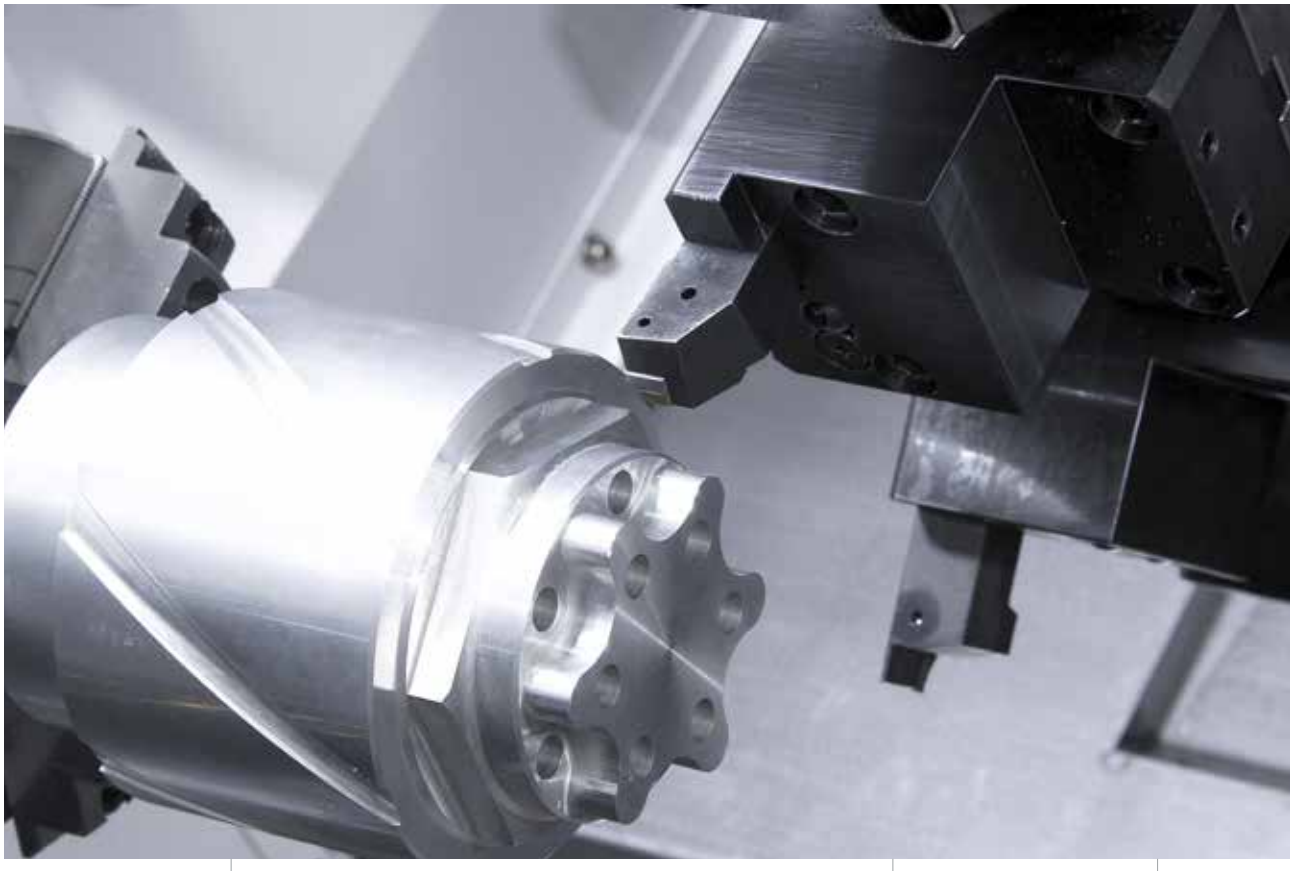
L300 Series

HYUNDAI WIA CNC Turning Center

HYUNDAI WIA

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.



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

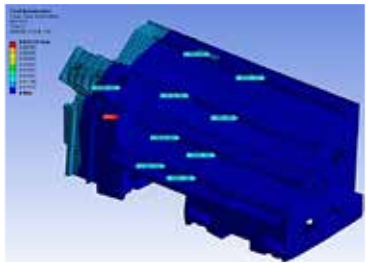
L300 Series

- 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 Basic Features

L300 Series

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.

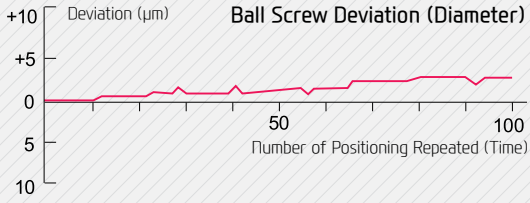
02

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.



03

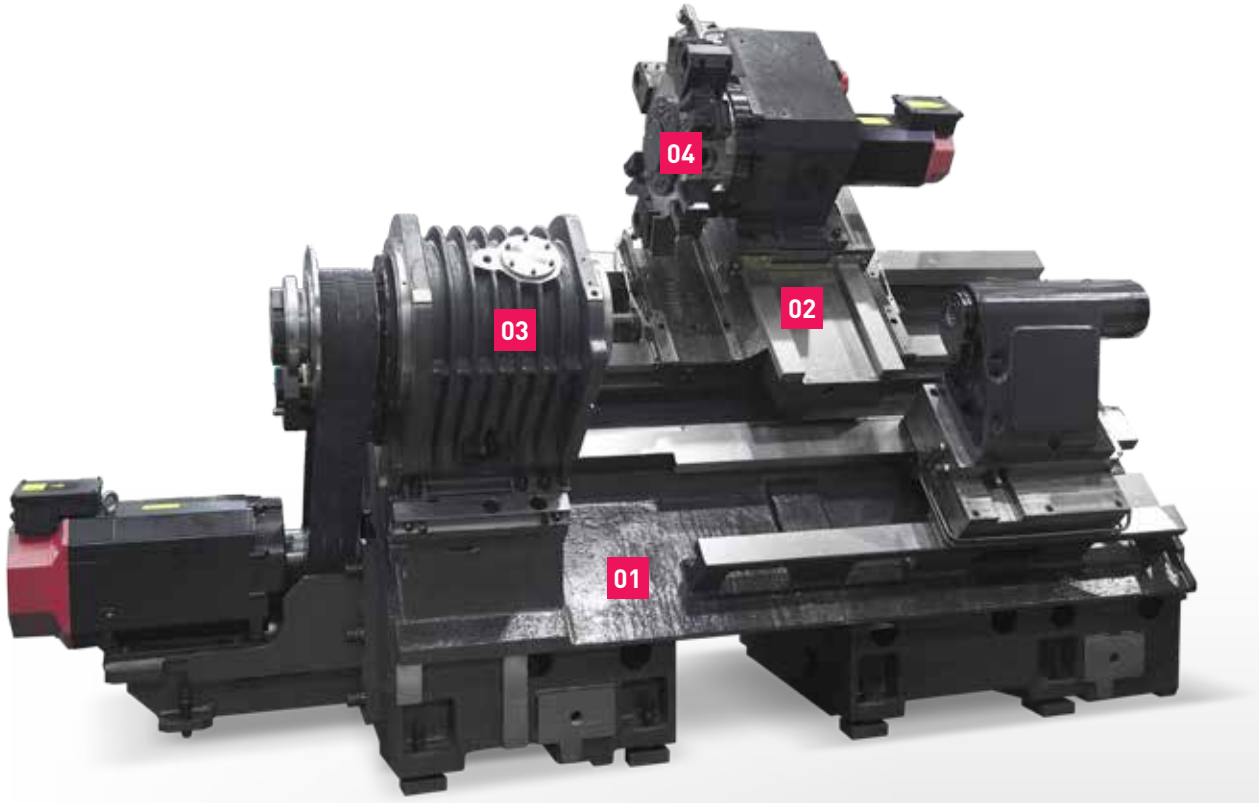
Main Spindle

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

04

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.



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″)

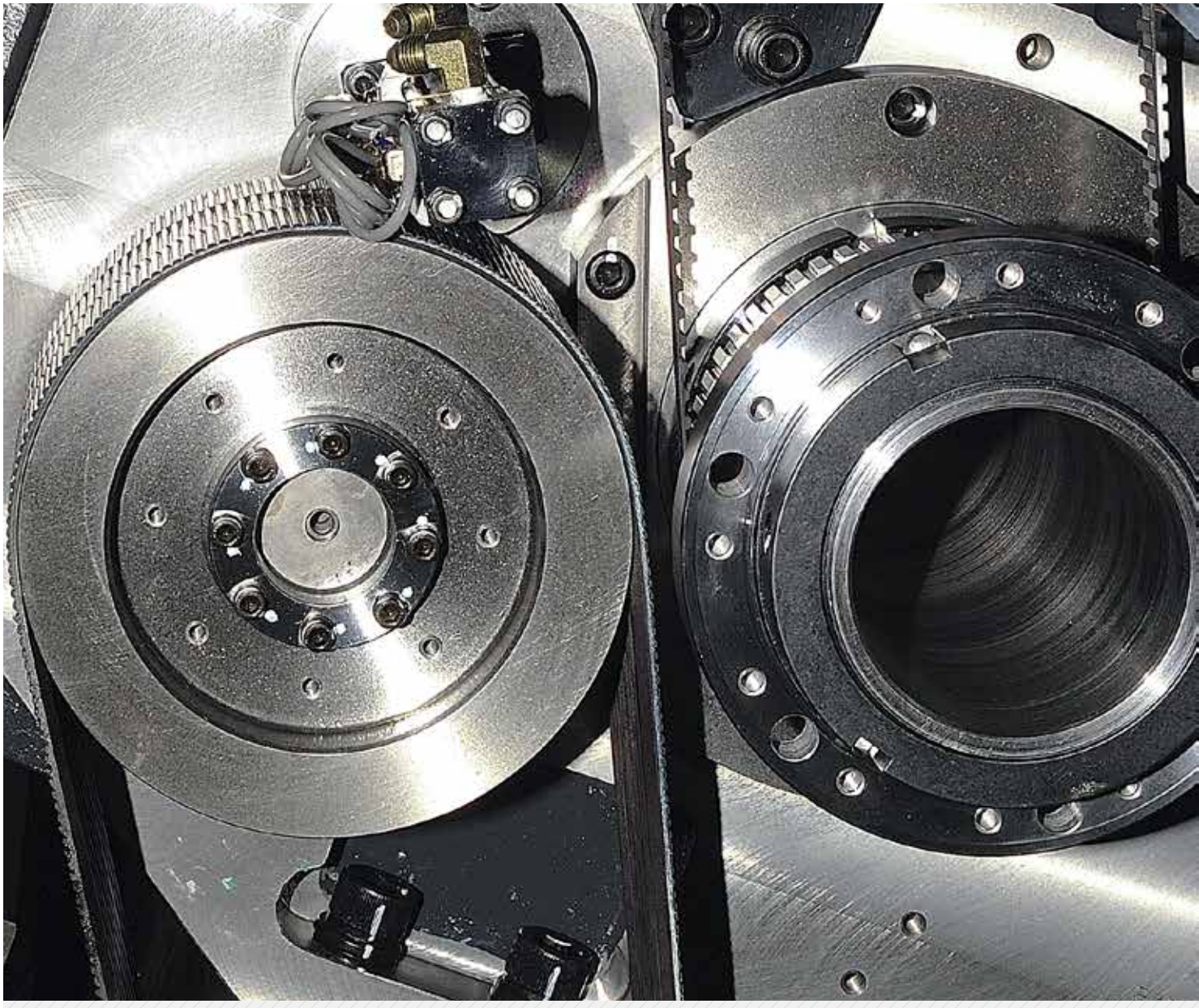
  L300MSC : 355/750/700 mm (14″/29.5″/27.6″)

