

L300 Series

HYUNDAI WIA CNC Turning Center

www.wardcnc.com



Technical Leader

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



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

●: Standard ○: Option

CNC Turning Center for Heavy Duty Cutting

L300 Series

- Rigidity secured through box guideways
- Highly accurate direct link and solid one-piece structure
- Pretension double-anchored method for high precision
- 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)

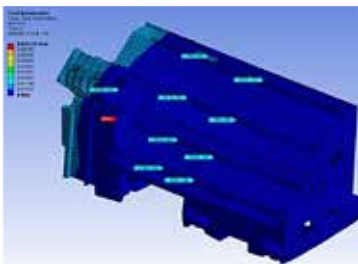


01

L300 Series

Basic Features

Powerful Cutting Capability & Large Working Area
CNC Turning Center



01

High Precision, High 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.

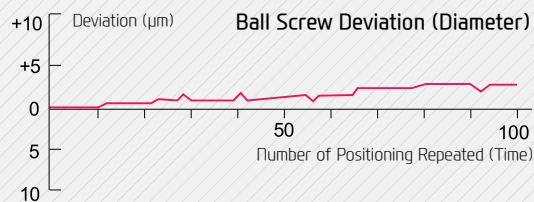
Box Guideway

Box guideways provide unsurpassed long term rigidity and accuracy, even during heavy duty cutting.



Ball Screw

Travel is stabilized by fastening both ends of the ball screw using the double anchored method. In particular, a large diameter ball screw with proper preload reinforces sturdiness and resistance to thermal displacement.



02

Main Spindle

The main spindle has become sturdier by enlarging the diameter and thickness. Rigidity and accuracy are maintained incorporating high precision angular ball bearings.



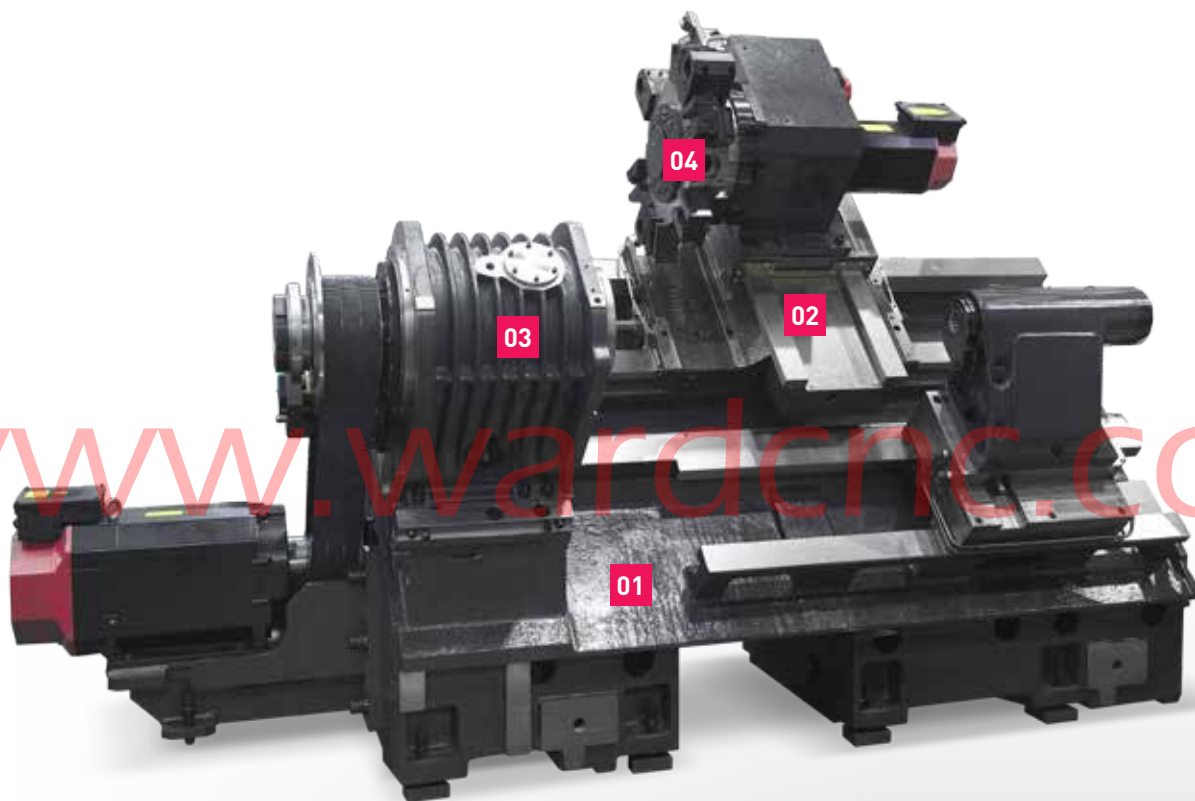
03

BMT Turret (Mill Turret)

The BMT turret, with 4 screws solidly fastening the holder, shows outstanding performance in powerful cutting and is capable of machining complex products by using rotation tools.



04



Reduction of non-cutting time by fast rapid speed

⊙ **Rapid Traverse Rate** (X/Z/ZB axis) : 20/24/20 m/min (787/945/787 ipm)

⊙ **Travel** (X/Z/ZB axis)

L300A/MA : 290/750 mm (11.4"/29.5") L300MSA : 290/750/700 mm (11.4"/29.5"/27.6")

L300LA/LMA : 290/1,350 mm (11.4"/53.1") L300LMSA : 290/1,350/1,200 mm (11.4"/53.1"/47.2")

L300C/MC : 355/750 mm (14"/29.5") L300LC/LMC : 355/1,350 mm (14"/53.1")

L300MSC : 355/750/700 mm (14"/29.5"/27.6")

02

L300 Series

High Precision Spindle

Long Lasting High Accuracy & Excellent Performance
CNC Turning Center

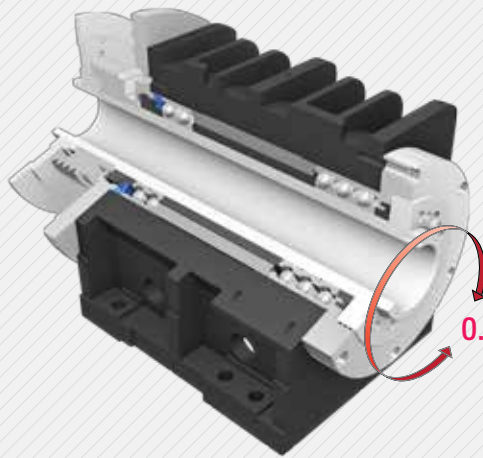


Gear Type Spindle

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.



Main Spindle

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.

0.001° Big Bore 15" Spindle (L300C Series) **OPTION**

The big bore spindle of $\varnothing 115(\varnothing 4.5")$ provides excellent performance during pipe machining.

Also, spindle torque of 1,325N·m(977.3lbf·ft) is optimal for heavy duty cutting.

Sub Spindle (L300MSA/LMSA/MSC)

The 8" sub spindle with C-axis, is designed to minimize thermal growth, even under long, continuous machining, to ensure high precision and accuracy.

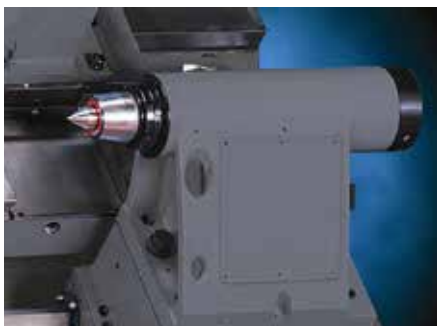
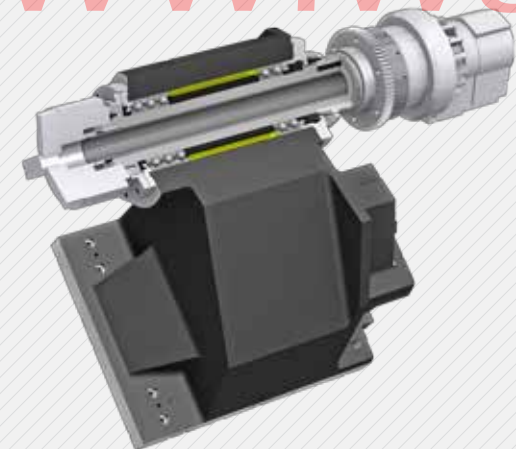
Easy Work Coordinate Setting

Once the processing on the main spindle is completed, the sub spindle rotates at the same rate as the main spindle and the workpiece is handed over to the sub spindle.

Once the workpiece is secured in the sub spindle rear processing is possible. Thus, workpiece setup time is reduced and productivity is enhanced.

Chuck Size : 8" Motor : 11/7.5 kW (14.7/10 HP)

C-axis Indexing : 0.001° Spindle Bore : $\varnothing 65(\varnothing 2.6")$



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.

