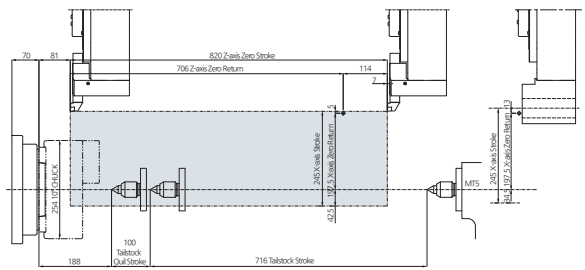
SL 2500M/3000M series



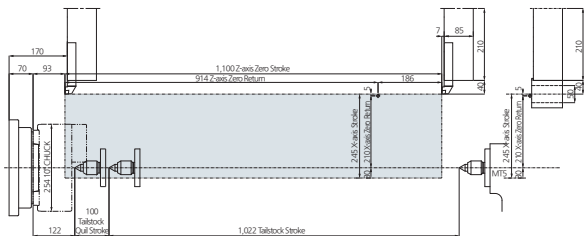
SL 2500X/3000X series



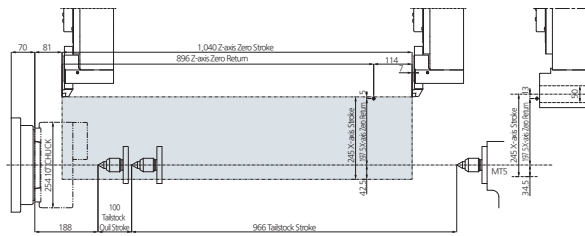
SL 2500XM/3000XM series



SL 2500L/3000L series



SL 2500LM/3000LM series



Major Specifications

| DESCRIPTION                           |                                        |       | SL 2500            |                    | SL 2500M           |                    |
|---------------------------------------|----------------------------------------|-------|--------------------|--------------------|--------------------|--------------------|
|                                       |                                        |       | A Type             | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                             | inch  | 8"                 | 10"                | 8"                 | 10"                |
| Capacity                              | Swing over the bed                     | mm    | 650                | 650                | 650                | 650                |
|                                       | Swing over the cross slide             | mm    | 480                | 480                | 480                | 480                |
|                                       | Max. machining diameter                | mm    | 430                | 430                | 405                | 405                |
|                                       | Max. machining length                  | mm    | 570                | 554                | 504                | 497                |
|                                       | Bar working diameter                   | mm    | 67                 | 76                 | 67                 | 76                 |
| Spindle                               | Max. Spindle Speed                     | rpm   | 4,500              | 3,500              | 4,500              | 3,500              |
|                                       | Spindle nose                           | ASA   | A2-6               | A2-8               | A2-6               | A2-8               |
|                                       | Bore diameter                          | mm    | 78                 | 86                 | 78                 | 86                 |
|                                       | Draw tube I.D.                         | mm    | 68                 | 77                 | 68                 | 77                 |
|                                       | Motor (Cont./Max.) [OPT.]              | kW    | 15/18.5            | 15/18.5[18.5/26]   | 15/18.5            | 15/18.5[18.5/26]   |
| Travel                                | X/Z axis travel                        | mm    | 245/600            | 245/600            | 245/540            | 245/540            |
|                                       | X/Z rapid traverse rate                | m/min | 24/30              | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.]        | st.   | 12                 | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                          | sec   | 0.20               | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool             | mm    | □25x25             | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar          | mm    | 50                 | 50                 | 50                 | 50                 |
|                                       | Live tool speed                        | rpm   | -                  | -                  | 5,000              | 5,000              |
| Tailstock                             | Tailstock quill travel (Programable)   | mm    | 522/80(100)        | 522/80(100)        | 466/100            | 466/100            |
|                                       | Tailstock quill diameter (Programable) | mm    | 85(110)            | 85(110)            | 110                | 110                |
| Electric Power Supply                 |                                        | kVA/V | 34/220             | 34(41)/220         | 34/220             | 34(41)/220         |
| Floor Space(L×W) [With Chip Conveyor] |                                        | mm    | 3,125[4,230]×1,610 | 3,125[4,230]×1,610 | 3,125[4,230]×1,610 | 3,125[4,230]×1,610 |
| Machine Weight                        |                                        | kg    | 5,100              | 5,100              | 5,100              | 5,200              |
| Controller                            |                                        |       | Fanuc Series       |                    |                    |                    |

※ Design and specifications subject to change without notice.

