

# 600/700/800 Series

L600 Series | L700 Series | L800 Series | L800D Series

HYUNDAI WIA Heavy Duty CNC Turning Center

# Technical Leader

The CNC Turning Center L600/700/800 Series designed by Hyundai WIA with years of expertise and the latest technology, is a Turning Center that maximizes productivity and performance.

| ITEM    | Chuck     |           |           |             |     |           |             |     | Bed  |      | Turret |      |
|---------|-----------|-----------|-----------|-------------|-----|-----------|-------------|-----|------|------|--------|------|
|         | 18"       | 21"       | 24"       | 24"         | 27" | 32"       | 32"         | 34" | Std. | Long | Std.   | Mill |
|         | Hydraulic | Hydraulic | Hydraulic | Independent | Air | Hydraulic | Independent | Air |      |      |        |      |
| L600A   | ○         | ○         | ○         |             |     |           |             |     | ●    |      | ●      |      |
| L600LA  | ○         | ○         | ○         |             |     |           |             |     |      | ●    | ●      |      |
| L600MA  | ○         | ○         | ○         |             |     |           |             |     | ●    |      |        | ●    |
| L600LMA | ○         | ○         | ○         |             |     |           |             |     |      | ●    |        | ●    |
| L700A   |           |           | ○         |             |     | ○         |             |     | ●    |      | ●      |      |
| L700LA  |           |           | ○         |             |     | ○         |             |     |      | ●    | ●      |      |
| L700MA  |           |           | ○         |             |     | ○         |             |     | ●    |      |        | ●    |
| L700LMA |           |           | ○         |             |     | ○         |             |     |      | ●    |        | ●    |
| L800A   |           |           |           | ○           | ○   | ○         |             |     | ●    |      | ●      |      |
| L800LA  |           |           |           | ○           | ○   | ○         |             |     |      | ●    | ●      |      |
| L800MA  |           |           |           | ○           | ○   | ○         |             |     | ●    |      |        | ●    |
| L800LMA |           |           |           | ○           | ○   | ○         |             |     |      | ●    |        | ●    |
| L800D   |           |           |           |             |     |           | ○           | ○   | ●    |      | ●      |      |
| L800LD  |           |           |           |             |     |           | ○           | ○   |      | ●    | ●      |      |
| L800MD  |           |           |           |             |     |           | ○           | ○   | ●    |      |        | ●    |
| L800LMD |           |           |           |             |     |           | ○           | ○   |      | ●    |        | ●    |

●: Standard ○: Option



# 600/700/800 Series

Heavy-Duty Cutting, Large Work Capacity, CNC Turning Center

- Sturdiness secured through box guideways on all axes
- One piece structure for high accuracy and rigidity
- Pretensioned double anchored method provides high precision
- Gear box type main spindle (L600/700 Series : 3 step / L800 Series : 2 step)
- Big Bore Spindle with a maximum spindle bore of  $\varnothing 375$  ( $\varnothing 14.8$ ") (L800D Series)
- Structure designed for machining long shafts and pipes with maximum turning length of 3,250mm (128") (Long Bed Type)



# 01 BASIC STRUCTURE

High Rigid Bed & Structure for Heavy Duty Cutting CNC Turning Center



## BMT85 Mill Turret

- 3,000 rpm
- Collet Size :  $\varnothing 34$  (1.3")/ER50

## Servo Turret

- No. of Tools : 12 EA
- Tool Size (O.D/I.D)  
□ 32/ $\varnothing 80$  ( $\varnothing 1 \frac{1}{4}$ "/ $\varnothing 3$ " )

## High Precision Spindle

- L600 Series : 1,800 r/min
- L700 Series : 1,500 r/min
- L800 Series : 700 r/min
- L800D Series : 500 r/min
- C-Axis Control : 0.001° ('M' Type)
- Big Bore Spindle (L800/D Series)

L800D

L700LMA

## Spindle Gear Box

- L600/700 Series : 3 Step
- L800 Series : 2 Step

## Built-in Tail Stock

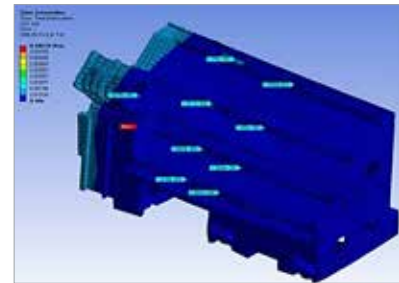
- Taper : MT#6
- Quill Travel : 132.5 mm (5.2")

# POWERFUL CUTTING CAPABILITY & WIDE CUTTING AREA

## ALL-IN-ONE TYPE OF BED

### High Precision & Rigidity, One-Piece Structure

The L600/700/800 series features a 45° slant bed design which is developed through finite element analysis (FEA) to effectively absorb vibration and minimize heat generation. The structure ensures stability which enables powerful and precise cutting.



#### Floor Space (L×W)

Standard Bed

**7,077×3,075** mm (278.6"×121.1")

Long Type Bed

**8,715×3,075** mm (343.1"×121.1")

## GUIDEWAY

### Box Guideway

The L600/700/800 Series, specialized in machining large products, features box guideways in all axes and gear driven main spindle. The series demonstrates unsurpassed performance in heavy duty cutting.

### Ball Screw

Travel is stabilized by fixing both ends of the ball screw with double anchored method. In particular, a large diameter ball screw with proper preload reinforces sturdiness and resistance to thermal displacement.



#### Travel (X/Z)

Standard Bed

**500/1,680** mm (19.7"/66.1")

Long Type Bed

**500/3,280** mm (19.7"/129.1")



# 02 HIGH PRECISION SPINDLE

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center

## Spindle Specifications

| MODEL        | Spindle Speed | Motor (Max./Cont.)  | Torque (Max./Cont.)                       | Driving Method           |
|--------------|---------------|---------------------|---|--------------------------|
| L600 Series  | 1,800 rpm     | 45/37 kW (60/50 HP) | 5,610/4,621 N·m (4,137.7/3,408.3 lbft·ft) | Belt<br>+<br>3 Step Gear |
| L700 Series  | 1,500 rpm     | 45/37 kW (60/50 HP) | 6,928/5,700 N·m (5,109.8/4,204.1 lbft·ft) |                          |
| L800 Series  | 700 rpm       | 45/37 kW (60/50 HP) | 7,045/5,795 N·m (5,196.1/4,274.2 lbft·ft) | Belt<br>+<br>2 Step Gear |
| L800D Series | 500 rpm       | 45/37 kW (60/50 HP) | 7,288/5,992 N·m (5,375.4/4,419.5 lbft·ft) |                          |

# HEAVY DUTY CUTTING & HIGH ACCURACY

## MAIN SPINDLE

### Spindle Ideal for Heavy Cutting

To accomplish advanced stability during heavy duty cutting, a combination of P4 double cylindrical roller bearings and angular bearings are adopted. The double locking device separates the spindle bearing and pulley to prevent a decrease in spindle bearing pretension during interrupted cutting, heavy duty cutting, chuck cylinder operations, and by belt pulley tension.

#### Spindle Gear Box

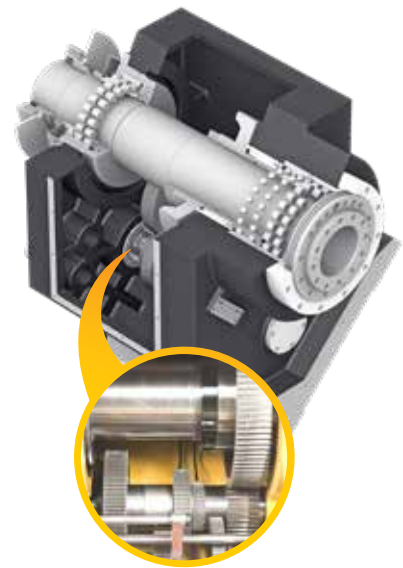
Gear shift of spindle provide stability and high torque during low speed.

L600/700 Series

L800 Series

3 Step Gear

2 Step Gear



### C-Axis Control ('M' Type)

The C-axis is capable of 0.001° control when milling turret is applied. Machining capability is strengthened with turning and milling operations.

※ Prior consultation is required when applying spindle contouring control for gear driven spindle.

## BIG BORE SPINDLE (L800/D Series)

Max. Spindle Bore L800LMA :  $\varnothing 320$  ( $\varnothing 12.6''$ ), L800D :  $\varnothing 375$  ( $\varnothing 14.8''$ ) show excellent performance in machining large cylindrical parts for oil and gas industry.

### Air Chucking System **OPTION**

A dual chuck design – one on each end of the spindle – offers superior support of the workpiece such as long shafts or pipe.





# 03 SERVO TURRET

High speed, High Accuracy, Highly Reliable Servo Turret

## Servo Turret

No. of Tools

12<sub>EA</sub>

Tool Size (O.D/i.D)

□ 32/Ø80<sub>mm</sub> (Ø1 1/4"/Ø3")

Indexing Time

0.4<sub>sec</sub>

## Mill Turret

| ITEM  | Speed     | Motor (Max./Cont)   | Torque (Max./Cont)               | Collet Size       |
|-------|-----------|---------------------|----------------------------------|-------------------|
| BMT85 | 3,000 rpm | 11/7.5 kW (15/10HP) | 140/95.4 N·m (103.3/70.4 lbf·ft) | ER50 / Ø34 (1.3") |



# VARIOUS DRIVEN PRECISION BMT TOOL HOLDERS

## SERVO TURRET



### Standard Turret

The L600/700/800 Series apply an AC Servo Motor to enhance machining reliability. Also, split accuracy is improved by using 3-piece couplings. Powerful hydraulic tool clamping system minimizes tool tip displacement caused by workload.

### 70 bar High Pressure Coolant **OPTION**

Turret is designed to utilize 70 bar high pressure coolant and it shows optimum performance in machining difficult-to-cut material.

### BMT85 Turret

The BMT turret secures the tool with four bolts and key on the tool mounting surface of the turret, making it possible to powerfully fix the tool, ensuring high reliability in rigidity and precision.

STRAIGHT MILLING HEAD

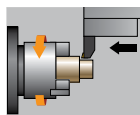


ANGULAR MILLING HEAD



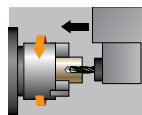
### Mill Tool Holder

Machining capability has increased with the addition of straight milling head tool holder.



Heavy-duty cutting (O.D)  
(Material : S45C)

|                |              |
|----------------|--------------|
| Spindle rpm    | 96 r/min     |
| Cutting speed  | 150 m/min    |
| Cutting depth  | 12 mm        |
| Forwarding     | 0.65 mm/rev  |
| Chip discharge | 1,170 cc/min |



U-Drilling  
(Material : S45C)

|                |             |
|----------------|-------------|
| Tool diameter  | Ø180        |
| Cutting speed  | 130 m/min   |
| Cutting depth  | 50 mm       |
| Forwarding     | 0.14 mm/rev |
| Chip discharge | 814 cc/min  |

❖ The above result might be different by types of processing circumstance.

# 04 USER CONVENIENCE

Various Devices for User Friendly

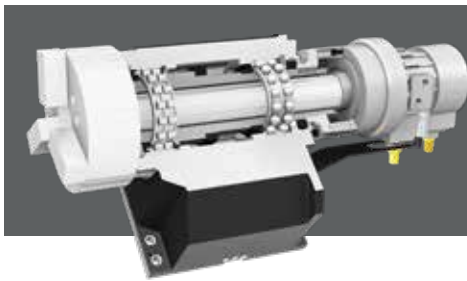
## TAIL STOCK

### Built-In Tail Stock

The built-in tail stock ensures high accuracy even during heavy duty cutting and can be controlled automatically or manually.



| Taper | Quill Dia.     | Quill Travel    |
|-------|----------------|-----------------|
| MT#6  | Ø160 mm (6.3") | 132.5 mm (5.2") |



### Chuck Type Tail Stock **OPTION**

When machining material like pipe stable product-machining is possible with the use of chuck type tail stock.

|                  |                       |                             |
|------------------|-----------------------|-----------------------------|
| Chuck Size : 12" | Sp. Speed : 3,000 rpm | Quill Dia. : Ø95 mm (Ø3.7") |
|------------------|-----------------------|-----------------------------|

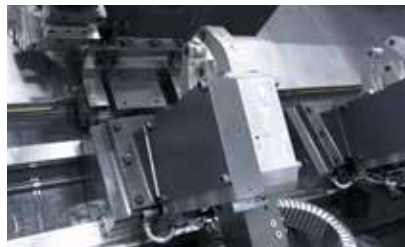
## MACHINING SUPPORT SYSTEM



### Automatic Q-Setter

Cutting tools are calibrated quickly and accurately with the addition of a q-setter. Each tool tip is touched off manually using a sensor that inputs the position automatically.

※ (L800/D Series : Manual Q-Setter)



### Steady Rest **OPTION**

For long parts, such as shafts, the steady rest increases rigidity and minimizes vibration.  
(Manual/Programmable hydraulic steady rest)



### Rear Chuck **OPTION**

The rear chuck option enables long products such as long shaft or pipes to be processed in a stable condition.

Optional

## COOLANT UNIT



Standard Coolant (Nozzle)



Chuck Coolant (Upper Chuck)



Chuck Air Blow (Upper Chuck)



Gun Coolant

## CHIP DISPOSAL SOLUTION

### Chip Conveyor

Timely and effective disposal of chips will enhance productivity as well as the working environment.



|               |   |                                  |                          |
|---------------|---|----------------------------------|--------------------------|
| Hinge         | Chip Type : Roughing Chip, Long Chip, Chip complex                                  | Material : SS41, 45C, Cast Steel | Front-Right<br>Direction |
|               | Highly efficient when disposing a lot of chips. Capable of handling stringy chips.. |                                  |                          |
| Scraper       | Chip Type : Finely broken chip blown out  | Material : cast Iron, Nonferrous |                          |
|               | Convenient for shortly cut chips.   |                                  |                          |
| ❖ Screw       | Chip Type : The lower portion of micro-chips  | Material : Steel, Casting        |                          |
|               | Compresses and ejects chips to reduce chip Trouble.                                 |                                  |                          |
| ❖ Drum Filter | Chip Type : Powder, Micro Chip  | Material : AL                    |                          |
|               | Advantageous in precision, as the chips do not flow in to the coolant nozzle.       |                                  |                          |

❖ When ordering a screw or drum filter chip conveyor, prior consult with hyundai wia's sales person.



# 05 HYUNDAI WIA FANUC – SMART PLUS

The Compatible All-round Control



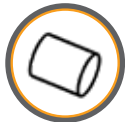
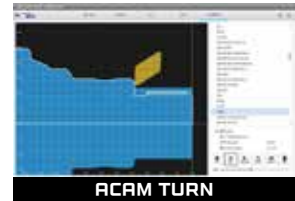
**15" Touch-type Monitor as a standard**

|                              |                                |
|------------------------------|--------------------------------|
|                              | Fast Cycle Time Technology     |
| Smart Machine Control        | Fine Surface Technology        |
|                              | Smart Servo Control Technology |
| Conversational Program       | SmartGuide-i                   |
| i-HMI                        | Machining-aid Function         |
| Part Program Storage         | 5120M (2MB)                    |
| No. of Registerable Programs | 1000 EA                        |

## ACAM (Automatic CAM)

Cloud-based automatic CAM S/W that automatically creates NC programs only by inputting drawing files

Cloud-based  
Intelligent Programming



**Material definition**  
Block/Shape Cutting  
condition DB by materials



**Model Input**  
2d/3d drawing input



**Tool Definition**  
Tool library  
Tool's file In/Output



**Automatic Process Creating**  
Intelligent automatic  
process creating



**Simulation**  
2D/3D simulation  
File transfer to machine

## MMS (Machine Monitoring System)



### 1. MMS Cloud

A cloud server-based equipment monitoring system for collecting and analyzing facility operation data.

