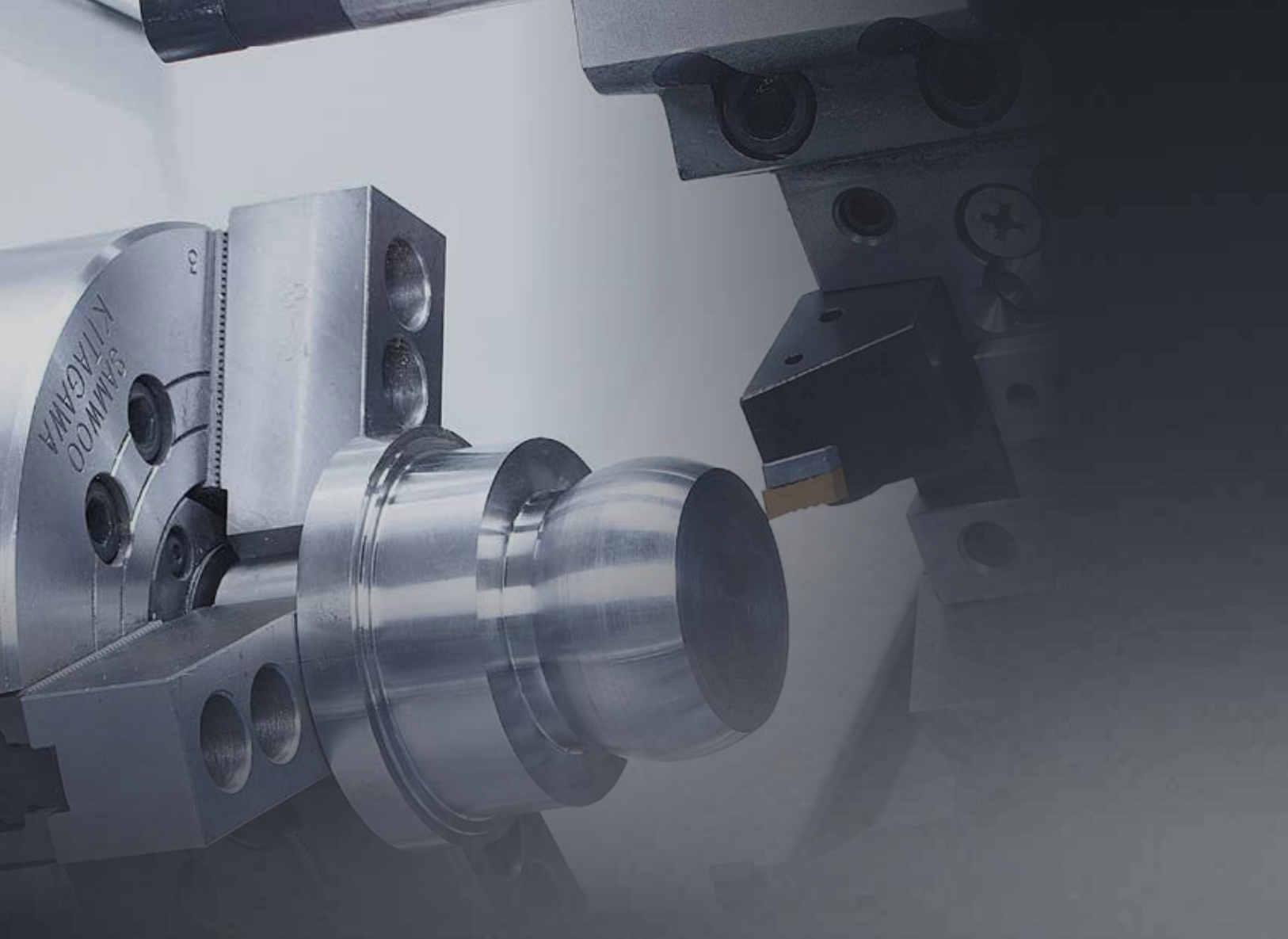


280 Series

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

L 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)



01 BASIC STRUCTURE

The Best Productivity Popular 10 inch CNC Turning Center

High Precision Spindle

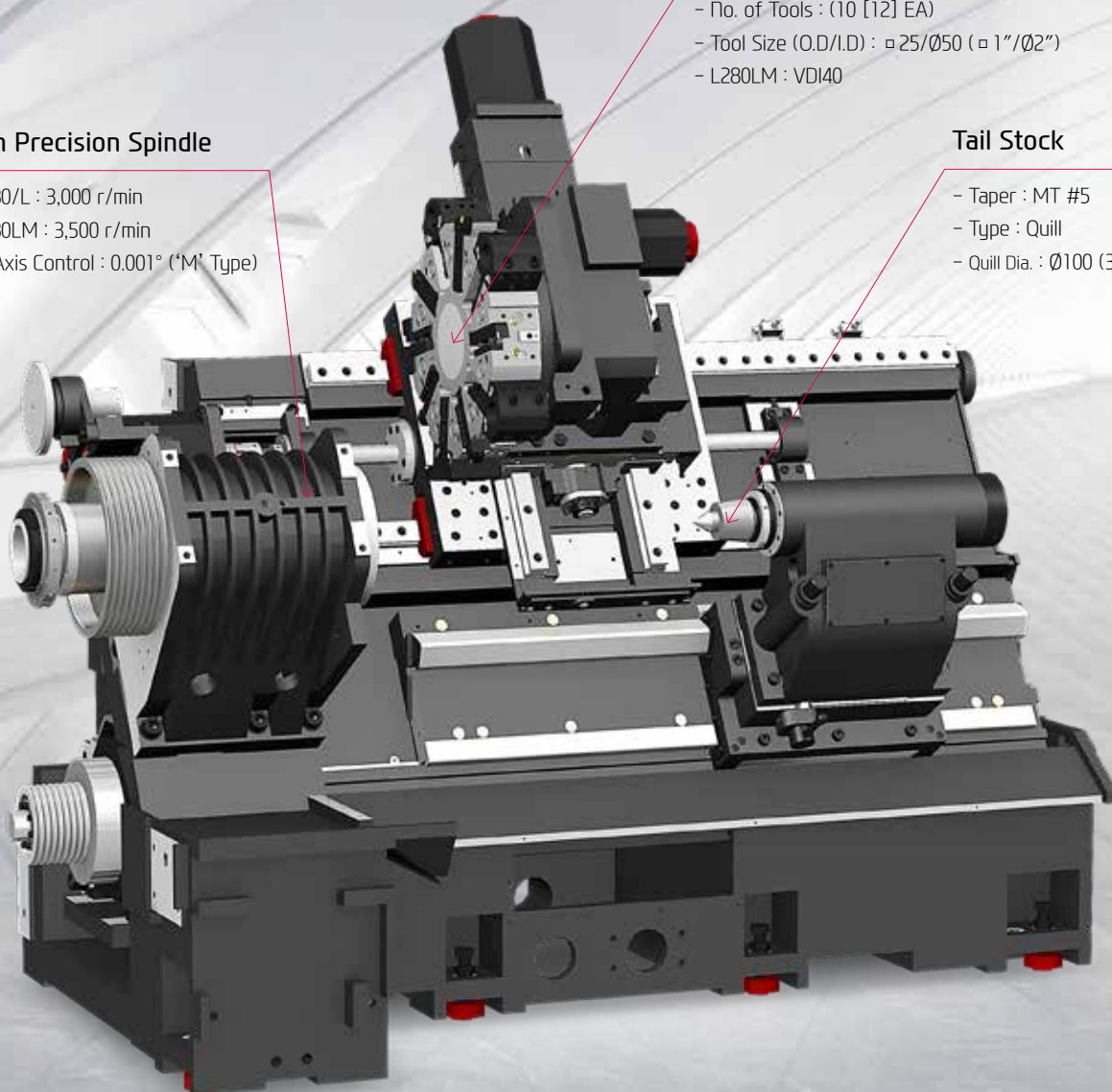
- L280/L : 3,000 r/min
- L280LM : 3,500 r/min
- C-Axis Control : 0.001° ('M' Type)

