SMEC

# PL 2000 Series

CNC TURNING CENTER

PL 2000 Series

- PL 2000A
- PL 2000B
- PL 2000AM
- PL 2000BM

SMEC CO.,LTD.


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SMEC CO.,LTD. | YouTube




Ⓔ SMEC 2021.02-NO.1

SMEC *Smart One, Global One*

- 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

**S**amsung
**M**achine Tools
**E**ngineering
**C**ompany

| | | PL 2000A \| PL 2000AM | PL 2000B \| PL 2000BM |
|---|---|---|---|
| Swing Over Bed | mm | 570 | 570 |
| Max. Machining Length | mm | 307 \| 291 | 271 \| 262 |
| Chuck Size | inch | 6" | 8" |
| Bore Capacity | mm | 61 | 76 |
| Spindle Speed | rpm | 6,000 | 4,500 |
| Motor (Cont./Max) | kW | 11/18.5 | 11/18.5 |
| Travel (X/Z) | mm | 175/350 | 175/350 |
| No. of Tools | EA | 10[12] \| 12(BMT45) | 10[12] \| 12(BMT45) |

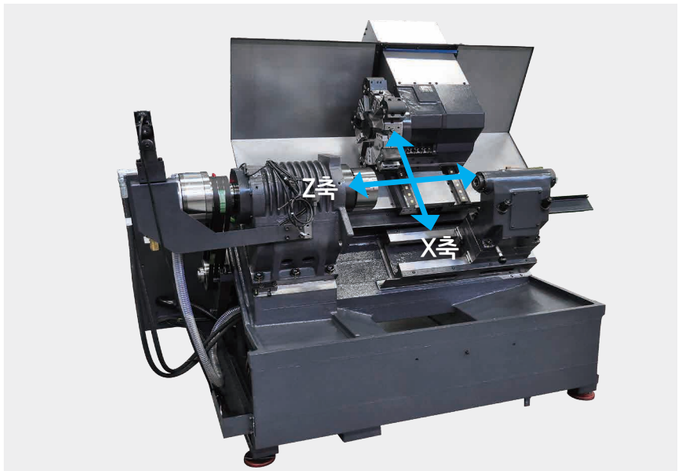
[ ]:Option

# PL 2000 series

## Compact Roller LM Guide Type, Economical 6~8" Small Turning Center

- 45 degree slant bed with torque tubing for heavy duty turning
- significantly reduced non-cutting time for efficient turning
- low center of gravity for vibration dampening and minimized thermal growth for high rigidity

## Machine Design




| Model | Chuck Size | Stroke(mm) | | Rapid Traverse(m/min) | |
|---|---|---|---|---|---|
| | | X-axis | Z-axis | X-axis | Z-axis |
| PL 2000A | 6" | 175 | 350 | 36 | 36 |
| PL 2000AM | 6" | 175 | 350 | 36 | 36 |
| PL 2000B | 8" | 175 | 350 | 36 | 36 |
| PL 2000BM | 8" | 175 | 350 | 36 | 36 |

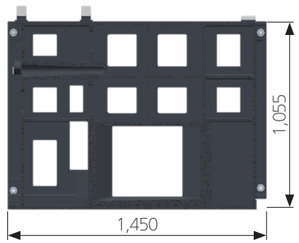
All feed axes use environmentally friendly grease lubrication with roller LM guides for high rigidity.

### High Reliability, High Rigidity

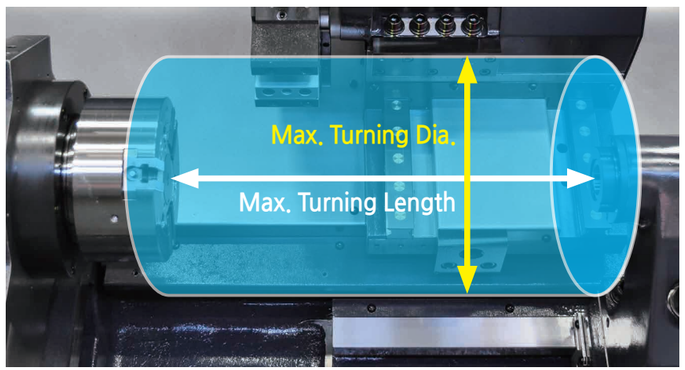
Torque Tube Rib casting and wide guideways ensure high precision and durability by dampening torsion and vibration, even during heavy duty machining

45 degree slant bed supports heavy duty machining

Surface contact area increased by **60%** from the previous model to increase stiffness.




## Work Range



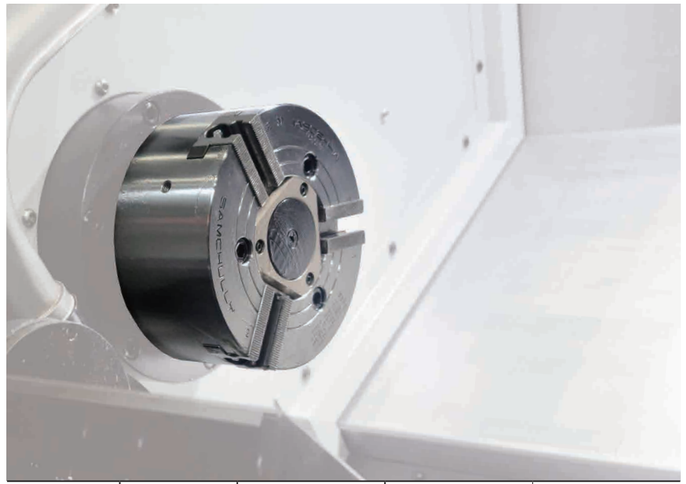

| Model | Unit | Max. Turning Dia. | Max. Turning Length | Bar Working Dia. |
|---|---|---|---|---|
| PL 2000A | mm | Ø310 | 307 | 51 |
| PL 2000AM | mm | Ø270 | 291 | 51 |
| PL 2000B | mm | Ø310 | 270.5 | 67 |
| PL 2000BM | mm | Ø270 | 261.6 | 67 |

Best-in-class work range.

Max. Turning Dia.
**Ø310** mm (PL 2000A/B)

Max. Turning Length
**307** mm (PL 2000A)

## Spindle



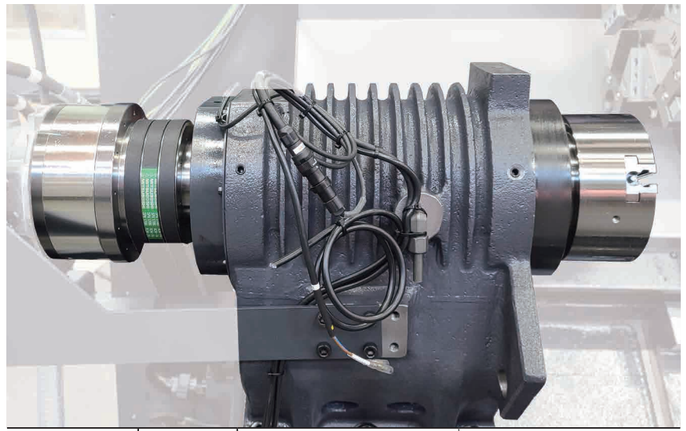
| Model | Std Chuck Size | Spindle speed rpm | Spindle Power (Cont./Max) kW | Spindle Torque (Cont./Max) N·m |
|---|---|---|---|---|
| PL 2000A | 6" | 6,000 | 11/18.5 | 53/118 |
| PL 2000AM | 6" | 6,000 | 11/18.5 | 53/118 |
| PL 2000B | 8" | 4,500 | 11/18.5 | 94/211 |
| PL 2000BM | 8" | 4,500 | 11/18.5 | 94/211 |

Improved productivity with high power / torque motor supporting high precision and heavy duty cutting.

