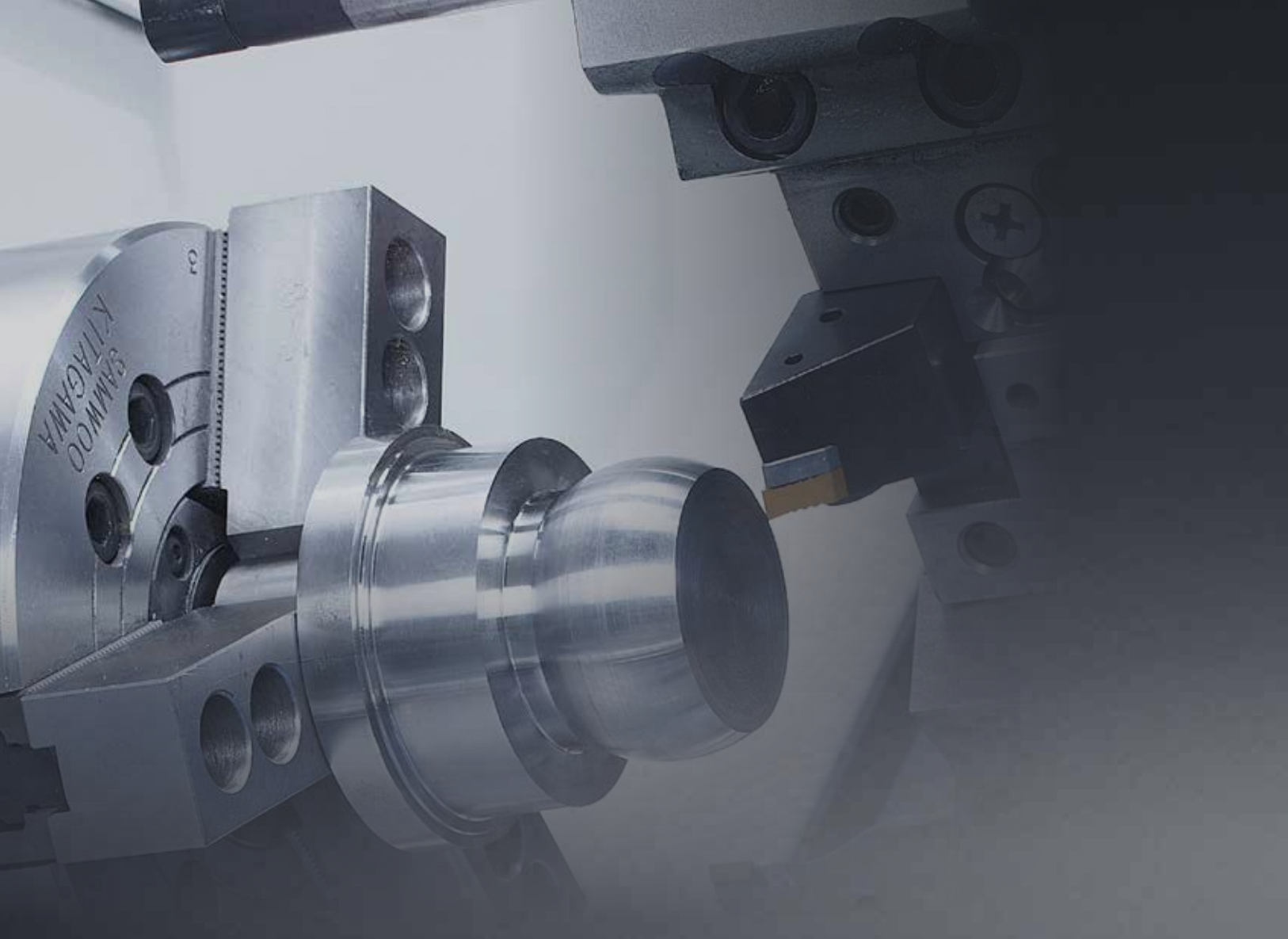


280 Series

L280 | L280L | L280LM

HYUNDAI WIA CNC Turning Center



Technical Leader

L280 series, designed by Hyundai WIA with years of expertise and the latest technology, is a Turning Center that maximizes productivity and performance.

		L280	L280L	L280LM
Max. Turning Dia.	mm(in)	Ø410 (16.1")		Ø300 (11.8")
Max. Turning Length	mm(in)	720 (28.3")	1,070 (42.1")	1,000 (39.4")
Chuck Size	inch	10"		
Bar Capacity	mm(in)	Ø76 (3")		
Sp. Speed	r/min	3,000 [3,000]		3,500 [3,500]
Sp. Motor (Max./Cont.)	kW(HP)	22/18.5 (30/25) [33.6/28 (45/37.5)]		
Travel (X/Z)	mm(in)	220/750 (8.7"/29.5")	220/1,100 (8.7"/43.3")	220/1,020 (8.7"/40.2")
No. of Tools	EA	10 [12]		12 (VDI40)

[] : Option ■ : iTROL

280 Series

New Leader in Middle/Large CNC Turning Center

- Utilizes roller bearings of $\varnothing 140$ ($\varnothing 5.5''$) and double angular contact bearings for the main spindle
- Highly sturdy and reliable servo turret
- Main body designed to achieve high rigidity and accuracy
- A powerful tailstock with a thrust of 7,252 N·m
- Highly efficient HYUNDAI iTROL (Option) - L280/280L



01 BASIC STRUCTURE

The Best Productivity Popular 10 inch CNC Turning Center

High Precision Spindle

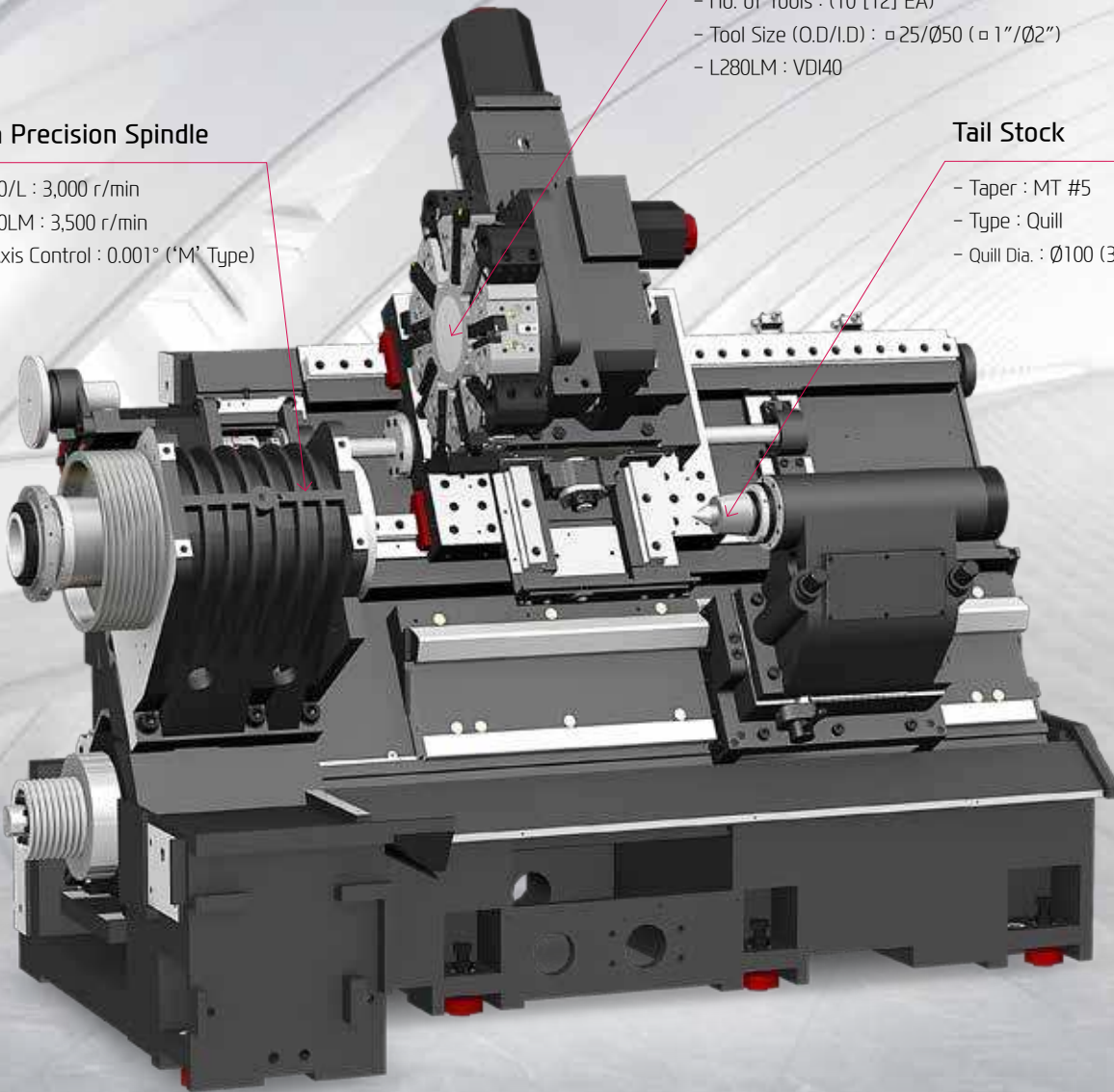
- L280/L : 3,000 r/min
- L280LM : 3,500 r/min
- C-Axis Control : 0.001° (*M' Type)