### 2. MMS Edge

A client server-based tool monitoring system for collection/analysis of facility operation data. (Compatible with client MES / ERP interface)

## SMART CNC (FANUC SMART PLUS)



### 1. Dialogue Program (Smart Guide-i)

This software offers the maximum user convenience through dialogue manipulation from setup to processing. This includes writing processing programs and simulation checks.

### 2. LAUNCHER

This software offers shortcuts for quick access to specialized features and frequently used features.

# SPECIFICATIONS

## Standard & Optional

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

| Spindle  |                                   | L600A(LA) | L600MA(LMA) |
|--|-----------------------------------|-----------|-------------|
| No Chuck   |                                   | ●         | ●           |
| Main Spindle<br>Hollow Chuck 3 Jaw   | 18"                               | ○         | ○           |
|  | 21"                               | ○         | ○           |
|  | 24"                               | ○         | ○           |
| Main Spindle<br>Solid Chuck 3 Jaw  | 18"                               | -         | -           |
|  | 21"                               | -         | -           |
|  | 24"                               | -         | -           |
| Standard Soft Jaw (1set)   |                                   | ○         | ○           |
| Chuck Clamp Foot Switch  |                                   | ●         | ●           |
| 2 Steps Hyd. Pressure Device   |                                   | ○         | ○           |
| Spindle Inside Stopper   |                                   | ☆         | ☆           |
| 5" Index   |                                   | ☆         | ☆           |
| Cs-Axis (0.001")   |                                   | -         | ●           |
| Chuck Open/Close Confirmation Device   |                                   | ●         | ●           |
| 2 Steps Chuck Foot Switch  |                                   | ○         | ○           |
| <b>Turret</b>  |                                   |           |             |
| Tool Holder  |                                   | ●         | ●           |
| Mill Turret  |                                   | -         | ●           |
| Straight Milling Head (Radial)   | Adaptor Type                      | -         | ●           |
| Angular Milling Head (Axial)   | Adaptor Type                      | -         | ●           |
| Boring Sleeve  |                                   | ●         | ●           |
| Drill Socket   |                                   | ○         | ○           |
| U-Drill Cap  |                                   | ●         | ●           |
| Long Boring Bar I.D Holder   |                                   | LA ☆      | LMA ☆       |
| Angle Head   |                                   | -         | ☆           |
| <b>Tail Stock &amp; Steady Rest</b>  |                                   |           |             |
| Built-In Tail Stock  |                                   | ●         | ●           |
| Programmable Tail Stock  |                                   | ●         | ●           |
| Manual Type Steady Rest  |                                   | ☆         | ☆           |
| Manual Type<br>Hyd. Steady Rest  | 1Set                              | -         | -           |
|  | 2Sets                             | -         | -           |
| Programmable<br>Hyd. Steady Rest   | 1Set                              | ○         | ○           |
|  | 2Sets                             | LA ○      | LMA ○       |
| Fixed center   |                                   | ●         | ●           |
| 2 Steps Tail Stock Pressure System   |                                   | ☆         | ☆           |
| Quill Forward/Reverse Confirmation Device  |                                   | ○ (CE:●)  | ○ (CE:●)    |
| Tail Stock Foot Switch (Standard when selecting the tailstock / Excluding the motor tailstock) |                                   | ●         | ●           |
| <b>Coolant &amp; Air Blow</b>  |                                   |           |             |
| Standard Coolant (Nozzle)  |                                   | ●         | ●           |
| Bed Flushing Coolant   |                                   | ●         | ●           |
| Chuck Coolant (Upper Chuck)  |                                   | ○         | ○           |
| Gun Coolant  |                                   | ○         | ○           |
| Spindle Thru Coolant (Only for Special Chuck)  |                                   | ☆         | ☆           |
| Thru Coolant for Live Tool   |                                   | -         | -           |
| Chuck Air Blow (Upper Chuck)   |                                   | ○         | ○           |
| Tail Stock Air Blow (Upper Tail Stock)   |                                   | ☆         | ☆           |
| Turret Air Blow  |                                   | ☆         | ☆           |
| Air Gun  |                                   | ○         | ○           |
| Spindle Thru Air Blow (Only for Special Chuck)   |                                   | ☆         | ☆           |
| High Pressure Coolant  | 6Bar                              | ●         | ●           |
|  | 20Bar                             | ○         | ○           |
|  | 70Bar                             | ○         | ○           |
| Power Coolant System (For Automation)  |                                   | ☆         | ☆           |
| Coolant Chiller  |                                   | ☆         | ☆           |
| <b>Chip Disposal</b>   |                                   |           |             |
| Coolant Tank   | 570 ℓ (150.6 gal)                 | ●         | ●           |
|  | 770 ℓ (203.4 gal)                 | LA ●      | LMA ●       |
| Chip Conveyor<br>(Hinge/Scraper)   | Front (Right)                     | ○         | ○           |
|  | Front (Rear)                      | -         | -           |
| Special Chip Conveyor (Drum Filter)  |                                   | ☆         | ☆           |
| Chip Wagon   | Standard<br>(180 ℓ [47.5 gal])    | ○         | ○           |
|  | Swing<br>(200 ℓ [52.8 gal])       | ○         | ○           |
|  | Large Swing<br>(290 ℓ [76.6 gal]) | ○         | ○           |
|  | Large Size<br>(330 ℓ [87.2 gal])  | ○         | ○           |
|  | Customized                        | ☆         | ☆           |

| Safety Device  |                       | L600A(LA)      | L600MA(LMA)    |
|--|-----------------------|----------------|----------------|
| Total Splash Guard   |                       | ●              | ●              |
| Chuck hydraulic pressure maintenance interlock                     |                       | ○ (CE:●)       | ○ (CE:●)       |
| <b>Electric Device</b>   |                       |                |                |
| Call Light   | 1Color : ●            | ●              | ●              |
| Call Light & Buzzer  | 3Color : ● ● ● B      | ○              | ○              |
| Electric Cabinet Light   |                       | ○              | ○              |
| Remote MPG   |                       | ○              | ○              |
| Work Counter   | Digital               | ○              | ○              |
| Total Counter  |                       | ○              | ○              |
| Tool Counter   |                       | ○              | ○              |
| Multi Tool Counter   | Digital               | ○              | ○              |
| Electric Circuit Breaker   |                       | ○              | ○              |
| AVR (Auto Voltage Regulator)                                       |                       | ☆              | ☆              |
| Transformer  | 70kVA                 | ○              | ○              |
| Auto Power Off   |                       | ○              | ○              |
| <b>Measurement</b>   |                       |                |                |
| Q-Setter   |                       | -              | -              |
| Automatic Q-Setter   |                       | ●              | ●              |
| Work Close Confirmation Device<br>(Only for Special Chuck)         | TACO                  | ☆              | ☆              |
|  | SMC                   | ☆              | ☆              |
| Work Setter  |                       | ○              | ○              |
| Linear Scale   | X Axis                | ○              | ○              |
|  | Z Axis                | ○              | ○              |
| Coolant Level Sensor (Only for Chip Conveyor)                      |                       | ☆              | ☆              |
| <b>Environment</b>   |                       |                |                |
| Air Conditioner  |                       | ○              | ○              |
| Oil Mist Collector   |                       | ☆              | ☆              |
| Oil Skimmer  |                       | ○              | ○              |
| MQL (Minimal Quantity Lubrication)                                 |                       | ☆              | ☆              |
| <b>Fixture &amp; Automation</b>                                    |                       |                |                |
| Auto Door  | Standard              | ○              | ○              |
|  | High Speed            | ☆              | ☆              |
| Auto Shutter (Only for Automatic System)                           |                       | -              | -              |
| Sub Operation Pannel   |                       | ☆              | ☆              |
| Bar Feeder Interface   |                       | ○              | ○              |
| Bar Feeder (FEDEK)   |                       | ☆              | ☆              |
| Extra M-Code 4ea   |                       | ○              | ○              |
| Automation Interface   |                       | ☆              | ☆              |
| I/O Extension (IN & OUT)   | 16 Contact            | ○              | ○              |
|  | 32 Contact            | ○              | ○              |
| Parts Catcher  | Main SP.              | -              | -              |
| Turret Work Pusher (For Automation)                                |                       | ☆              | ☆              |
| <b>Hyd. Device</b>   |                       |                |                |
| Standard Hyd. Cylinder   | Hollow                | ●              | ●              |
| Standard Hyd. Unit   | 58bar/63 ℓ (16.6 gal) | ●              | ●              |
| <b>S/W</b>   |                       |                |                |
| Automatic CAM (HW-ACAM)  |                       | -              | -              |
| Dialogue Program (HW-DPRO)   |                       | ○              | ○              |
| DNC software (HW-eDNC)   |                       | ○              | ○              |
| Machine Monitoring System (HW-MMS Cloud)                           |                       | ☆              | ☆              |
| Machine Monitoring System<br>(Customer Installation : HW-MMS Edge) |                       | ☆              | ☆              |
| Smart Guide-i : FANUC  |                       | ● (F32i-B : ☆) | ● (F32i-B : ☆) |
| Smart S/W  |                       | ☆              | ☆              |
| <b>ETC</b>   |                       |                |                |
| Tool Box   |                       | ●              | ●              |
| Customized Color   | Need Munsel No.       | ☆              | ☆              |
| CAD & CAM  |                       | ☆              | ☆              |

❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (iRIS) for details by S/W product.



# SPECIFICATIONS

## Standard & Optional

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

| Spindle  |                                | L700A(LA) | L700MA(LMA) |
|--|--------------------------------|-----------|-------------|
| No Chuck   |                                | ●         | ●           |
| Main Spindle<br>Hollow Chuck 3 Jaw   | 18"                            | -         | -           |
|  | 21"                            | -         | -           |
|  | 24"                            | ○         | ○           |
|  | 32"                            | ○         | ○           |
| Main Spindle<br>Solid Chuck 3 Jaw  | 18"                            | -         | -           |
|  | 21"                            | -         | -           |
|  | 24"                            | -         | -           |
|  | 32"                            | -         | -           |
| Standard Soft Jaw (1set)   | ○                              | ○         |             |
| Chuck Clamp Foot Switch  | ●                              | ●         |             |
| 2 Steps Hyd. Pressure Device   | ○                              | ○         |             |
| Spindle Inside Stopper   | ☆                              | ☆         |             |
| 5° Index   | ☆                              | ☆         |             |
| Cs-Axis (0.001°)   | -                              | ●         |             |
| Chuck Open/Close Confirmation Device   | ●                              | ●         |             |
| 2 Steps Chuck Foot Switch  | ○                              | ○         |             |
| <b>Turret</b>  |                                |           |             |
| Tool Holder  |                                | ●         | ●           |
| Mill Turret  | BMT                            | -         | ●           |
| Straight Milling Head (Radial)   | Adaptor Type                   | -         | ●           |
| Angular Milling Head (Axial)   | Adaptor Type                   | -         | ●           |
| Boring Sleeve  |                                | ●         | ●           |
| Drill Socket   |                                | ○         | ○           |
| U-Drill Cap  |                                | ●         | ●           |
| Long Boring Bar I.D Holder   |                                | LA ☆      | LMA ☆       |
| Angle Head   |                                | -         | ☆           |
| <b>Tail Stock &amp; Steady Rest</b>  |                                |           |             |
| Built-In Tail Stock  |                                | ●         | ●           |
| Programmable Tail Stock  |                                | ●         | ●           |
| Manual Type Steady Rest  |                                | ☆         | ☆           |
| Manual Type Hyd. Steady Rest   | 1Set                           | -         | -           |
|  | 2Sets                          | -         | -           |
| Programmable Hyd. Steady Rest  | 1Set                           | ○         | ○           |
|  | 2Sets                          | LA ○      | LMA ○       |
| Fixed center   |                                | ●         | ●           |
| 2 Steps Tail Stock Pressure System   |                                | ☆         | ☆           |
| Quill Forward/Reverse Confirmation Device  |                                | ○(CE:●)   | ○(CE:●)     |
| Tail Stock Foot Switch (Standard when selecting the tailstock / Excluding the motor tailstock) |                                | ●         | ●           |
| <b>Coolant &amp; Air Blow</b>  |                                |           |             |
| Standard Coolant (Nozzle)  |                                | ●         | ●           |
| Bed Flushing Coolant   |                                | ●         | ●           |
| Chuck Coolant (Upper Chuck)  |                                | ○         | ○           |
| Gun Coolant  |                                | ○         | ○           |
| Spindle Thru Coolant (Only for Special Chuck)  |                                | ☆         | ☆           |
| Thru Coolant for Live Tool   |                                | -         | -           |
| Chuck Air Blow (Upper Chuck)   |                                | ○         | ○           |
| Tail Stock Air Blow (Upper Tail Stock)   |                                | ☆         | ☆           |
| Turret Air Blow  |                                | ☆         | ☆           |
| Air Gun  |                                | ○         | ○           |
| Spindle Thru Air Blow (Only for Special Chuck)   |                                | ☆         | ☆           |
| High Pressure Coolant  | 6Bar                           | ●         | ●           |
|  | 20Bar                          | ○         | ○           |
|  | 70Bar                          | ○         | ○           |
| Power Coolant System (For Automation)  |                                | ☆         | ☆           |
| Coolant Chiller  |                                | ☆         | ☆           |
| <b>Chip Disposal</b>   |                                |           |             |
| Coolant Tank   | 570 ℓ (150.6 gal)              | ●         | ●           |
|  | 770 ℓ (203.4 gal)              | LA ●      | LMA ●       |
| Chip Conveyor (Hinge/Scraper)  | Front (Right)                  | ○         | ○           |
|  | Front (Rear)                   | -         | -           |
| Special Chip Conveyor (Drum Filter)  |                                | ☆         | ☆           |
| Chip Wagon   | Standard (180 ℓ [47.5 gal])    | ○         | ○           |
|  | Swing (200 ℓ [52.8 gal])       | ○         | ○           |
|  | Large Swing (290 ℓ [76.6 gal]) | ○         | ○           |
|  | Large Size (330 ℓ [87.2 gal])  | ○         | ○           |
|  | Customized                     | ☆         | ☆           |

