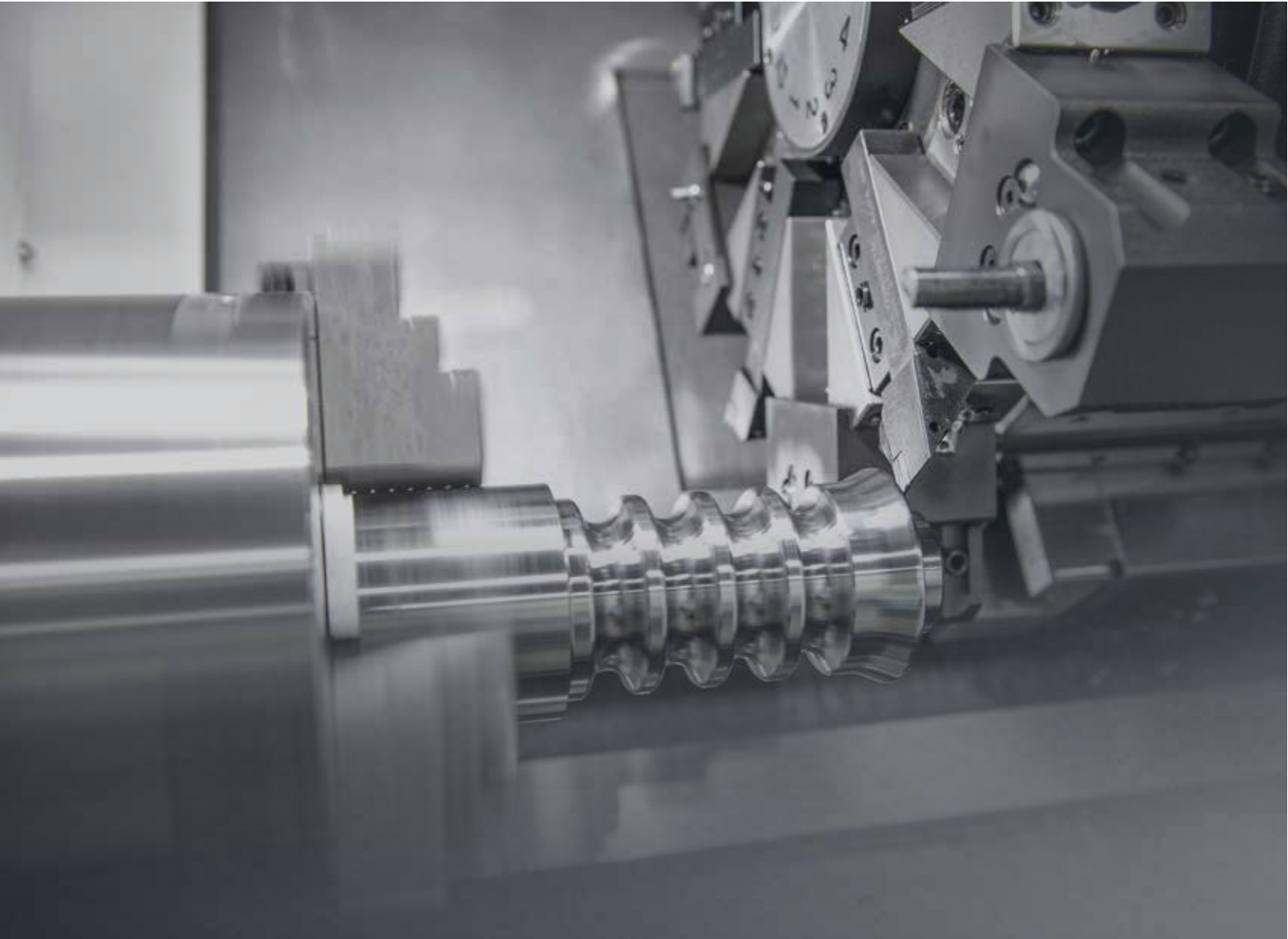


HD

2600/3100 Series

HD2600/M | HD3100A/MA | HD3100/M/L/LM

HYUNDAI WIA Heavy Duty Cutting CNC Turning Center



Technical Leader

The CNC Turning Center HD2600/3100 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 (Z-Axis) | | | Standard Turret | | Mill Turret | |
|----------|-------|-----|--------------|-------|---------|-----------------|------------|-------------|--------|
| | 10" | 12" | 680mm | 830mm | 1,350mm | 10 Station | 12 Station | BMT55P | BMT65P |
| HD2600 | ● | ○ | ● | | | ● | ○ | | |
| HD2600M | ● | | ● | | | | | ● | |
| HD3100A | ● | | | ● | | ● | ○ | | |
| HD3100MA | ● | | | ● | | | | | ● |
| HD3100 | | ● | | ● | | ● | ○ | | |
| HD3100M | | ● | | ● | | | | | ● |
| HD3100L | | ● | | | ● | ● | ○ | | |
| HD3100LM | | ● | | | ● | | | | ● |

●: Standard ○: Option

HD

2600/3100 Series

Lathe with Box Guideways for Heavy Cutting

- Box guideways for heavy-duty cutting
- Stabilized unit structure to minimize thermal displacement
- User convenient structure for high productivity
- Excellent rapid traverse rate: 30m/min [1,181ipm] (Z-axis)
- High-rigidity and high-speed servo turret (Expanded disk width)
- Ergonomic design for convenient access to chuck and tool



01 BASIC STRUCTURE

High Productivity 10/12inch CNC Turning Center for Heavy Duty Cutting

Turret

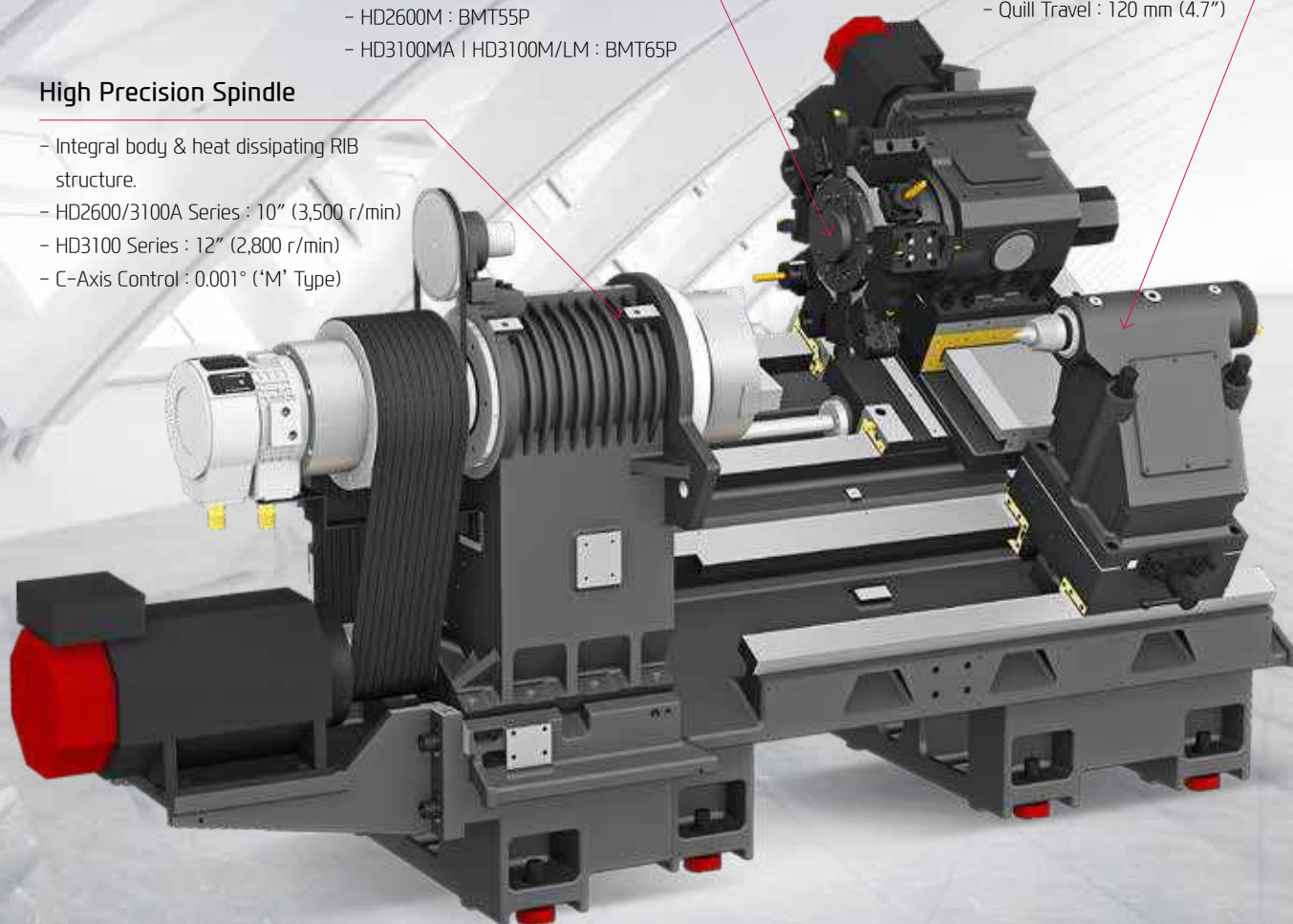
- 10 [Opt. 12] EA
- O.D./I.D. : $\square 25/\varnothing 50$
- HD2600M : BMT55P
- HD3100MA | HD3100M/LM : BMT65P

Tail Stock

- MT#5
- Quill Dia. : $\varnothing 100$ (3.9")
- Quill Travel : 120 mm (4.7")

High Precision Spindle

- Integral body & heat dissipating RIB structure.
- HD2600/3100A Series : 10" (3,500 r/min)
- HD3100 Series : 12" (2,800 r/min)
- C-Axis Control : 0.001° ('M' Type)



POWERFUL CUTTING CAPABILITY & WIDE CUTTING AREA

ALL-IN-ONE TYPE OF BED

Optimal Structural Analysis

Structural analysis was applied to the design of the machine to increase the tool post body and reduce the machine's height so as to maintain the bed's dynamic rigidity even during heavy-duty cutting.

In addition, the HD2600/3100's bed slope is pitched at 30° to ensure more stable machining.



Integrated Coolant Tank

The structure is designed with the coolant tank installed at the bed front for improved convenience. Chips can be removed from the right side of the machine.

GUIDEWAY

Box Guideway on All Axes

With the mounting of box guideways on all axes, the machine offers excellent vibration absorption even against during heavy-duty cutting, enabling high-quality machining.

Closed-type GIB Structure

The guide attachment surface of X-axis guideway has been changed to a sealed GIB structure to minimize X-axis turcite damage caused by chips. As a result, the machining capacity has been greatly enhanced too.

Rapid Traverse Rate (X/Z axis) : 24/30 m/min (945/1,181 ipm)



6-Face constraint design for improved travel capacity

Travel (X/Z)

| | | |
|------------------------------------|------------------------------------|--------------------------------------|
| HD2600/M | HD3100A/MA HD3100/M | HD3100L/LM |
| 265/680 mm (10.4"/26.8") | 265/830 mm (10.4"/32.7") | 265/1,350 mm (10.4"/53.1") |

02 HIGH PRECISION SPINDLE

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center



Spindle Specifications

[] : Option

| ITEM | Speed r/min | Motor (Max./Cont.) | Torque (Max./Cont.) | Type |
|----------------|-------------|-----------------------|---------------------|------|
| HD2600 Series | 3,500 rpm | 26/18.5 kW (35/25 HP) | 734/522 N·m | Belt |
| | [2,800 rpm] | 26/18.5 kW (35/25 HP) | 1,123/657 N·m | |
| HD3100A Series | 3,500 rpm | 26/18.5 kW (35/25 HP) | 734/522 N·m | Gear |
| HD3100 Series | 2,800 rpm | 26/18.5 kW (35/25 HP) | 1,123/657 N·m | |
| | [2,800 rpm] | 35/32 kW (47/29.5 HP) | 1,613/1,014 N·m | |

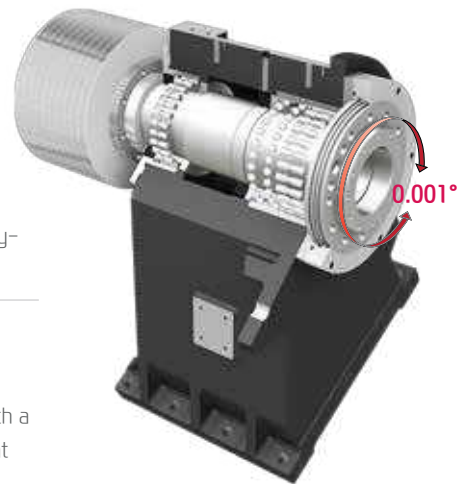
HEAVY DUTY CUTTING & HIGH ACCURACY

SPINDLE

Spindle Ideal for Heavy Cutting

The HD2600 and HD3100 feature torque of 734N·m and 1,123N·m, respectively, ensuring excellent performance in heavy-duty cutting, interrupted cutting, and so on. (specially designed for extra heavy workpiece)

In particular, the HD3100 features a gear spindle as an option [gear : 1,613N·m torque], thus meeting customer needs for a stronger heavy-duty cutting function.



Ribstar Belt

Also, machining performance is enhanced by **applying ribstar belt** to minimize noise and belt slipping problems. The spindle is designed with a **labyrinth structure** to minimize possible bearing damage from coolant and to improve machining stability.