(Built-in Tail Stock : MT #4) **OPTION**

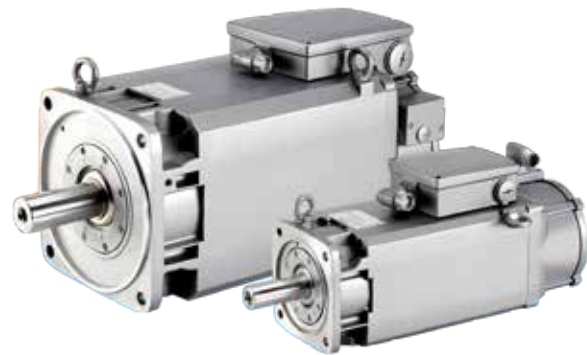
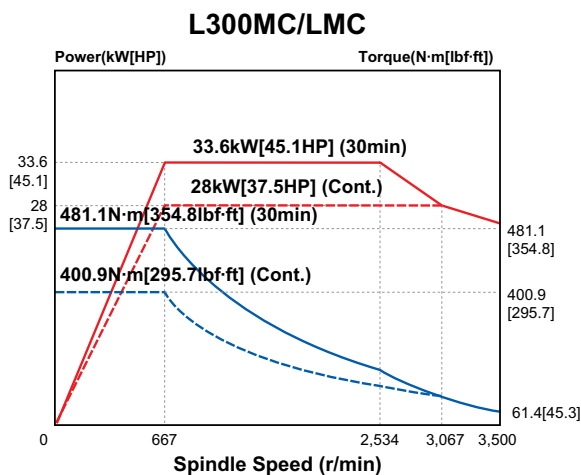
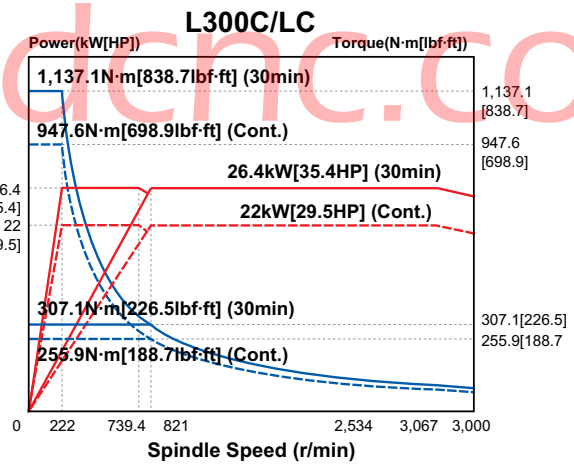
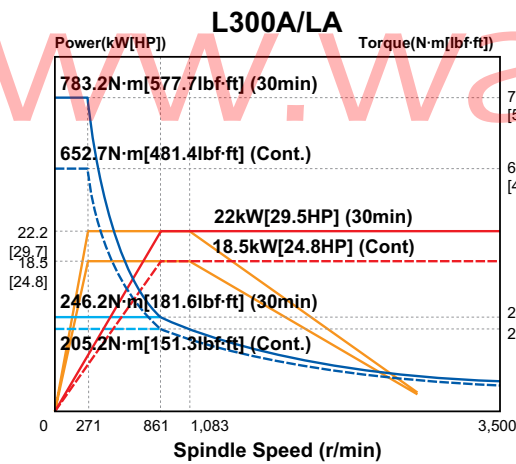
Taper : **MT #5** Quill Dia. : $\varnothing 100(\varnothing 3.9")$ Quill Weight : 740 kgf (1,631 lbf)

Travel : 750 mm (29.5") L Type : 1,350 mm (53.1")



SIEMENS 1PH8 Spindle Motor

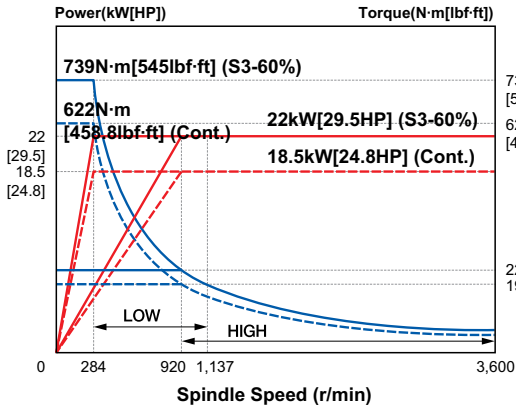
The 1PH8 Series is a high quality performance motor providing concentricity of 10 μ m and fast response time.



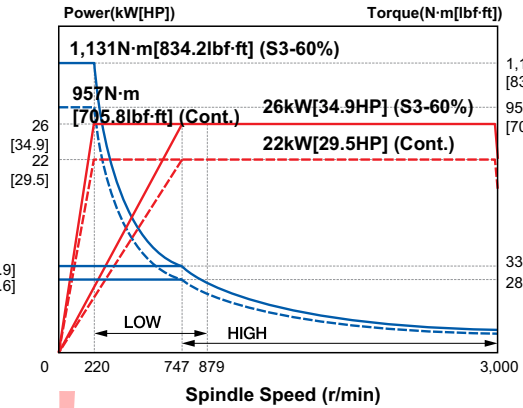
Spindle Output/Torque Diagram

FANUC Spindle

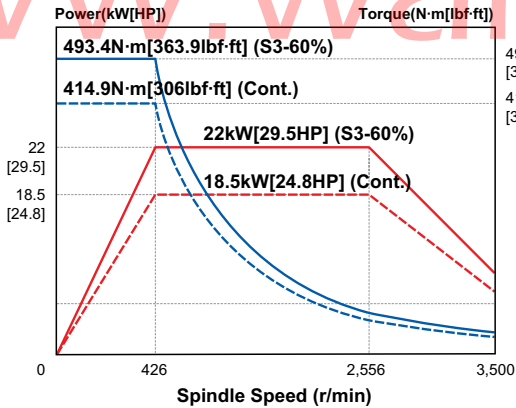
L300A/LA



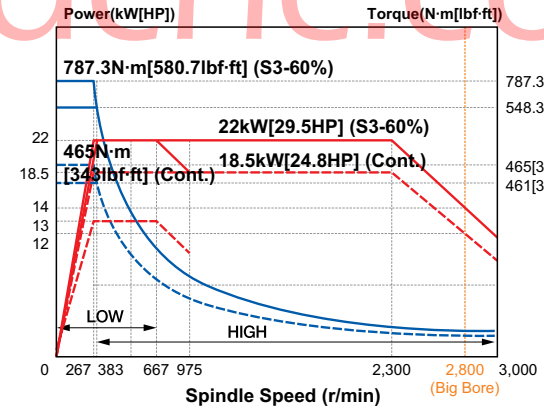
L300C/LC



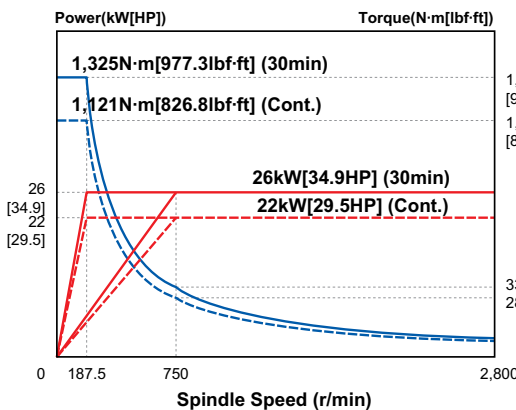
L300MA/MSA/LMA/LMSA



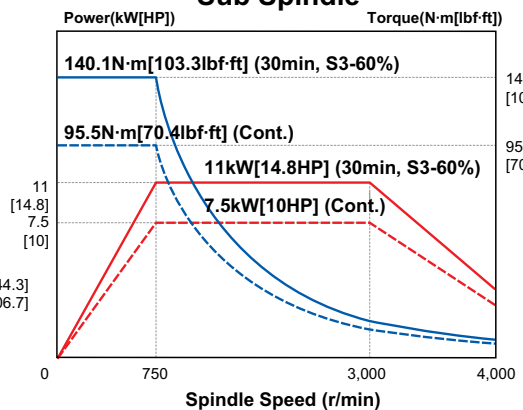
L300MC/MSC/LMC & BIG BORE



L300C/LC BIG BORE



L300MSA/LMSA/MSC Sub Spindle



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L300 Series

Servo Turret

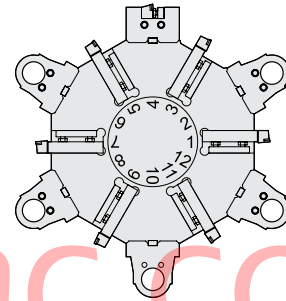
High speed, High Accuracy, Highly Reliable
Servo Turret



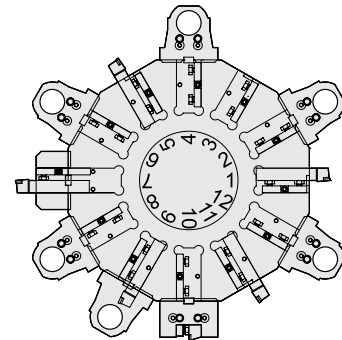
Servo Turret

- Number of Tools : 12 EA
- Tool Size (O.D) : 25 (1")
- Tool Size (I.D) : Ø50 (Ø2")

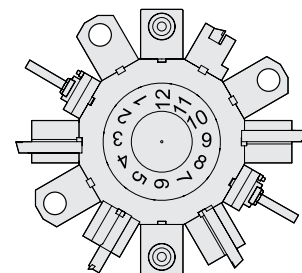
L300A Series



L300C Series



L300M Series



Turret

The turret of L300 series is joined with a high performance AC servo motor, improving machining reliability. The 3 piece coupling shows excellent performance in indexing. Powerful hydraulic tool clamping minimizes tool tip deviation caused by workload.

BMT Turret (Mill Turret)



BMT turret applied in L300M series, with 4 screws solidly fastening the holder, shows outstanding performance in milling, drilling and tapping during heavy duty cutting.



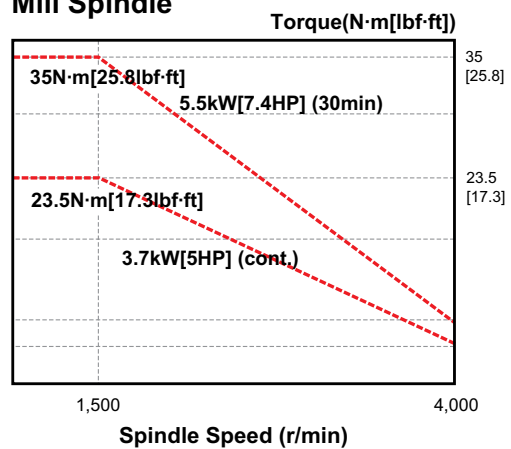
Mill Tool Holder

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

A wide variety of additional tool holders enable further enhanced machining such as drilling, tapping and endmilling.