Spindle Speed
**6000** rpm (6inch)

Max. Torque
**211** N·m(8inch)

Swing over the bed : **570** mm
Swing over the cross slide : **310** mm
Max. Turning dia. : **310** mm
Max. Bar working dia : **51** mm

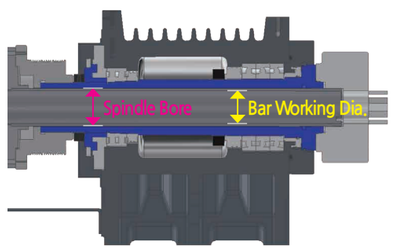


| Category | Unit | PL 2000A / AM | PL 2000B / BM |
|---|---|---|---|
| Spindle Bore | mm | Ø61 | Ø76 |
| Bar Working Dia. | mm | Ø51 | Ø67 |
| Spindle Nose | ASA | A2-5 | A2-6 |

### Radiator Fin Design to Reduce Thermal Growth

Radiator Fin design minimizes thermal growth of the spindle, preventing changes in precision due to increasing temperature. Also, the symmetrical spindle structure minimizes thermal growth.

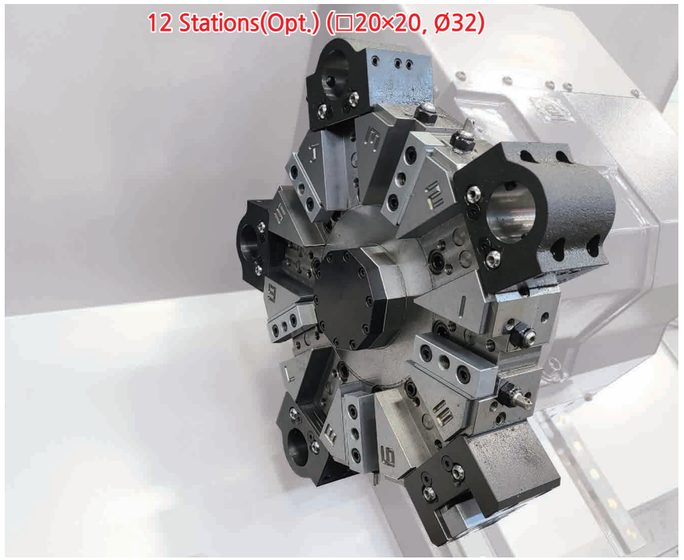
3 high precision Angular Ball Bearings are placed at the front while a set of Double Cylinder Roller Bearings are placed at the rear of the spindle to ensure high precision, high speed cutting.



## Turret

### HIGH SPEED, HEAVY DUTY SERVO TURRET

PL 2000A/B : 10 Stations (□25×25, Ø40)




Minimized non-cutting time with high-speed indexing turret with 0.2 second indexing per station.

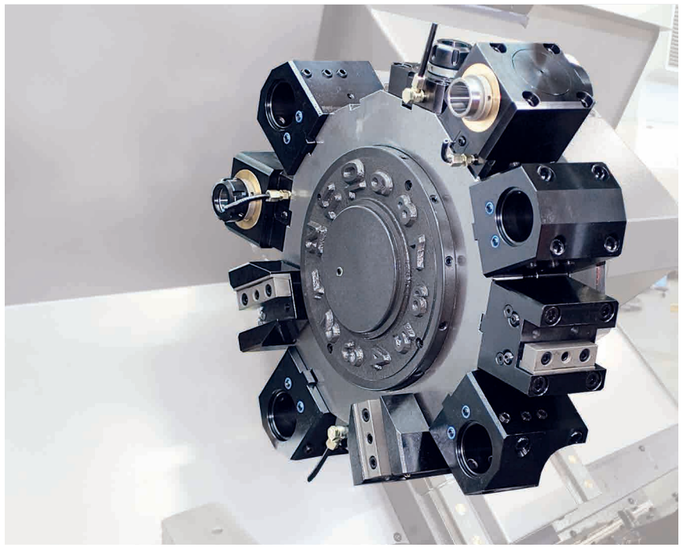
Tool selection is made with turret indexing time of 0.2 seconds per station made possible through the High Power Servo Index Motor using the Non Stop Random Index Method. The Ø145mm large diameter Curvic Coupling enhances the clamping power and indexing accuracy.

Turret Indexing Time
**0.2** sec

No. of Tool Stations
**10** station
**12** station(Opt.)

### HIGH SPEED MILL TURRET (BMT45)

PL 2000AM/BM : 12 Stations (□20×20, Ø32)



BMT Milling Turret (AM/BM Type)

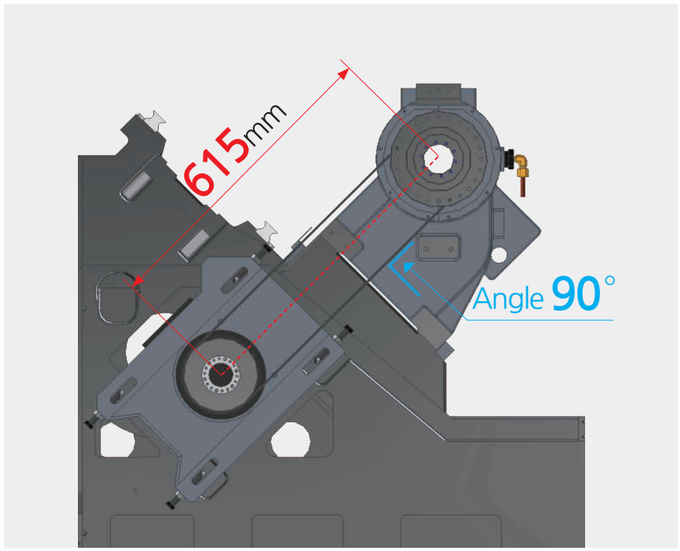
The 12 station BMT turret with the largest in class Curvic Coupling and powerful clamping force, is capable of accepting rotary tool on every tool position and supports a variety of machining operations with a single set-up.

The best in class tool holders ensure high rigidity, high precision machining and with Non Stop turret indexing in either direction minimizes the turret index time down to 0.15 seconds per station.

Turret Indexing Time
**0.15** sec

No. of Tool Stations
**12** station

## Spindle Drive




- Distance between spindle and spindle motor has been reduced compared to previous models.
- The internalized spindle motor design minimizes the required floor space.
- Thermal growth is minimized with TENSION in the orthagonal direction.

Angle **90°**

Distance between spindle and moto
**615**mm

Distance compared to previous model
**12**% shorter

## Tailstock Opt.

Used to maintain high precision during heavy duty cutting, the tailstock may be traversed using the MPG handle or manually.

