HYUNDAI WIA Machine Tool

High Performacne 8inch CNC Turning Center

KL

2300A/LA

EXPERIENCE THE NEW TECHNOLOGY

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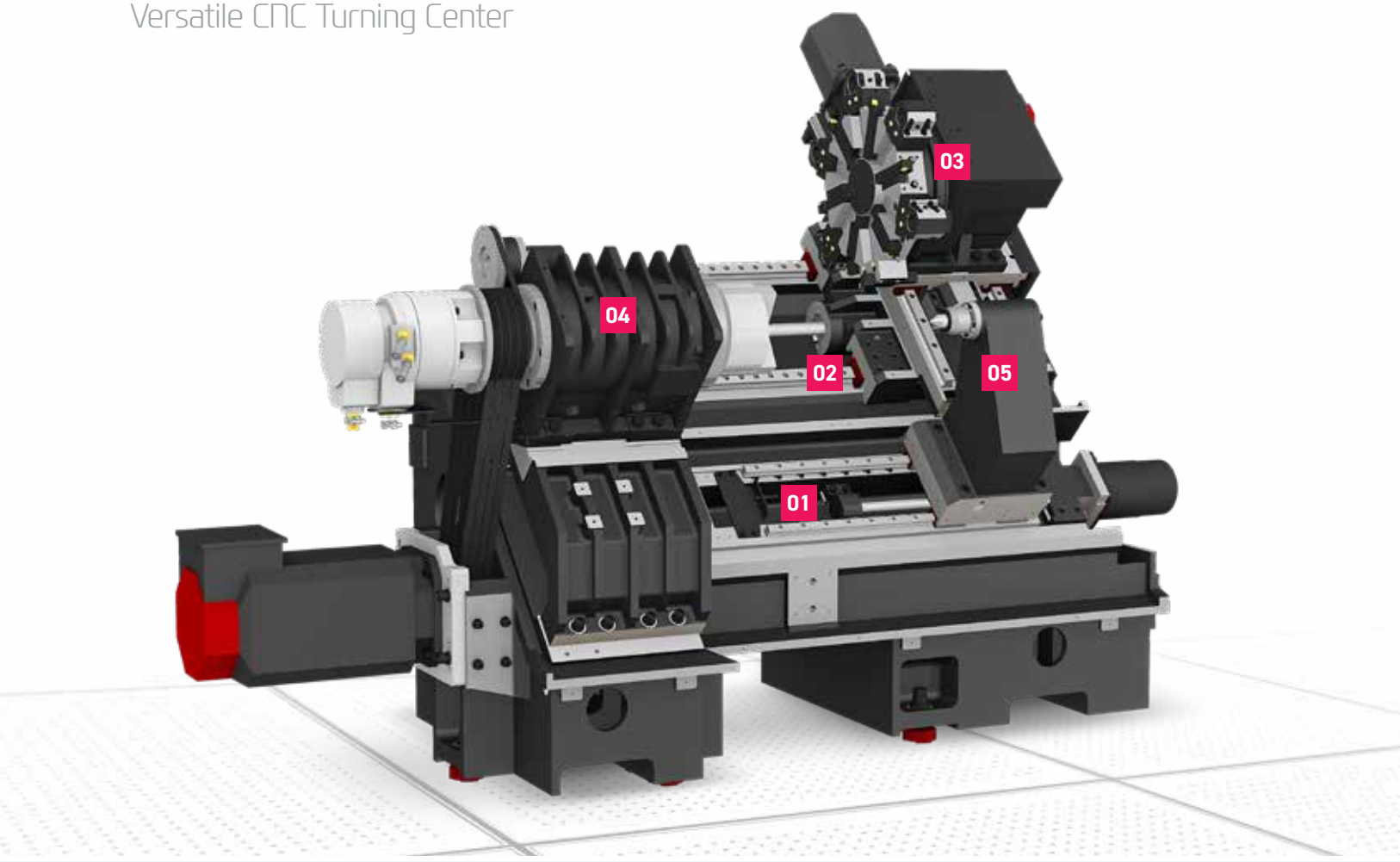
HYUNDAI WIA