C-Axis Control ('M' Type)

C-axis of SE-SY Series can be controlled to 0.001° which makes it possible to process various shapes.

TAIL STOCK

MT#5 Tail Stock

The HD2600 and HD3100 are fitted with tailstocks as a standard for excellent machining quality. In addition, the travel distance of quill can be as long as 120mm (4.7"), thus expanding the support area.

- ◎ Quill Dia. : $\varnothing 100$ mm (3.9")
- ◎ Quill Travel : 120 mm (4.7")
- ◎ Reinforced Tailstock Rigidity : Thrust 742 kgf → **989** kgf



03 SERVO TURRET

High speed, High Accuracy, Highly Reliable Servo Turret

Servo Turret

[] : Option

No. of Tools

12_{EA}

HD2600/3100A : 10 [12] EA

Tool Size (O.D/I.D)

□ 25/Ø50 mm (□ 1"/Ø2")

HD2600M : □ 25/Ø40 mm (□ 1"/Ø1 1/2")

Indexing Time

0.15_{sec}

Mill Turret

[] : Option

| ITEM | Speed | Motor (Max./Cont) | Torque (Max./Cont) | Collet Size |
|------------------------|-------------|-----------------------|--------------------|-----------------|
| BMT55P | 6,000 r/min | 5.5/3.7 kW (7.4/5 HP) | 52.5/26.5 N·m | Ø16 (0.6")/ER25 |
| BMT65P | 5,000 r/min | 5.5/3.7 kW (7.4/5 HP) | 70/35.4 N·m | Ø25 (1")/ER32 |
| [BMT65P (High-Torque)] | 5,000 r/min | 7.5/3.7 kW (10/5 HP) | 95.5/35.4 N·m | |

VARIOUS DRIVEN PRECISION VDI TOOL HOLDERS

TURRET

Servo Turret

The turret of HD2600/3100 series is joined with a high performance AC servo motor, improving machining reliability.

The 3-piece coupling shows excellent performance in indexing. Powerful hydraulic tool clamping minimizes tool tip deviation caused by workload.



High Pressure Coolant **OPTION**

Turret is designed to utilize 20 bar (290 psi) high pressure coolant and it shows optimum performance in machining difficult-to-cut material.

⊙ Static-Rigidity Increased : I.D 20%, O.D 3% ↑

| | | |
|--------------|---------------|--------|
| HD2600/3100A | 90 mm (3.5") | 20% UP |
| HD3100 | 120 mm (4.7") | 20% UP |

BMT Turret

BMT turret where each holder is fixed with 4 screws, shows outstanding performance in milling, drilling and tapping during heavy-duty cutting.



STRAIGHT MILLING HEAD



ANGULAR MILLING HEAD



Mill Tool Holder

Machining capability has increased with the addition of straight milling head tool holder, which can machine workpieces from the side, and angular milling head tool holder, which can perform I.D. operations.



Special Tool

OPTION

The HD2600/3100 series can process high value-added products using a variety of rotating tools. In particular, there is a multi-holder for attaching a variety of tools to one holder, and an eccentric rotary tool for handling eccentric parts without additional axis travel, which can realize integration of process with one machine.

❖ Consultation needed when ordering these options.

04 USER CONVENIENCE

Various Devices for User Friendly

BAR FEEDER SYSTEM

Bar Feeder

Bar feeder system enables automation which leads to efficiency improvement.

| | | | |
|--------------|----------------|--------------|-----------------|
| Long Type | : 3 m (118.1") | Short Type | : 1.5 m (59.1") |
| Bar Capacity | : Ø42 (1.7") | Bar Capacity | : Ø65 (2.6") |



Parts Catcher

An optional parts catcher collects finished parts without the need to open the door, adding productivity, especially when a bar feeder is attached.



Auto Door

Using M-code, the doors can be automatically opened and closed which brings productivity and convenience for automation.



Parts Conveyor

The parts conveyor transfers the finished workpiece unloaded by the parts catcher for user convenience.



Auto Shutter

Using auto shutter, automation system with gantry loader is possible without opening the machine's door.

HIGH PRECISION 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.



Linear Scale

Linear scales increase positioning accuracy and reduce distortion caused by thermal growth, thus ensuring a more accurate finished part



Work Probe

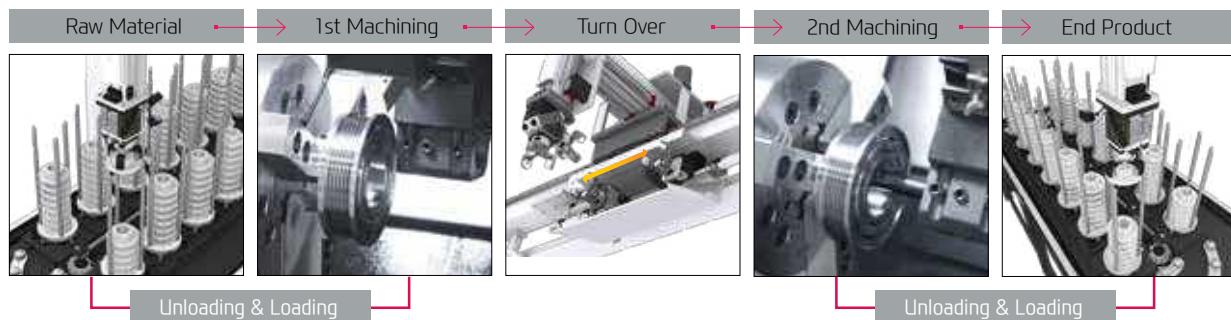
Workpiece coordinate values can be set automatically using the optional spindle probe.

Optional

GANTRY LOADER SYSTEM

Gantry Loader Machining Process

The high speed gantry loaders and the work stocker allow the implementation of automation cells. This enables flexible machining process and productivity enhancement. Optimization of the installation space is also possible.



COOLANT UNIT & ECO SYSTEM



Standard Coolant (Nozzle)

Chuck Coolant (Upper Chuck)

Chuck Air Blow (Upper Chuck)

Air Gun



Grease Lubrication Device

- PLC control allows for timely supply of extremely small amount of grease
- System alarm (low level, line blockage)
- Oil skimmer is unnecessary
- Up to 60% reduction of annual maintenance costs compared to ordinary lubricant oil

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 |



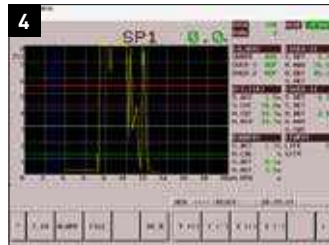
SMART SOFTWARE



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.

Convenience Function S/W



1. Thermal Displacement Compensation (HW-TDC) OPTION
This software improves processing precision by minimizing thermal deformation from changes in external environments and machining.

2. Machine Guidance (HW-MCG)
This software offers various user convenience functions such as tool manipulation, maintenance, tool monitoring, and a pop-up/status

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

4. Tool Monitoring (HW-TM) OPTION
This tool status monitoring software monitors and protects workpiece, tools, and equipment through real-time monitoring of the motor load from machining.

Machining Support S/W



1. Premium Tool Operation
This software offers premium graphic functions for more intuitive tool operation. (Only in iHMI tools)

2. Manual Viewer
This software enables users to view electronic manuals right from the tool. (Only in iHMI tools)

3. Scheduling
This software enables viewing/setting up directly from the tool. This allows such actions as managing customer's tool schedules and schedule notification. (Only in iHMI tools)

4. Operation Memo
This software is capable of managing customer notes such as tool information and issues. (Only in iHMI tools)

SPECIFICATIONS

Standard & Optional

| Spindle | | HD2600 | HD2600M |
|----------------------------------------------------|--------------------------------|--------|---------|
| 12" Headstock | | ○ | - |
| Main Spindle | 10" | ● | ● |
| Hollow Chuck 3 Jaw | 12" | ○ | ○ |
| Main Spindle | 10" | ○ | ○ |
| Solid Chuck 3 Jaw | 12" | - | - |
| 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 | | ○ | ○ |
| Turret | | | |
| Tool Holder | | ● | ● |
| Mill Turret | BMT | - | ● |
| Straight Milling Head (Axial) | Collet Type,2ea | - | ● |
| Angular Milling Head (Radial) | Collet Type,2ea | - | ● |
| Straight Milling Head (Axial) | Adapter Type | - | - |
| Angular Milling Head (Radial) | Adapter Type | - | - |
| Boring Sleeve | | ● | ● |
| Drill Socket | | ○ | ○ |
| U-Drill Holder | | ● | ● |
| O.D Extension Holder | For Out-Dia | ● | - |
| Angle Head | | - | - |
| Tail Stock & Steady Rest | | | |
| Quill Type Tail Stock | MT#4 | - | - |
| | MT#5 | ● | ● |
| Built-in Tail Stock | MT#4 | ○ | ○ |
| Programmable Tail Stock | | ○ | ○ |
| Manual Type Hyd. Steady Rest | | - | - |
| Standard Live Center | | ● | ● |
| High Precision Live Center | | ☆ | ☆ |
| 2 Steps Tail Stock Pressure System | | ○ | ○ |
| Quill Forward/Reverse Confirmation Device | | ○ | ○ |
| Tail Stock Foot Switch | | ○ | ○ |
| Coolant & Air Blow | | | |
| Standard Coolant (Nozzle) | | ● | ● |
| Chuck Coolant (Upper Chuck) | | ○ | ○ |
| Gun Coolant | | ○ | ○ |
| Through Spindle 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 | | ○ | ○ |
| Through Spindle Air Blow (Only for Special Chuck) | | ☆ | ☆ |
| High Pressure Coolant | 0.5Bar (7.3psi) | ● | ● |
| | 6Bar (87psi) | ○ | ○ |
| | 20Bar (290psi) | ○ | ○ |
| Power Coolant System (For Automation) | | ☆ | ☆ |
| Coolant Chiller (Only for Sub Tank, Chip Conveyor) | | - | - |
| Chip Disposal | | | |
| Coolant Tank | Side | ● | ● |
| | Rear | ○ | ○ |
| Chip Conveyor (Hinge/Scraper) | Front (Right) | ○ | ○ |
| | Rear (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 | ☆ | ☆ |

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

| Safety Device | | HD2600 | HD2600M |
|-------------------------------------------------------------|----------------------------------|--------|---------|
| Total Splash Guard | | ● | ● |
| Electric Device | | | |
| Call Light | 1Color : ● | ● | ● |
| Call Light | 2Color : ● ● | ○ | ○ |
| Call Light | 3Color : ● ● ● | ○ | ○ |
| Call Light & Buzzer | 3Color : ● ● ● B | ○ | ○ |
| Electric Cabinet Light | | ○ | ○ |
| Remote MPG | | - | - |
| Work Counter | Digital | ○ | ○ |
| Total Counter | | ○ | ○ |
| Tool Counter | | ○ | ○ |
| Multi Tool Counter | | ○ | ○ |
| Electric Circuit Breaker | | ○ | ○ |
| AVR (Auto Voltage Regulator) | | ☆ | ☆ |
| Transformer | 30kVA | ○ | ○ |
| Auto Power Off | | ○ | ○ |
| Measurement | | | |
| Manual Q-Setter | | ○ | ○ |
| Manual Q-Setter (Renishaw) | | ○ | ○ |
| Automatic Q-Setter (Renishaw) | | ○ | ○ |
| Work Close Confirmation Device (Only for Special Chuck) | TACO | ☆ | ☆ |
| | SMC | ☆ | ☆ |
| Auto Tool Measuring Device | | ☆ | ☆ |
| Linear Scale | X Axis | ○ | ○ |
| | Z Axis | ○ | ○ |
| Coolant Level Sensor (Only for Chip Conveyor, bladder Type) | | ☆ | ☆ |
| Environment | | | |
| Air Conditioner | | ○ | ○ |
| Oil Mist Collector | | ☆ | ☆ |
| Oil Skimmer (Only for Chip Conveyor) | | ○ | ○ |
| MQL (Minimal Quantity Lubrication) | | ☆ | ☆ |
| Fixture & Automation | | | |
| Auto Door | | ○ | ○ |
| Auto Shutter (Only for Automatic System) | | ☆ | ☆ |
| Sub Operation Pannel | | ☆ | ☆ |
| Bar Feeder Interface | | ○ | ○ |
| Bar Feeder (FEDEK) | | ☆ | ☆ |
| workpusher (Spring type) | | ○ | ○ |
| Extra M-Code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O Extension (IN & OUT) | 16 Contact | ○ | ○ |
| | 32 Contact | ○ | ○ |
| Parts Catcher | Main SP. | ○ | ○ |
| Turret Work Pusher (For Automation) | | ☆ | ☆ |
| Parts Conveyor (Required Main Parts Catcher) | | ☆ | ☆ |
| Semi Automation System | | ☆ | ☆ |
| Hyd. Device | | | |
| Standard Hyd. Cylinder | Hollow | ● | ● |
| Standard Hyd. Unit | 35bar (507.6 psi) /24 ℓ (6.3gal) | ● | ● |
| S/W | | | |
| Conversational program | SmartGuide-i | ● | ● |
| | HW-DPRO | ○ | ○ |
| Thermal Displacement Compensation (HW-TDC) | | ○ | ○ |
| Tool Monitoring (HW-TM) | | ○ | ○ |
| Machine Guidance (HW-MCG) | | ● | ● |
| Energy Saving System (HW-ESS) | | ● | ● |
| DNC software (HW-eDNC) | | ○ | ○ |
| Machine Monitoring System (HW-MMS) | | ○ | ○ |
| Thermal Displacement Compensation Device | | ○ | ○ |
| Premium Tool Operation | | ● | ● |
| Manual Viewer | | ● | ● |
| Scheduling | | ● | ● |
| Operation Memo | | ● | ● |
| ETC | | | |
| 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.