Turret

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

Tail Stock

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

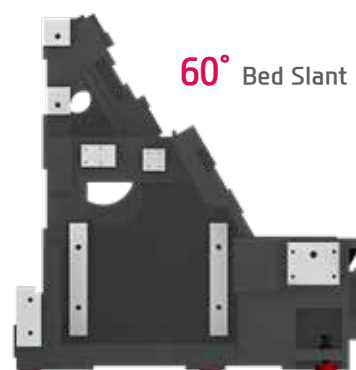


REDUCTION OF NON-CUTTING TIME BY FAST RAPID SPEED

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.



60° Bed Slant

Floor Space (L×W)

L280

3,090×1,894 mm

L280L/LM

3,670×1,894 mm

GUIDEWAY

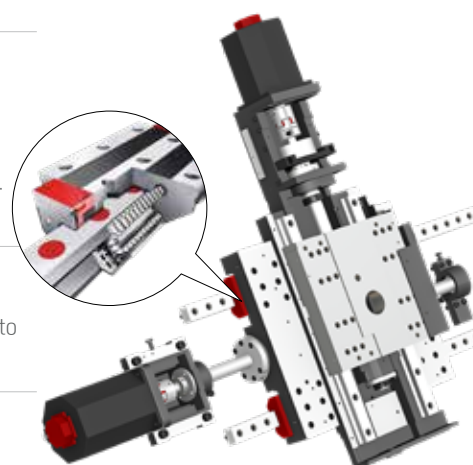
High-Speed Roller LM Guideway

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

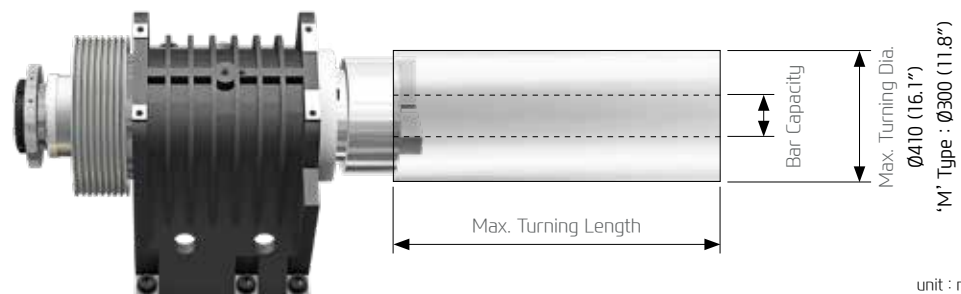
Specialized in High-speed and Rough Cutting

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)

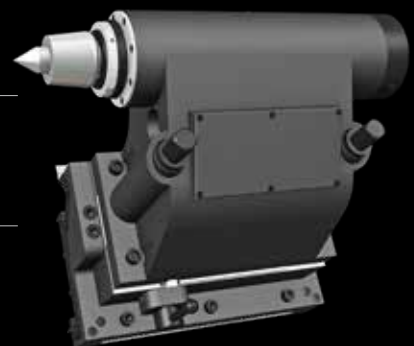
ITEM	L280	L280L	L280LM	Bar Capacity
Max. Turning Length	720 (28.3")	1,070 (42.1")	1,000 (39.4")	$\varnothing 76$ (3")

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

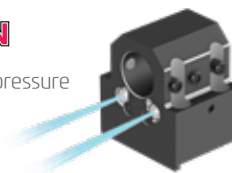


HD2200/C Servo Turret

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.



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.



Parts Conveyor

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



Auto Door

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



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

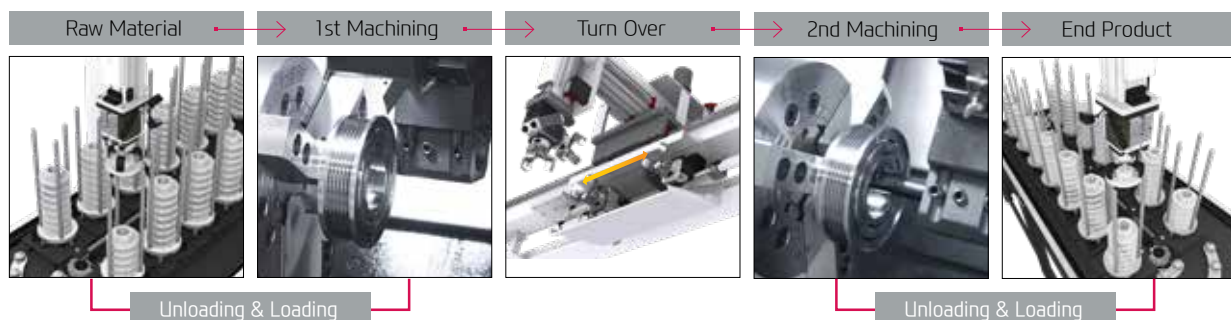
Workpiece coordinate values can be set automatically using the optional spindle probe.

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.