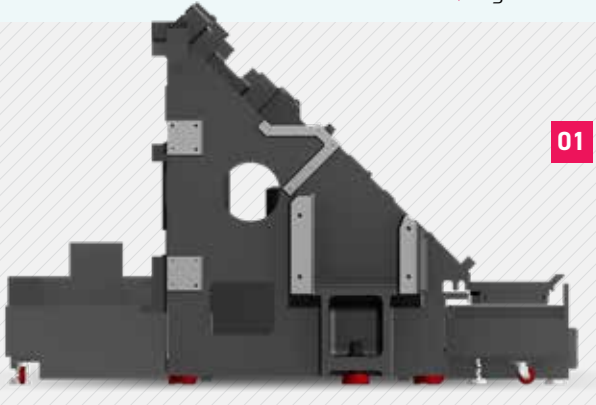
Basic Features

Spindle and Turret for High Productivity
Versatile CNC Turning Center



Korea No.1 Lathe
KL2300A

The **KL2300A** is an 8-inch lathe born to be second to none in the Korean machinery industry. Particularly notable is the greatly enhanced performance of the spindle, the core unit of the lathe, ensuring excellent cutting performance. The machine is the genuine fruit of HYUNDAI WIA's lathe technology.

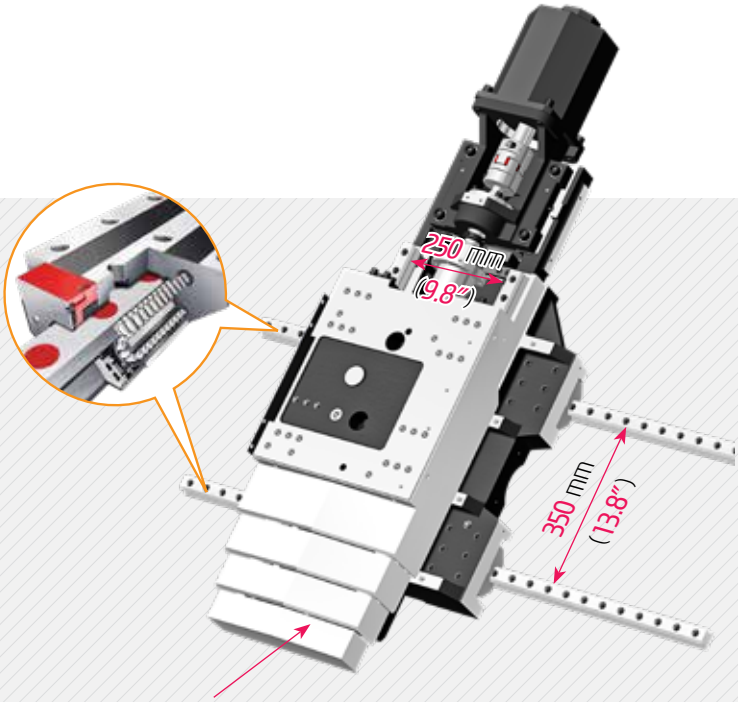


01 High Precision, High Rigidity All-In-One Type of Bed

45° slant bed is designed with square and tubular rib structure. It shows excellent performance in absorbing vibration and its high rigidity enables heavy duty cutting.

One-piece Cooolant Tank

The structure of the coolant tank is designed as a one-piece structure, so there is no clogging of overflow and hose of cutting oil, chip removal is possible from the right side of machine and chip processing ability is improved.



‹ Durability Improved by Application of Multistage Slide Cover ›

02 Guideway

KL2300A applies roller type LM guideways in Z-axis delivering high rigidity and speed to improve productivity.