SPECIFICATIONS

Standard & Optional

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

| Spindle | | HD3100A | HD3100MA |
|----------------------------------------------------|--------------------------------|---------|----------|
| Main Spindle | 10" | ● | ● |
| Hollow Chuck 3 Jaw | 12" | ○ | ○ |
| Main Spindle | 10" | ○ | ○ |
| Solid Chuck 3 Jaw | 12" | - | - |
| 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 | | ○ | ○ |
| Turret | | | |
| Tool Holder | | ● | ● |
| Mill Turret | BMT | - | ● |
| Straight Milling Head (Axial) | Collet Type,2ea | - | ● |
| Angular Milling Head (Radial) | Collet Type,2ea | - | ● |
| Straight Milling Head (Axial) | Adapter Type | - | - |
| Angular Milling Head (Radial) | Adapter Type | - | - |
| Boring Sleeve | | ● | ● |
| Drill Socket | | ○ | ○ |
| U-Drill Holder | | ● | ● |
| O.D Extension Holder | For Out-Dia | ● | - |
| Angle Head | | - | - |
| Tail Stock & Steady Rest | | | |
| Quill Type Tail Stock | MT#4 | - | - |
| | MT#5 | ● | ● |
| Built-in Tail Stock | MT#4 | ○ | ○ |
| Programmable Tail Stock | | ○ | ○ |
| Manual Type Hyd. Steady Rest | | - | - |
| Standard Live Center | | ● | ● |
| High Precision Live Center | | ☆ | ☆ |
| 2 Steps Tail Stock Pressure System | | ○ | ○ |
| Quill Forward/Reverse Confirmation Device | | ○ | ○ |
| Tail Stock Foot Switch | | ○ | ○ |
| Coolant & Air Blow | | | |
| Standard Coolant (Nozzle) | | ● | ● |
| Chuck Coolant (Upper Chuck) | | ○ | ○ |
| Gun Coolant | | ○ | ○ |
| Through Spindle 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 | | ○ | ○ |
| Through Spindle Air Blow (Only for Special Chuck) | | ☆ | ☆ |
| High Pressure Coolant | 0.5Bar (7.3psi) | ● | ● |
| | 6Bar (87psi) | ○ | ○ |
| | 20Bar (290psi) | ○ | ○ |
| Power Coolant System (For Automation) | | ☆ | ☆ |
| Coolant Chiller (Only for Sub Tank, Chip Conveyor) | | - | - |
| Chip Disposal | | | |
| Coolant Tank | Side | ● | ● |
| | Rear | ○ | ○ |
| Chip Conveyor (Hinge/Scraper) | Front (Right) | ○ | ○ |
| | Rear (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 | | HD3100A | HD3100MA |
|-------------------------------------------------------------|----------------------------------|---------|----------|
| Total Splash Guard | | ● | ● |
| Electric Device | | | |
| Call Light | 1Color : ■ | ● | ● |
| Call Light | 2Color : ■ ■ | ○ | ○ |
| Call Light | 3Color : ■ ■ ■ | ○ | ○ |
| 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 | 30KVA | ○ | ○ |
| Auto Power Off | | ○ | ○ |
| Measurement | | | |
| Manual Q-Setter | | ○ | ○ |
| Manual Q-Setter (Renishaw) | | ○ | ○ |
| Automatic Q-Setter (Renishaw) | | ○ | ○ |
| Work Close Confirmation Device (Only for Special Chuck) | TACO | ☆ | ☆ |
| | SMC | ☆ | ☆ |
| Auto Tool Measuring Device | | ☆ | ☆ |
| Linear Scale | X Axis | ○ | ○ |
| | Z Axis | ○ | ○ |
| Coolant Level Sensor (Only for Chip Conveyor, bladder Type) | | ☆ | ☆ |
| Environment | | | |
| Air Conditioner | | ○ | ○ |
| Oil Mist Collector | | ☆ | ☆ |
| Oil Skimmer (Only for Chip Conveyor) | | ○ | ○ |
| MQL (Minimal Quantity Lubrication) | | ☆ | ☆ |
| Fixture & Automation | | | |
| Auto Door | | ○ | ○ |
| Auto Shutter (Only for Automatic System) | | ☆ | ☆ |
| Sub Operation Pannel | | ☆ | ☆ |
| Bar Feeder Interface | | ○ | ○ |
| Bar Feeder (FEDEK) | | ☆ | ☆ |
| workpusher (Spring type) | | ○ | ○ |
| Extra M-Code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O Extension (IN & OUT) | 16 Contact | ○ | ○ |
| | 32 Contact | ○ | ○ |
| Parts Catcher | Main SP. | ○ | ○ |
| Turret Work Pusher (For Automation) | | ☆ | ☆ |
| Parts Conveyor (Required Main Parts Catcher) | | ☆ | ☆ |
| Semi Automation System | | ☆ | ☆ |
| Hyd. Device | | | |
| Standard Hyd. Cylinder | Hollow | ● | ● |
| Standard Hyd. Unit | 35bar (507.6 psi) /30 ℓ (7.9gal) | ● | ● |
| S/W | | | |
| Conversational program | SmartGuide-i | ● | ● |
| | HW-DPRO | ○ | ○ |
| Thermal Displacement Compensation (HW-TDC) | | ○ | ○ |
| Tool Monitoring (HW-TM) | | ○ | ○ |
| Machine Guidance (HW-MCG) | | ● | ● |
| Energy Saving System (HW-ESS) | | ● | ● |
| DNC software (HW-eDNC) | | ○ | ○ |
| Machine Monitoring System (HW-MMS) | | ○ | ○ |
| Thermal Displacement Compensation Device | | ○ | ○ |
| Premium Tool Operation | | ● | ● |
| Manual Viewer | | ● | ● |
| Scheduling | | ● | ● |
| Operation Memo | | ● | ● |
| ETC | | | |
| 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.

SPECIFICATIONS

Standard & Optional

| Spindle | | HD3100/L | HD3100M/LM |
|----------------------------------------------------|--------------------------------|----------|------------|
| Main Spindle | 12" | ● | ● |
| Hollow Chuck 3 Jaw | 15" | - | - |
| Main Spindle | 12" | - | - |
| Solid Chuck 3 Jaw | 15" | - | - |
| 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 | | ○ | ○ |
| Turret | | | |
| Tool Holder | | ● | ● |
| Mill Turret | BMT | - | ● |
| Straight Milling Head (Axial) | Collet Type,2ea | - | ● |
| Angular Milling Head (Radial) | Collet Type,2ea | - | ● |
| Straight Milling Head (Axial) | Adapter Type | - | - |
| Angular Milling Head (Radial) | Adapter Type | - | - |
| Boring Sleeve | | ● | ● |
| Drill Socket | | ○ | ○ |
| U-Drill Holder | | ● | ● |
| O.D Extension Holder | For Out-Dia | ● | - |
| Angle Head | | - | - |
| Tail Stock & Steady Rest | | | |
| Quill Type Tail Stock | MT#4 | - | - |
| | MT#5 | ● | ● |
| Built-in Tail Stock | MT#4 | ○ | ○ |
| Programmable Tail Stock | | ○ | ○ |
| Manual Type Hyd. Steady Rest | | - | - |
| Standard Live Center | | ● | ● |
| High Precision Live Center | | ☆ | ☆ |
| 2 Steps Tail Stock Pressure System | | ○ | ○ |
| Quill Forward/Reverse Confirmation Device | | ○ | ○ |
| Tail Stock Foot Switch | | ○ | ○ |
| Coolant & Air Blow | | | |
| Standard Coolant (Nozzle) | | ● | ● |
| Chuck Coolant (Upper Chuck) | | ○ | ○ |
| Gun Coolant | | ○ | ○ |
| Through Spindle 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 | | ○ | ○ |
| Through Spindle Air Blow (Only for Special Chuck) | | ☆ | ☆ |
| High Pressure Coolant | 0.5Bar (7.3psi) | ● | ● |
| | 6Bar (87psi) | ○ | ○ |
| | 20Bar (290psi) | ○ | ○ |
| Power Coolant System (For Automation) | | ☆ | ☆ |
| Coolant Chiller (Only for Sub Tank, Chip Conveyor) | | - | - |
| Chip Disposal | | | |
| Coolant Tank | Side | ● | ● |
| | Rear | ○/- | ○/- |
| Chip Conveyor (Hinge/Scraper) | Front (Right) | ○ | ○ |
| | Rear (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 | ☆ | ☆ |

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

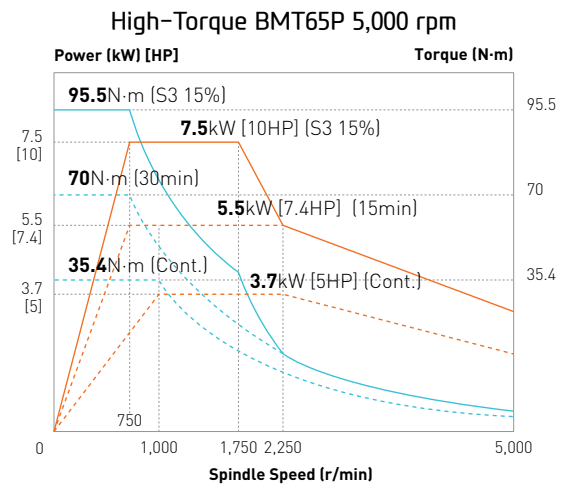
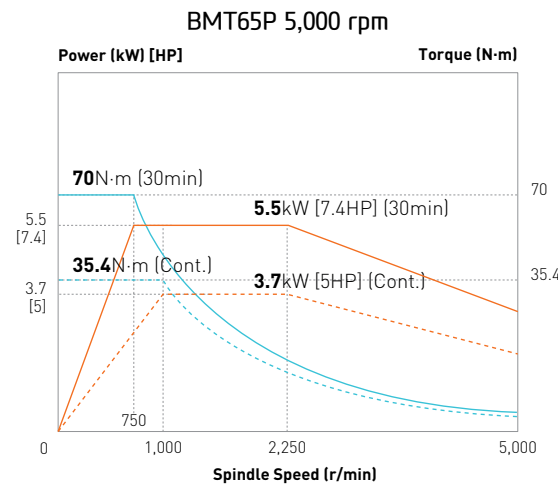
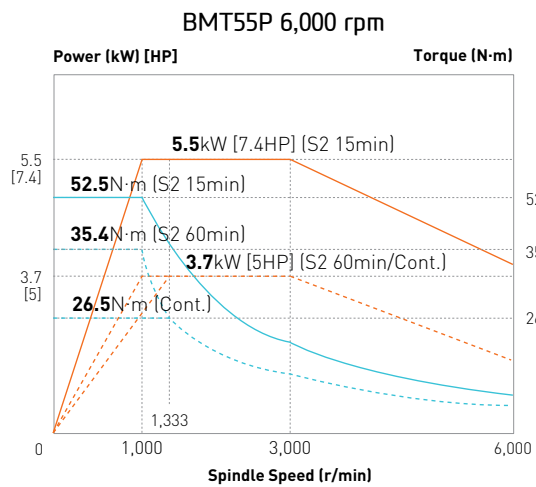
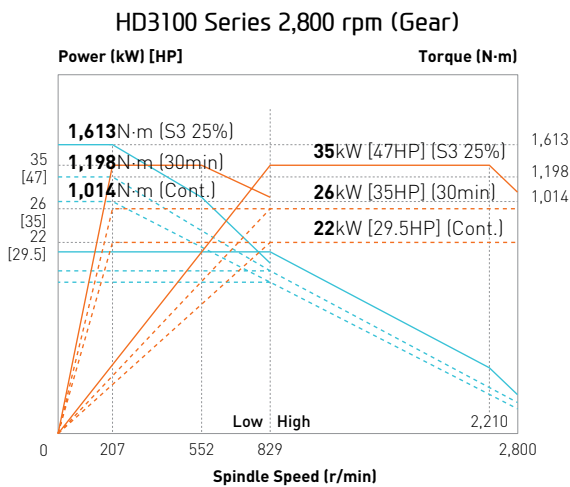
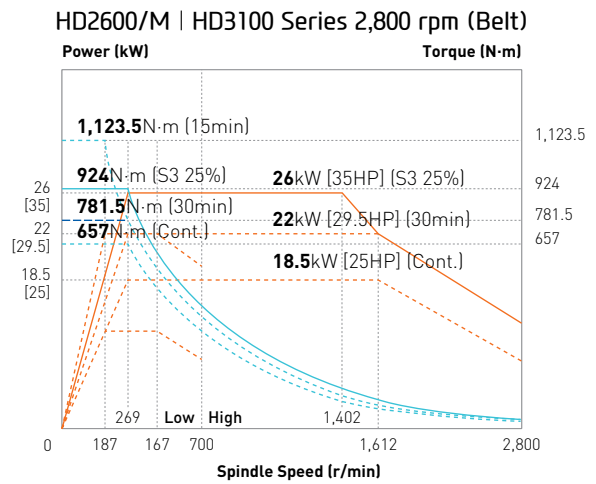
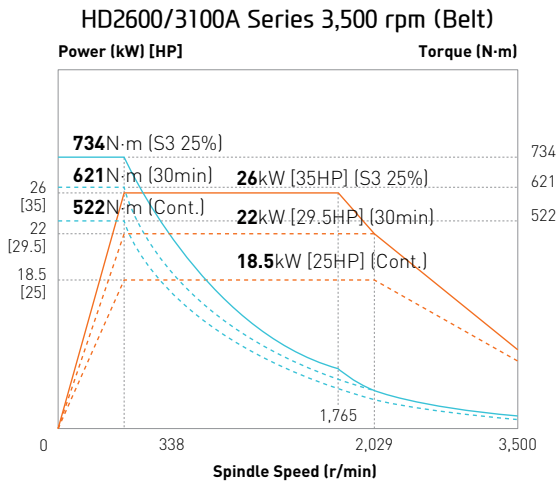
| Safety Device | | HD3100/L | HD3100M/LM |
|-------------------------------------------------------------|-------------------------------------|----------|------------|
| Total Splash Guard | | ● | ● |
| Electric Device | | | |
| Call Light | 1Color : ● | ● | ● |
| Call Light | 2Color : ● ● ● | ○ | ○ |
| Call Light | 3Color : ● ● ● ● | ○ | ○ |
| 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 | 30kVA (Belt) | ○ | ○ |
| | 35kVA (Gear) | ○ | ○ |
| Auto Power Off | | ○ | ○ |
| Measurement | | | |
| Manual Q-Setter | | ○ | ○ |
| Manual Q-Setter (Renishaw) | | ○ | ○ |
| Automatic Q-Setter (Renishaw) | | ○ | ○ |
| Work Close Confirmation Device (Only for Special Chuck) | TACO | ☆ | ☆ |
| | SMC | ☆ | ☆ |
| Auto Tool Measuring Device | | ☆ | ☆ |
| Linear Scale | X Axis | ○ | ○ |
| | Z Axis | ○ | ○ |
| Coolant Level Sensor (Only for Chip Conveyor, bladder Type) | | ☆ | ☆ |
| Environment | | | |
| Air Conditioner | | ○ | ○ |
| Oil Mist Collector | | ☆ | ☆ |
| Oil Skimmer (Only for Chip Conveyor) | | ○ | ○ |
| MQL (Minimal Quantity Lubrication) | | ☆ | ☆ |
| Fixture & Automation | | | |
| Auto Door | | ○ | ○ |
| Auto Shutter (Only for Automatic System) | | ☆ | ☆ |
| Sub Operation Panel | | ☆ | ☆ |
| Bar Feeder Interface | | ○ | ○ |
| Bar Feeder (FEDEK) | | ☆ | ☆ |
| workpusher (Spring type) | | ○ | ○ |
| Extra M-Code 4ea | | ○ | ○ |
| Automation Interface | | ☆ | ☆ |
| I/O Extension (IN & OUT) | 16 Contact | ○ | ○ |
| | 32 Contact | ○ | ○ |
| Parts Catcher | Main SP. | ○ | ○ |
| Turret Work Pusher (For Automation) | | ☆ | ☆ |
| Parts Conveyor (Required Main Parts Catcher) | | ☆ | ☆ |
| Semi Automation System | | ☆ | ☆ |
| Hyd. Device | | | |
| Standard Hyd. Cylinder | Hollow | ● | ● |
| Standard Hyd. Unit | 35bar (507.6 psi) /30 ℓ (7.9gal) | ● | ● |
| S/W | | | |
| Conversational program | SmartGuide-i HW-DPRO | ● | ● |
| Thermal Displacement Compensation (HW-TDC) | | ○ | ○ |
| Tool Monitoring (HW-TM) | | ○ | ○ |
| Machine Guidance (HW-MCG) | | ● | ● |
| Energy Saving System (HW-ESS) | | ● | ● |
| DNC software (HW-eDNC) | | ○ | ○ |
| Machine Monitoring System (HW-MMS) | | ○ | ○ |
| Thermal Displacement Compensation Device | | ○ | ○ |
| Premium Tool Operation | | ● | ● |
| Manual Viewer | | ● | ● |
| Scheduling | | ● | ● |
| Operation Memo | | ● | ● |
| ETC | | | |
| 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.

