HD2200 Series

HYUNDAI WIA CNC Turning Center

HYUNDAI WIA

Technical Leader

The CNC Turning Center **HD2200 Series**, designed by Hyundai WIA with years of expertise and the latest technology, is a Turning Center that maximizes productivity and performance.

HD2200 | HD2200C

[Option] ■ : iTROL

Swing Over the Bed	mm(in)	Ø550 (21.7″)
Max. Turning Length	mm(in)	565 (22.2″) | 550 (21.7″)
Chuck Size	inch	8″ [10″] | 10″
Bar Capacity	mm(in)	Ø65 (2.6″) | Ø81 (3.2″)
Speed (rpm)	r/min	4,500 [4,000] [4,000] | 3,500 [3,500]
Motor (Max/Cont.)	kW(HP)	18.5 (24.8) [18.5 (24.8)] [23.5 (31.5)] | 18.5 (24.8) [26.4 (35.4)]
Travel(X/Z)	mm(in)	215/580 (8.5″/22.8″)
No. of Tools	EA	12

HD2200M | HD2200MC

[Option]

Swing Over the Bed	mm(in)	Ø550 (21.7″)
Max. Turning Length	mm(in)	467 (18.4″) | 452 (17.8″)
Chuck Size	inch	8″ [10″] | 10″
Bar Capacity	mm(in)	Ø65 (2.6″) | Ø81 (3.2″)
Speed (rpm)	r/min	4,500 [4,000] [4,000] | 3,500 [3,500]
Motor (Max/Cont.)	kW(HP)	18.5 (24.8) [18.5 (24.8)] [23.5 (31.5)] | 18.5 (24.8) [26.4 (35.4)]
Travel(X/Z)	mm(in)	215/482 (8.5″/19.1″)
No. of Tools	EA	12

High Speed, Rigidity and Productivity
The next generation CNC Turning Center

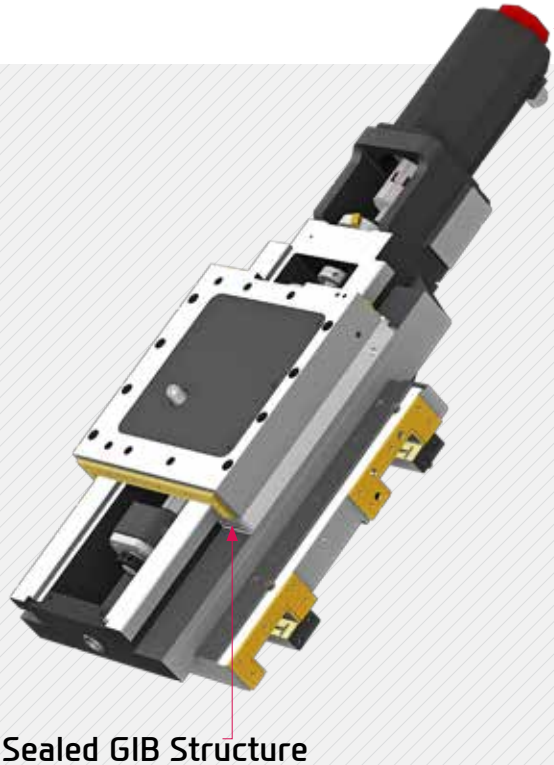
HD2200 Series

- Box guideways for heavy duty cutting
- 45° slanted one-piece bed structure for high rigidity
- Stabilized Unit Structure to minimize thermal displacement
- User convenient structure for high productivity
- Excellent rapid traverse rate: 30m/min [1,181ipm] (Z-axis)
- Reliable, high speed servo turret: 0.12sec/step
- Ergonomic design for convenient access to chuck and tool

01 Basic Features

HD2200 Series

The Best Productivity 8 inch
Heavy Duty CNC Turning Center



01

Z-Axis High Performance Motor

Z-axis feed ability is improved by installing high performance servo motor.

(Z-axis Rapid Traverse Rate : 30 m/min [1,181 ipm])

Box Guideways

All axes of HD2200 are designed with Box Guideways for better travel ability. Box Guideways show great performance in offsetting vibrations caused by heavy duty cutting.

Sealed GIB Structure

X-axis of HD2200 is designed to minimize the damage of turcite from chips by applying the sealed GIB structure.

02

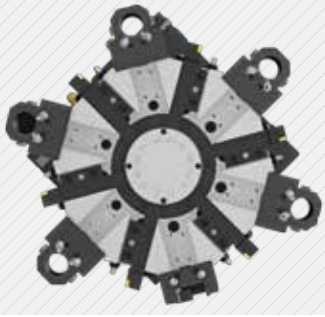
Main Spindle

Heat produced by the main spindle is blocked by applying a symmetric one-piece base and an insulation plate. This enables maintenance of high accuracy even during a long period of machining.

03

Turret

The turret is driven by a servo motor at a high speed indexing time of 0.12sec/step. Cycle time is reduced and productivity is improved.

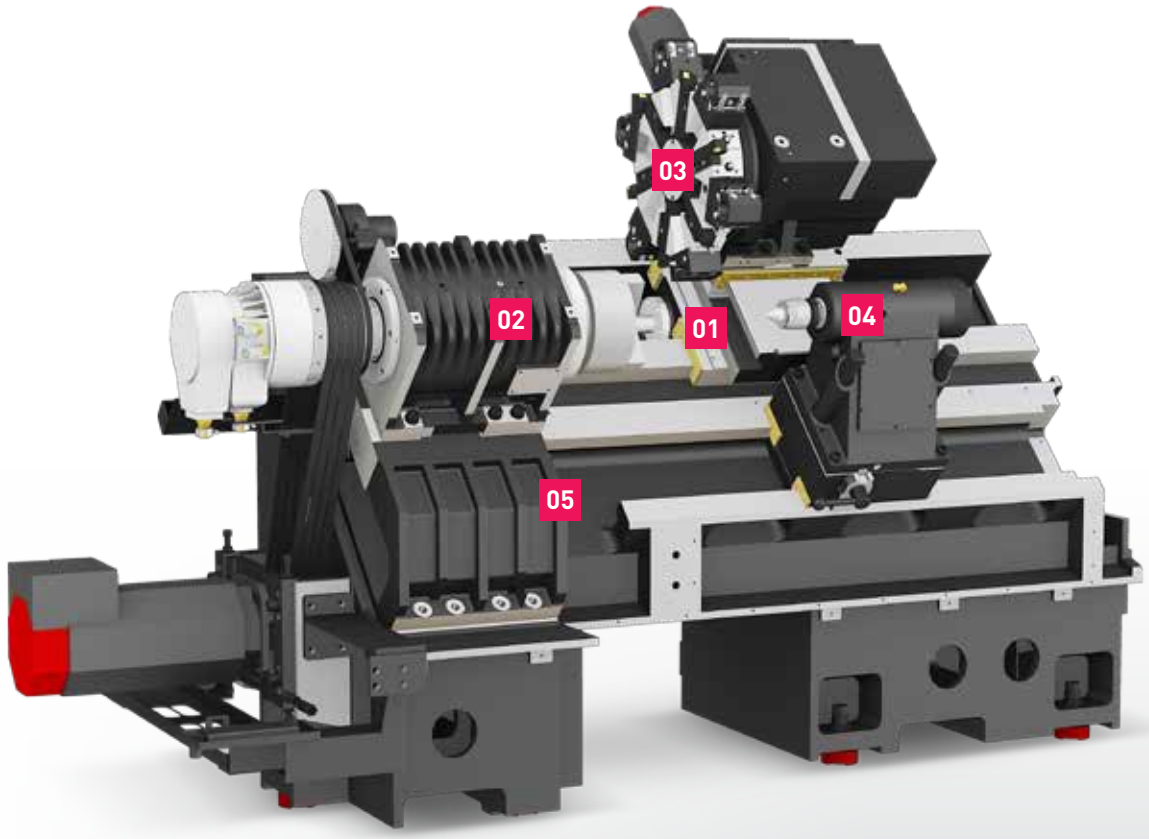


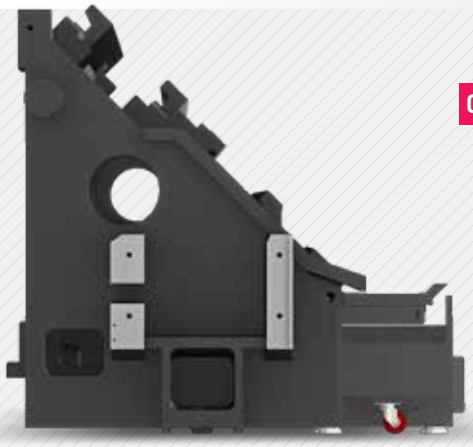
04

Tailstock

Tailstock enables stable machining of high quality products where quill travels up to 80mm (3").

- **Standard**
  Type : MT#4,
  Quill Dia. : Ø65 (2.6")
- **Option**
  Type : MT#5,
  Quill Dia. : Ø100 (3.9")





05 High Precision, High Rigidity, One-Piece Structure

The bed structure of the HD2200 is designed with combination of square type and tubular rib structure. It has a slope of 45 ° which helps maintain high rigidity. It shows great performance in heavy duty cutting, absorbing vibration and maintaining accuracy.

Integrated Coolant Tank

The coolant tank is installed at the front of the bed to prevent leakage, enabling stable machining with the use of high pressure coolant.

Powerful Cutting Capability & Wide Cutting Range

- **Rapid Traverse Rate** (X/Z axis) : 24/30 m/min (945/1,181 ipm)
- **Travel** (X/Z axis) : 215/580 mm (8.5″/22.8″) HD2200M/MC : 215/482 mm (8.5″/19″)

02

HD2200
Series

High Precision Spindle

Long Lasting, High Accuracy & Excellent Performance
CNC Turning Center

Main Spindle

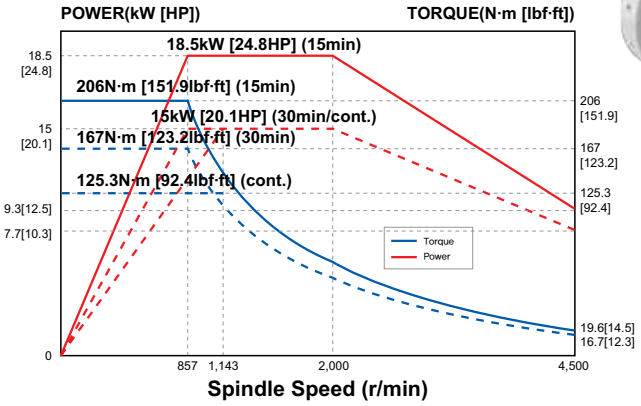
The main spindle is designed with the same structure often found in larger sized machines. The combination of taper roller bearings and angular contact ball bearings leads to excellent heavy duty cutting performance.