Enlarging Distance Between Each Rail Span

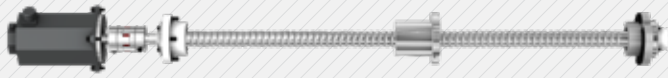
A machine tool's feed capacity varies greatly depending on the distance between guideways on feed axis.

If the distance between the guideways is too narrow, the feed body becomes less rigid, whereas if it's too wide, it sags and sinks downwards in the middle. To cope with this technical challenge, KL2300A has been designed by using the Finite Element Method (FEM) analysis so that the distance between guideways on the X-axis to be 250mm (9.8″) and on the Z-axis to be 350mm (13.8″), enabling high-quality machining in a high-rigidity heavy cutting environment.

Ball Screw

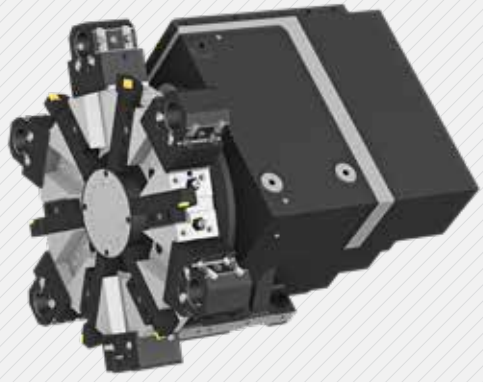
To prevent the expansion of ball screws due to higher temperatures during feeding, and to remove the feeding axis backlash, the both ends are fixed with 4-row precision angular thrust bearings and are preloaded.

- **Rapid Traverse Rate** (X/Z axis)
  36/36 m/min (1,417/1,417ipm)
- **Travel** (X/Z axis) 220/440 mm (8.7″/17.3″)



03 Servo Turret

The turret of KL2300A 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.



Holder

To enhance rigidity, M10 bolts are used to fix holders and M12 bolts are used to fix boring bar holders.

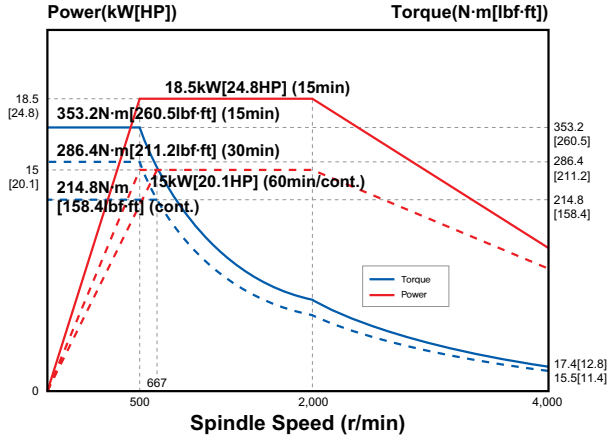
20 Bar(290 psi) High Pressure Coolant OPTION

Turret is designed to utilize 20 bar(290 psi) high pressure coolant and it shows optimum performance in machining difficult-to-cut material.

- **Tool Size** (O.D/I.D)
  □ 25/Ø50 mm (□ 1″/Ø2″)
- **Index Time** (1-Step) : 0.17 sec

High-Precision Spindle

Long Lasting High Accuracy & Excellent Performance
CNC Turning Center



18.5 kW (24.8 HP) Max. Power

353 N·m (260.5 lbf·ft) Max. Torque

04 Main Spindle

The main spindle is designed with the same structure often found in larger sized machines. The combination of taper roller bearings and angular contact ball bearings leads to excellent heavy duty cutting performance.

Also, machining performance is enhanced by applying ribstar belt to minimize noise and belt slipping problems. The spindle is designed with a Labyrinth structure to minimize possible bearing damage from coolant and to improve machining stability.

05 Tail Stock

The KL2300A can be processed with high quality by applying a tailstock as standard.