SPECIFICATIONS

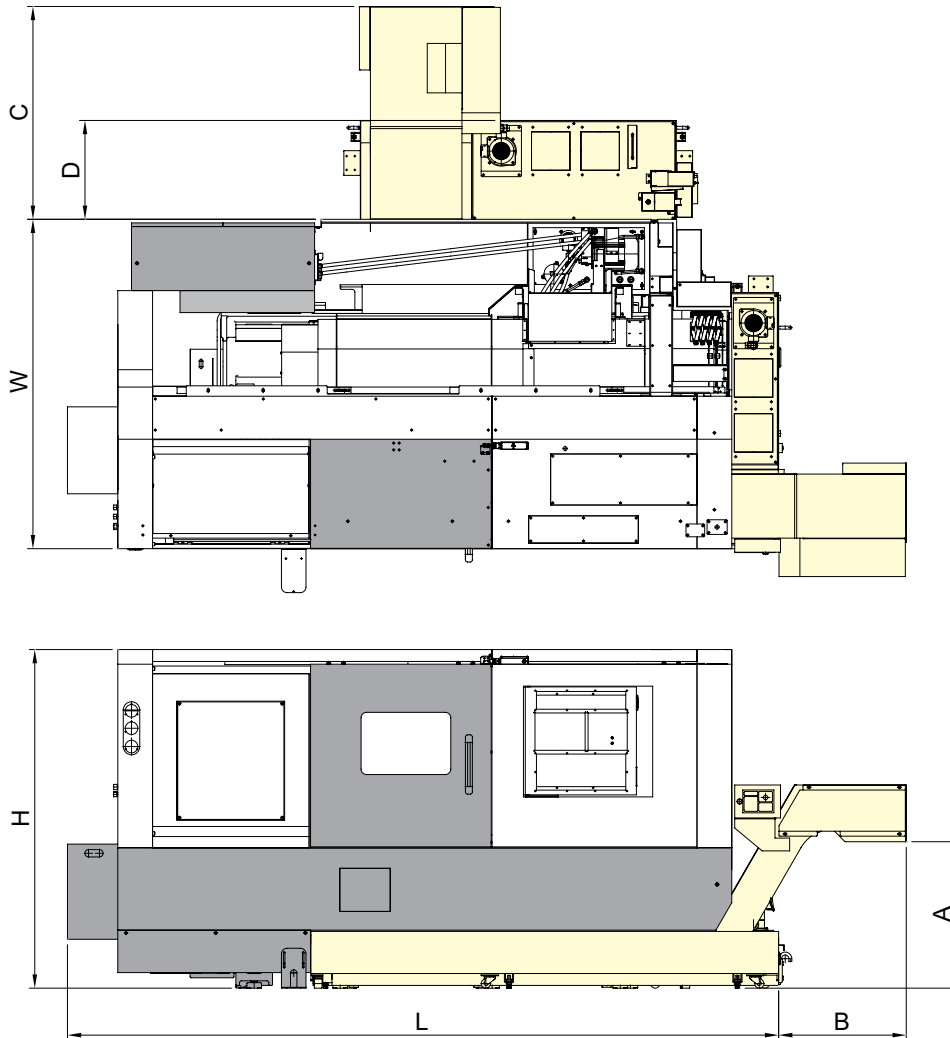
Spindle Output/Torque Diagram



SPECIFICATIONS

External Dimensions

unit : mm(in)



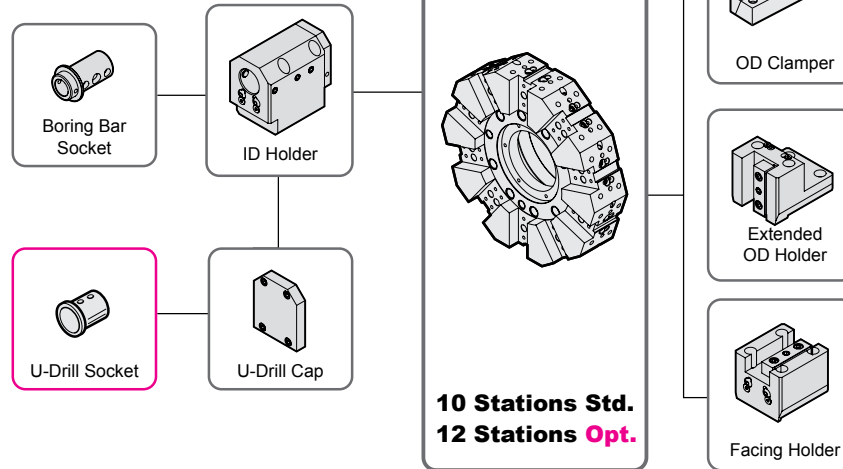
| Dimension | | HD2600 | HD2600M | HD3100A | HD3100MA | HD3100 | HD3100M | HD3100L | HD3100LM |
|----------------------------|---|-------------------------------------|---------|---------------|----------------|--------|---------|----------------|----------|
| Length | L | 3,400 (133.9") | | 3,885 (153") | | | | 4,405 (173.4") | |
| Length (Gear Spindle Opt.) | | - | | - | 4,045 (159.2") | - | | 4,565 (179.7") | - |
| Width | W | 1,708 (67.2") | | 1,800 (70.9") | | | | 1,978 (77.9") | |
| Height | H | 1,755 (69.1") | | 1,850 (72.8") | | | | | |
| Conveyor height | A | 1,200 (47.2") or 850 (33.5") [Opt.] | | | | | | | |
| Side type chip conveyor | B | 1,120 (44.1") | | 900 (35.4") | | | | 980 (38.6") | |
| Rear type chip conveyor | C | 1,210 (47.6") | | 1,120 (44.1") | | | | - | |
| Rear tank | D | 630 (24.8") | | 540 (21.3") | | | | - | |

SPECIFICATIONS

Tooling System

unit : mm(in)

□ Option



Tooling Parts Detail

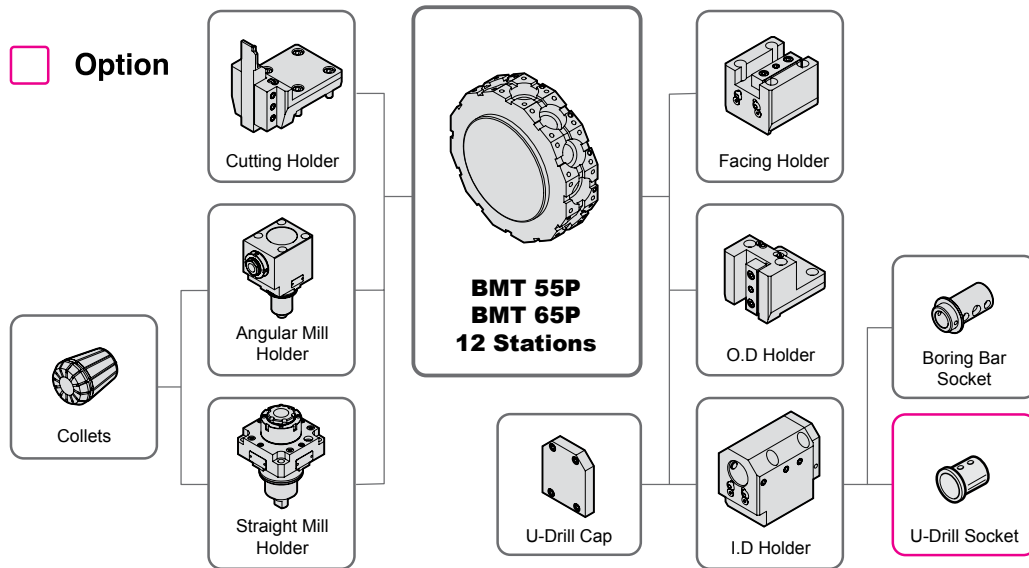
| ITEM | | | HD2600 | | HD3100A | | HD3100 | | HD3100L | |
|----------------|----------------------|---------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| | | | mm Unit | inch Unit | mm Unit | inch Unit | mm Unit | inch Unit | mm Unit | inch Unit |
| Turning Holder | O.D Holder | Right/Left | - | - | - | - | - | - | - | - |
| | | Extension | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Facing Holder | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Boring Holder | I.D Holder | Single | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | U-Drill Holder | Cap | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Driven Holder | Straight Mill Holder | Standard | - | - | - | - | - | - | - | - |
| | | TTC | - | - | - | - | - | - | - | - |
| | Angular Mill Holder | Standard | - | - | - | - | - | - | - | - |
| TTC | | - | - | - | - | - | - | - | - | |
| Socket | Boring | Ø12 (Ø1/2") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø16 (Ø5/8") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø20 (Ø3/4") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø25 (Ø1") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø32 (Ø1 1/4") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø40 (Ø1 1/2") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Drill | MT 1 x MT 2 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 2 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 3 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 4 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | ER Collet | | - | - | - | - | - | - | - | - |

Specifications are subject to change without notice for improvement. (HD3100 Series - I.D. Tool Holder Single/U-drill <Combined Use>)

SPECIFICATIONS

Tooling System

unit : mm(in)