Turret

- No. of Tools : (10 [12] EA)
- Tool Size (O.D./I.D.) : $\square 25/\varnothing 50$ ($\square 1''/\varnothing 2''$)
- L280LM : VDI40

Tail Stock

- Taper : MT #5
- Type : Quill
- Quill Dia. : $\varnothing 100$ (3.9")

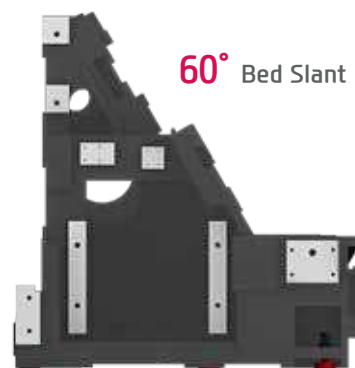


REDUCTION OF NON-CUTTING TIME BY FAST RAPID SPEED

ALL-IN-ONE TYPE OF BED

High Precision & Rigidity, One-Piece Structure

The L280 features a 60° slant bed design which was developed using finite element analysis (FEM) to effectively absorb vibration for stable and precise machining.



Floor Space (L×W)

L280

3,090×1,894 mm

L280L/LM

3,670×1,894 mm

GUIDEWAY

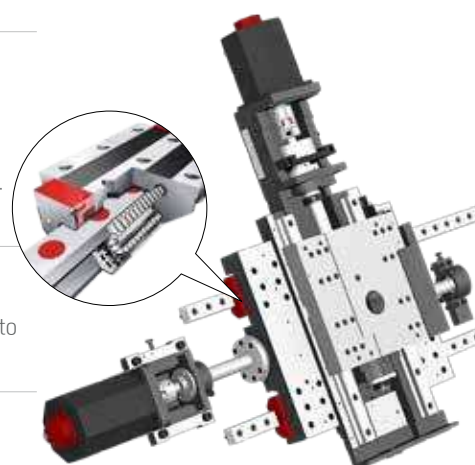
High-Speed Roller LM Guideway

L280 series applies roller type LM guideway on Z-axis which shows excellent performance in travel.

Great repeatability accuracy makes it suitable for precise machining.
(X-axis : Ball Type LM Guide)

Ball Screw

Large diameter ball screws with preloading prevent deformation due to heat. Also double-anchor support method improves rigidity.



Rapid Traverse Rate (X/Z)

25/30 m/min

Travel (X/Z)

(984/1,181 ipm)

L280

220/750 mm

(8.7"/18.1")

L280L

220/1,100 mm

L280LM

220/1,020 mm

02 HIGH PRECISION SPINDLE

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center

Spindle Specifications

[] : Option

MODEL	Spindle Speed	Motor (Max./Cont.)	Torque (Max./Cont.)	Driving Method
L280/L	3,000 rpm (FANUC)	22/18.5 kW (30/25HP)	729.5/613.5 N·m (538/452.5 lbf·ft)	Belt
	[3,000 rpm (iTROL)]	[33.6/28 kW (45/37.4HP)]	[641.4/534.5 N·m (473/394.2 lbf·ft)]	
L280M	3,500 rpm (FANUC)	22/18.5 kW (30/25HP)	493.2/414.7 N·m (363.8/305.9 lbf·ft)	
	[3,500 rpm (iTROL)]	[33.6/28 kW (45/37.4HP)]	[433/360.8 N·m (319.4/266.1 lbf·ft)]	

HEAVY DUTY CUTTING & HIGH ACCURACY

MAIN SPINDLE

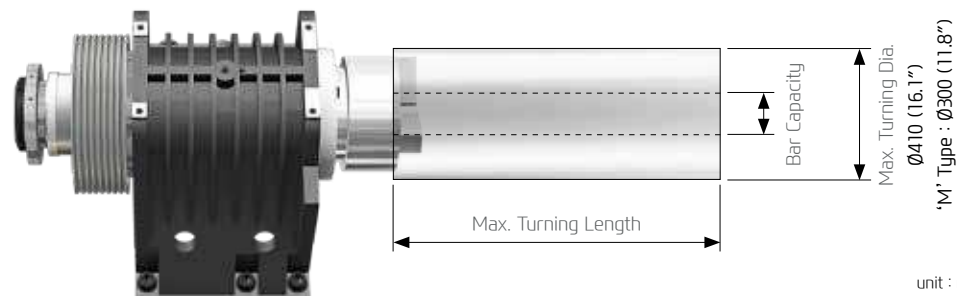
Specialized in High-speed and Rough Cutting

The main spindle unit is designed with $\varnothing 140$ ($\varnothing 5.5''$) roller bearings and double angular contact bearings to maintain stability during high speed machining.

The unit is able to maintain precision for a long time where the outer bearing part is assembled to the highest precision standards. Also, stable machining is possible by AC motor which controls spindle at constant speed.