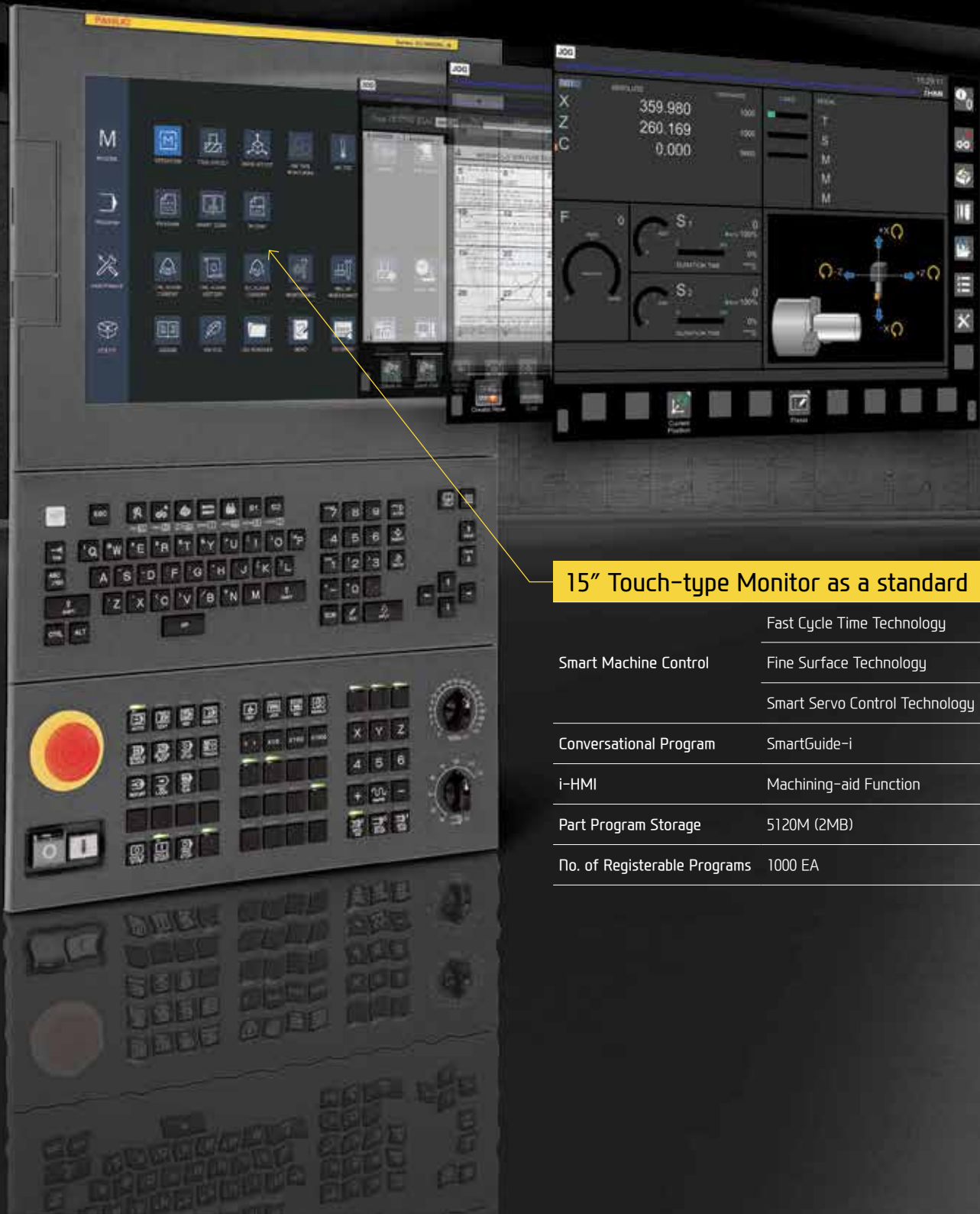


COOLANT UNIT & ECO SYSTEM



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

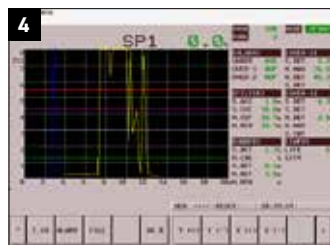
SMART SOFTWARE



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

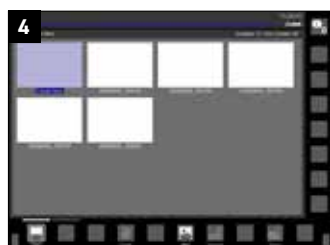
3. LAUNCHER

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		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	☆	☆	☆

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

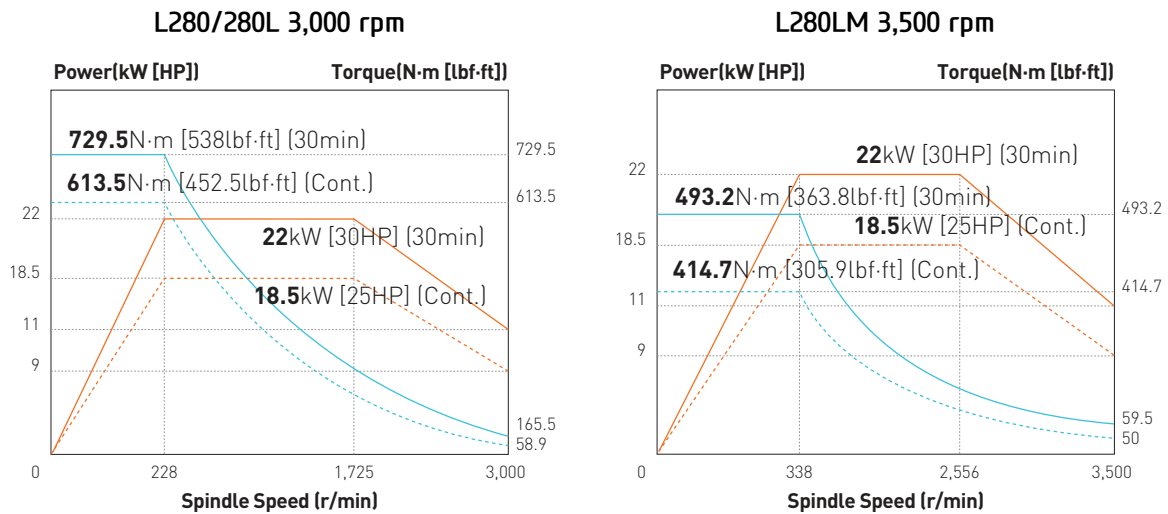
Safety Device		L280	L280L	L280LM
Total Splash Guard		●	●	●
Back Spin Torque Limiter (BST)		●	●	●
Chuck Hydraulic Pressure Maintenance Interlock		☆	☆	☆
Electric Device				
Call Light	1Color : ●	●	●	●
Call Light & Buzzer	3Color : ● ● ● B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		○	○	○
Work Counter	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		○	○	○
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				
DNC software (HW-eDNC)		○	○	○
Machine Monitoring System (HW-MMS Cloud/Edge/Remote)		○	○	○
Machine Monitoring System & Analysis (HW-MMS Edge Plus)		☆	☆	☆
Automation CAM program (HW-ACAM)		○	○	-
Conversational program (HW-DPRO)		○	○	○
SmartGuide-i : FANUC		●	●	●
Thermal Displacement Compensation (HW-TDC)		○	○	○
Tool Monitoring (HW-TM) : FANUC		○	○	○
Machine Guidance (HW-MCG) : FANUC		●	●	●
Energy Saving System (HW-ESS) : FANUC		●	●	●
Premium Tool Operation : FANUC		● (F32i : -)	● (F32i : -)	● (F32i : -)
Manual Viewer : FANUC		● (F32i : -)	● (F32i : -)	● (F32i : -)
Scheduling : FANUC		● (F32i : -)	● (F32i : -)	● (F32i : -)
Operation Memo : FANUC		● (F32i : -)	● (F32i : -)	● (F32i : -)
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.