Tooling Parts Detail

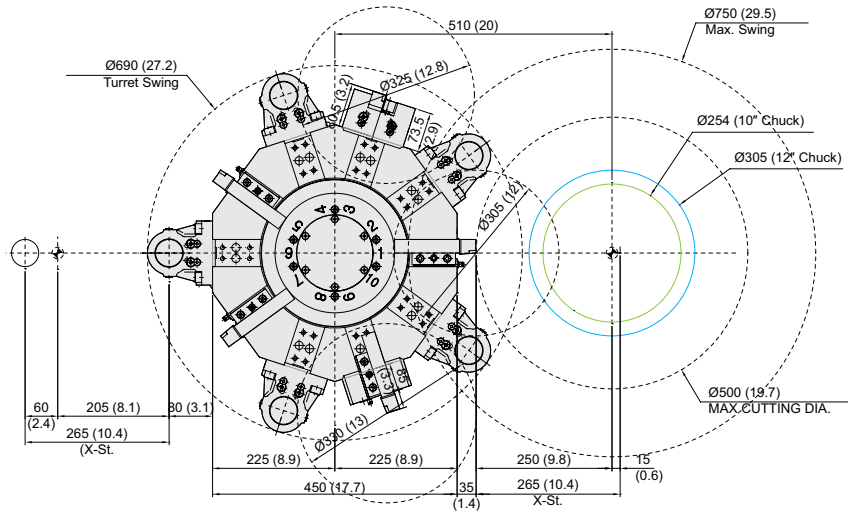
| ITEM | | | HD2600M | | HD3100MA | | HD3100M | | HD3100LM | |
|----------------|----------------------|---------------|---------|-----------|----------|-----------|---------|-----------|----------|-----------|
| | | | mm Unit | inch Unit | mm Unit | inch Unit | mm Unit | inch Unit | mm Unit | inch Unit |
| Turning Holder | O.D Holder | Right/Left | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | Cutting Holder | | - | - | - | - | - | - | - | - |
| | Facing Holder | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Boring Holder | I.D Holder | Single | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | U-Drill | Cap | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Driven Holder | Straight Mill Holder | Standard | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | TTC | - | - | - | - | - | - | - | - |
| | Angular Mill Holder | Standard | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | TTC | - | - | - | - | - | - | - | - |
| Socket | Boring | Ø10 (Ø3/8") | 1 | 1 | - | - | - | - | - | - |
| | | Ø12 (Ø1/2") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø16 (Ø5/8") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø20 (Ø3/4") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø25 (Ø1") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø32 (Ø1 1/4") | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Ø40 (Ø1 1/2") | - | - | 1 | 1 | 1 | 1 | 1 | 1 |
| | Drill | MT 1 x MT 2 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 2 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 3 | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | | MT 4 | - | - | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |
| | ER Collet | | 1 Set | 1 Set | 1 Set | 1 Set | 1 Set | 1 Set | 1 Set | 1 Set |
| | Adapter Set | | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. | Opt. |

SPECIFICATIONS

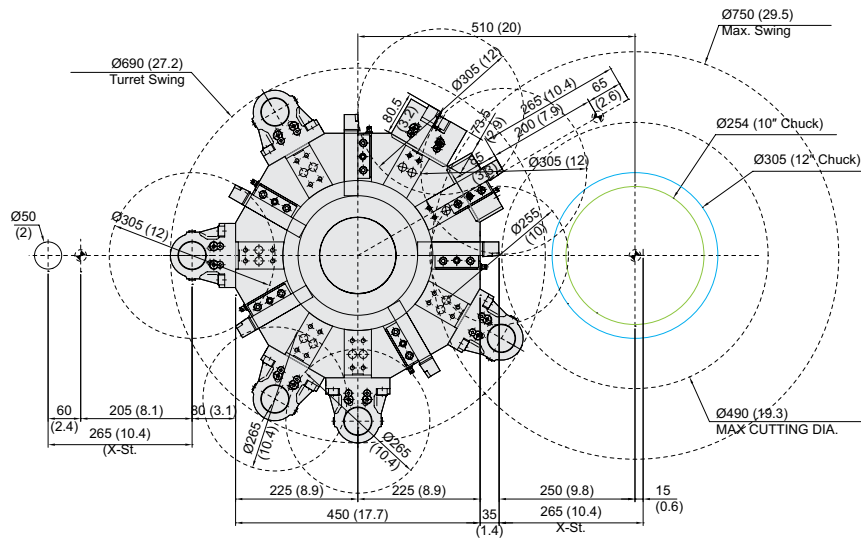
Interference

unit : mm(in)

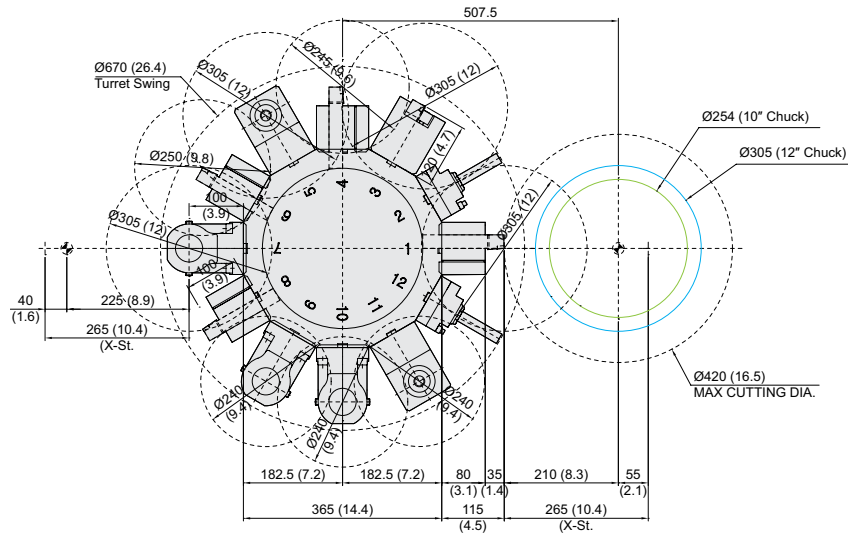
**(10 Station)
HD3100A
HD3100/L**



**(12 Station)
HD3100A
HD3100/L**



**HD3100MA
HD3100M/LM**



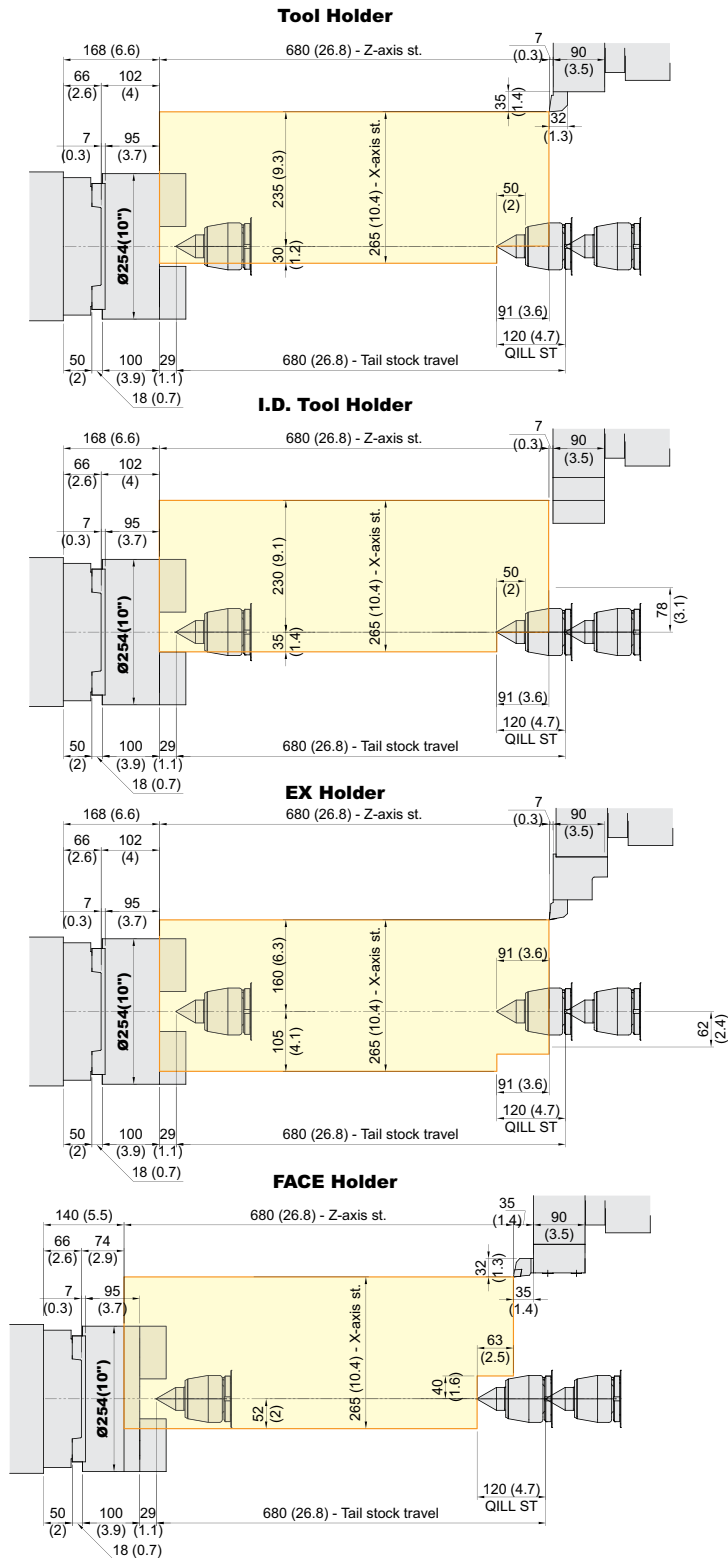
If the tool is positioned differently than the above tooling drawings, the application of the OD Extension holder may interfere with the chuck.

SPECIFICATIONS

Tooling Travel Range

unit : mm(in)

HD2600



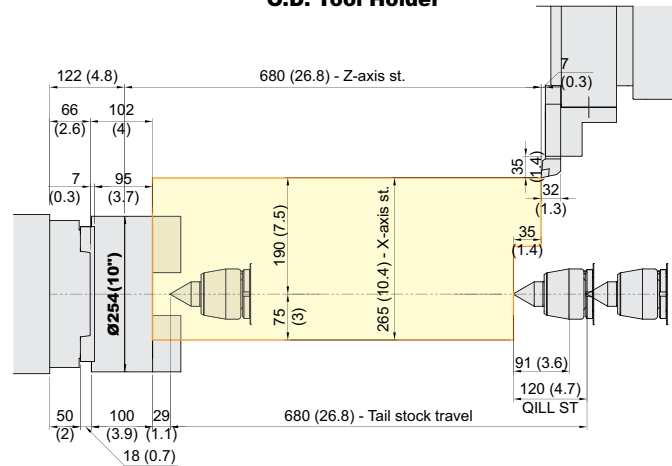
SPECIFICATIONS

Tooling Travel Range

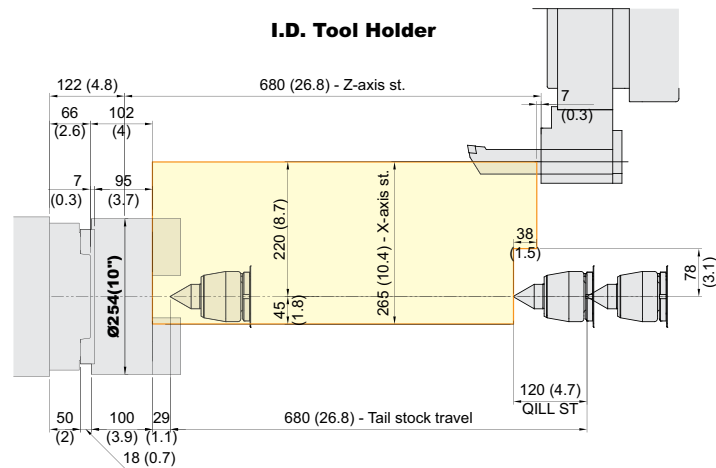
unit : mm(in)