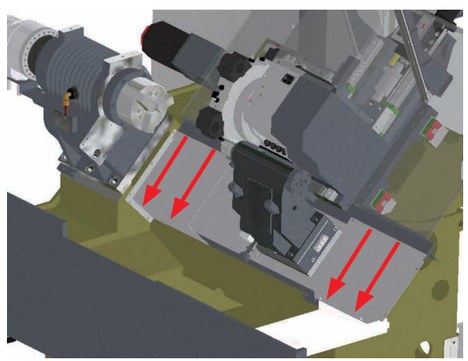
Tailstock Stroke
**350**mm

Quill Stroke
**80**mm

Quill Taper
**MT4**

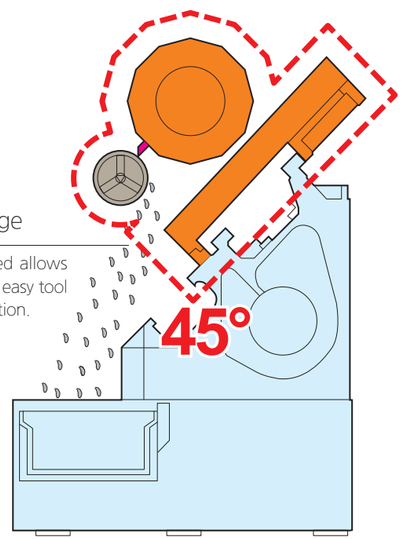
## Machine Features

- SLIDE WAY : ROLLER LM GUIDE(SLIDE COVER ADDED)
- Improved chip discharge



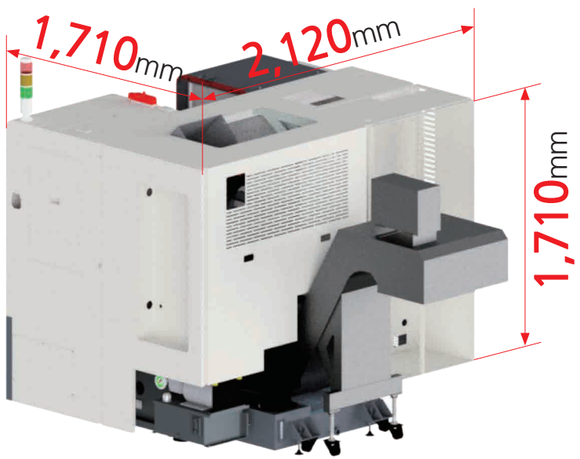
### Easy Chip Discharge

The 45 degree slant bed allows easy chip discharge and easy tool replacement and inspection.




### Efficient Space Usage

- Minimized installation footprint design
- Effective chip discharge
- Centralized OP panel for operator convenience
- More units can be installed and operated in the amount of space.




"Machine length reduced by **25**% compared to previous model"

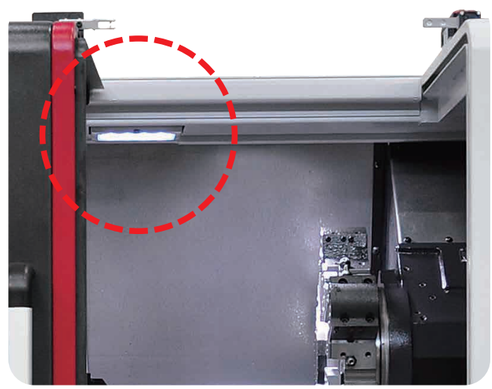

### Automatic Lubrication Dispenser

Using a system that provides the correct amount of lubrication to all necessary points, it maintains the accuracy of the feed systems and extends the lifetime of each component.
If there is a problem in the lubrication line or there is insufficient lubrication, an alarm message is displayed and the machine automatically stops to ensure safe operation.



## Machine Features

- LED worklight location
- Worklight glare prevention



### Feed system with pretension and both ends fixed.

All feed axes ballscrews are fixed on both ends with pretension. Feed axes are driven by large-diameter high-precision ballscrews and are supported on both ends with high-precision P4 class angular bearings.

### Rapid Traverse(X/Z)

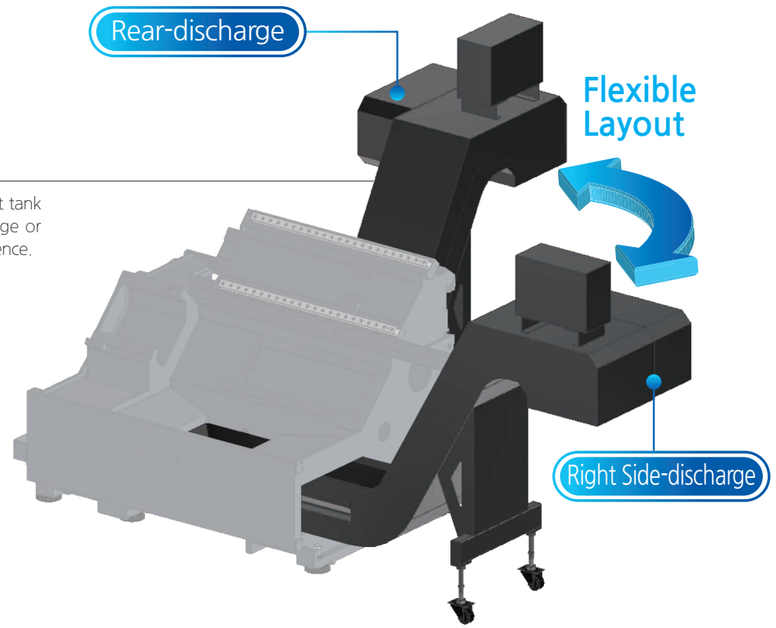
**36** m/min

### Flexible Chip Discharge

The same chip conveyor and coolant tank may be used either as rear-discharge or side-discharge for customer convenience.

### Tank Capacity

**140** ℓ



## SMEC FANUC i series


### PL 2000

- 10.4'' LCD color display
- Part Program Size 2Mbyte
- High quality OP Panel design
- SMEC Custom S/W

SMEC Customer S/W accessible via MDI's [SYSTEM] or using the [CUSTOM] button in the OP Panel


### PL 2000M

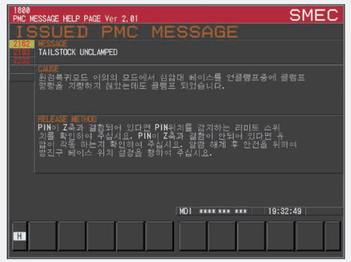
- 10.4'' LCD color display
- Part Program Size 2Mbyte
- High quality OP Panel design
- SMEC Custom S/W
- Conversational programming Manual guide i

SMEC Customer S/W accessible via MDI's S1 or using the [CUSTOM] button in the OP Panel

[CUSTOM] ◀ **CUSTOM** : Enhancing customer convenience and productivity by supporting various functions such as tool management and peripheral device setting.

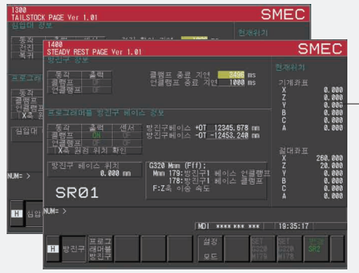

### M/G Code Check

Convenience software allowing operator to read the M/G code directly from the machine



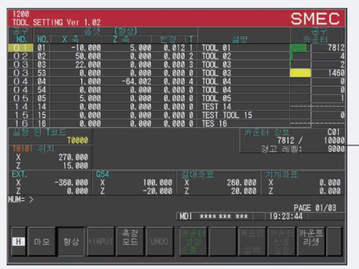

### Check detailed PMC alarm messages

Convenient operation and maintenance when PMC alarms are generated using the detailed descriptions for cause and release method




### Simplified tailstock setting.

Easily configure various functions such as tailstock stroke limit, home position setting and signal check.