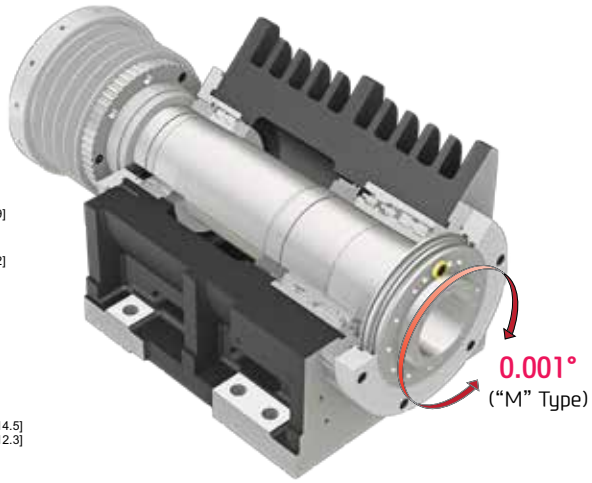
Also, machining performance is enhanced by applying ribstar belt to minimize noise and belt slipping problems. The spindle is designed with a Labyrinth structure to minimize possible bearing damage from coolant and to improve machining stability.

Spindle Cooling

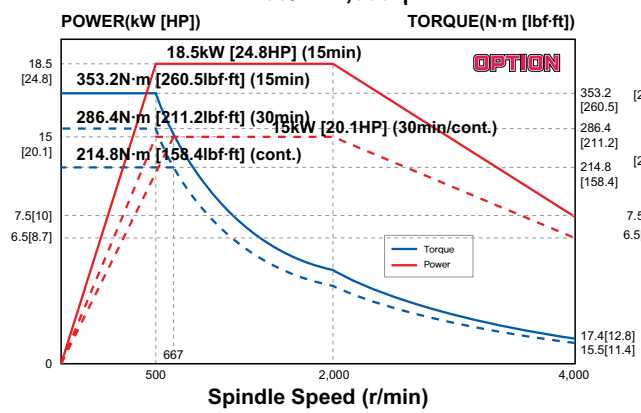
A fan is installed on top of the head body and the rear of motor to minimize heat generation of the spindle.

HD2200/M 4,500rpm

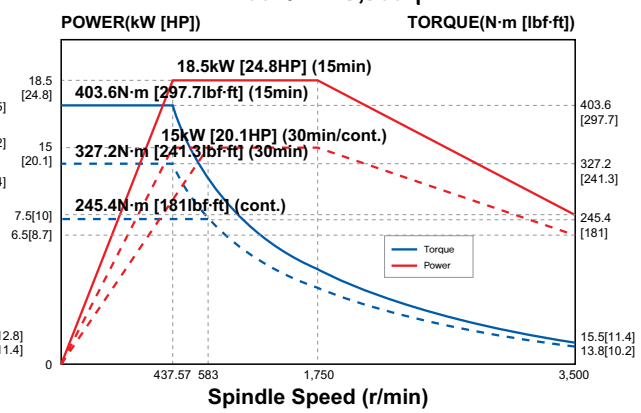




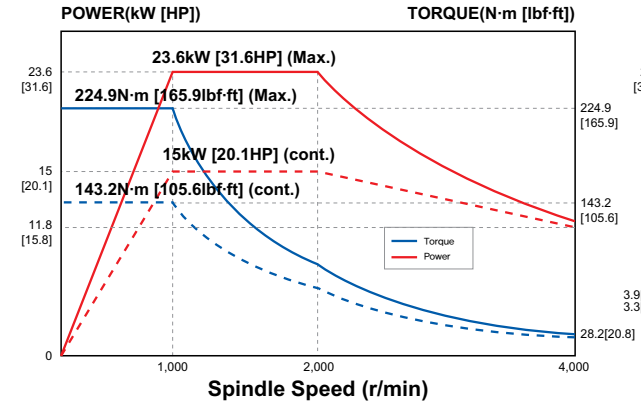
HD2200/M 4,000rpm



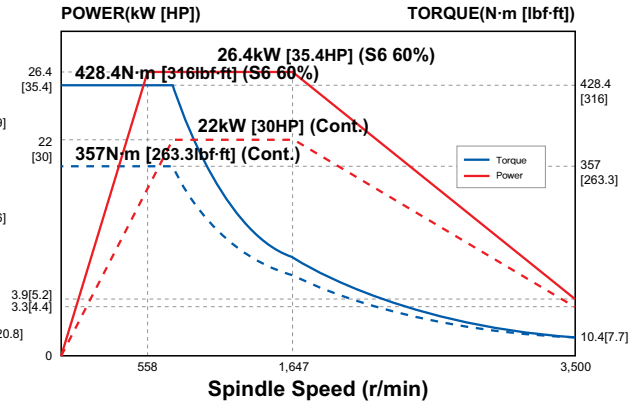
HD2200C/MC 3,500rpm



HD2200/M 4,000rpm iTROL



HD2200C/MC 3,500rpm iTROL

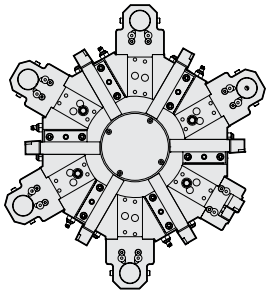


03

HD2200
Series

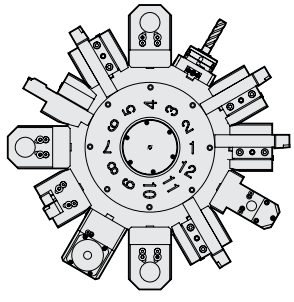
Servo Turret

High speed, High Accuracy, Highly Reliable
Servo Turret



Servo Turret

- No. of Tools : 12 EA
- Tool Size (O.D/I.D)
  □ 25(□ 1″)/
  Ø40 (Ø1.6″)
- Indexing Time :
  0.12 sec/step

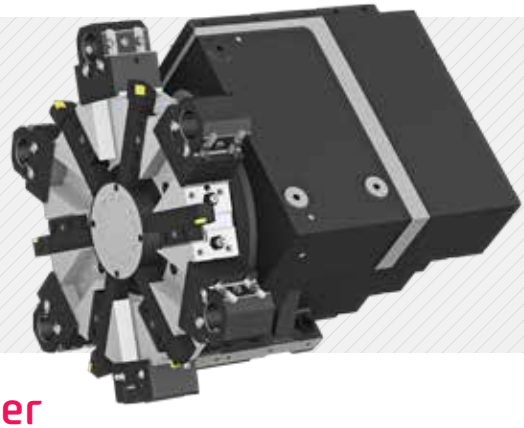


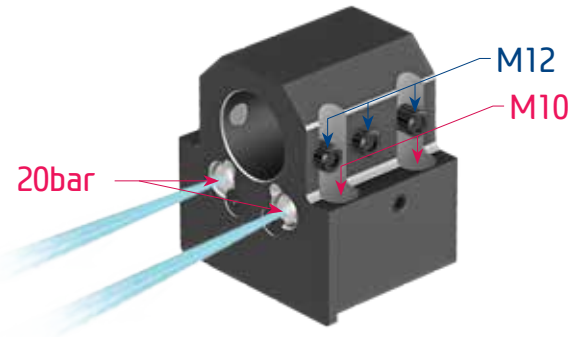
BMT55P Turret

- Speed : 6,000 rpm
- Max. Output : 5.5 kW (7.5 HP)
- Max. Torque :
  35.3/21.3 N·m (26/15.7 lbf·ft)

Servo Turret

The turret of HD2200 is applied with high performance AC servo motor, improving machining reliability. 3-piece coupling shows excellent performance in indexing. Powerful hydraulic tool clamping minimizes tool tip deviation caused by load.





Holder

To enhance rigidity, M10 bolts are used to fix holders and M12 bolts are used to fix boring bar holders.

20 Bar(290 psi) High Pressure Coolant

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

OPTION

HD2200M/MC BMT Turret (Mill Turret)

Strong clamping power is achieved by the 3-piece coupling. Also, two separate motors are used for indexing and tool rotation. BMT turret where each holder is fixed with 4 screws, shows outstanding performance in milling, drilling and tapping during heavy duty cutting.

Straight Mill Head	Angular Mill Head

Mill Tool Holder

Machining capability is increased with the addition of a Straight Milling Head which can remove material from the side and an Angular Milling Head which can perform I.D. operations.

04

HD2200
Series

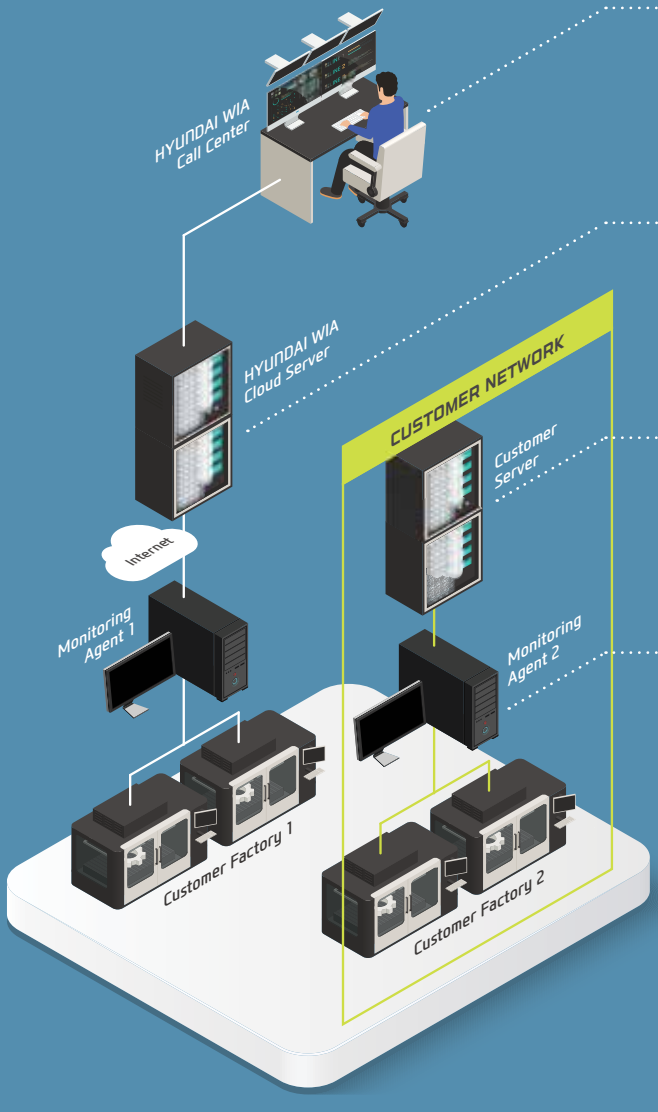
iRiS HYUNDAI WIA Smart Factory Solution

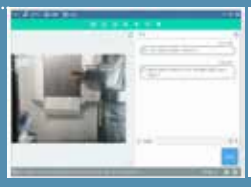
integrated Revolution of industrial Solution

iRiS is HYUNDAI WIA's Smart Factory Solution.

iRiS, HYUNDAI WIA's revolutionary smart factory solution, consists of **Smart Monitoring System** for integrated management of HYUNDAI WIA machines around the world, and the **Smart Machining System** with ease, quality control, productivity and safety of the operator in mind.

SMART MONITORING





HW-MMS Remote
(Remote service based)

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

HW-MMS Cloud
(Cloud server based)

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

HW-MMS Edge
(Customer Server Based)

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

HW-MMS Collector
(Machine data collector)

A dedicated program for collecting CNC data for MES/ERP.