HD2600M

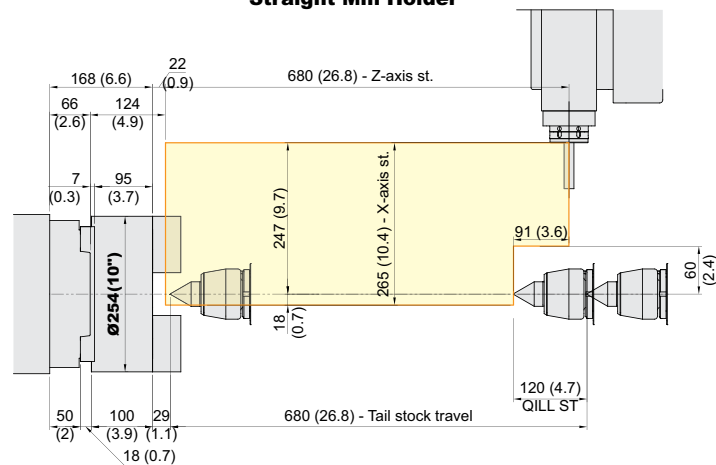
O.D. Tool Holder



I.D. Tool Holder



Straight Mill Holder



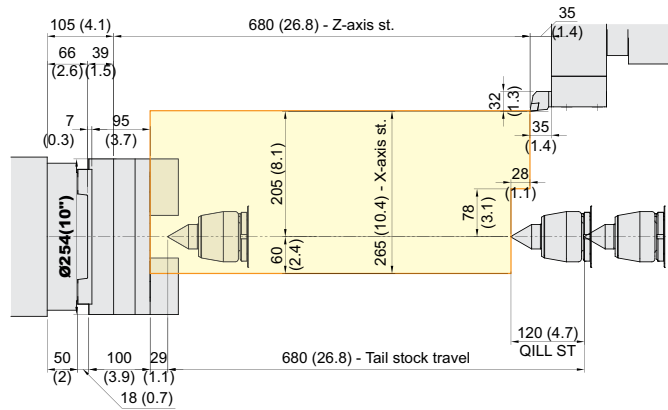
SPECIFICATIONS

Tooling Travel Range

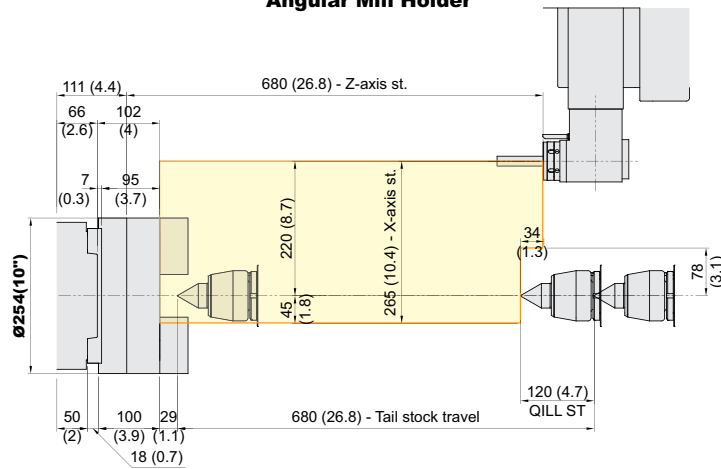
unit : mm(in)

HD2600M

FACE Holder



Angular Mill Holder



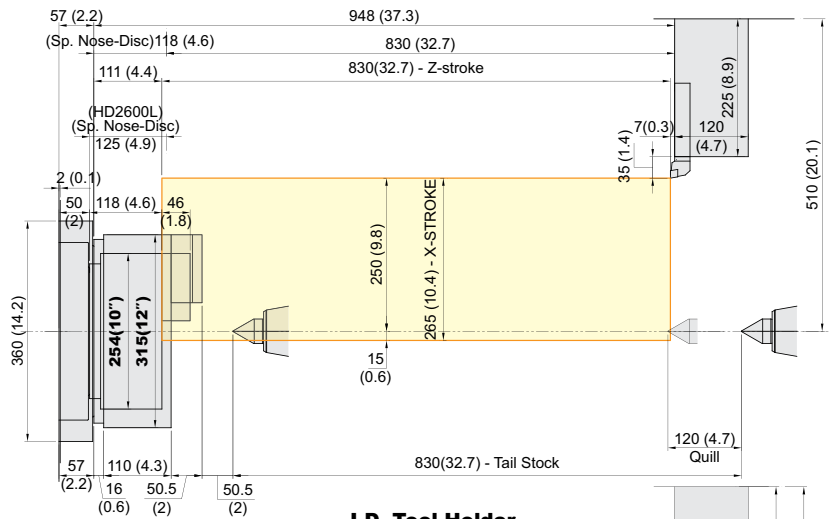
SPECIFICATIONS

Tooling Travel Range

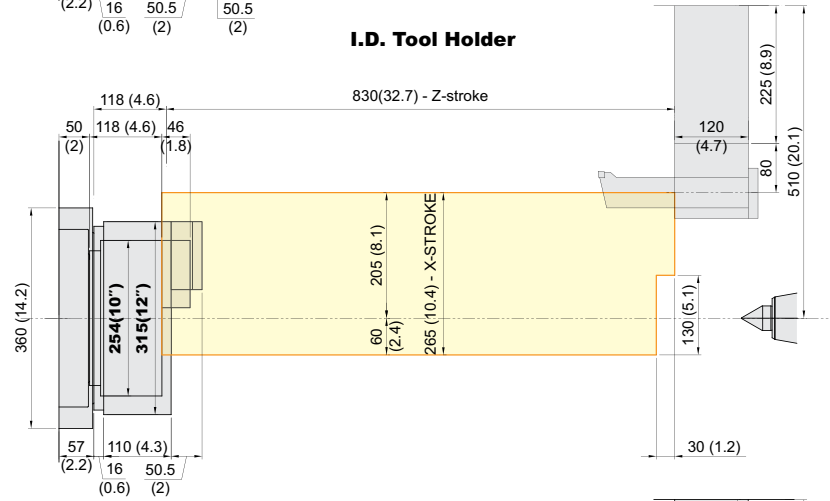
unit : mm(in)

HD3100A | HD3100

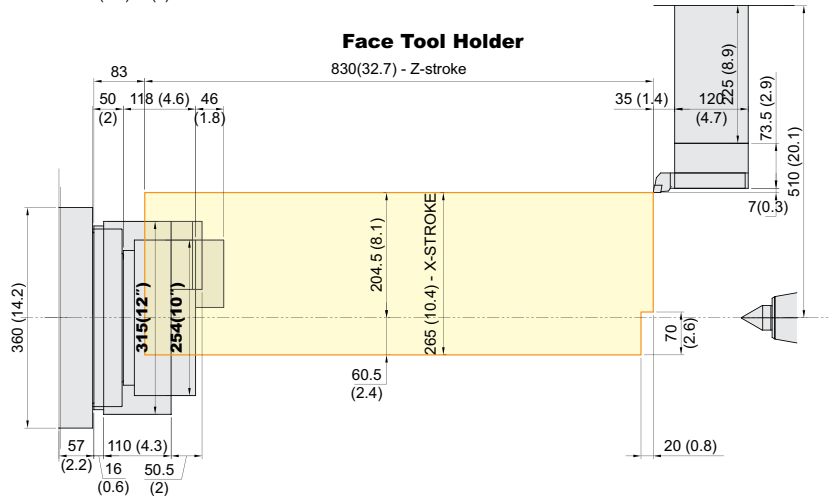
O.D. Tool Holder



I.D. Tool Holder



Face Tool Holder



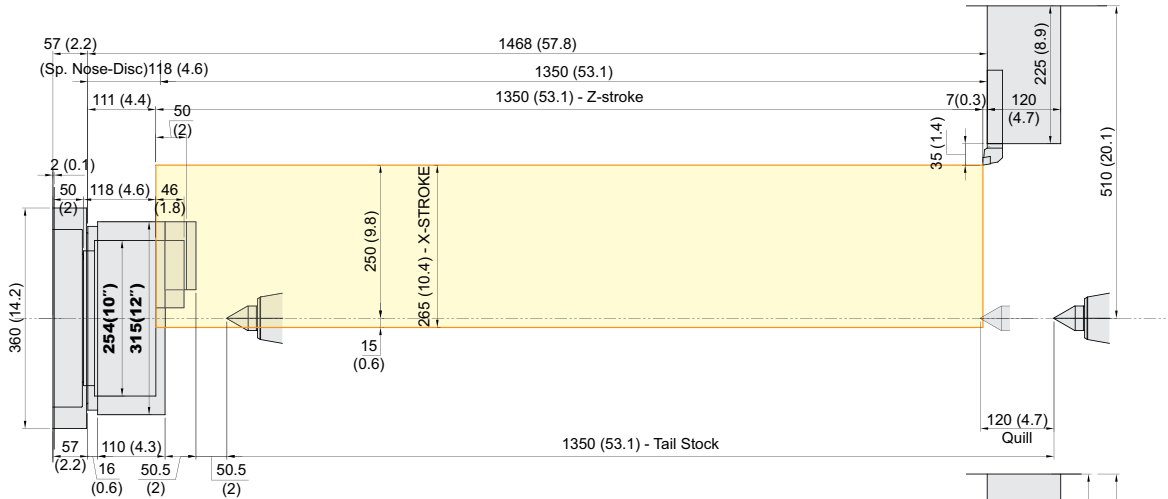
SPECIFICATIONS

Tooling Travel Range

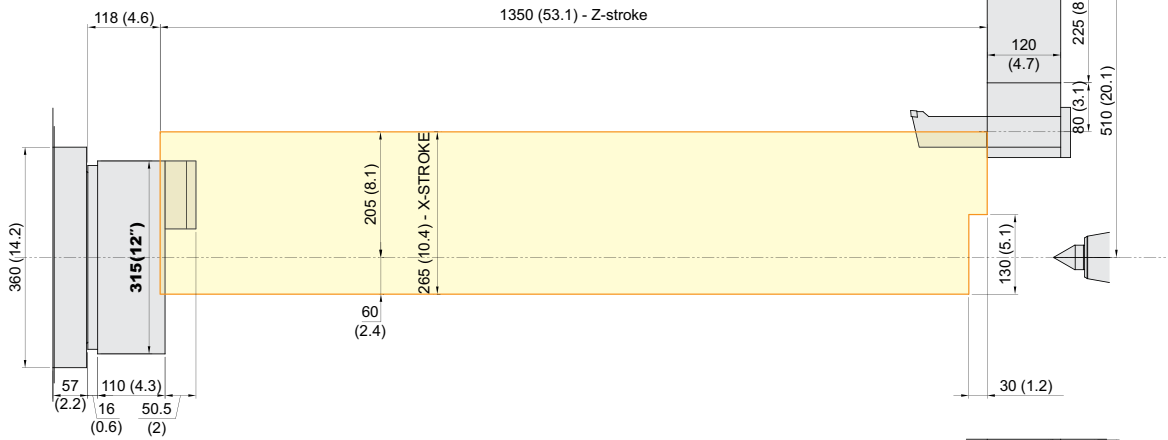
unit : mm(in)

HD3100L

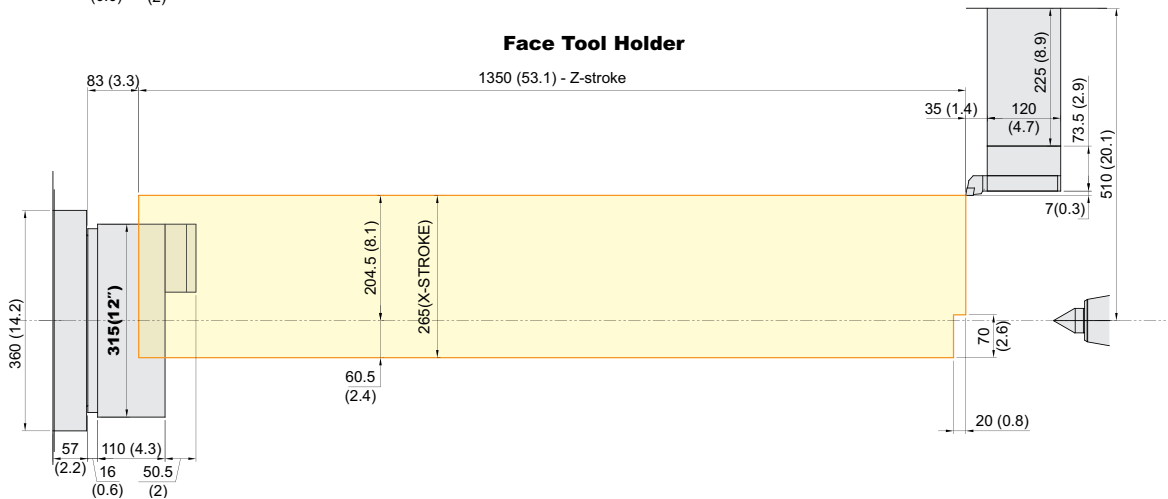
O.D. Tool Holder



I.D. Tool Holder



Face Tool Holder



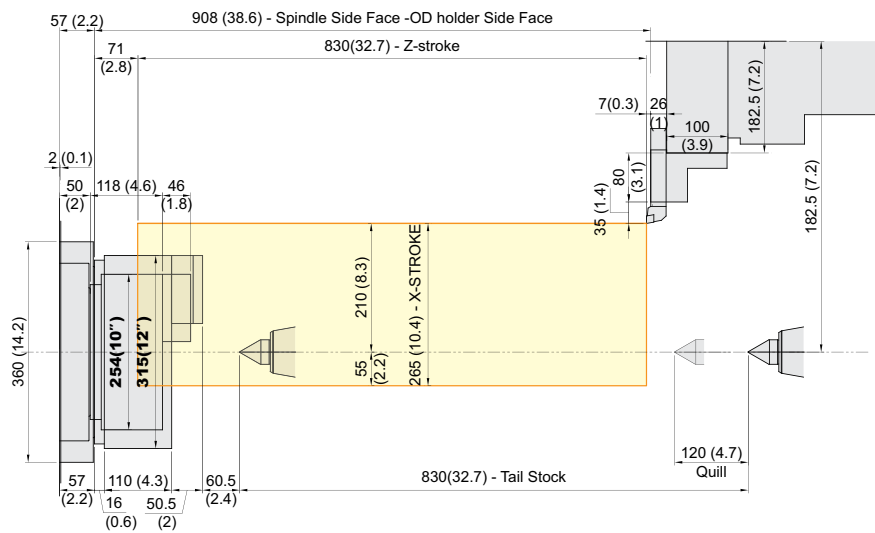
SPECIFICATIONS

Tooling Travel Range

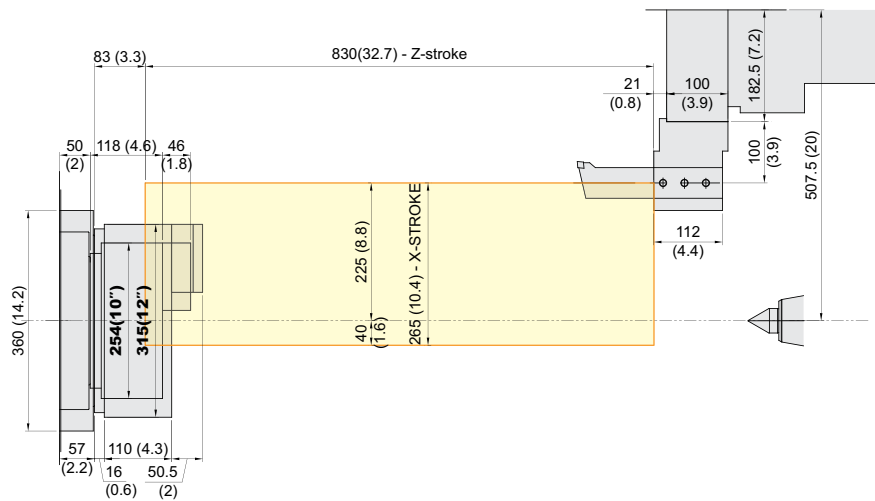
unit : mm(in)