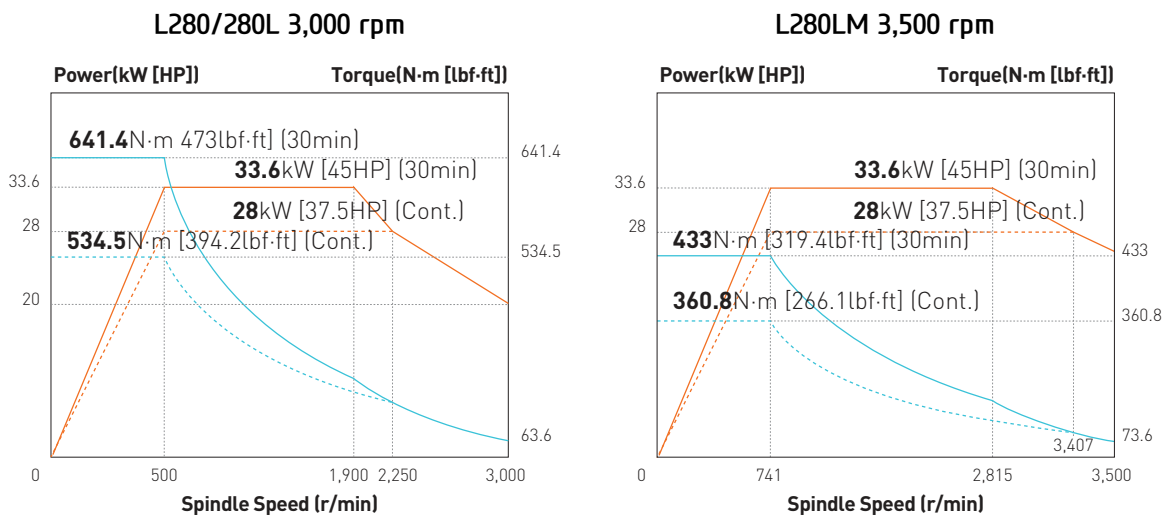
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

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



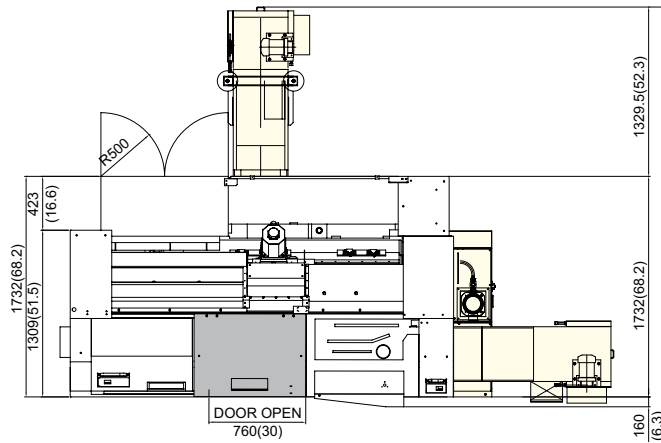
Spindle Output/Torque Diagram (HYUNDAI iTROL)



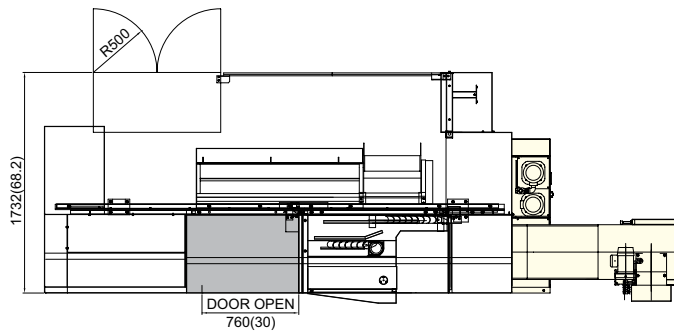
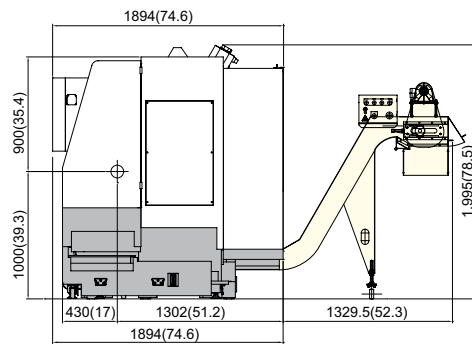
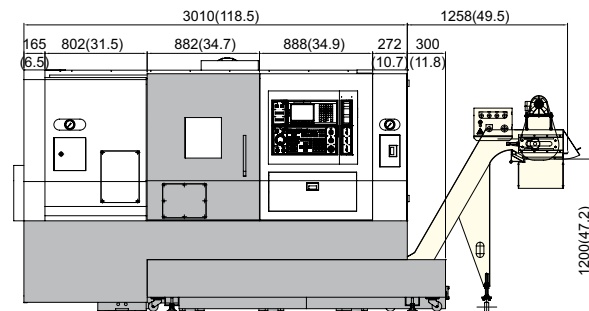
SPECIFICATIONS

External Dimensions

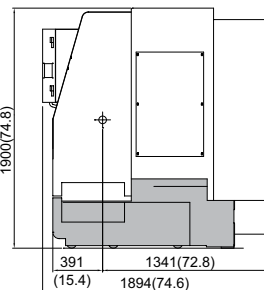
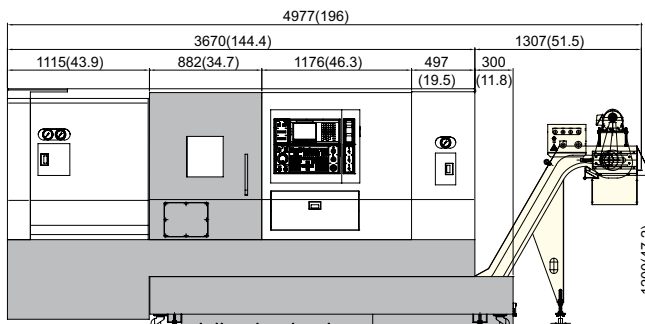
unit : mm(in)