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.

SMART MACHINING

HW-MCG

HYUNDAI WIA
Machine Guidance

Software that offers operation, maintenance, management monitoring and various user friendly features.

HW-TDC

HYUNDAI WIA Thermal
Displacement Compensation

Software that measures the changes in the external environment as well as heat emission during processing to help reduce thermal displacement.

HW-TM

HYUNDAI WIA
Tool Monitoring

A tool monitoring software which analyzes the load of the spindle motor to determine and monitor possible damage of tools.

HW-ESS

HYUNDAI WIA
Energy Saving System

An environmental friendly software that reduces the unnecessarily wasted standby power waiting for an operation.

HW-DPRO

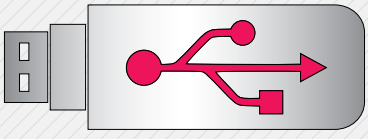
HYUNDAI WIA
Dialogue PROgram

Software to create machining program easily and quickly through interactive operation

HW-eDNC

HYUNDAI WIA ethernet
Direct Numerical Control

This software allows transmition of NC data between PC and a machine's CNC. The processing programs can be managed on the PC through the ethernet or serial communication.



USB Port

Convenience is increased when inputting and outputting program. The USB port is available in addition to the former input output methods such as CF memort card and LAN.

05

HD2200
Series

HYUNDAI-iTROL

The Powerful CNC Platform for Machine Tools

HYUNDAI Intelligent Control

Convenient and Easy-to-Use Machine Tool...

Hyundai WIA take operator convenience to a higher level with the new controller, HYUNDAI-iTROL. Experience the new operating environment with HYUNDAI-iTROL.

COMMUNICATION FUNCTION

Easy input/output of programs is possible with the use of USB memory card, CF memory card and LAN.

Energy Saving & ECO System

Energy Saving System

You can use energy saving function (ECO) and machining optimization function (SMART) with the MCP button.

Combination of HYUNDAI-iTROL with Siemens servo drive and motor offers the optimum machine tool solution!

Dynamic servo control, highly efficient Siemens servo drive and Siemens servo motor with durability and quick response have been applied.

Turret Guidance

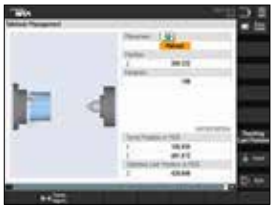
- Turret reference point setup guide screen
- The turret reference point can be set quickly and easily with the simple touch of a button.
- Easy setting of milling tool direction enabled by a simple touch of the button in the event of a milling tool reference point error.

Tool Setting

- Easy-to-use automatic tool measurement function for the turning center.
- Rapid detection of tool's length and wear/tear.
- Can be used in conjunction with the Q-setter.

Coordinate Setting

- Workpiece coordinate setting is available for the turning center.
- Intuitive UI for enhanced convenience.
- Easy resetting with one touch of the button after shifting position.



Tailstock Management

- Intuitive UI for easy tailstock setting in the automatic/manual mode.
- History Management function for predefined settings

Monitoring of Operating Ratio

- Intuitive display uses distinctive colors to indicate the 4 stages of alarm, cycle, setup, and inactivity.
- Displays current activated status as "Activated".
- Options to export 10-day operation history as an NC file or to CF card (MS Excel compatible format)

Soft MCP

- Displays the unused optional utility as "Option" for inactivation.
- The number of SoftMCP has been increased to 28 to respond to a variety of options.
- Usability has been enhanced by connecting/setting with F1 & F2.
- Addition of a new 'FUNCTION' button to the PPU shortcut button enables quick access to the SoftMCP function.

Shop Turn OPTION

- Dialogue-type programming, simple and convenient
- Effective specifications for small quantitybatch production
- Step-by-step operation possible without knowledge of the DIN/ISO code

3D Simulation OPTION

- 3D confirmation of the completed processing configuration of the NC program is possible.
- Offers standards for 2D simulation.
- Possible to confirm the simulation of the NC grogram during processing.

ISO Code Programming

If the ISO Dialect (G291) is ordered, JIS-based G-code programs can be used. (Standard)

06

HD2200
Series

Automation System

OPTION

Various Devices for User Convenience

Bar Feeder System

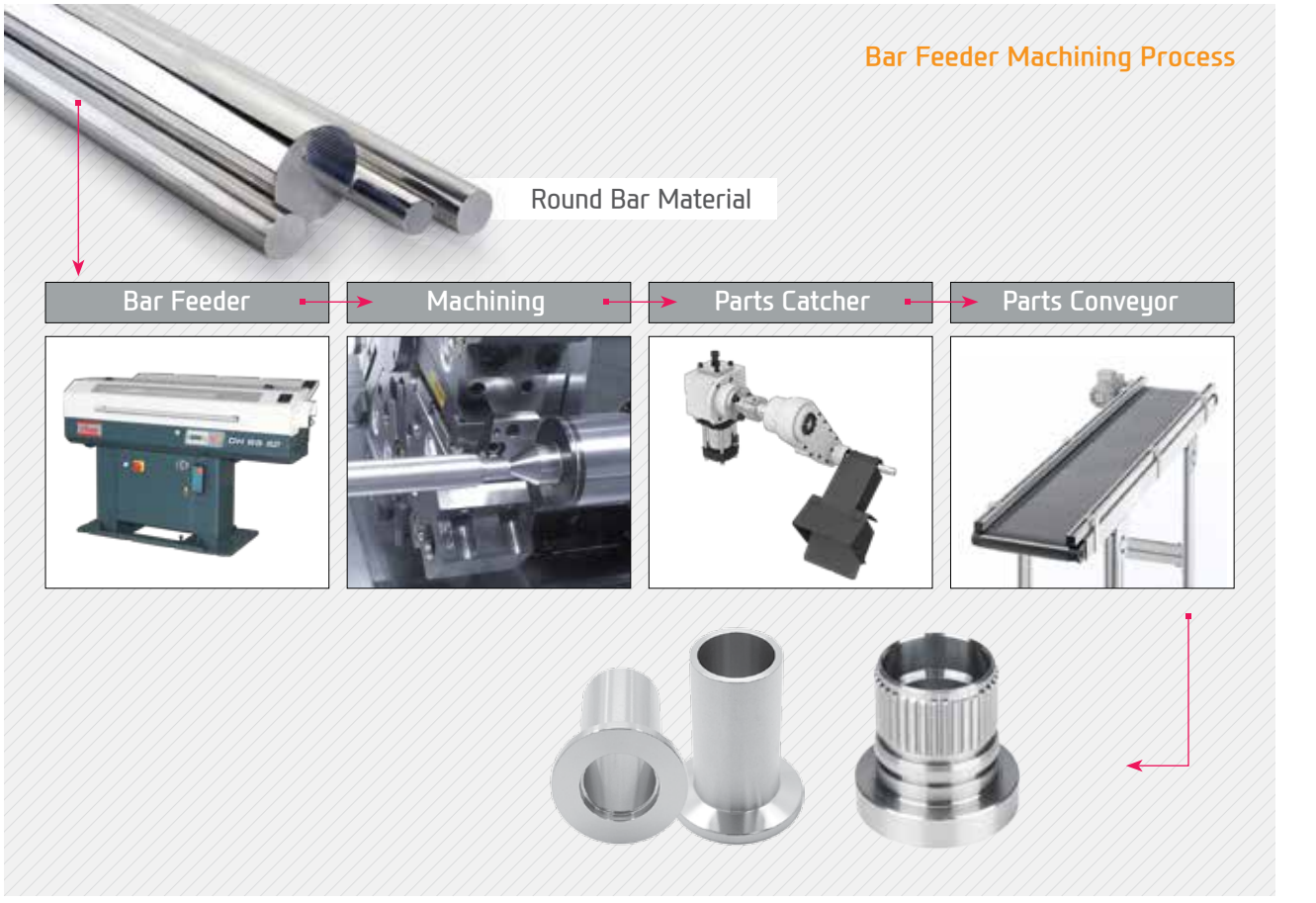
Bar Feeder

Bar feeder system enables automation which leads to efficiency improvement.

Long Type	3 m (118.1")
Max Bar Capacity	Ø42 mm (1.7")
Short Type	1.5 m (59.1")
Max Bar Capacity	Ø65 mm (2.6")

Work Conveyor

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

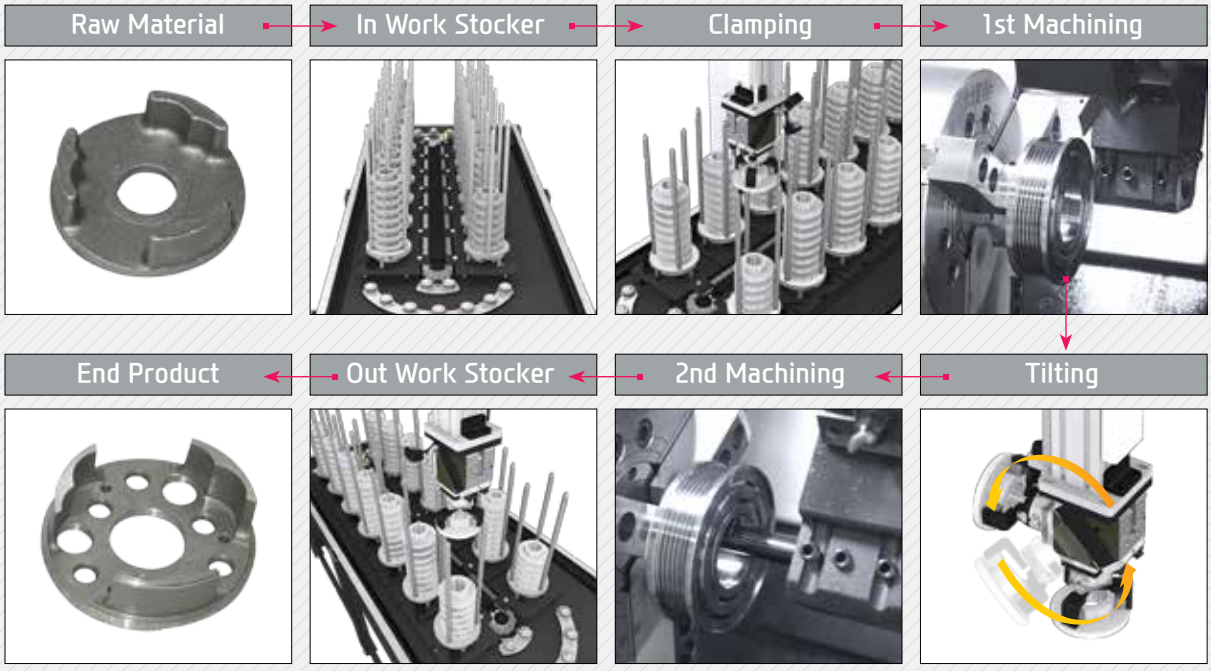


Gantry Loader System

Door is designed to open up to 710mm(28") which is suitable for gantry automation.

Gantry Loader Machining Process

The high speed gantry loaders and the work stocker allow the implementation of automation cells.
This enables machining process flexibility and productivity enhancement.