HD3100MA | HD3100M

O.D. Tool Holder



I.D. Tool Holder



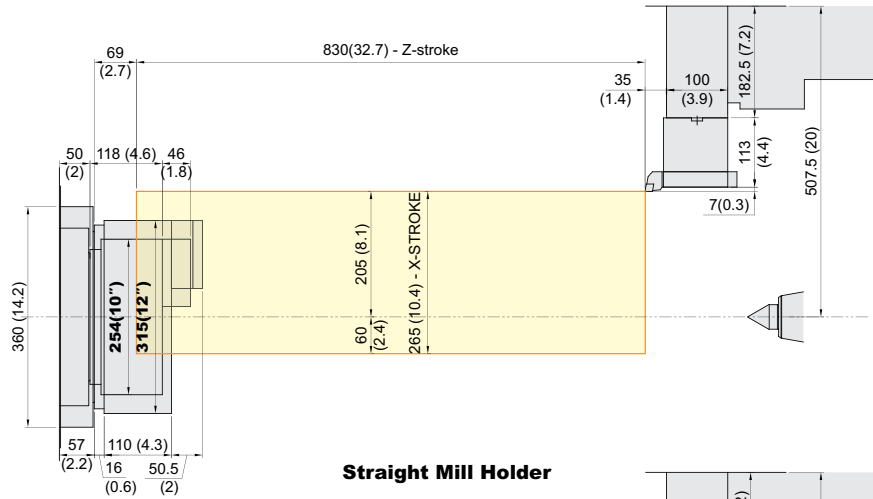
SPECIFICATIONS

Tooling Travel Range

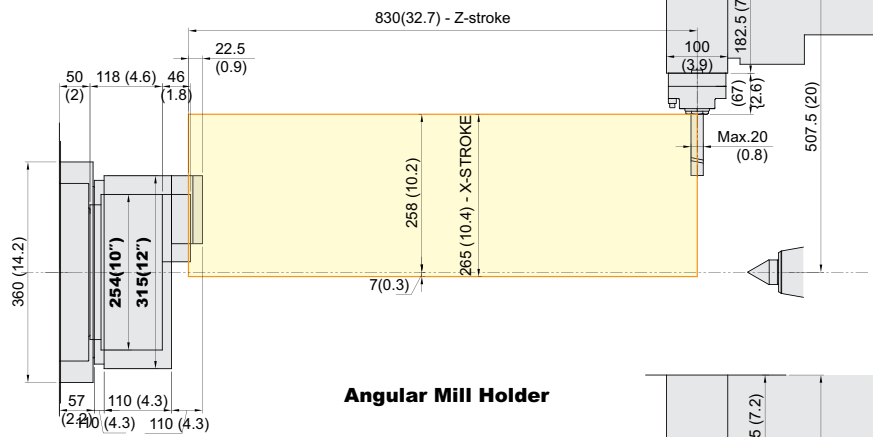
unit : mm(in)

HD3100MA | HD3100M

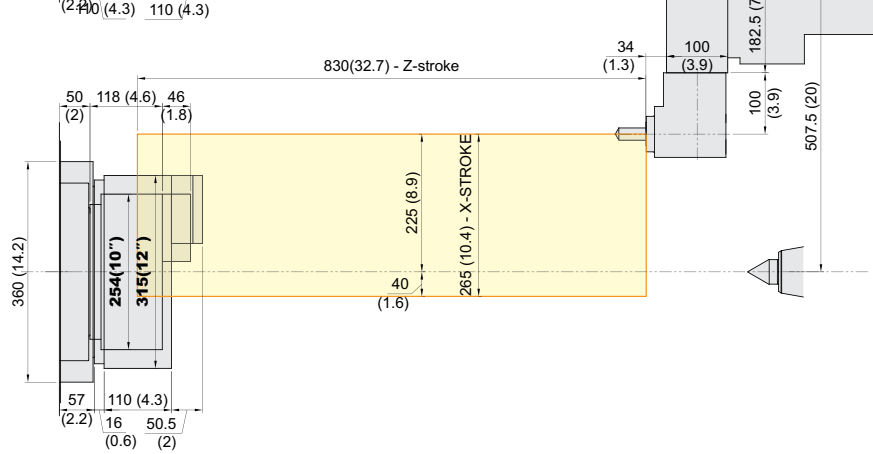
Face Tool Holder



Straight Mill Holder



Angular Mill Holder



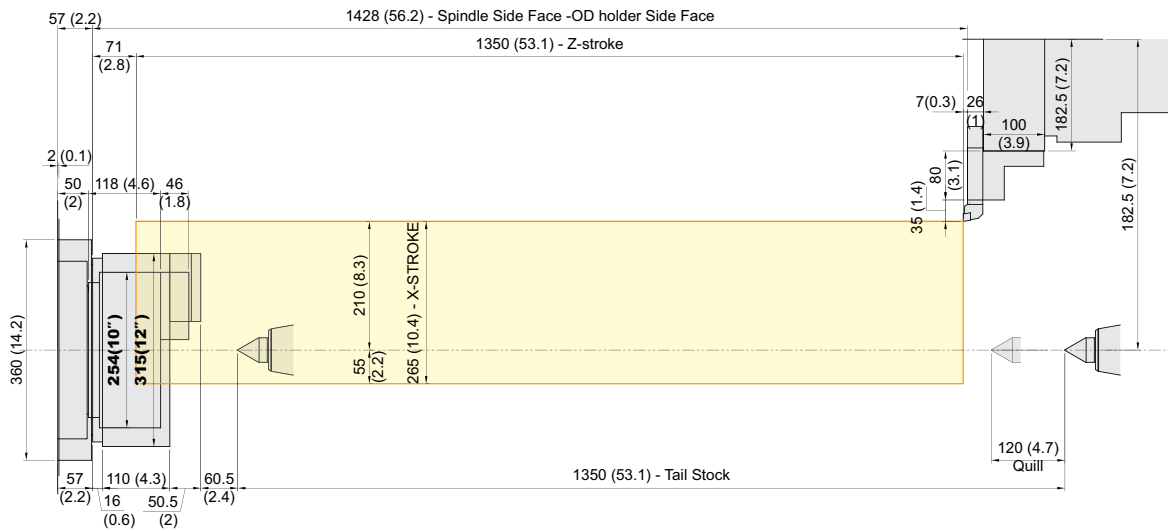
SPECIFICATIONS

Tooling Travel Range

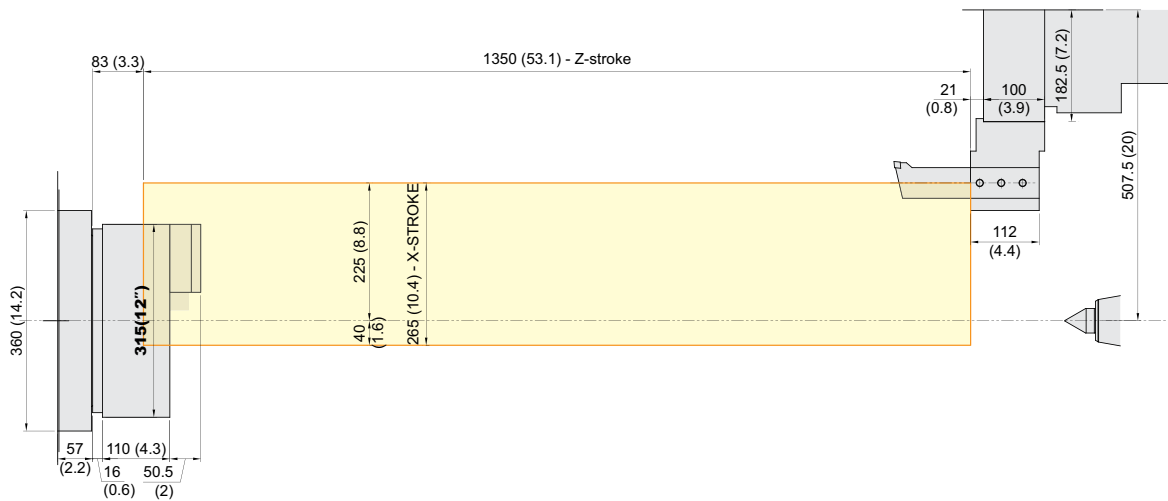
unit : mm(in)

HD3100LM

O.D. Tool Holder



I.D. Tool Holder



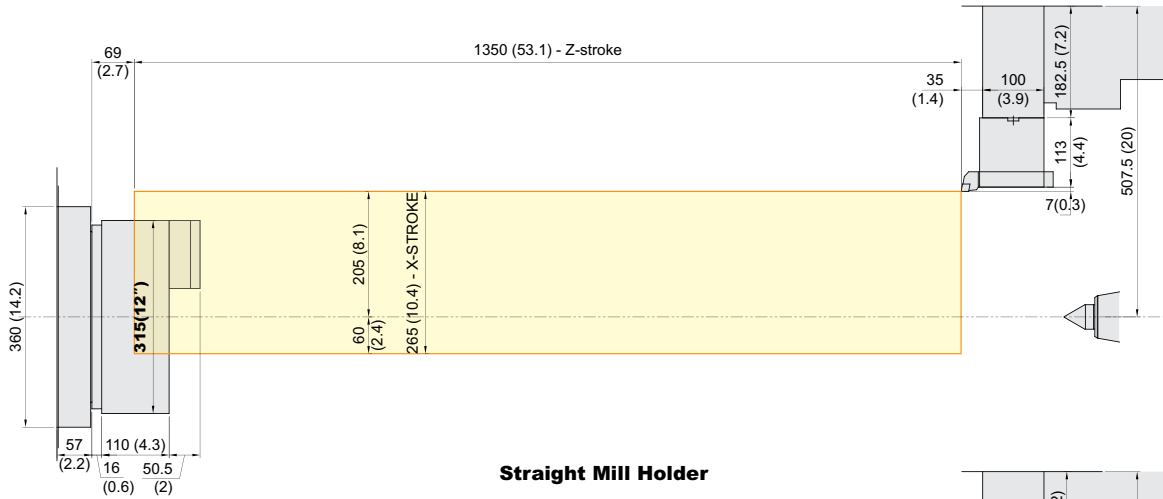
SPECIFICATIONS

Tooling Travel Range

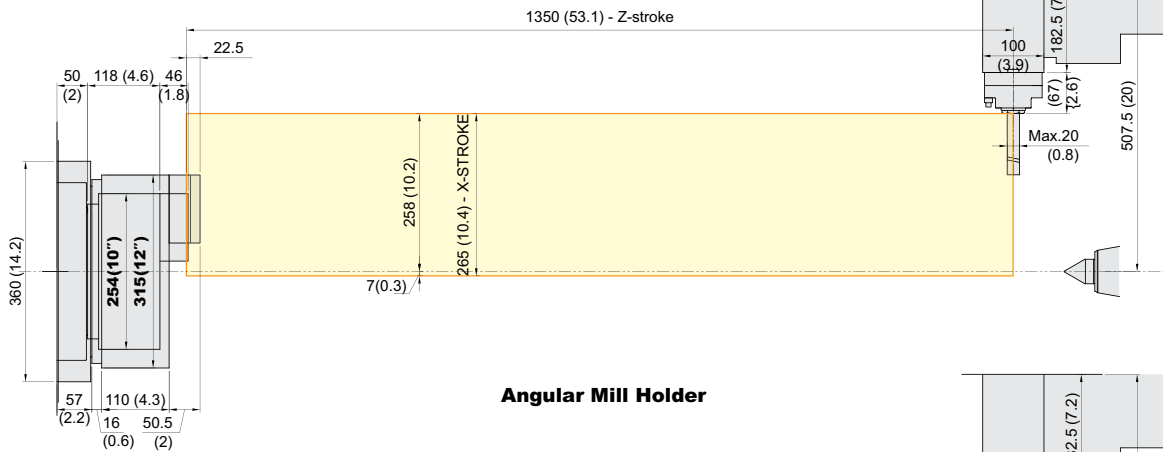
unit : mm(in)