Mill Spindle



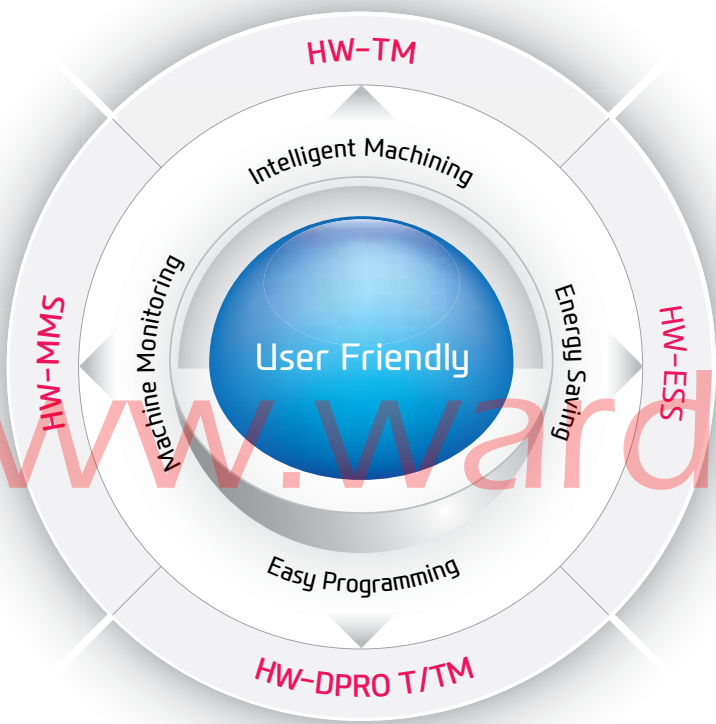
- ⊙ Output : 5.5/3.7 kW (7.4/5 HP)
- ⊙ Speed (rpm) : 4,000 r/min
- ⊙ Collet size : Ø20 (Ø0.8") (ER32)
- ⊙ Live Tool Type : BMT65P

04
L300 Series

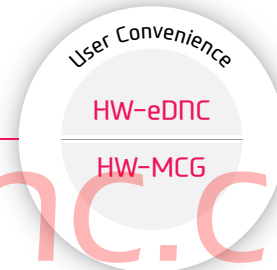
Smart System



Software for Smart Operating and Machining



HYUNDAI WIA Smart System
for CNC Turning Center



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Smart Factory 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.

- 01 Real-time monitoring of machine operation status (Cloud)
- 02 History and statistics of machine operation (Cloud)
- 03 History and statistics of alarm occurrence (Cloud)
- 04 History and statistics of work count (Cloud)
- 05 Remote diagnosis (Remote)

Faster processing and enhanced accuracy in are possible through the **HYUNDAI WIA Smart System**. The user friendly software and equipment monitoring of the Smart System maximizes productivity.



HW-eDNC

HYUNDAI WIA ethernet
Direct Numerical Control

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



HW-MCG

HYUNDAI WIA
Machine Guidance

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



HW-TM

HYUNDAI WIA
Tool Monitoring

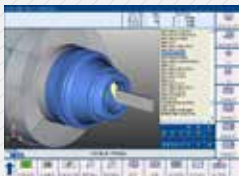
A tool monitoring software which analyzes the load of the spindle motor to determine and monitor possible damage of tools.



HW-ESS (Standard)

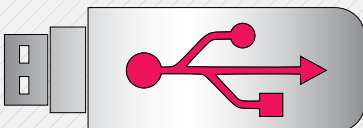
HYUNDAI WIA
Energy Saving System

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



HW-DPRO T/TM HYUNDAI WIA Dialogue PROGRAM Turn/TurnMill

Using a dialogue method, this software makes it easy to work out a program for a lathe processing operation with complicated configurations. (Can be installed on a PC.)



USB Port

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

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SIEMENS

DIFFERENTIATED CAPABILITIES, INTEGRATED ENGINEERING PERFECTLY INTERLINKED

SIEMENS 828D is a latest model CNC. It is designed for horizontal/vertical all-purpose equipments.

Its 80-bit control reduces processing time and increases productivity. The 828D is easy to maintain and run, with its easy setup functions.



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SIEMENS Technology

SIEMENS Communication Function

Shop Turn

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



OPTION

3D Simulation

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



OPTION

Easy Extend

- Easy to install/uninstall an option (Ex : barfeeder and chip conveyor, etc.)
- Possible to install in one motion without revision of individual perimeters.
- A spate list is unnecessary as option items are indicated with letters.



Variable Communication Port

RJ 45 Ethernet

USB 2.0

Compact Flash Card



Easy input/output of a program is possible as a USB memory card, a CF memory card and LAN can all be used.

ISO Code Programming



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

SIEMENS Convenience Function

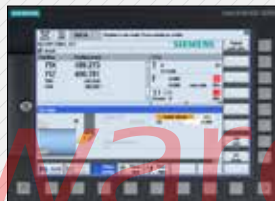
Easy Tool Measuring

- Easy calculation (automatic and manual) of the offset values of the installed equipment
- Automatic input of the measured offset values of equipment into the equipment list



Work Offset Measuring

- Supports the function of work offset calculation
- Automatic application of the measured work offset value as the activated work offset



Real Time PLC Monitoring

- Real time monitoring of PLC programs is possible. Supports the "search" and "cross reference" functions.
- Real time verification of I/O variables and PLC interface
- Input/change of the values of variables



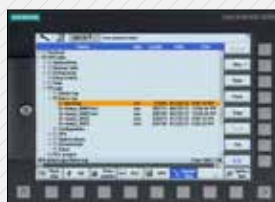
Block Searching

- Program can be re-started from a particular location without editing the processing program.
- Provides safety to the user.

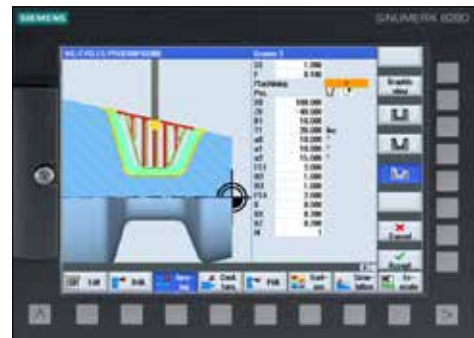


Alarm Log

- A maximum of 500 alarms can be stored.
- The entire alarm log can be stored as a data file in the I/O
- The overall alarm history can be checked through the alarm log.



SIEMENS Easy Programming



Program Guide

Simple Program, High Productivity

- Use of cycle program minimizes program capacity.
- When cycle variables are input, graphic images are provided.
- Tool path and simulation of completed cycle program are available.
- Various configurations can be processed using cycles.



Engraving Cycle

Simple Letter Processing is Possible.

- Letters can be processed on products by establishing a plane and inputting letters.
- Letter size/angle/location/direction can be designated.
- Capital and small letters of English can be processed.

n5

L300 Series

Automation System

Various Devices for User Convenience



Robot Automation System



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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.

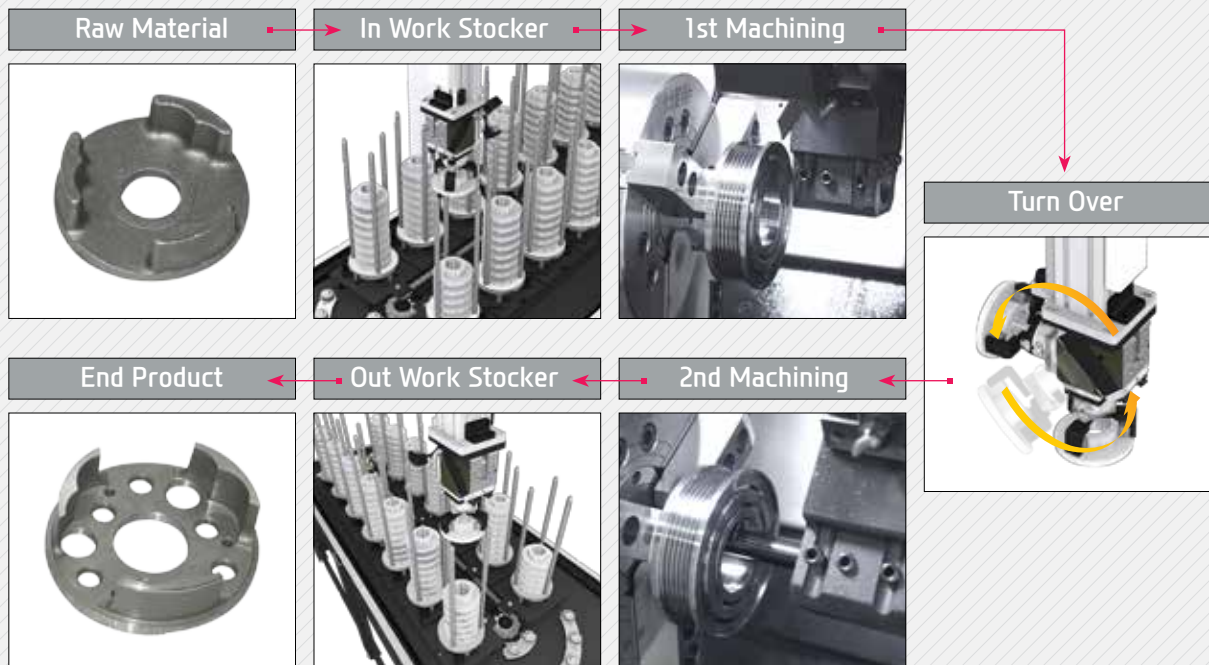


Gantry Loader System



Gantry Loader Machining Process

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



SPECIFICATIONS

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		○(CE:●)	○(CE:●)	○(CE:●)
2 Steps Chuck Foot Switch		○	○	○
Sub Spindle 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		●	●	-
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:●)	-
Tail Stock Foot Switch		○	○	-
Coolant & Air Blow				
Standard Coolant (Nozzle)		●	●	●
Chuck Coolant (Upper Chuck)		○	○	○
Gun Coolant		○	○	○
Through Spindle Coolant (Only for Special Chuck)		☆	☆	☆
Thru Coolant for Live Tool		-	☆	☆
Chuck Air Blow (Upper Chuck)		○	○	○
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 (21.7psi)	●	●	●
	6Bar (87psi)	○	○	○
	14.5Bar (210.2psi)	○	○	○
	20Bar (290psi)	○	○	○
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)		☆	☆	☆
	Standard (180ℓ [47.5 gal])	○	○	○
	Swing (200ℓ [52.8 gal])	○	○	○
Chip Wagon	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	2Color : ●●	○	○	○
Call Light	3Color : ●●●	○	○	○
Call Light & Buzzer	3Color : ●●●B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		○	○	○
Work Counter	Digital	○	○	○
Total Counter	Digital	○	○	○
Tool Counter	Digital	○	○	○
Multi Tool Counter	Digital	○	○	○
Electric Circuit Breaker		○	○	○
Transformer	30kVA	○	-	-
	35kVA	-	○	○
Auto Power Off		○	○	○
Measurement				
Q-Setter		●	●	●
Automatic Q-Setter		○	○	○
Work Close Confirmation Device (Only for Special Chuck)	TACO	☆	☆	☆
	SMC	☆	☆	☆
Work Setter (REFINSHAW/MARPOSS)		○	○	○
Linear Scale	X axis	○	○	○
	Z axis	○	○	○
Coolant Level Sensor (Only for Chip Conveyor)		☆	☆	☆
Environment				
Air Conditioner	FANUC	○	○	○
	SIEMENS	●	-	-
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 (507.6 psi)/ 20ℓ (5.3gal)	●	●	●
S/W				
Machine Guidance (HW-MCG)		☆	☆	☆
Energy Saving System (HW-ESS)		●	●	●
Tool Monitoring (HW-TM)		○	○	○
DNC software (HW-eDNC)		○	○	○
Machine Monitoring System (HW-MMS)		☆	☆	☆
Conversational program (HW-DPRO)		○	○	-
ETC				
Tool Box		●	●	●
Customized Color	Need Munsel No.	☆	☆	☆
CAD & CAM		☆	☆	☆