C-Axis Control (L280LM)

C-axis of L280LM can be controlled to 0.001° which makes it possible to machine various shapes.



unit : mm(in)

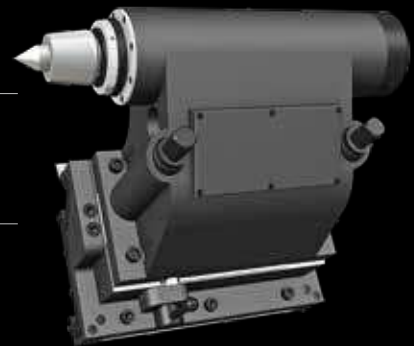
ITEM	L280	L280L	L280LM	Bar Capacity
Max. Turning Length	720 (28.3")	1,070 (42.1")	1,000 (39.4")	$\varnothing 76$ (3")

TAIL STOCK

MT#5 Tail Stock

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

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



03 SERVO TURRET

High speed, High Accuracy, Highly Reliable Servo Turret

Servo Turret

No. of Tools

10 [12]_{EA}

Tool Size (O.D./I.D)

□ 25/Ø50 mm (□ 1"/Ø2")

Indexing Time

0.3_{sec}

Mill Turret

Type	Speed	Motor (Max./Cont)	Torque (Max./Cont)	Collet Size
VDI 40	4,000 rpm	5.5/3.7 kW (7.4/5HP)	35/23.5 N·m (25.8/17.3 lbf·ft)	ER32 (Ø20)

HIGH PERFORMANCE TURRET WITH SERVO MOTOR

SERVO TURRET



HD2200/C Servo Turret

The L280 series has a high performance AC servo motor and 3-piece coupling attached which enhances its machining reliability. Powerful hydraulic tool clamping minimizes tool tip deviation due to load, which enhances heavy duty cutting ability.

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.



MILL TURRET

VDI 40 (L280LM)

The VDI turret engages the holder of each cutting tool with a single bolt, to provide quick tool change convenience.

STRAIGHT MILLING HEAD

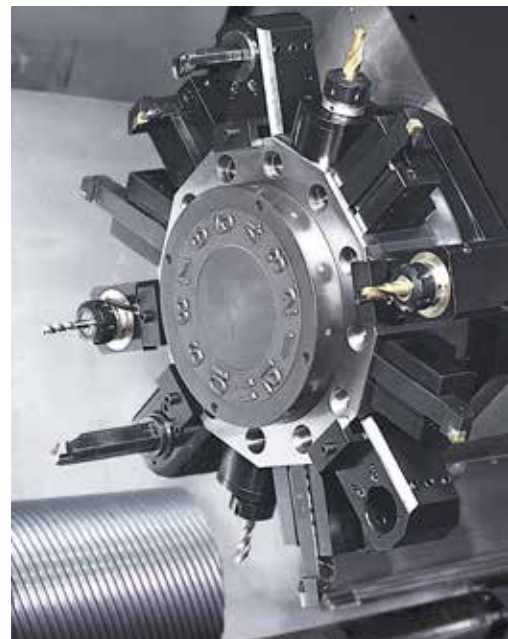


ANGULAR MILLING HEAD



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.



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

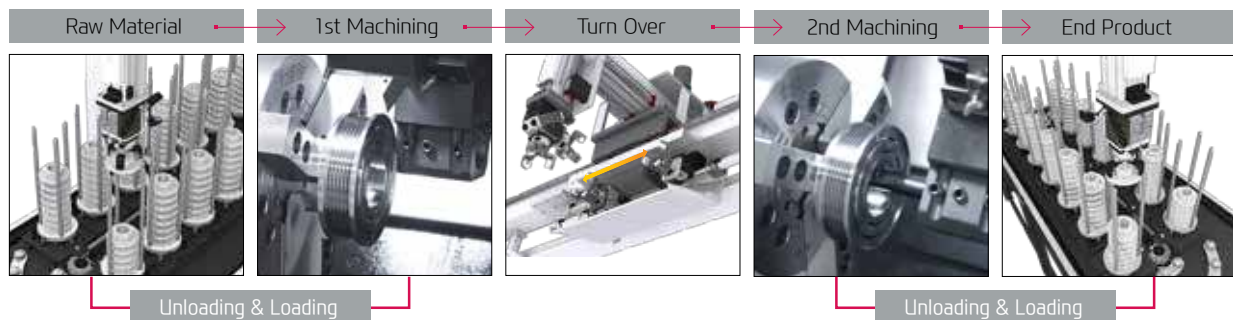
Workpiece coordinate values can be set automatically using the optional spindle probe.

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



MQL : Minimal Quantity Lubrication

Oil Skimmer

Mist Collector

Grease Lubrication Device

SPECIFICATIONS

Standard & Optional

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

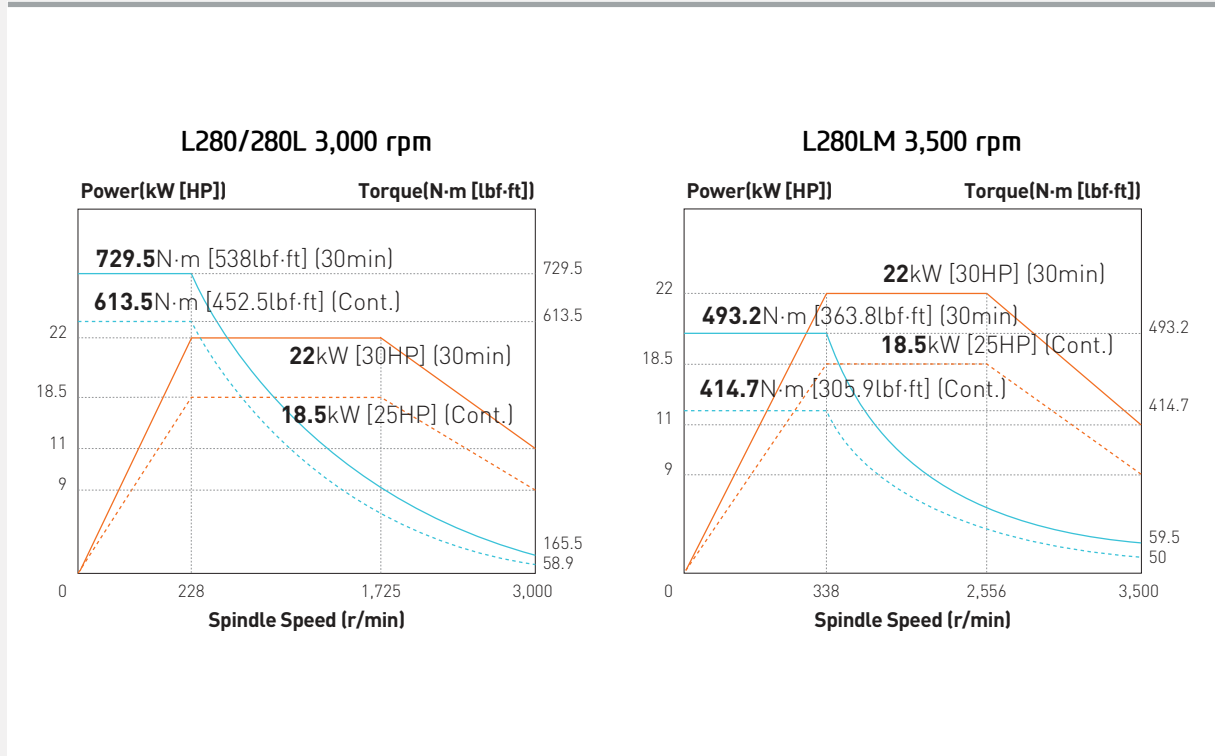
Spindle		L280	L280L	L280LM
Main Spindle	10"	●	●	●
Hollow Chuck 3 Jaw	12"	○	○	○
Main Spindle	10"	☆	☆	☆
Solid Chuck 3 Jaw	12"	☆	☆	☆
Standard Soft Jaw (1set)		●	●	●
Chuck Clamp Foot Switch		●	●	●
2 Steps Hyd. Pressure Device		○	○	○
Spindle Inside Stopper		☆	☆	☆
Cs-Axis (0.001")		-	-	●
Chuck Open/Close Confirmation Device		○(CE:●)	○(CE:●)	○(CE:●)
2 Steps Chuck Foot Switch		○	○	○
Turret				
Tool Holder		●	●	●
10 station Turret		●	●	-
12 station Turret		○	☆	●
Mill Turret	VDI	-	-	●
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		○	○	○
U-Drill Holder Sleeve		○	○	○
O.D Extension Holder	For Out-Dia	☆	☆	-
Angle Head		-	-	☆
Tail Stock & Steady Rest				
Quill Type Tail Stock	MT#5	●	●	●
Built in Tail Stock	MT#4	○	○	-
Programmable Tail Stock		○	○	○
Manual Type Steady Rest		☆	☆	☆
Manual Type Hyd. Steady Rest		○	○	○
Standard Live Center		●	●	●
2 Steps Tail Stock Pressure System		☆	☆	☆
Quill Forward/Reverse Confirmation Device		○(CE:●)	○(CE:●)	○(CE:●)
Tail Stock Foot Switch		●	●	●
Coolant & Air Blow				
Standard Coolant (Nozzle)		●	●	●
Chuck Coolant (Upper Chuck)		○	○	○
Gun Coolant		○	○	○
Through Spindle Coolant (Only for Special Chuck)		☆	☆	☆
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	0.4Bar (5.8psi)	●	●	●
	1.5Bar (21.7psi)	○	○	○
	14.5Bar (210.2psi)	○	○	○
	20Bar (290psi)	○	○	○
Power Coolant System (For Automation)		☆	☆	☆
Coolant Chiller		☆	☆	☆
Chip Disposal				
Coolant Tank	180 ℓ (47.6 gal)	●	-	-
	200 ℓ (52.8 gal)	-	●	●
Chip Conveyor (Hinge/Scraper)	Front (Right)	○	○	○
	Front (Rear)	○	☆	☆
Special Chip Conveyor (Drum Filter)		☆	☆	☆
Chip Wagon	Standard (180 ℓ [47.5 gal])	○	○	○
	Swing (200 ℓ [52.8 gal])	○	○	○
	Large Swing (290 ℓ [76.6 gal])	○	○	○
	Large Size (330 ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆