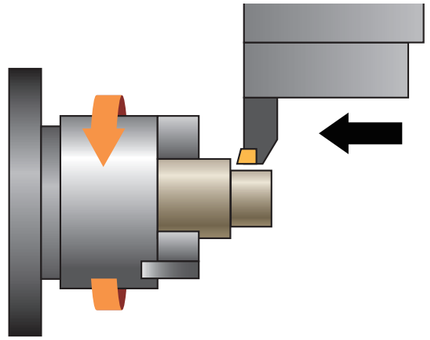

### Function to simultaneously display needed tools and offsets and configured counters

Tool information and setting management mode


### Life counters per T Code

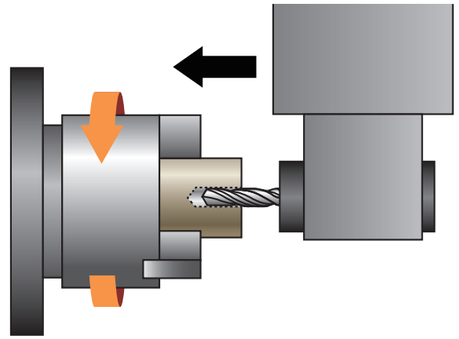
## Cutting Performance

◆ O.D Cutting



| | | |
|---|---|---|
| **Cutting Dia.** | mm | Ø45 |
| **Cutting Depth** | mm | 4.5 |
| **Cutting Speed** | m/min | 212 |
| **Spindle Speed** | rpm | 1,500 |
| **Feedrate** | mm/rev | 0.45 |
| **Chip Removal Rate** | cc/min | 429 |

◆ U-Drill Cutting



| | | |
|---|---|---|
| **U-Drill Dia.** | mm | Ø70 |
| **Cutting Depth** | mm | 70 |
| **Cutting Speed** | m/min | 180 |
| **Spindle Speed** | rpm | 1,500 |
| **Feedrate** | mm/rev | 0.23 |
| **Chip Removal Rate** | cc/min | 388 |

## Standard / Optional Specifications

Various optional features are available for customer-specific work environments.

● : Standard ○ : Optional △ : To be discussed X : Not applicable

| Category | Description | | PL 2000A/B | PL 2000AM/BM |
|---|---|---|---|---|
| Spindle | 3 jaw open-center chuck | | ● | ● |
| | 3 jaw closed-center chuck | | ○ | ○ |
| | Soft jaw (3set) | | ● | ● |
| | Hard jaw (1set) | | ○ | ○ |
| | Chuck clamp footswitch | | ● | ● |
| | Dual pressure chucking | | ○ | ○ |
| | C-axis control (0.001°) | | X | ● |
| | Chuck clamp confirmation | | ● | ● |
| | Chuck dual footswitch | | ○ | ○ |
| Tool Holder | Tool holder | | ● | ● |
| | Rotary holder type | BMT | X | ● |
| | Rotary holder (Axial) | Collet-type, 2EA | X | ● |
| | Rotary holder (Radial) | Collet-type, 2EA | X | ● |
| | Rotary holder (Axial) | Adapter-type | X | ○ |
| | Rotary holder (Radial) | Adapter-type | X | ○ |
| | Boring bar sleeve (same as U-drill holder sleeve) | | ● | ● |
| | Drill socket | | ● | ● |
| | U-drill holder | | ● | ● |
| | U-drill CAP | | ● | ● |
| | Angle head | | ○ | ○ |
| Tailstock & Steady Rest | Programmable Tailstock | | X | X |
| | Live Center (Standard with Tailstock) | | ○ | ○ |
| | High Precision Live Center | | ○ | ○ |
| | 2 Step Tailstock Pressure System | | ○ | ○ |
| | Tailstock Quill Forward/Reverse Confirmation Device | | ○ | ○ |
| | Footswitch for Tailstock | | ○ | ○ |
| Coolant & Air Blow | Standard coolant nozzle | | ○ | ○ |
| | Chuck coolant | | ○ | ○ |
| | Gun coolant | | ○ | ○ |
| | TSC for chuck (for special chuck) | | △ | △ |
| | Bed flushing | | ○ | ○ |
| | Chuck air blower | | ○ | ○ |
| | TSC for turn-mill | | ○ | ○ |
| | Tailstock air blower | | X | X |
| | Turret tool air blower | | X | X |
| | Air gun | | ○ | ○ |
| | Through spindle air blower (for special chuck) | | ○ | ○ |
| | Coolant pump | 4.5Bar | ● | ● |
| | | 7Bar | ○ | ○ |
| | | 10Bar | ○ | ○ |
| | | 14.5Bar | ○ | ○ |
| | | 20Bar | ○ | ○ |
| | Power coolant system (for automation solutions) | | △ | △ |
| | Coolant chiller | | ○ | ○ |

| Category | Description | | PL 2000A/B | PL 2000AM/BM |
|---|---|---|---|---|
| Chip Removal | Coolant tank | 140L | ● | ● |
| | Chip conveyor (Hinge / Scraper / Screw) | Right-side | ○ | ○ |
| | | Rear | ○ | ○ |
| | Special chip conveyor (Drum Filter) | | △ | △ |
| | Chip bucket | Standard 380L | ○ | ○ |
| Safety Features | Door interlock | | ● | ● |
| | Backspin torque limiter(BST) | | X | X |
| | Torque limiter | | X | X |
| | Full splash guard | | ● | ● |
| | Chuck hyd. pressure interlock | | X | X |
| Electrical | 3 step patrol lamp and buzzer | | ● | ● |
| | Lamp for electrical cabinet | | X | X |
| | Remote MPG | | X | X |
| | Work counter | Digital | △ | △ |
| | Total counter | Digital | △ | △ |
| | Tool counter | Digital | △ | △ |
| | Multi counter | 6EA | △ | △ |
| | | 9EA | △ | △ |
| | Grounded circuit breaker | | △ | △ |
| | AVR(Auto Voltage Regulator) | | X | X |
| | Transformer | 25kVA | ○ | ○ |
| | | 30kVA | △ | △ |
| | Auto Power Off | | ○ | ○ |
| Measurement | Tool Presetter | Manual | ○ | ○ |
| | Tool Presetter | Auto | ○ | ○ |
| | Air zero measuring device | TACO | △ | △ |
| | | SMC | △ | △ |
| | Linear scale | X-axis | ○ | ○ |
| | | Z-axis | ○ | ○ |
| | Coolant level gauge (requires chip conveyor) | | ○ | ○ |
| Environmental | Air conditioner for electrical cabinet | | ○ | ○ |
| | Dehumidifier | | △ | △ |
| | Oil mist collector | | ○ | ○ |
| | Oil skimmer | | ○ | ○ |
| | MQL(Minimal Quantity Lubrication) | | ○ | ○ |
| Automation | Auto door | | ○ | ○ |
| | Auto shutter (for automation solution) | | ○ | ○ |
| | Sub controller | | △ | △ |
| | Barfeeder interface | | △ | △ |
| | External M Code 4 Pairs | | △ | △ |
| | Automation interface | | △ | △ |
| | I/O expansion (including both IN and OUT) | 16 contacts | △ | △ |
| | | 32 contacts | △ | △ |
| | Parts catcher | | ○ | ○ |
| | Part conveyor (requires part catcher) | | X | X |
| Hydraulic Supply | Standard hydraulic cylinder | Open-center | ● | ● |
| | Standard hydraulic unit | 35Bar / 15L | X | X |
| | | 35Bar / 20L | ● | ● |

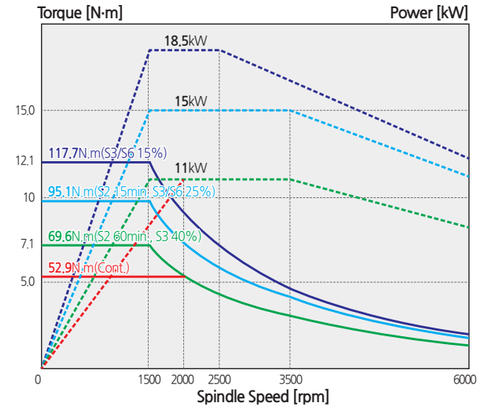
* For detailed information, please contact your SMEC Machine Tools representative.

