

300 Series

L300A/LA/MA/LMA/MSA/LMSA | L300C/LC/MC/LMC/MSC

HYUNDAI WIA CNC Turning Center

Technical Leader

L300 series, designed by Hyundai WIA with years of expertise and the latest technology, is a Turning Center that maximizes productivity and performance.

MODEL	Chuck Size					Bed		Turret	
	10"	12"	15"	Big Bore	Sub 8"	Standard	Long	Standard	BMT65
L300A	●					●		●	
L300LA	●						●	●	
L300MA	●					●			●
L300LMA	●						●		●
L300MSA	●				●	●			●
L300LMSA	●				●		●		●
L300C		●	○	●		●		●	
L300LC		●	○	●			●	●	
L300MC		●	○	●		●			●
L300LMC		●	○	●			●		●
L300MSC		●	○	●	●	●			●

● : Standard ○ : Option

300 Series

Versatile, High Production CNC Turning Center

- Rigidity secured through box guideways
- Highly accurate direct link and solid one-piece structure
- Main spindle heat displacement minimized
- All gearless type spindle machines applied with mill turret.
- Integrated process realized through adoption of 8" sub spindle
- Optional big bore spindle is available (L300C series)



01 BASIC STRUCTURE

Powerful Cutting Capability & Large Working Area CNC Turning Center

Turret

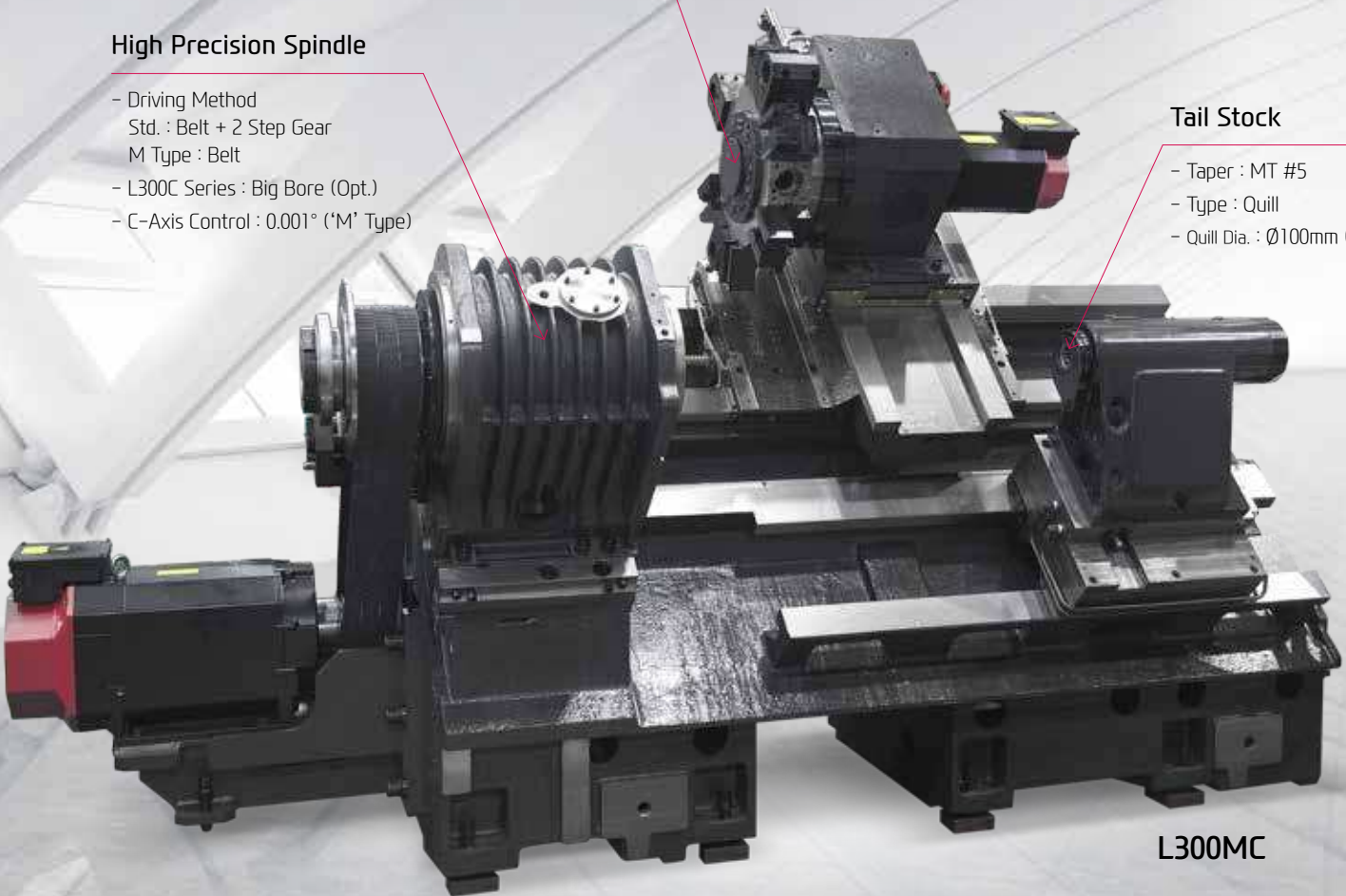
- No. of Tools : 12 EA
- Tool Size (O.D/I.D) : $\varnothing 25/\varnothing 50$ ($\varnothing 1"/\varnothing 2"$)
- Mill Turret : BMT65

High Precision Spindle

- Driving Method
Std. : Belt + 2 Step Gear
M Type : Belt
- L300C Series : Big Bore (Opt.)
- C-Axis Control : 0.001° ('M' Type)

Tail Stock

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



L300MC



MT#5 Tail Stock

The large (MT#5) tail stock ensures high accuracy even during heavy duty cutting. The quill can be operated by a foot pedal or a program. The quill body which is attached to the saddle, is operated manually by using the JOG button or MPG. (MT 4 Built-in Tail Stock : Option)

POWERFUL CUTTING CAPABILITY & WIDE CUTTING AREA

ALL-IN-ONE TYPE OF BED

High Precision & Rigidity, One-Piece Structure

The L300 features a 45° slant bed design which is developed through finite element analysis (FEA) to absorb vibration and minimize thermal growth. This ensures a stabilized platform for powerful, precise cutting capabilities.



GUIDEWAY

High-Speed Roller LM Guideway

All axes of L300 Series are designed with Box Guideways for better travel ability. Box Guideways show great performance in offsetting vibrations caused by heavy duty cutting.

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/ZB) **20/24/20** m/min
(787/945/787 ipm)

Travel (X/Z/ZB)

unit : mm(in)

L300A/MA	L300MSA	L300LA/LMA	L300LMSA
290/750 (11.4"/29.5")	290/750/700 (11.4"/29.5"/27.6")	290/1,350 (11.4"/53.1")	290/1,350/1,200 (11.4"/53.1"/47.2")
L300C/MC	L300LC/LMC	L300MSC	
355/750 (14"/29.5")	355/1,350 (14"/53.1")	355/750/700 (14"/29.5"/27.6")	

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
L300A/LA	3,600 rpm (FANUC)	22/18.5 kW (30/25 HP)	739.5/622 N·m (545/458.8 lbf-ft)	Belt + 2 Step Gear
	[3,500 rpm (iTROL)]	[22/18.5 kW (30/25 HP)]	[783.2/652.7 N·m (577.7/481.4 lbf-ft)]	
L300C/LC	3,000 rpm (FANUC)	26/22 kW (35/30 HP)	1,131/957 N·m (834.2/705.8 lbf-ft)	
	[2,800 rpm (BIG BORE)]	[26/22 kW (35/30 HP)]	[1,325/1,121 N·m (977.3/826.8 lbf-ft)]	
	[3,000 rpm (iTROL)]	[26.4/22 kW (35.4/30 HP)]	[1,137/947.6 N·m (838.7/698.9 lbf-ft)]	
L300MA Series	3,500 rpm (FANUC)	22/18.5 kW (30/25 HP)	493.4/414.9 N·m (363.9/306 lbf-ft)	Belt
	3,000 rpm (FANUC)	22/18.5 kW (30/25 HP)	787.3/465 N·m (580.7/343 lbf-ft)	
L300MC Series	[2,800 rpm (BIG BORE)]	[22/18.5 kW (30/25 HP)]	[787.3/465 N·m (580.7/343 lbf-ft)]	
	[3,500 rpm (iTROL)]	[33.6/28 kW (45.1/37.5 HP)]	[481.1/400.9 N·m (354.8/295.7 lbf-ft)]	
Sub Spindle	4,000 rpm (FANUC)	11/7.5 kW (15/10 HP)	140.1/95.5 N·m (103.2/70.4 lbf-ft)	Belt

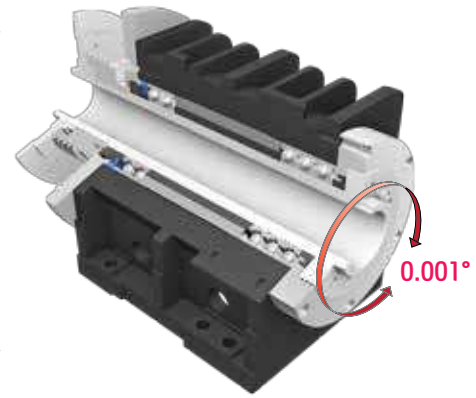
HEAVY DUTY CUTTING & HIGH ACCURACY

MAIN SPINDLE

Spindle Ideal for Heavy Cutting

The main spindle has a wide range of constant power and utilizes the same structure as high speed turning centers. It is designed to minimize thermal displacement and to maintain stable cutting Capability during high speed machining.

In particular, the enhanced processing and assembling accuracy of bearings enables the spindle unit to maintain high precision for a long time.



C-Axis Control ('M' Type)

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

Gear Type Spindle

A two-step driving method is applied inside the main spindle as standard to non mill turret models.(L300A/C/LA/LC) It provides powerful torque at low speeds and stable rotation at high speeds.

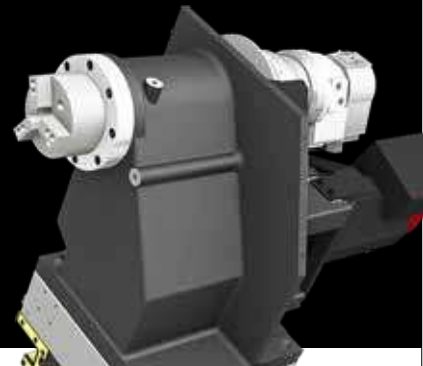


Gearless Type Spindle

Mill turret(BMT turret) equipped models are driven by the gearless method thereby reducing noise and providing outstanding surface finish.