02

L300 Series

High Precision Spindle

Long Lasting High Accuracy & Excellent Performance
CNC Turning Center

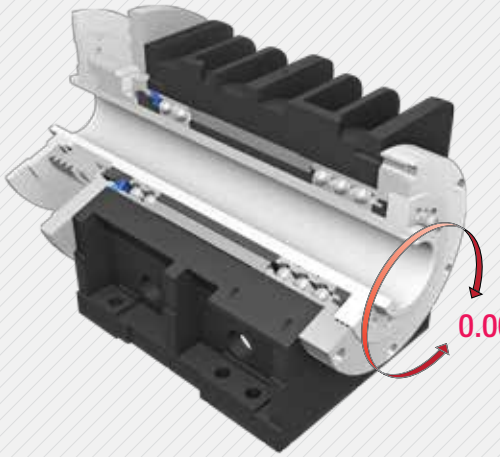


Gear Type Spindle

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

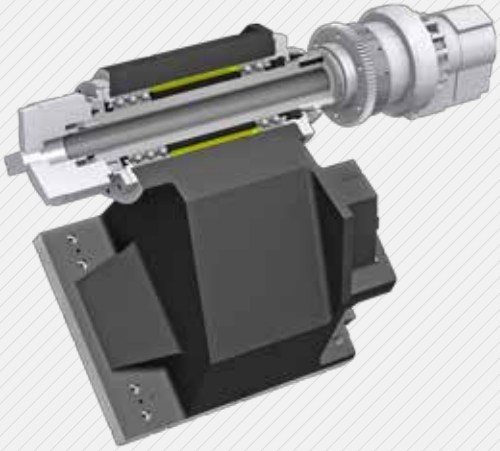
The main spindle has a wide range of constant power and utilizes the same structure as high speed turning centers. It is designed to minimize thermal displacement and to maintain stable cutting Capability during high speed machining.

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

Big Bore 15″ Spindle (L300C Series) OPTION

The big bore spindle of Ø115(Ø4.5″) 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.

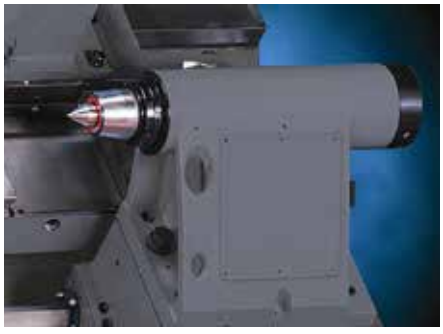
Easy Work Coordinate Setting

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 : Ø65 (Ø2.6″)



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. : Ø100 (Ø3.9″) Quill Weight : 740 kgf (1,631 lbf)

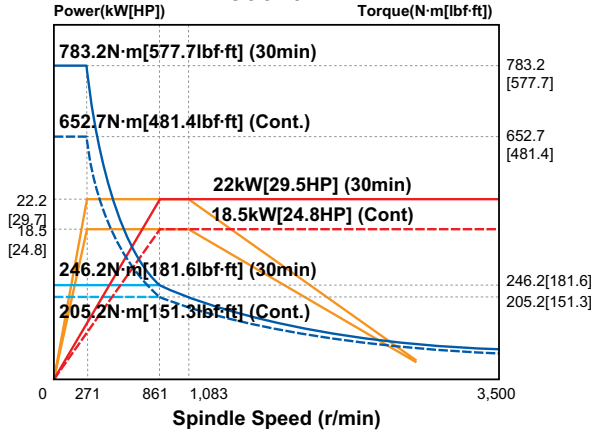
Travel : 750 mm (29.5″) L Type : 1,350 mm (53.1″)

SIEMENS 1PH8 Spindle Motor

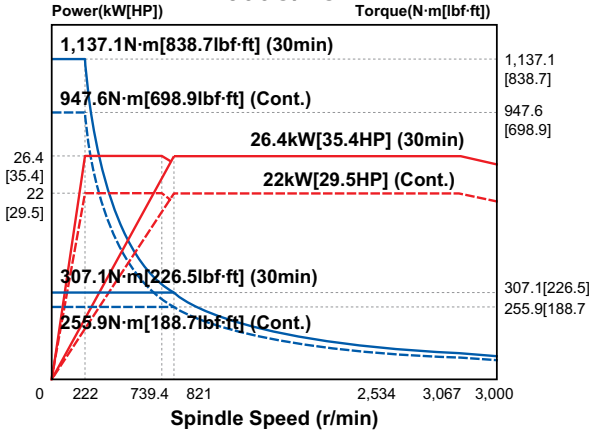
The 1PH8 Series is a high quality performance motor providing concentricity of 10㎛ and fast response time.

It operates smoothly in extreme environments such as high temperature, dust and dirt. The unique heat emission minimizing design makes it possible to maintain a high degree of accuracy at all times.