HD3100LM

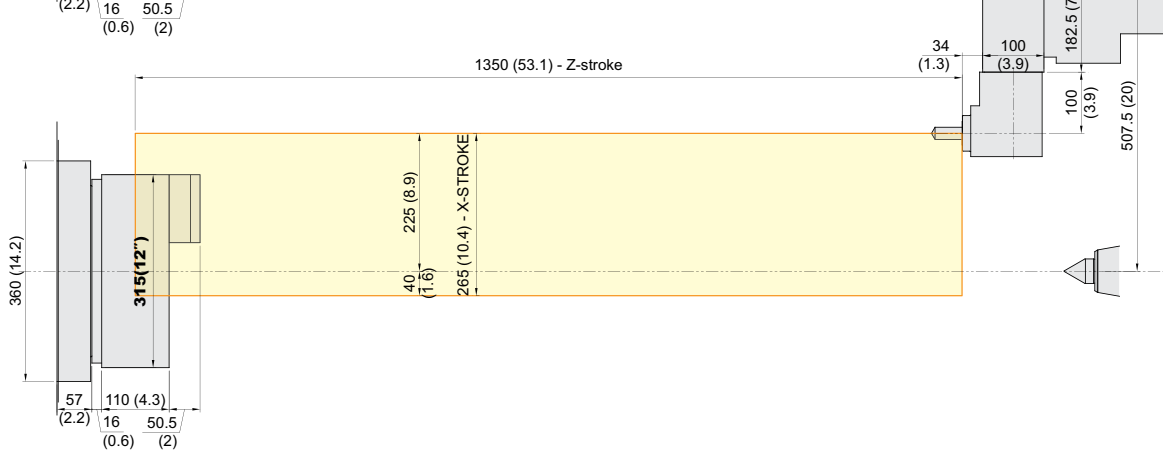
Face Tool Holder



Straight Mill Holder



Angular Mill Holder



SPECIFICATIONS

Specifications

[] : Option

| MODEL | | HD2600 | HD2600M | HD3100A | HD3100MA | |
|---------------|---------------------------|------------|-----------------------------------------|------------------|--------------------------|-------------------------------------|
| CAPACITY | Swing Over the Bed | mm(in) | Ø630 (24.8") | | Ø750 (29.5") | |
| | Swing Over the Carriage | mm(in) | Ø460 (18.1") | | Ø500 (19.7") | |
| | Max. Turning Dia. | mm(in) | Ø460 (18.1") | Ø380 (15") | Ø500 (19.7") | Ø420 (16.5") |
| | Max. Turning Length | mm(in) | 659 (25.9") | 613 (24.1") | 780 (30.7") | 740 (29.1) |
| | Bar Capacity | mm(in) | Ø81 (3.2") | | | |
| SPINDLE | Chuck Size | inch | 10" [12"] | 10" | | |
| | Spindle Bore | mm(in) | Ø91 (3.6") | | | |
| | Spindle Speed (rpm) | r/min | 3,500 [2,800] | | 3,500 | |
| | Motor (Max/Cont.) | kW(HP) | 26/18.5 (35/25) | | | |
| | Torque (Max/Cont.) | N·m | 734/522 [1,123/657] | | 734/522 | |
| | Spindle Type | - | BELT | | | |
| | Spindle Nose | - | A2-8 | | | |
| | C-axis Indexing | deg | - | 0.001° | - | 0.001° |
| FEED | Travel (X/Z) | mm(in) | 265/680 (10.4"/26.8") | | 265/830 (10.4"/32.7") | |
| | Rapid Traverse Rate (X/Z) | m/min(ipm) | 24/30 (945/1,181) | | | |
| | Slide Type | - | BOX GUIDE | | | |
| TURRET | No. of Tools | ea | 10 [12] | 12 | 10 [12] | 12 |
| | Tool Size | OD | □ 25 (□ 1") | | | |
| | | ID | mm(in) | Ø50 (Ø2") | Ø40 (Ø1.6") | Ø50 (Ø2") |
| | Indexing Time | sec | 0.15 | | | |
| LIVE TOOL | Motor (Max/Cont.) | kW(HP) | - | 5.5/3.7 (7.4/5) | - | 5.5/3.7 (7.4/5) [7.5/3.7 (10/5)] |
| | Milling Tool Speed (rpm) | r/min | - | 6,000 | - | 5,000 [5,000] |
| | Torque (Max/Cont.) | N·m | - | 52.5/26.5 | - | 70/35.4 [95.5/35.4] |
| | Collet Size | mm(in) | - | Ø16 (0.6")(ER25) | - | Ø25 (1")(ER32) |
| | Type | - | - | BMT55P | - | BMT65P |
| TAIL STOCK | Taper | - | MT#5 [BUILT-IN TAIL STOCK : MT#4] | | | |
| | Quill Dia. | mm(in) | Ø100 (3.9) | | | |
| | Quill Travel | mm(in) | 120 (4.7") | | | |
| | Travel | mm(in) | 680 (26.8") | | 830 (32.7") | |
| TANK CAPACITY | Coolant Tank | ℓ (gal) | 180 (47.6) | | 200 (52.8) | |
| | Lubricating Tank | ℓ (gal) | 1.8 (0.5) | | | |
| POWER SUPPLY | Electric Power Supply | kVA | 27 | | | |
| | Thickness of Power Cable | Sq | Over 16 | | | |
| | Voltage | V/Hz | 220/60 (200/50) | | | |
| MACHINE | Floor Space (L×W) | mm(in) | 3,400×1,708 (133.9"×37.2") | | 3,885×1,800 (153"×70.9") | |
| | Height | mm(in) | 1,755 (69.1") | | 1,850 (72.8") | |
| | Weight | kg(lb) | 5,800 (12,787) | 5,850 (12,897) | 5,950 (13,116) | 6,000 (13,228) |
| PC | Controller | - | HYUNDAI WIA FANUC i Series – SMART PLUS | | | |

SPECIFICATIONS

Specifications

[] : Option

| MODEL | | HD3100 | HD3100L | HD3100M | HD3100LM | |
|---------------|---------------------------|------------|-----------------------------------------|-------------------------------|----------------------------------|-------------------------------|
| CAPACITY | Swing Over the Bed | mm(in) | Ø750 (29.5") | | | |
| | Swing Over the Carriage | mm(in) | Ø500 (19.7") | | | |
| | Max. Turning Dia. | mm(in) | Ø500 (19.7") | | Ø420 (16.5") | |
| | Max. Turning Length | mm(in) | 780 (30.7") | 1,300 (51.2") | 740 (29.1") | 1,260 (49.6") |
| | Bar Capacity | mm(in) | Ø102 (4") | | | |
| SPINDLE | Chuck Size | inch | 12" | | | |
| | Spindle Bore | mm(in) | Ø115 (4.5") | | | |
| | Spindle Speed (rpm) | r/min | 2,800 [2,800] | | | |
| | Motor (Max/Cont.) | kW(HP) | 26/18.5 (35/25) [35/22 (47/29.5)] | | | |
| | Torque (Max/Cont.) | N·m | 1,123/657 [1,613/1,014] | | | |
| | Spindle Type | - | BELT [GEAR] | | BELT | |
| | Spindle Nose | - | A2-11 | | | |
| | C-axis Indexing | deg | - | | 0.001° | |
| FEED | Travel (X/Z) | mm(in) | 265/830 (10.4"/32.7") | 265/1,350 (10.4"/53.1") | 265/830 (10.4"/32.7") | 265/1,350 (10.4"/53.1") |
| | Rapid Traverse Rate (X/Z) | m/min(ipm) | 24/30 (945/1,181) | | | |
| | Slide Type | - | BOX GUIDE | | | |
| TURRET | No. of Tools | ea | 10 [12] | | 12 | |
| | Tool Size | OD | □ 25 (□ 1") | | | |
| | | ID | Ø50 (Ø2") | | | |
| | Indexing Time | sec | 0.15 | | | |
| LIVE TOOL | Motor (Max/Cont.) | kW(HP) | - | | 5.5/3.7 (7.4/5) [7.5/3.7 (10/5)] | |
| | Milling Tool Speed (rpm) | r/min | - | | 5,000 [5,000] | |
| | Torque (Max/Cont.) | N·m | - | | 70/35.4 [95.5/35.4] | |
| | Collet Size | mm(in) | - | | Ø25 (1") (ER32) | |
| | Type | - | - | | BMT65P | |
| TAIL STOCK | Taper | - | MT#5 | | | |
| | Quill Dia. | mm(in) | Ø100 (3.9") | | | |
| | Quill Travel | mm(in) | 120 (4.7") | | | |
| | Travel | mm(in) | 830 (32.7") | 1,350 (53.1") | 830 (32.7") | 1,350 (53.1") |
| TANK CAPACITY | Coolant Tank | ℓ (gal) | 200 (52.8) | 220 (58.1) | 200 (52.8) | 220 (58.1) |
| | Lubricating Tank | ℓ (gal) | 1.8 (0.5) | | | |
| POWER SUPPLY | Electric Power Supply | kVA | Belt : 27 [Gear : 30] | | | |
| | Thickness of Power Cable | sq | Over 16 | | | |
| | Voltage | V/Hz | 220/60 (200/50) | | | |
| MACHINE | Floor Space (L×W) | mm(in) | 3,885×1,800 (153"×70.9") | 4,405×1,978 (173.4"×77.9") | 3,885×1,800 (153"×70.9") | 4,405×1,978 (173.4"×77.9") |
| | Height | mm(in) | 1,850 (72.8") | | | |
| | Weight | kg(lb) | 6,000 (13,228) | 7,200 (15,873) | 6,050 (13,338) | 7,250 (15,984) |
| PC | Controller | - | HYUNDAI WIA FANUC i Series - SMART PLUS | | | |

* Prior consultation is required when applying spindle contouring control for gear driven spindle.
Specifications are subject to change without notice for improvement.

CONTROLLER

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) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A) 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) C, A axes : 0.001 deg |
| Least input increment | X, Z, Y, B axes : 0.001 mm (0.0001 inch) 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 | |
| Pano 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 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 Jog : 0~2,000 mm/min (79 ipm) Manual handle : x1, x10, x100 pulses 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 | 1 ea |
| Absolute / Incremental program | G90 / G91 |
| 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##) |
| FSSB 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 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 | |
| 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 | 200 pairs |
| Helical interpolation | |
| Optional block skip | 40 ea, 200 ea (AICC II) |

Figures in inch are converted from metric values.

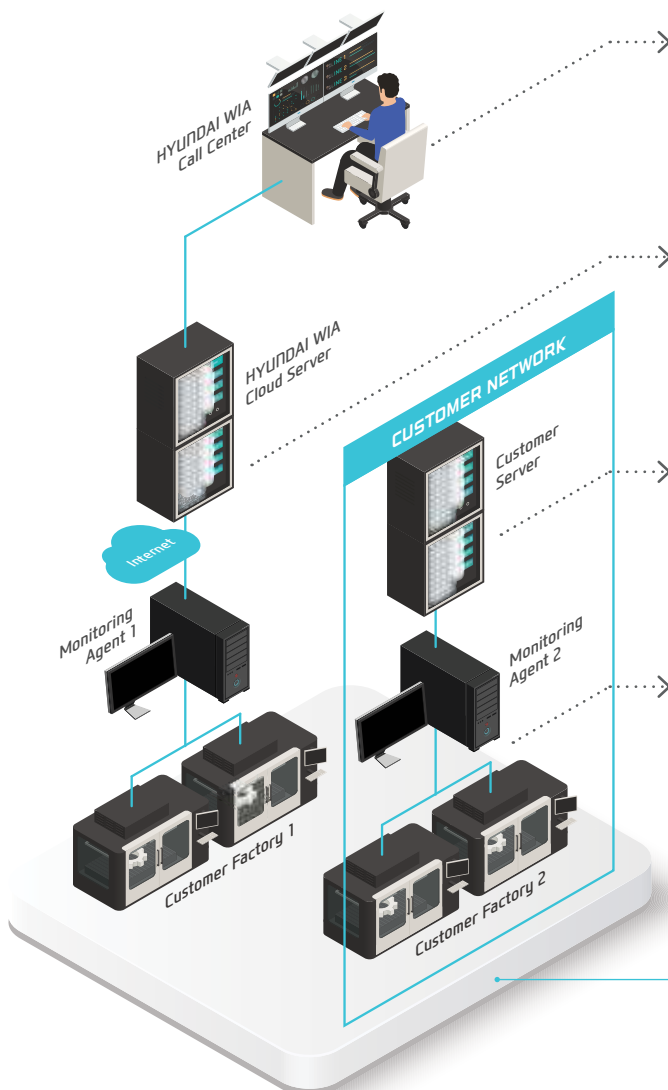
The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

HW-MMS

HYUNDAI WIA Machine Monitoring System



A brand new manufacturing machine by Hyundai Wia, HW-MMS is a unique software capable of monitoring the operation status of manufacturing machines in factories, a smart solution to improve manufacturing conditions of customers.



HW-MMS Remote

Hyundai Wia Call Center's remote diagnosis service provides a HMI/video diagnostic function.



HW-MMS Cloud

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



HW-MMS Edge

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



HW-MMS PT

This is a facility big data-based smart factory solution that collects and analyzes changes in spindle/feed data and NC processing files

HYUNDAI WIA
Smart Factory Solution



You  HYUNDAI WIA MT

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