8" SUB SPINDLE ('S' Type)

The Belt-type sub spindle is designed to minimize thermal displacement during the continuous machining, offering from the heavy-duty cutting to the high-speed machining. When the main spindle cutting is completed, the sub spindle rotation is synchronized with the main spindle allowing the workpiece to be transferred to the sub spindle, and machining can begin on the back side of the workpiece.



03 SERVO TURRET

High speed, High Accuracy, Highly Reliable Servo Turret

Servo Turret

No. of Tools

12^{EA}

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

□ 25/Ø50 mm (□ 1"/Ø2")

Indexing Time

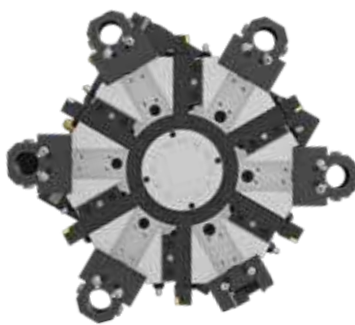
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Mill Turret

ITEM	Speed	Motor (Max./Cont)	Torque (Max./Cont)	Collet Size
BMT65	4,000 rpm	5.5/3.7 kW (7.5/5HP)	35/23.5 N·m (25.8/17.3 lbf·ft)	Ø20 (Ø3/4") /ER32

VARIOUS DRIVEN PRECISION BMT TOOL HOLDERS

TURRET



Servo Turret

The turret of L300 series are 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.

20 Bar(290 psi) 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.

BMT65 Turret

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

STRAIGHT MILLING HEAD



ANGULAR MILLING HEAD



Mill Tool Holder

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



Special Tool

OPTION

The L300 series can process high value-added products using a variety of rotating tools. In particular, there is a multi-holder for attaching a variety of tools to one holder, and an eccentric rotary tool for handling eccentric parts without additional axis travel, which can realize integration of process with one machine.

❖ Consultation needed when ordering these options.

04 USER CONVENIENCE

Various Devices for User Friendly

BAR FEEDER SYSTEM

Bar Feeder

Bar feeder system enables automation which leads to efficiency improvement.

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



Parts Catcher

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



Auto Door

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



Parts Conveyor

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



Auto Shutter

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

HIGH PRECISION SYSTEM



Automatic Q-Setter

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



Linear Scale

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



Work Probe

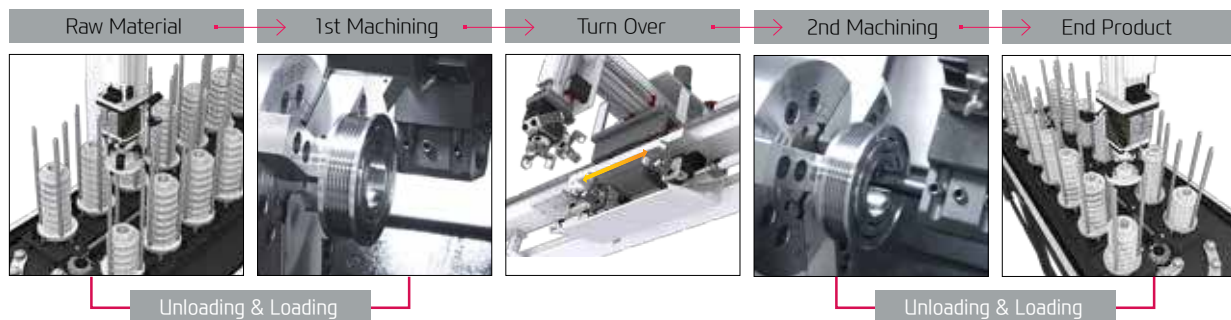
Workpiece coordinate values can be set automatically using the optional spindle probe.

Optional

GANTRY LOADER SYSTEM

Gantry Loader Machining Process

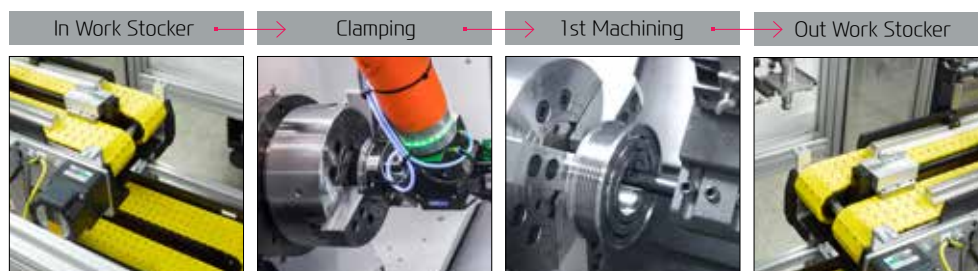
The high speed gantry loaders and the work stocker allow the implementation of automation cells. This enables flexible machining process and productivity enhancement. Optimization of the installation space is also possible.



ROBOT AUTOMATION SYSTEM

Robot System Machining Process

Hyundai WIA is able to deliver high quality factory automation system through the precision technologies accumulated by a long time experience of machine tool manufacturing, and the operation capability acquired from the automobile parts manufacturing business.



SPECIFICATIONS

L300 Series Standard & Optional

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

Spindle		A(LA)	MA(LMA)	MSA(LMSA)
Main Spindle	10"	●	●	●
Hollow Chuck 3 Jaw	12"	○	○	○
Main Spindle	10"	○	☆	☆
Solid Chuck 3 Jaw	12"	☆	☆	☆
Sub Spindle	8"	-	-	●
Hollow Chuck 3 Jaw	10"	-	-	-
Sub Spindle	8"	-	-	○
Solid Chuck 3 Jaw	10"	-	-	-
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		○	○	○
2 Steps Chuck Foot Switch		○	○	○
Turret				
Tool Holder		●	●	●
Mill Turret	BMT	-	●	●
Straight Milling Head (Radial)	Collet Type,2ea	-	●	●
Angular Milling Head (Axial)	Collet Type,2ea	-	●	●
SUB Angular Milling Head (Axial)	Collet Type,1ea	-	-	●
Straight Milling Head (Radial)	Adapter Type	-	○	○
Angular Milling Head (Axial)	Adapter Type	-	○	○
SUB Angular Milling Head (Axial)	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 (Foot Switch)		●	●	-
Built in Tail Stock (MT#4)		○	○	-
Programmable Tail Stock		○	○	-
Programmable Hyd. Steady Rest		○	○	-(○)
Manual Steady Rest		☆	☆	-(☆)
Standard Live Center		●	●	-
High Precision Live Center		☆	☆	-
2 Steps Tail Stock Pressure System		☆	☆	-
Quill Forward/Reverse Confirmation Device		○(CE:●)	○(CE:●)	-
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)		○	○	○
Sub Spindle Air Blow		-	-	○
Tail Stock Air Blow (Upper Tail Stock)		○	○	-
Turret Air Blow		☆	☆	☆
Air Gun		○	○	○
Through Spindle Air Blow (Only for Special Chuck)		☆	☆	☆
High Pressure Coolant	1.5Bar	●	●	●
	6Bar	○	○	○
	14.5Bar	○	○	○
	20Bar	○	○	○
Power Coolant System (For Automation)		☆	☆	☆
Coolant Chiller		☆	☆	☆
Chip Disposal				
Coolant Tank	220ℓ (58.1 gal)	A (●)	MA (●)	MSA (●)
	270ℓ (71.3 gal)	LA (●)	LMA (●)	LMSA (●)
Chip Conveyor (Hinge/Scraper)	Front (Rear)	○ (-)	○ (-)	-
	Front (Right)	○	○	○
Special Chip Conveyor (Drum Filter)		☆	☆	☆
Chip Wagon	Standard (180ℓ [47.5 gal])	○	○	○
	Swing (200ℓ [52.8 gal])	○	○	○
	Large Swing (290ℓ [76.6 gal])	○	○	○

Chip Disposal		A(LA)	MA(LMA)	MSA(LMSA)
Chip Wagon	Large Size (330ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆
Safety Device				
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		○	○	○
Transformer	30kVA	○	-	-
	35kVA	-	○	○
Auto Power Off		○	○	○
Measurement				
Q-Setter		●	●	●
Automatic Q-Setter		○	○	○
Work Close Confirmation Device (Only for Special Chuck)	TACO	☆	☆	☆
	SMC	☆	☆	☆
Work Setter (RENSHAW/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)		○	○	○
MLQ (Minimal Quantity Lubrication)		☆	☆	☆
Fixture & Automation				
Auto Door	Standard	○	○	○
	High Speed	☆	☆	☆
Auto Shutter (Only for Automatic System)		☆	☆	☆
Sub Operation Pannel		○	○	○
Bar Feeder Interface		☆	☆	☆
Bar Feeder (FEDEK)		○	○	○
Extra M-Code 4ea		☆	☆	☆
Automation Interface		○	○	○
I/O Extension (IN & OUT)	16 Contact	○	○	○
	32 Contact	○	○	○
Parts Catcher	Main SP.	-	-	○
	Sub SP.	-	-	○
Sub Sp. Work Pusher (Pneumatic Type)		☆	☆	☆
Turret Work Pusher (For Automation)		☆	☆	☆
Parts Conveyor		☆	☆	☆
Hyd. Device				
Standard Hyd. Cylinder	Hollow	●	●	●
Standard Hyd. Unit	35bar/20ℓ (5.3gal)	●	●	●
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 Munsell No.	☆	☆	☆
CAD & CAM		☆	☆	☆

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

SPECIFICATIONS

L300 Series Standard & Optional

		C(LC)	MC(LMC)	MSC
Spindle				
Main Spindle	12"	●	●	●
Hollow Chuck 3 Jaw	15"	○	○	○
Main Spindle	12"	☆	☆	☆
Solid Chuck 3 Jaw	15"	○	☆	☆
Sub Spindle	8"	-	-	●
Hollow Chuck 3 Jaw	10"	-	-	-
Sub Spindle	8"	-	-	☆
Solid Chuck 3 Jaw	10"	-	-	-
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		○	○	○
2 Steps Chuck Foot Switch		○	○	○
Turret				
Tool Holder		●	●	●
Mill Turret	BMT	-	●	●
Straight Milling Head (Radial)	Collet Type,2ea	-	●	●
Angular Milling Head (Axial)	Collet Type,2ea	-	●	●
SUB Angular Milling Head (Axial)	Collet Type,1ea	-	-	●
Straight Milling Head (Radial)	Adapter Type	-	○	○
Angular Milling Head (Axial)	Adapter Type	-	○	○
SUB Angular Milling Head (Axial)	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 (Foot Switch)		●	●	-
Built in Tail Stock (MT#4)		○	○	-
Programmable Tail Stock		○	○	-
Programmable Hyd. Steady Rest		○	○	-
Manual Steady Rest		☆	☆	-
Standard Live Center		●	●	-
High Precision Live Center		☆	☆	-
2 Steps Tail Stock Pressure System		☆	☆	-
Quill Forward/Reverse Confirmation Device		○(CE:●)	○(CE:●)	-
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)		○	○	○
Sub Spindle Air Blow		-	-	○
Tail Stock Air Blow (Upper Tail Stock)		○	○	-
Turret Air Blow		☆	☆	☆
Air Gun		○	○	○
Through Spindle Air Blow (Only for Special Chuck)		☆	☆	☆
High Pressure Coolant	1.5Bar	●	●	●
	6Bar	○	○	○
	14.5Bar	○	○	○
	20Ba	○	○	○
Power Coolant System (For Automation)		☆	☆	☆
Coolant Chiller		☆	☆	☆
Chip Disposal				
Coolant Tank	220 ℓ (58.1 gal)	C (●)	MC (●)	●
	270 ℓ (71.3 gal)	LC (●)	LMC (●)	-
Chip Conveyor (Hinge/Scraper)	Front (Rear)	○(-)	○(-)	-
	Front (Right)	○	○	○
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])	○	○	○