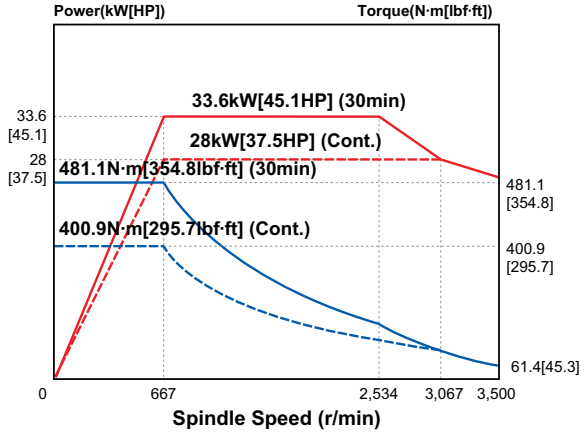
L300A/LA

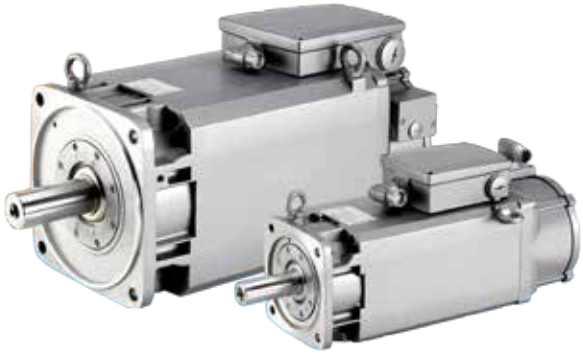


L300C/LC



L300MC/LMC

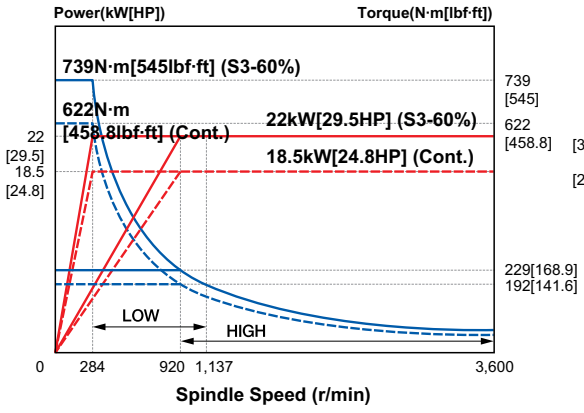




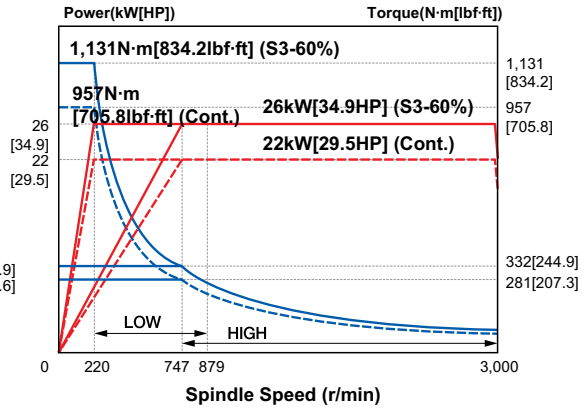
Spindle Output/Torque Diagram

FANUC Spindle

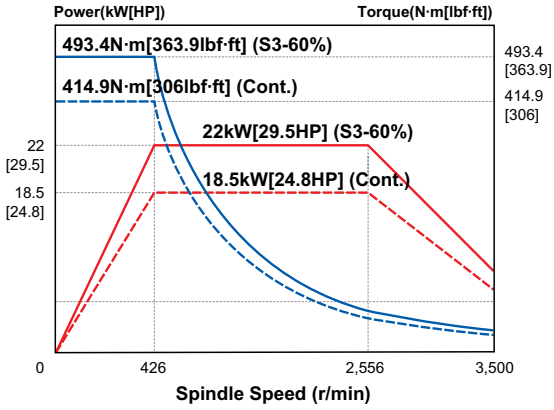
L300A/LA



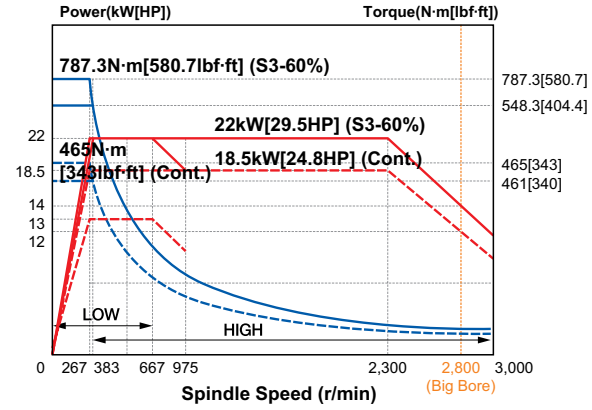
L300C/LC



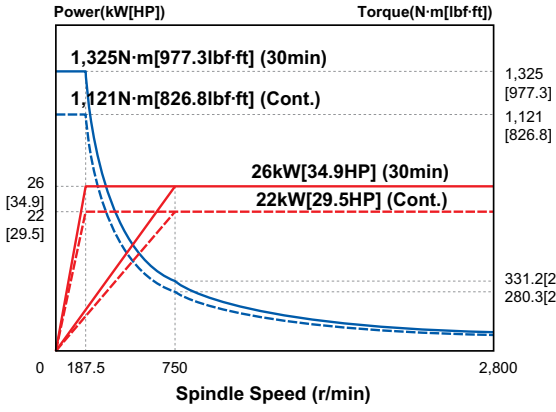
L300MA/MSA/LMA/LMSA



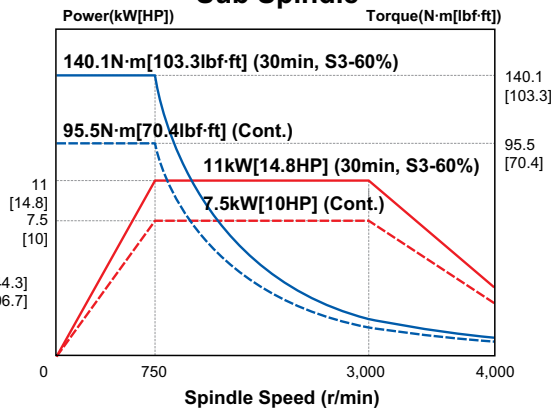
L300MC/MSC/LMC & BIG BORE



L300C/LC BIG BORE



L300MSA/LMSA/MSC Sub Spindle

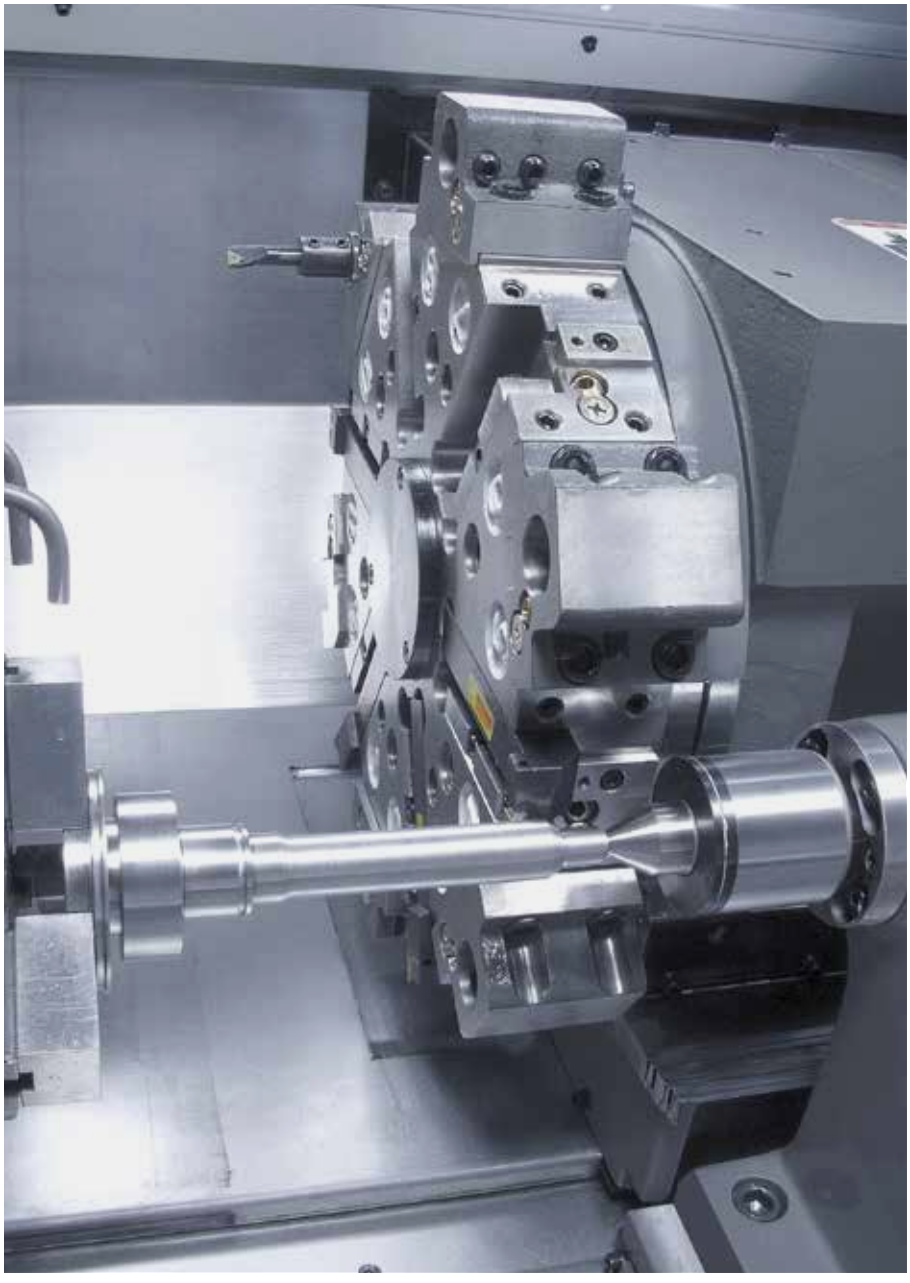


03

L300 Series

Servo Turret

High speed, High Accuracy, Highly Reliable
Servo Turret



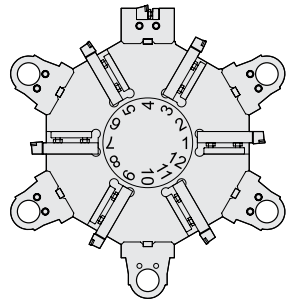
Turret

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.

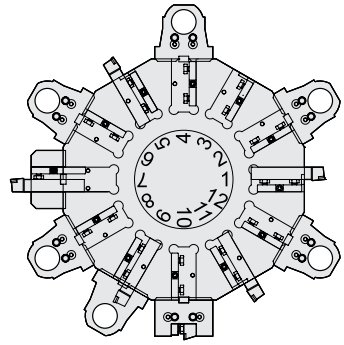
Servo Turret

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

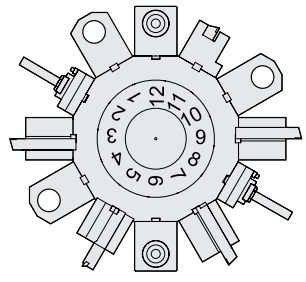
L300A Series



L300C Series



L300M Series

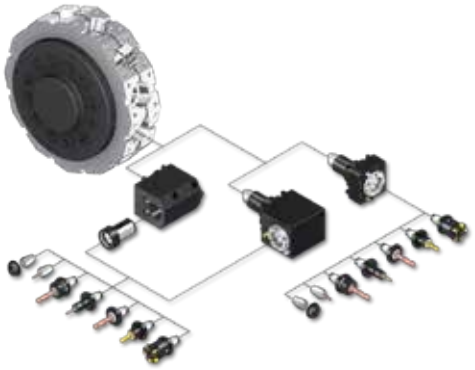


BMT Turret (Mill Turret)

Mill Tool Holder

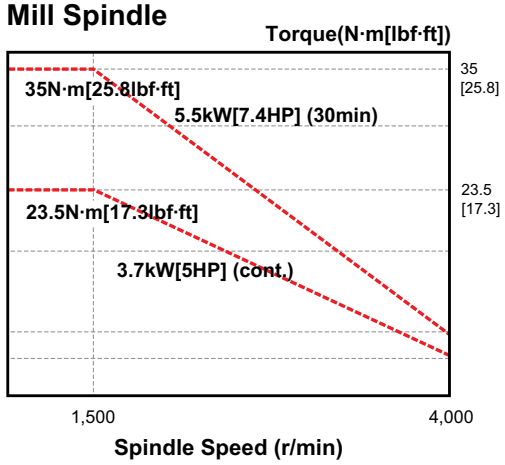
Machining capability has increased with the addition of a Straight Milling Head which can remove material from the side and an Angular Milling Head which can perform I.D. operations.

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



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 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

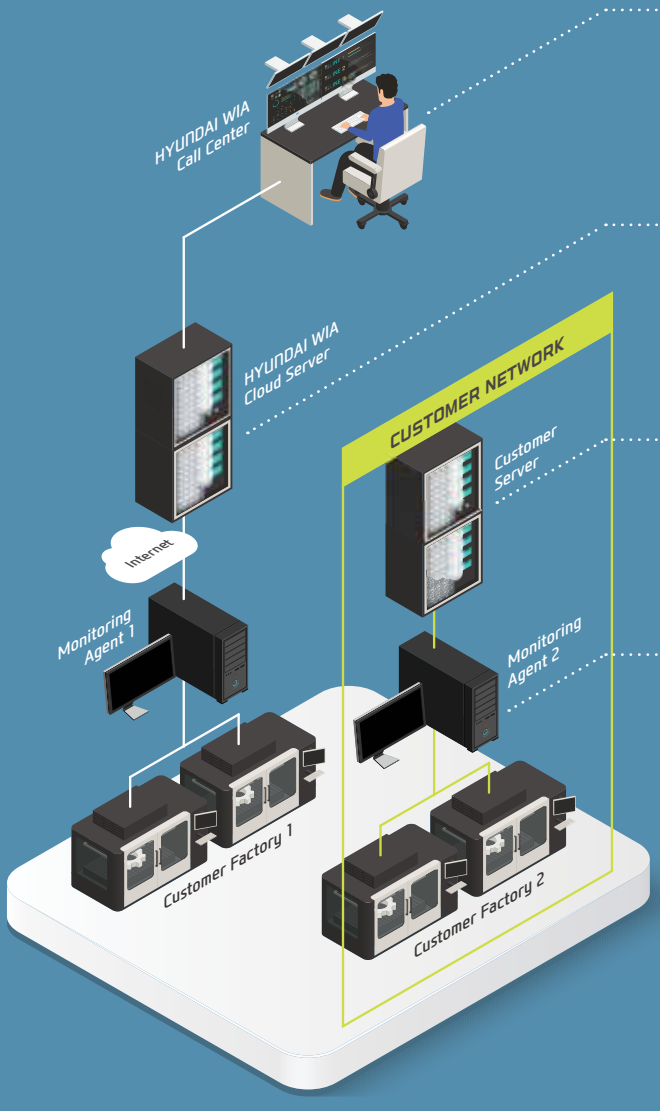
iRiS HYUNDAI WIA Smart Factory Solution

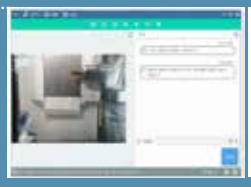
integrated Revolution of industrial Solution

iRiS is HYUNDAI WIA's Smart Factory Solution.