Safety Device		L280	L280L	L280LM
Total Splash Guard		●	●	●
Chuck hydraulic pressure maintenance interlock		○(CE:●)	○(CE:●)	○(CE:●)
Electric Device				
Call Light	1Color : ●	●	●	●
Call Light & Buzzer	3Color : ●●● B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		○	○	○
Work Counter	Digital	○	○	○
Total Counter	Digital	○	○	○
Tool Counter	Digital	○	○	○
Multi Tool Counter	Digital	○	○	○
Electric Circuit Breaker		○	○	○
AVR (Auto Voltage Regulator)		☆	☆	☆
Transformer	30kVA	○	○	○
Auto Power Off		○	○	○
Measurement				
Q-Setter		●	●	●
Automatic Q-Setter		○	○	○
Work Close Confirmation Device (Only for Special Chuck)	TACO	○	○	○
	SMC	○	○	○
Work Setter (REANISHAW/MARPOSS)		○	○	☆
Linear Scale	X axis	-	-	-
	Z axis	☆	☆	☆
Coolant Level Sensor (Only for Chip Conveyor)		☆	☆	☆
Environment				
Air Conditioner	FANUC	○	○	○
	HYUNDAI-ITROL	●	●	●
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		☆	☆	☆
Hyd. Device				
Standard Hyd. Cylinder	Hollow	●	●	●
Standard Hyd. Unit	35bar (507.6 psi)/ 20 ℓ (5.3 gal)	●	●	●
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		☆	☆	☆

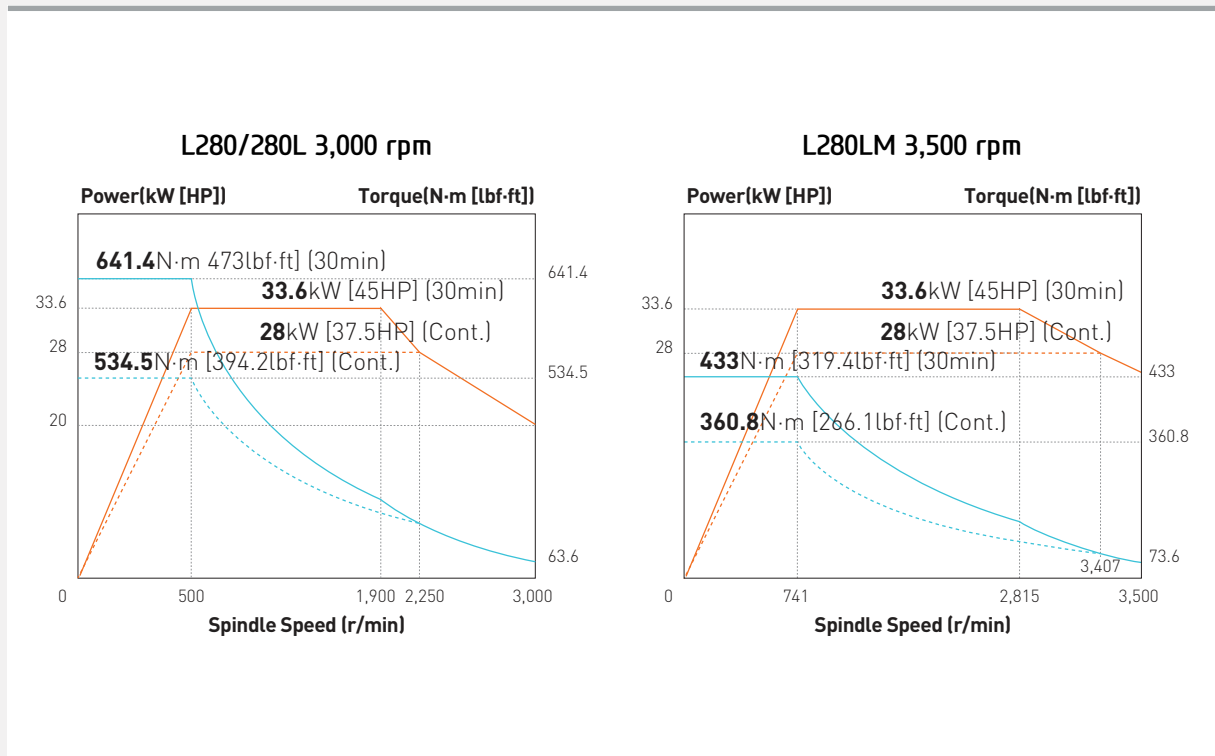
❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining. Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Spindle Output/Torque Diagram (HYUNDAI WIA FANUC i Series)



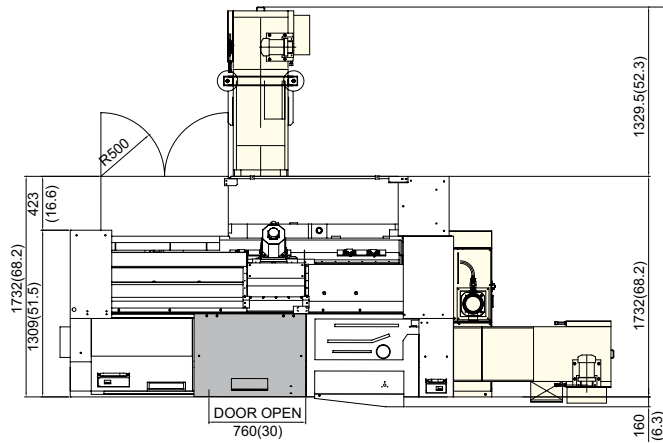
Spindle Output/Torque Diagram (HYUNDAI iTROL)