Major Specifications

| DESCRIPTION                           |                                 |       | SL 2500X     |                    | SL 2500XM          |                    |
|---------------------------------------|---------------------------------|-------|--------------|--------------------|--------------------|--------------------|
|                                       |                                 |       | A Type       | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                      | inch  | 8"           | 10"                | 8"                 | 10"                |
| Capacity                              | Swing over the bed              | mm    | 650          | 650                | 650                | 650                |
|                                       | Swing over the cross slide      | mm    | 480          | 480                | 480                | 480                |
|                                       | Max. machining diameter         | mm    | 430          | 430                | 405                | 405                |
|                                       | Max. machining length           | mm    | 850          | 834                | 784                | 767                |
|                                       | Bar working diameter            | mm    | 67           | 76                 | 67                 | 76                 |
| Spindle                               | Max. Spindle Speed              | rpm   | 4,500        | 3,500              | 4,500              | 3,500              |
|                                       | Spindle nose                    | ASA   | A2-6         | A2-8               | A2-6               | A2-8               |
|                                       | Bore diameter                   | mm    | 78           | 86                 | 78                 | 86                 |
|                                       | Draw tube I.D.                  | mm    | 68           | 77                 | 68                 | 77                 |
|                                       | Motor (Cont./Max.) [OPT.]       | kW    | 15/18.5      | 15/18.5[18.5/26]   | 15/18.5            | 15/18.5[18.5/26]   |
| Travel                                | X/Z axis travel                 | mm    | 245/880      | 245/880            | 245/820            | 245/820            |
|                                       | X/Z rapid traverse rate         | m/min | 24/30        | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.] | st.   | 12           | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                   | sec   | 0.20         | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool      | mm    | □25x25       | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar   | mm    | 50           | 50                 | 50                 | 50                 |
|                                       | Live tool speed                 | rpm   | -            | -                  | 5,000              | 5,000              |
|                                       |                                 |       |              |                    |                    |                    |
| Tailstock                             | Tailstock quill travel          | mm    | 772/100      | 772/100            | 716/100            | 716/100            |
|                                       | Tailstock quill diameter        | mm    | 110          | 110                | 110                | 110                |
| Electric Power Supply                 |                                 |       | kVA/V        | 34/220             | 34(41)/220         | 34(41)/220         |
| Floor Space(L×W) [With Chip Conveyor] |                                 |       | mm           | 3,430[4,535]×1,610 | 3,430[4,535]×1,610 | 3,430[4,535]×1,610 |
| Machine Weight                        |                                 |       | kg           | 5,700              | 5,700              | 5,800              |
| Controller                            |                                 |       | Fanuc Series |                    |                    |                    |

※Design and specifications subject to change without notice.