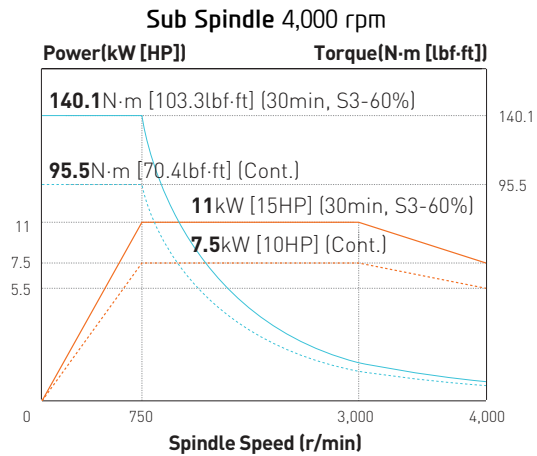
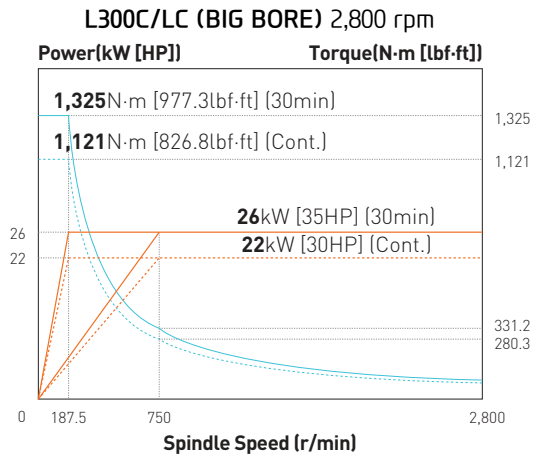
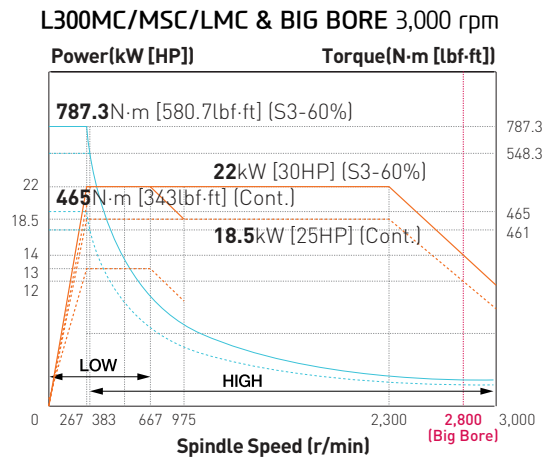
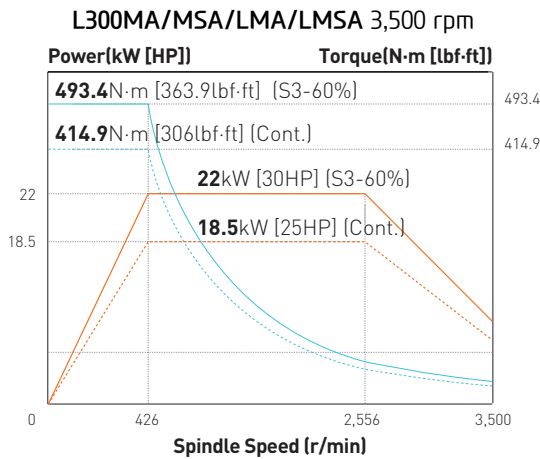
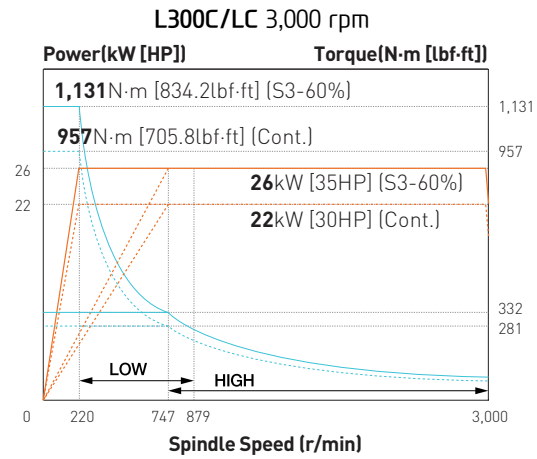
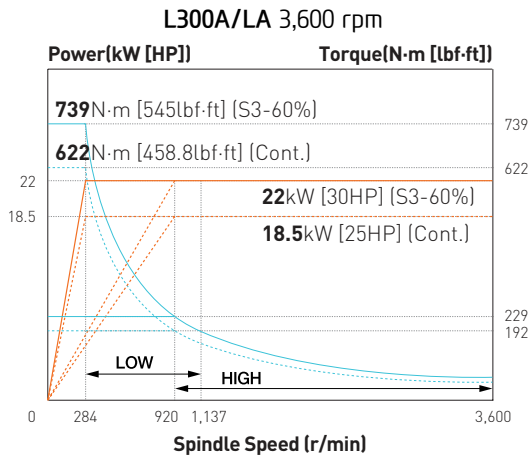
● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

		C(LC)	MC(LMC)	MSC
Chip Disposal				
Chip Wagon	Large Size (330 ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆
Safety Device				
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	35kVA	○	○	○
Auto Power Off		○	○	○
Measurement				
Q-Setter		●	●	●
Automatic Q-Setter		○	○	○
Work Close Confirmation Device	TACO	☆	☆	☆
(Only for Special Chuck)	SMC	☆	☆	☆
Work Setter (RENISHAW/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	Standard	○	○	○
	High Speed	☆	☆	☆
Auto Shutter (Only for Automatic System)		☆	☆	☆
Sub Operation Pannel		○	○	○
Bar Feeder Interface		☆	☆	☆
Bar Feeder (FEDEK)		○	○	○
Extra M-Code 4ea		☆	☆	☆
Automation Interface		○	○	○
I/O Extension (IN & OUT)	16 Contact	○	○	○
	32 Contact	○	○	○
Parts Catcher	Main SP.	-	-	○
	Sub SP.	-	-	○
Sub Sp. Work Pusher (Pneumatic Type)		☆	☆	☆
Turret Work Pusher (For Automation)		☆	☆	☆
Parts Conveyor		☆	☆	☆
Hyd. Device				
Standard Hyd. Cylinder	Hollow	●	●	●
Standard Hyd. Unit	35bar/20 ℓ (5.3gal)	●	●	●
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 Munsell No.	☆	☆	☆
CAD & CAM		☆	☆	☆

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

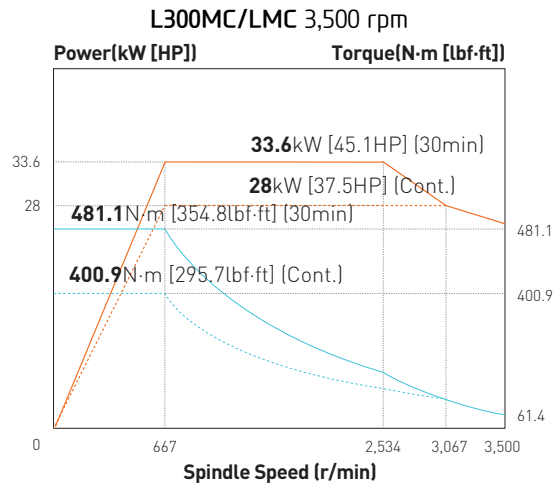
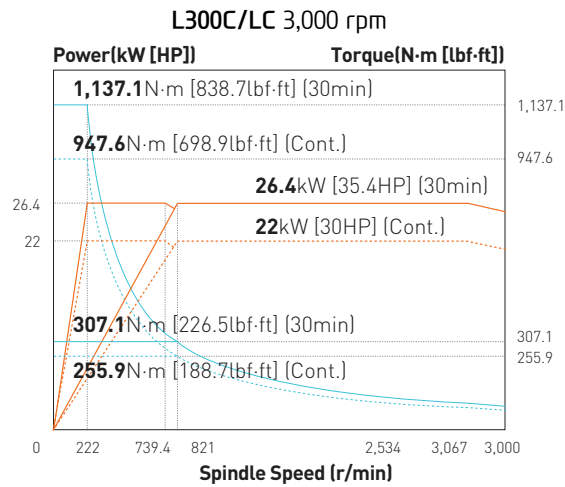
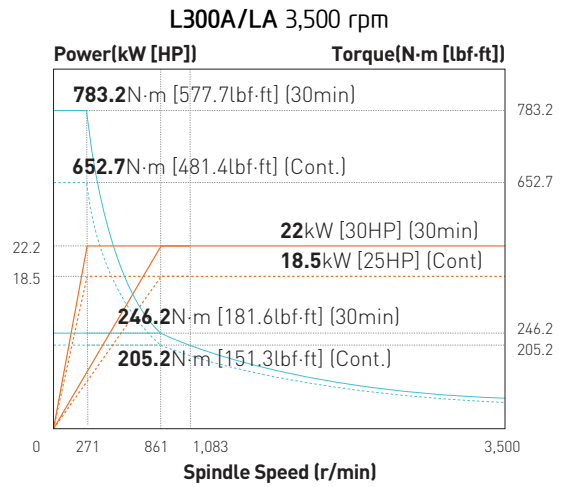
SPECIFICATIONS

Spindle Output/Torque Diagram (HYUNDAI WIA FANUC)



SPECIFICATIONS

Spindle Output/Torque Diagram (HYUNDAI-iTROL)