| Safety Device   |                        | L700A(LA)      | L700MA(LMA)    |
|---|------------------------|----------------|----------------|
| Total Splash Guard  |                        | ●              | ●              |
| Chuck hydraulic pressure maintenance interlock                  |                        | ○(CE:●)        | ○(CE:●)        |
| <b>Electric Device</b>  |                        |                |                |
| Call Light  | 1Color : ●             | ●              | ●              |
| Call Light & Buzzer   | 3Color : ● ■ ■ B       | ○              | ○              |
| Electric Cabinet Light  |                        | ○              | ○              |
| Remote MPG  |                        | ○              | ○              |
| Work Counter  | Digital                | ○              | ○              |
| Total Counter   | Digital                | ○              | ○              |
| Tool Counter  | Digital                | ○              | ○              |
| Multi Tool Counter  | Digital                | ○              | ○              |
| Electric Circuit Breaker  |                        | ○              | ○              |
| AVR (Auto Voltage Regulator)                                    |                        | ☆              | ☆              |
| Transformer   | 70kVA                  | ○              | ○              |
| Auto Power Off  |                        | ○              | ○              |
| <b>Measurement</b>  |                        |                |                |
| Q-Setter  |                        | -              | -              |
| Automatic Q-Setter  |                        | ●              | ●              |
| Work Close Confirmation Device                                  | TACO                   | ☆              | ☆              |
| (Only for Special Chuck)  | SMC                    | ☆              | ☆              |
| Work Setter   |                        | ○              | ○              |
| Linear Scale  | X Axis                 | ○              | ○              |
|   | Z Axis                 | ○              | ○              |
| Coolant Level Sensor (Only for Chip Conveyor)                   |                        | ☆              | ☆              |
| <b>Environment</b>  |                        |                |                |
| Air Conditioner   |                        | ○              | ○              |
| Oil Mist Collector  |                        | ☆              | ☆              |
| Oil Skimmer   |                        | ○              | ○              |
| MQL (Minimal Quantity Lubrication)                              |                        | ☆              | ☆              |
| <b>Fixture &amp; Automation</b>                                 |                        |                |                |
| Auto Door   | Standard               | ○              | ○              |
|   | High Speed             | ☆              | ☆              |
| Auto Shutter (Only for Automatic System)                        |                        | -              | -              |
| Sub Operation Pannel  |                        | ☆              | ☆              |
| Bar Feeder Interface  |                        | ○              | ○              |
| Bar Feeder (FEDEK)  |                        | ☆              | ☆              |
| Extra M-Code 4ea  |                        | ○              | ○              |
| Automation Interface  |                        | ☆              | ☆              |
| I/O Extension (IN & OUT)  | 16 Contact             | ○              | ○              |
|   | 32 Contact             | ○              | ○              |
| Parts Catcher   | Main SP.               | -              | -              |
| Turret Work Pusher (For Automation)                             |                        | ☆              | ☆              |
| <b>Hyd. Device</b>  |                        |                |                |
| Standard Hyd. Cylinder  | Hollow                 | ●              | ●              |
| Standard Hyd. Unit  | 58bar/63 ℓ (116.6 gal) | ●              | ●              |
| <b>S/W</b>  |                        |                |                |
| Automatic CAM (HW-ACAM)   |                        | -              | -              |
| Dialogue Program (HW-DPRO)                                      |                        | ○              | ○              |
| DNC software (HW-eDNC)  |                        | ○              | ○              |
| Machine Monitoring System (HW-MMS Cloud)                        |                        | ☆              | ☆              |
| Machine Monitoring System (Customer Installation : HW-MMS Edge) |                        | ☆              | ☆              |
| Smart Guide-i : FANUC   |                        | ● (F32i-B : ☆) | ● (F32i-B : ☆) |
| Smart S/W   |                        | ☆              | ☆              |
| <b>ETC</b>  |                        |                |                |
| Tool Box  |                        | ●              | ●              |
| Customized Color  | Need Munsel No.        | ☆              | ☆              |
| CAD & CAM   |                        | ☆              | ☆              |

❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (IRIS) for details by S/W product.

# SPECIFICATIONS

## Standard & Optional

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

| Spindle  |                                | L800A(LA) | L800MA(LMA) |
|--|--------------------------------|-----------|-------------|
| No Chuck   |                                | ●         | ●           |
| Main Spindle<br>Hollow Chuck 3 Jaw   | 18"                            | -         | -           |
|  | 21"                            | -         | -           |
|  | 24"                            | -         | -           |
| Main Spindle<br>Solid Chuck 3 Jaw  | 32"                            | ○         | ○           |
|  | 18"                            | -         | -           |
|  | 21"                            | -         | -           |
| Big Bore Air Chuck   | 24"                            | -         | -           |
|  | 32"                            | -         | -           |
| Standard Soft Jaw (1set)   |                                | ○         | ○           |
| Chuck Clamp Foot Switch  |                                | ●         | ●           |
| 2 Steps Hyd. Pressure Device   |                                | ○         | ○           |
| Spindle Inside Stopper   |                                | ☆         | ☆           |
| 5" Index   |                                | ☆         | ☆           |
| Cs-Axis (0.001")   |                                | -         | ●           |
| Chuck Open/Close Confirmation Device   |                                | ●         | ●           |
| 2 Steps Chuck Foot Switch  |                                | ○         | ○           |
| <b>Turret</b>  |                                |           |             |
| Tool Holder  |                                | ●         | ●           |
| Mill Turret  | BMT                            | -         | ●           |
| Straight Milling Head (Radial)   | Adaptor Type                   | -         | ●           |
| Angular Milling Head (Axial)   | Adaptor Type                   | -         | ●           |
| Boring Sleeve  |                                | ●         | ●           |
| Drill Socket   |                                | ○         | ○           |
| U-Drill Cap  |                                | ●         | ●           |
| Long Boring Bar I.D Holder   |                                | LA ☆      | LMA ☆       |
| Angle Head   |                                | -         | ☆           |
| <b>Tail Stock &amp; Steady Rest</b>  |                                |           |             |
| Built-In Tail Stock  |                                | ●         | ●           |
| Programmable Tail Stock  |                                | ●         | ●           |
| Manual Type Steady Rest  |                                | ☆         | ☆           |
| Manual Type<br>Hyd. Steady Rest  | 1Set                           | -         | -           |
|  | 2Sets                          | -         | -           |
| Programmable<br>Hyd. Steady Rest   | 1Set                           | ○         | ○           |
|  | 2Sets                          | LA ○      | LMA ○       |
| Fixed center   |                                | ●         | ●           |
| 2 Steps Tail Stock Pressure System   |                                | ☆         | ☆           |
| Quill Forward/Reverse Confirmation Device  |                                | ○(CE:●)   | ○(CE:●)     |
| Tail Stock Foot Switch (Standard when selecting the tailstock / Excluding the motor tailstock) |                                | ●         | ●           |
| <b>Coolant &amp; Air Blow</b>  |                                |           |             |
| Standard Coolant (Nozzle)  |                                | ●         | ●           |
| Bed Flushing Coolant   |                                | ●         | ●           |
| Chuck Coolant (Upper Chuck)  |                                | ○         | ○           |
| Gun Coolant  |                                | ○         | ○           |
| Spindle Thru Coolant (Only for Special Chuck)  |                                | ☆         | ☆           |
| Thru Coolant for Live Tool   |                                | -         | -           |
| Chuck Air Blow (Upper Chuck)   |                                | ○         | ○           |
| Tail Stock Air Blow (Upper Tail Stock)   |                                | ☆         | ☆           |
| Turret Air Blow  |                                | ☆         | ☆           |
| Air Gun  |                                | ○         | ○           |
| Spindle Thru Air Blow (Only for Special Chuck)   |                                | ☆         | ☆           |
| High Pressure Coolant  | 6Bar                           | ●         | ●           |
|  | 20Bar                          | ○         | ○           |
|  | 70Bar                          | ○         | ○           |
| Power Coolant System (For Automation)  |                                | ☆         | ☆           |
| Coolant Chiller  |                                | ☆         | ☆           |
| <b>Chip Disposal</b>   |                                |           |             |
| Coolant Tank   | 570 ℓ (150.6 gal)              | ●         | ●           |
|  | 770 ℓ (203.4 gal)              | LA ●      | LMA ●       |
| Chip Conveyor (Hinge/Scraper)  | Front (Right)                  | ○         | ○           |
|  | Front (Rear)                   | -         | -           |
| Special Chip Conveyor (Drum Filter)  |                                | ☆         | ☆           |
| Chip Wagon   | Standard (180 ℓ [47.5 gal])    | ○         | ○           |
|  | Swing (200 ℓ [52.8 gal])       | ○         | ○           |
| Chip Wagon   | Large Swing (290 ℓ [76.6 gal]) | ○         | ○           |
|  | Large Size (330 ℓ [87.2 gal])  | ○         | ○           |
|  | Customized                     | ☆         | ☆           |

| Safety Device   |                       | L800A(LA)      | L800MA(LMA)    |
|---|-----------------------|----------------|----------------|
| Total Splash Guard  |                       | ●              | ●              |
| Chuck hydraulic pressure maintenance interlock                  |                       | ○(CE:●)        | ○(CE:●)        |
| <b>Electric Device</b>  |                       |                |                |
| Call Light  | 1Color : ●            | ●              | ●              |
| Call Light & Buzzer   | 3Color : ● ● ● B      | ○              | ○              |
| Electric Cabinet Light  |                       | ○              | ○              |
| Remote MPG  |                       | ○              | ○              |
| Work Counter  | Digital               | ○              | ○              |
| Total Counter   | Digital               | ○              | ○              |
| Tool Counter  | Digital               | ○              | ○              |
| Multi Tool Counter  | Digital               | ○              | ○              |
| Electric Circuit Breaker  |                       | ○              | ○              |
| AVR (Auto Voltage Regulator)                                    |                       | ☆              | ☆              |
| Transformer   | 70kVA                 | ○              | ○              |
| Auto Power Off  |                       | ○              | ○              |
| <b>Measurement</b>  |                       |                |                |
| Q-Setter  |                       | ○              | ○              |
| Automatic Q-Setter  |                       | -              | -              |
| Work Close Confirmation Device (Only for Special Chuck)         | TACO                  | ☆              | ☆              |
|   | SMC                   | ☆              | ☆              |
| Work Setter   |                       | ○              | ○              |
| Linear Scale  | X Axis                | ○              | ○              |
|   | Z Axis                | ○              | ○              |
| Coolant Level Sensor (Only for Chip Conveyor)                   |                       | ☆              | ☆              |
| <b>Environment</b>  |                       |                |                |
| Air Conditioner   |                       | ○              | ○              |
| Oil Mist Collector  |                       | ☆              | ☆              |
| Oil Skimmer   |                       | ○              | ○              |
| MQL (Minimal Quantity Lubrication)                              |                       | ☆              | ☆              |
| <b>Fixture &amp; Automation</b>                                 |                       |                |                |
| Auto Door   | Standard              | ○              | ○              |
|   | High Speed            | ☆              | ☆              |
| Auto Shutter (Only for Automatic System)                        |                       | -              | -              |
| Sub Operation Pannel  |                       | ☆              | ☆              |
| Bar Feeder Interface  |                       | ○              | ○              |
| Bar Feeder (FEDEK)  |                       | ☆              | ☆              |
| Extra M-Code 4ea  |                       | ○              | ○              |
| Automation Interface  |                       | ☆              | ☆              |
| I/O Extension (IN & OUT)  | 16 Contact            | ○              | ○              |
|   | 32 Contact            | ○              | ○              |
| Parts Catcher   | Main SP.              | -              | -              |
| Turret Work Pusher (For Automation)                             |                       | ☆              | ☆              |
| <b>Hyd. Device</b>  |                       |                |                |
| Standard Hyd. Cylinder  | Hollow                | ○              | ○              |
| Standard Hyd. Unit  | 58bar/63 ℓ (16.6 gal) | ●              | ●              |
| <b>S/W</b>  |                       |                |                |
| Automatic CAM (HW-ACAM)   |                       | -              | -              |
| Dialogue Program (HW-DPRO)                                      |                       | ○              | ○              |
| DNC software (HW-eDNC)  |                       | ○              | ○              |
| Machine Monitoring System (HW-MMS Cloud)                        |                       | ☆              | ☆              |
| Machine Monitoring System (Customer Installation : HW-MMS Edge) |                       | ☆              | ☆              |
| Smart Guide-i : FANUC   |                       | ● (F32i-B : ☆) | ● (F32i-B : ☆) |
| Smart S/W   |                       | ☆              | ☆              |
| <b>ETC</b>  |                       |                |                |
| Tool Box  |                       | ●              | ●              |
| Customized Color  | Need Munsel No.       | ☆              | ☆              |
| CAD & CAM   |                       | ☆              | ☆              |

◆ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (iRIS) for details by S/W product.

# SPECIFICATIONS

## Standard & Optional

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

| Spindle  |                                | L800D(LD)                | L800MD(LMD)              |
|--|--------------------------------|--------------------------|--------------------------|
| No Chuck                                       |                                | ●                        | ●                        |
| Main Spindle<br>Hollow Chuck 3 Jaw             | 18"                            | -                        | -                        |
|  | 21"                            | -                        | -                        |
|  | 24"                            | -                        | -                        |
| Main Spindle<br>Solid Chuck 3 Jaw              | 32"                            | -                        | -                        |
|  | 18"                            | -                        | -                        |
|  | 21"                            | -                        | -                        |
| Big Bore Air Chuck                             | 24"                            | -                        | -                        |
|  | 32"                            | -                        | -                        |
| Big Bore Independent Chuck                     | 32"                            | ○                        | ○                        |
| Standard Soft Jaw (1set)                       |                                | ○                        | ○                        |
| Chuck Clamp Foot Switch                        |                                | ●                        | ●                        |
| 2 Steps Hyd. Pressure Device                   |                                | ○                        | ○                        |
| Spindle Inside Stopper                         |                                | ☆                        | ☆                        |
| Main Spindle 5° Index                          |                                | ☆                        | ☆                        |
| C-Axis (0.001")                                |                                | -                        | ●                        |
| Chuck Open/Close Confirmation Device           |                                | ●                        | ●                        |
| 2 Steps Chuck Foot Switch                      |                                | ○                        | ○                        |
| <b>Turret</b>                                  |                                |                          |                          |
| Tool Holder                                    |                                | ●                        | ●                        |
| Mill Turret                                    | BMT                            | -                        | ●                        |
| Straight Milling Head (Radial)                 | Collet Type                    | -                        | ●                        |
| Angular Milling Head (Axial)                   | Collet Type                    | -                        | ●                        |
| Boring Sleeve                                  |                                | ●                        | ●                        |
| Drill Socket                                   |                                | ○                        | ○                        |
| U-Drill Cap                                    |                                | ●                        | ●                        |
| Long Boring Bar I.D Holder                     |                                | LD ☆                     | LMD ☆                    |
| Angle Head                                     |                                | -                        | ☆                        |
| <b>Tail Stock &amp; Steady Rest</b>            |                                |                          |                          |
| Built-In Tail Stock                            |                                | ○                        | ○                        |
| Programmable Tail Stock                        |                                | ○                        | ○                        |
| Manual Type Steady Rest                        |                                | ☆                        | ☆                        |
| Programmable                                   | 1Set                           | ○                        | ○                        |
| Hyd. Steady Rest                               | 2Sets                          | LD ○                     | LMD ○                    |
| Fixed center                                   | Selecting Tail Stock (●)       | Selecting Tail Stock (●) | Selecting Tail Stock (●) |
| 2 Steps Tail Stock Pressure System             | Selecting Tail Stock (☆)       | Selecting Tail Stock (☆) | Selecting Tail Stock (☆) |
| Quill Forward/Reverse Confirmation Device      | Selecting Tail Stock (●)       | Selecting Tail Stock (●) | Selecting Tail Stock (●) |
| Tail Stock Foot Switch                         | Selecting Tail Stock (●)       | Selecting Tail Stock (●) | Selecting Tail Stock (●) |
| <b>Coolant &amp; Air Blow</b>                  |                                |                          |                          |
| Standard Coolant (Nozzle)                      |                                | ●                        | ●                        |
| Bed Flushing Coolant                           |                                | ●                        | ●                        |
| Chuck Coolant (Upper Chuck)                    |                                | ○                        | ○                        |
| Gun Coolant                                    |                                | ○                        | ○                        |
| Spindle Thru Coolant (Only for Special Chuck)  |                                | ☆                        | ☆                        |
| Thru Coolant for Live Tool                     |                                | -                        | -                        |
| Chuck Air Blow (Upper Chuck)                   |                                | ○                        | ○                        |
| Tail Stock Air Blow (Upper Tail Stock)         |                                | ☆                        | ☆                        |
| Turret Air Blow                                |                                | ☆                        | ☆                        |
| Air Gun  |                                | ○                        | ○                        |
| Spindle Thru Air Blow (Only for Special Chuck) |                                | ☆                        | ☆                        |
| High Pressure Coolant                          | 6Bar                           | ●                        | ●                        |
|  | 20Bar                          | ○                        | ○                        |
|  | 70Bar                          | ○                        | ○                        |
| Power Coolant System (For Automation)          |                                | ☆                        | ☆                        |
| Coolant Chiller                                |                                | ☆                        | ☆                        |
| <b>Chip Disposal</b>                           |                                |                          |                          |
| Coolant Tank                                   | 570 ℓ (150.6 gal)              | ●                        | ●                        |
|  | 770 ℓ (203.4 gal)              | LD ●                     | LMD ●                    |
| Chip Conveyor (Hinge/Scraper)                  | Front (Right)                  | ○                        | ○                        |
|  | Front (Rear)                   | -                        | -                        |
| Special Chip Conveyor (Drum Filter)            |                                | ☆                        | ☆                        |
| Chip Wagon                                     | Standard (180 ℓ [47.5 gal])    | ○                        | ○                        |
|  | Swing (200 ℓ [52.8 gal])       | ○                        | ○                        |
| Chip Wagon                                     | Large Swing (290 ℓ [76.6 gal]) | ○                        | ○                        |
|  | Large Size (330 ℓ [87.2 gal])  | ○                        | ○                        |
|  | Customized                     | ☆                        | ☆                        |

