

KIT 4500

Revolutionized Productivity & High Performance

HYUNDAI WIA Gang Type CNC Turning Center

Technical Leader

The Gang Type CNC Turning Center KIT4500, designed by Hyundai WIA with years of expertise and the latest technology, is a gang tool CNC Turning Center which maximizes productivity through high speed and high performance mechanisms.

KIT4500

[] : Option • SIEMENS

Max. Swing	mm(in)	Ø530 (20.9")
Max. Turning Length	mm(in)	300 (11.8")
Chuck Size	inch	6" [Big Bore : 8"]
Bar Capacity	mm(in)	Ø51 (2") [Big Bore : Ø65 (2.6")]
Sp. Speed	r/min	6,000 [6,000] [Electric Chuck : 6,000] [Big Bore : 4,000] [Big Bore : 4,000]
Sp. Motor (Max./Cont.)	kW(HP)	15/11 (20/15) [25/10.5 (33.5/14.1)] [Electric Chuck : 20/10.5 (26.8/14.1)] [Big Bore : 15/11 (20/15)] [Big Bore : 25/10.5 (33.5/14.1)]
Travel (X/Z)	mm(in)	450/300 (17.7"/11.8")
No. of Tools	EA	Block Tool : 6

KIT 4500

Economical Gang Type CNC Turning center

- 60° slanted one-piece bed structure with high rigidity
- Stabilized unit structure to minimize thermal displacement
- Reduction of belt damage and spindle vibration through decrease of spindle belt length
- Optimal design for automation
- Compact design suitable for installation in restricted space



01 BASIC STRUCTURE

Which Can Cover All Machining Process with Only One Initial Setting

LM Guideway

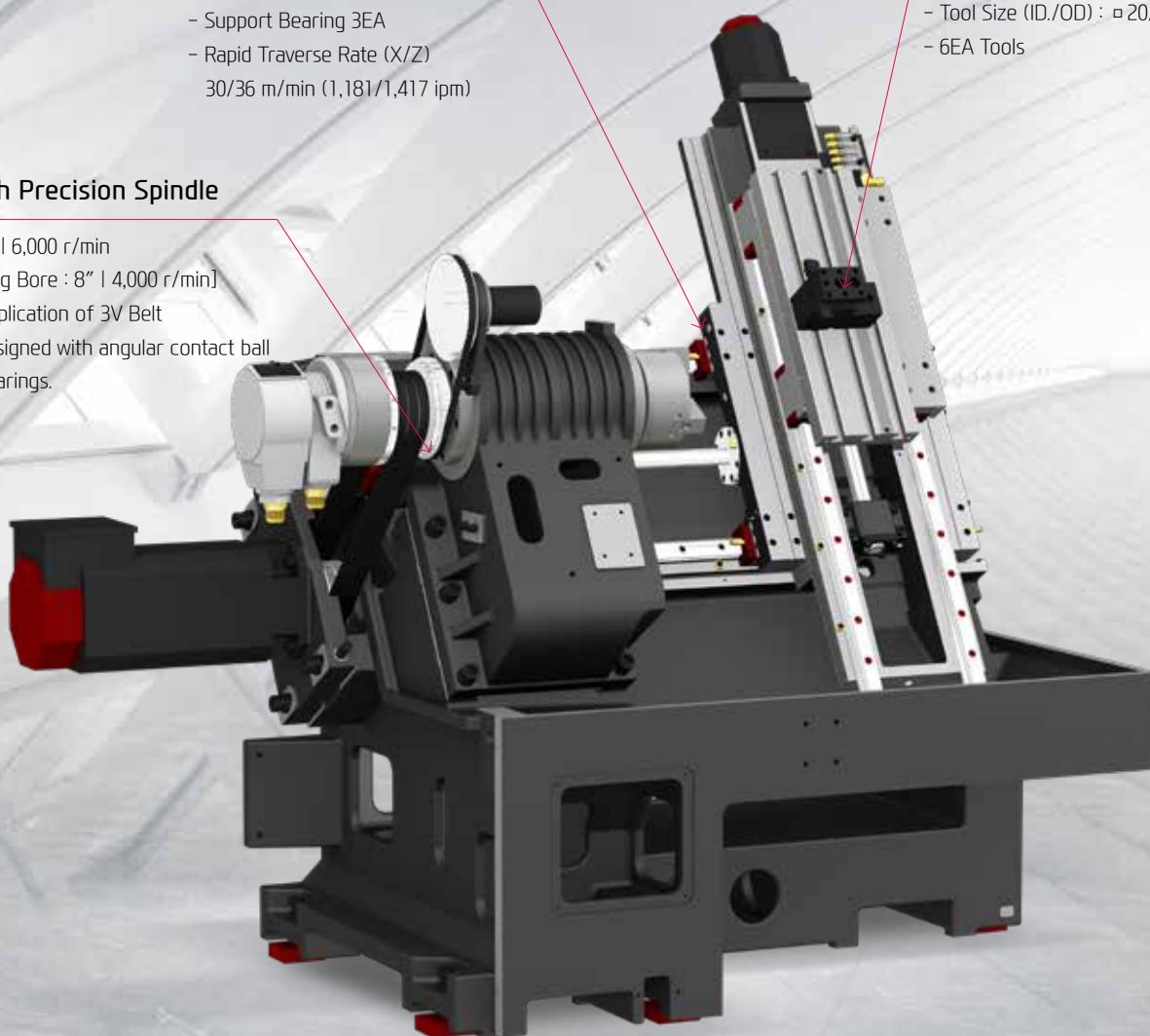
- Support Bearing 3EA
- Rapid Traverse Rate (X/Z)
30/36 m/min (1,181/1,417 ipm)