One Touch Type

Quill Type

⊙ One Touch Type

Taper : MT#4 Stroke : 400 mm (15.7″)

⊙ Quill Type OPTION

Taper : MT#5

Stroke : 300+100(Quill) mm
(11.8″+3.9″[Quill])

SPECIFICATIONS

Standard & Optional

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

Spindle		KL2300A/LA
Main Spindle Hollow Chuck 3 Jaw	8"	●
Main SpindleSolid Chuck 3 Jaw	8"	○
Sub Spindle Hollow Chuck 3 Jaw	6"	–
Sub Spindle Solid Chuck 3 Jaw	6"	–
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
2 Steps Hyd. Pressure Device		○
Spindle Inside Stopper		☆
Main Spindle Cs-axis (0.001°)		–
Sub Spindle Cs-axis (0.001°)		–
Chuck Open/Close Confirmation Device		●
2 Steps Chuck Foot Switch		☆
Sub Spindle Foot Switch		–
Turret		
Tool Holder		●
Mill Turret	BMT	–
Straight Milling Head (Axial)	Collet Type,1ea	–
Angular Milling Head (Radial)	Collet Type,1ea	–
Straight Milling Head (Radial)	Adapter Type	–
Angular Milling Head (Axial)	Adapter Type	–
Boring Sleeve (U-Drill Holder Sleeve)		●
Drill Socket		○
U-Drill Holder		●
U-Drill Cap		●
Angle Head		–
Tail Stock & Steady Rest		
Semi Programable Tail Stock		●
Quill Type Tail Stock (Foot Switch)	MT-5	○
Built-In Tail Stock	MT-4	☆
Programable Tail Stock		–
Standard Live Center		●
High Precesion Live Center		○
2 Steps Tail Stock Pressure System		☆
Quill Forward/Reverse Confirmation Device		○
Coolant & Air Blow		
Standard Coolant (Nozzle)		●
Chuck Coolant (Upper Chuck)		○
Gun Coolant		○
Through Spindle Coolant (Only for Special Chuck)		☆
Bed Flushing		○
Chuck Air Blow (Upper Chuck)		○
Sub Spindle Air Blow		–
Turret Air Blow		☆
Air Gun		○
Through Spindle Air Blow (Only for Special Chuck)		☆
High Pressure Coolant	0.4Bar (5.8psi)	●
	6Bar (87psi)	○
	20Bar (290psi)	○
Power Coolant System (For Automation)		☆
Chip Disposal		
Coolant Tank	Front (150 ℓ [39.6 gal])	●
	Front (200 ℓ /20 bar [52.8 gal /290 psi])	○
	Front (270 ℓ [71.3 gal])	–
	Rear (200 ℓ [52.8 gal])	○
	Rear (250 ℓ [66 gal])	–
Chip Conveyor (Hinge/Scraper)	Front (Right)	○
	Rear (Rear)	○
Special Chip Conveyor (Drum Filter)		☆
Chip Wagon Chip Wagon	Standard (180 ℓ [47.5 gal])	○
	Swing (200 ℓ [52.8 gal])	○
	Large Swing (290 ℓ [76.6 gal])	○
	Large Size (330 ℓ [87.2 gal])	○
	Customized	☆