## Power-Torque Diagram

### PL 2000A/AM

Speed
**6000** rpm

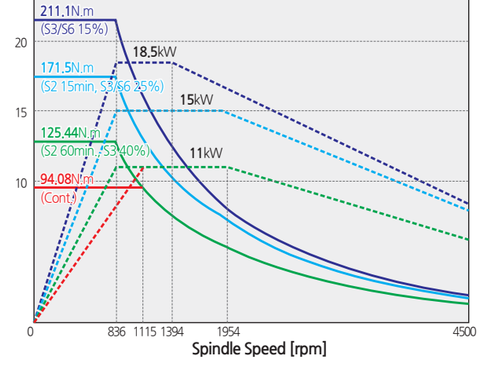
Power
**11/15/18.5** kW




### PL 2000B/BM

Speed
**4500** rpm

Power
**11/15/18.5** kW

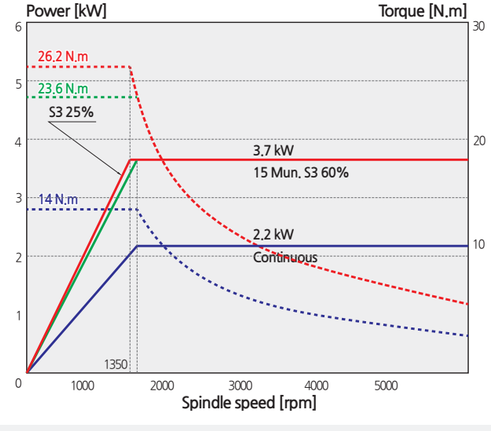



### PL 2000AM/BM

Milling Motor Torque Diagram

Speed
**5000** rpm

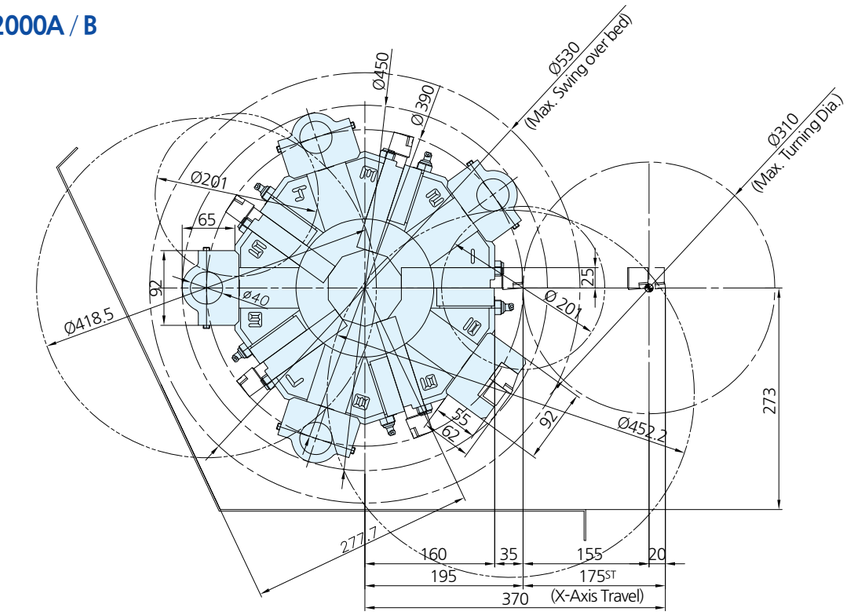
Power
**2.2/3.7** kW



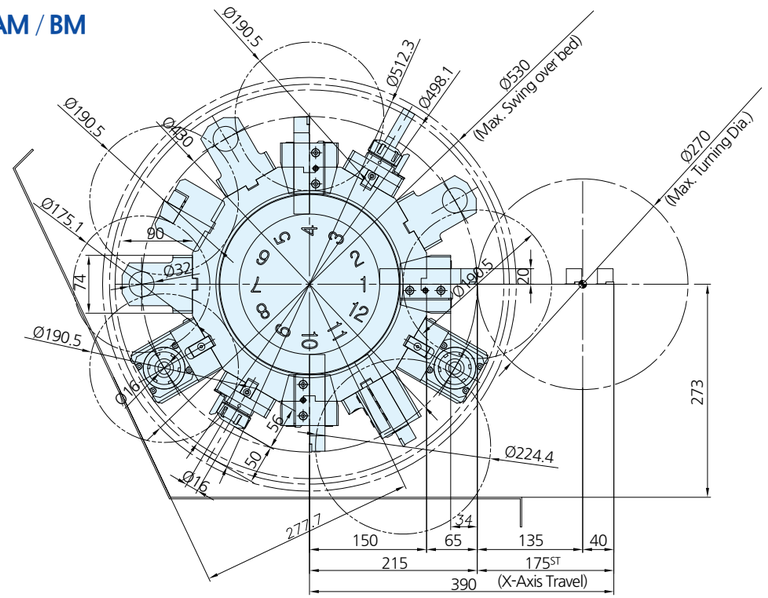
## Turret Interference

Units : mm

### PL 2000A / B



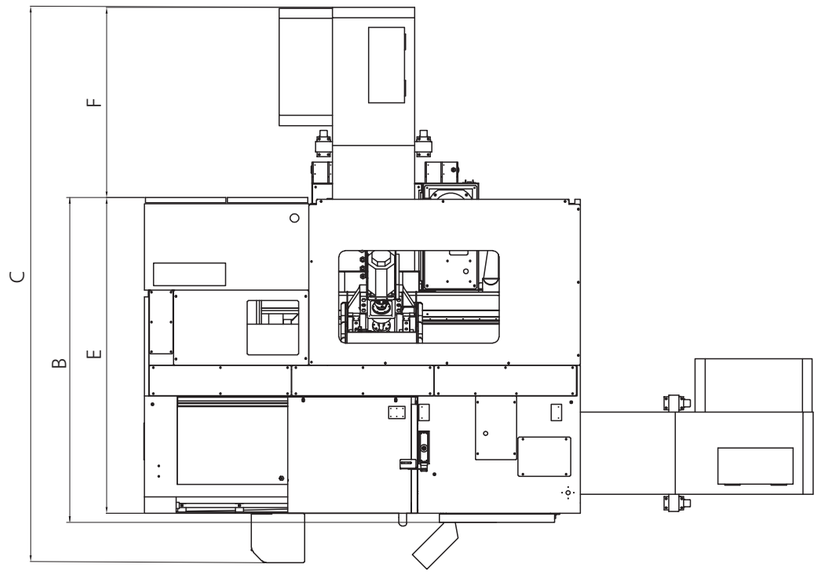

### PL 2000AM / BM



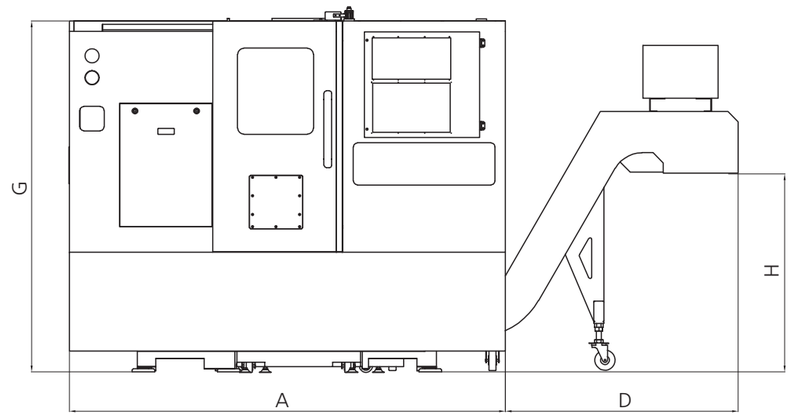

## Machine Dimensions

Units : mm

### Top view




### Front view

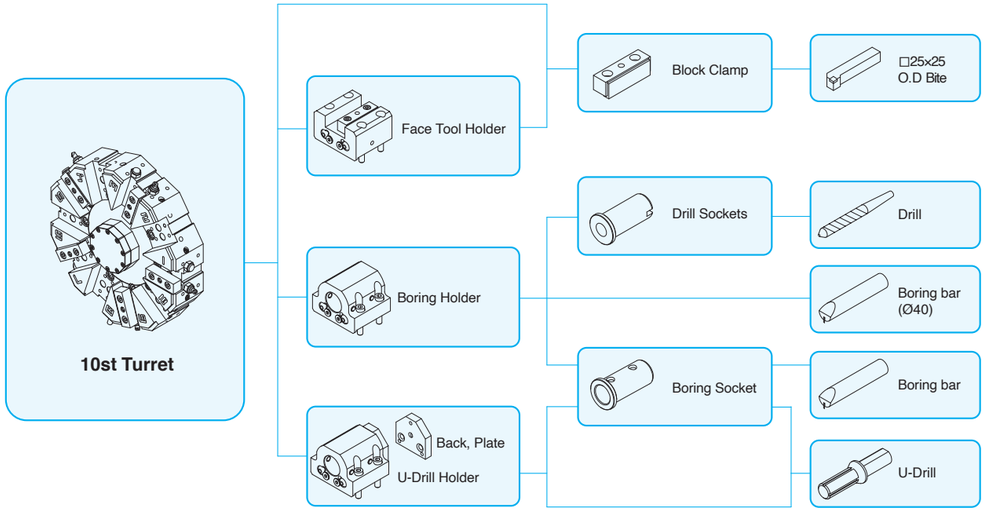



| Model | A (Length) | B [Width (incl. OP Panel)] | C (Total Width) | D (Incl. Side Discharge C/C) | E (Machine Width) | F (Incl. Rear Discharge C/C) | G (Machine Height) | H (C/C Discharge Height) |
|---|---|---|---|---|---|---|---|---|
| PL 2000A/B | 2,120 | 1,570 | 2,700 | 1,130 | 1,535 | 930 | 1,710 | 970 |
| PL 2000AM/BM | 2,120 | 1,570 | 2,700 | 1,130 | 1,535 | 930 | 1,710 | 970 |

## Tooling System

Unit : mm

### PL 2000A / B



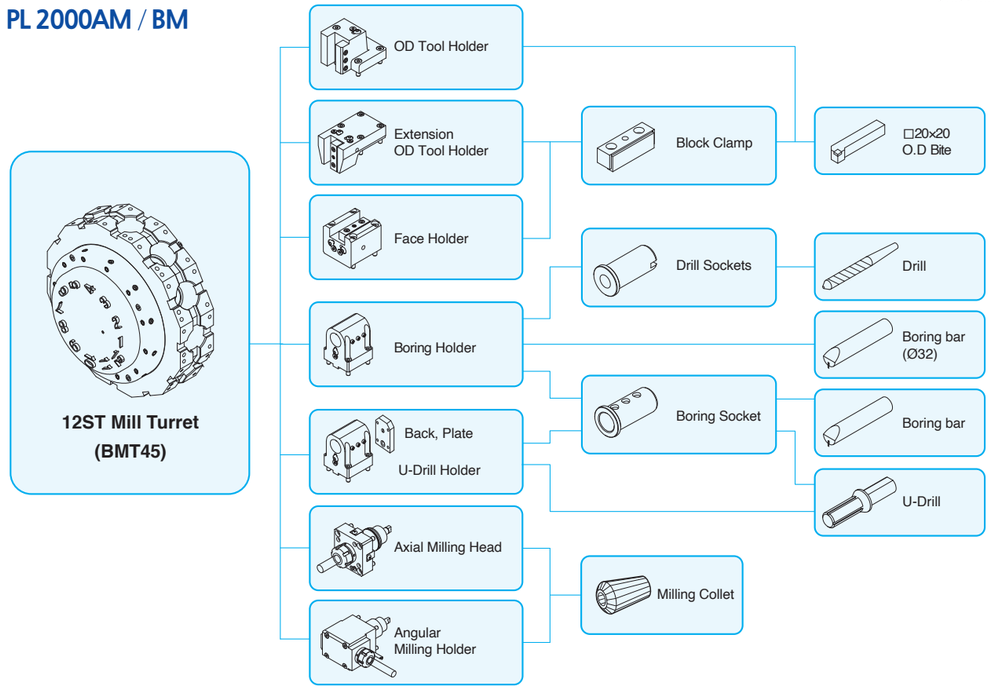

### Standard Tooling(PL 2000A/B)

| ITEM/ MODEL | | | 6 Inch | 8 Inch |
|---|---|---|---|---|
| Static Holder | Clamper | | 5 | 5 |