| Safety Device   |                        | L800D(LD)      | L800MD(LMD)    |
|---|------------------------|----------------|----------------|
| Total Splash Guard  |                        | ●              | ●              |
| Chuck hydraulic pressure maintenance interlock                  |                        | ○(CE:●)        | ○(CE:●)        |
| <b>Electric Device</b>  |                        |                |                |
| Call Light  | 1Color : ●             | ●              | ●              |
| Call Light & Buzzer   | 3Color : ● ■ ■ B       | ○              | ○              |
| Electric Cabinet Light  |                        | ○              | ○              |
| Remote MPG  |                        | ○              | ○              |
| Work Counter  | Digital                | ○              | ○              |
| Total Counter   | Digital                | ○              | ○              |
| Tool Counter  | Digital                | ○              | ○              |
| Multi Tool Counter  | Digital                | ○              | ○              |
| Electric Circuit Breaker  |                        | ○              | ○              |
| AVR (Auto Voltage Regulator)                                    |                        | ☆              | ☆              |
| Transformer   | 70kVA                  | ○              | ○              |
| Auto Power Off  |                        | ○              | ○              |
| <b>Measurement</b>  |                        |                |                |
| Q-Setter  |                        | ○              | ○              |
| Automatic Q-Setter  |                        | -              | -              |
| Work Close Confirmation Device (Only for Special Chuck)         | TACO                   | ☆              | ☆              |
|   | SMC                    | ☆              | ☆              |
| Work Setter   |                        | ○              | ○              |
| Linear Scale  | X Axis                 | ○              | ○              |
|   | Z Axis                 | ○              | ○              |
| Coolant Level Sensor (Only for Chip Conveyor)                   |                        | ☆              | ☆              |
| <b>Environment</b>  |                        |                |                |
| Air Conditioner   |                        | ○              | ○              |
| Oil Mist Collector  |                        | ☆              | ☆              |
| Oil Skimmer   |                        | ○              | ○              |
| MQL (Minimal Quantity Lubrication)                              |                        | ☆              | ☆              |
| <b>Fixture &amp; Automation</b>                                 |                        |                |                |
| Auto Door   | Standard               | ○              | ○              |
|   | High Speed             | ☆              | ☆              |
| Auto Shutter (Only for Automatic System)                        |                        | -              | -              |
| Sub Operation Pannel  |                        | ☆              | ☆              |
| Bar Feeder Interface  |                        | -              | -              |
| Bar Feeder (FEDEK)  |                        | -              | -              |
| Extra M-Code 4ea  |                        | ○              | ○              |
| Automation Interface  |                        | ☆              | ☆              |
| I/O Extension (IN & OUT)  | 16 Contact             | ○              | ○              |
|   | 32 Contact             | ○              | ○              |
| Parts Catcher   | Main SP.               | -              | -              |
| Turret Work Pusher (For Automation)                             |                        | ☆              | ☆              |
| <b>Hyd. Device</b>  |                        |                |                |
| Standard Hyd. Cylinder  | Hollow                 | -              | -              |
| Standard Hyd. Unit  | 58bar/63 ℓ (116.6 gal) | ●              | ●              |
| <b>S/W</b>  |                        |                |                |
| Automatic CAM (HW-ACAM)   |                        | -              | -              |
| Dialogue Program (HW-DPRO)                                      |                        | ○              | ○              |
| DNC software (HW-eDNC)  |                        | ○              | ○              |
| Machine Monitoring System (HW-MMS Cloud)                        |                        | ☆              | ☆              |
| Machine Monitoring System (Customer Installation : HW-MMS Edge) |                        | ☆              | ☆              |
| Smart Guide-I : FANUC   |                        | ● (F32I-B : ☆) | ● (F32I-B : ☆) |
| Smart S/W   |                        | ☆              | ☆              |
| <b>ETC</b>  |                        |                |                |
| Tool Box  |                        | ●              | ●              |
| Customized Color  | Need Munsell No.       | ☆              | ☆              |
| CAD & CAM   |                        | ☆              | ☆              |

❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (IRIS) for details by S/W product.

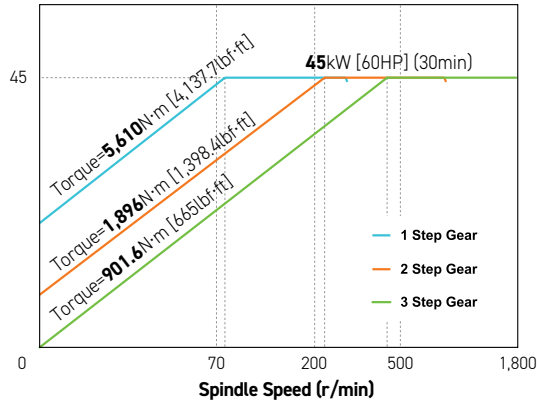


# SPECIFICATIONS

## Spindle Output/Torque Diagram

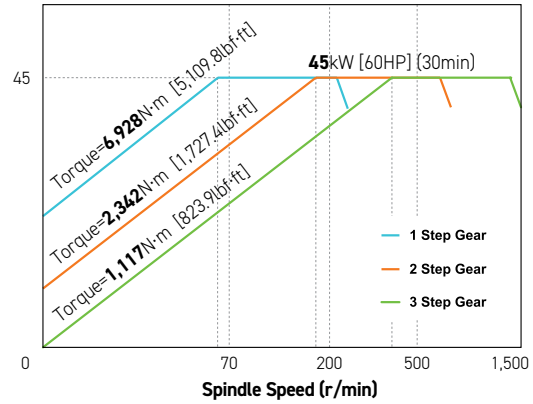
### L600 Series 1,800 rpm

Power(kW [HP])



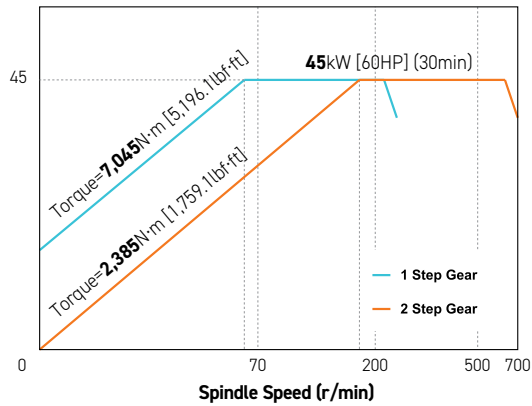
### L700 Series 1,500 rpm

Power(kW [HP])



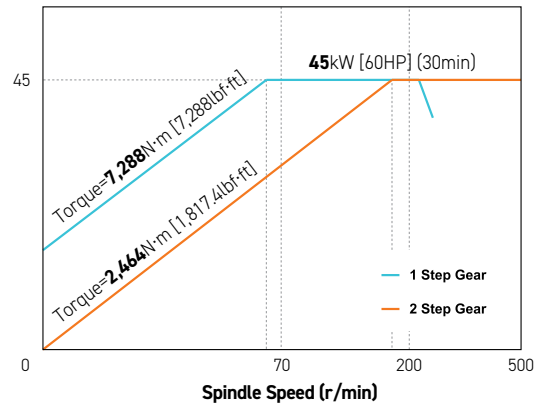
### L800 Series 700 rpm

Power(kW [HP])



### L800D Series 500 rpm

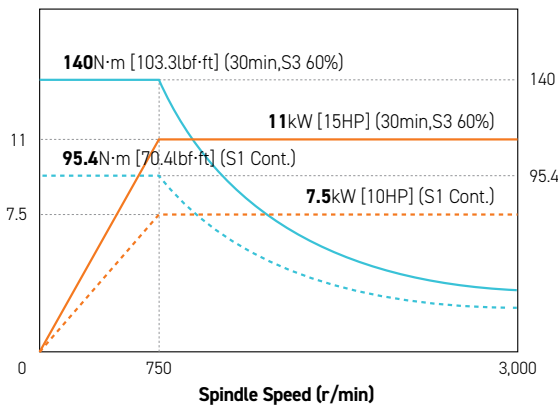
Power(kW [HP])



### Mill Turret 3,000 rpm

Power(kW [HP])

Torque (N·m [lbf·ft])

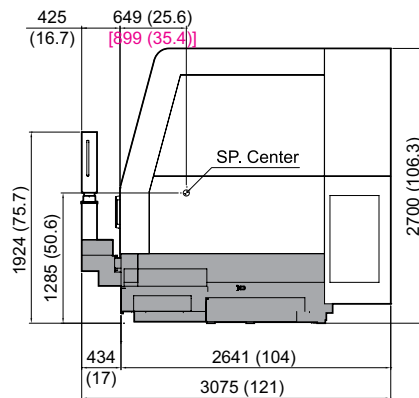
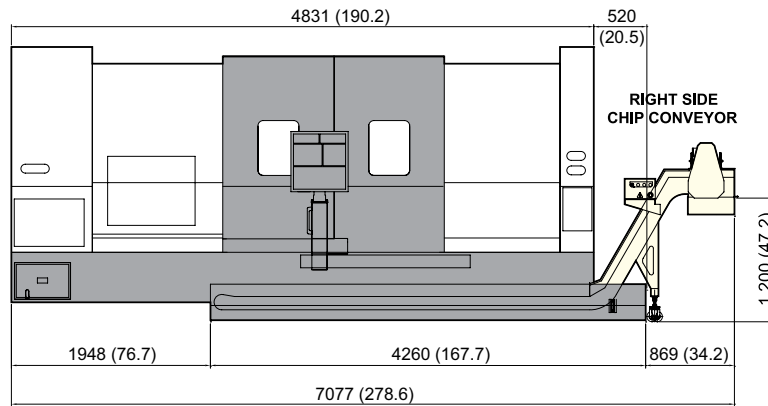
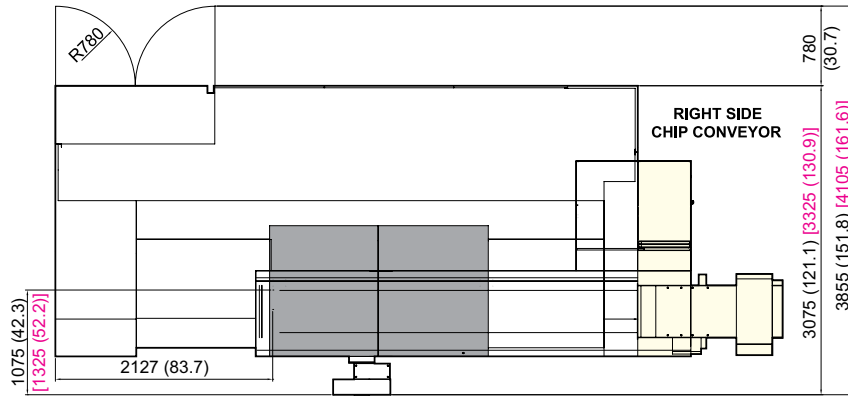


# SPECIFICATIONS

## External Dimensions

unit : mm(in)

### L600A/600MA/700A/700MA/800A/800MA/800D/800MD



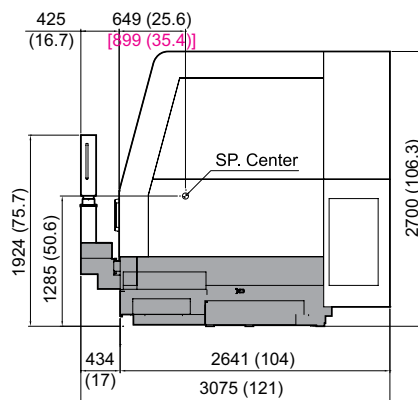
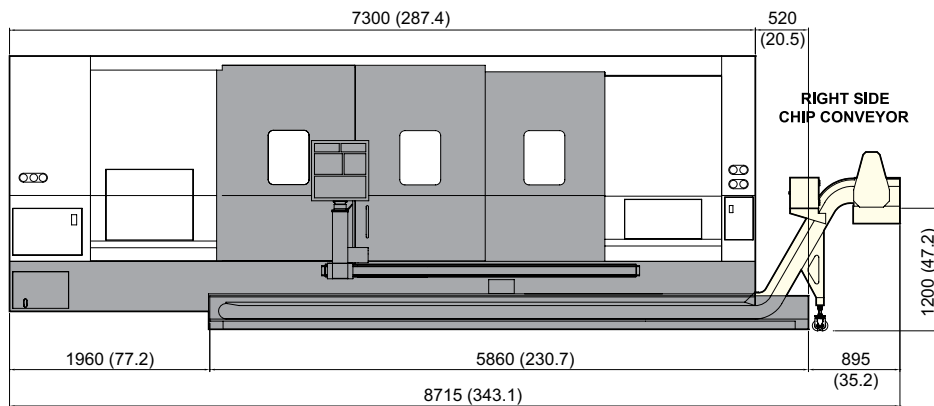
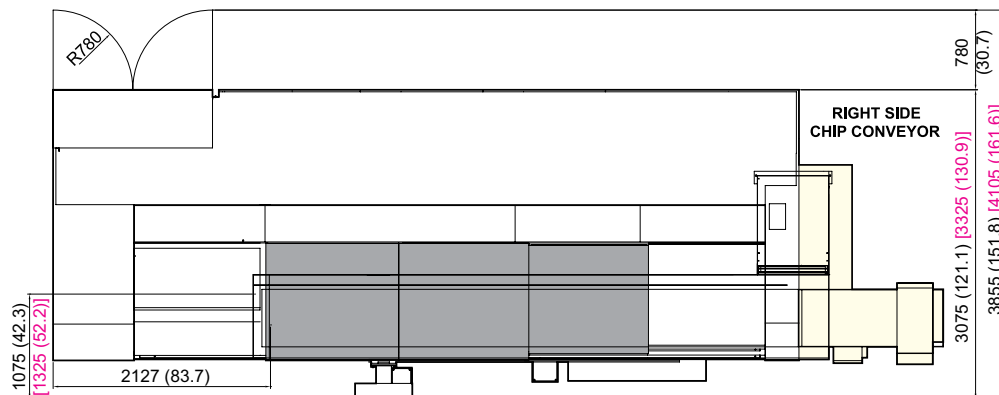
[When applying K6.1 steady rest device]

# SPECIFICATIONS

## External Dimensions

unit : mm(in)