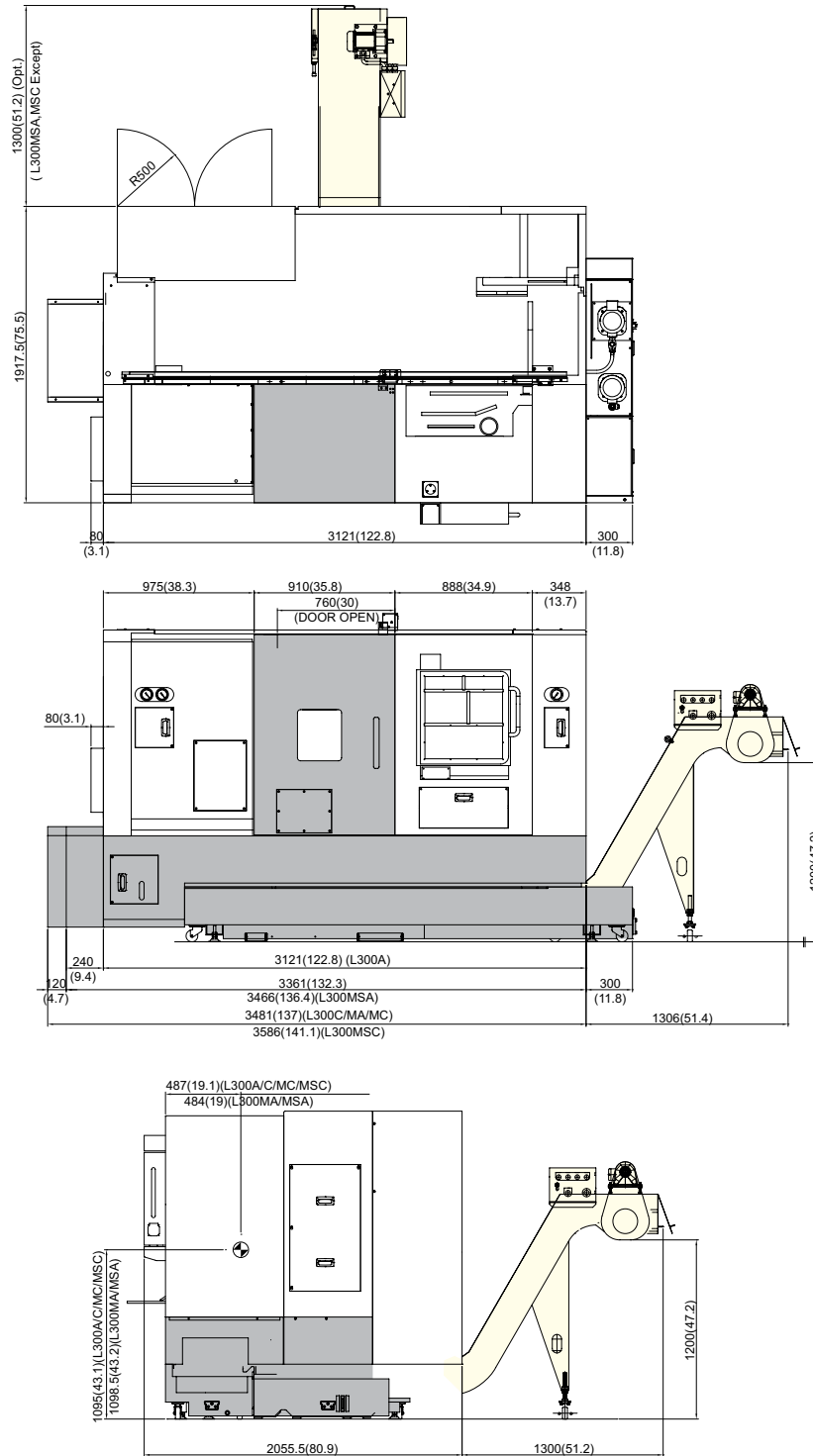


SPECIFICATIONS

External Dimensions

unit : mm(in)

L300A/MA//MSA
L300C/MC//MSC

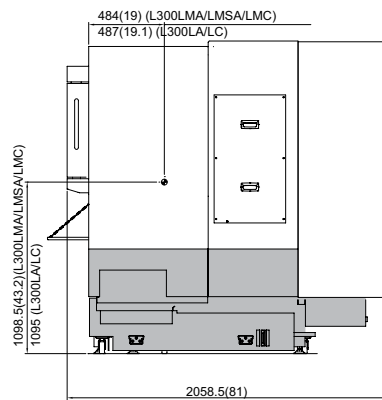
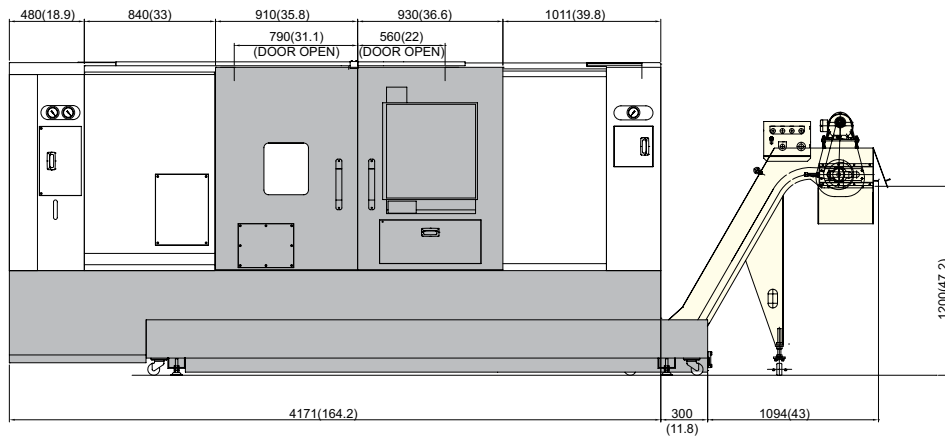
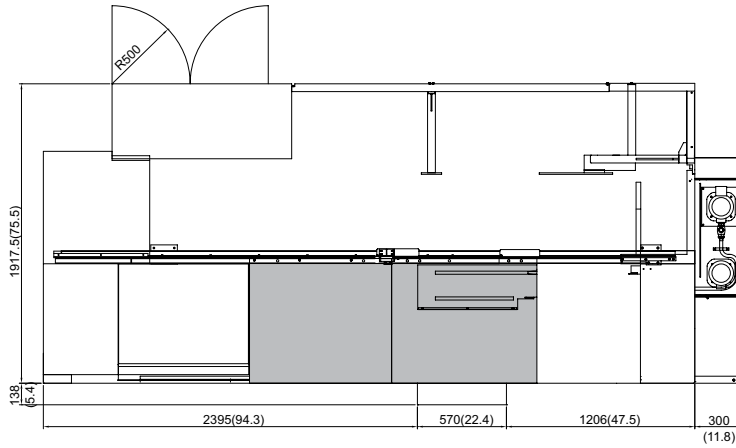


SPECIFICATIONS

External Dimensions

unit : mm(in)

L300LA/LMA/LMSA
L300LC/LMC/LMSC

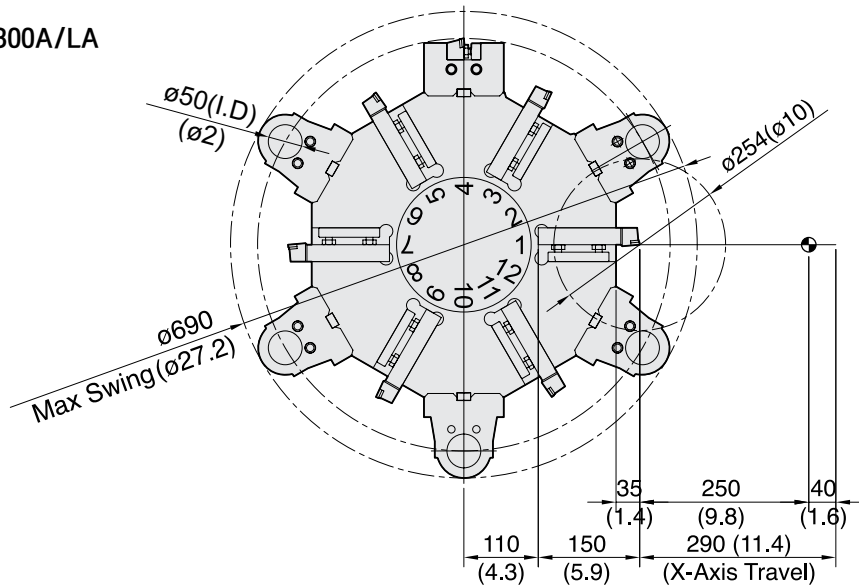


SPECIFICATIONS

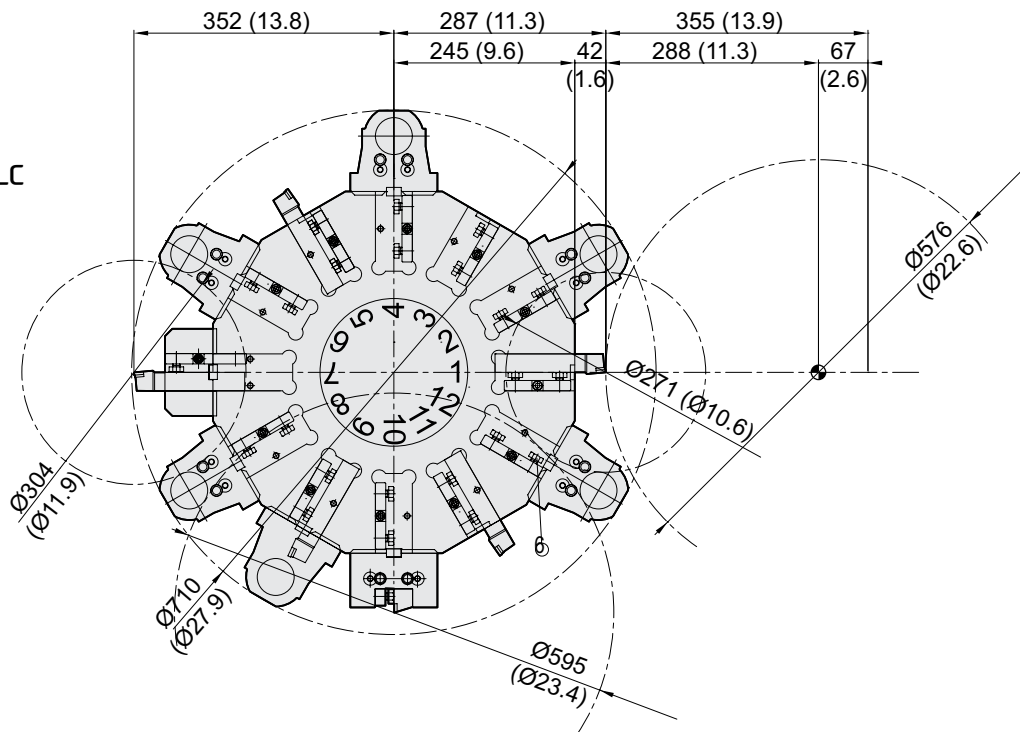
Interference

unit : mm(in)