High Precision Spindle

- 6" | 6,000 r/min
[Big Bore : 8" | 4,000 r/min]
- Application of 3V Belt
- designed with angular contact ball bearings.

Block Tool

- Tool Size (ID./OD) : $\square 20/\varnothing 32$ mm
- 6EA Tools



REDUCTION OF NON-CUTTING TIME BY FAST RAPID SPEED

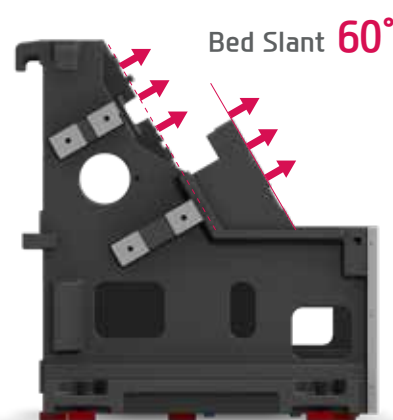
ALL-IN-ONE TYPE OF BED

60° Slant Bed Structure

The application of 60° slant bed ensures excellent chip processing with easy access to the chuck during your tool setting for your increased convenience.

Especially, thermal displacement has been greatly improved compared to that of the existing machine as the thermal expansion directions of both the spindle and table are identical according to the thermal displacement of the bed.

40% reduction of combined thermal displacement



Same thermal expansion angle of the table / spindle

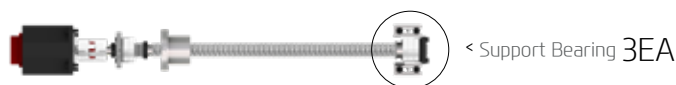
GUIDEWAY

LM Guideway

All axes of KIT4500 is designed with LM Guides. It reduces machining noise and enhances productivity through faster traverse rate.

Ball Screw

Thermal displacement on the X axis has been reduced by 50% compared to that of the existing equipment due to improvements on the carriage structure on the X axis. Especially, the supporting capability has been improved as the support bearing of ball screws is expanded from the existing 2 EA to 3 EA on the X axis.



< Support Bearing 3EA

Thermal displacement improvement on the X axis : 50% reduction

Rapid Traverse Rate (X/Z)

30/36 m/min (1,181/1,417 ipm)

Travel (X/Z)

450/300 mm (17.7"/11.8")

02 SPINDLE & BLOCK TOOL

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center

Spindle Specifications

[] : Option

ITEM	Chuck Size	Spindle Speed	Motor (Max./Cont.)	Torque (Max./Cont.)
FANUC	(Hydraulic) 6"	6,000 rpm	15/11 kW (20/15 HP)	95.5/70 N·m (70.4/51.6 lbf·ft)
	[(Hydraulic) 8"]	[4,000 rpm]	15/11 kW (20/15 HP)	[191/140 N·m (140.9/103.3 lbf·ft)]
SIEMENS	[(Hydraulic) 6"]	[6,000 rpm]	25/10.5 kW (33.5/14.1 HP)	[120/50 N·m (88.5/36.9 lbf·ft)]
	[(Hydraulic) 8"]	[4,000 rpm]	25/10.5 kW (33.5/14.1 HP)	[238/100 N·m (175.5/73.8 lbf·ft)]
	[(Electric) 6"]	[6,000 rpm]	20/10.5 kW (26.8/14.1 HP)	[143/75 N·m (105.5/55.3 lbf·ft)]