L600LA/600LMA/700LA/700LMA/800LA/800LMA/800LD/800LMD



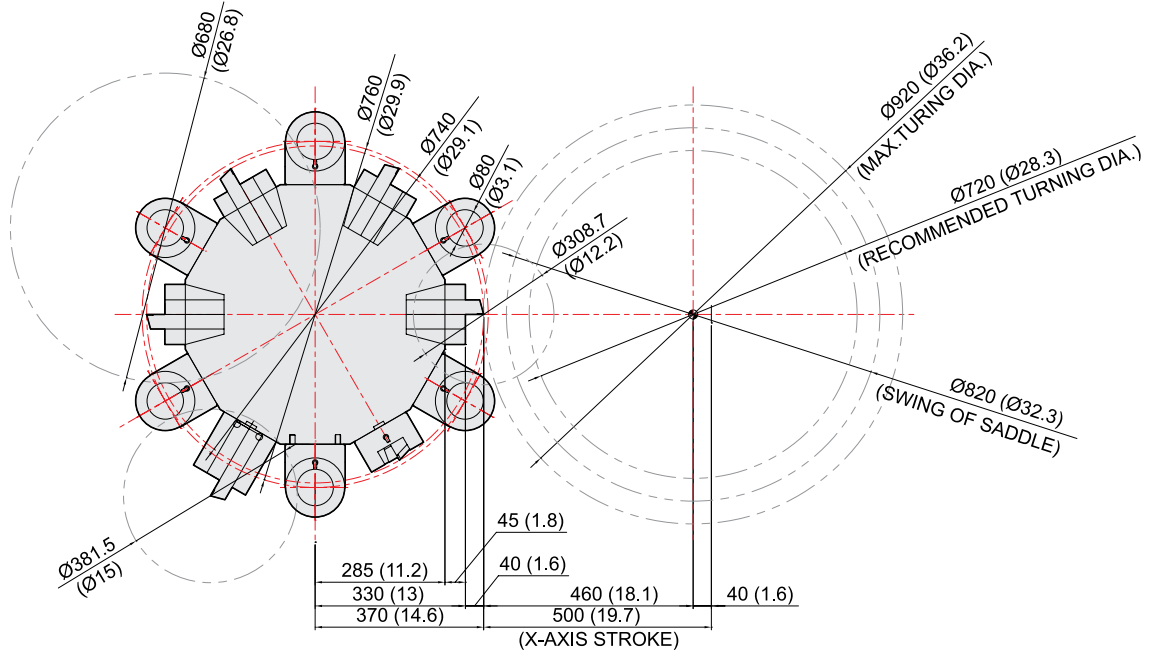
[When applying K6.1 steady rest device]

# SPECIFICATIONS

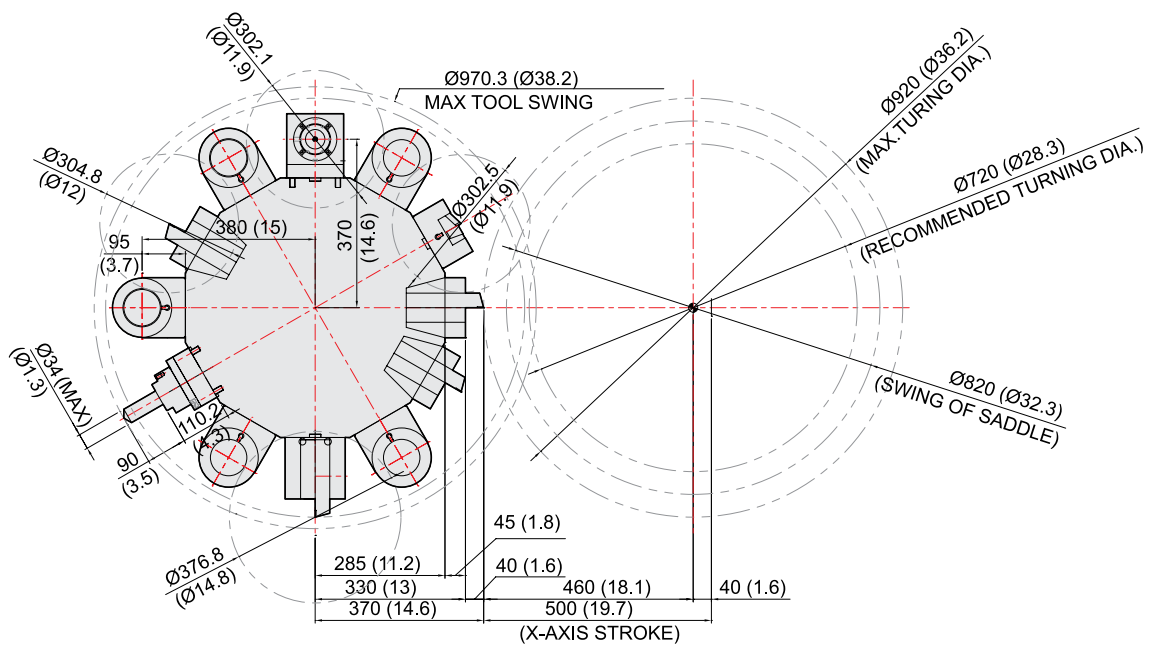
## Interference

unit : mm(in)

### L600A/600LA/700A/700LA/800A/800LA/800D/800LD



### L600MA/600LMA/700MA/700LMA/800MA/800LMA



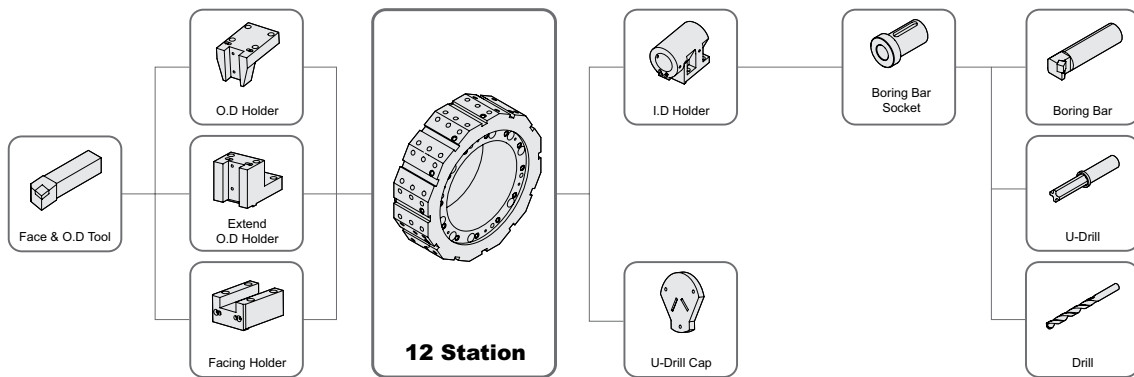


# SPECIFICATIONS

## Tooling System

unit : mm(in)

### L600A/600LA/700A/700LA/800A/800LA/800D/800LD



### L600/700/800 Series Tooling Parts Detail

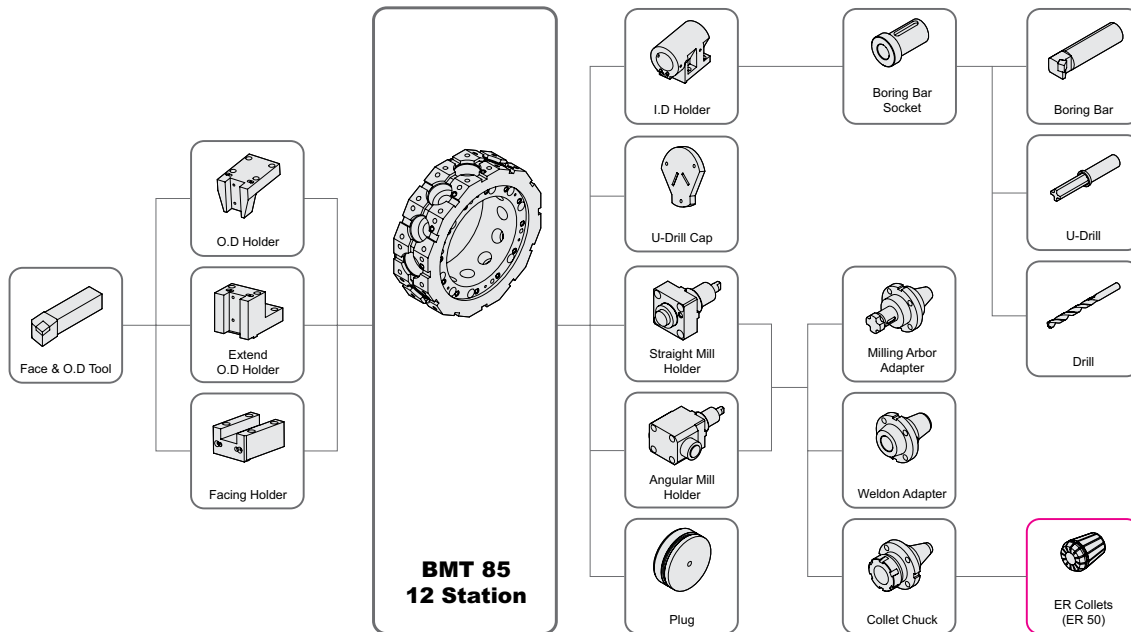
| ITEM           |                      |               | A/D     |           | LA/LD   |           |
|----------------|----------------------|---------------|---------|-----------|---------|-----------|
|                |                      |               | mm Unit | inch Unit | mm Unit | inch Unit |
| Turning Holder | O.D Holder           | Right/Left    | 4       | 4         | 4       | 4         |
|                |                      | Extended      | 1       | 1         | 1       | 1         |
|                | Facing Holder        | 1             | 1       | 1         | 1       |           |
| Boring Holder  | I.D Holder           | Single        | 6       | 6         | 6       | 6         |
|                |                      | Long (SET)    | -       | -         | Opt     | -         |
| Driven Holder  | Straight Mill Holder | Standard      | -       | -         | -       | -         |
|                | Angular Mill Holder  | Standard      | -       | -         | -       | -         |
| Socket         | Boring               | Ø20 (Ø3/4")   | 1       | 1         | 1       | 1         |
|                |                      | Ø25 (Ø1")     | 1       | 1         | 1       | 1         |
|                |                      | Ø32 (Ø1 1/4") | 1       | 1         | 1       | 1         |
|                |                      | Ø40 (Ø1 1/2") | 1       | 1         | 1       | 1         |
|                |                      | Ø50 (Ø2")     | 1       | 1         | 1       | 1         |
|                |                      | Ø60 (Ø2 1/4") | 1       | 1         | 1       | 1         |
|                | Drill                | MT 3          | Opt     | Opt       | Opt     | Opt       |
|                |                      | MT 4          | Opt     | Opt       | Opt     | Opt       |
|                |                      | MT 5          | Opt     | Opt       | Opt     | Opt       |
|                | Adapter Set          |               | -       | -         | -       | -         |

# SPECIFICATIONS

## Tooling System

unit : mm(in)

### L600MA/600LMA/700MA/700LMA/800MA/800LMA/800MD/800LMD



### L600/700/800 Series Tooling Parts Detail

| ITEM           |                      |               | MA/MD   |           | LMA/LMD |           |
|----------------|----------------------|---------------|---------|-----------|---------|-----------|
|                |                      |               | mm Unit | inch Unit | mm Unit | inch Unit |
| Turning Holder | O.D Holder           | Right/Left    | 3       | 3         | 3       | 3         |
|                |                      | Extended      | 1       | 1         | 1       | 1         |
|                | Facing Holder        |               | 1       | 1         | 1       | 1         |
| Boring Holder  | I.D Holder           | Single        | 5       | 5         | 5       | 5         |
|                |                      | Long (SET)    | -       | -         | Opt     | -         |
| Driven Holder  | Straight Mill Holder | Standard      | 1       | 1         | 1       | 1         |
|                | Angular Mill Holder  | Standard      | 1       | 1         | 1       | 1         |
| Socket         | Boring               | Ø20 (Ø3/4")   | 1       | 1         | 1       | 1         |
|                |                      | Ø25 (Ø1")     | 1       | 1         | 1       | 1         |
|                |                      | Ø32 (Ø1 1/4") | 1       | 1         | 1       | 1         |
|                |                      | Ø40 (Ø1 1/2") | 1       | 1         | 1       | 1         |
|                |                      | Ø50 (Ø2")     | 1       | 1         | 1       | 1         |
|                |                      | Ø60 (Ø2 1/4") | 1       | 1         | 1       | 1         |
|                | Drill                | MT 3          | Opt     | Opt       | Opt     | Opt       |
|                |                      | MT 4          | Opt     | Opt       | Opt     | Opt       |
|                |                      | MT 5          | Opt     | Opt       | Opt     | Opt       |
|                | Adapter Set          |               | 1 Set   | 1 Set     | 1 Set   | 1 Set     |

Specifications are subject to change without notice for improvement. (Driven Holder - EWS : Standard, Eppinger : Option)

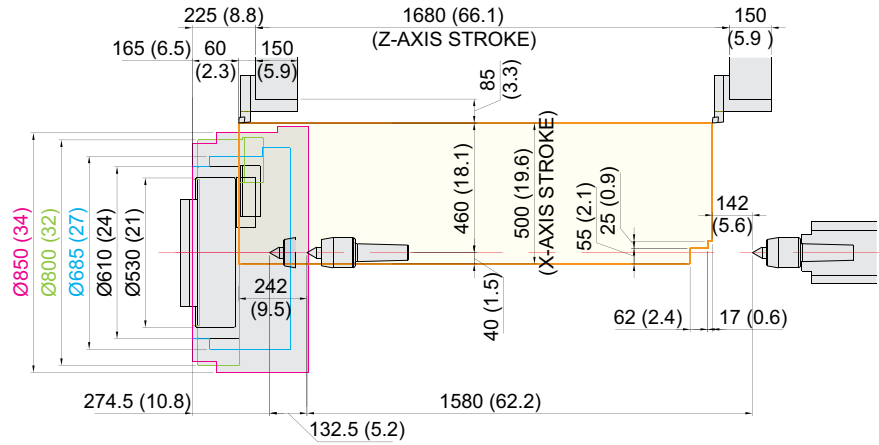
# SPECIFICATIONS

Interference

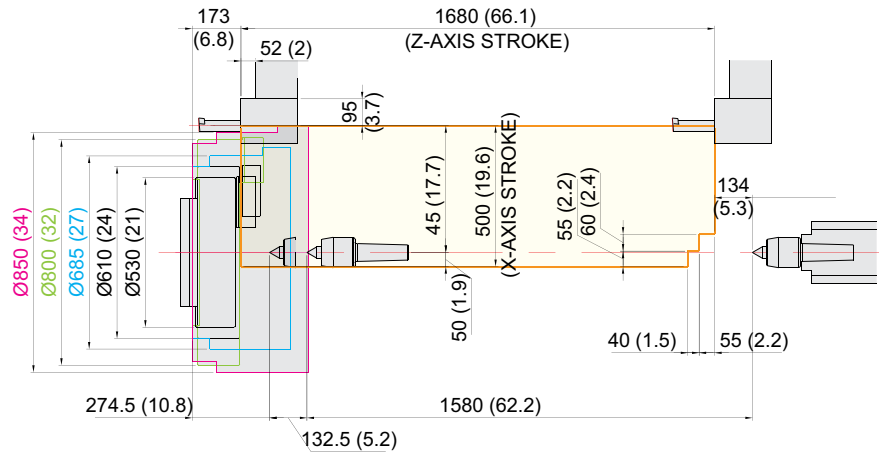
unit : mm(in)