SPECIFICATIONS

Standard & Optional

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

Spindle		HD2200	HD2200C
Main Spindle Hollow Chuck 3 Jaw	8″	●	–
	10″	○	●
Main Spindle Solid Chuck 3 Jaw	8″	–	–
	10″	–	–
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		○ (CE: ●)	○ (CE: ●)
2 Steps Chuck Foot Switch		○	○
Turret			
Tool Holder		●	●
Mill Turret	BMT	–	–
Straight Milling Head (Axial)	Collet Type,1ea	–	–
Angular Milling Head (Radial)	Collet Type,1ea	–	–
Straight Milling Head (Axial)	Adapter Type	–	–
Angular Milling Head (Radial)	Adapter Type	–	–
Boring Sleeve		●	●
Drill Socket		●	●
U-Drill Holder		○	○
U-Drill Holder Sleeve		○	○
O.D Extension Holder	For Out-Dia	○	●
Angle Head		–	–
Tail Stock & Steady Rest			
Quill Type Tail Stock	MT#4 (Ø65{Ø2.6})	●	●
	MT#4 (Ø80{Ø3.1})	○	○
	MT#5 (Ø100{Ø3.9})	○	○
Programable Tail Stock	MT#4 (Ø65{Ø2.6})	○	○
	MT#4 (Ø80{Ø3.1})	○	○
Built-in Tail Stock	MT#4 (Ø100{Ø3.9})	○	○
Manual Type Hyd. Steady Rest		–	–
Standard Live Center (Tail Stock : Standard)		●	●
High Precesion 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 (Olny fir Sub Tank, Chip Conveyor)		–	–
Chip Disposal			
Coolant Tank	150 ℓ (39.6gal)(Side)	●	●
	180 ℓ (47.6gal)(Side)	● (Only for High Pressure Coolant 20 bar [290psi])	
	210 ℓ (55.5gal)(Rear)	○	○
Chip Conveyor (Hinge/Scraper/Screw)	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		HD2200	HD2200C
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	25kVA	○	○
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)/ 15 ℓ (4gal)	●	●
S/W			
Machine Guidance (HW-MCG)		●	●
Energy Saving System (HW-ESS)		●	●
Tool Monitoring (HW-TM)		○	○
Spindle Heat Distortion Compensation(HW-TDC)		○	○
DNC software (HW-eDNC)		○	○
Machine Monitoring System (HW-MMS)		○	○
Conversational Program (HW-DPRO)		○	○
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		HD2200M	HD2200MC
Main Spindle Hollow Chuck 3 Jaw	8″	●	–
	10″	○	●
Main Spindle Solid Chuck 3 Jaw	8″	–	–
	10″	–	–
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		○ (CE: ●)	○ (CE: ●)
2 Steps Chuck Foot Switch		○	○
Turret			
Tool Holder		●	●
Mill Turret	BMT	●	●
Straight Milling Head (Axial)	Collet Type,1ea	●	●
Angular Milling Head (Radial)	Collet Type,1ea	●	●
Straight Milling Head (Axial)	Adapter Type	○	○
Angular Milling Head (Radial)	Adapter Type	○	○
Boring Sleeve		●	●
Drill Socket		○	○
U-Drill Holder		●	●
U-Drill Holder Sleeve		●	●
O.D Extension Holder	For Out-Dia	–	–
Angle Head		☆	☆
Tail Stock & Steady Rest			
Quill Type Tail Stock	MT#4 (Ø65{Ø2.6})	●	●
	MT#4 (Ø80{Ø3.1})	○	○
	MT#5 (Ø100{Ø3.9})	○	○
Programable Tail Stock	MT#4 (Ø65{Ø2.6})	○	○
	MT#4 (Ø80{Ø3.1})	○	○
Built-in Tail Stock	MT#4 (Ø100{Ø3.9})	○	○
Manual Type Hyd. Steady Rest		–	–
Standard Live Center (Tail Stock : Standard)		●	●
High Precesion 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 (Olny fir Sub Tank, Chip Conveyor)		–	–
Chip Disposal			
Coolant Tank	150 ℓ (39.6gal)(Side)	●	●
	180 ℓ (47.6gal)(Side)	● (Only for High Pressure Coolant 20 bar [290psi])	
	210 ℓ (55.5gal)(Rear)	○	○
Chip Conveyor (Hinge/Scraper/Screw)	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		HD2200M	HD2200MC
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	20kVA	○	○
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)/ 15 ℓ (4gal)	●	●
S/W			
Machine Guidance (HW-MCG)		●	●
Energy Saving System (HW-ESS)		●	●
Tool Monitoring (HW-TM)		○	○
Spindle Heat Distortion Compensation(HW-TDC)		○	○
DNC software (HW-eDNC)		○	○
Machine Monitoring System (HW-MMS)		○	○
Conversational Program (HW-DPRO)		○	○
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.

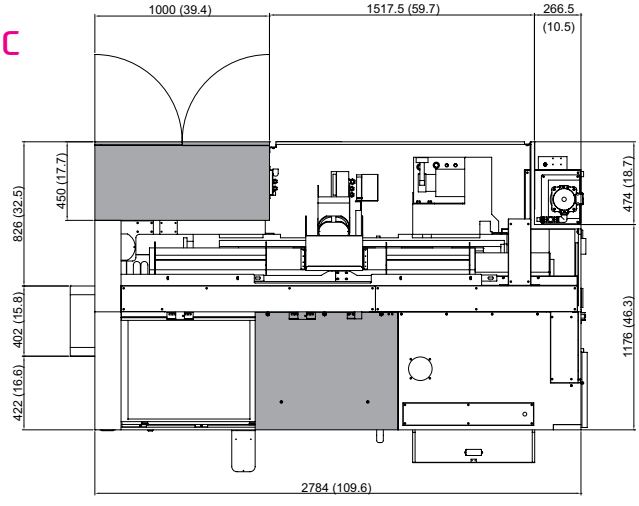
Specifications are subject to change without notice for improvement.

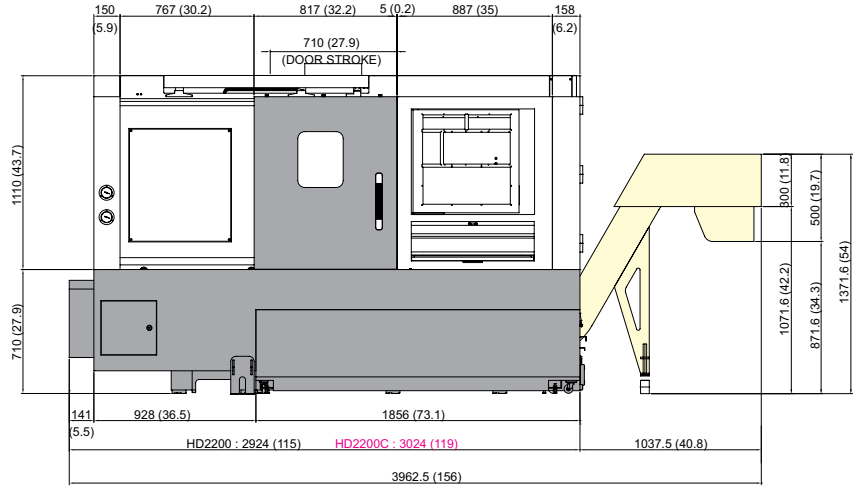
SPECIFICATIONS

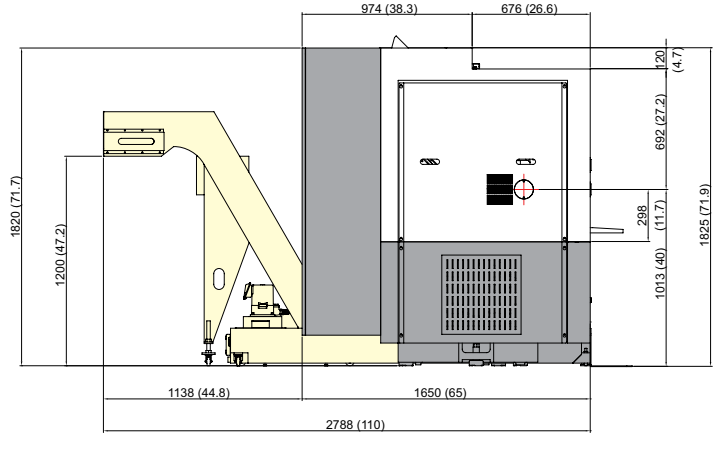
External Dimensions

unit : mm(in)

HD2200/M
HD2200C/MC





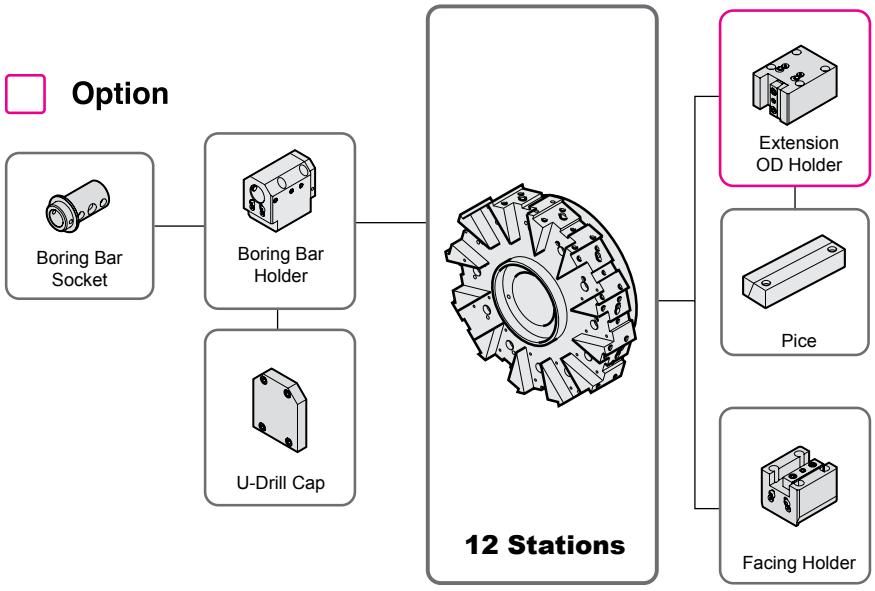


SPECIFICATIONS

Tooling System

unit : mm(in)

HD2200 I HD2200C



Tooling Parts Detail

ITEM			HD2200		HD2200C	
			mm Unit	inch Unit	mm Unit	inch Unit
Turning Holder	O.D Holder	Extenstion (40mm{1.6"})	Opt	Opt	1	1
	Facing Holder		1	1	1	1
Boring Holder	I.D Holder	Single (Ø40, Ø1 1/2")	5	5	4	4
	U-Drill Holder	Cap	1	1	1	1
Driven Holder	Straight Mill Holder	Standard	-	-	-	-
		TTC	-	-	-	-
	Angular Mill Holder	Standard	-	-	-	-
		TTC	-	-	-	-
Socket	Boring	Ø10 (Ø3/8")	1	-	1	-
		Ø12 (Ø1/2")	1	1	1	1
		Ø16 (Ø5/8")	1	-	1	-
		Ø20 (Ø3/4")	1	1	1	1
		Ø25 (Ø1")	1	1	1	1
		Ø32 (Ø1 1/4")	1	1	1	1
	Drill	MT 1 × MT 2	1	1	1	1
		MT 2	1	1	1	1
	ER Collet		-	-	-	-