| | OD Holder | Extension | - | - |
| | Face Holder | | 1 | 1 |
| Boring Holder | I.D. Holder | Single (Ø40, Ø1 1/2") | 3 | 3 |
| | U-Drill Holder | Cap | 1 | 1 |
| Driven Holder | Axial Driven Holder | Standard | - | - |
| | | T.T.C | - | - |
| | Radial Driven Holder | Standard | - | - |
| | | T.T.C | - | - |
| Socket | Boring | Ø8 | 1 | 1 |
| | | Ø10 | 1 | 1 |
| | | Ø12 | 1 | 1 |
| | | Ø16 | 1 | 1 |
| | | Ø20 | 1 | 1 |
| | | Ø25 | 1 | 1 |
| | | Ø32 | 1 | 1 |
| | Drilling | MT1 | 1 | 1 |
| | | MT2 | 1 | 1 |
| | ER Collet | | - | - |

## Tooling System

Unit : mm

### PL 2000AM / BM




### Standard Tooling(PL 2000AM/BM)

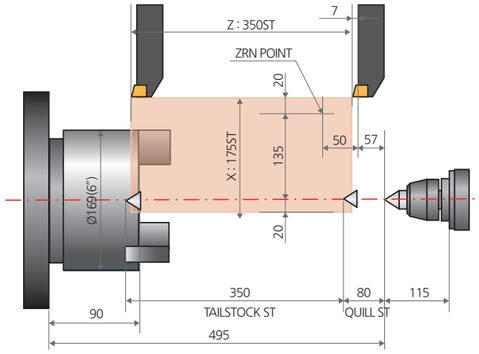
| ITEM/ MODEL | | | 6 Inch | 8 Inch |
|---|---|---|---|---|
| Static Holder | Clamper | | 6 | 6 |
| | OD Holder | | 1 | 1 |
| | OD Holder | Extension | 3 | 3 |
| | Face Holder | | 1 | 1 |
| Boring Holder | I.D. Holder | Single (Ø40, Ø1 1/2") | 2 | 2 |
| | U-Drill Holder | Cap | 1 | 1 |
| Driven Holder | Axial Driven Holder | Standard | 2 | 2 |
| | | T.T.C | - | - |
| | Radial Driven Holder | Standard | 2 | 2 |
| | | T.T.C | - | - |
| Socket | Boring | Ø8 | 1 | 1 |
| | | Ø10 | 1 | 1 |
| | | Ø12 | 1 | 1 |
| | | Ø16 | 1 | 1 |
| | | Ø20 | 1 | 1 |
| | | Ø25 | 1 | 1 |
| | Drilling | MT1 | 1 | 1 |
| | | MT2 | 1 | 1 |
| | ER Collet | | - | - |