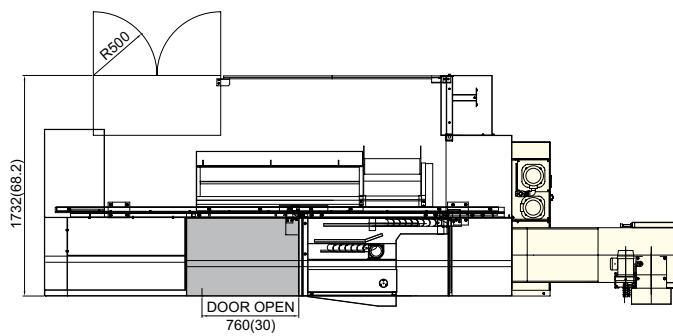
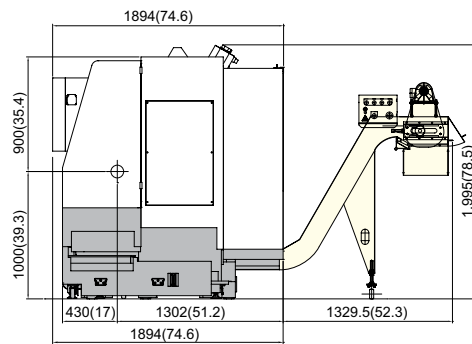
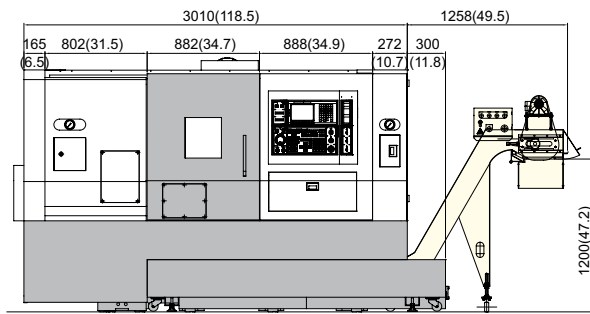
SPECIFICATIONS

External Dimensions

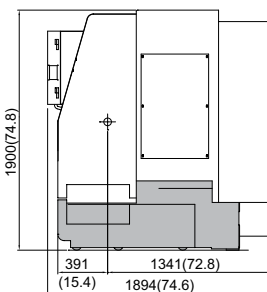
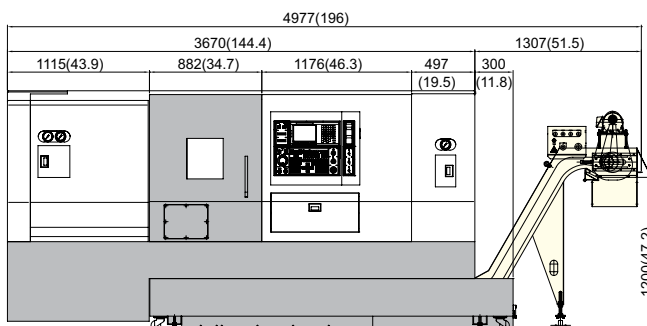
unit : mm(in)



L280



L280L/LM

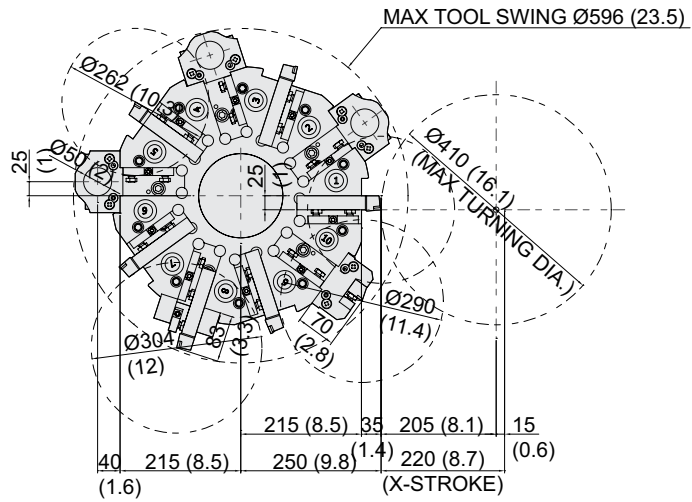


SPECIFICATIONS

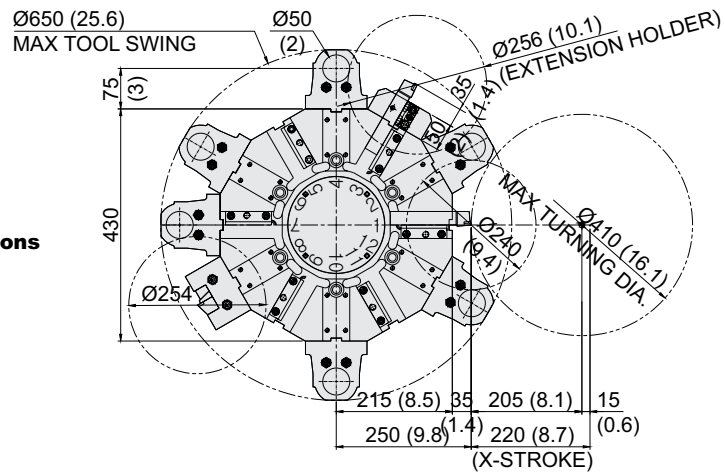
Interference

unit : mm(in)