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

SMART MONITORING





HW-MMS Remote
(Remote service based)

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

HW-MMS Cloud
(Cloud server based)

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

HW-MMS Edge
(Customer Server Based)

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

HW-MMS Collector
(Machine data collector)

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

A brand new manufacturing machine by Hyundai Wia, **HW-MMS** is a unique software capable of monitoring the operation status of manufacturing machines in factories, a **smart solution** to improve manufacturing conditions of customers.

SMART MACHINING

HW-MCG

HYUNDAI WIA
Machine Guidance

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

HW-TDC

HYUNDAI WIA Thermal
Displacement Compensation

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

HW-TM

HYUNDAI WIA
Tool Monitoring

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

HW-ESS

HYUNDAI WIA
Energy Saving System

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

HW-DPRO

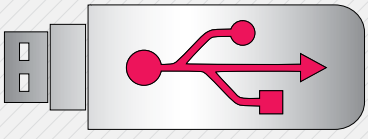
HYUNDAI WIA
Dialogue PROgram

Software to create machining program easily and quickly through interactive operation

HW-eDNC

HYUNDAI WIA ethernet
Direct Numerical Control

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



USB Port

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

05
L300 Series

HYUNDAI-iTROL

The Powerful CNC Platform for Machine Tools

HYUNDAI Intelligent Control

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

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

COMMUNICATION FUNCTION

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

Energy Saving & ECO System

Energy Saving System

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

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

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

Turret Guidance

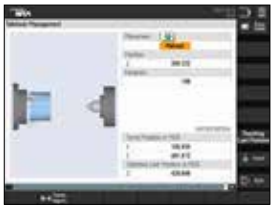
- Turret reference point setup guide screen
- The turret reference point can be set quickly and easily with the simple touch of a button.
- Easy setting of milling tool direction enabled by a simple touch of the button in the event of a milling tool reference point error.

Tool Setting

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

Coordinate Setting

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



Tailstock Management

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

Monitoring of Operating Ratio

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

Soft MCP

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

Shop Turn OPTION

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

3D Simulation OPTION

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

ISO Code Programming

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

06

L300 Series

Automation System

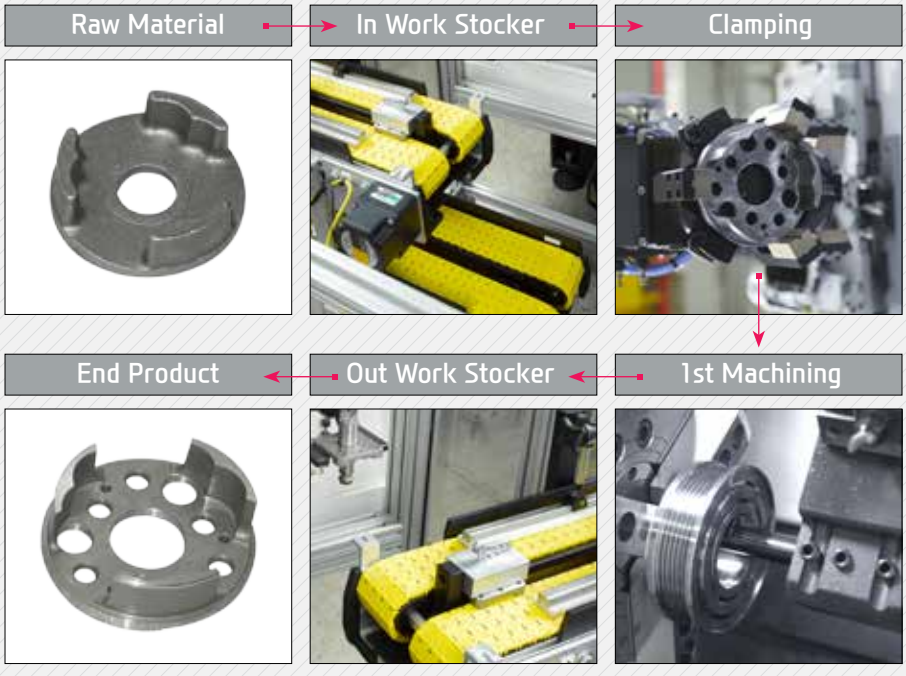
OPTION

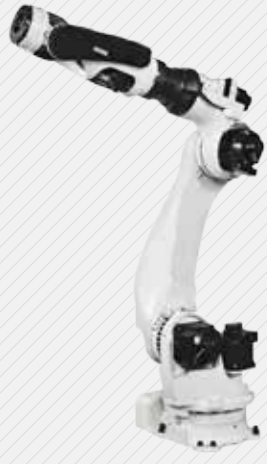
Various Devices for User Convenience

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.

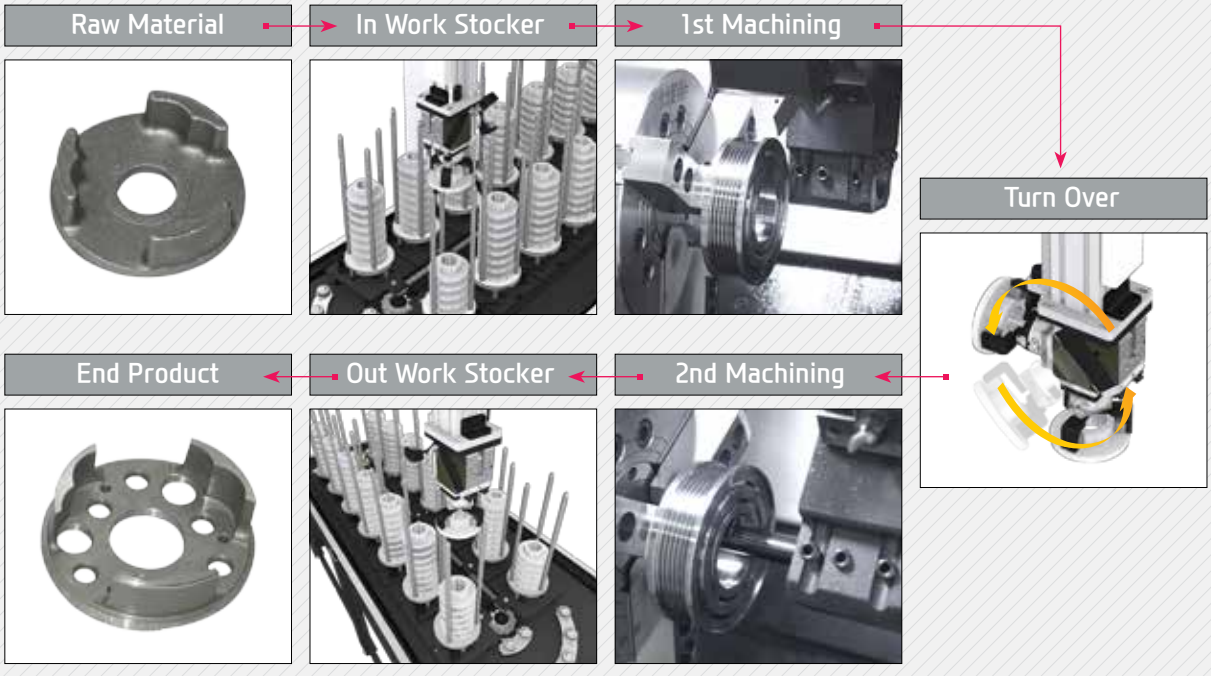




Gantry Loader System

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 Hollow Chuck 3 Jaw	10″	●	●	●
	12″	○	○	○
Main Spindle Solid Chuck 3 Jaw	10″	○	☆	☆
	12″	☆	☆	☆
Sub Spindle Hollow Chuck 3 Jaw	8″	–	–	●
	10″	–	–	–
Sub Spindle Solid Chuck 3 Jaw	8″	–	–	○
	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)		○	○	–
Programable Tail Stock		○	○	–
Programable Hyd. Steady Rest		○	○	-(○)
Manual Steady Rest		☆	☆	-(☆)
Standard Live Center		●	●	–
High Precesion 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 (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)		☆	☆	☆
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	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 (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 (507.6 psi)/ 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 Munsel No.	☆	☆	☆
CAD & CAM		☆	☆	☆

❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

L300 Series Standard & Optional

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

Spindle		C(LC)	MC(LMC)	MSC
Main Spindle Hollow Chuck 3 Jaw	12″	●	●	●
	15″	○	○	○
Main Spindle Solid Chuck 3 Jaw	12″	☆	☆	☆
	15″	○	☆	☆
Sub Spindle Hollow Chuck 3 Jaw	8″	–	–	●
	10″	–	–	–
Sub Spindle Solid Chuck 3 Jaw	8″	–	–	☆
	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)		○	○	–
Programable Tail Stock		○	○	–
Programable Hyd. Steady Rest		○	○	–
Manual Steady Rest		☆	☆	–
Standard Live Center		●	●	–
High Precesion 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 (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	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 (507.6 psi)/ 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 Munsel No.	☆	☆	☆
CAD & CAM		☆	☆	☆

❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

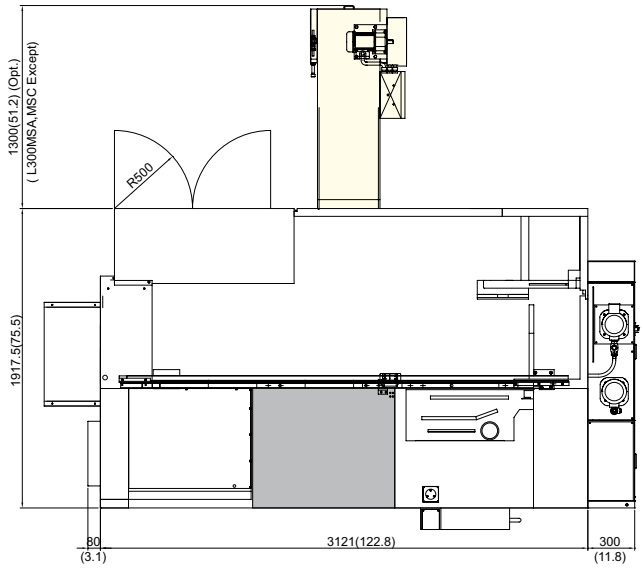
Specifications are subject to change without notice for improvement.