SPECIFICATIONS

L300 Series Standard & Optional

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

Spindle		C(LC)	MC(LMC)	MSC
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		○(CE:●)	○(CE:●)	○(CE:●)
2 Steps Chuck Foot Switch		☆	☆	☆
Sub Spindle 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		●	●	-
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:●)	-
Tail Stock Foot Switch		○	○	-
Coolant & Air Blow				
Standard Coolant (Nozzle)		●	●	●
Chuck Coolant (Upper Chuck)		○	○	○
Gun Coolant		○	○	○
Through Spindle Coolant (Only for Special Chuck)		☆	☆	☆
Thru Coolant for Live Tool		-	☆	☆
Chuck Air Blow (Upper Chuck)		○	○	○
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 (21.7psi)	●	●	●
	6Bar (87psi)	○	○	○
	14.5Bar (210.2psi)	○	○	○
	20Bar (290psi)	○	○	○
Power Coolant System (For Automation)		☆	☆	☆
Coolant Chiller		☆	☆	☆
Chip Disposal				
Coolant Tank	220ℓ (58.1 gal)	C (●)	MC (●)	●
	270ℓ (71.3 gal)	LC (●)	LMC (●)	-
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])	○	○	○

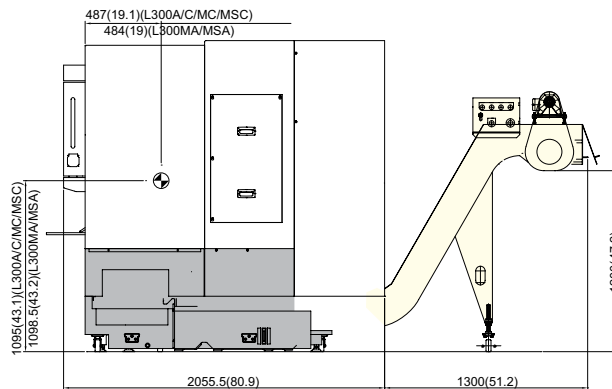
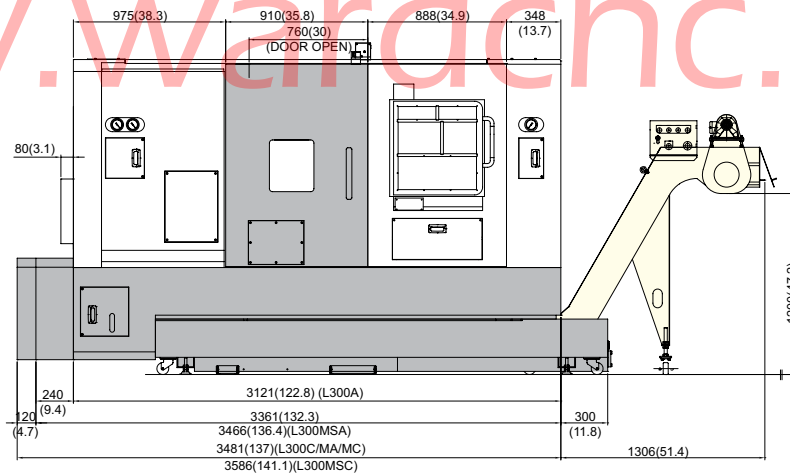
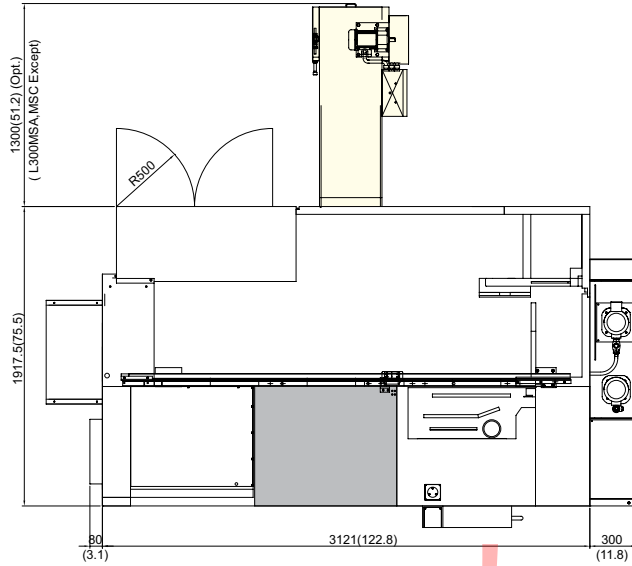
Chip Disposal		C(LC)	MC(LMC)	MSC
Chip Wagon	Large Size (330ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆
Safety Device				
Total Splash Guard		●	●	●
Chuck hydraulic pressure maintenance interlock		○(CE:●)	○(CE:●)	○(CE:●)
Electric Device				
Call Light	1Color : ●	●	●	●
Call Light	2Color : ●●	○	○	○
Call Light	3Color : ●●●	○	○	○
Call Light & Buzzer	3Color : ●●● B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		○	○	○
Work Counter	Digital	○	○	○
Total Counter	Digital	○	○	○
Tool Counter	Digital	○	○	○
Multi Tool Counter	Digital	○	○	○
Electric Circuit Breaker		○	○	○
AVR (Auto Voltage Regulator)		☆	☆	☆
Transformer	35kVA	○	○	○
Auto Power Off		○	○	○
Measurement				
Q-Setter		●	●	●
Automatic Q-Setter		○	○	○
Work Close Confirmation Device (Only for Special Chuck)	TACO	☆	☆	☆
	SMC	☆	☆	☆
Work Setter (RENISHAW/MARPOSS)		○	○	○
Linear Scale				
Linear Scale	X axis	○	○	○
	Z axis	○	○	○
Coolant Level Sensor (Only for Chip Conveyor)		☆	☆	☆
Environment				
Air Conditioner	FANUC	○	○	○
	SIEMENS	●	●	-
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 Panel		○	○	○
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 (507.6 psi)/ 20ℓ (5.3gal)	●	●	●
S/W				
Machine Guidance (HW-MCG)		☆	☆	☆
Energy Saving System (HW-ESS)		●	●	●
Tool Monitoring (HW-TM)		○	○	○
DNC software (HW-eDNC)		○	○	○
Machine Monitoring System (HW-MMS)		☆	☆	☆
Conversational program (HW-DPRO)		○	○	-
ETC				
Tool Box		●	●	●
Customized Color	Need Munsell No.	☆	☆	☆
CAD & CAM		☆	☆	☆

SPECIFICATIONS

External Dimensions

unit : mm(in)

L300A/MA//MSA(RIGHT ONLY)
L300C/MC//MSC(RIGHT ONLY)



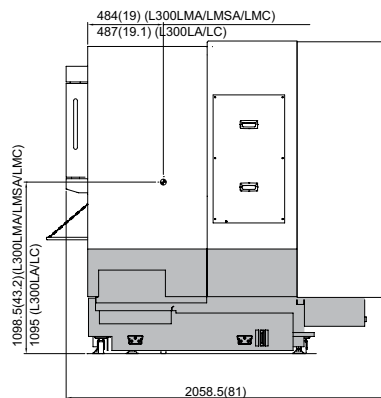
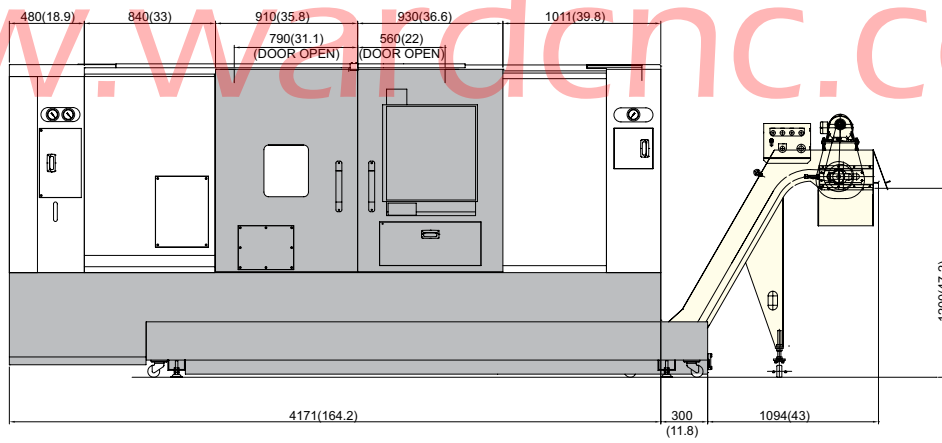
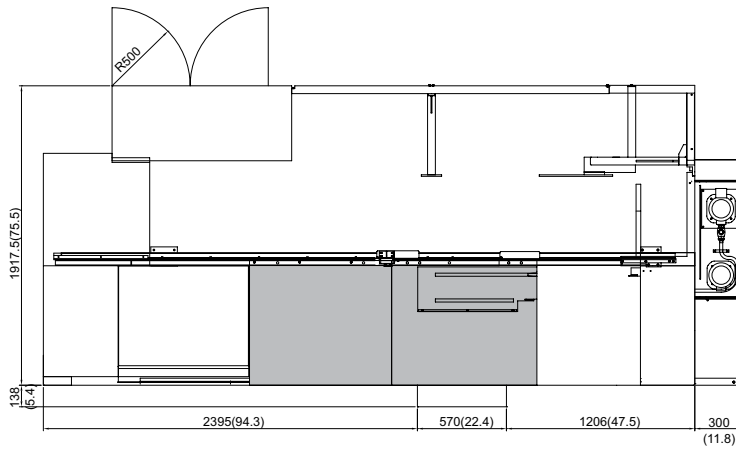
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SPECIFICATIONS