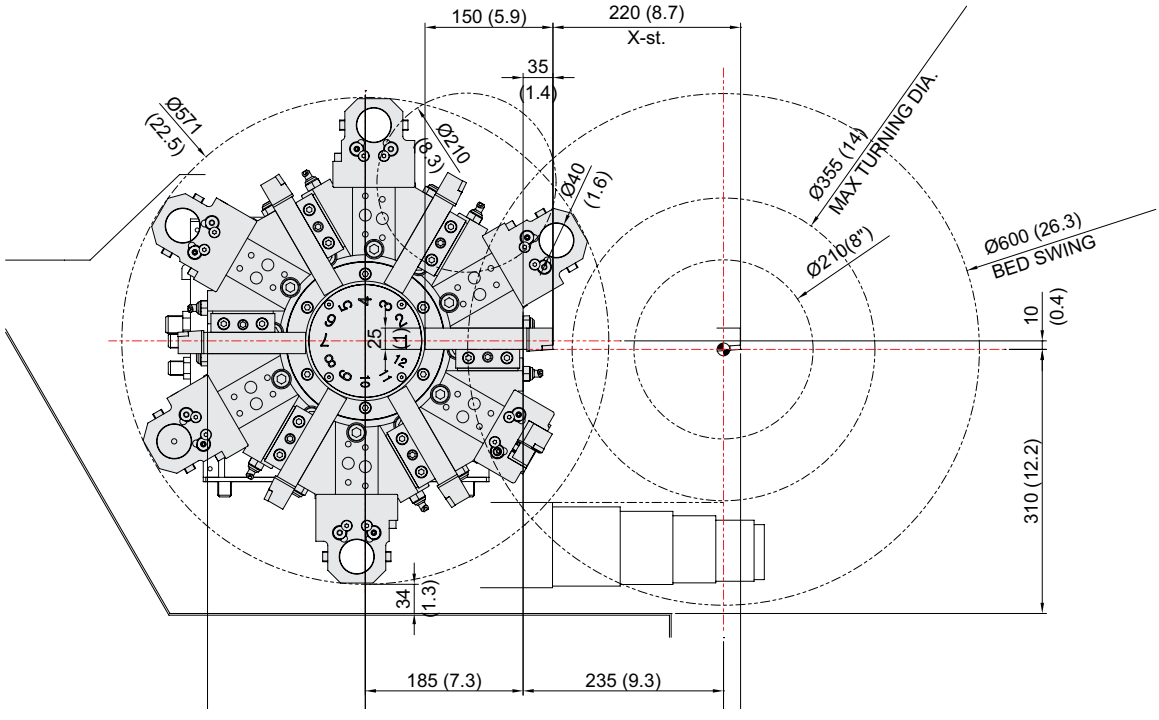
Safety Device		KL2300A/LA
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		●
Electric Device		
Call Light	1 Color : ■	●
Call Light	2 Color : ■ ■	○
Call Light	3 Color : ■ ■ ■	○
Call Light & Buzzer	3 Color : ■ ■ ■B	○
Electric Cabinet Light		○
Remote MPG		–
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	Digital	○
Electric Circuit Breaker		○
AVR (Auto Voltage Regulator)		☆
Transformer	25kVA	○
	30kVA	–
	35kVA	–
Auto Power Off		○
Measurement		
Q-Setter		○
Automatic Q-Setter		○
Work Close Confirmation Device (Only for Special Chuck)	TACO	○
	SMC	○
Work Setter		☆
Linear Scale	X Axis	○
	Z Axis	○
Coolant Level Sensor (Only for Chip Conveyor)		☆
Environment		
Air Conditioner	FANUC	○
	SIEMENS	●
Oil Mist Collector		☆
Oil-Water Separation Device		●
Oil Skimmer		○
MQL(Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door	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		○
Sub Spindle Work Pusher (Spring Type)		–
Sub Spindle Work Ejector (Pneumatic Type)		–
Turret Work Pusher (For Automation)		☆
Parts Conveyor (Main Part Catcher Application)		○
Semi Automation System		☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 18 ℓ (4.8gal)	●
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		☆

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Interference

unit : mm(in)