[ ] : Option

Major Specifications

| DESCRIPTION                           |                                 |       | SL 2500L     |                    | SL 2500LM          |                    |
|---------------------------------------|---------------------------------|-------|--------------|--------------------|--------------------|--------------------|
|                                       |                                 |       | A Type       | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                      | inch  | 8"           | 10"                | 8"                 | 10"                |
| Capacity                              | Swing over the bed              | mm    | 650          | 650                | 650                | 650                |
|                                       | Swing over the cross slide      | mm    | 480          | 480                | 480                | 480                |
|                                       | Max. machining diameter         | mm    | 430          | 430                | 405                | 405                |
|                                       | Max. machining length           | mm    | 1,070        | 1,054              | 1,004              | 997                |
|                                       | Bar working diameter            | mm    | 67           | 76                 | 67                 | 76                 |
| Spindle                               | Max. Spindle Speed              | rpm   | 4,500        | 3,500              | 4,500              | 3,500              |
|                                       | Spindle nose                    | ASA   | A2-6         | A2-8               | A2-6               | A2-8               |
|                                       | Bore diameter                   | mm    | 78           | 86                 | 78                 | 86                 |
|                                       | Draw tube I.D.                  | mm    | 68           | 77                 | 68                 | 77                 |
|                                       | Motor (Cont./Max.) [OPT.]       | kW    | 15/18.5      | 15/18.5[18.5/26]   | 15/18.5            | 15/18.5[18.5/26]   |
| Travel                                | X/Z axis travel                 | mm    | 245/1,100    | 245/1,100          | 245/1,040          | 245/1,040          |
|                                       | X/Z rapid traverse rate         | m/min | 24/30        | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.] | st.   | 12           | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                   | sec   | 0.20         | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool      | mm    | □25x25       | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar   | mm    | 50           | 50                 | 50                 | 50                 |
|                                       | Live tool speed                 | rpm   | -            | -                  | 5,000              | 5,000              |
|                                       |                                 |       |              |                    |                    |                    |
| Tailstock                             | Tailstock quill travel          | mm    | 1022/100     | 1022/100           | 966/100            | 966/100            |
|                                       | Tailstock quill diameter        | mm    | 110          | 110                | 110                | 110                |
| Electric Power Supply                 |                                 |       | kVA/V        | 34/220             | 34(41)/220         | 34(41)/220         |
| Floor Space(L×W) [With Chip Conveyor] |                                 |       | mm           | 3,780[4,885]×1,610 | 3,780[4,885]×1,610 | 3,780[4,885]×1,610 |
| Machine Weight                        |                                 |       | kg           | 6,300              | 6,300              | 6,400              |
| Controller                            |                                 |       | Fanuc Series |                    |                    |                    |

※Design and specifications subject to change without notice.



Major Specifications

| DESCRIPTION                           |                                        |       | SL 3000      |                    | SL 3000M           |                    |
|---------------------------------------|----------------------------------------|-------|--------------|--------------------|--------------------|--------------------|
|                                       |                                        |       | A Type       | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                             | inch  | 10"          | 12"                | 10"                | 12"                |
| Capacity                              | Swing over the bed                     | mm    | 650          | 650                | 650                | 650                |
|                                       | Swing over the cross slide             | mm    | 480          | 480                | 480                | 480                |
|                                       | Max. machining diameter                | mm    | 430          | 430                | 405                | 405                |
|                                       | Max. machining length                  | mm    | 554          | 528                | 497                | 456                |
|                                       | Bar working diameter                   | mm    | 76           | 90                 | 76                 | 90                 |
| Spindle                               | Max. Spindle Speed                     | rpm   | 3,500        | 3,000              | 3,500              | 3,000              |
|                                       | Spindle nose                           | ASA   | A2-8         | A2-8               | A2-8               | A2-8               |
|                                       | Bore diameter                          | mm    | 86           | 105                | 86                 | 105                |
|                                       | Draw tube I.D.                         | mm    | 77           | 91                 | 77                 | 91                 |
|                                       | Motor (Cont./Max.)                     | kW    | 18.5/26      | 18.5/26            | 18.5/26            | 18.5/26            |
| Travel                                | X/Z axis travel                        | mm    | 245/600      | 245/600            | 245/540            | 245/540            |
|                                       | X/Z rapid traverse rate                | m/min | 24/30        | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.]        | st.   | 12           | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                          | sec   | 0.20         | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool             | mm    | □25x25       | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar          | mm    | 50           | 50                 | 50                 | 50                 |
|                                       | Live tool speed                        | rpm   | -            | -                  | 5,000              | 5,000              |
| Tailstock                             | Tailstock quill travel (Programable)   | mm    | 522/100      | 522/80(100)        | 466/100            | 466/100            |
|                                       | Tailstock quill diameter (Programable) | mm    | 110          | 85(110)            | 110                | 110                |
| Electric Power Supply                 |                                        |       | kVA/V        | 41/220             | 41/220             | 41/220             |
| Floor Space(L×W) [With Chip Conveyor] |                                        |       | mm           | 3,125[4,230]×1,610 | 3,125[4,230]×1,610 | 3,125[4,230]×1,610 |
| Machine Weight                        |                                        |       | kg           | 5,200              | 5,200              | 5,300              |
| Controller                            |                                        |       | Fanuc Series |                    |                    |                    |

※Design and specifications subject to change without notice.