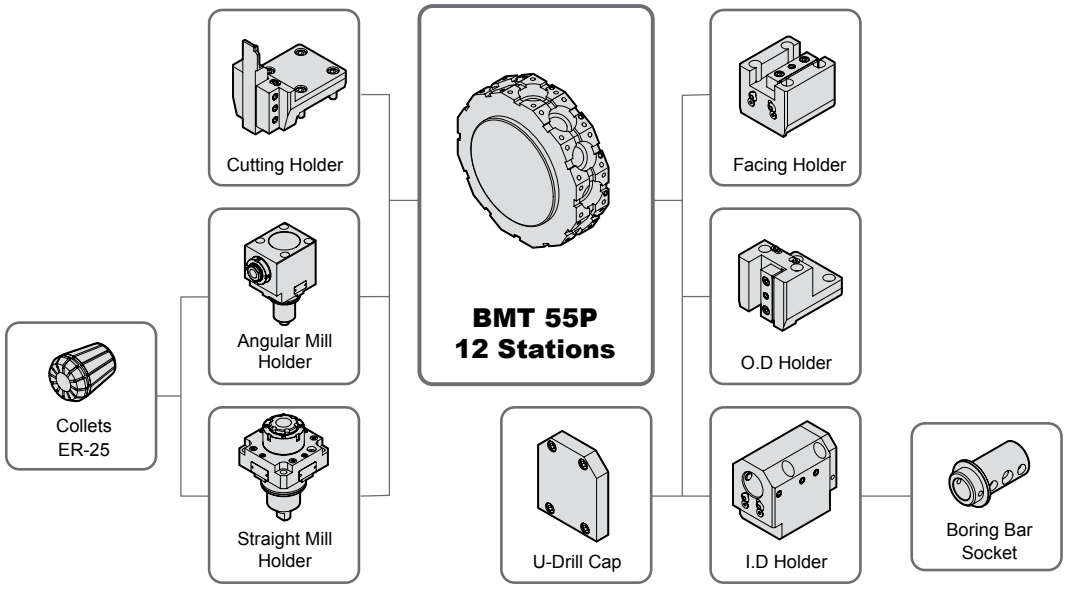
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Tooling System

unit : mm(in)

HD2200M/MC



Tooling Parts Detail

ITEM			HD2200M		HD2200MC	
			mm Unit	inch Unit	mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left	4	4	4	4
	Cutting Holder		1	1	1	1
	Facing Holder		1	1	1	1
Boring Holder	I.D Holder	Single (Ø40, Ø1 1/2")	4	4	4	4
	U-Drill Holder	Cap	1	1	1	1
Driven Holder	Straight Mill Holder	Standard	1	1	1	1
		TTC	Opt.	Opt.	Opt.	Opt.
	Angular Mill Holder	Standard	1	1	1	1
		TTC	Opt.	Opt.	Opt.	Opt.
Socket	Boring	Ø10 (Ø3/8")	1	1	1	1
		Ø12 (Ø1/2")	1	1	1	1
		Ø16 (Ø5/8")	1	1	1	1
		Ø20 (Ø3/4")	1	1	1	1
		Ø25 (Ø1")	1	1	1	1
		Ø32 (Ø1 1/4")	1	1	1	1
	Drill	MT 1 × MT 2	Opt.	Opt.	Opt.	Opt.
		MT 2	Opt.	Opt.	Opt.	Opt.
		MT 3	Opt.	Opt.	Opt.	Opt.
	ER Collet		1 Set	1 Set	1 Set	1 Set

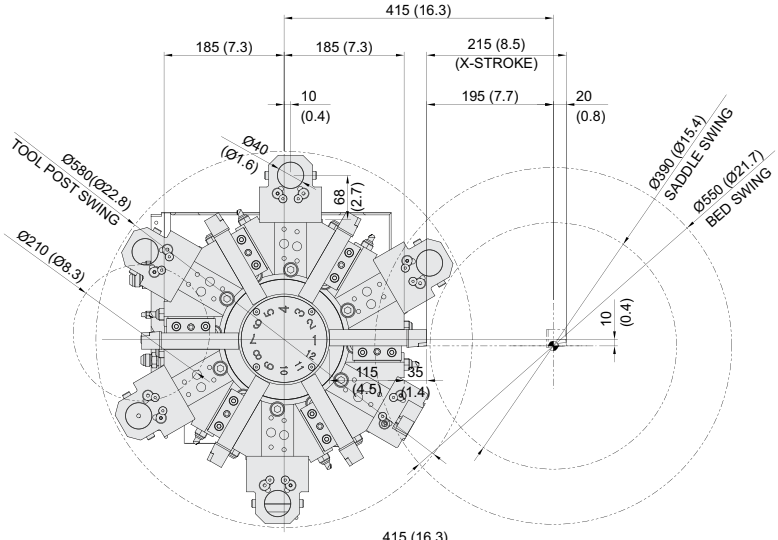
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

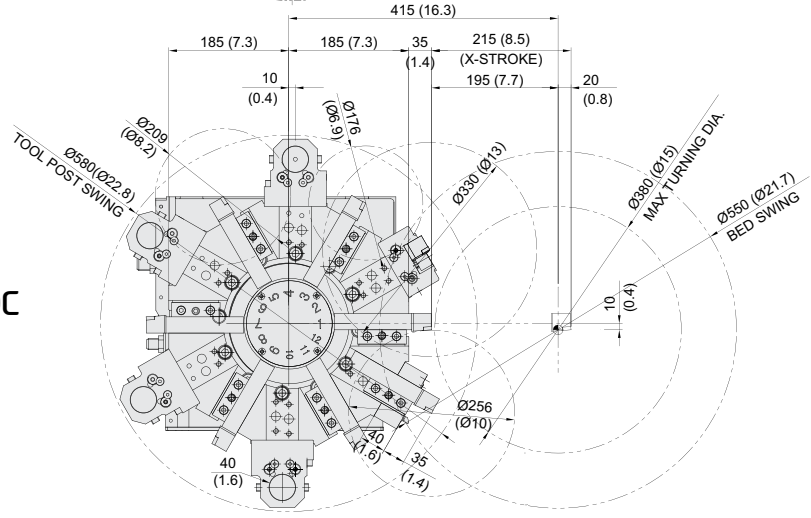
Interference

unit : mm(in)

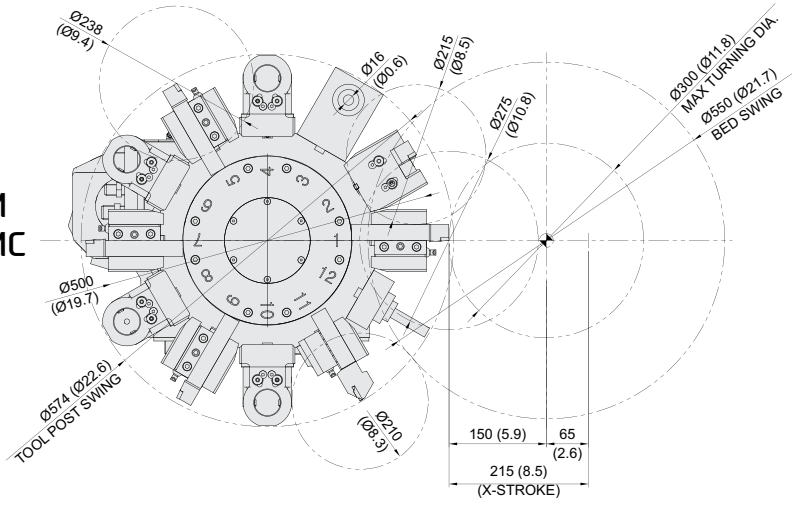
HD2200



HD2200C



HD2200M
HD2200MC



If the tool is placed differently from the picture above, it may interfere with the chuck when applying the O.D Extension holder.

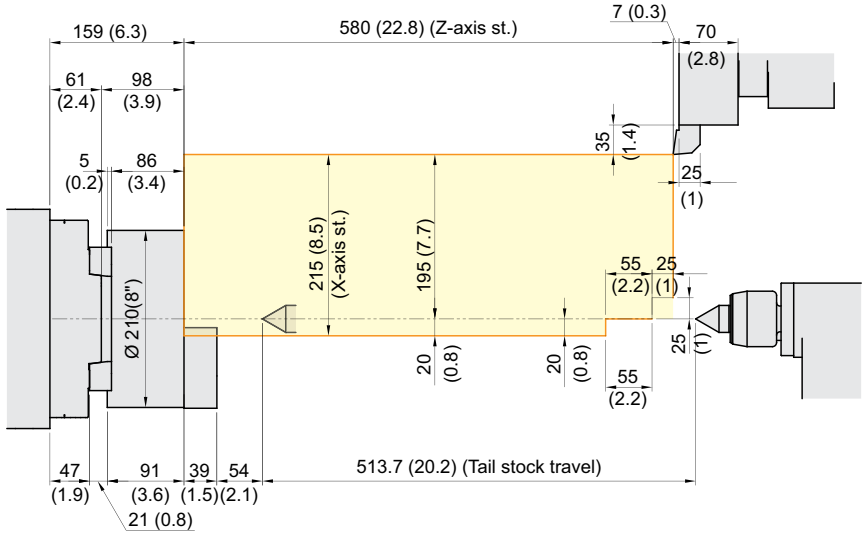
SPECIFICATIONS

Tooling Travel Range

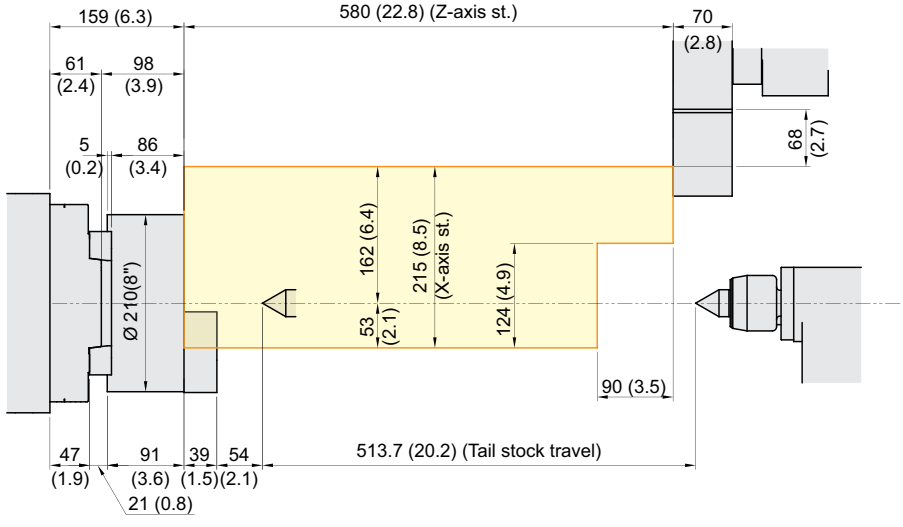
unit : mm(in)