L300A/LA



L300C/LC

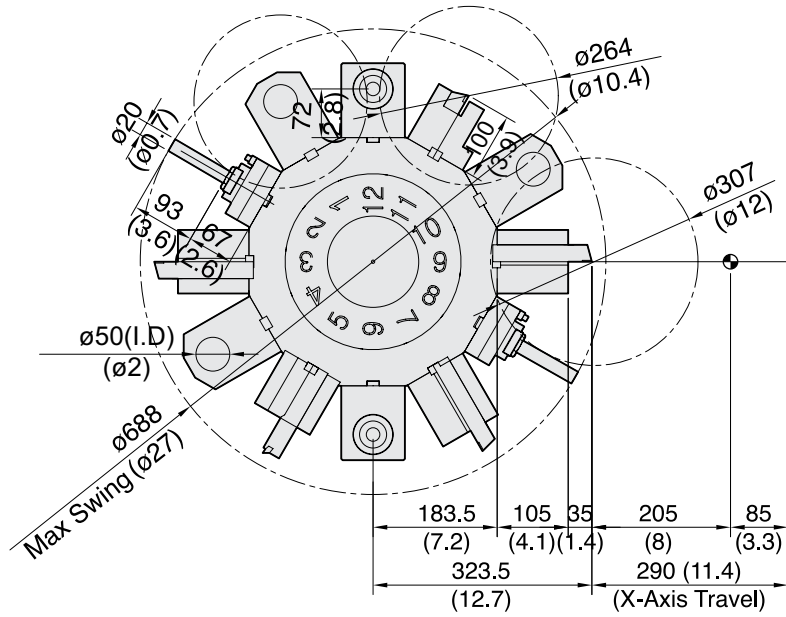


SPECIFICATIONS

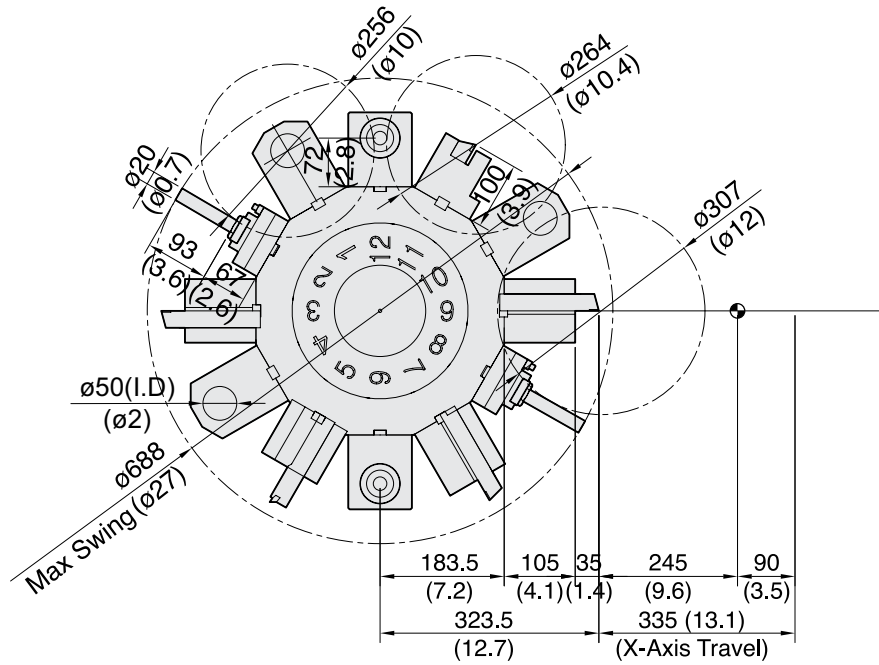
Interference

unit : mm(in)

L300MA/LMA



L300MC/LMC

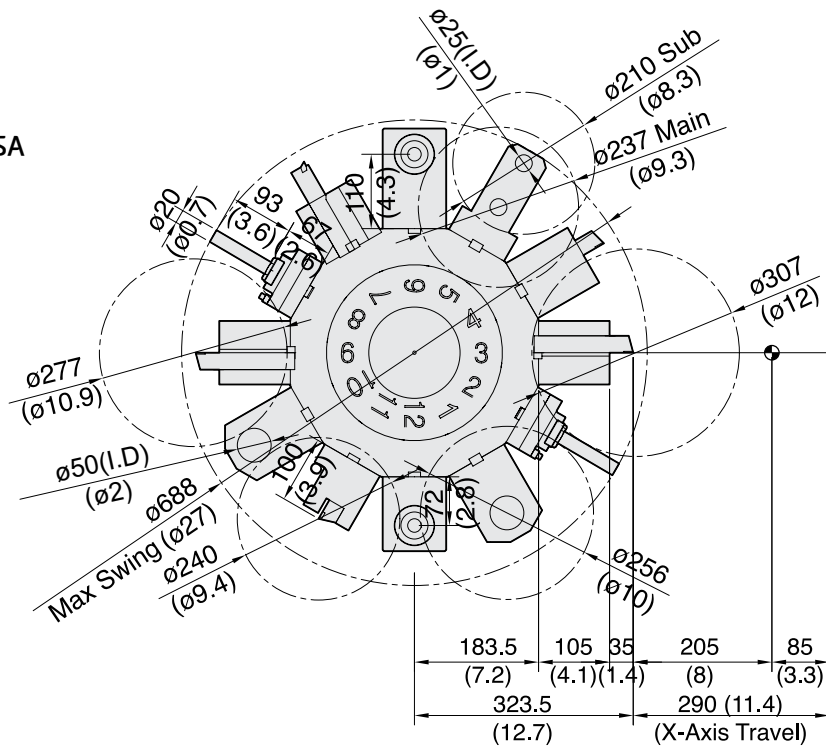


SPECIFICATIONS

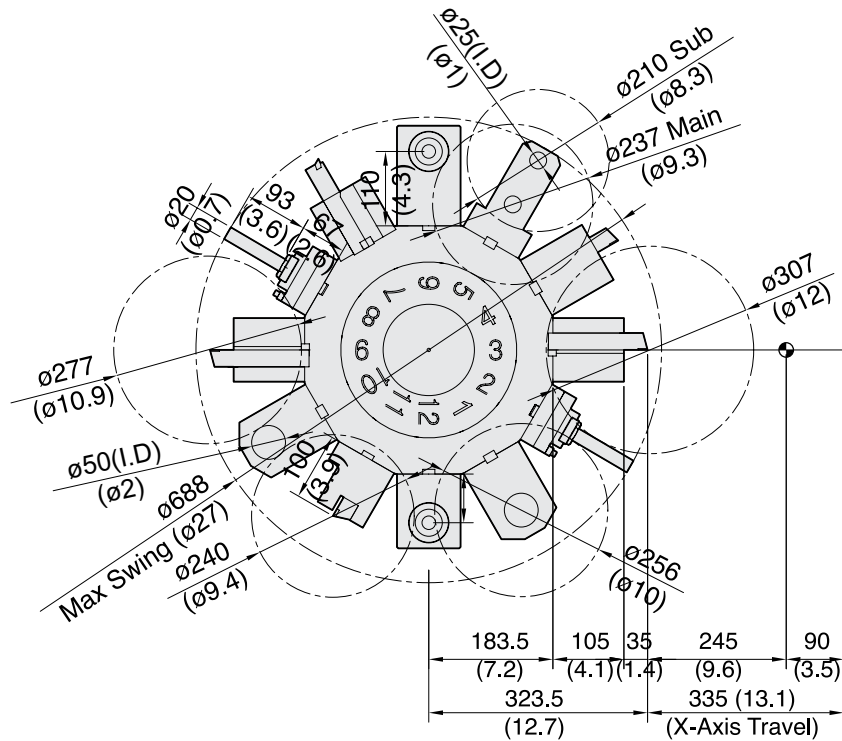
Interference

unit : mm(in)

L300MSA/LMSA



L300MSC

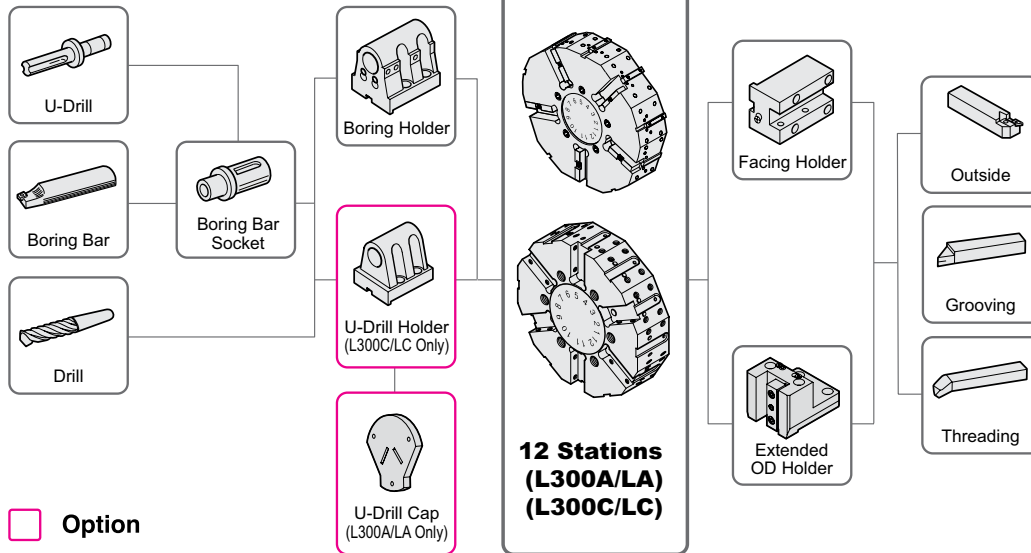


SPECIFICATIONS

Tooling System

unit : mm(in)