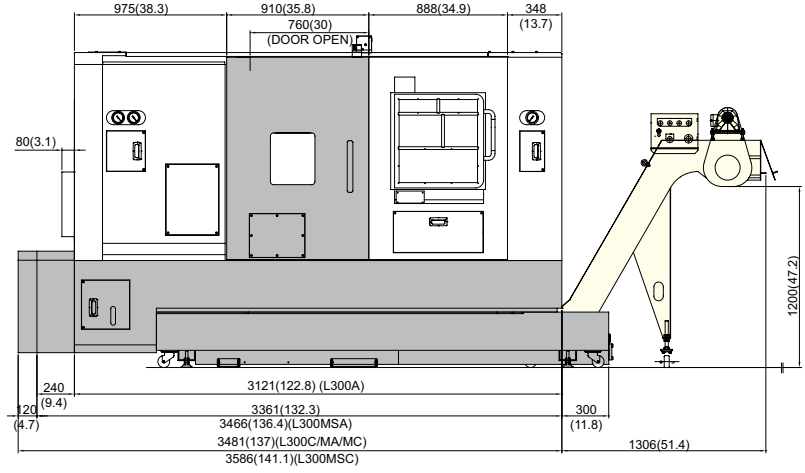
SPECIFICATIONS

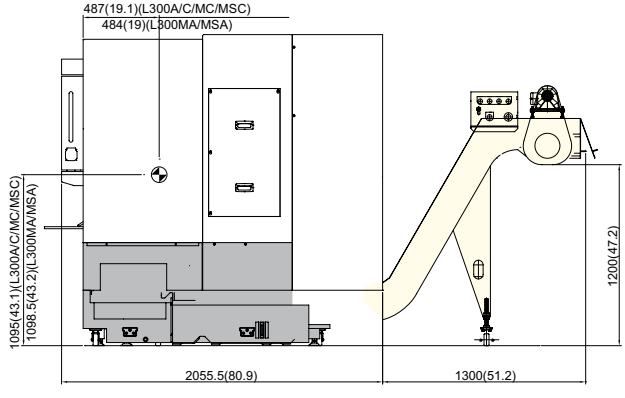
External Dimensions

unit : mm(in)

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





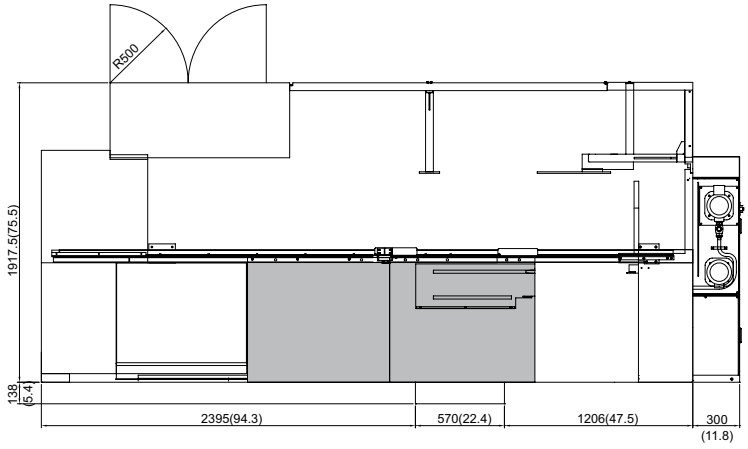


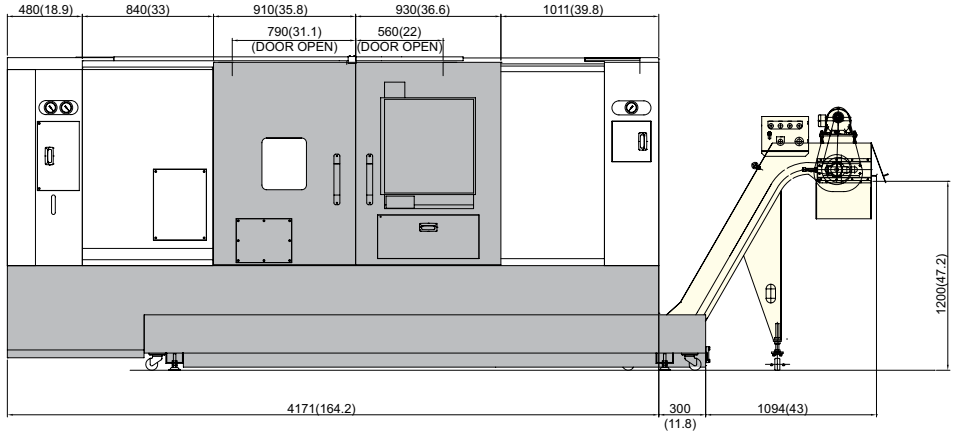
SPECIFICATIONS

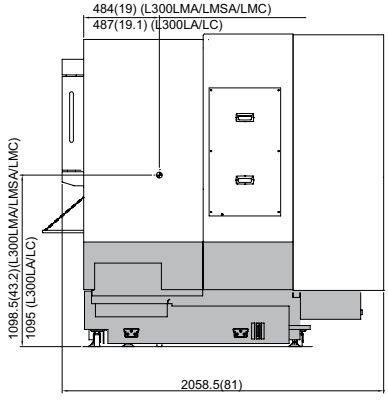
External Dimensions

unit : mm(in)

L300LA/LMA/LMSA
L300LC/LMC/LMSC





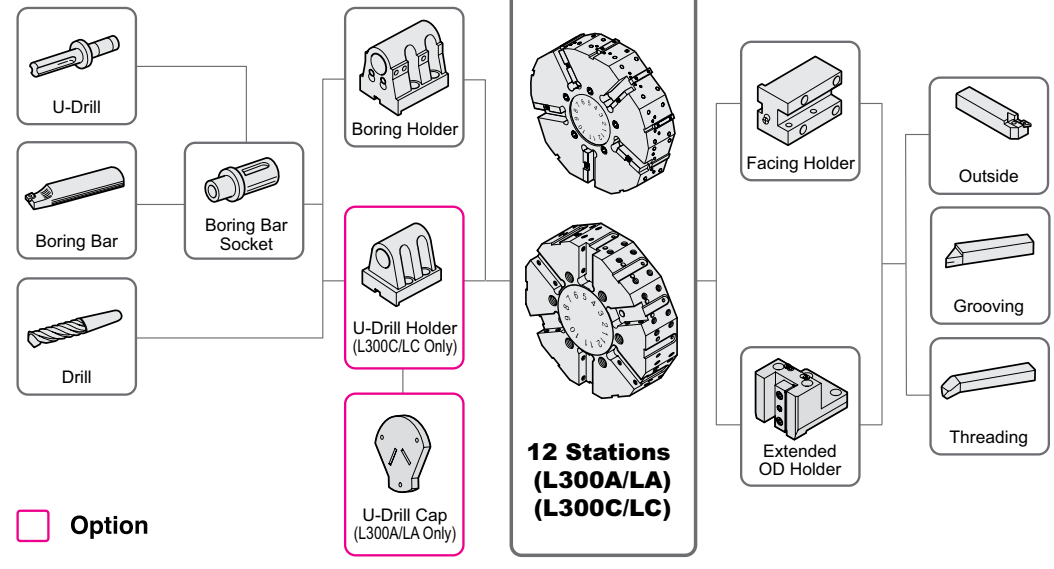


SPECIFICATIONS

Tooling System

unit : mm(in)

L300A/LA L300C/LC



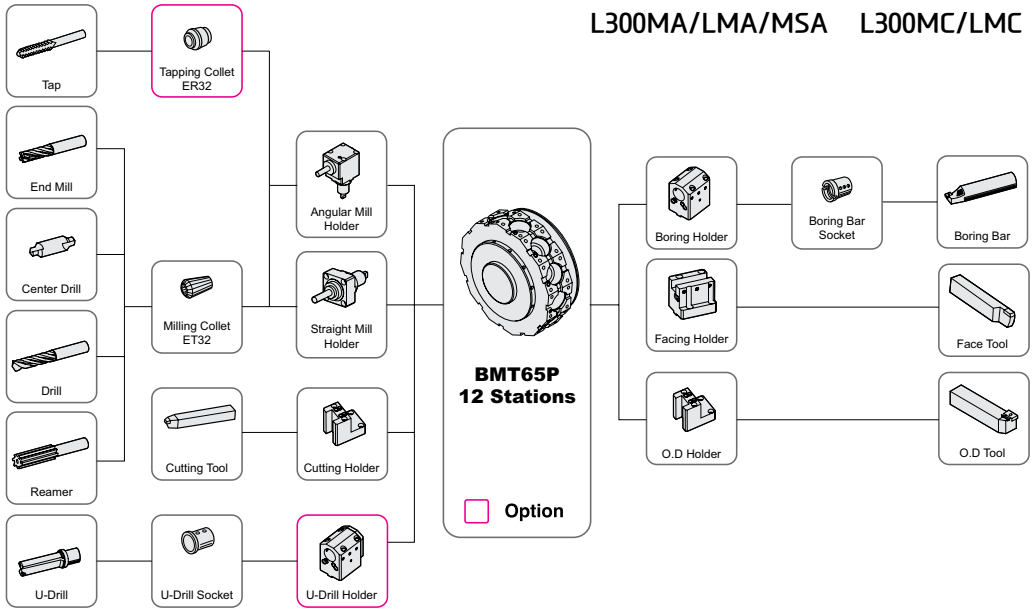
Tooling Parts Detail

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		-	-	-	-
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	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