L280



L280L/LM

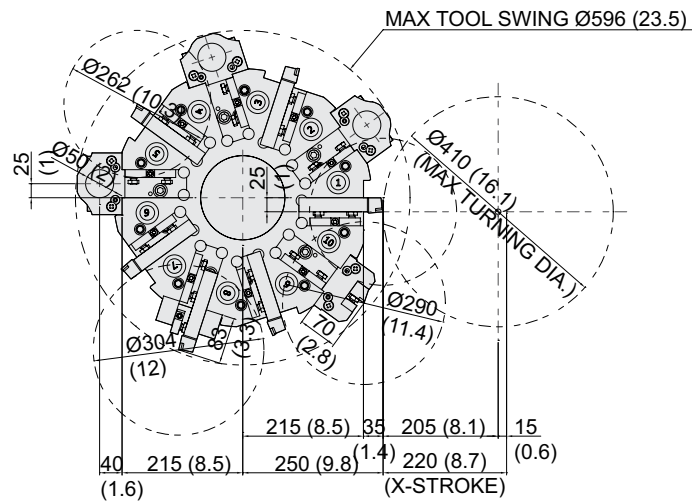


SPECIFICATIONS

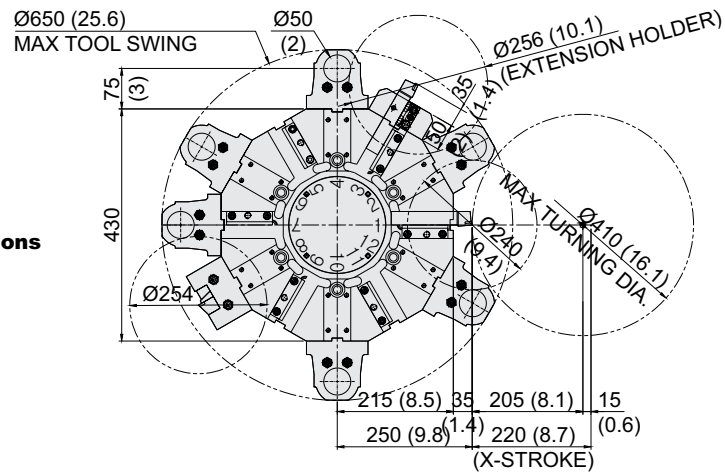
Interference

unit : mm(in)

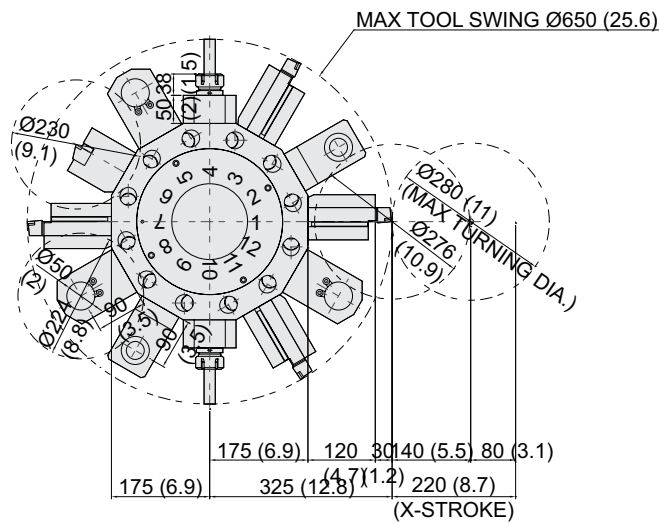
**L280/L
10 Stations**



**L280/L
12 Stations**



**L280LM
12 Stations**

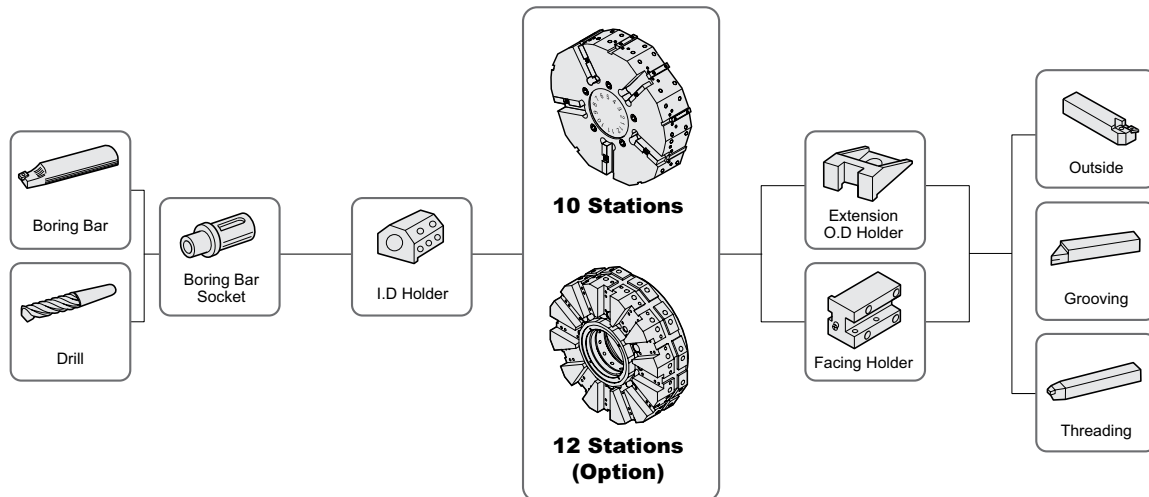


SPECIFICATIONS

Tooling System

unit : mm(in)