External Dimensions

unit : mm(in)

L300LA/LMA/LMSA
L300LC/LMC/LMSC

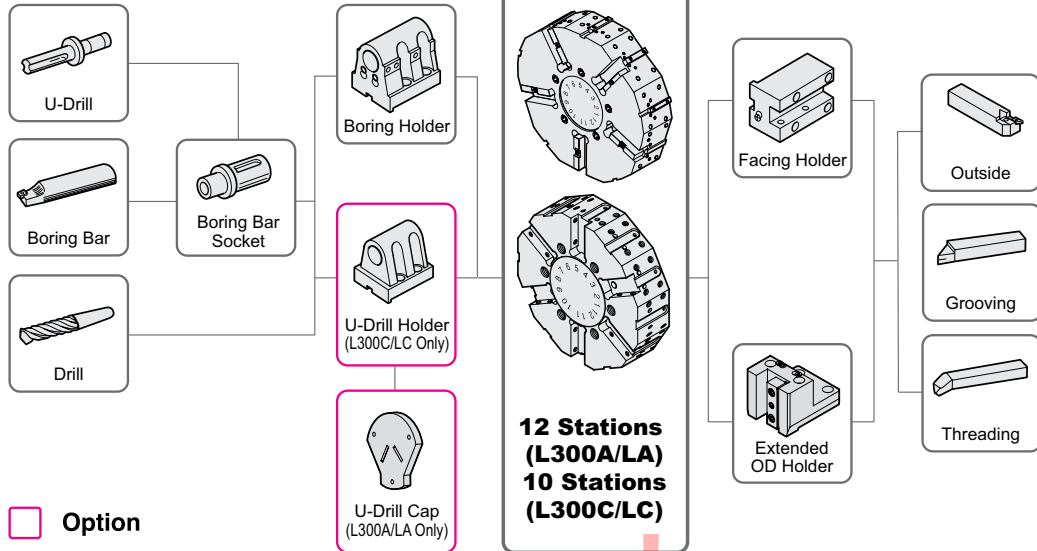


SPECIFICATIONS

Tooling System

unit : mm(in)

L300A/LA L300C/LC



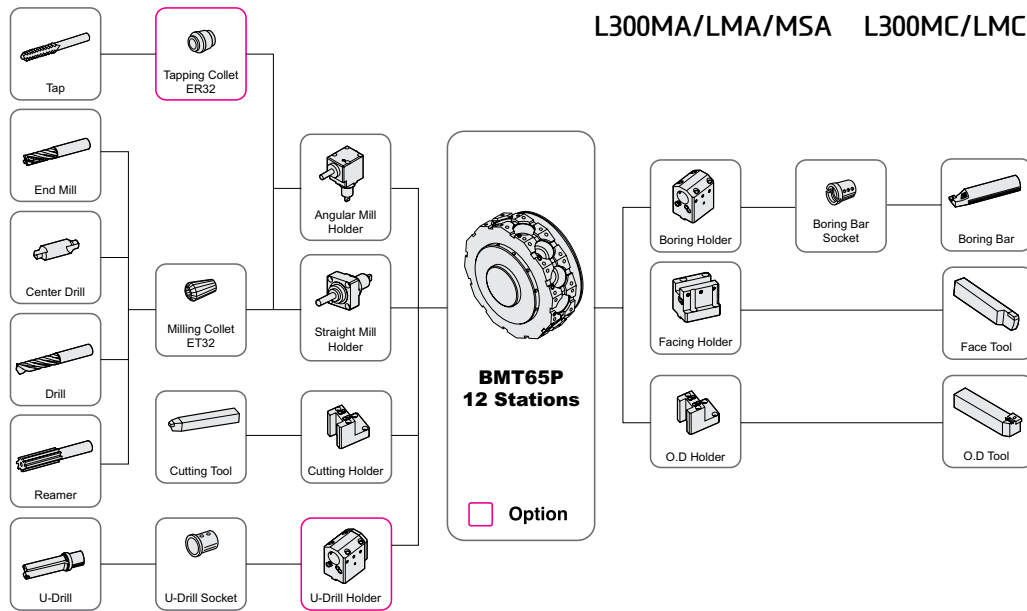
Tooling Parts Detail

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		-	-	1	1
Boring Holder	I.D Holder	Single	5	5	5	5
	U-Drill Holder	Tool Holder	Opt.	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	-
		Ø25 (Ø1")	-	-	-	-
		Ø32 (Ø1 1/4")	1	1	1	1
		Ø40 (Ø1 1/2")	-	-	-	-
		Ø45 (Ø1 3/4")	-	-	-	-
	Boring Sub	Ø6×Ø25 (1/4")	-	-	-	-
		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

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		
	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	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	

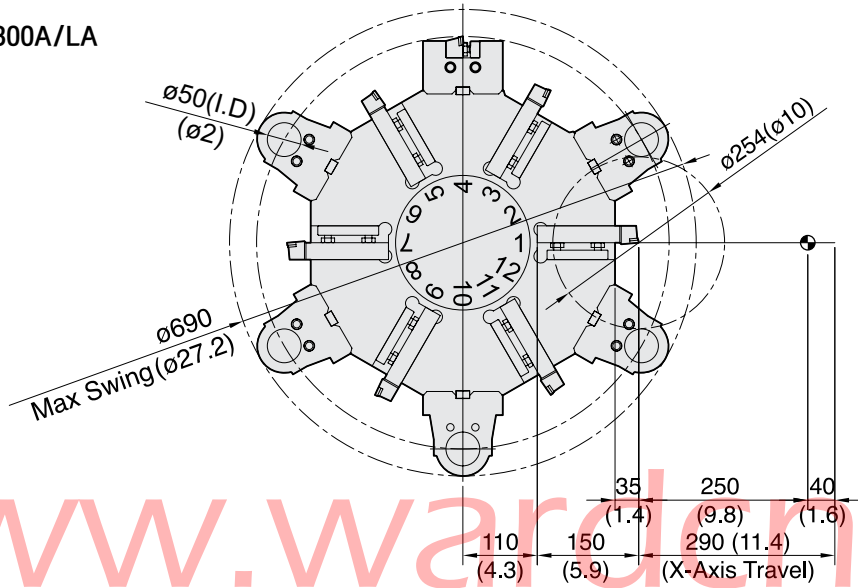
Specifications are subject to change without notice for improvement.

SPECIFICATIONS

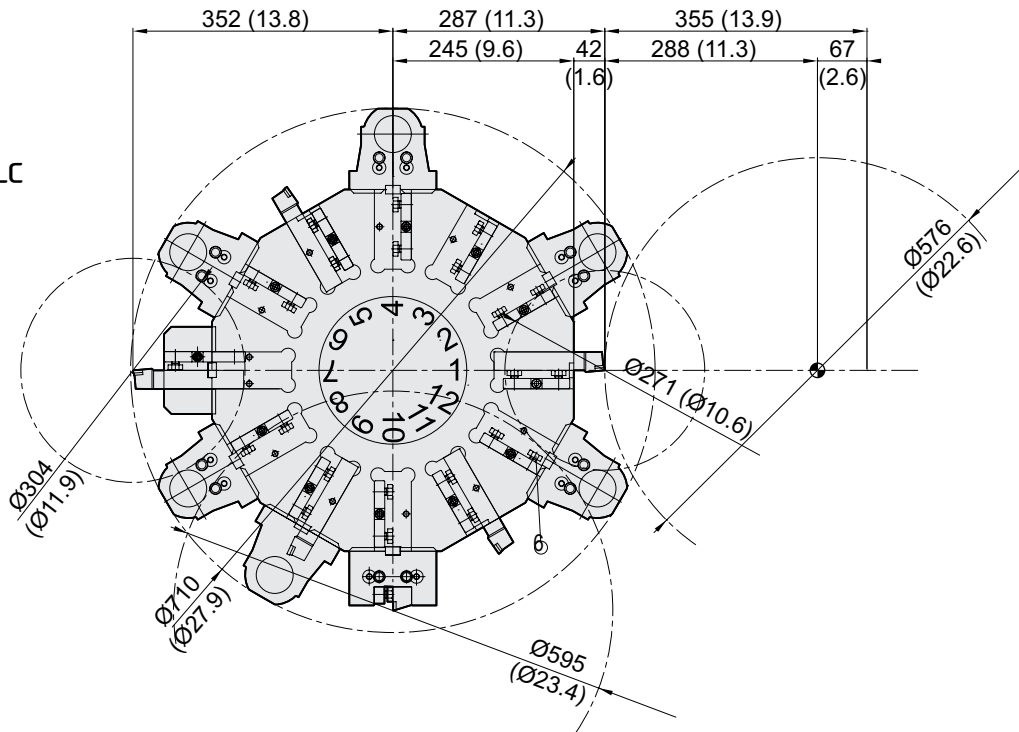
Interference

unit : mm(in)