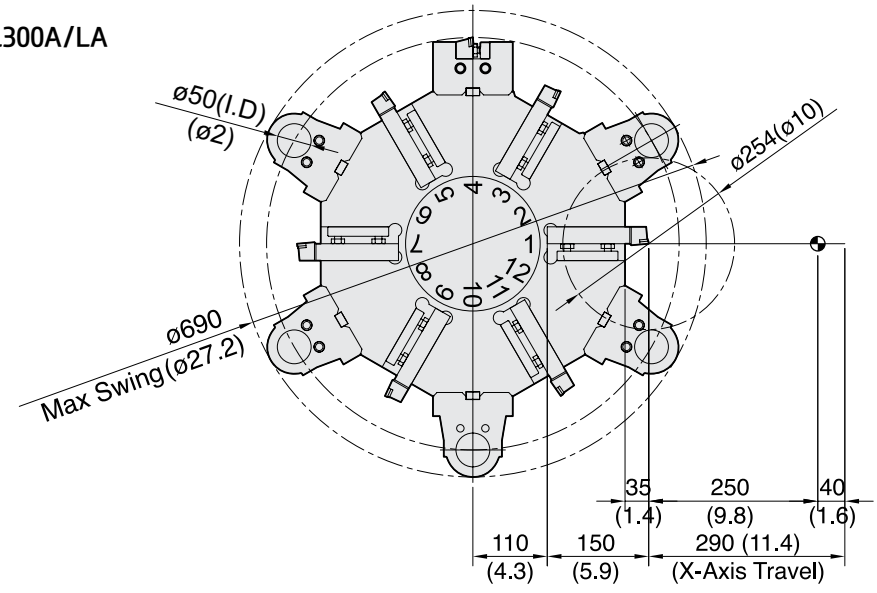
ITEM			MA/MC/LMA/LMC		MSA		MSC/LMSA/LMSC	
			mm Unit	inch Unit	mm Unit	inch Unit	mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left	4	4	1	1	1	1
		Double	-	-	1	1	1	1
		Sub	-	-	1	1	1	1
	Facing Holder		1	1	1	1	1	1
	Cutting Holder		-	-	1	1	1	1
Boring Holder	I.D Holder	Single	3	3	2	2	2	2
		Double	-	-	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

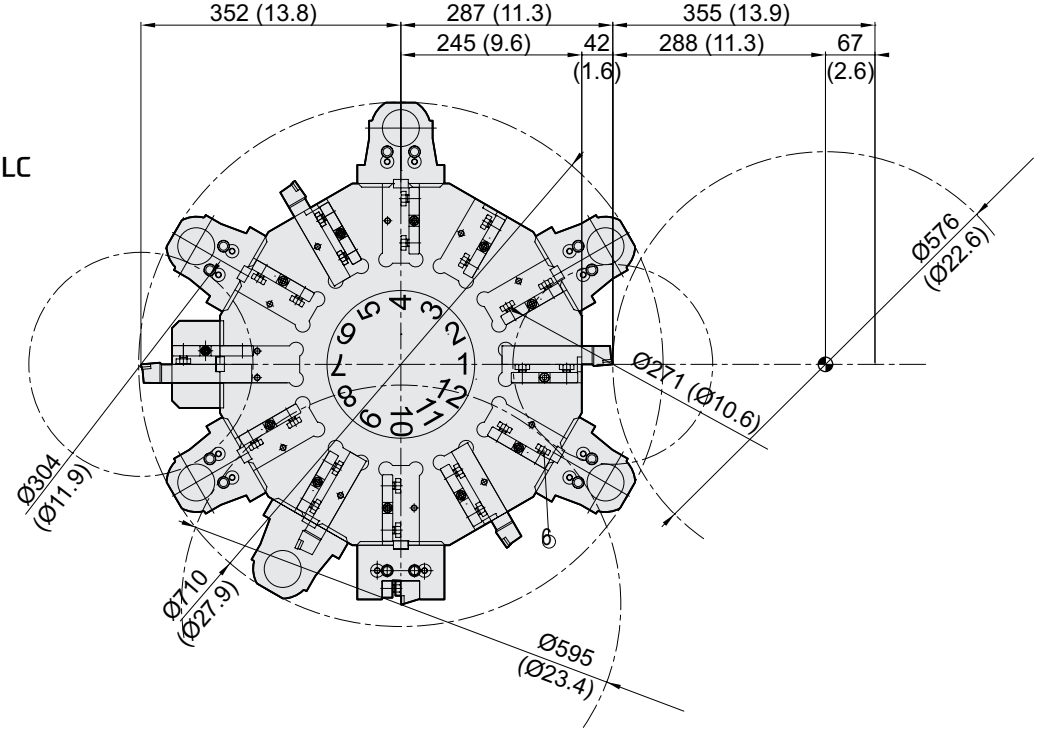
Interference

unit : mm(in)

L300A/LA



L300C/LC

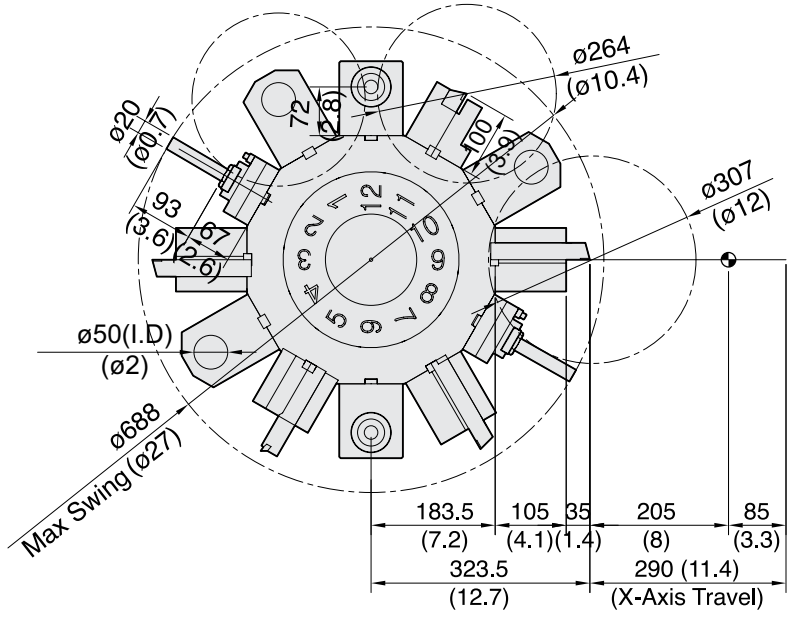


SPECIFICATIONS

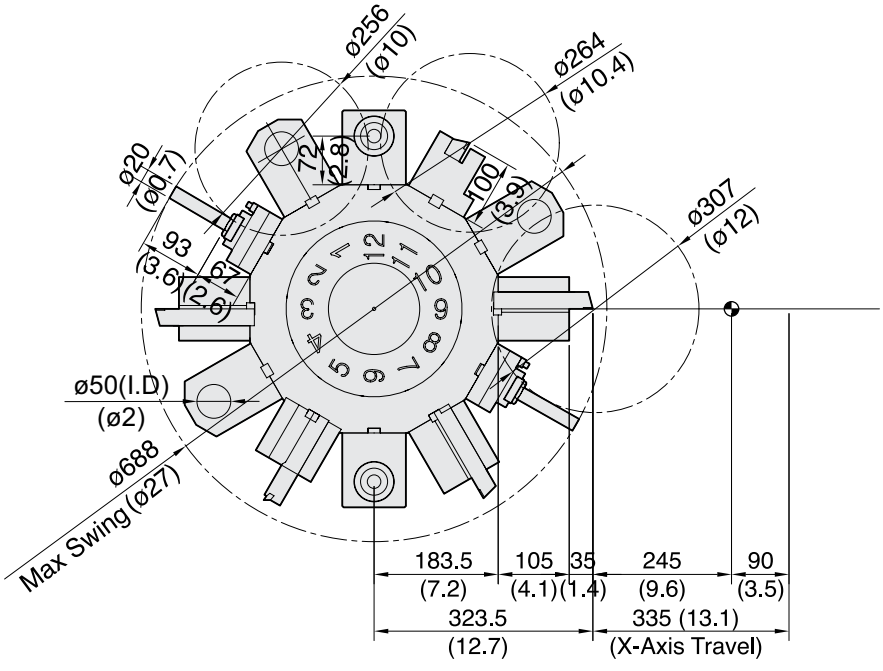
Interference

unit : mm(in)