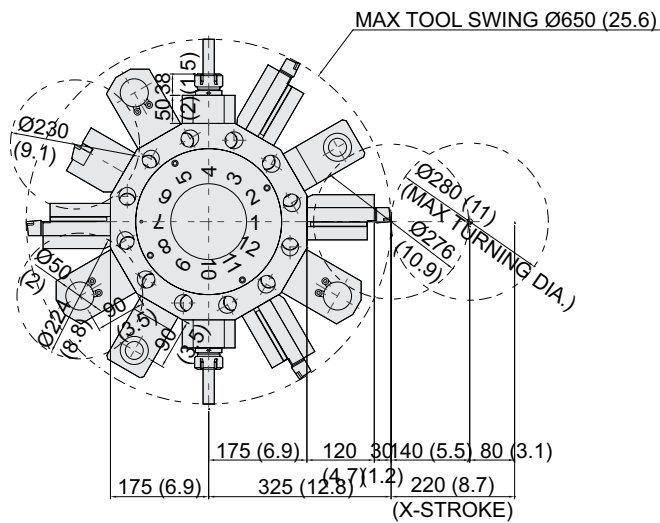
**L280/L
10 Stations**



**L280/L
12 Stations**



**L280LM
12 Stations**

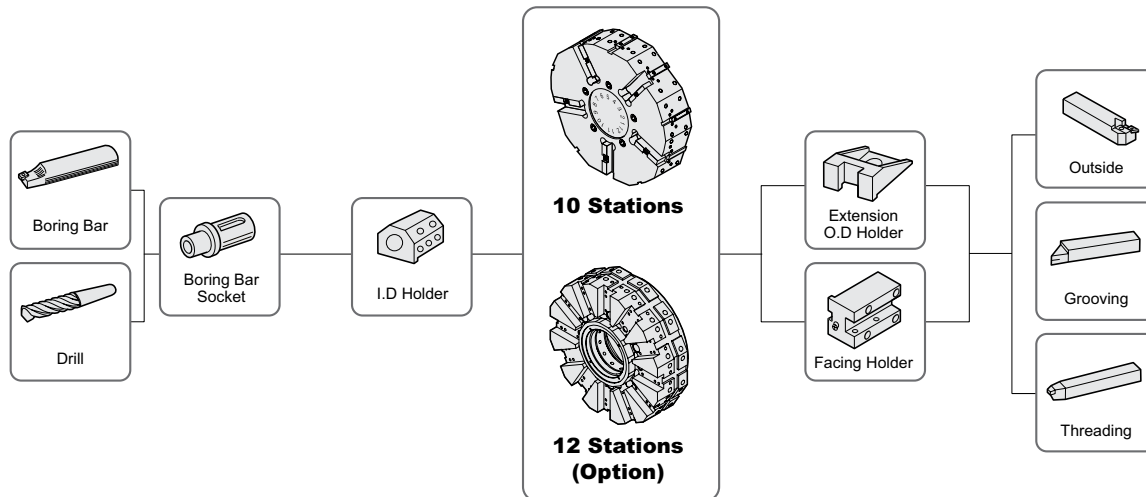


SPECIFICATIONS

Tooling System

unit : mm(in)

L280/L



Tooling Parts Detail

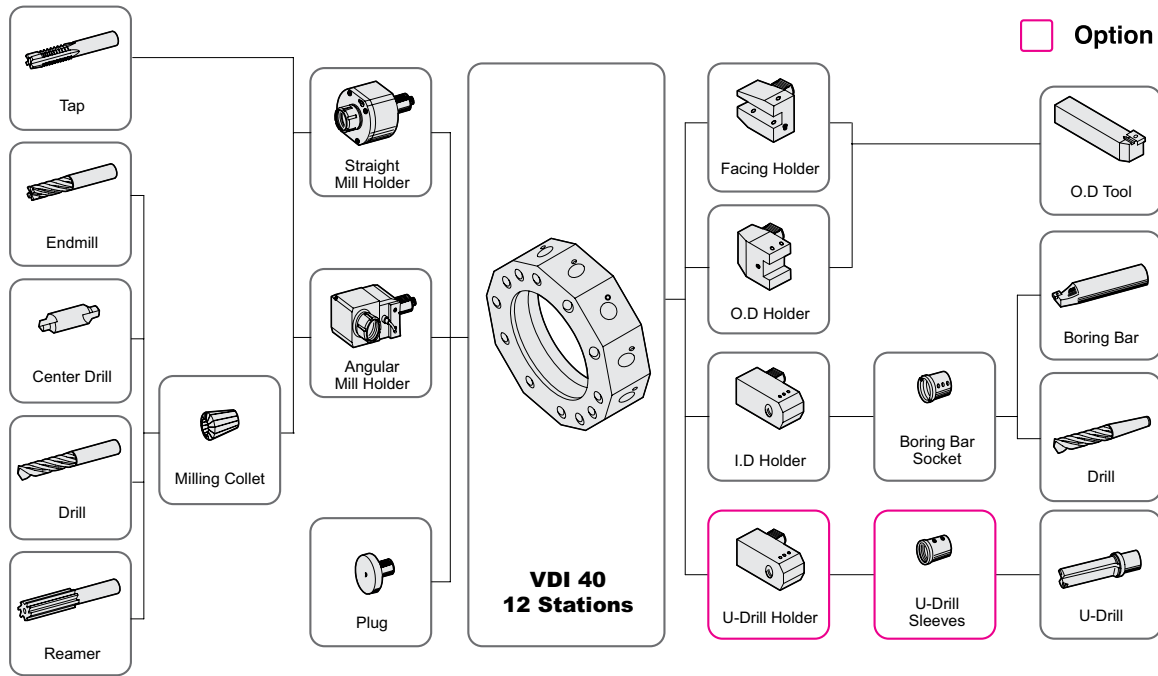
ITEM			L280/L				
			mm 단위		inch 단위		
			10 Station	12 Station (Opt.)	10 Station	12 Station (Opt.)	
Turning Holder	Extension O.D Holder	Right/Left	1	1	1	1	
	Facing Holder		1	1	1	1	
Boring Holder	I.D Holder	Single	3	5	3	5	
Driven Holder	Straight Mill Holder	Standard	-	-	-	-	
	Angular Mill Holder	Standard	-	-	-	-	
Socket	Boring	Ø16 (Ø5/8")	-	-	-	-	
		Ø20 (Ø3/4")	1	1	1	1	
		Ø25 (Ø1")	-	-	-	-	
		Ø32 (Ø1 1/4")	1	1	1	1	
		Ø40 (Ø1 1/2")	-	-	-	-	
		Ø45 (Ø1 3/4")	-	-	-	-	
	Drill	MT 2		1	1	1	1
		MT 3		1	1	1	1
		MT 4		1	1	1	1
	ER Collet		-	-	-	-	

SPECIFICATIONS

Tooling System

unit : mm(in)

L280LM



Tooling Parts Detail

ITEM	L280LM				
	mm Unit	inch Unit			
Turning Holder	O.D Holder	Left	4	4	
	Facing Holder		1	1	
Boring Holder	I.D Holder	Single	3	3	
Driven Holder	Straight Mill Holder	Standard	2	2	
	Angular Mill Holder	Standard	2	2	
Socket	Boring	Ø16 (Ø5/8")	1	-	
		Ø20 (Ø3/4")	1	1	
		Ø25 (Ø1")	1	1	
		Ø32 (Ø1 1/4")	1	1	
		Ø40 (Ø1 1/2")	1	1	
		Ø45 (Ø1 3/4")	-	1	
	Drill	MT 1 x MT 2		1	1
		MT 2		1	1
		MT 3		1	1
	ER Collet			1 Set	1 Set

Specifications are subject to change without notice for improvement.

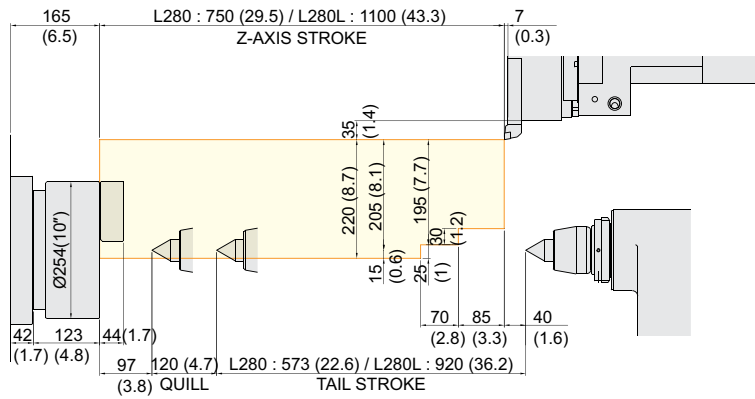
SPECIFICATIONS

Tooling Travel Range

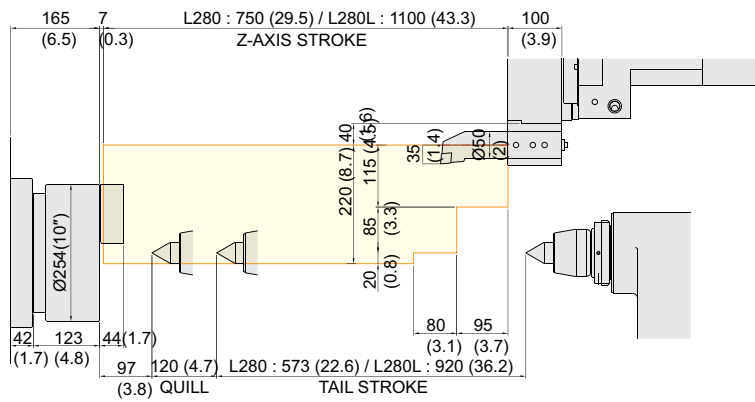
unit : mm(in)