L300A/LA L300C/LC



Tooling Parts Detail

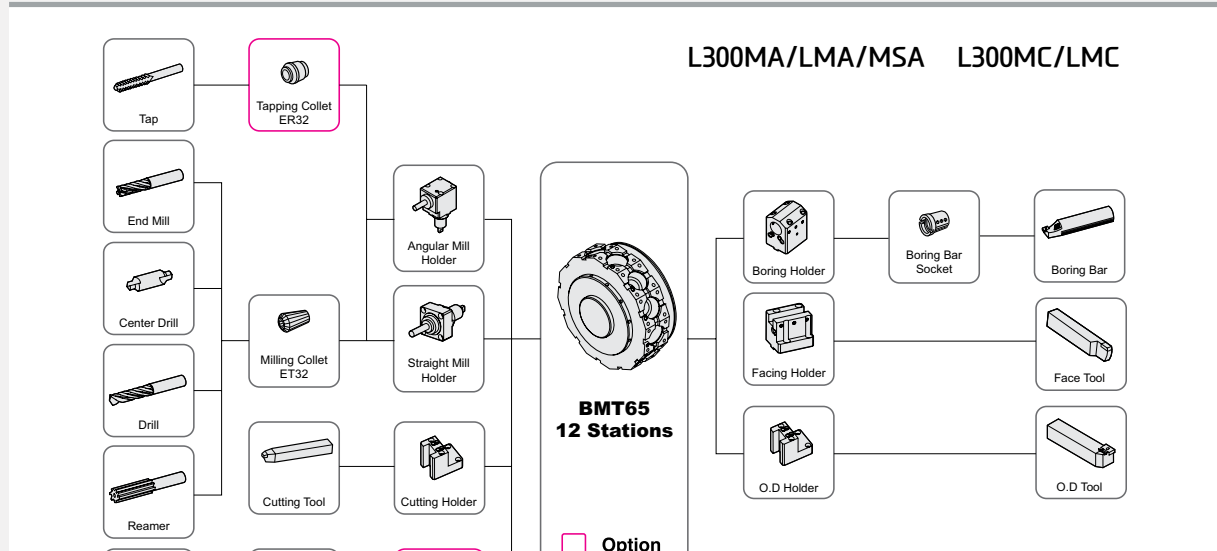
ITEM			A/LA		C/LC	
			mm Unit	inch Unit	mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left	-	-	-	-
		Extension	-	-	1	1
	Facing Holder		1	1	1	1
	Cutting Holder		-	-	-	-
Boring Holder	I.D Holder	Single	5	5	5	5
		U-Drill Holder	Tool Holder	Opt.	Opt.	Opt.
		Cap	Opt.	Opt.	-	-
Driven Holder	Straight Mill Holder	Standard	-	-	-	-
	Angular Mill Holder	Standard	-	-	-	-
Socket	Boring Main	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")	-	-	-	-
		Ø6×Ø25 (1/4")	-	-	-	-
	Boring Sub	Ø12×Ø25 (1/2")	-	-	-	-
		Ø20×Ø25 (3/4")	-	-	-	-
		MT 2	1	1	1	1
		MT 3	1	1	1	1
		MT 4	1	1	1	1
		ER Collet	-	-	-	-

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Tooling System

unit : mm(in)



Tooling Parts Detail

ITEM			MA/MC/LMA/LMC		MSA		MSC/LMSA/LMSC	
			mm Unit	inch Unit	mm Unit	inch Unit	mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left	4	4	1	1	1	1
		Double	-	-	1	1	1	1
		Sub	-	-	1	1	1	1
	Facing Holder		1	1	1	1	1	1
	Cutting Holder		-	-	1	1	1	1
Boring Holder	I.D Holder	Single	3	3	2	2	2	2
		Double	-	-	1	1	1	1
	U-Drill Holder	Tool Holder/Cap	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
Driven Holder	Straight Mill Holder	Standard	2	2	2	2	2	2
	Angular Mill Holder	Standard	2	2	2	2	2	2
		Long	-	-	-	-	1	1
Socket	Boring Main	Ø16 (Ø5/8")	1	-	1	-	1	-
		Ø20 (Ø3/4")	1	1	1	1	1	1
		Ø25 (Ø1")	1	1	1	1	1	1
		Ø32 (Ø1 1/4")	1	1	1	1	1	1
		Ø40 (Ø1 1/2")	1	1	1	1	1	1
		Ø45 (Ø1 3/4")	-	1	-	1	-	1
	Boring Sub	Ø6×Ø25 (1/4")	-	-	1	1	1	1
		Ø12×Ø25 (1/2")	-	-	1	1	1	1
		Ø20×Ø25 (3/4")	-	-	1	1	1	1
	Drill	MT 1 × MT 2	1	1	1	1	1	1
		MT 2	1	1	1	1	1	1
		MT 3	1	1	1	1	1	1
		MT 4	1	1	1	1	1	1
	ER Collet		1 Set	1 Set	1 Set	1 Set	1 Set	1 Set

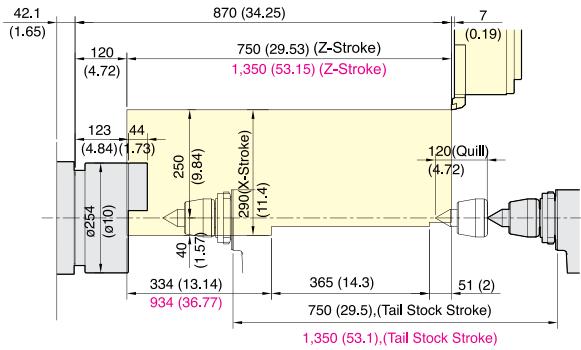
SPECIFICATIONS

Tooling Travel Range

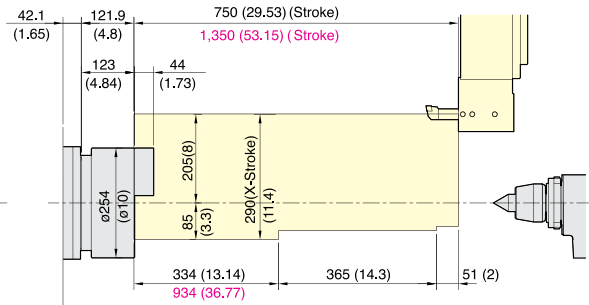
unit : mm(in)

L300A L300LA

OD TOOL HOLDER

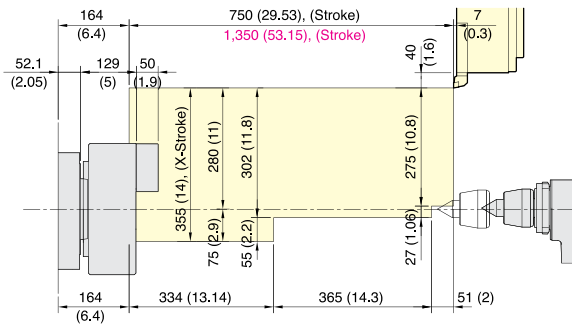


ID TOOL HOLDER

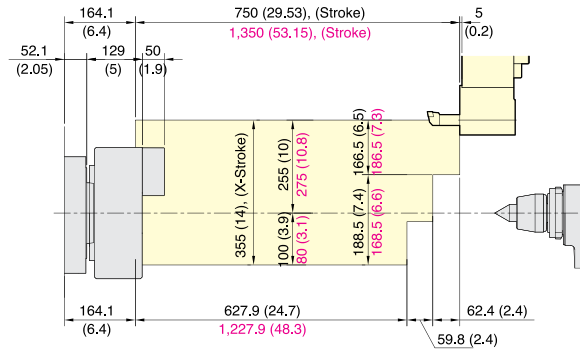


L300C L300LC

OD TOOL HOLDER



ID TOOL HOLDER



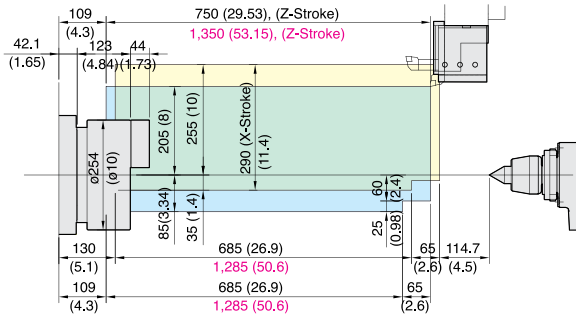
SPECIFICATIONS

Tooling Travel Range

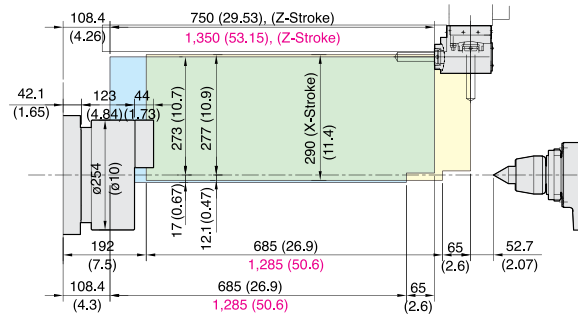
unit : mm(in)