## Work Range

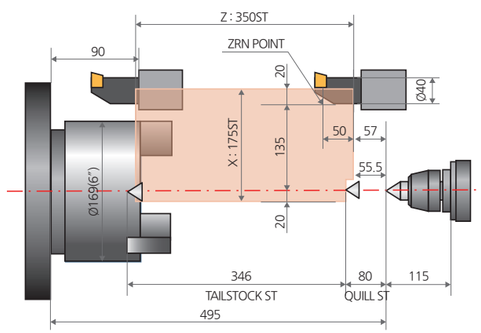
Unit : mm

### PL 2000A

**O.D Tool**

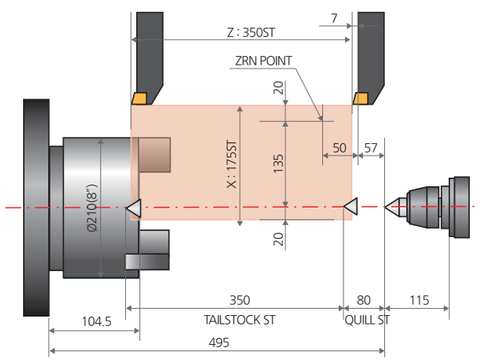



**I.D Tool**

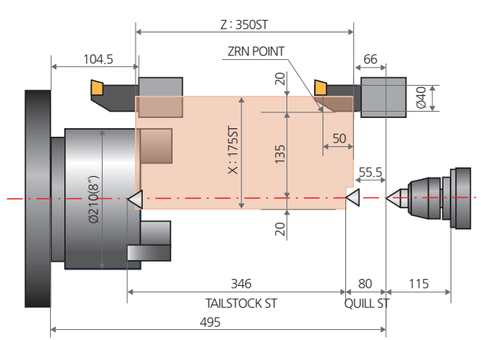



### PL 2000B

**O.D Tool**




**I.D Tool**

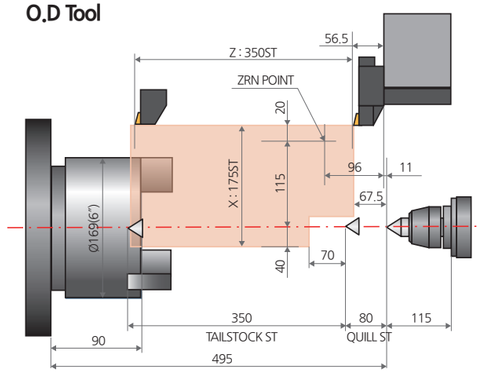



## Work Range

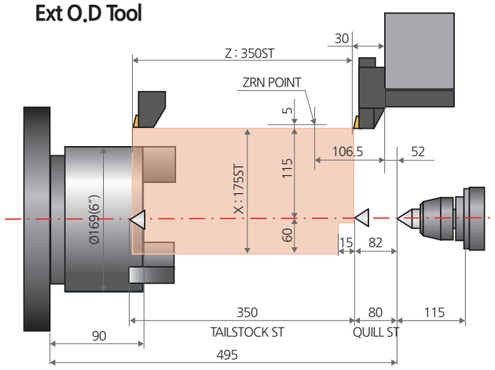
Unit : mm

### PL 2000AM

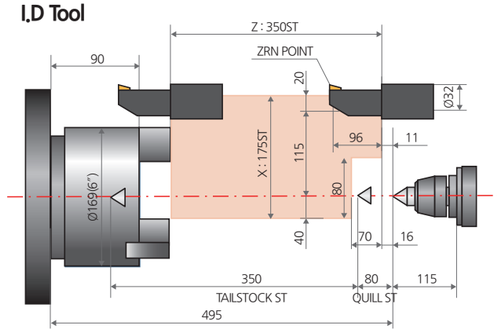
**O.D Tool**



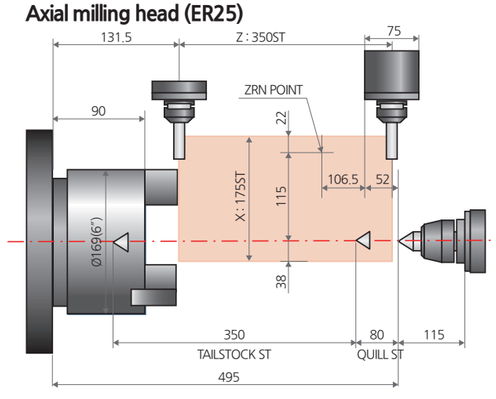

**Ext O.D Tool**



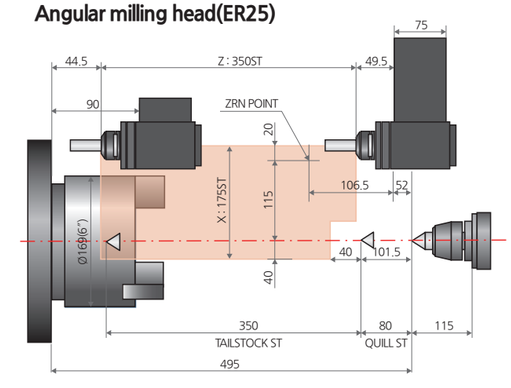

**I.D Tool**




**Axial milling head (ER25)**




**Angular milling head(ER25)**

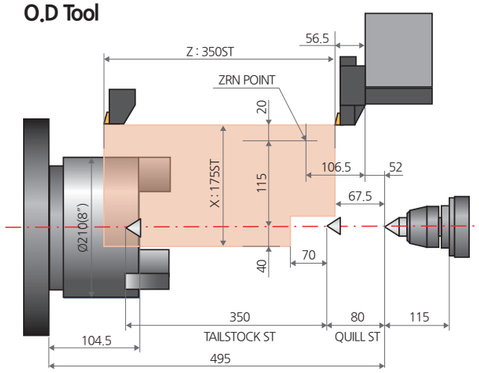


## Work Range

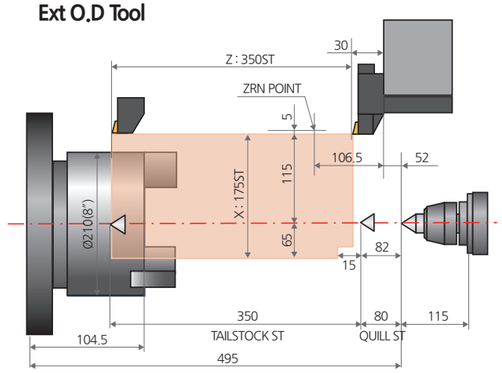
Unit : mm

### PL 2000BM

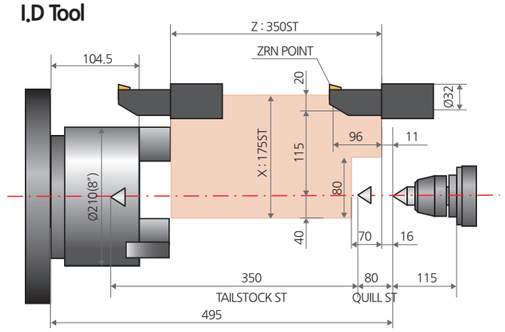
**O.D Tool**



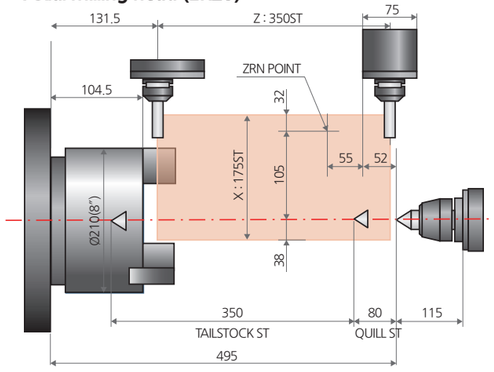

**Ext O.D Tool**



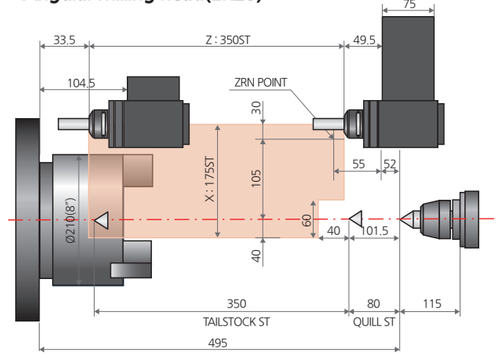

**I.D Tool**




**Axial milling head (ER25)**




**Angular milling head(ER25)**




## Machine Specifications

| DESCRIPTION | | | PL 2000 | | PL 2000M | |
|---|---|---|---|---|---|---|
| | | | A type | B type | A type | B type |
| Chuck | Chuck Size | inch | 6" | 8" | 6" | 8" |
| Capacity | Swing over Bed | mm | 570 | 570 | 570 | 570 |
| | Swing over Cross-slide | mm | 310 | 310 | 310 | 310 |
| | Max. Turning Dia. | mm | 310 | 310 | 270 | 270 |
| | Max. Milling Dia. | mm | - | - | 310 | 310 |
| | Max. Turning Length | mm | 307 | 270.5 | 291 | 261.6 |
| Spindle | Spindle Speed | rpm | 6,000 | 4,500 | 6,000 | 4,500 |
| | Spindle Nose | ASA | A2-5 | A2-6 | A2-5 | A2-6 |
| | Draw Tube I.D. | mm | 52 | 68 | 52 | 68 |
| | Spindle Bore | mm | 61 | 76 | 61 | 76 |
| | Spindle Motor (Cont./Max) | kW | 11/18.5 | 11/18.5 | 11/18.5 | 11/18.5 |
| Travels | X-axis Stroke | mm | 175 | 175 | 175 | 175 |
| | Z-axis Stroke | mm | 350 | 350 | 350 | 350 |
| | X-axis Rapid Traverse | m/min | 36 | 36 | 36 | 36 |
| | Z-axis Rapid Traverse | m/min | 36 | 36 | 36 | 36 |
| Turret | No. of Tool Positions | ea | 10 | 10 | 12(BMT45) | 12(BMT45) |
| | Shank Size for Square Tool | mm | □25×25 | □25×25 | □20×20 | □20×20 |
| | Boring Bar Dia. | mm | 40 | 40 | 32 | 32 |
| | Indexing Time | sec | 0.20 | 0.20 | 0.15 | 0.15 |
| | Rotary Tool Speed | rpm | - | - | 5,000 | 5,000 |
| | Rotary Tool Motor (Cont./Max) | kW | - | - | 2.2/3.7 | 2.2/3.7 |
| Tailstock | Quill Dia. | mm | 65 | 65 | 65 | 65 |
| | Quill Stroke | mm | 80 | 80 | 80 | 80 |
| | Tailstock Stroke | mm | 350 | 350 | 350 | 350 |
| | Quill Taper | MT | MT4 | MT4 | MT4 | MT4 |
| Machine | Size (incl. side discharge chip conveyor) L×W×H | mm | 2,120(3,252) × 1,710 × 1,710 | | 2,120(3,252) × 1,710 × 1,710 | |
| | Size (incl. rear discharge chip conveyor) L×W×H | mm | 2,120 × 1,710(2,842) × 1,710 | | 2,120 × 1,710(2,842) × 1,710 | |
| | Weight | kg | 2,850 | 2,940 | 3,100 | 3,190 |
| | Coolant Pump Power | kW | 1.1 | 1.1 | 1.1 | 1.1 |
| | Coolant Tank Capacity | Liter | 140 | 140 | 140 | 140 |
| ELECTRIC POWER SUPPLY | | kVA/V | 25/220 | 25/220 | 25/220 | 25/220 |
| CONTROLLER | | | FANUC 0i-TF Plus | | | |

※Design and specifications are subject to change without notice.

[ ] : Option

## NC Specifications / FANUC Series

● : Standard ○ : Optional X : Not applicable


| Item | | 0*i*-TF+ | |
|---|---|---|---|
| | | PL 2000A/B | PL 2000AM/BM |
| Controlled axis | Controlled axes | X, Z | X, Z, C |