L300A/LA



L300C/LC

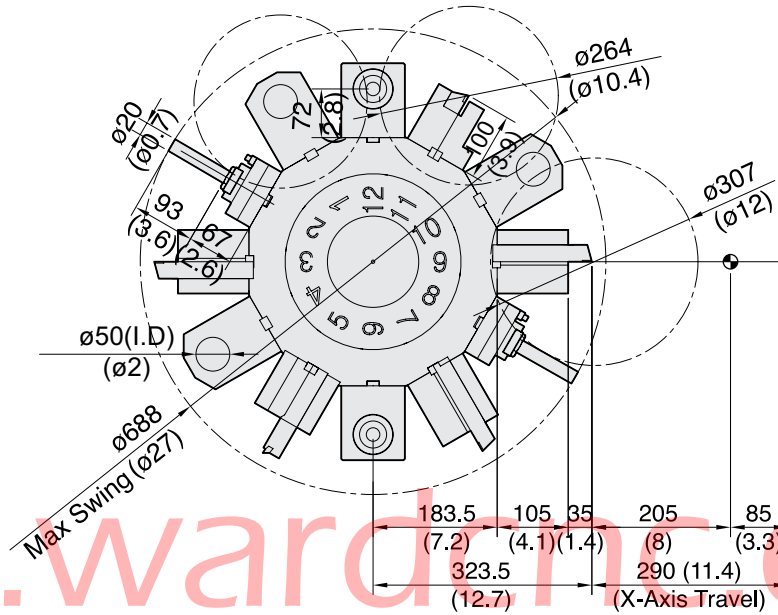


SPECIFICATIONS

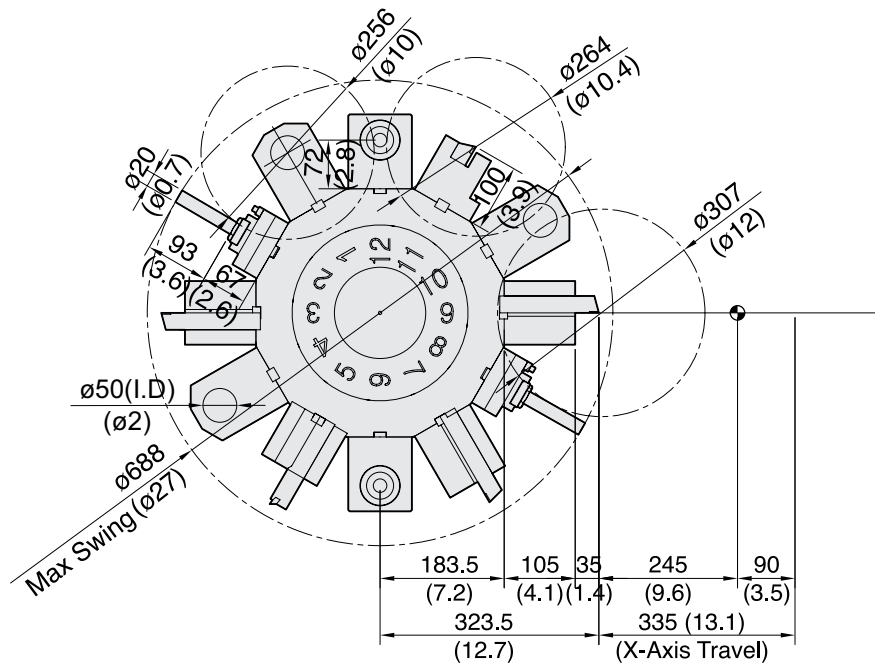
Interference

unit : mm(in)

L300MA/LMA



L300MC/LMC

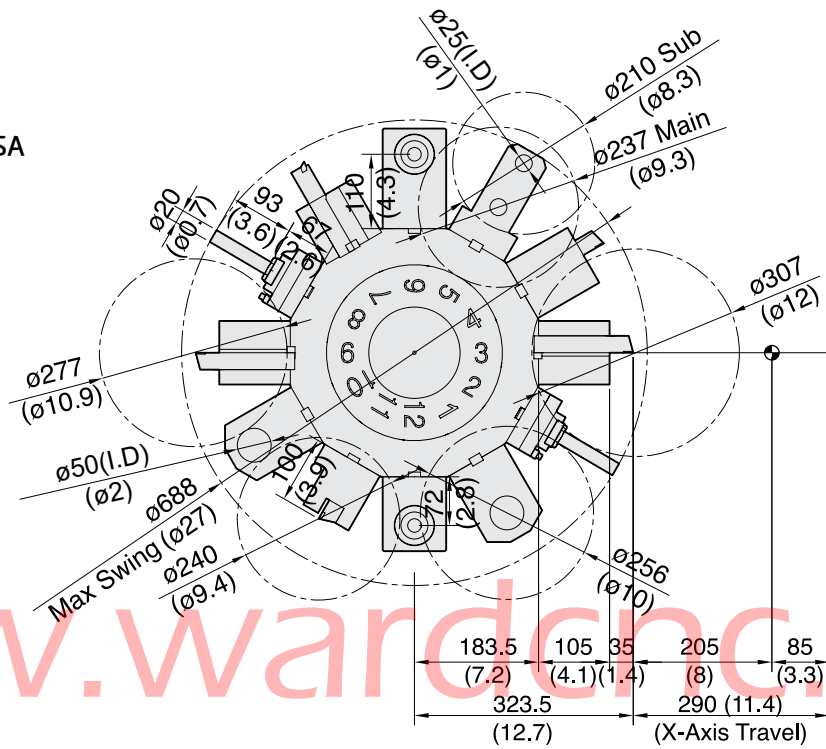


SPECIFICATIONS

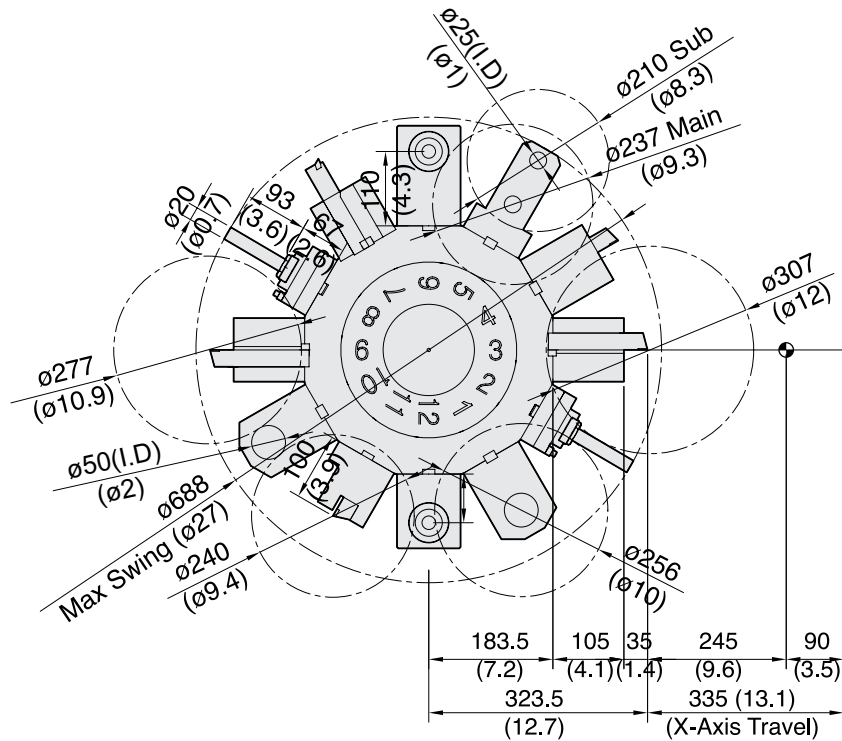
Interference

unit : mm(in)

L300MSA/LMSA



L300MSC



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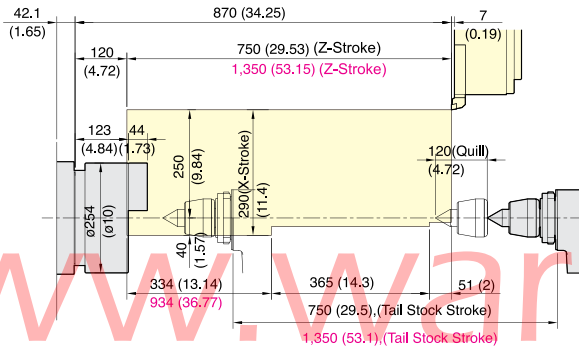
SPECIFICATIONS

Tooling Travel Range

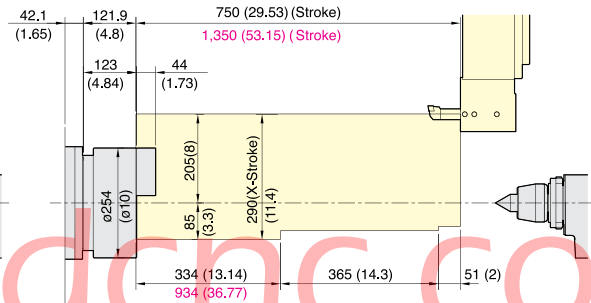
unit : mm(in)

L300A L300LA

OD TOOL HOLDER

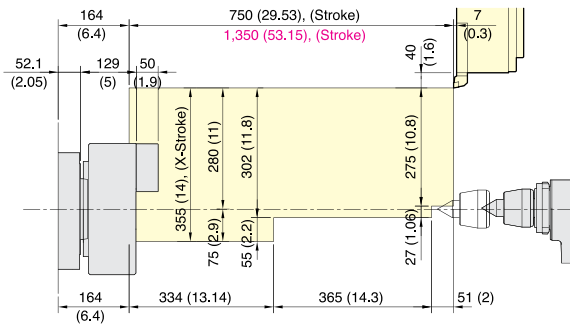


ID TOOL HOLDER

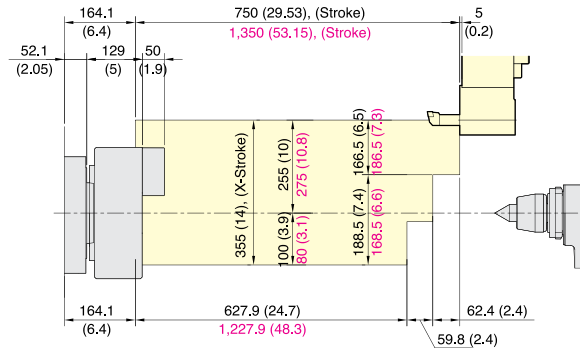


L300C L300LC

OD TOOL HOLDER



ID TOOL HOLDER



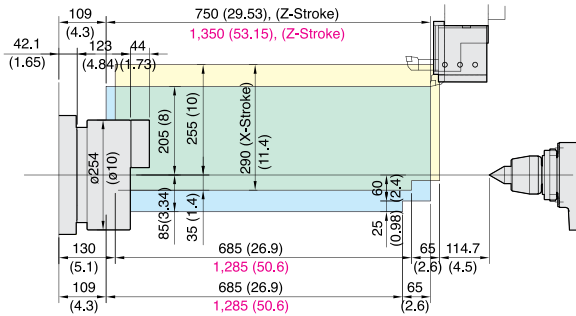
SPECIFICATIONS

Tooling Travel Range

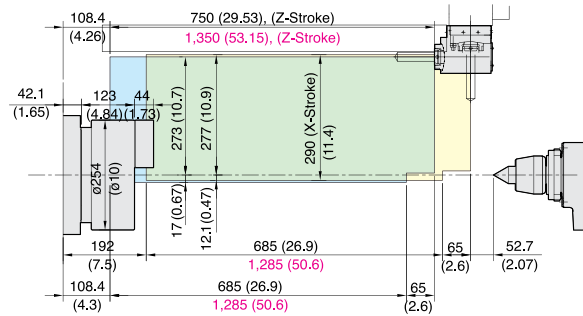
unit : mm(in)