L280/L



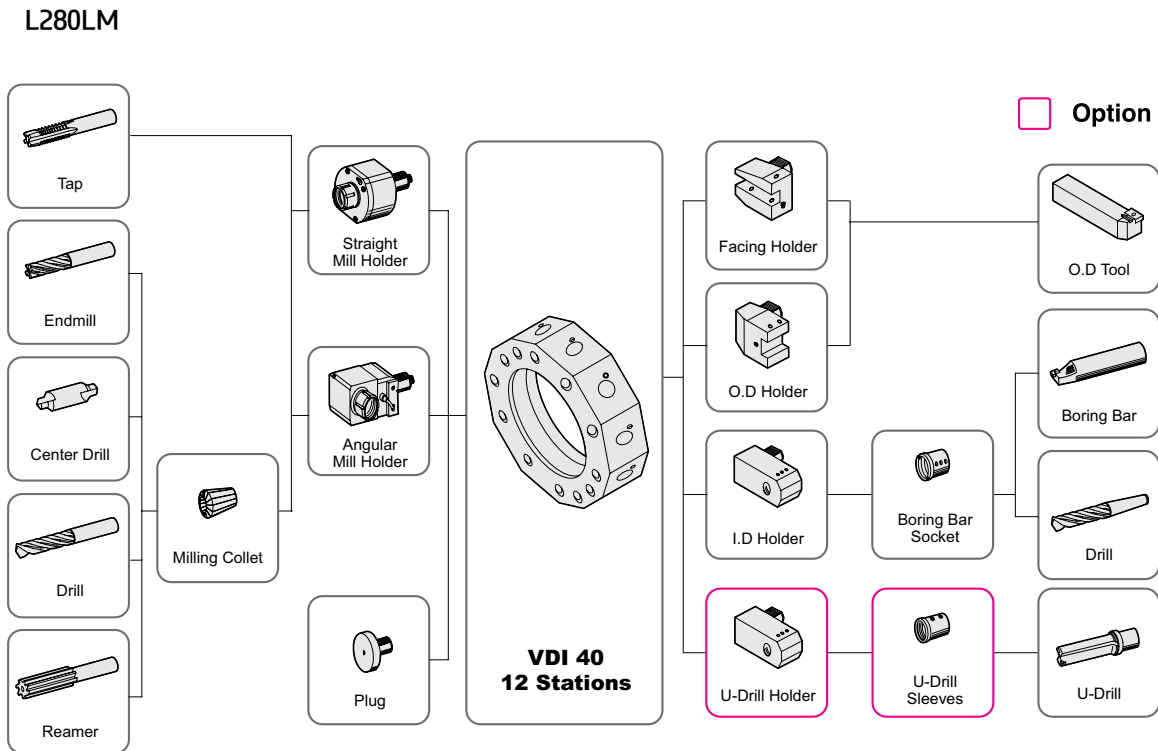
Tooling Parts Detail

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)



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.

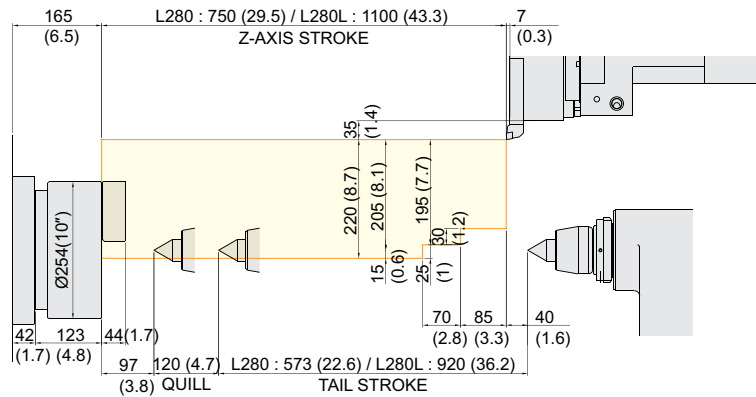
SPECIFICATIONS

Tooling Travel Range

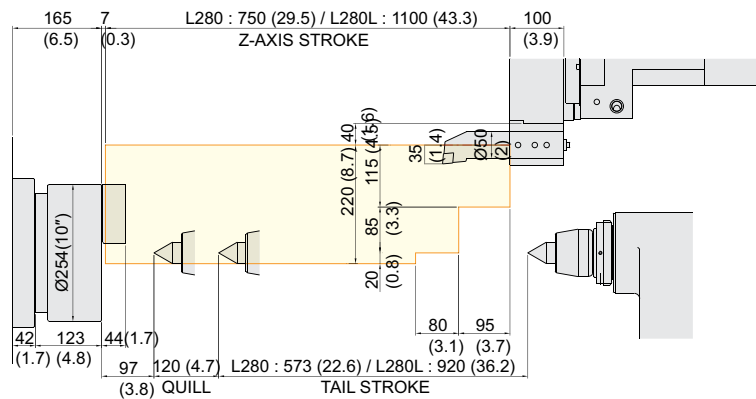
unit : mm(in)

L280/L

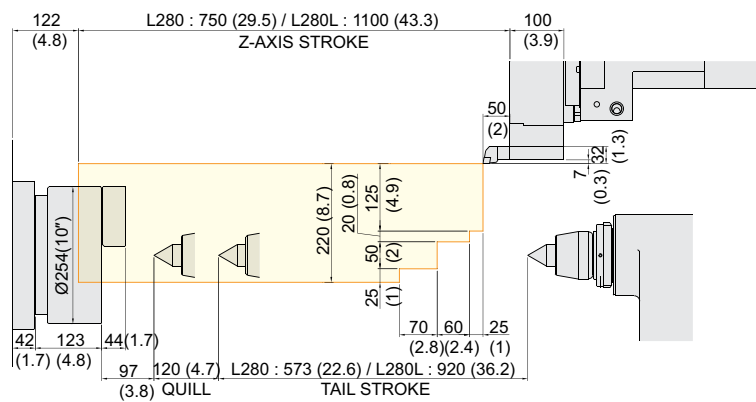
OD



BORING HOLDER



FACING HOLDER



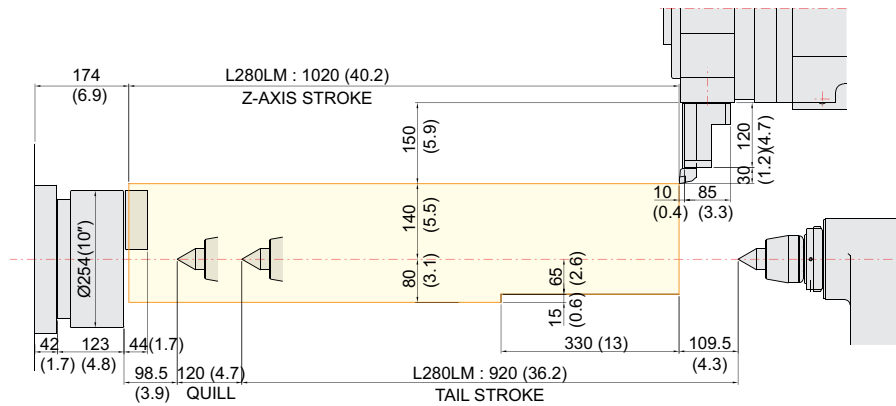
SPECIFICATIONS

Tooling Travel Range

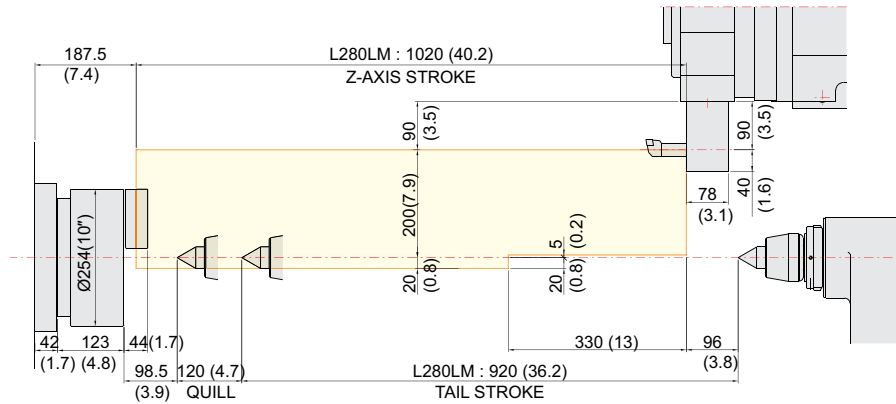
unit : mm(in)