| | Max. simultaneosly controlled axes | 4 | |
| | Least command increment | 0.001mm / 0.0001" | |
| | Stored stroke check | Soft overtravel 1, 2, 3 | |
| | Machine lock | ● | |
| Operation functions | Pulse handle feed | X1, X10, X100 | |
| | Dry run | ● | |
| | Single block | ● | |
| | Feedrate per minute | G94 | |
| | Feedrate per revolution | G95 | |
| | DNC operation | Ethernet, CF card | |
| | Retraction for rigid tapping | ○ | |
| Interpolation functions | Linear interpolation | G01 | |
| | Circular interpolation | G02, G03 | |
| | Dwell | G04 | |
| | Cylindrical interpolation | G70.1 | |
| | Skip | G31 | |
| | Nano smoothing | X | |
| | Polar coordinate interpolation | ● | |
| | Reference position return | G28 | |
| | Reference position return check | G27 | |
| | 2nd/3rd/4th reference position return | G30 | |
| | Variable lead thread cutting | ● | |
| | Thread Repair | Manual guide i 필요 | |
| Feed function | Rapid traverse rate override | F0, 25%, 50%, 100% | |
| | Feedrate override | 0~200% | |
| | Jog Override | ● | |
| | AI advanced preview control | X | |
| | AI contour control II | OPT(200 block) | |
| Spindle function | Spindle orientation | ● | |
| | Rigid tapping | M29 | |
| | Spindle override | S0 ~ 150% | |
| | Arbitrary speed threading | ○ | |
| Tool functions | Tool number command | T4-Digt Tool number | |
| | Tool nose radius compensation | G40 ~ G42 | |
| | Tool offset pairs | 128-pairs | |
| | Tool geometry/wear offset | ● | |
| | Tool length offset | ● | |
| | Tool life management | ● | |
| | Tool path graphic display | ● | |

## NC Specifications / FANUC Series

● : Standard ○ : Optional X : Not applicable


| Item | | 0*i*-TF+ | |
|---|---|---|---|
| | | PL 2000A/B | PL 2000AM/BM |
| Program input | Absolute/incremental programming | G90/G91 | |
| | Multiple repetitive cycle | ● | |
| | Multiple repetitive cycle II | ● | |
| | Canned cycles | ● | |
| | Canned cycle for drilling | ● | |
| | Decimal point programming | ● | |
| | Inch/metric conversion | G20 / G21 | |
| | Program restart | ● | |
| | Sub program call | ● | |
| | Max. programmable dimension | ±99999.999mm/±9999.9999" | |
| | M function | 3 digit | |
| | Custom macro | ● | |
| | Addition of custom macro common variables | #100~#199, #500~#999 | |
| | Direct drawing dimension programming | ● | |
| | Programmable data input | G10 | |
| | Tape code | ISO / EIA | |
| | Optional block skip | ● | |
| | Workpiece coordinate system | G52 ~ G59 | |
| | Addition of workpiece coordinate system | X | |
| Interface function | Embedded ethernet | ● | |
| | Fast ethernet | X | |
| Setting and display | Alarm & Operator histor display | ● | |
| | Run hour and parts count display | ● | |
| | Display spindle & servo overload | ● | |
| | Self-diagnosis function | ● | |
| | Extended part program editing | ● | |
| | Machining condition selecting function | ○ | |
| | Machining quality level adjustment | X | |
| | Display screen | 10.4" color LCD | |
| | Multi-language display | 25 language | |
| Data input/output | Fast data server | X | ○ |
| | RS232C interface | ● | |
| | Memory card input/output | ● | |
| | USB memory input/output | ● | |
| Editing operation | Part program storage size | 2Mbyte | |
| | Number of registerable programs | 1,000EA | |
| | Manual guide 0i | ○ | X |
| | Manual guide i | ○ | ● |