L300MA L300LMA

OD/ID TOOL HOLDER

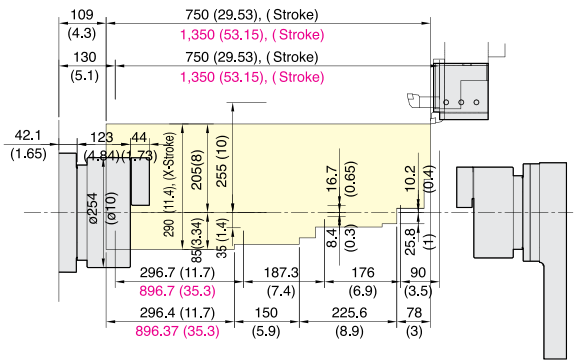


DRILL/END MILL TOOL HOLDER

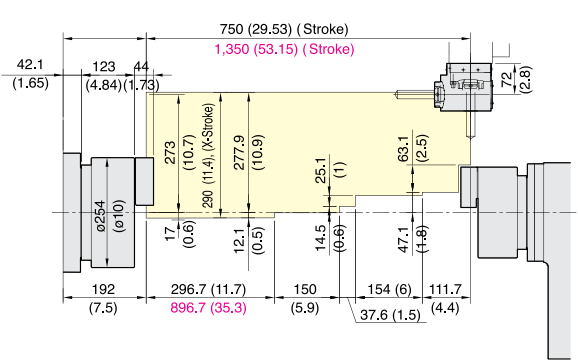


L300MSA L300LMSA

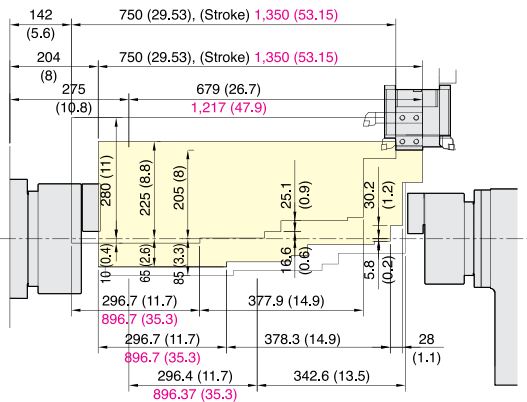
OD/ID TOOL HOLDER



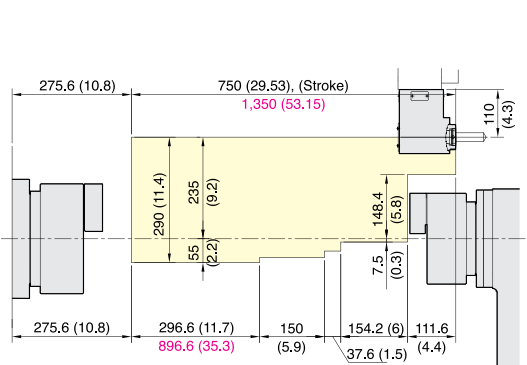
DRILL/END MILL TOOL HOLDER



DOUBLE OD/ID TOOL HOLDER



SUB MILL TOOL HOLDER



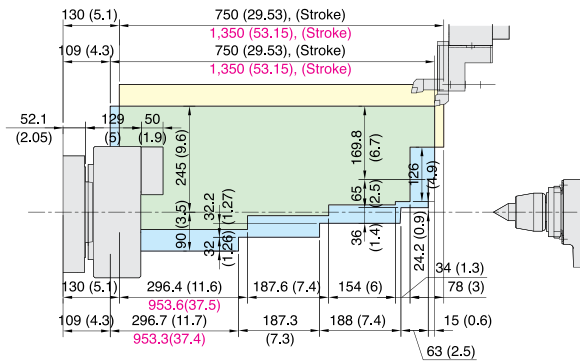
SPECIFICATIONS

Tooling Travel Range

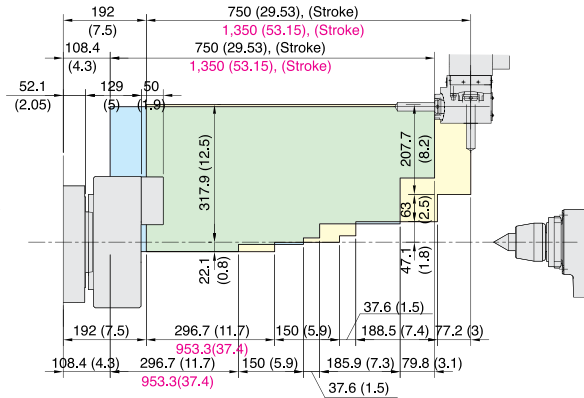
unit : mm(in)

L300MC L300LMC

OD/ID TOOL HOLDER

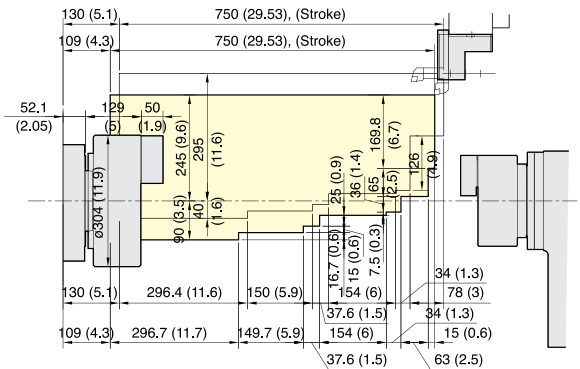


DRILL/END MILL TOOL HOLDER

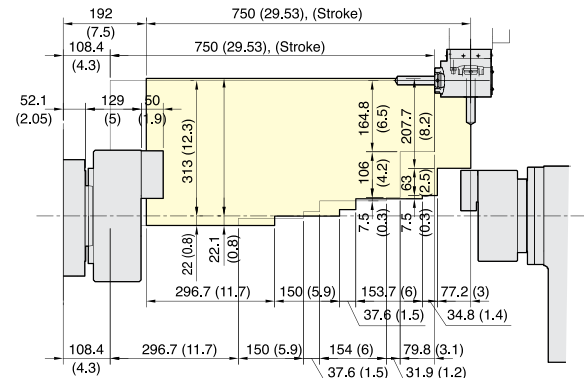


L300MSC

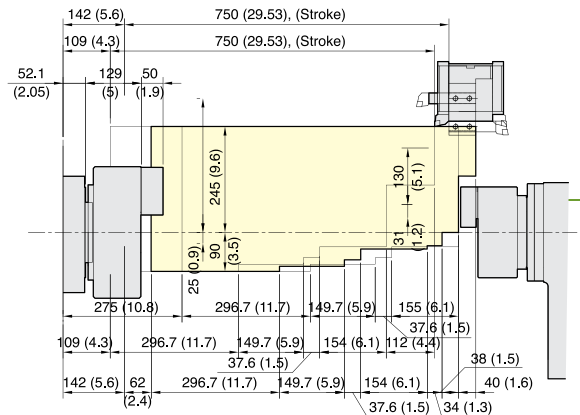
OD/ID TOOL HOLDER



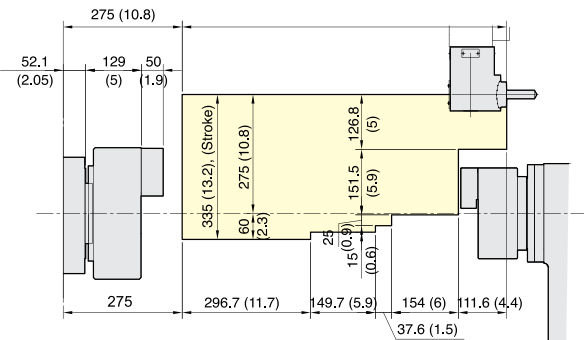
DRILL/END MILL TOOL HOLDER



DOUBLE OD/ID TOOL HOLDER



SUB MILL TOOL HOLDER



SPECIFICATIONS

Specifications

[] : Option

ITEM			L300A	L300MA	L300MSA	
CAPACITY	Swing Over the Bed	mm(in)	Ø750 (29.5")			
	Swing Over the Carriage	mm(in)	Ø480 (18.9")			
	Max. Turning Dia.	mm(in)	Ø500 (19.7")	Ø410 (16.1")		
	Max. Turning Length	mm(in)	720 (28.3")	680 (26.8")		
	Bar Capacity	Main	mm(in)	Ø76 (3")		
Sub		mm(in)	-	Ø65 (2.6")		
SPINDLE	Chuck Size	Main	inch	10"		
		Sub	inch	-	8"	
	Spindle Bore	Main	mm(in)	Ø90 (3.5")	Ø95(3.7")	
		Sub	mm(in)	-	Ø78 (3.1")	
	Spindle Speed (rpm)	Main	r/min	3,600 [3,500]	3,500	
		Sub	r/min	-	4,000	
	Motor (Max/Cont.)	Main	kW(HP)	22/18.5 (30/25) [22/18.5 (30/25)]	22/18.5 (30/25)	
		Sub	kW(HP)	-	11/7.5 (15/10)	
	Torque (Max/Cont.)	Main	N·m(lbf·ft)	739/622 (545/458.8) [783.2/652.7 (577.7/481.4)]	493.4/414.9 (363.9/306)	
		Sub	N·m(lbf·ft)	-	140.1/95.5	
	Spindle Type	Main	-	Belt+2Step Gear	Belt	
		Sub	-	-	Belt	
	Spindle Nose	Main	-	A2-8		A2-6
		Sub	-	-	A2-6	
C-axis Indexing	deg	-	0.001°			
FEED	Travel (X/Z/ZB)	mm(in)	290/750 (11.4"/29.5")		290/750/700 (11.4"/29.5"/27.5")	
	Rapid Traverse Rate (X/Z/ZB)	m/min	20/24		20/24/20	
	Slide Type	-	BOX GUIDE			
TURRET	No. of Tools	EA	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 (7.4/4.7)		
	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	-	-	BMT65P		
TAIL STOCK	Taper	-	MT5		-	
	Quill Dia.	mm(in)	Ø100 (3.9")		-	
	Quill Travel	mm(in)	120 (4.72)		-	
	Travel	mm(in)	750 (29.5)		-	
TANK CAPACITY	Coolant Tank	ℓ (gal)	220 (58.1)			
	Lubricating Tank	ℓ (gal)	1.8 (0.5)			
POWER SUPPLY	Electric Power Supply	kVA	25	27	35	
	Thickness of Power Cable	Sq	Over 25	Over 35		
	Voltage	V/Hz	220/60 (200/50*)			
MACHINE	Floor Space (L×W)	mm(in)	3,200×2,002(126"×78.8")	3,360×2,002(132.3"×78.8")	3,470×2,002(136.6"×78.8")	
	Height	mm(in)	1,997 (78.6")			
	Weight	kg(lb)	6,300 (13,889)	6,500 (14,330)	7,000 (15,432)	
PC	Controller	-	HW F i Series [iTROL]	HW F i Series [F 32i-B]	F 32i-B	

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

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

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[] : Option

ITEM			L300LA	L300LMA	L300LMSA	
CAPACITY	Swing Over the Bed	mm(in)	Ø750 (29.5")			
	Swing Over the Carriage	mm(in)	Ø480 (18.9")			
	Max. Turning Dia.	mm(in)	Ø500 (19.7")	Ø410 (16.1")		
	Max. Turning Length	mm(in)	1,320 (52")	1,280 (50.4")	1,250 (49.2")	
	Bar Capacity	Main	mm(in)	Ø76 (3")		
Sub		mm(in)	-	Ø65 (2.6")		
SPINDLE	Chuck Size	Main	10"			
		Sub	-	8"		
	Spindle Bore	Main	mm(in)	Ø90 (3.5")	Ø95(3.7")	
		Sub	mm(in)	-	Ø78 (3.1")	
	Spindle Speed (rpm)	Main	r/min	3,600 [3,500]	3,500	
		Sub	r/min	-	4,000	
	Motor (Max/Cont.)	Main	kW(HP)	22/18.5 (30/25) [22/18.5 (30/25)]	22/18.5 (30/25)	
		Sub	kW(HP)	-	11/7.5 (15/10)	
	Torque (Max/Cont.)	Main	N·m(lbf·ft)	739/622 (545/458.8) [783.2/652.7 (577.7/481.4)]	493.4/414.9 (363.9/306)	
		Sub	N·m(lbf·ft)	-	140.1/95.5	
	Spindle Type	Main	-	Belt+2Step Gear	Belt	
		Sub	-	-	Belt	
	Spindle Nose	Main	-	A2-8		-
Sub		-	-	A2-6		
C-axis Indexing	deg	-	0.001°			
FEED	Travel (X/Z/ZB)	mm(in)	290/1,350(11.4"/53.1")		290/1,350/1,200 (11.4"/53.1"/47.2")	
	Rapid Traverse Rate (X/Z/ZB)	m/min	20/24			
	Slide Type	-	BOX GUIDE			
TURRET	No. of Tools	EA	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 (7.4/4.7)		
	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	-	-	BMT65P		
TAIL STOCK	Taper	-	MT5			
	Quill Dia.	mm(in)	Ø100 (3.9")			
	Quill Travel	mm(in)	120 (4.72)			
	Travel	mm(in)	1,350 (53.1)			
TANK CAPACITY	Coolant Tank	ℓ (gal)	270 (71.3)			
	Lubricating Tank	ℓ (gal)	1.8 (0.5)			
POWER SUPPLY	Electric Power Supply	kVA	25	27	35	
	Thickness of Power Cable	Sq	Over 25	Over 35		
	Voltage	V/Hz	220/60 (200/50*)			
MACHINE	Floor Space (L×W)	mm(in)	4,171×2,002 (164.2"×78.8")			
	Height	mm(in)	1,997 (78.6")			
	Weight	kg(lb)	7,500 (16,535)	7,700 (16,976)	8,200 (18,078)	
PC	Controller	-	HW F i Series [iTROL]	F 32i-B [HW F i Series]	F 32i-B	