L300MA/LMA



L300MC/LMC

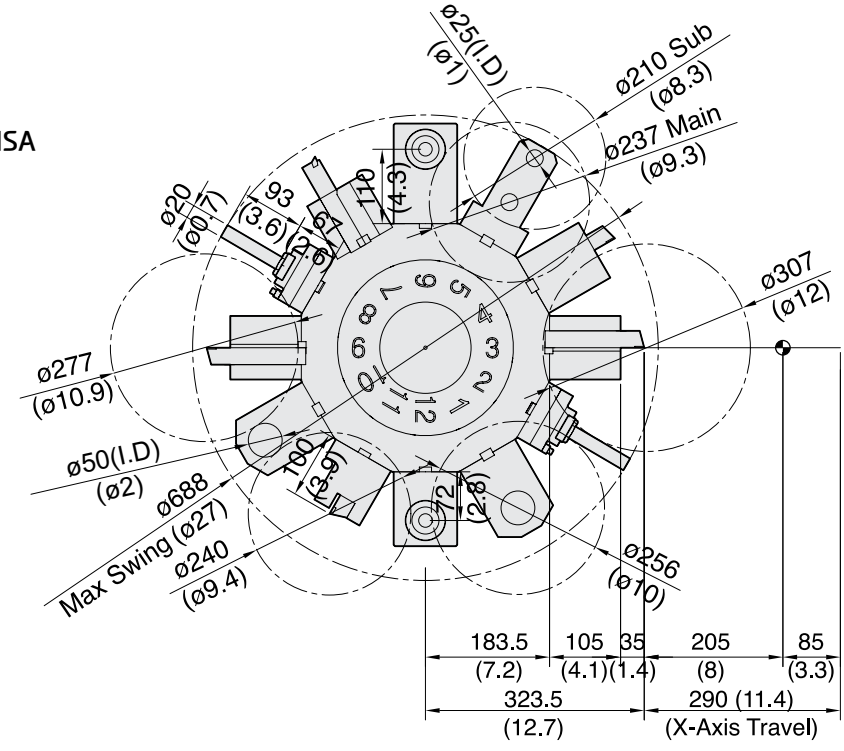


SPECIFICATIONS

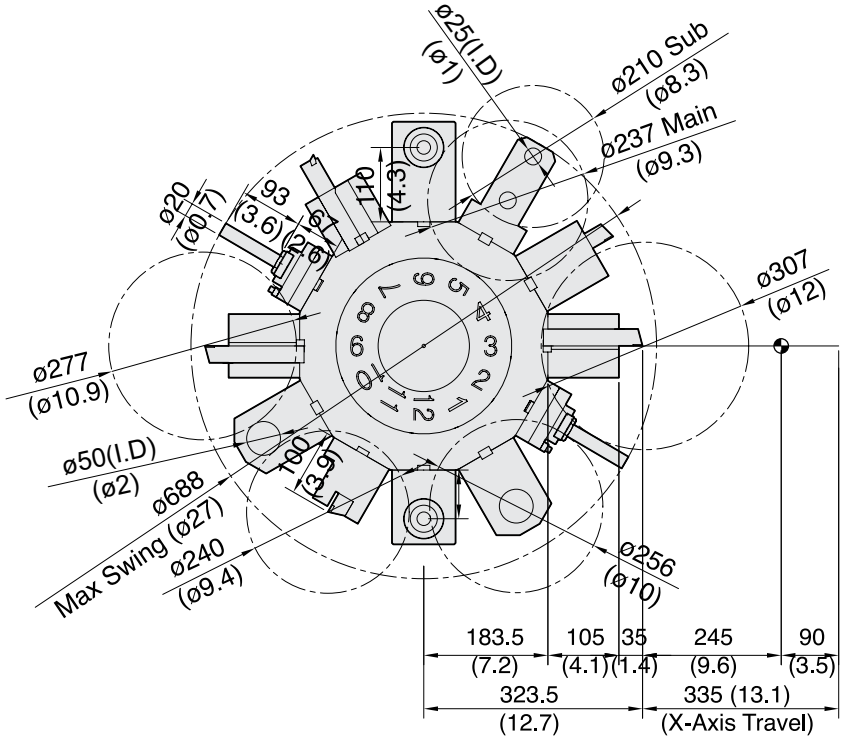
Interference

unit : mm(in)

L300MSA/LMSA



L300MSC



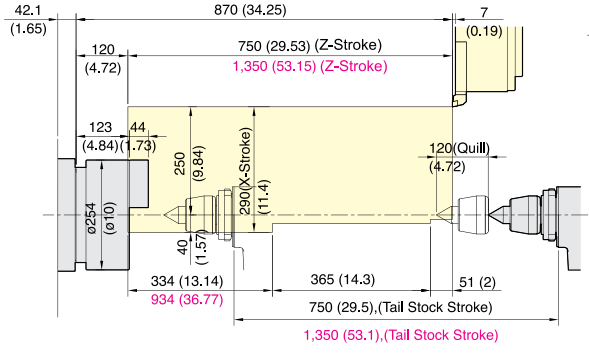
SPECIFICATIONS

Tooling Travel Range

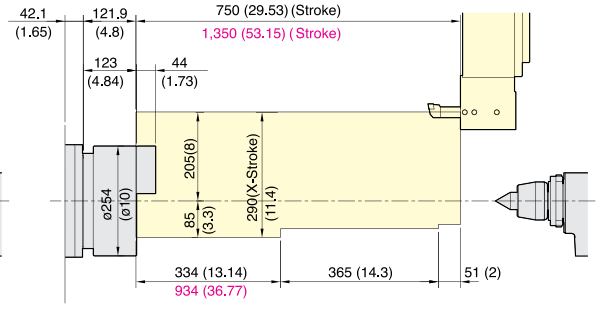
unit : mm(in)

L300A
L300LA

OD TOOL HOLDER

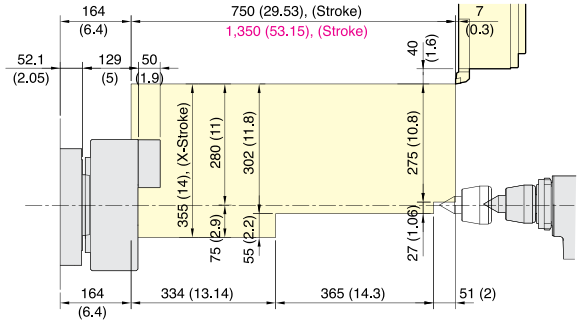


ID TOOL HOLDER

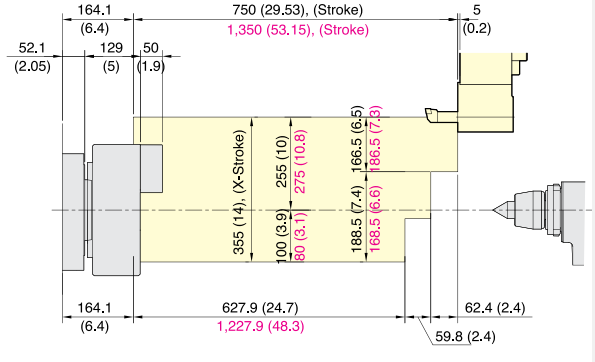


L300C
L300LC

OD TOOL HOLDER



ID TOOL HOLDER



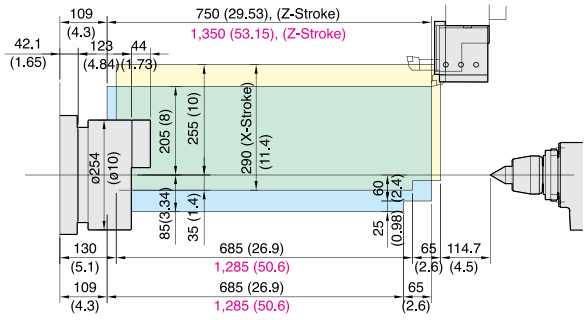
SPECIFICATIONS

Tooling Travel Range

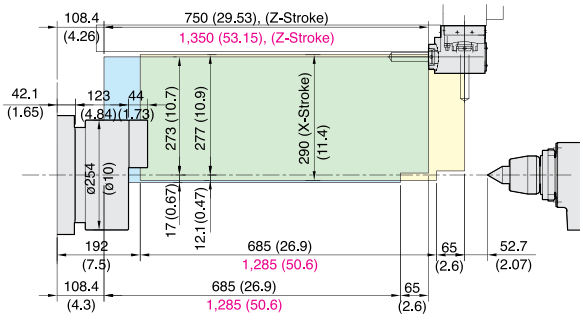
unit : mm(in)

L300MA
L300LMA

OD/ID TOOL HOLDER

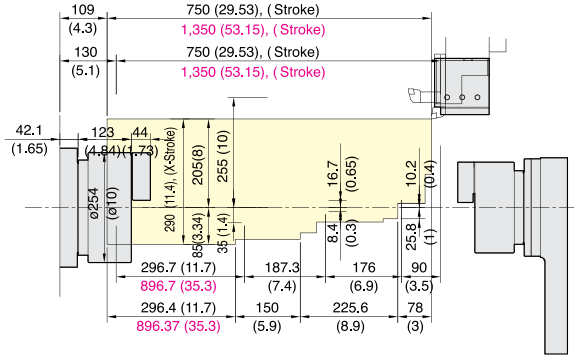


DRILL/END MILL TOOL HOLDER

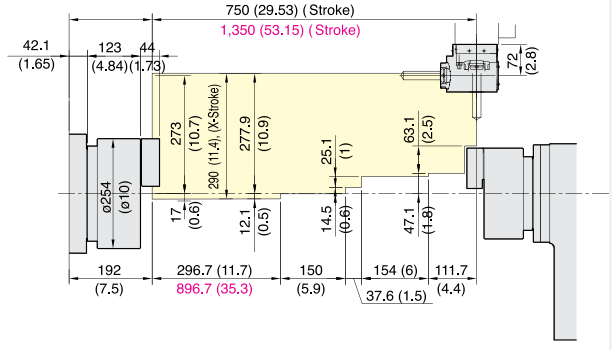


L300MSA
L300LMSA

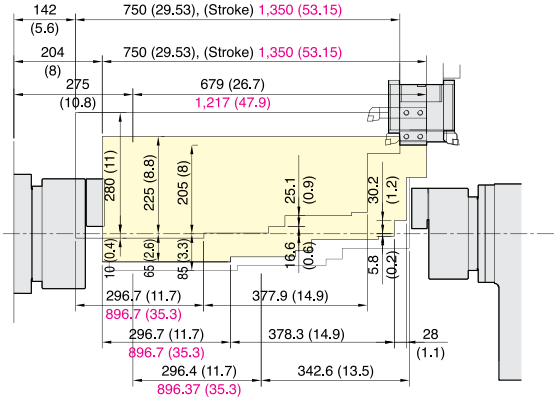
OD/ID TOOL HOLDER



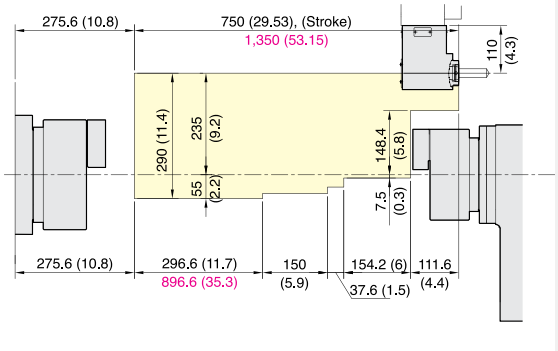
DRILL/END MILL TOOL HOLDER



DOUBLE OD/ID TOOL HOLDER



SUB MILL TOOL HOLDER



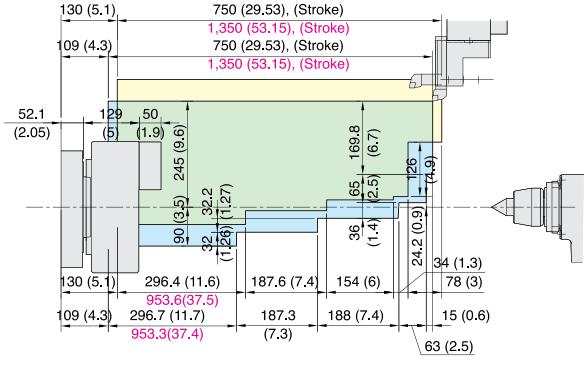
SPECIFICATIONS

Tooling Travel Range

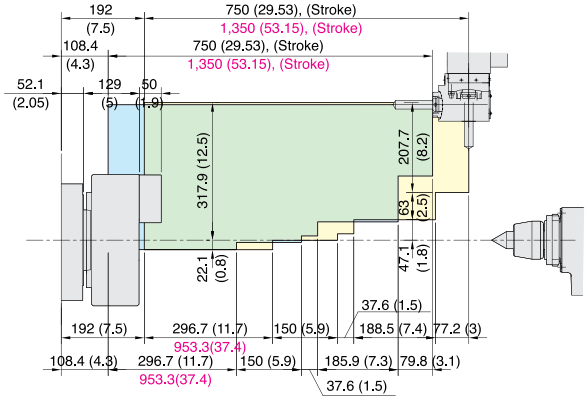
unit : mm(in)