Major Specifications

| DESCRIPTION                           |                                 |       | SL 3000X     |                    | SL 3000XM          |                    |
|---------------------------------------|---------------------------------|-------|--------------|--------------------|--------------------|--------------------|
|                                       |                                 |       | A Type       | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                      | inch  | 10"          | 12"                | 10"                | 12"                |
| Capacity                              | Swing over the bed              | mm    | 650          | 650                | 650                | 650                |
|                                       | Swing over the cross slide      | mm    | 480          | 480                | 480                | 480                |
|                                       | Max. machining diameter         | mm    | 430          | 430                | 405                | 405                |
|                                       | Max. machining length           | mm    | 834          | 808                | 767                | 736                |
|                                       | Bar working diameter            | mm    | 76           | 90                 | 76                 | 90                 |
| Spindle                               | Max. Spindle Speed              | rpm   | 3,500        | 3,000              | 3,500              | 3,000              |
|                                       | Spindle nose                    | ASA   | A2-8         | A2-8               | A2-8               | A2-8               |
|                                       | Bore diameter                   | mm    | 86           | 105                | 86                 | 105                |
|                                       | Draw tube I.D.                  | mm    | 77           | 91                 | 77                 | 91                 |
|                                       | Motor (Cont./Max.)              | kW    | 18.5/26      | 18.5/26            | 18.5/26            | 18.5/26            |
| Travel                                | X/Z axis travel                 | mm    | 245/880      | 245/880            | 245/820            | 245/820            |
|                                       | X/Z rapid traverse rate         | m/min | 24/30        | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.] | st.   | 12           | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                   | sec   | 0.20         | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool      | mm    | □25x25       | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar   | mm    | 50           | 50                 | 50                 | 50                 |
|                                       | Live tool speed                 | rpm   | -            | -                  | 5,000              | 5,000              |
| Tailstock                             | Tailstock quill travel          | mm    | 772/100      | 772/100            | 716/100            | 716/100            |
|                                       | Tailstock quill diameter        | mm    | 110          | 110                | 110                | 110                |
| Electric Power Supply                 |                                 |       | kVA/V        | 41/220             | 41/220             | 41/220             |
| Floor Space(L×W) [With Chip Conveyor] |                                 |       | mm           | 3,430[4,535]×1,610 | 3,430[4,535]×1,610 | 3,430[4,535]×1,610 |
| Machine Weight                        |                                 |       | kg           | 5,800              | 5,800              | 5,900              |
| Controller                            |                                 |       | Fanuc Series |                    |                    |                    |

※Design and specifications subject to change without notice.

Major Specifications

| DESCRIPTION                           |                                 |       | SL 3000L     |                    | SL 3000LM          |                    |
|---------------------------------------|---------------------------------|-------|--------------|--------------------|--------------------|--------------------|
|                                       |                                 |       | A Type       | B Type             | A Type             | B Type             |
| Chuck                                 | Chuck size                      | inch  | 10"          | 12"                | 10"                | 12"                |
| Capacity                              | Swing over the bed              | mm    | 650          | 650                | 650                | 650                |
|                                       | Swing over the cross slide      | mm    | 480          | 480                | 480                | 480                |
|                                       | Max. machining diameter         | mm    | 430          | 430                | 405                | 405                |
|                                       | Max. machining length           | mm    | 1,054        | 1,028              | 997                | 956                |
|                                       | Bar working diameter            | mm    | 76           | 90                 | 76                 | 90                 |
| Spindle                               | Max. Spindle Speed              | rpm   | 3,500        | 3,000              | 3,500              | 3,000              |
|                                       | Spindle nose                    | ASA   | A2-8         | A2-8               | A2-8               | A2-8               |
|                                       | Bore diameter                   | mm    | 86           | 105                | 86                 | 105                |
|                                       | Draw tube I.D.                  | mm    | 77           | 91                 | 77                 | 91                 |
|                                       | Motor (Cont./Max.)              | kW    | 18.5/26      | 18.5/26            | 18.5/26            | 18.5/26            |
| Travel                                | X/Z axis travel                 | mm    | 245/1,100    | 245/1,100          | 245/1,040          | 245/1,040          |
|                                       | X/Z rapid traverse rate         | m/min | 24/30        | 24/30              | 24/30              | 24/30              |
| Turret                                | Number of tool positions [OPT.] | st.   | 12           | 12                 | 12[24](BMT65)      | 12[24](BMT65)      |
|                                       | Indexing time                   | sec   | 0.20         | 0.20               | 0.20               | 0.20               |
|                                       | Shank size for square tool      | mm    | □25x25       | □25x25             | □25x25             | □25x25             |
|                                       | Shank diameter for boring bar   | mm    | 50           | 50                 | 50                 | 50                 |
|                                       | Live tool speed                 | rpm   | -            | -                  | 5,000              | 5,000              |
| Tailstock                             | Tailstock quill travel          | mm    | 1,022/100    | 1,022/100          | 966/100            | 966/100            |
|                                       | Tailstock quill diameter        | mm    | 110          | 110                | 110                | 110                |
| Electric Power Supply                 |                                 |       | kVA/V        | 41/220             | 41/220             | 41/220             |
| Floor Space(L×W) [With Chip Conveyor] |                                 |       | mm           | 3,780[4,885]×1,610 | 3,780[4,885]×1,610 | 3,780[4,885]×1,610 |
| Machine Weight                        |                                 |       | kg           | 6,400              | 6,400              | 6,500              |
| Controller                            |                                 |       | Fanuc Series |                    |                    |                    |