HD2200

O.D Tool Holder



I.D Tool Holder

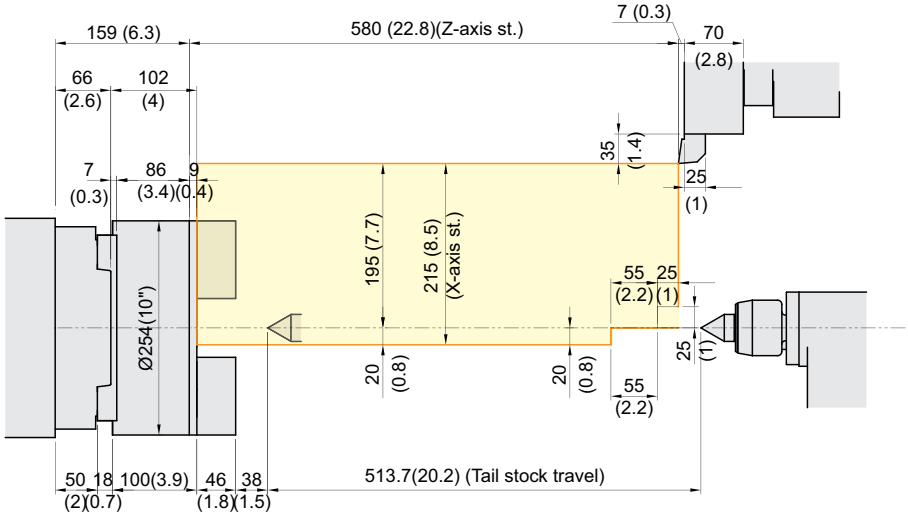


Tooling Travel Range

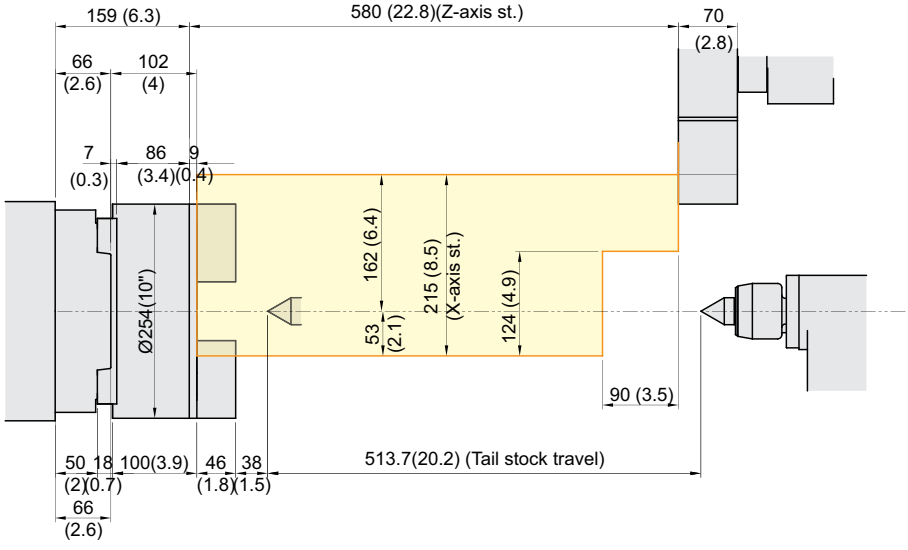
unit : mm(in)

HD2200C

O.D Tool Holder



I.D Tool Holder



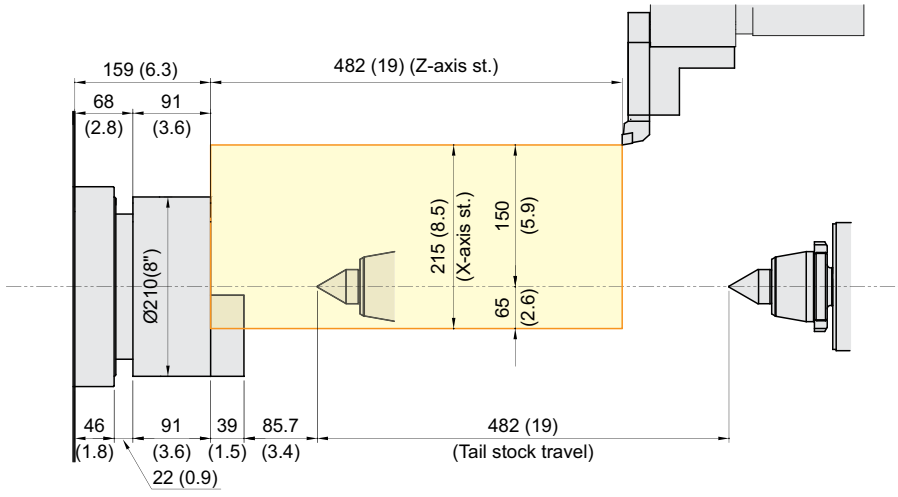
SPECIFICATIONS

Tooling Travel Range

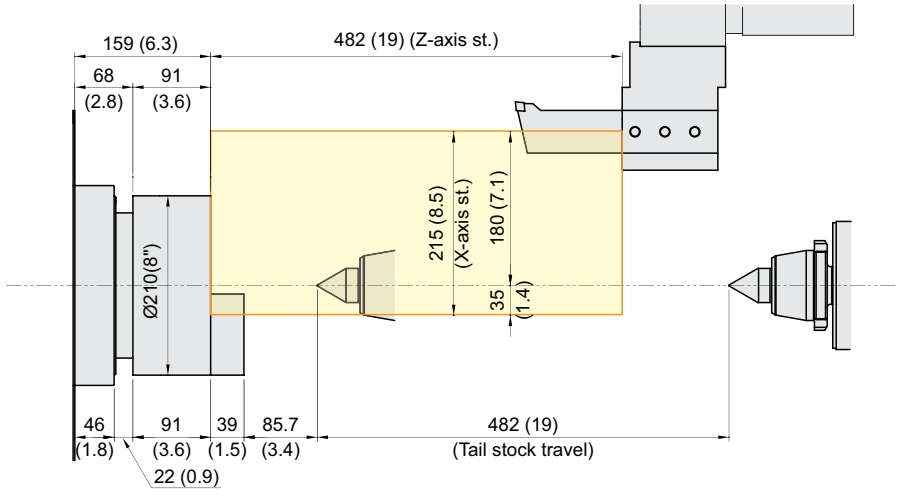
unit : mm(in)

HD2200M

O.D. Tool holder



I.D. Tool holder

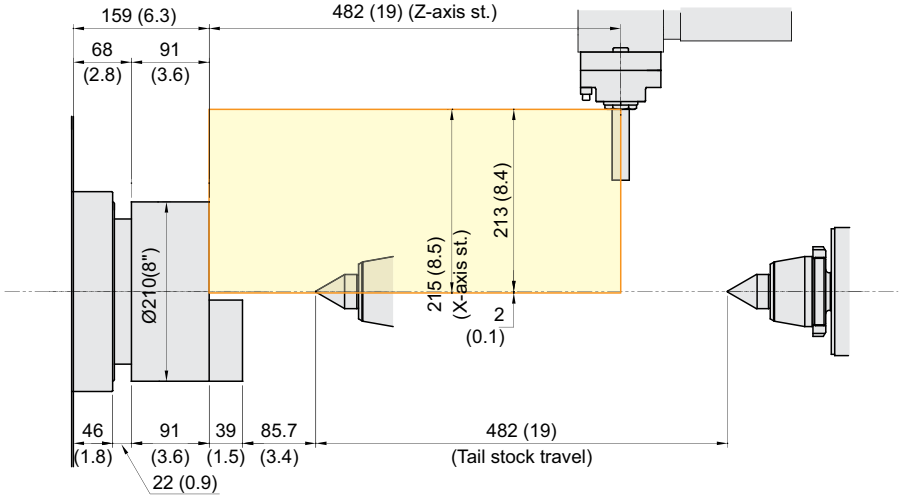


Tooling Travel Range

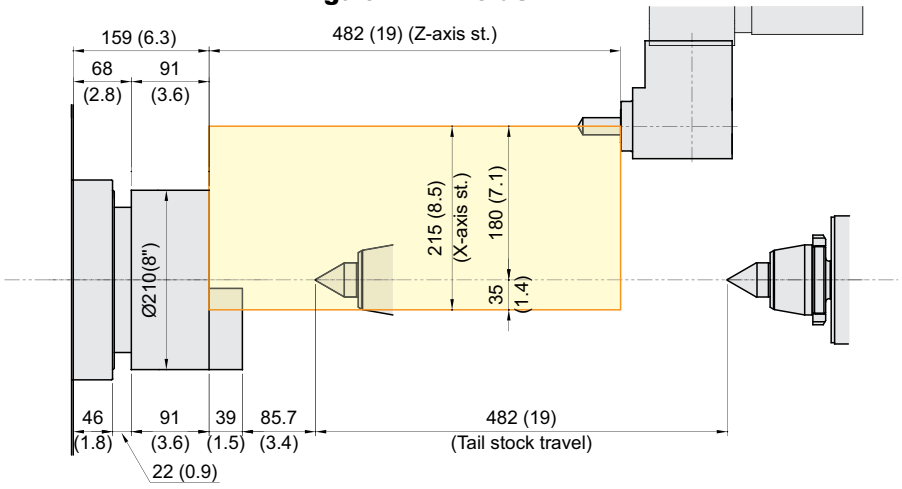
unit : mm(in)