L300MC
L300LMC

OD/ID TOOL HOLDER

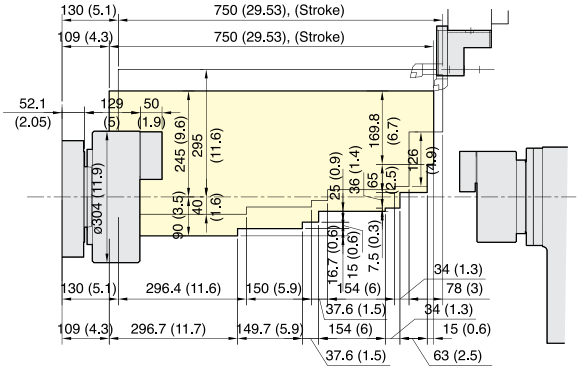


DRILL/END MILL TOOL HOLDER

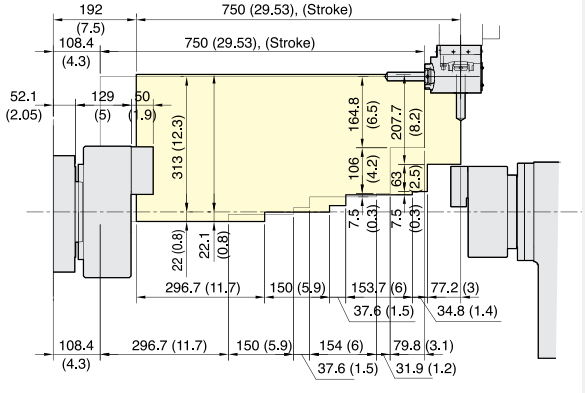


L300MSC

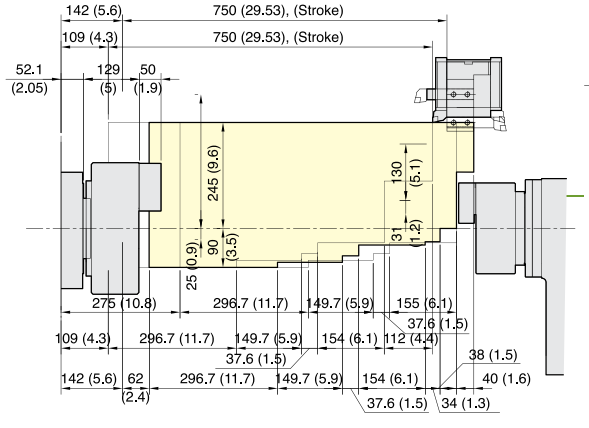
OD/ID TOOL HOLDER



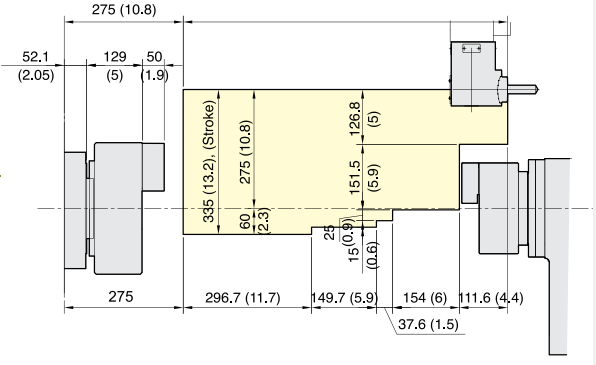
DRILL/END MILL TOOL HOLDER



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 (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	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)
NC	Controller		-	HW F i Series [HYUNDAI-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	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 (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)	290/1,350(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)	□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)
NC	Controller		-	HW F i Series [HYUNDAI-iTROL]	F 32i-B [HW F i Series]	F 32i-B

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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	–	
FEED	Travel (X/Z/ZB)		mm(in)	355/750(14″/29.5″)	355/1,350(14″/53.1″)
	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-B] [HYUNDAI-iTROL]	

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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)	-		Ø65 (2.6″)
SPINDLE	Chuck Size	Main	inch	12″ [15″] [Big Bore : 12″, 15″]		
		Sub	inch	-		8″
	Spindle Bore	Main	mm(in)	Ø102 (4″) [Big Bore : Ø115 (4.5″)]		
		Sub	mm(in)	-		Ø78 (3.1″)
	Spindle Speed (rpm)	Main	r/min	3,000 [Big Bore : 2,800] [3,500]		3,000 [Big Bore : 2,800]
		Sub	r/min	-		4,000
	Motor (Max/Cont.)	Main	kW(HP)	22/18.5 (29.5/24.8)[Big Bore : 22/18.5 (29.5/24.8)] [33.6/28 (45.1/37.5)]		22/18.5 (29.5/24.8) [Big Bore : 22/18.5 (29.5/24.8)]
		Sub	kW(HP)	-		11/7.5 (14.7/10)
	Torque (Max/Cont.)	Main	N·m(lbf·ft)	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	N·m(lbf·ft)	-		140/95.5 (103.2/70.4)
	Spindle Type	Main	-	Belt		
		Sub	-	-		Belt
	Spindle Nose	Main	-	A2-8 [A2-11]		
		Sub	-	-		A2-6
	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	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)	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)	3,480x2,002 (137″x78.8″)	4,170x2,002 (164.2″x78.8″)	3,586x2,002 (141.2″x78.8″)
	Height		mm(in)	1,997 (78.6″)		
	Weight		kg(lb)	6,600 (14,550)	7,800 (17,196)	7,100 (15,653)
NC	Controller		-	FANUC 32i-B [HW FANUC i Series] [HYUNDAI-iTROL]		FANUC 32i-B

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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/Jog transfer	
Manual measurement of workpiece / tool offset	
Automatic tool/Workpiece measurement	
Automatic/Program reference approach	
Automatic Operation	
Program run as using CF card/USB	
Program control/modification	
Block search	
Reposition	
Preset (Set actual value)	
Data Transmission	
Ethernet network	
USB memory stick & CF card	
Convenience Function	
Processing setting	Coordinate system setting, Auto tool length measurement
Processing support	Tool Monitoring, Spindle overload monitoring
Maintenance	Turret Guidance, I/O monitoring, Manual
Management	Soft MCP, M/G code List
SMART machining	
Energy saving function (ECO)	
Machine Monitoring System (MMS Lite)	
Language	
Standard support language	Chinese Simplified, English, Korean

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

Figures in inch are converted from metric values.
Design and specifications are subject to change without notice.

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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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

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GLOBAL NETWORK

HEADQUARTER

Changwon Technical Center / R&D Center / Factory
153, Jeongdong-ro, Seongsan-gu, Changwon-si,
Gyeongsangnam-do, Korea (Zip Code : 51533)
TEL : +82 55 280 9114 FAX : +82 55 282 9680

Uiwang Technical Center / R&D Center
37, Cheoldobangmulgwan-ro, Uiwang-si, Gyeonggi-do,
Korea (Zip Code : 16082)
TEL : +82 31 596 8213 Fax : +82 55 210 9804

OVERSEAS OFFICES

**HYUNDAI WIA
Machine Tools America**
450 Commerce Blvd. Carlstadt, NJ 07072
TEL : +1 630 625 5600

**HYUNDAI WIA
Machine Tools Europe
TECH CUBE**
Alexander-Fleming-Ring 57, 65428
Rüsselsheim Germany
TEL: +49 6142 9256 0
FAX: +49 6142 9256 100

India Branch Office
#4/169, Rajiv Gandhi Salai, (OMR),
Kandanchavadi, Chennai-600 096,
Tamilnadu, India
TEL: +91-44-3290-1719

Jiangsu HYUNDAI WIA
Company No.6 Fenghuang Road,
Fenghuang Town, Zhangjjagang City,
Jiangsu province, China
TEL : +86 512 5672 6808
FAX : +86 512 5671 6960

**Hyundai WIA Machine Tools China
Shanghai Branch Office**
2-3F, Bldg6, No.1535 Hongmei Road,
Xuhui District, Shanghai, China
TEL : +86 021 6427 9885
FAX : +86 021 6427 9890

Beijing Branch Office
Floor 14, Zhonghangji Plaza B, No.15
Ronghua South Road, BDA Dist., Daxing
Dist., Beijing, China 100176
TEL : +86 010 8453 9850
FAX : +86 010 8453 9853

Guangzhou Branch Office
Room 311, Unit 1-3, POLY TAL TU WUN,
Hanxi Avenue, Panyu District,
Guangzhou, China
TEL : +86 020 8550 6595
FAX : +86 020 8550 6597

Chengdu Branch Office
NO.508 Room, B Block, AFC Plaza, NO.88
Jiaozi Road, High-tech Zone, Chengdu,
China
TEL : +86 028 8665 2985
FAX : +86 028 8665 2985

Qingdao Office
Room 1207, Cai Fu Building, 182-6 Haier
Middle Road, Qingdao, China
TEL : +86 0532 8667 9334
FAX : +86 0532 8667 9338

Wuhan Office
Room 302, B Tower, Nova Center,
Dongfeng Three Road, Zhuankou,
Wuhan, Hubei, China
TEL : +86 027 5952 3256
FAX : +86 027 5952 3256

http://machine.hyundai-wia.com

Head Office & Factory

153, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do **Tel** +82 55 280 9500

Overseas Sales Team

16F, 37, Cheoldobangmulgwan-ro, Uiwang-si, Gyeonggi-do **Tel** +82 31 596 8213

HYUNDAI WIA Machine Tools America

450 Commerce Blvd. Carlstadt, NJ 07072 **Tel** +1 (630) 625 5600

HYUNDAI WIA Machine Tools Europe TECH CUBE

Alexander-Fleming-Ring 57, 65428 Rüsselsheim Germany **Tel** +49 6142 9256 0 **Fax** +49 6142 9256 100

India Branch Office

#4/169, Rajiv Gandhi Salai, (OMR), Kandanchavadi, Chennai-600 096, Tamilnadu, India **Tel** +91 44 3290 1719

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