HIGH ACCURACY & EXCELLENT PERFORMANCE

SPINDLE

High Precision Spindle

The high precision spindle is designed with angular contact ball bearings. The bearings minimize thermal displacement even at high speed.

Application of 3V Belt

The belt slip is reduced by changing the existing scrum belt to the V-ribbed belt. The span between motors in the spindle is optimized to improve spindle vibration and belt life.



KIT4500

Ø51(Ø6 UP)

Ø2" (Ø0.2" UP)

Shortened Belt Length

KIT450

1,326 mm (52.2")

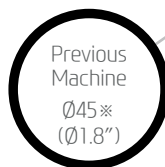
KIT4500

1,060 mm (41.7")

266 mm (10.5") Shortened

KIT4500

Expansion of Bar Capacity



Previous Machine
Ø45 ※
(Ø1.8")

6" : Ø51 (Ø6 UP)

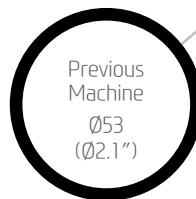
Ø2" (Ø0.2" UP)

[8" : Ø65 (Big Bore)]

[Ø2.6"]

KIT4500

Expansion of Spindle Bore



Previous Machine
Ø53
(Ø2.1")

KIT4500

Ø61(Ø8 UP)

Ø2.4" (Ø0.3"UP)

※ With a customer's requirement, bar capacity can be replaced by Ø45 (Ø1.8")

BLOCK TOOL

Gang Type Block Tool

With Tool-To-Tool time reduced, productivity has been improved in the machining of small sized parts.

◎ No. of Tools : 6 EA

◎ Tool Size (O.D/I.D) : □ 20/Ø32 mm (□ 0.8"/Ø1 1/4")

◎ Table Size : 200×550 mm (7.9"×21.7")



03 USER CONVENIENCE

Various Devices for User Friendly

BAR FEEDER SYSTEM

Bar Feeder

Bar feeder system enables automation which leads to efficiency improvement.



Parts Catcher

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



Parts Conveyor

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



Auto Door

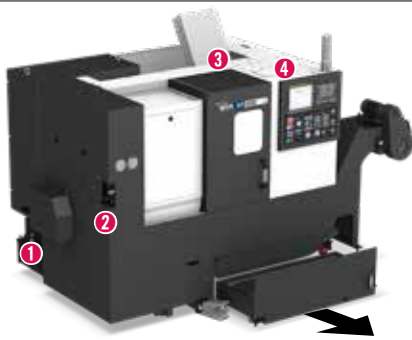
Using M-code, the doors can be automatically opened and closed which brings productivity and convenience for automation.



Auto Shutter

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

OUTSTANDING PRODUCTIVITY



Independent separation of only the coolant tank without the separation of chip pan and chip conveyor (common for the side and back)

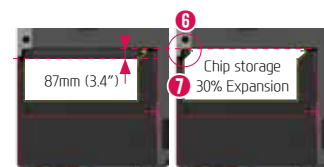
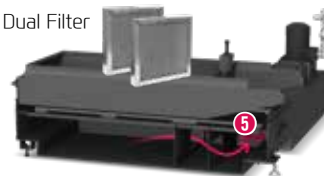
- ❶ Arrangement of hydraulic unit on the backend
- ❷ 2-directional (front / left side) pressure controller
- ❸ Top hole for the dust collector installation
- ❹ Sockets for piping option such as air tool, hydraulic, etc. (3 points)

Optimal structure for user convenience

Door opening width	495 mm (19.5")
Coolant Capacity	120 ℓ (31.7 gal)