L280/L

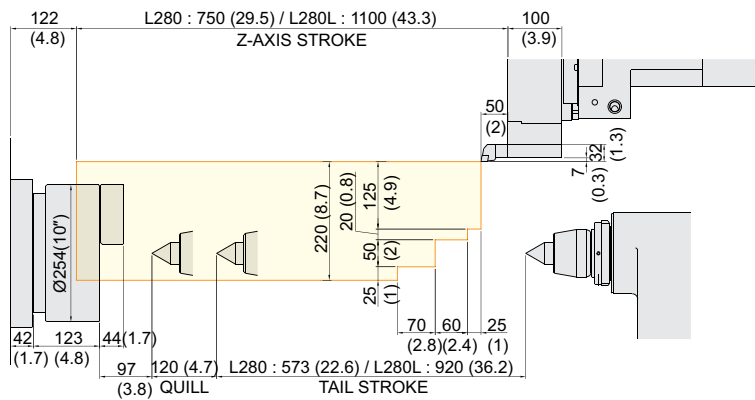
OD



BORING HOLDER



FACING HOLDER



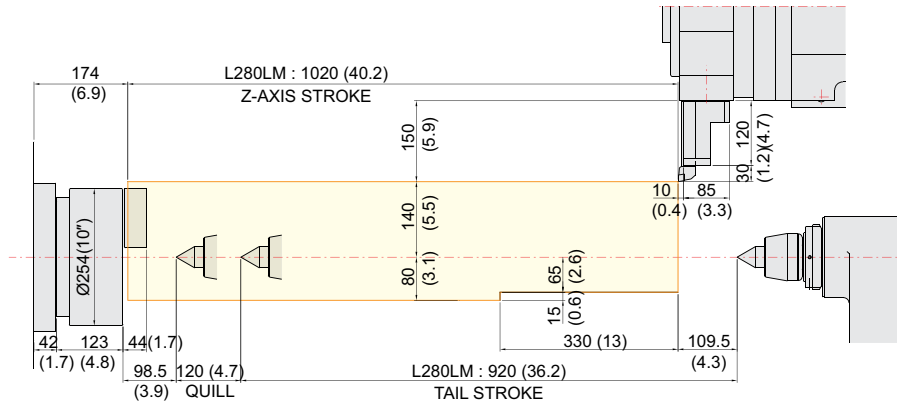
SPECIFICATIONS

Tooling Travel Range

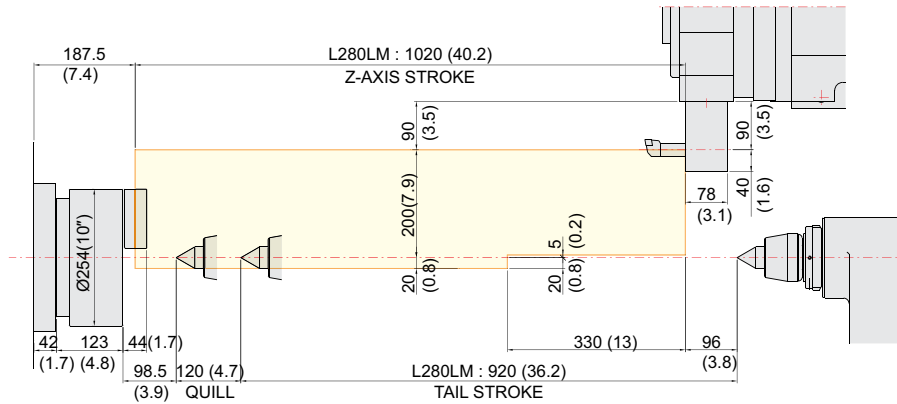
unit : mm(in)

L280LM

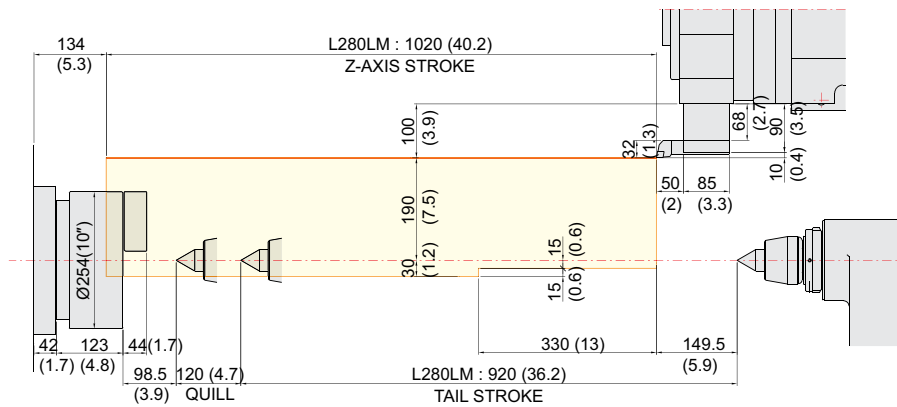
OD



BORING HOLDER



FACING HOLDER



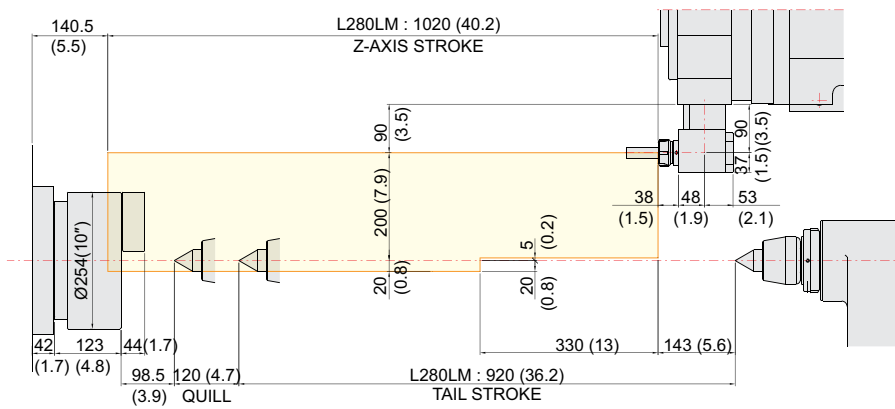
SPECIFICATIONS

Tooling Travel Range

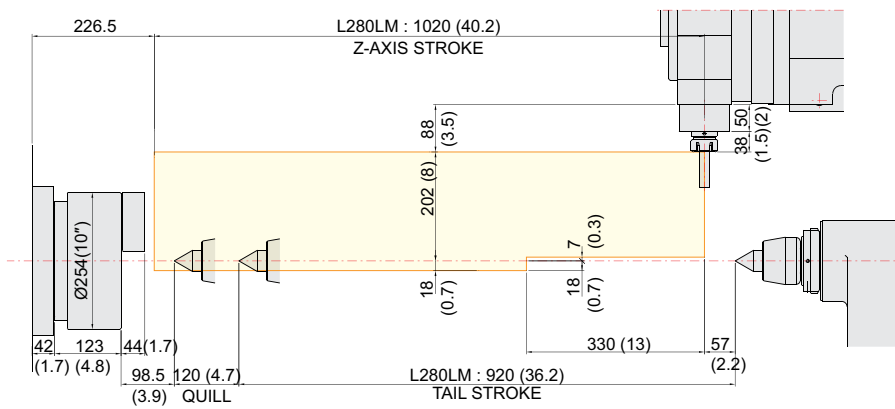
unit : mm(in)