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

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

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[] : Option

ITEM			L300C	L300LC	
CAPACITY	Swing Over the Bed		mm(in) Ø750 (29.5")		
	Swing Over the Carriage		mm(in) Ø480 (18.9")		
	Max. Turning Dia.		mm(in) Ø560 (22")		
	Max. Turning Length		720 (28.3")	1,320 (52")	
	Bar Capacity	Main	mm(in)	Ø90 (3.5") [Big Bore : Ø102 (4")]	
Sub		mm(in)	-		
SPINDLE	Chuck Size	Main	inch	12" [15"] [Big Bore : 12", 15"]	
		Sub	inch	-	
	Spindle Bore	Main	mm(in)	Ø102 (4") [Big Bore : Ø115 (4.5")]	
		Sub	mm(in)	-	
	Spindle Speed (rpm)	Main	r/min	3,000 [2,800] [3,300]	
		Sub	r/min	-	
	Motor (Max/Cont.)	Main	kW(HP)	26/22 (35/30) [26/22 (35/30)] [26.4/22 (35.4/30)]	
		Sub	kW(HP)	-	
	Torque (Max/Cont.)	Main	N·m(lbf·ft)	1,131/957(834.2/705.8) [1,325/1,121(977.3/826.8)] [1,137.1/947.6(838.7/698.9)]	
		Sub	N·m(lbf·ft)	-	
	Spindle Type	Main	-	BELT+2STEP GEAR	
		Sub	-	-	
	Spindle Nose	Main	-	A2-8 [A2-11]	
Sub		-	-		
C-axis Indexing	-	deg	-		
FEED	Travel (X/Z/ZB)		355/750(14"/29.5")	355/1,350(14"/53.1")	
	Rapid Traverse Rate (X/Z/ZB)		m/min 20/24		
	Slide Type		BOX GUIDE		
TURRET	No. of Tools		EA	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)	-	
	Milling Tool Speed (rpm)		r/min	-	
	Torque (Max/Cont.)		N·m(lbf·ft)	-	
	Collet Size		mm(in)	-	
	Type		-	-	
TAIL STOCK	Taper		-	MT5	
	Quill Dia.		mm(in)	Ø100 (3.9")	
	Quill Travel		mm(in)	120 (4.7")	
	Travel		mm(in)	750 (29.5")	1,350 (53.1)
TANK CAPACITY	Coolant Tank		ℓ (gal)	220 (58.1)	
	Lubricating Tank		ℓ (gal)	1.8 (0.5)	
POWER SUPPLY	Electric Power Supply		kVA	30	
	Thickness of Power Cable		Sq	Over 35	
	Voltage		V/Hz	220/60 (200/50*)	
MACHINE	Floor Space (L×W)		mm(in)	3,506×2,002 (138"×78.8")	
	Height		mm(in)	1,997 (78.6")	
	Weight		kg(lb)	6,400 (14,110)	7,600 (16,755)
PC	Controller		-	HW 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)

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

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[] : Option

ITEM			L300MC	L300LMC	L300MSC
CAPACITY	Swing Over the Bed	mm(in)	Ø750 (29.5")		
	Swing Over the Carriage	mm(in)	Ø480 (18.9")		
	Max. Turning Dia.	mm(in)	Ø500 (19.7")		
	Max. Turning Length	mm(in)	600 (23.6")	1,260 (49.6")	600 (23.6")
	Bar Capacity	Main	mm(in)	Ø90 (3.5") [Big Bore : Ø102 (4")]	
Sub		mm(in)	-		
SPINDLE	Chuck Size	Main	12" [15"] [Big Bore : 12", 15"]		
		Sub	-		
	Spindle Bore	Main	Ø102 (4") [Big Bore : Ø115 (4.5")]		
		Sub	-		
	Spindle Speed (rpm)	Main	3,000 [Big Bore : 2,800] [3,500]		
		Sub	-		
	Motor (Max/Cont.)	Main	22/18.5 (30/25)[Big Bore : 22/18.5 (30/25)] [33.6/28 (45.1/37.5)]		22/18.5 (30/25) [Big Bore : 22/18.5 (30/25)]
		Sub	-		11/7.5 (14.7/10)
	Torque (Max/Cont.)	Main	787.3/465 (580.7/343) [Big Bore : 787.3/465 (580.7/343)] [481.1/400.9 (354.8/295.7)]		787.3/465 (580.7/343) [Big Bore : 787.3/465 (580.7/343)]
		Sub	-		140/95.5
	Spindle Type	Main	Belt		
		Sub	-		
	Spindle Nose	Main	A2-8 [A2-11]		
Sub		-			
C-axis Indexing	deg	0.001*			
FEED	Travel (X/Z/ZB)	mm(in)	355/750 (14"/29.5")	355/1,350 (14"/53.1")	355/750/700 (14"/29.5"/27.6")
	Rapid Traverse Rate (X/Z/ZB)	m/min(ipm)	20/24 (787/945)		20/24/20 (787/945/787)
	Slide Type	-	BOX GUIDE		
TURRET	No. of Tools	EA	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 (7.4/4.7)		
	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	-	BMT65P		
TAIL STOCK	Taper	-	MT5		-
	Quill Dia.	mm(in)	Ø100 (3.9")		
	Quill Travel	mm(in)	120 (4.72)		
	Travel	mm(in)	750 (29.5)	1,350 (53.1)	-
TANK CAPACITY	Coolant Tank	ℓ (gal)	220 (58.1)	270 (71.3)	220 (58.1)
	Lubricating Tank	ℓ (gal)	1.8 (0.5)		
POWER SUPPLY	Electric Power Supply	kVA	30		38
	Thickness of Power Cable	Sq	Over 35		
	Voltage	V/Hz	220/60 (200/50*)		
MACHINE	Floor Space (L×W)	mm(in)	3,480×2,002 (137"×78.8")	4,170×2,002 (164.2"×78.8")	3,586×2,002 (141.2"×78.8")
	Height	mm(in)	1,997 (78.6")		
	Weight	kg(lb)	6,600 (14,550)	7,800 (17,196)	7,100 (15,653)
PC	Controller	-	FANUC 32i-B [HW FANUC i Series] [HYUNDAI-ITROL]		FANUC 32i-B

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

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

Specifications are subject to change without notice for improvement.

CONTROLLER

HYUNDAI WIA FANUC i Series (L300A/LA/MA/LMA/C/LC | L300MC/LMC)

[] : 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	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	1%, F25%, 50%, 100%
Override cancel	
Feed per minute	G98
Feed per revolution	G99
Look-ahead block	1 block
Program input	
Tape Code	EIA / ISO
Optional block skip	1 ea
Absolute / Incremental program	G90 / G91
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999.999 mm (± 99,999.9999 inch)
Plane selection	X-Y : G17 / Z-X : G18 / Y-Z : G19
Workpiece coordinate system	G52, G53, 6 pairs (G54 ~ G59)
Manual absolute	Fixed ON
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	#100 ~ #199, #500 ~ #999
G code system	A
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	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	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	
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 (L300MA/LMA/MSA/LMSA | L300C/LC/MC/LMC/MSC)

[] : 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 (L300A/LA/C/LC/MC/LMC)

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	

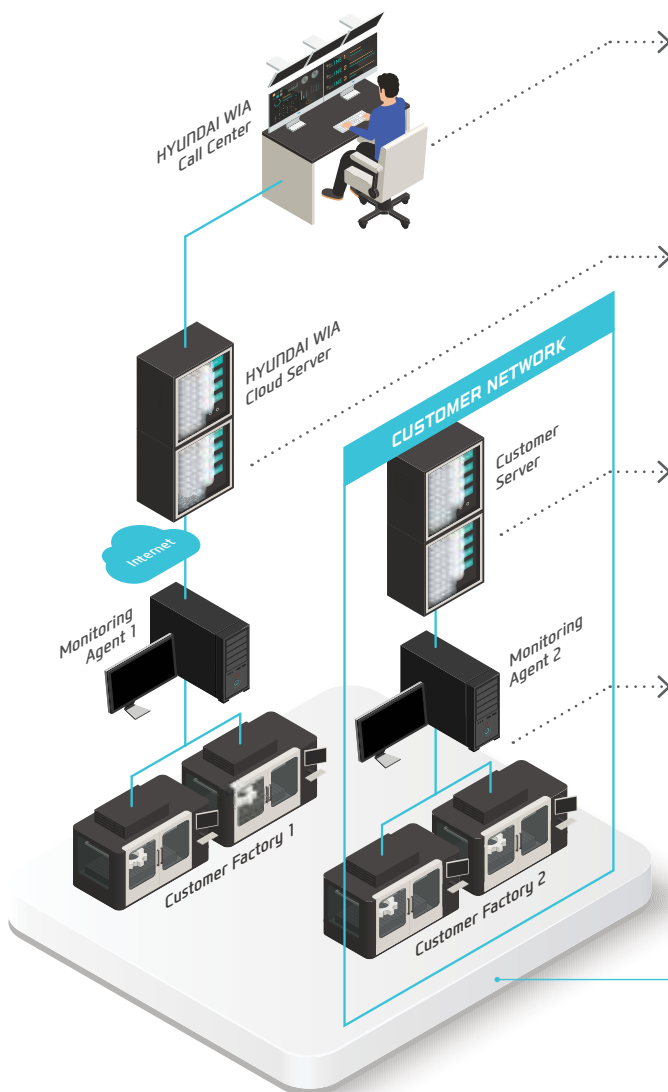
Compensation	
Backlash compensation	
Leadscrew error compensation	
Measuring system error compensation	
Feedforward control (Speed control)	
Safety Function	
Safe torque off (STO)	
Safe brake control (SBC)	
Safe stop 1 (SS1)	
Diagnostic Function	
Alarm/Message . Alarm log	
PLC status/LAD online display	
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 Management	Turret Guidance, I/O monitoring, Manual
SMART machining	Soft MCP, M/G code List
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



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