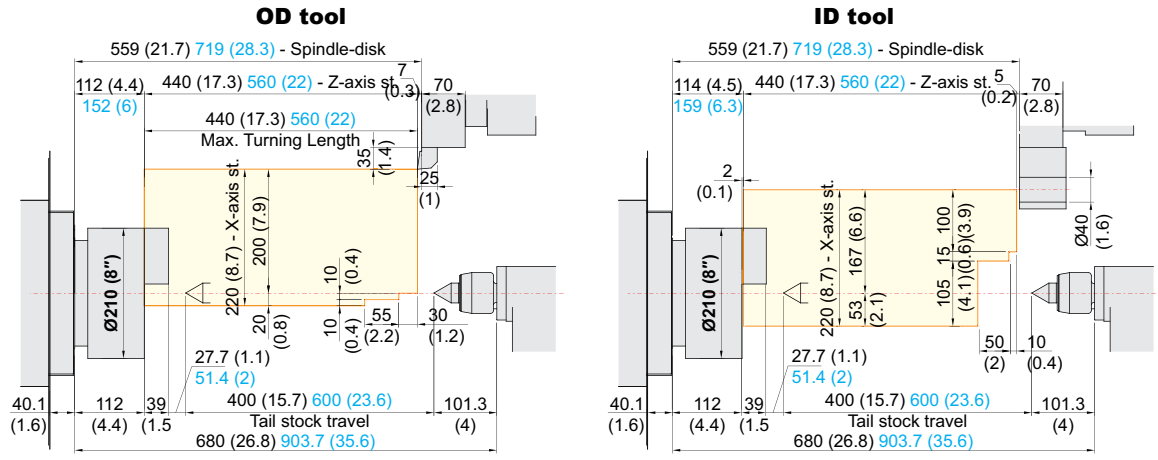
Tooling System

ITEM			LKL2300A/LA	
			mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left	-	-
		Extenstion	-	-
	Facing Holder		1	1
	Cutting Holder		-	-
Boring Holder	I.D Holder	Single	5	5
	U-Drill Holder	Cap	1	1
Socket	Boring (mm)	Ø10 (Ø3/8")	1	-
		Ø12 (Ø1/2")	1	1
		Ø16 (Ø5/8")	1	-
		Ø20 (Ø3/4")	1	1
		Ø25 (Ø1")	1	1
		Ø32 (Ø1 1/4")	1	1
	Drill	MT 2	1	1