L600A/600MA/700A/700MA/800A/800MA/800D

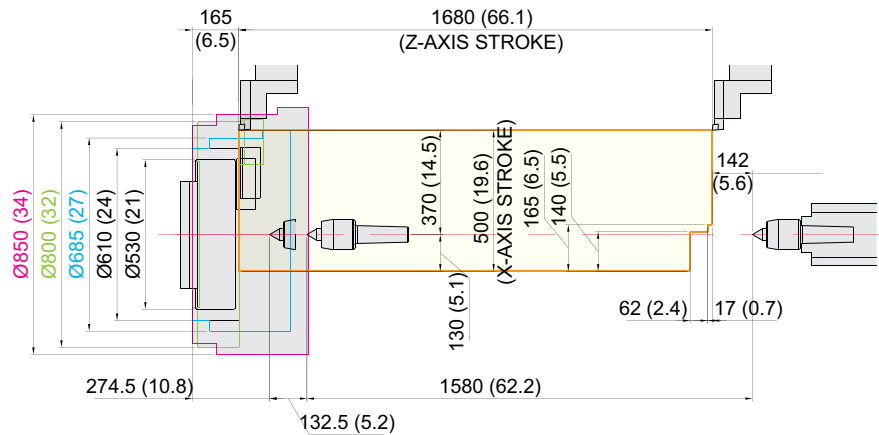
## OD TOOL HOLDER



## ID TOOL HOLDER



## EXTEND OD TOOL HOLDER



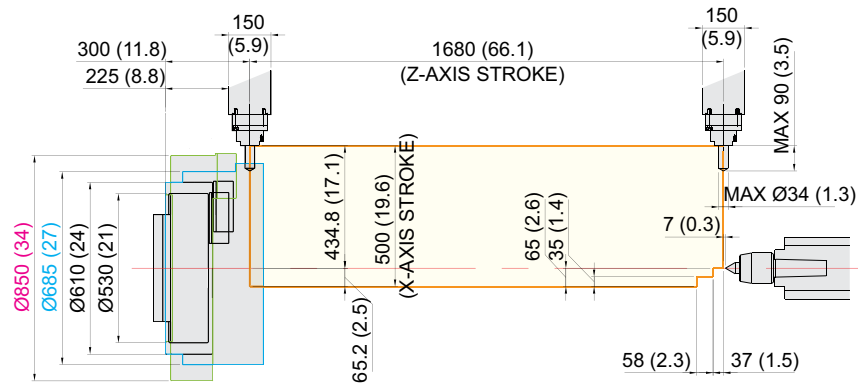
# SPECIFICATIONS

## Tooling Travel Range

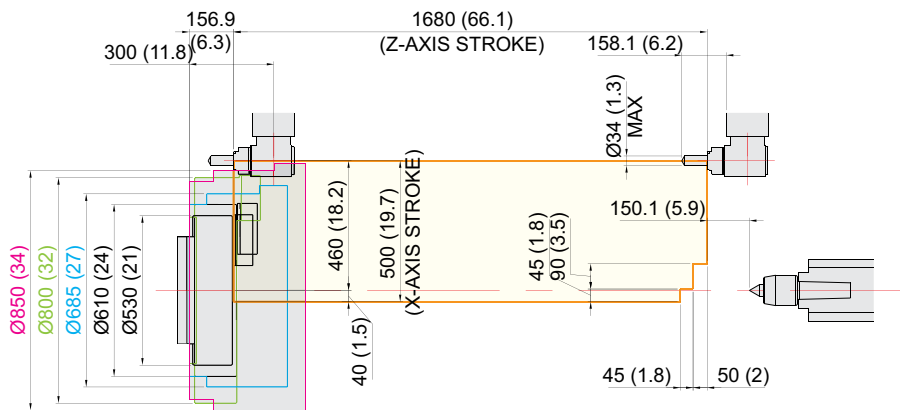
unit : mm(in)

L600MA/700MA/800MA/800MD

### STRAIGHT MILLING HEAD



### ANGULAR MILLING HEAD



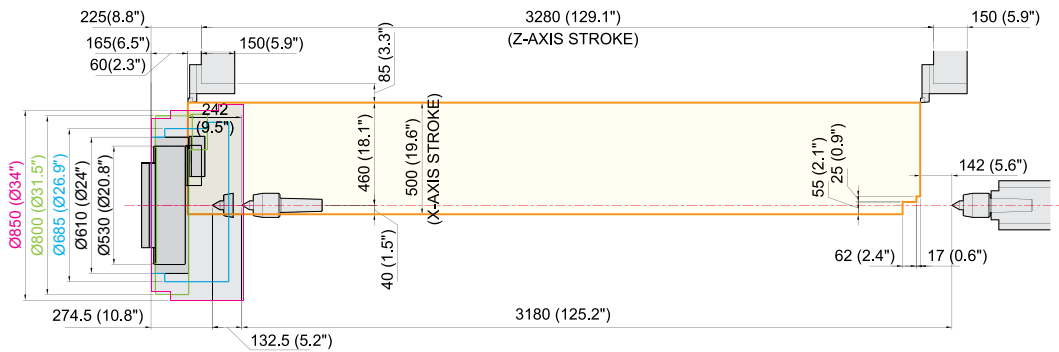
# SPECIFICATIONS

Interference

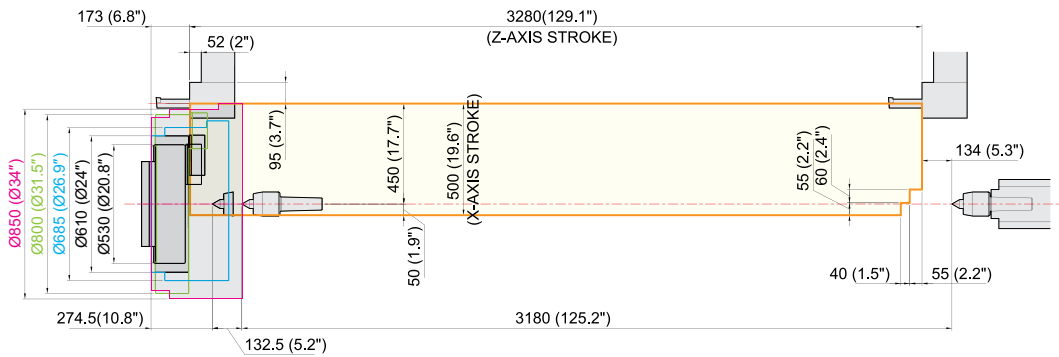
unit : mm(in)

L600LA/600LMA/700LA/700LMA/800LA/800LMA/800LD/800LMD

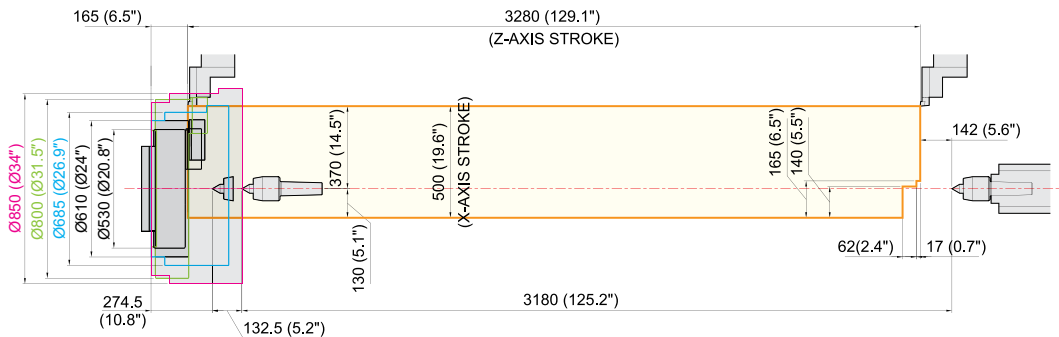
## OD TOOL HOLDER



## ID TOOL HOLDER



## EXTEND OD TOOL HOLDER





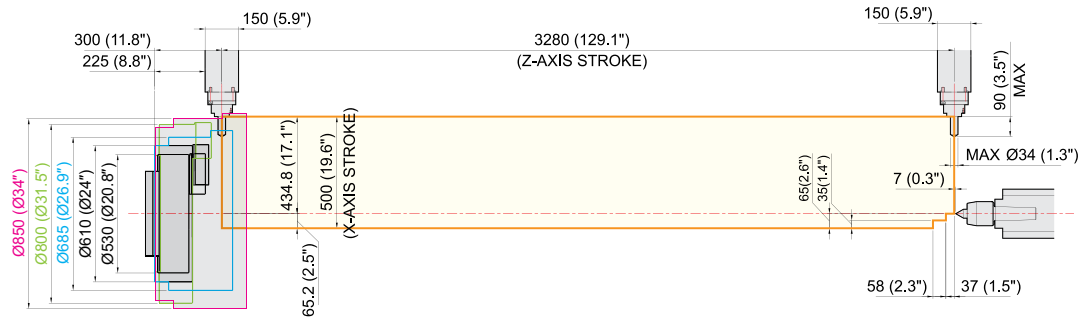
# SPECIFICATIONS

## Tooling Travel Range

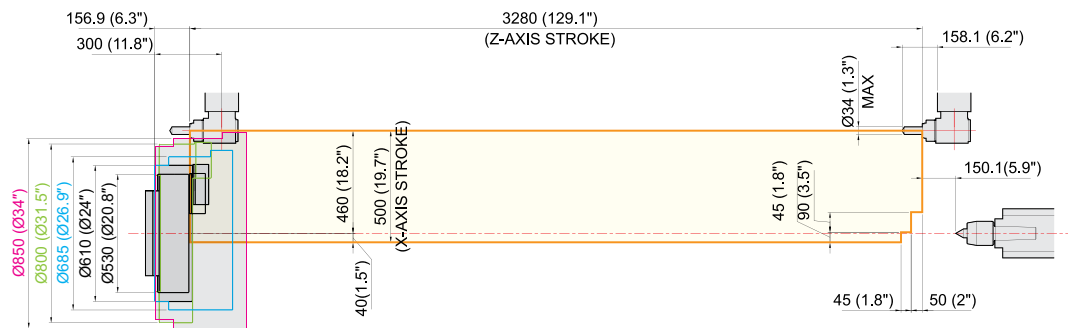
unit : mm(in)

L600LMA/700LMA/800LMA/800LMD

### STRAIGHT MILLING HEAD



### ANGULAR MILLING HEAD



# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                           |             | L600A   | L600MA                | L600LA                      | L600LMA               |
|---------------|---------------------------|-------------|---|-----------------------|-----------------------------|-----------------------|
| CAPACITY      | Swing Over the Bed        | mm(in)      | Ø1,050 (41.3")  |                       |                             |                       |
|               | Swing Over the Carriage   | mm(in)      | Ø820 (32.3")  |                       |                             |                       |
|               | Max. Turning Dia.         | mm(in)      | Ø920 (36.2")  |                       |                             |                       |
|               | Max. Turning Length       | mm(in)      | 1,650 (65")   |                       | 3,250 (128")                |                       |
|               | Bar Capacity              | mm(in)      | [18" : Ø117 (Ø4.6") / 21", 24" : Ø139 (Ø5.5")]        |                       |                             |                       |
| SPINDLE       | Chuck Size                | inch        | Opt. [18" / 21" / 24"]                                |                       |                             |                       |
|               | Spindle Bore              | mm(in)      | Ø152 (6")   |                       |                             |                       |
|               | Spindle Speed (rpm)       | r/min       | Opt. [18" : 1,800 / 21" : 1,700 / 24" : 1,400]        |                       |                             |                       |
|               | Motor (30min./Cont.)      | kW(HP)      | 45/37 (60/50)   |                       |                             |                       |
|               | Torque (30min./Cont.)     | N·m(lbf·ft) | 5,610/4,621 (4,137.7/3,408.3)                         |                       |                             |                       |
|               | Spindle Type              | -           | BELT + 3 STEP GEAR                                    |                       |                             |                       |
|               | Spindle Nose              | -           | A2-15   |                       |                             |                       |
|               | C-axis Indexing           | deg         | -   | 0.001°                | -                           | 0.001°                |
| FEED          | Travel (X/Z)              | mm(in)      | 500/1,680 (19.7"/66.1")                               |                       | 500/3,280 (19.7"/129.1")    |                       |
|               | Rapid Traverse Rate (X/Z) | m/min       | 12/16   |                       | 12/12                       |                       |
|               | Slide Type                | -           | BOX GUIDE   |                       |                             |                       |
| TURRET        | No. of Tools              | EA          | 12  |                       |                             |                       |
|               | Tool Size                 | OD          | □ 32 (1.3")   |                       |                             |                       |
|               |                           | ID          | Ø80 (3.1")  |                       |                             |                       |
|               | Indexing Time             | sec/step    | 0.4   |                       |                             |                       |
| LIVE TOOL     | Motor (Max/Cont.)         | kW(HP)      | -   | 11/7.5 (14.8/10)      | -                           | 11/7.5 (14.8/10)      |
|               | Milling Tool Speed (rpm)  | r/min       | -   | 3,000                 | -                           | 3,000                 |
|               | Torque (Max/Cont.)        | N·m(lbf·ft) | -   | 140/95.4 (103.3/70.4) | -                           | 140/95.4 (103.3/70.4) |
|               | Collet Size               | mm(in)      | -   | Ø34 (1.3") - ER50     | -                           | Ø34 (1.3") - ER50     |
|               | Type                      | -           | -   | BMT85                 | -                           | BMT85                 |
| TAIL STOCK    | Taper                     | -           | MT6 (Built-in)  |                       |                             |                       |
|               | Quill Dia.                | mm(in)      | Ø160 (6.3")   |                       |                             |                       |
|               | Quill Travel              | mm(in)      | 132.5 (5.2")  |                       |                             |                       |
|               | Travel                    | mm(in)      | 1,580 (62.2")   |                       | 3,180 (125.2")              |                       |
| TANK CAPACITY | Coolant Tank              | ℓ (gal)     | 570 (150.6)   |                       | 770 (203.4)                 |                       |
|               | Lubricating Tank          | ℓ (gal)     | 4 (1.1)   |                       |                             |                       |
| POWER SUPPLY  | Electric Power Supply     | kVA         | 50  |                       |                             |                       |
|               | Thickness of Power Cable  | Sq          | Over 50   |                       |                             |                       |
|               | Voltage                   | V/Hz        | 220/60 (200/50*)                                      |                       |                             |                       |
| MACHINE       | Floor Space (L×W)         | mm(in)      | 7,077×3,075 (278.6"×121.1")                           |                       | 8,715×3,075 (343.1"×121.1") |                       |
|               | Height                    | mm(in)      | 2,700 (106.3")  |                       |                             |                       |
|               | Weight                    | kg(lb)      | 18,000 (3,968)  |                       | 23,500 (51,809)             |                       |
| PC            | Controller                | -           | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] |                       |                             |                       |

\* Prior consultation is required when applying spindle contouring control for gear driven spindle.

\*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)  
Specifications are subject to change without notice for improvement.

# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                           | L700A       | L700MA  | L700LA                      | L700LMA |                       |
|---------------|---------------------------|-------------|---|-----------------------------|---------|-----------------------|
| CAPACITY      | Swing Over the Bed        | mm(in)      | Ø1,050 (41.3")  |                             |         |                       |
|               | Swing Over the Carriage   | mm(in)      | Ø820 (32.3")  |                             |         |                       |
|               | Max. Turning Dia.         | mm(in)      | Ø920 (36.2")  |                             |         |                       |
|               | Max. Turning Length       | mm(in)      | 1,650 (65")   | 3,250 (128")                |         |                       |
|               | Bar Capacity              | mm(in)      | Ø165 (6.5")   |                             |         |                       |
| SPINDLE       | Chuck Size                | inch        | Opt. [24" / 32"]                                      |                             |         |                       |
|               | Spindle Bore              | mm(in)      | Ø181 (7.1")   |                             |         |                       |
|               | Spindle Speed (rpm)       | r/min       | Opt. [24" : 1,500 / 32" : 1,200]                      |                             |         |                       |
|               | Motor (30min./Cont.)      | kW(HP)      | 45/37 (60/50)   |                             |         |                       |
|               | Torque (30min./Cont.)     | N·m(lbf·ft) | 6,928/5,700 (5,109.8/4,204.1)                         |                             |         |                       |
|               | Spindle Type              | -           | BELT+3STEP GEAR                                       |                             |         |                       |
|               | Spindle Nose              | -           | A1-15   |                             |         |                       |
|               | C-axis Indexing           | deg         | -   | 0.001°                      | -       | 0.001°                |
| FEED          | Travel (X/Z)              | mm(in)      | 500/1,680 (19.7"/66.1")                               | 500/3,280 (19.7"/129.1")    |         |                       |
|               | Rapid Traverse Rate (X/Z) | m/min       | 12/16   | 12/12                       |         |                       |
|               | Slide Type                | -           | BOX GUIDE   |                             |         |                       |
| TURRET        | No. of Tools              | EA          | 12  |                             |         |                       |
|               | Tool Size                 | OD          | mm(in)  | □ 32 (1.3")                 |         |                       |
|               |                           | ID          | mm(in)  | Ø80 (3.1")                  |         |                       |
|               | Indexing Time             | sec/step    | 0.4   |                             |         |                       |
| LIVE TOOL     | Motor (Max/Cont.)         | kW(HP)      | -   | 11/7.5 (14.8/10)            | -       | 11/7.5 (14.8/10)      |
|               | Milling Tool Speed (rpm)  | r/min       | -   | 3,000                       | -       | 3,000                 |
|               | Torque (Max/Cont.)        | N·m(lbf·ft) | -   | 140/95.4 (103.3/70.4)       | -       | 140/95.4 (103.3/70.4) |
|               | Collet Size               | mm(in)      | -   | Ø34 (1.3") - ER50           | -       | Ø34 (1.3") - ER50     |
|               | Type                      | -           | -   | BMT85                       | -       | BMT85                 |
| TAIL STOCK    | Taper                     | -           | MT6 (Built-in)  |                             |         |                       |
|               | Quill Dia.                | mm(in)      | Ø160 (6.3")   |                             |         |                       |
|               | Quill Travel              | mm(in)      | 132.5 (5.2")  |                             |         |                       |
|               | Travel                    | mm(in)      | 1,580 (62.2")   | 3,180 (125.2")              |         |                       |
| TANK CAPACITY | Coolant Tank              | ℓ (gal)     | 570 (150.6)   | 770 (203.4)                 |         |                       |
|               | Lubricating Tank          | ℓ (gal)     | 4 (1.1)   |                             |         |                       |
| POWER SUPPLY  | Electric Power Supply     | kVA         | 51  |                             |         |                       |
|               | Thickness of Power Cable  | Sq          | Over 50   |                             |         |                       |
|               | Voltage                   | V/Hz        | 220/60 (200/50*)                                      |                             |         |                       |
| MACHINE       | Floor Space (L×W)         | mm(in)      | 7,077×3,075 (278.6"×121.1")                           | 8,715×3,075 (343.1"×121.1") |         |                       |
|               | Height                    | mm(in)      | 2,700 (106.3")  |                             |         |                       |
|               | Weight                    | kg(lb)      | 18,000 (3,968)  | 23,500 (51,809)             |         |                       |
| PC            | Controller                | -           | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] |                             |         |                       |

\* Prior consultation is required when applying spindle contouring control for gear driven spindle.

\*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)  
Specifications are subject to change without notice for improvement.

# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                           | L800A       | L800MA  | L800LA                      | L800LMA |                       |
|---------------|---------------------------|-------------|---|-----------------------------|---------|-----------------------|
| CAPACITY      | Swing Over the Bed        | mm(in)      | Ø1,050 (41.3")  |                             |         |                       |
|               | Swing Over the Carriage   | mm(in)      | Ø820 (32.3")  |                             |         |                       |
|               | Max. Turning Dia.         | mm(in)      | Ø920 (36.2")  |                             |         |                       |
|               | Max. Turning Length       | mm(in)      | 1,650 (65")   | 3,250 (128")                |         |                       |
|               | Bar Capacity              | mm(in)      | Hydraulic : Ø239 (9.4") / Air, Independent : Ø319 (12.6") |                             |         |                       |
| SPINDLE       | Chuck Size                | inch        | Opt. [24" : Independent / 27" : Air / 32" : Hydraulic]    |                             |         |                       |
|               | Spindle Bore              | mm(in)      | Ø320 (12.6")  |                             |         |                       |
|               | Spindle Speed (rpm)       | r/min       | 700   |                             |         |                       |
|               | Motor (30min./Cont.)      | kW(HP)      | 45/37 (60/50)   |                             |         |                       |
|               | Torque (30min./Cont.)     | N·m(lbf·ft) | 7,045/5,795 (5,196.1/4,274.2)                             |                             |         |                       |
|               | Spindle Type              | -           | BELT+2STEP GEAR   |                             |         |                       |
|               | Spindle Nose              | -           | A1-20   |                             |         |                       |
|               | C-axis Indexing           | deg         | -   | 0.001°                      | -       | 0.001°                |
| FEED          | Travel (X/Z)              | mm(in)      | 500/1,680 (19.7"/66.1")                                   | 500/3,280 (19.7"/129.1")    |         |                       |
|               | Rapid Traverse Rate (X/Z) | m/min       | 12/16   | 12/12                       |         |                       |
|               | Slide Type                | -           | BOX GUIDE   |                             |         |                       |
| TURRET        | No. of Tools              | EA          | 12  |                             |         |                       |
|               | Tool Size                 | OD          | mm(in)  | □ 32 (1.3")                 |         |                       |
|               |                           | ID          | mm(in)  | Ø80 (3.1")                  |         |                       |
|               | Indexing Time             | sec/step    | 0.4   |                             |         |                       |
| LIVE TOOL     | Motor (Max/Cont.)         | kW(HP)      | -   | 11/7.5 (14.8/10)            | -       | 11/7.5 (14.8/10)      |
|               | Milling Tool Speed (rpm)  | r/min       | -   | 3,000                       | -       | 3,000                 |
|               | Torque (Max/Cont.)        | N·m(lbf·ft) | -   | 140/95.4 (103.3/70.4)       | -       | 140/95.4 (103.3/70.4) |
|               | Collet Size               | mm(in)      | -   | Ø34 (1.3") - ER50           | -       | Ø34 (1.3") - ER50     |
|               | Type                      | -           | -   | BMT85                       | -       | BMT85                 |
| TAIL STOCK    | Taper                     | -           | MT6 (Built-in)  |                             |         |                       |
|               | Quill Dia.                | mm(in)      | Ø160 (6.3")   |                             |         |                       |
|               | Quill Travel              | mm(in)      | 132.5 (5.2")  |                             |         |                       |
|               | Travel                    | mm(in)      | 1,580 (62.2")   | 3,180 (125.2")              |         |                       |
| TANK CAPACITY | Coolant Tank              | ℓ (gal)     | 570 (150.6)   | 770 (203.4)                 |         |                       |
|               | Lubricating Tank          | ℓ (gal)     | 4 (1.1)   |                             |         |                       |
| POWER SUPPLY  | Electric Power Supply     | kVA         | 54  |                             |         |                       |
|               | Thickness of Power Cable  | Sq          | Over 50   |                             |         |                       |
|               | Voltage                   | V/Hz        | 220/60 (200/50*)  |                             |         |                       |
| MACHINE       | Floor Space (L×W)         | mm(in)      | 7,077×3,075 (278.6"×121.1")                               | 8,715×3,075 (343.1"×121.1") |         |                       |
|               | Height                    | mm(in)      | 2,700 (106.3")  |                             |         |                       |
|               | Weight                    | kg(lb)      | 18,000 (3,968)  | 23,500 (51,809)             |         |                       |
| NC            | Controller                | -           | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus]     |                             |         |                       |

\* Prior consultation is required when applying spindle contouring control for gear driven spindle.

\*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)

Specifications are subject to change without notice for improvement.

# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM                      |                          | L800D        | L800MD  | L800LD                      | L800LMD                  |                       |
|---------------------------|--------------------------|--------------|---|-----------------------------|--------------------------|-----------------------|
| CAPACITY                  | Swing Over the Bed       | mm(in)       | Ø1,050 (41.3")  |                             |                          |                       |
|                           | Swing Over the Carriage  | mm(in)       | Ø820 (32.3")  |                             |                          |                       |
|                           | Max. Turning Dia.        | mm(in)       | Ø920 (36.2")  |                             |                          |                       |
|                           | Max. Turning Length      | mm(in)       | 1,650 (65")   | 3,250 (128")                |                          |                       |
|                           | Bar Capacity             | mm(in)       | Ø374 (14.7")  |                             |                          |                       |
| SPINDLE                   | Chuck Size               | inch         | Opt. [34" Air Chuck] [32" Independent Chucks]         |                             |                          |                       |
|                           | Spindle Bore             | mm(in)       | Ø375 (14.8")  |                             |                          |                       |
|                           | Spindle Speed (rpm)      | r/min        | 500   |                             |                          |                       |
|                           | Motor (30min./Cont.)     | kW(HP)       | 45/37 (60/50)   |                             |                          |                       |
|                           | Torque (30min./Cont.)    | N·m(lbf·ft)  | 7,288/5,992 (5,375.4/4,419.5)                         |                             |                          |                       |
|                           | Spindle Type             | -            | BELT+2STEP GEAR                                       |                             |                          |                       |
|                           | Spindle Nose             | -            | A2-20   |                             |                          |                       |
|                           | C-axis Indexing          | deg          | -   | 0.001°                      | -                        | 0.001°                |
|                           | FEED                     | Travel (X/Z) | mm(in)  | 500/1,680 (19.7"/66.1")     | 500/3,280 (19.7"/129.1") |                       |
| Rapid Traverse Rate (X/Z) |                          | m/min        | 12/16   | 12/12                       |                          |                       |
| Slide Type                |                          | -            | BOX GUIDE   |                             |                          |                       |
| TURRET                    | No. of Tools             | EA           | 12  |                             |                          |                       |
|                           | Tool Size                | OD           | mm(in)  | □ 32 (1.3")                 |                          |                       |
|                           |                          | ID           | mm(in)  | Ø80 (3.1")                  |                          |                       |
|                           | Indexing Time            | sec/step     | 0.4   |                             |                          |                       |
| LIVE TOOL                 | Motor (Max/Cont.)        | kW(HP)       | -   | 11/7.5 (14.8/10)            | -                        | 11/7.5 (14.8/10)      |
|                           | Milling Tool Speed (rpm) | r/min        | -   | 3,000                       | -                        | 3,000                 |
|                           | Torque (Max/Cont.)       | N·m(lbf·ft)  | -   | 140/95.4 (103.3/70.4)       | -                        | 140/95.4 (103.3/70.4) |
|                           | Collet Size              | mm(in)       | -   | Ø34 (1.3") - ER50           | -                        | Ø34 (1.3") - ER50     |
|                           | Type                     | -            | -   | BMT85                       | -                        | BMT85                 |
| TAIL STOCK<br>(OPTION)    | Taper                    | -            | MT6 (Built-in)  |                             |                          |                       |
|                           | Quill Dia.               | mm(in)       | Ø160 (6.3")   |                             |                          |                       |
|                           | Quill Travel             | mm(in)       | 132.5 (5.2")  |                             |                          |                       |
|                           | Travel                   | mm(in)       | 1,580 (62.2")   | 3,180 (125.2")              |                          |                       |
| TANK CAPACITY             | Coolant Tank             | ℓ (gal)      | 570 (150.6)   | 770 (203.4)                 |                          |                       |
|                           | Lubricating Tank         | ℓ (gal)      | 4 (1.1)   |                             |                          |                       |
| POWER SUPPLY              | Electric Power Supply    | kVA          | 54  |                             |                          |                       |
|                           | Thickness of Power Cable | Sq           | Over 50   |                             |                          |                       |
|                           | Voltage                  | V/Hz         | 220/60 (200/50*)                                      |                             |                          |                       |
| MACHINE                   | Floor Space (L×W)        | mm(in)       | 7,077×3,075 (278.6"×121.1")                           | 8,715×3,075 (343.1"×121.1") |                          |                       |
|                           | Height                   | mm(in)       | 2,700 (106.3")  |                             |                          |                       |
|                           | Weight                   | kg(lb)       | 18,000 (3,968)  | 23,500 (51,809)             |                          |                       |
| PC                        | Controller               | -            | FANUC 32i-B [HYUNDAI WIA FANUC i Series - Smart Plus] |                             |                          |                       |

\* Prior consultation is required when applying spindle contouring control for gear driven spindle.

\*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)  
Specifications are subject to change without notice for improvement.



# CONTROLLER

## FANUC 32i-B

[ ] : Option

| Controlled axis / Display / Accuracy Compensation |  |
|---|--|
| Control axes                                      | 2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X, Z, Y, C)<br>5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A)         |
| Simultaneously controlled axes                    | 2 axes [Max. 4 axes]   |
| Designation of spindle axes                       | 4 axes (1 path), 6 axes (2 path Total)   |
| Least setting Unit                                | X, Z, Y, B axes : 0.001 mm (0.0001 inch)<br>C, A axes : 0.001 deg  |
| Least input increment                             | X, Z, Y, B axes : 0.001 mm (0.0001 inch)<br>C, A axes : 0.001 deg  |
| Inch / Metric conversion                          | G20 / G21  |
| High response vector control                      |  |
| Interlock   | All axes / Each axis   |
| Machine lock                                      | All axes   |
| Backlash compensation                             | ± 0 ~ 9999 pulses<br>(Rapid traverse / Cutting feed)   |
| Position switch                                   |  |
| LCD / MDI   | 10.4 inch color LCD  |
| Feedback  | Absolute motor feedback  |
| Stored stroke check 1                             | Over travel  |
| Stored stroke check 2, 3                          |  |
| PMC axis control                                  |  |
| <b>Operation</b>                                  |  |
| Automatic operation (Memory)                      |  |
| MDI operation                                     |  |
| DNC operation                                     | Needed DNC software / CF card  |
| Program restart                                   |  |
| Wrong operation prevention                        |  |
| Program check function                            | Dry run, Program check   |
| Single block                                      |  |
| Search function                                   | Program Number / Sequence Number   |
| <b>Interpolation functions</b>                    |  |
| Nano interpolation                                |  |
| Positioning                                       | G00  |
| Linear interpolation                              | G01  |
| Circular interpolation                            | G02, G03   |
| Exact stop mode                                   | Single : G09, Continuous : G61   |
| Dwell   | G04, 0 ~ 9999.9999 sec   |
| Skip  | G31  |
| Reference position return                         | 1st reference : G28<br>2nd reference : G30<br>Ref. position check : G27  |
| Thread synchronous cutting                        |  |
| Thread cutting retract                            |  |
| Variable lead thread cutting                      |  |
| Multi / Continuous threading                      |  |
| <b>Feed function / Acc. &amp; Dec. control</b>    |  |
| Manual feed                                       | Rapid traverse<br>Jog : 0~2,000 mm/min (79 ipm)<br>Manual handle : x1, x10, x100 pulses<br>Reference position return |
| Cutting Feed command                              | Direct input F code  |
| Feedrate override                                 | 0 ~ 200% (10% Unit)  |
| Rapid traverse override                           | F1%, F25%, 50%, F100%  |
| Override cancel                                   |  |
| Feed per minute                                   | G98  |
| Feed per revolution                               | G99  |
| Look-ahead block                                  | 1 block  |
| <b>Program input</b>                              |  |
| Tape Code   | EIA / ISO  |
| Optional block skip                               | 1 ea   |
| Program stop / end                                | M00, M01 / M02, M30  |
| Maximum command unit                              | ± 999,999,999 mm (± 99,999,999 inch)   |
| Plane selection                                   | X-Y : G17 / Z-X : G18 / Y-Z : G19  |
| Workpiece coordinate system                       | G52, G53, 6 pairs (G54 ~ G59)  |
| Manual absolute                                   | Fixed ON   |
| Programmable data input                           | G10  |
| Sub program call                                  | 10 folds nested  |
| Custom macro                                      | #100 ~ #149, #500 ~ #549   |
| G code system                                     | A  |
| Programmable mirror image                         | G51.1, G50.1   |
| G code preventing buffering                       | G4.1   |
| Multiple repetitive cycles I, II                  |  |
| <b>Program input</b>                              |  |