L300MA L300LMA

OD/ID TOOL HOLDER

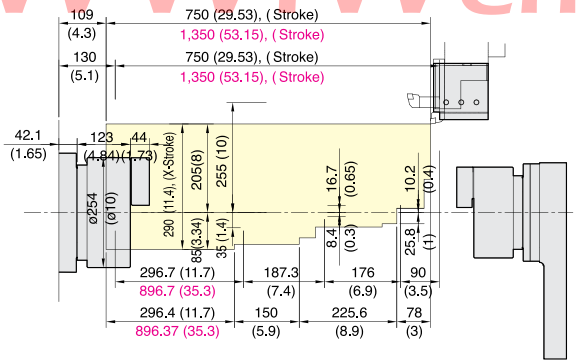


DRILL/END MILL TOOL HOLDER

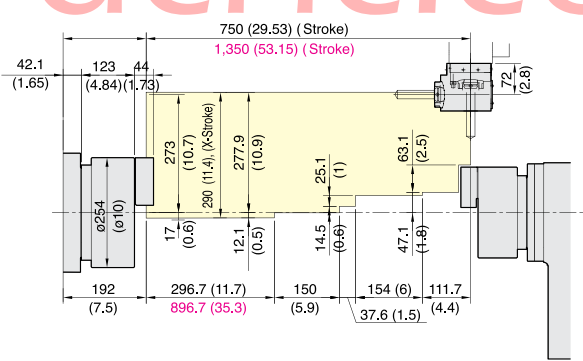


L300MSA L300LMSA

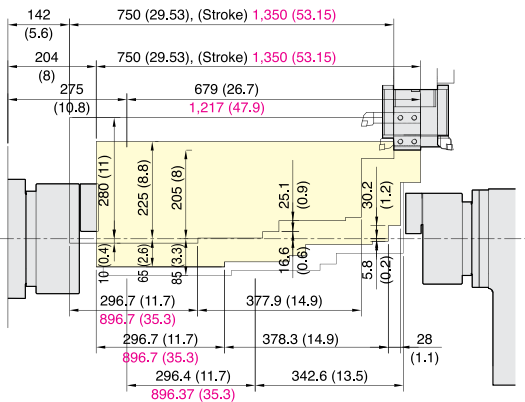
OD/ID TOOL HOLDER



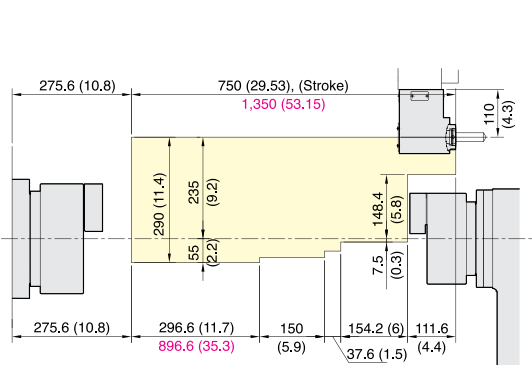
DRILL/END MILL TOOL HOLDER



DOUBLE OD/ID TOOL HOLDER



SUB MILL TOOL HOLDER



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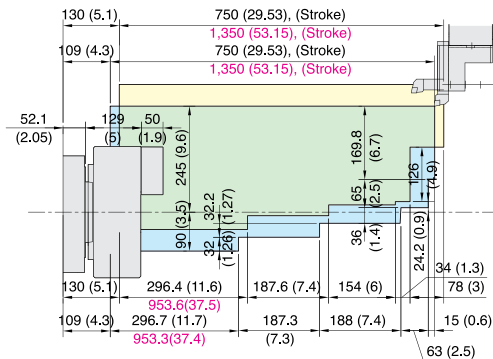
SPECIFICATIONS

Tooling Travel Range

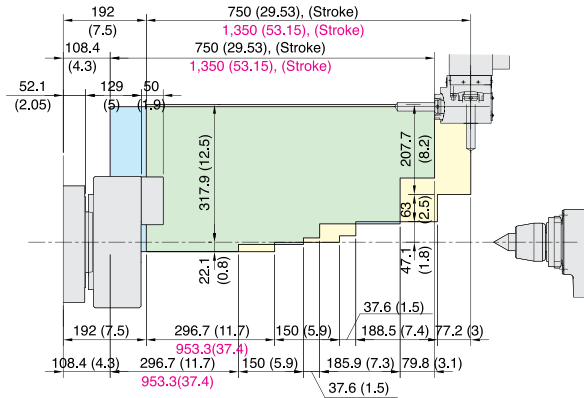
unit : mm(in)

L300MC L300LMC

OD/ID TOOL HOLDER

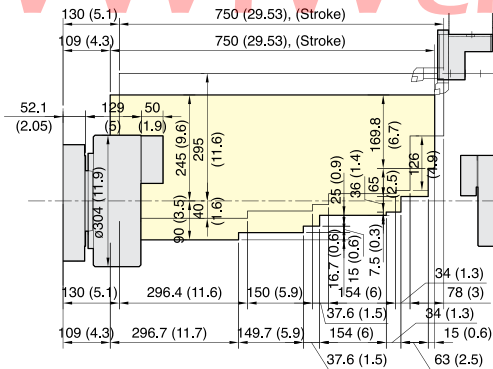


DRILL/END MILL TOOL HOLDER

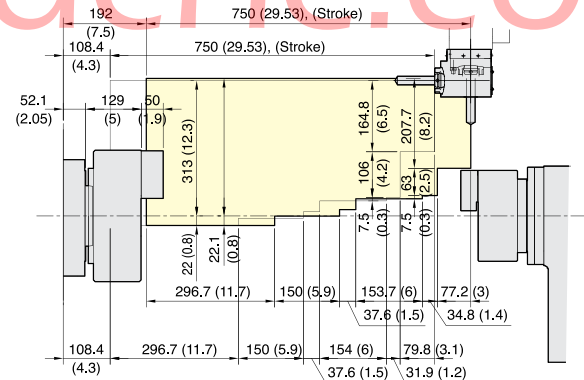


L300MSC

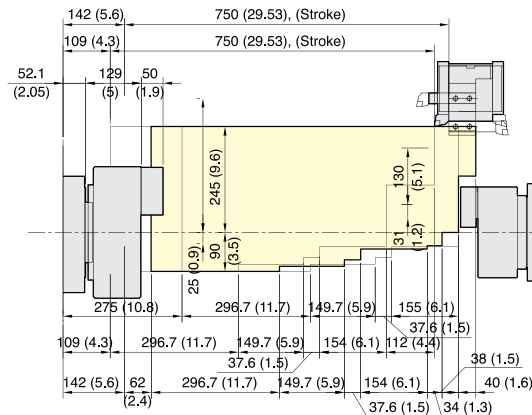
OD/ID TOOL HOLDER



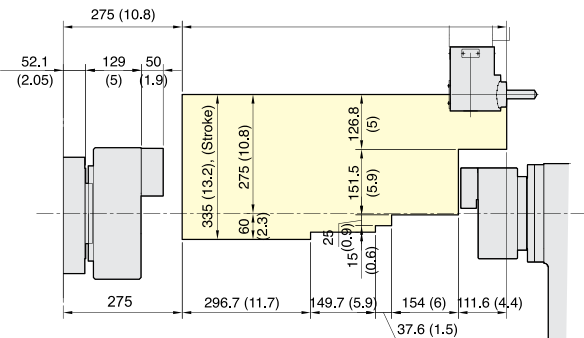
DRILL/END MILL TOOL HOLDER



DOUBLE OD/ID TOOL HOLDER



SUB MILL TOOL HOLDER



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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	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 (29.5/24.8) [22/18.5 (29.5/24.8)]	22/18.5 (29.5/24.8)	
		Sub	kW(HP)	-	11/7.5 (14.8/10)	
	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 (103.3/70.4)	
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)	290/750 (11.4"/29.5")		290/750/700 (11.4"/29.5"/27.5")	
	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)		-	
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 [S 828D]	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 (29.5/24.8) [22/18.5 (29.5/24.8)]	22/18.5 (29.5/24.8)	
		Sub	kW(HP)	-	11/7.5 (14.8/10)	
	Torque (Max/Cont.)	Main	N·m(lb·ft)	739/622 (545/458.8) [783.2/652.7 (577.7/481.4)]	493.4/414.9 (363.9/306)	
		Sub	N·m(lb·ft)	-	140.1/95.5 (103.3/70.4)	
	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(ipm)	20/24 (787/945)		20/24/20 (787/945/787)	
	Slide Type	-	BOX GUIDE			
TURRET	No. of Tools	EA	12			
	Tool Size	OD	mm(in)			
		ID	mm(in)			
	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(lb·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)		-	
ТАПК 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*)			
МАШИНА	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 [S 828D]	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	mm(in)	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 (34.9/29.5) [26/22 (34.9/29.5)] [26.4/22 (35.4/29.5)]	
		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	-			
Travel (X/Z/ZB)	mm(in)	355/750(14"/29.5")	355/1,350(14"/53.1")		
FEED	Rapid Traverse Rate (X/Z/ZB)	m/min(ipm)	20/24 (787/945)		
	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)	270 (71.3)	
	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)	3,506x2,002 (138"x78.8")	4,170x2,002 (164.2"x78.8")	
	Height	mm(in)	1,997 (78.6")		
	Weight	kg(lb)	6,400 (14,110)	7,600 (16,755)	
NC	Controller	-	HW FANUC i Series [FANUC 32i-A] [SIEMENS 828D]		