SPECIFICATIONS

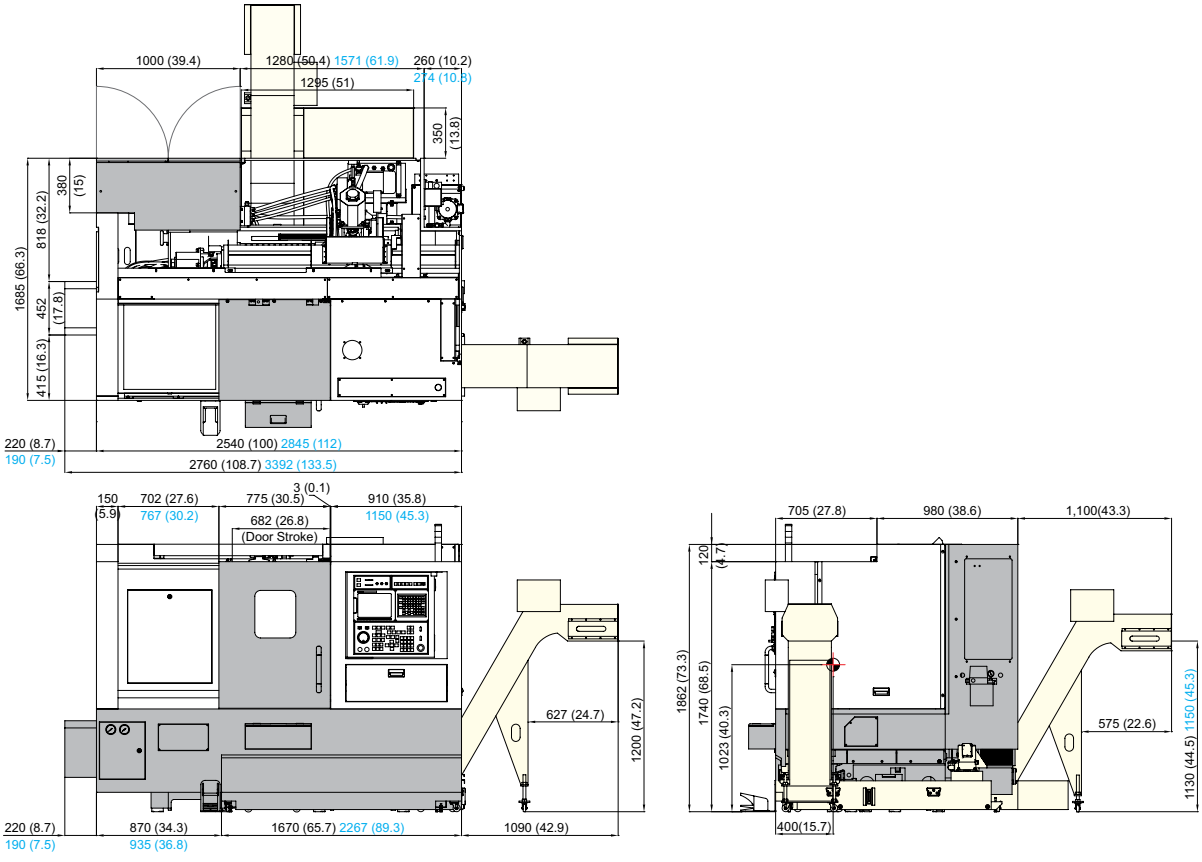
KL2300A/LA Tooling Travel Range

unit : mm(in)



External Dimensions

unit : mm(in)



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HYUNDAI WIA

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SPECIFICATIONS

Specifications

[ ] : Option

ITEM				KL2300A	KL2300LA
CAPACITY	Swing Over the Bed		mm(in)	Ø600 (23.6″)	
	Swing Over the Carriage		mm(in)	Ø355 (14″)	
	Max. Turning Dia.		mm(in)	Ø355 (14″)	
	Max. Turning Length		mm(in)	440 (17.3″)	560 (22″)
	Bar Capacity		mm(in)	Ø65 (2.6″)	
SPINDLE	Chuck Size		inch	8″	
	Spindle Bore		mm(in)	Ø78 (3.1″)	
	Spindle Speed (rpm)		r/min	4,000	
	Motor (Max/Cont.)		kW(HP)	18.5/15 (24.8/20.1)	
	Torque (Max/Cont.)		N·m(lbf·ft)	353.2/214.8 (260.5/158.4)	
	Spindle Type		-	BELT	
	Spindle Nose		-	A2-6	
	C-axis Indexing		deg	-	
FEED	Travel (X/Z)		mm(in)	220/440 (8.7″/17.3″)	220/560 (8.7″/22″)
	Rapid Traverse Rate (X/Z)		m/min(ipm)	36/36 (1,417/1,417)	
	Slide Type		-	X-Axis : BALL TYPE LM GUIDE, Z-Axis : ROLLER TYPE LM GUIDE	
TURRET	No. of Tools		ea	12	
	Tool Size	OD	mm(in)	□ 25 (1″)	
		ID	mm(in)	Ø40 (1.6″)	
	Indexing Time		sec/step	0.17	
TAIL STOCK	Taper		-	MT4	
	Quill Dia.		mm(in)	Ø56 (2.2″)	
	Quill Travel		mm(in)	-	
	Travel		mm(in)	400 (15.7″)	600 (23.6″)
TANK CAPACITY	Coolant Tank		ℓ (gal)	150 (39.6) {20 Bar : 200 (52.8)}	270 (71.3)
	Lubricating Tank		ℓ (gal)	1.8 (0.5)	
POWER SUPPLY	Electric Power Supply		kVA	22	
	Thickness of Power Cable		Sq	Over 16	
	Voltage		V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)		mm(in)	2,760×1,685 (108.7″×66.3″)	3,392×1,685 (133.5″×66.3″)
	Height		mm(in)	1,862 (73.3″)	
	Weight		kg(lb)	4,400 (9,700)	4,600 (10,141)
NC	Controller		-	HYUNDAI WIA FANUC i Series	

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