HD2200M

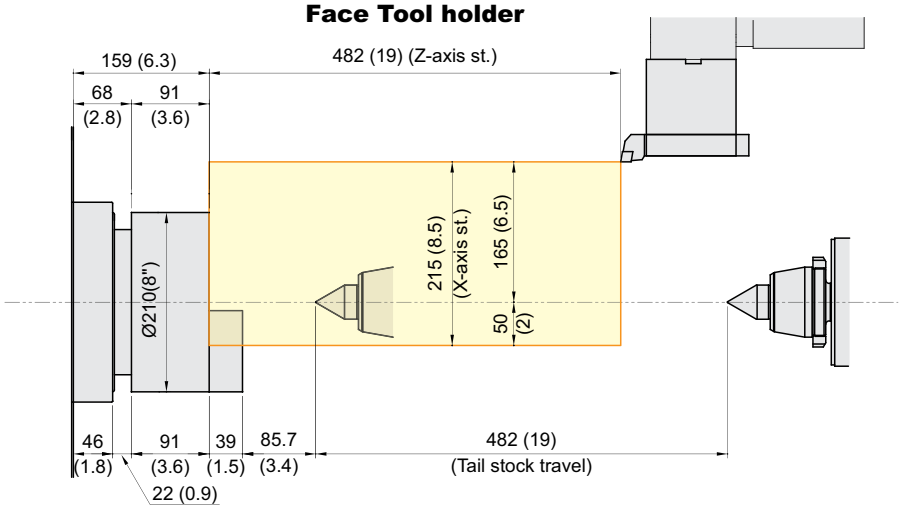
Straight Mill Holder



Angular Mill Holder



Face Tool holder



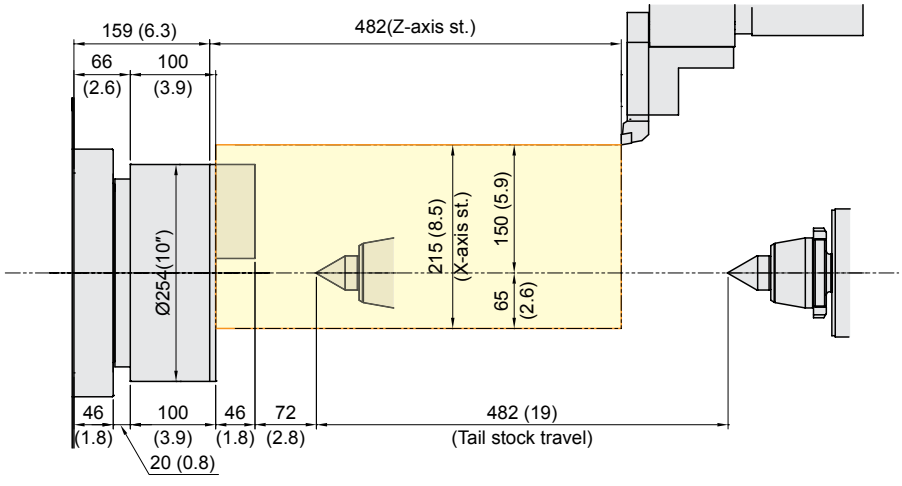
SPECIFICATIONS

Tooling Travel Range

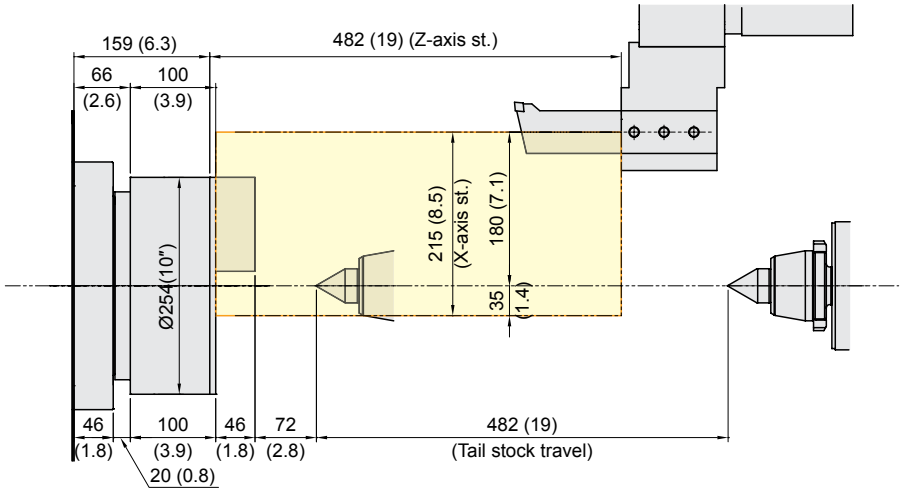
unit : mm

HD2200MC

O.D. Tool holder



I.D. Tool holder

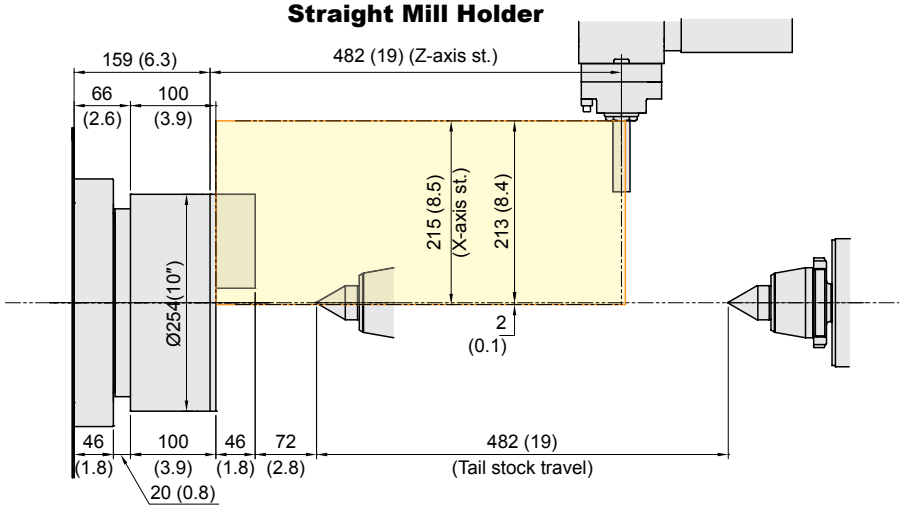


Tooling Travel Range

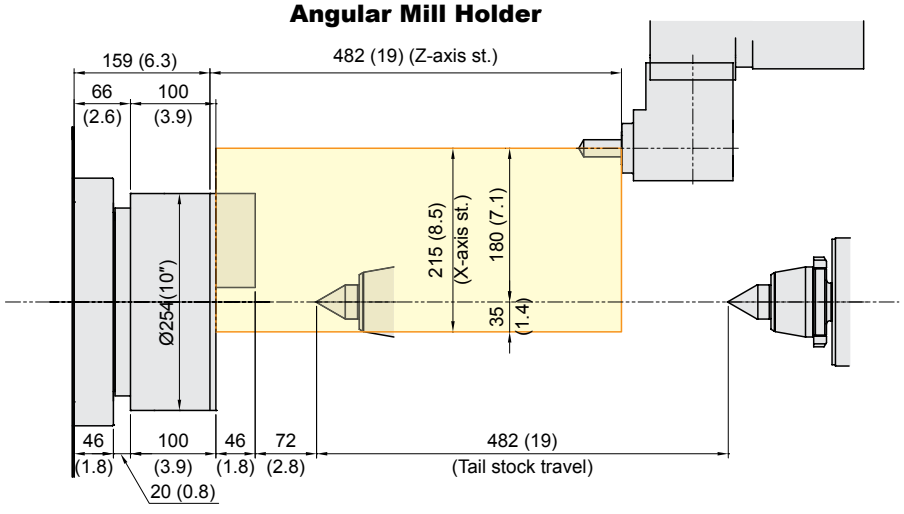
unit : mm

HD2200MC

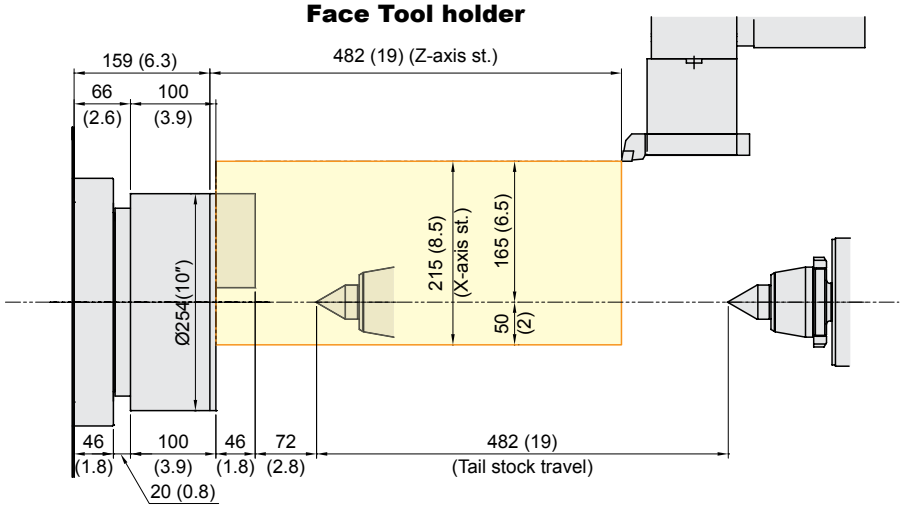
Straight Mill Holder



Angular Mill Holder



Face Tool holder



SPECIFICATIONS

Specifications

[ ] : Option

ITEM			HD2200	HD2200C
CAPACITY	Swing Over the Bed	mm(in)	Ø550 (21.7″)	
	Swing Over the Carriage	mm(in)	Ø390 (15.4″)	
	Max. Turning Dia.	mm(in)	Ø380 (15″)	
	Max. Turning Length	mm(in)	565 (22.2″)	550 (21.7″)
	Bar Capacity	mm(in)	Ø65 (2.6″)	Ø81 (3.2″)
SPINDLE	Chuck Size	inch	8″ [10″]	10″
	Spindle Bore	mm(in)	Ø76 (3″)	Ø92 (3.6″)
	Spindle Speed (rpm)	r/min	4,500 [4,000] [4,000]	3,500 [3,500]
	Motor (Max/Cont.)	kW(HP)	18.5/15 (24.8/20.1) [18.5/15 (24.8/20.1)] [23.5/15 (31.5/20.1)]	18.5/15 (24.8/20.1) [26.4/22 (35.4/30)]
	Torque (Max/Cont.)	N·m(lbf·ft)	206/125.3 (151.9/92.4) [353.2/214.8 (260.5/158.4)] [225/143.2 (166/105.6)]	403.6/245.4(297.7/181) [428.4/357 (314/263.3)]
	Spindle Type	-	BELT	
	Spindle Nose	-	A2-6	A2-8
	C-axis Indexing	deg	-	
FEED	Travel (X/Z/B)	mm(in)	215/580 (8.5″/22.8″)	
	Rapid Traverse Rate (X/Z)	m/min(ipm)	24/30 (945/1,181)	
	Slide Type	-	BOX GUIDE	
TURRET	No. of Tools	EA	12	
	Tool Size OD	mm(in)	□25 (1″)	
	Tool Size ID	mm(in)	Ø40 (1.6″)	
	Indexing Time	sec/step	0.12	
LIVE TOOL	Motor (Max/Cont.)	kW(HP)	-	
	Milling Tool Speed (rpm)	r/min	-	
	Torque (Max/Cont.)	N·m(lbf·ft)	-	
	Collet Size	mm(in)	-	
	Type	-	-	
TAIL STOCK	Taper	-	MT#4 [MT#5]	
	Quill Dia.	mm(in)	Ø65 (2.6″) [Ø100 (3.9″)]	
	Quill Travel	mm(in)	80 (3.1″) [120 (4.7″)]	
	Travel	mm(in)	513.7 (20.2″)	
TANK CAPACITY	Coolant Tank	ℓ (gal)	150 (39.6)	
	Lubricating Tank	ℓ (gal)	1.8 (0.5)	
POWER SUPPLY	Electric Power Supply	kVA	17	
	Thickness of Power Cable	Sq	OVER 16	
	Voltage	V/Hz	220/60 (200/50*)	
MACHINE	Floor Space (L×W)	mm(in)	2,925×1,650 (115.2″×65″)	3,024×1,650 (119″×65″)
	Height	mm(in)	1,820 (71.7″)	
	Weight	kg(lb)	4,100 (9,039)	4,200 (9,259)
NC	Controller	-	HW FANUC i Series [HYUNDAI-ITROL]	