L280LM

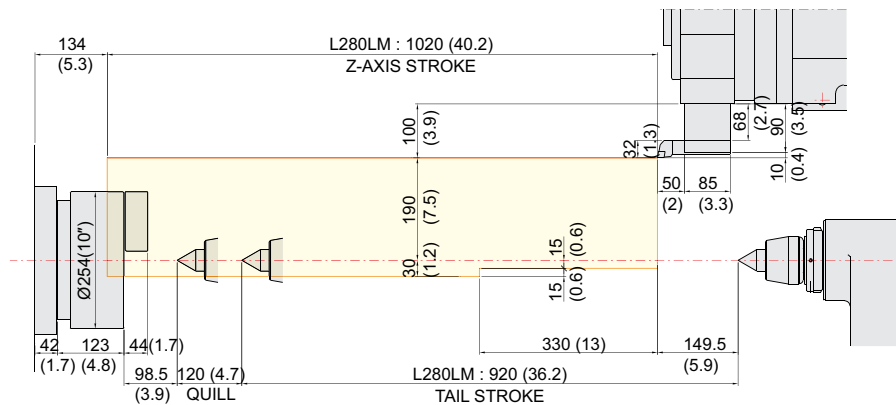
OD



BORING HOLDER



FACING HOLDER



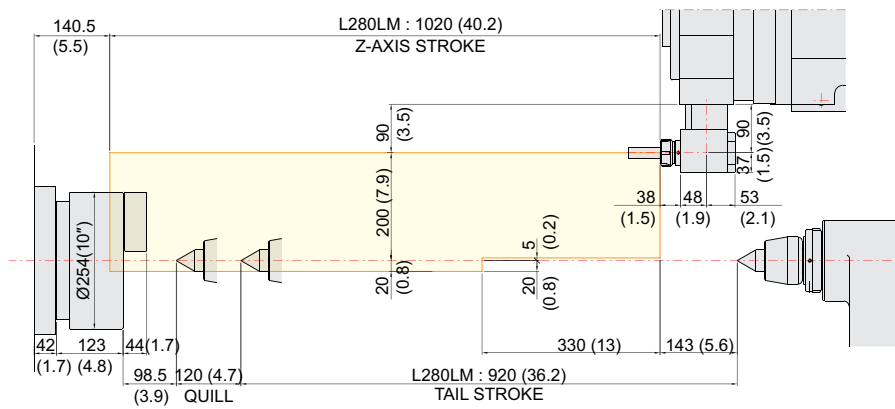
SPECIFICATIONS

Tooling Travel Range

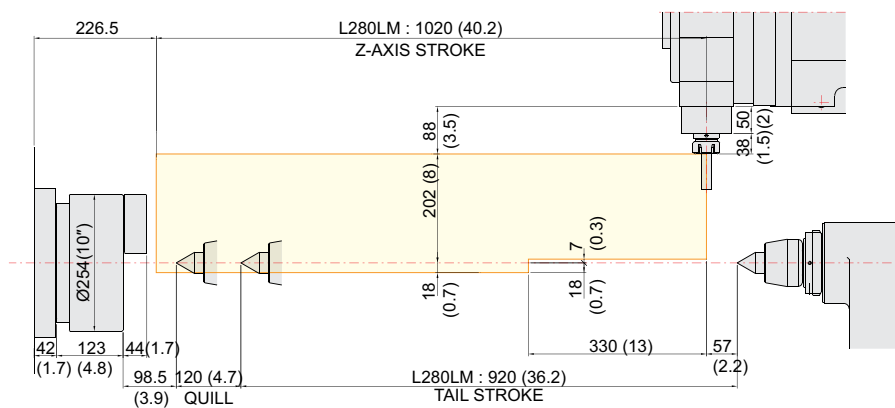
unit : mm(in)

L280LM

ANGULAR MILL HOLDER



STRAIGHT MILL HOLDER



SPECIFICATIONS

Specifications

[] : Option

ITEM			L280	L280L	L280LM	
CAPACITY	Swing Over the Bed		mm(in)	Ø590 (23.2")		Ø650 (25.6")
	Swing Over the Carriage		mm(in)	Ø375 (14.8")		Ø415 (16.3")
	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")
	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")
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	mm(in)	□ 25 (1")		
		ID	mm(in)	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)	1,900 (74.8")		
	Weight		kg(lb)	6,100 (13,448)	8,000 (17,637)	8,100 (17,857)
NC	Controller		-	HYUNDAI WIA FANUC i Series - Smart Plus [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 – 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	
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	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	9 ea
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999.999 mm (± 99,999.9999 inch)
Plane selection	X-Y : G17 / Z-X : G18 / Y-Z : G19
Workpiece coordinate system	G52, G53, 6 pairs (G54 ~ G59)
Manual absolute	Fixed ON
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	#100 ~ #199, #500 ~ #999
G code system	A, B/C
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Direct drawing dimension program	Including Chamfering / Corner R
Conversational Program	SmartGuide-i

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

Figures in inch are converted from metric values.

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) X, Z, Y, B axes : 0.001 mm (0.0001 inch)
Least setting Unit	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
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999,999 mm (± 99,999,999 inch)
Plane selection	X-Y, G17 / Z-X, G18 / Y-Z, G19
Workpiece coordinate system	G52, G53, 6 pairs (G54 ~ G59)
Manual absolute	Fixed ON
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	#100 ~ #149, #500 ~ #549
G code system	A
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Multiple repetitive cycles I, II	

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	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 (SIEMENS 828D)

[] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation	
Control axes	2 axes (X, Z) – Std.
	3 axes (X, Z, C) – Mill
	4 axes (X, Z, Y, C) – Y
	5 axes (X, Z, B, C, A) – MS
	6 axes (X, Z, Y, B, C, A) – SY
Simultaneously controlled axes	Max. 4 axes
Least setting Unit	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 1 deg [0.001] deg
Least input increment	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 1 deg [0.001] deg
Inch / Metric changeover	G70 (inch) / G71 (metric)
Interlock	All axes / Each axis
Backlash compensation	
Pitch error compensation	Leadscrew pitch error compensation
LCD / MDI	10.4 inch color LCD [15 inch color LCD (With Touch panel)]
Keyboard	QWERTY full keyboard
Stored stroke check	Over travel
Operation	
Automatic operation	
MDI operation	
Program restart	
Program check function	Dry run / Program check / Machine lock
Single block	
Block search	Block search
Reposition	
Working area limit	Working area limitations
Interpolation functions	
Positioning	G00
Linear interpolation	G01
Circular interpolation	Circular interpolation CW (G02)
	Circular interpolation CCW (G03)
Exact position stop	Single block exact stop (G09)
	Exact stop G60 (G601, G602, G603)
Dwell	Dwell (G04)
Reference position return	Return to reference point
	Return to 2nd reference point
Helical interpolation	
Thread synchronous cutting	
Thread cutting retract	
Spline interpolation	Non-uniform rational B splines
Feed function / Acc. & Dec. control	
Manual feed	Rapid traverse
	Jog
	Manual handle
	Reference position return
Cutting Feed command	Direct input F code
Feedrate override	0 ~ 200% (10% Unit)
Rapid traverse override	1%, 25%, 50%, 100%
Feed per minute	G94
Feed per revolution	G95
Look-ahead block	1 block
Program input	
ISO support	G291(ISO) / G290 (SIEMENS)
	(ISO G Code system-A)
Optional block skip	2
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999,999 mm, ± 99,999,9999 inch
Plane selection	X-Y : G17, X-Z : G18, Y-Z : G19
	G54 ~ G57, G505~G549
Workpiece coordinate system	G500 (Basic frame – settable zero offset)
	G53 (Work offset non modal)
	G153 (basic frame non modal)
Sub program call	11 folds nested
G code preventing buffering	STOPRE
Turning Cycle	Turning programing (Cycle 93, 94, 95, 97)
User Cycle	

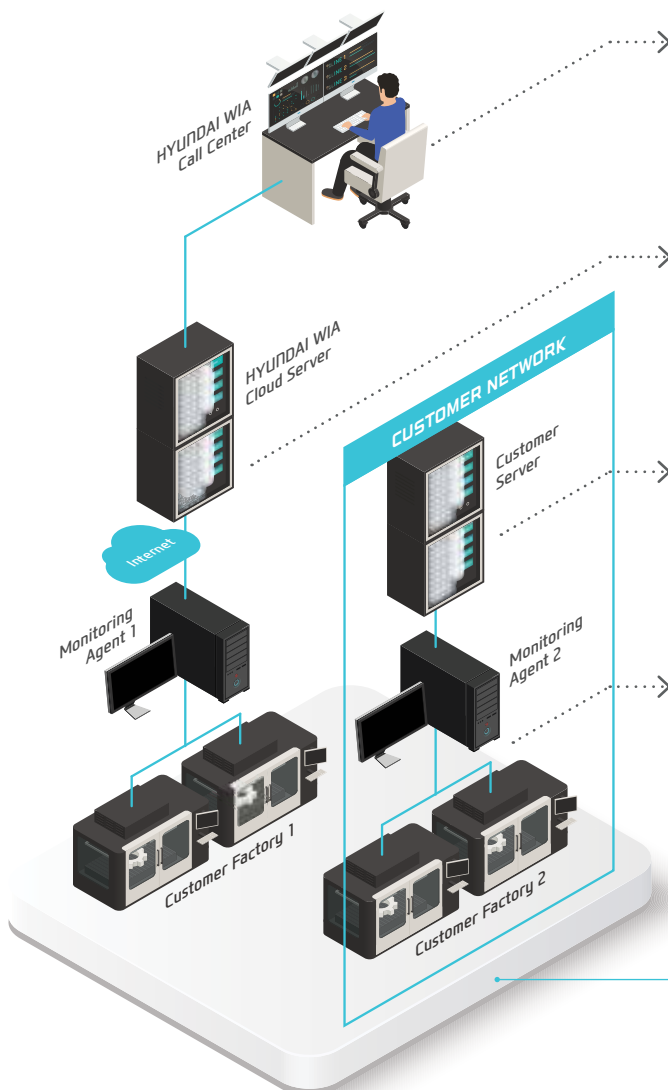
Auxiliary function / Spindle speed function	
Auxiliary function	M Code 4 digit
Spindle speed function	S Code 5 digit
Spindle override	0% ~ 150% (10% Unit)
Spindle orientation	SPOS
Rigid tapping	
Automatic mode interchange	Spindle / Axis mode
Constant surface speed control	G96, G97
Spindle speed limitation	LIMS
Tool function / Tool compensation	
Tool function	Tool number & Tool name
	Tool : T + Offset : D
Tool life management	
Tools in tool list	128 ea : Std.
	256 ea : Mill
	768 ea : Y, MS, SY
Cutting Edges in tool list	256 ea : Std.
	512 ea : Mill
	1,536 ea : Y, MS, SY
Tool nose radius compensation	ISO (G40, G41, G42)
Geometry / Wear compensation	
Measurement of tool length	
Tool management function	
Editing function	
Part program storage size	3MB – Std.
	5MB – Mill
	10MB – Y, MS, SY
No. of registerable programs	750 ea
External Storage devices	Local network, Server, USB, Flash drive
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 interface (ONLY 10.4")
	USB memory interface
	Embedded Ethernet memory interface
Screenshot	
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.
Multi language display	Support 9 languages Chinese (Simplified/Traditional), English, French, German, Italian, Korean, Portuguese, Spanish
	[☆ Support 22 languages : Inquiry need]
LCD Screen Saver	Screen saver & Motion sensing
Function for machine type	
Cs contour control (C & A axes)	Mill, MS, Y, SY model
Polar coordinate interpolation	Mill, MS, Y, SY model
Cylindrical interpolation	Mill, MS, Y, SY model
Canned cycle for drilling	Mill, MS, Y, SY model
[Polygon turning (CP-Basic)]	Mill, MS, Y, SY model
[Hobbing / Skybing (CP-Comfort)]	Mill, MS, Y, SY model
Spindle synchronous control	MS, SY model
Servo tailstock function	MS, SY model
Option	
Additional optional block skip	10
Contour handwheel	
3D simulation	
Real time simulation	
Shop Turn	Machining step programming for turning

HW-MMS

HYUNDAI WIA Machine Monitoring System



A manufacturing machine self-developed 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 Edge Plus

This is a facility big data-based smart factory solution that collects and analyzes spindle/feed data, tool lifespan, NC processing files, etc. in real time

HYUNDAI WIA
Smart Factory Solution



L280
Movie



You Tube HYUNDAI WIA MT
www.youtube.com/HYUNDAIWIAMT

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