L280LM

ANGULAR MILL HOLDER



STRAIGHT MILL HOLDER



SPECIFICATIONS

Specifications

[] : Option

ITEM		L280	L280L	L280LM	
CAPACITY	Swing Over the Bed	mm(in)	Ø590 (23.2")		
	Swing Over the Carriage	mm(in)	Ø375 (14.8")		
	Max. Turning Dia.	mm(in)	Ø410 (16.1")		
	Max. Turning Length	mm(in)	720 (28.3")	1,070 (42.1")	1,000 (39.4")
	Bar Capacity	mm(in)	Ø76 (3")		
SPINDLE	Chuck Size	inch	10"		
	Spindle Bore	mm(in)	Ø95 (3.7")		
	Spindle Speed (rpm)	r/min	3,000 [3,000]		3,500 [3,500]
	Motor (Max/Cont.)	kW(HP)	22/18.5 (30/25) [33.6/28 (45/37.5)]		22/18.5 (30/25) [33.6/28 (45/37.5)]
	Torque (Max/Cont.)	N·m(lbf·ft)	729.5/613.5 (538/452.5) [641.4/534.5 (473/394.2)]		493.2/414.7 (363.8/305.9) [433/360.8 (319.4/266.1)]
	Spindle Type	-	BELT		
	Spindle Nose	-	A2-8		
	C-axis Indexing	deg	-		0.001°
FEED	Travel (X/Z/B)	mm(in)	220/750 (8.7"/29.5")	220/1,100 (8.7"/43.3")	220/1,020 (8.7"/40.2")
	Rapid Traverse Rate (X/Z)	m/min(ipm)	25/30 (984/1,181)		
	Slide Type	-	LM GUIDE		
TURRET	No. of Tools	EA	10		12
	Tool Size	OD	□ 25 (1")		
		ID	Ø50 (2")		
	Indexing Time	sec/step	0.3		
LIVE TOOL	Motor (Max/Cont.)	kW(HP)	-		5.5/3.7 (7.4/5)
	Milling Tool Speed (rpm)	r/min	-		4,000
	Torque (Max/Cont.)	N·m(lbf·ft)	-		35/23.5 (25.8/17.3)
	Collet Size	mm(in)	-		Ø20 (0.8") ER32
	Type	-	-		VDI40
TAIL STOCK	Taper	-	MT#5		
	Quill Dia.	mm(in)	Ø100 (3.9")		
	Quill Travel	mm(in)	120 (4.7")		
	Travel	mm(in)	570 (22.4")	920 (36.2")	
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	24		27
	Thickness of Power Cable	Sq	Over 25		
	Voltage	V/Hz	220/60 (200/50*)		
MACHINE	Floor Space (L×W)	mm(in)	3,090×1,894 (121.7"×74.6")	3,670×1,894 (144.5"×74.6")	
	Height	mm(in)	1,995 (78.5")		
	Weight	kg(lb)	6,100 (13,448)	8,000 (17,637)	8,100 (17,857)
PC	Controller	-	HYUNDAI WIA FANUC i Series [FANUC 32i-B] [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	Tool Number 2 digit + Offset 2 digit
Tool life management	
Tool offset pairs	64 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

FANUC 32i-B

[] : Option

Controlled axis / Display / Accuracy Compensation	
Control axes	2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X, Z, Y, C) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A)
Simultaneously controlled axes	2 axes [Max. 4 axes]
Designation of spindle axes	4 axes (1 path), 6 axes (2 path Total)
Least setting Unit	X, Z, Y, B axes : 0.001 mm (0.0001 inch) 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	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, Program check
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%, 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
Multiple repetitive cycles I, II	

Program input	
Canned cycle for turning	
Manual Guide i	Conversational auto program
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	M19
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	32 pairs
Tool nose radius compensation	G40, G41, G42
Geometry / Wear compensation	
Direct input of offset measured B	
Editing function	
Part program storage size	640m (256KB)
No. of registerable programs	500 ea
Program protect	
Background editing	
Extended part program editing	Copy, move and change of NC program
Memory card program edit	
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	
Additional optional block skip	9 ea
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Tool offset pairs	64 pairs / 99 pairs / 200 pairs
Part program storage size	1280 m (512KB) / 2560m (1MB)
Polygon turning (2 Spindles)	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Helical interpolation	
Dynamic graphic display	
Direct drawing dimension program	Including Chamfering / Corner R

Figures in inch are converted from metric values.

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

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	

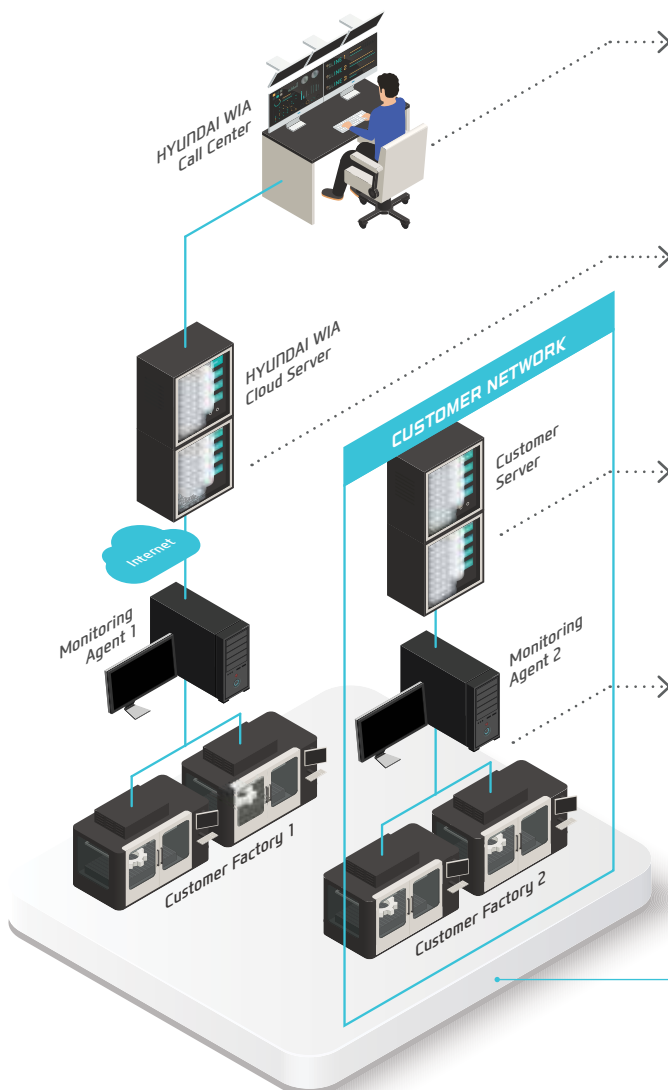
Compensation	
Backlash compensation	
Leadscrew error compensation	
Measuring system error compensation	
Feedforward control (Speed control)	
Safety Function	
Safe torque off (STO)	
Safe brake control (SBC)	
Safe stop 1 (SS1)	
Diagnostic Function	
Alarm/Message . Alarm log	
PLC status/LAD online display	
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/Log 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

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



L280
Movie



You Tube HYUNDAI WIA MT

www.youtube.com/HYUNDAIWIAMT

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