|  |  |
|--|--|
| Canned cycle for turning                           |  |
| Manual Guide i                                     | Conversational auto program                        |
| <b>Auxiliary function / Spindle speed function</b> |  |
| Auxiliary function                                 | M 4 digit  |
| Level-up M Code                                    | High speed / Multi / Bypass M code                 |
| Spindle speed function                             | S 4 digit, Binary output                           |
| Spindle override                                   | 0% ~ 150% (10% Unit)                               |
| Multi position spindle orientation                 | M19  |
| Rigid tapping                                      |  |
| Constant surface speed control                     | G96, G97   |
| <b>Tool function / Tool compensation</b>           |  |
| Tool function                                      | T 2 digit + Offset 2 digit                         |
| Tool life management                               |  |
| Tool offset pairs                                  | 32 pairs   |
| Tool nose radius compensation                      | G40, G41, G42                                      |
| Geometry / Wear compensation                       |  |
| Direct input of offset measured B                  |  |
| <b>Editing function</b>                            |  |
| Part program storage size                          | 640m (256KB)                                       |
| No. of registerable programs                       | 500 ea   |
| Program protect                                    |  |
| Background editing                                 |  |
| Extended part program editing                      | Copy, move and change of NC program                |
| Memory card program edit                           |  |
| <b>Data input / output &amp; Interface</b>         |  |
| I/O interface                                      | CF card, USB memory<br>Embedded Ethernet interface |
| Screen hard copy                                   |  |
| External message                                   |  |
| External key input                                 |  |
| External workpiece number search                   |  |
| Automatic data backup                              |  |
| <b>Setting, display and diagnosis</b>              |  |
| Self-diagnosis function                            |  |
| History display & Operation                        | Alarm & Operator message & Operation               |
| Run hour / Parts count display                     |  |
| Maintenance information                            |  |
| Actual cutting feedrate display                    |  |
| Display of spindle speed / T code                  |  |
| Graphic display                                    |  |
| Operating monitor screen                           | Spindle / Servo load etc.                          |
| Power consumption monitoring                       | Spindle & Servo                                    |
| Spindle / Servo setting screen                     |  |
| Multi language display                             | Support 20 languages                               |
| Display language switching                         | Selection of 5 optional Languages                  |
| LCD Screen Saver                                   | Screen saver                                       |
| Unexpected disturbance torque                      | BST (Back spin torque limit)                       |
| <b>Function for machine type</b>                   |  |
| Cs contour control (C & A axes)                    | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Polar coordinate interpolation                     | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Cylindrical interpolation                          | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Canned cycle for drilling                          | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Spindle orientation expansion                      | MS, SY TTS, TTMS, TTSY                             |
| Spindle synchronous control                        | MS, SY TTS, TTMS, TTSY                             |
| Torque control                                     | MS, SY TTS, TTMS, TTSY                             |
| Y axis offset                                      | Y, SY, TTSY  |
| Arbitrary angular control                          | Y, SY, TTSY  |
| Composite / Superimposed control                   | MS, SY TTS, TTMS, TTSY                             |
| Balance cutting                                    | MS, SY TTS, TTMS, TTSY                             |
| <b>Option</b>                                      |  |
| Additional optional block skip                     | 9 ea   |
| Fast ethernet                                      | Needed option board                                |
| Data server  | Needed option board                                |
| Protection of data at 8 levels                     |  |
| Tool offset pairs                                  | 64 pairs / 99 pairs / 200 pairs                    |
| Part program storage size                          | 1280 m (512KB) / 2560m (1MB)                       |
| Polygon turning (2 Spindles)                       | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Helical interpolation                              |  |
| Dynamic graphic display                            |  |
| Direct drawing dimension program                   | Including Chamfering / Corner R                    |

Figures in inch are converted from metric values.

The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

## HYUNDAI WIA FANUC i Series – Smart Plus

[ ] : Option

| Controlled axis / Display / Accuracy Compensation |   |
|---|---|
| Control axes                                      | 2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X,Z,Y,C)<br>5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A)<br>7 axes (X1/Z1, X2/Z2, B2, C1/C2) |
| Simultaneously controlled axes                    | 2 axes [Max. 4 axes]  |
| Designation of spindle axes                       | 3 axes [Max. 4 axes]  |
| Least setting Unit                                | X, Z, Y, B axes : 0.001 mm (0.0001 inch)<br>C, A axes : 0.001 deg   |
| Least input increment                             | X, Z, Y, B axes : 0.001 mm (0.0001 inch)<br>C, A axes : 0.001 deg   |
| Inch / Metric conversion                          | G20 / G21   |
| High response vector control                      |   |
| Interlock   | All axes / Each axis  |
| Machine lock                                      | All axes  |
| Backlash compensation                             | ± 0~9999 pulses (exc. Rapid traverse / Cutting feed)  |
| Position switch                                   |   |
| LCD / MDI   | 15 inch LCD unit (with Touch Panel)   |
| Feedback  | Absolute motor feedback   |
| Stored stroke check 1                             | Over travel   |
| Stored stroke check 2, 3                          |   |
| PMC axis control                                  |   |
| Operation   |   |
| Automatic operation (Memory)                      |   |
| MDI operation                                     |   |
| DNC operation                                     | Needed DNC software / CF card   |
| Program restart                                   |   |
| Wrong operation prevention                        |   |
| Program check function                            | Dry run   |
| Single block                                      |   |
| Search function                                   | Program Number / Sequence Number  |
| Interpolation functions                           |   |
| Nano interpolation                                |   |
| Positioning                                       | G00   |
| Linear interpolation                              | G01   |
| Circular interpolation                            | G02, G03  |
| Exact stop mode                                   | Single : G09, Continuous : G61  |
| Dwell   | G04, 0 ~ 9999.9999 sec  |
| Skip  | G31   |
| Reference position return                         | 1st reference : G28, 2nd reference : G30<br>Ref. position check : G27   |
| Thread synchronous cutting                        | G33   |
| Thread cutting retract                            |   |
| Variable lead thread cutting                      |   |
| Multi / Continuous threading                      |   |
| Feed function / Acc. & Dec. control               |   |
| Manual feed                                       | Rapid traverse<br>Jog : 0~2,000 mm/min (79 ipm)<br>Manual handle : x1, x10, x100 pulses<br>Reference position return                          |
| Cutting Feed command                              | Direct input F code   |
| Feedrate override                                 | 0 ~ 200% (10% Unit)   |
| Rapid traverse override                           | 1%, F25%, 50%, 100%   |
| Override cancel                                   |   |
| Feed per minute                                   | G98   |
| Feed per revolution                               | G99   |
| Look-ahead block                                  | 1 block   |
| Program input                                     |   |
| Tape Code   | EIA / ISO   |
| Optional block skip                               | 9 ea  |
| Program stop / end                                | M00, M01 / M02, M30   |
| Maximum command unit                              | ± 999,999.999 mm (± 99,999.9999 inch)   |
| Plane selection                                   | X-Y : G17 / Z-X : G18 / Y-Z : G19   |
| Workpiece coordinate system                       | G52, G53, 6 pairs (G54 ~ G59)   |
| Manual absolute                                   | Fixed ON  |
| Programmable data input                           | G10   |
| Sub program call                                  | 10 folds nested   |
| Custom macro                                      | #100 ~ #199, #500 ~ #999  |
| G code system                                     | A, B/C  |
| Programmable mirror image                         | G51.1, G50.1  |
| G code preventing buffering                       | G4.1  |
| Direct drawing dimension program                  | Including Chamfering / Corner R   |
| Conversational Program                            | SmartGuide-i  |

| Program input                               |  |
|---|--|
| Multiple repetitive cycles                  | I, II  |
| Canned cycle for turning                    |  |
| Auxiliary function / Spindle speed function |  |
| Auxiliary function                          | M & 4 digit  |
| Level-up M Code                             | High speed / Multi / Bypass M code                 |
| Spindle speed function                      | S & 5 digit, Binary output                         |
| Spindle override                            | 0% ~ 150% (10% Unit)                               |
| Multi position spindle orientation          | M19 (S##)  |
| Rigid tapping                               |  |
| Constant surface speed control              | G96, G97   |
| Tool function / Tool compensation           |  |
| Tool function                               | T & 2 digit + Offset 2 digit                       |
| Tool life management                        |  |
| Tool offset pairs                           | 128 pairs  |
| Tool nose radius compensation               | G40, G41, G42                                      |
| Geometry / Wear compensation                |  |
| Direct input of offset measured B           |  |
| Editing function                            |  |
| Part program storage size                   | 5,120m (2MB)                                       |
| No. of registerable programs                | 1,000 ea   |
| Program protect                             |  |
| Background editing                          |  |
| Extended part program editing               | Copy, move and change of NC program                |
| Memory card program edit                    |  |
| Data input / output & Interface             |  |
| I/O interface                               | CF card, USB memory<br>Embedded Ethernet interface |
| Screen hard copy                            |  |
| External message                            |  |
| External key input                          |  |
| External workpiece number search            |  |
| Automatic data backup                       |  |
| Setting, display and diagnosis              |  |
| Self-diagnosis function                     |  |
| History display & Operation                 | Alarm & Operator message & Operation               |
| Run hour / Parts count display              |  |
| Maintenance information                     |  |
| Actual cutting feedrate display             |  |
| Display of spindle speed / T code           |  |
| Graphic display                             |  |
| Operating monitor screen                    | Spindle / Servo load etc.                          |
| Power consumption monitoring                | Spindle & Servo                                    |
| Spindle / Servo setting screen              |  |
| Multi language display                      | Support 24 languages                               |
| Display language switching                  | Selection of 5 optional Languages                  |
| LCD Screen Saver                            | Screen saver                                       |
| Unexpected disturbance torque               | BST (Back spin torque limit)                       |
| Function for machine type                   |  |
| Cs contour control (C & A axes)             | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Polar coordinate interpolation              | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Cylindrical interpolation                   | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Polygon turning (2 Spindles)                | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Canned cycle for drilling                   | Mill, MS, Y, SY, LF-Mill, TTMS, TTSY               |
| Spindle orientation expansion               | MS, SY, TTS, TTMS, TTSY                            |
| Spindle synchronous control                 | MS, SY, TTS, TTMS, TTSY                            |
| Torque control                              | MS, SY, TTS, TTMS, TTSY                            |
| Y axis offset                               | Y, SY, TTSY  |
| Arbitrary angular control                   | Y, SY, TTSY  |
| Composite / Superimposed control            | MS, SY, TTS, TTMS, TTSY                            |
| Balance cutting                             | TTS, TTMS, TTSY                                    |
| Option                                      |  |
| Fast ethernet                               | Needed option board                                |
| Data server                                 | Needed option board                                |
| Protection of data at 8 levels              |  |
| Tool offset pairs                           | 200 pairs  |
| Helical interpolation                       |  |
| Optional block skip                         | 40 ea, 200 ea (AICC II)                            |

Figures in inch are converted from metric values.

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# MOVEMENT FOR BETTER TOMORROW



## ECO FRIENDLY

Protect the environment for all humanity and generation to come

**01**

**Achieve  
carbon  
neutrality**

- Develop Net-zero Roadmap
- Heighten carbon emissions management
- Achieve carbon neutrality goals

**02**

**Boost  
resource  
circulation**

- Detail plans to reduce environmental impact
- Gradually reduce pollutant emissions
- Build eco-friendly supply chain

**03**

**Establish  
environmental  
management  
framework**

- Set up environmental management process
- Assess business impact of climate change risks

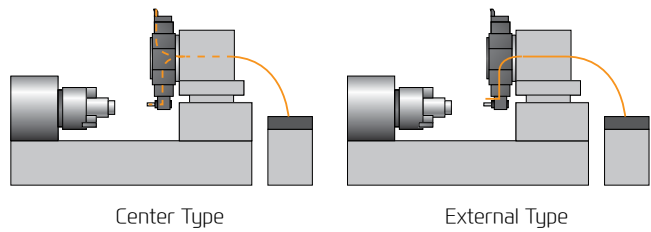


# HYUNDAI WIA ECO SYSTEM

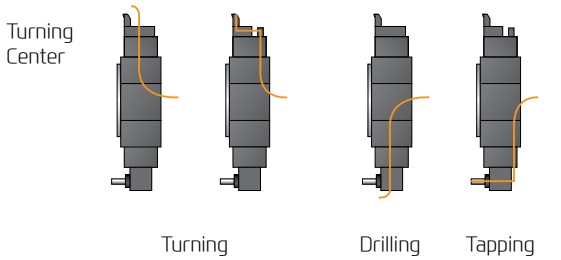
## MQL (Minimal Quantity Lubrication)

The goal of this system is to spray only the amount of lubricant required to prevent heat and chip build up at the cutting tool or work piece face.

### Example of Turning Center Application



### Example of Etc.



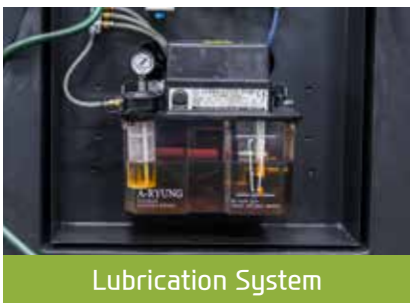
Oil Skimmer

An oil skimmer can increase coolant and tool life by removing tramp oil contaminants.



Mist Collector

Mist Collector reduces the amount of smoke and oil mist in the air. This helps build a safe and comfortable working environment and improve durability.



Lubrication System

By applying lubricant only when the machines axis are moving lubrication consumption is reduced by compared to standard systems.

# HYUNDAI WIA ENERGY SAVING

## HW-ESS (HYUNDAI WIA Energy Saving System)

HYUNDAI WIA Machine tool provides the optimum power saving function that can easily save energy with an intuitive user interface.



1. **Machine-ready power saving function** : Put all servo motors and other motors into sleep mode when no control or operation is done for a set time
2. **Work light auto-off function** : The work light is turned off automatically when no control or operation is done for a set time
3. **Chip conveyor auto power saving** : Operation/non operation time (timer) can be set to save energy
4. **Auto Power-off** : Auto power off after ending the an operation after a period of time
5. **Eco function** : Machine ready sleep mode can be activated/de-activated from the controller panel
6. **Power consumption monitor** : Real time power consumption can be monitored through the OP screen



L700A  
Movie



L800D  
Movie 1



L800D  
Movie 2



**You Tube** HYUNDAI WIA MT

[www.youtube.com/HYUNDAIWIAMT](http://www.youtube.com/HYUNDAIWIAMT)

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