*) 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 (29.5/24.8)[Big Bore : 22/18.5 (29.5/24.8)] [33.6/28 (45.1/37.5)]		
		Sub	-		
	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)]		
		Sub	-		
	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)		
	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		
	Thickness of Power Cable	Sq	Over 35		
	Voltage	V/Hz	220/60 (200/50*)		
MACHINE	Floor Space (L×W)	mm(in)	3,480x2,002 (137"×78.8")	4,170x2,002 (164.2"×78.8")	3,586x2,002 (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] [SIEMENS 828D]	FANUC 32i-B	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

SIEMENS 828D (L300A/LA/C/LC/MC/LMC)

Control function	
Max. configuration of axis	3 axis(MS / SY exception) 4 axis(MS / SY machine only)
Max. configuration of axis and sp.	6 axis(MS / SY exception) 8 axis(MS / SY machine only)
Least Command/input	0.0001mm / 0.00001inch
Feed function	
Feedrate Override	0 - 120%
Rapid Traverse Override	F1, 5, 25/50, 100%
Acceleration with jerk limitation	
Programmable acceleration	
Follow-up mode	
Measuring system 1 and 2, selectable	
Separate path feed for corners and chamfers	
Travel to fixed stop	
Spindle function	
Spindle Override	50% - 120%
Spindle Orientation	
Spindle Speed Limitation	
Rigid Tapping	
Interpolation function	
Linear interpolation axis	Max. 4 axis
Circle via center point and end point	
Circle via interpolation point	
Helical interpolation	
Universal interpolator NURBS (non-uniform rational B splines)	
Continuous-path mode with programmable rounding clearance	
Tool function	
Tool Radius Comp.	
Zero Offset (G54, G55, G56, G57, G58, G59)	100 EA
Programmable Zero Offset	
Tool management	
Display	
CRT / MDI	10.4" Color LCD
SCREEN SAVER	None
Manual Operation	
Manual Handle/Jog Feed	
Reposition	
Reference Approach	Ref 1, 2 Approach
Spindle Control	Start, Stop, Rev, Jog, Ort.
Auto Operation	
Single Block	
Feed Hold	
Optional Block Skip	
Machine Lock	
Dry Run	
Simulation	(2 dimensional)
Diagnosis function	
Alarm Display	
Spindle Load Meter/RPM Meter (monitor)	
PLC status/LAD display	
Program function	
Part Program Storage Length	3MB (MS / SY exception) PPU26x.x 5MB (MS / SY machine only) PPU28x.x

Program function	
Program Name	23 digit
Subroutine Call	(7 level)
Absolute/Incremental Command	G90 - G91
Scaling, ROT	
Inch / Metric Conversion	
Conversational Cycle Program	(22 Machine)
Block Search	
Variable Program (Macro)	
Read / Write System Variable	
BackGround Editing	
Miscellaneous Functions	M - Code
Label Skip	
Program Stop/End	M00, M01, M02, M30
Lookahead, Jerk LimitationFeed & forward control	
ISO Dialect Interpreter(G291) (Fanuc Program exe)	
Maximum number of tools/cuttings	128/256 (MS / SY exception) PPU26x.x 256/512 (MS / SY machine only) PPU28x.x
Number of levels for skip blocks 1	
Protection Function	
Emergency Stop	
Over Travel	Soft Limit & Hard O.T
Contour Monitoring	
Program Protection	
Automation Support Fun.	
Actual Speed Display(Monitor)	
Tool Life Management	(Time, Parts)
Work Count Function	(Internal)
Language Function	
Two Language Switchable	Chinese Traditional, Czech, Danish, Dutch, Finnish, Hungarian, Japanese, Korean, Polish, Russian, Swedish, Portuguese, Turkish
Data Transfer	
RS 232C I/F / Ethernet	
USB Memory Stick & CF Card	
Option	
Shop Turn	
3D Simulation	
DRF offset	
Teach -in	
Number of levels for skip blocks 8	
TRACYL (Cylinder interpolation)	
TRANSMIT (Pole coordinate command)	
Sister Tool	
A,B,C SPLINE INTERPOLATION	
RCS HOST (Remote Control)	
Simultaneous Recording (Real time monitoring)	
Analysis of Internal Drive Values	
Network Drive Management	

Figures in inch are converted from metric values.

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

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	

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

CONTROLLER

FANUC 32i-A (L300C/LC)

Axis control / Display unit	
Controlled axes	Max. 4 axes are available X, Z axes X, Z, C axes (M type machine) X, Z, Y, C axes (Y type machine) X, Z, B, C axes (MS type machine)
Simultaneous controllable axes	2axes / Linear and circular (Max. 4axes)
Least input increment	X, Z, Y, B axes : 0.001 mm (0.0001") C axis : 0.001 deg
Least command increment	X, Z, Y, B axes : 0.001 mm (0.0001") C axis : 0.001 deg
High speed HRV control	
Inch / Metric conversion	G20 / G21
Interlock	Each axis / All axes
Machine lock	All axes
Emergency stop	
Stored stroke check 1	Over-travel
Stored stroke check 2	
Stored stroke check 3	
Follow-up	
Servo-off	
Backlash compensation	+/- 0~9999 pulses (Rapid traverse & cutting feed)
Position switch	
Unexpected disturbance torque detection	Back-spin torque limiter (BST)
High resolution transfer control (HRM)	
LCD / MDI	10.4" Color LCD
Operation	
Automatic operation (memory)	
MDI operation	
Search function	Sequence, program
Program restart	
Wrong operation prevention	
Buffer register	
Program check function	Dry run., program check
Single block	
Feed functions	
Manual jog feed	Rapid, jog, handle
Manual handle feedrate	x1, x10, x100
Feed command	F code feedrate direct command
Feedrate override	0~200 % (10% units)
Jog override	0~2,000 mm/min[79 ipm]
Rapid traverse override	F1, F5, F25/F50, F100%
Override cancel	
Feed per minute / rotation	
Program input & interpolation functions	
Nano interpolation	Positioning / Linear / Circular (G00 / G01 / G02, G03)
Dwell	G04, 0~9999.9999 sec
Thread retract	
Variable lead threading	
1st reference point return	G28, manual
Reference point return check	G27
2nd reference point return	G30
Program stop / End	M00, M01 / M02, M30
Tape code	EIA / ISO
Optional block skip	1 ea
Maximum programmable dimensions	+/- 9999.9999"
Program number	0+4 digits
Absolute and incremental programming	
Decimal point input	
Plane selection	G17, G18, G19
Work coordinate system selection	G52 to G59
Manual absolute	"ON" Fixed
G code system	A
Programmable data input	G10
Sub program call	10 folds nested
Custom macro B	

Program input & interpolation functions	
Addition of custom macro common variable	#100 to #199, #500 to #999
Multiple repetitive cycles	
Multiple repetitive cycles II	
Canned cycles for turning	
Manual guide i	Conversational programming
Sub / Main spindle function	
M-Code function	M4 digits
M-Code function lock	
Lock sp. speed command	S4 digits, binary output
Main sp. constant control	G96, G97
Spindle speed override	50% to 150% (10% units)
Spindle position decision	
Rigid tapping	
Tool function / Tool compensation	
Tool function	T2 + 2
Tool offset pairs	64 pairs
Tool offset	
Tool nose radius compensation	G40, G41, G42
Direct input of measured tool compensation value B	
Tool life management	
Data in/output & editing functions	
Reader / Puncher interface	RS232C
Memory card input/output	
Part program storage length	256 Kbyte
Number of registrable programs expansion	Max. 500 programs
Memory lock	
Background editing	
Extended part program edition	Copy, move, change of NC program
Display, diagnosis & setting functions	
Self-diagnosis function	
History display	Alarm & operation display
Help function	
External message	
Run hour / Parts count display	
Display of actual spindle speed and T code	
Actual cutting feedrate display	
Operating monitor screen	Rod meter light
Graphic display	
Spindle / Servo setting screen	
Selection of 5 optional language	
LCD screen display	Screen saver
Automatic data backup	
Functions according to machine specification	
Cs contouring control	Turn mill
Stored pitch error compensation	Turn mill
Polar coordinate interpolation	Turn mill
Cylindrical interpolation	Turn mill
Canned cycles for drilling	Turn mill
spindle orientation expansion	Turn mill, Sub spindle
Spindle synchronous control	Sub spindle
Torque control	Sub spindle
Y axis offset	Y type machine
Angular axis control	Y type machine
Option	
High speed Ethernet	100 Mbps (Option board is required)
Optional block skip	9 ea
3rd & 4th reference point return	
G code system	B / C
Part program storage length	512 Kbyte
Polygon turning	
Helical interpolation	
Dynamic graphic display	
Protection of data at 8 levels	
Direct drawing dimension programming	Included chamfering / Corner R'

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

CONTROLLER

FANUC 32i-B (L300MA/LMA/MSA | L300C/LC/MC/LMC)

[] : 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	
Piano 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.

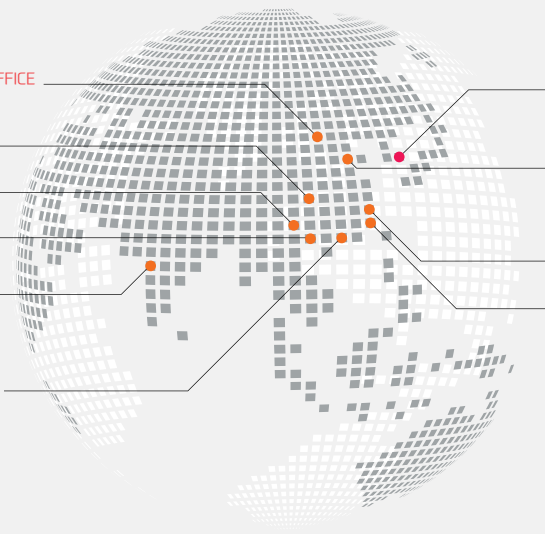
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