*) 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				HD2200M	HD2200MC
CAPACITY	Swing Over the Bed		mm(in)	Ø550 (21.7″)	
	Swing Over the Carriage		mm(in)	Ø390 (15.4″)	
	Max. Turning Dia.		mm(in)	Ø300 (11.8″)	
	Max. Turning Length		mm(in)	467 (18.4″)	452 (17.8″)
	Bar Capacity		mm(in)	Ø65 (2.6″)	Ø81 (3.2″)
SPINDLE	Chuck Size		inch	8″ [10″]	10″
	Spindle Bore		mm(in)	Ø76 (3″)	Ø92 (3.6″)
	Spindle Speed (rpm)		r/min	4,500 [4,000] [4,000]	3,500 [3,500]
	Motor (Max/Cont.)		kW(HP)	18.5/15 (24.8/20.1) [18.5/15 (24.8/20.1)] [23.5/15 (31.5/20.1)]	18.5/15 (24.8/20.1) [26.4/22 (35.4/30)]
	Torque (Max/Cont.)		N·m(lbf·ft)	206/125.3 (151.9/92.4) [353.2/214.8 (260.5/158.4)] [225/143.2 (166/105.6)]	403.6/245.4(297.7/181) [428.4/357 (314/263.3)]
	Spindle Type		-	BELT	
	Spindle Nose		-	A2-6	A2-8
	C-axis Indexing		deg	0.001°	
FEED	Travel (X/Z/B)		mm(in)	215/482 (8.5″/19″)	
	Rapid Traverse Rate (X/Z)		m/min(ipm)	24/30 (945/1,181)	
	Slide Type		-	BOX GUIDE	
TURRET	No. of Tools		ea	12	
	Tool Size	OD	mm(in)	□25 (1″)	
		ID	mm(in)	Ø40 (1.6″)	
	Indexing Time		sec/step	0.2	
LIVE TOOL	Motor (Max/Cont.)		kW(HP)	5.5/3.7 (7.5/5)	
	Milling Tool Speed (rpm)		r/min	6,000	
	Torque (Max/Cont.)		N·m(lbf·ft)	35.25/21.3 (26/15.7)	
	Collet Size		mm(in)	Ø16(0.6″) (ER25)	
	Type		-	BMT55	
TAIL STOCK	Taper		-	MT#4 [MT#5]	
	Quill Dia.		mm(in)	Ø65 (2.6″) [Ø100 (3.9″)]	
	Quill Travel		mm(in)	80 (3.1″) [120 (4.7″)]	
	Travel		mm(in)	513.7 (20.2″)	
TANK CAPACITY	Coolant Tank		ℓ (gal)	150 (39.6)	
	Lubricating Tank		ℓ (gal)	1.8 (0.5)	
POWER SUPPLY	Electric Power Supply		kVA	23	
	Thickness of Power Cable		Sq	OVER 16	
	Voltage		V/Hz	220/60 (200/50*)	
MACHINE	Floor Space (L×W)		mm(in)	2,925×1,650 (115.2″×65″)	3,024×1,650 (119″×65″)
	Height		mm(in)	1,820 (71.7″)	
	Weight		kg(lb)	4,200 (9,259)	4,300 (9,480)
NC	Controller		-	HW FANUC i Series [HYUNDAI-ITROL]	

*) 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

HYUNDAI WIA FANUC i Series

[ ] : Option

Controlled axis / Display / Accuracy Compensation	
Control axes	2 axes (X, Z) / 3 axes (X, Z, C / X, Z, B) / 4 axes (X, Z, Y, C)
	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	3 axes (1 path)
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 (Rapid traverse / Cutting feed)
Position switch	
LCD / MDI	8.4 inch / 10.4 inch color LCD
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
	Ref. position check : G27
Thread synchronous cutting	
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	F1%, F5%, F25% / 50%, F100%
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 ~ #149, #500 ~ #549
G code system	A
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Direct drawing dimension program	Including Chamfering / Corner R

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 4 digit , Binary output
Spindle override	0% ~ 150% (10% Unit)
Multi position spindle orientation	M 19
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	1280m (512KB)
No. of registerable programs	1000 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	RS 232C serial port, 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 20 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
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

Option	
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
Part program storage size	5120m (2MB)
Polygon turning (2 Spindles)	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Helical interpolation	
Manual Guide i	Conversational auto program
Dynamic graphic display	

Figures in inch are converted from metric values.
The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

CONTROLLER

HYUNDAI-iTROL

Control & Composition	
Number of axis/Spindles	2 axes (X, Z) / 3 axes (X, Z, C)
Number of axis/Spindles, max.	8 axes (Axis + Spindle)
Color display	TFT 10.4" Color (800 x 600)
Keyboard	QWERTY Full Keyboard
Part program storage	1MB, 3MB, 5MB
Addition of part program on CF card	
Transfer Function	
Feedrate override	0% ~ 200%
Transfer value input range	± 999999999
Unlimited rotation of rotation axis	
Acc./Dec. with jerk limitation	
Measuring systems 1 and 2, selectable	
Travel to fixed stop	
Auto servo drive tuning	
Spindle Function	
Spindle override	0% ~ 150%
Spindle speed, max. programmable value range	1000000 ~ 0.0001
Automatic gear stage selection	
Spindle orientation	
Spindle speed limitation	
Rigid tapping	
Spindle control with PLC	
Interpolation	
Linear interpolation axis, max.	4 axis
Circle via center point and end point	
Circle via interpolation point	
Helical interpolation	
Non-uniform rational B splines	
Continuous - path mode with programmable rounding clearance	
Program Function	
Subroutine levels, max.	7
Interrupt routines, max.	2
Number of levels for skip blocks	2
Polar Coordinates	
Dimensions inch/metric, changeover manually or via program	
Dynamic preprocessing memory FIFO	
Look ahead	1
Absolute/Incremental command	G90 / G91
Scaling/Rotation	
Read/Write system variables	
Block search	
Edit background	
Processing program number, max.	750
Using of CF Card, USB	
Basic coordinate number, max.	1
Work coordinate number, max.	100
Basic/Work coordinate programming change	
Scratching function	
Global and Local user data (GUD/LUD)	
Global program user data	
Conversational Cycle Program	
Tool Function	
Tool radius compensations	
Tool offset selection via T/D numbers	
Tools / Cutting edges in tool list	128 / 256, 256 / 512
Monitoring Function	
Working area limit	
Software and Hardware limit	
Zero-speed/Clamping monitoring	
2D/3D protection zones	
Contour monitoring	

Compensation	
Backlash compensation	
Leadscrew error compensation	
Measuring system error compensation	
Feedforward control (Speed control)	
Safety Function	
Safe torque off (STO)	
Safe brake control (SBC)	
Safe stop 1 (SS1)	
Diagnostic Function	
Alarm/Message , Alarm log	
PLC status/LAD online display	
PLC remote connection (Ethernet)	
Automation Support Function	
Actual velocity display	
Tool life management	As time / As amount
Work counter/Cycle time	Embedded
2D simulation	
Manual Operation	
Manual handle/Jog transfer	
Manual measurement of workpiece / tool offset	
Automatic tool/Workpiece measurement	
Automatic/Program reference approach	
Automatic Operation	
Program run as using CF card/USB	
Program control/modification	
Block search	
Reposition	
Preset (Set actual value)	
Data Transmission	
Ethernet network	
USB memory stick & CF card	
Convenience Function	
Processing setting	Coordinate system setting, Auto tool length measurement
Processing support	Tool Monitoring, Spindle overload monitoring
Maintenance	Turret Guidance, I/O monitoring, Manual
Management	Soft MCP, M/G code List
SMART machining	
Energy saving function (ECO)	
Machine Monitoring System (MMS Lite)	
Language	
Standard support language	Chinese Simplified, English, Korean

Option	
Maximum skip block number	10
DRF offset	
MDI program save/load	
Teach-In mode	
3D simulation	Except for working area/Collision check
Real time simulation	
Shop Turn	Conversational Program
Spline interpolation	
Program remote control in network	
Language	Chinese Traditional, French, German, Italian, Portuguese, Spanish

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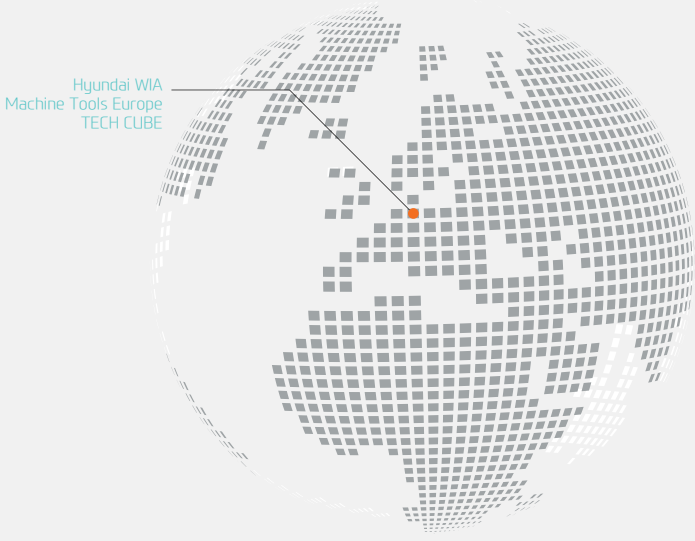
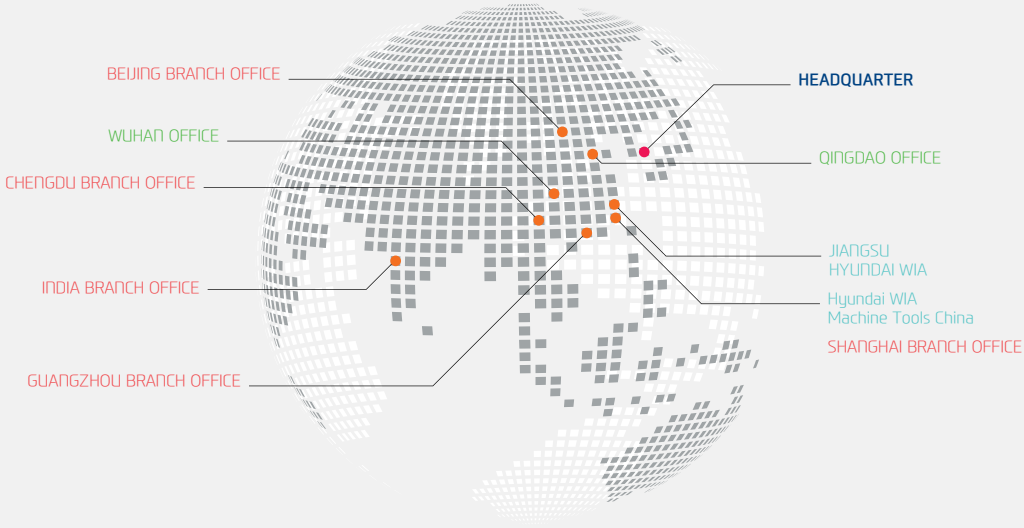
Design and specifications are subject to change without notice.

GLOBAL NETWORK





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HD2200 Movie 1

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2020-01 002.023 ENG