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NC Specifications / Fanuc Series

| Item                 |                                     | Description                                                                      |
|----------------------|-------------------------------------|----------------------------------------------------------------------------------|
| Controlled axes      | Controlled axes                     | 2-axis(X,Z)                                                                      |
|                      | Max. simultaneously controlled axes | Positioning(G00) / Linear Interpolation(G01)<br>Circular Interpolation(G02, G03) |
|                      | Least input increment               | 0.001mm                                                                          |
| Spindle function     | Spindle speed control               | S5 (5 Digit)                                                                     |
|                      | Spindle speed override              | 0~120%                                                                           |
|                      | Spindle orientation                 | M19                                                                              |
| Feed function        | Feedrate override (10% increase)    | 0~150%                                                                           |
|                      | Dwell                               | G04                                                                              |
|                      | Reference position return           | G27, G28                                                                         |
|                      | Manual pulse generator              | 0.001/0.01/0.1mm                                                                 |
|                      | Dry run                             | F0(Fine Feed), 25/50/100%                                                        |
| Tool function        | Rapid traverse override             | F0(Fine Feed), 25/50/100%                                                        |
|                      | Tool number command                 | T2(2 Digit), T4(Digit)                                                           |
|                      | Tool nose radius compensation       | G40 ~ G42                                                                        |
|                      | Tool offset pairs                   | 128EA                                                                            |
| Programming function | Tool geometry / wear offset         | GEOMETRY & WEAR DATA                                                             |
|                      | Canned cycle                        | G70~G72, G74~G76                                                                 |
|                      | Decimal point input                 | Able to input up to decimal point                                                |
|                      | SUB program                         | 4 phase                                                                          |
|                      | Work coordindate system             | G52~G59                                                                          |
| Tape Functions       | Max program dimension               | ±99999.999mm                                                                     |
|                      | M function                          | M3 (3 digit)                                                                     |
|                      | Input code                          | ISO/EIA auto recognition                                                         |
|                      | I/O interface                       | RS232C                                                                           |
|                      | Program storage space               | 1280M(512kb)                                                                     |
| Other features       | Number of stored programs           | 400ea                                                                            |
|                      | Display unit / MDI                  | 8.4" color LCD / Soft input type MDI                                             |
|                      | Display unit / MDI                  | 10.4" color LCD / Soft input type MDI                                            |
|                      | Synchronized tapping                | Rigid tapping function                                                           |
|                      | Background editing                  | Program saving / editing during automatic operation                              |
|                      | Backlash compensation               | Pitch error offset compensation for each axis                                    |
|                      | Search function                     | Sequence / program number search                                                 |
|                      | Safety function                     | Emergency stop / overtravel                                                      |
|                      | Program test function               | Machine Lock / Single Block                                                      |
|                      | Control function                    | Memory / MDI / Manual                                                            |
|                      | Mirror image                        |                                                                                  |
|                      | Run hour and parts count display    |                                                                                  |
|                      | Custom macro                        | #100 ~ #199, #500 ~ #999                                                         |