< Compared to previous machine 20 ℓ (5.3 gal) UP >

Dual Filter

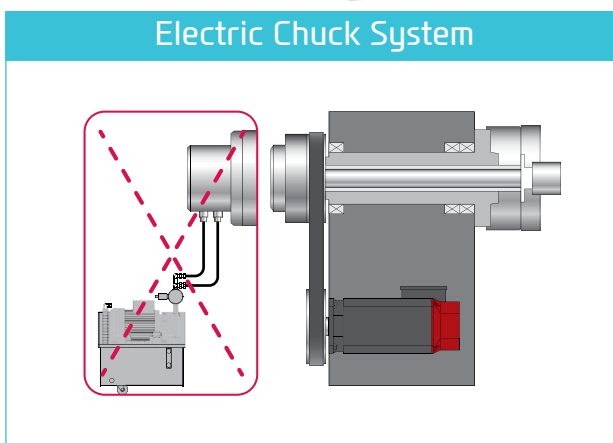
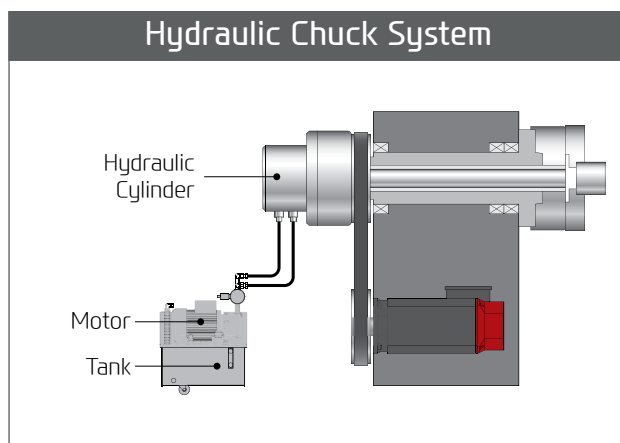
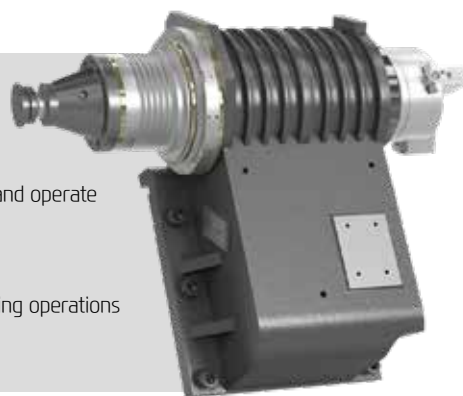


- ❺ Enhanced coolant filter capability
Filter capability has been improved by applying a dual filter in the zigzag filtering partition structure.
- ❻ Leakage prevention struction
Leak is prevented by tightening the chip box shoot surface close to the bed shoot floor through controlling the chip box height.
- ❼ Expansion of chip storage space
The chip storage space under the bed has been expanded by 30% compared to the previous model.

ELECTRIC CHUCK SYSTEM

Sustainable, Space-Saving Technology (No More Hydraulic Tanks, Motors and Cylinders)

- Smart, ICT-based equipment without hydraulic devices that allows you to save space and operate sustainably
- Precise control by electric power enables fine adjustment of clamping force
- Fuel-efficient mechanical system with locking clamp mechanism for rotational machining operations
- Motorized, energy-saving spindles with integrated clamping and rotating system



Performance Improvement

ITEM	Hydraulic Chuck System	Electric Chuck System
Simplified Structure	Hydraulic Tank + Hydraulic Motor + Hydraulic Cylinder + Draw Bar + Chuck	Clutch Unit + Draw Bar + Chuck (Simplified)
Equivalent Specifications	Max. Clamping Force : 56 kN Max. Spindle Speed : 6,000 rpm	Max. Clamping Force : 56 kN Max. Spindle Speed : 6,000 rpm
Effective Force Control	Enables manual adjustment of hydraulic valves (Resolution of 3 kN or higher)	Enables fine tuning via NC adjustment (Resolution of approx. 1.2 kN)
Improved Surface Roughness	Hydraulic pulsation phenomenon occurs (Hydraulic cylinder vibration)	Improves surface roughness compared to hydraulic pressure (No cylinder)
Environmentally Friendly	Occurrence of oil leakage, vibration and noise	Removes hydraulic power units including hydraulic tanks, motors and cylinders for environmental sustainability

Specifications are subject to change without notice for improvement. / Korea Institute of Machinery and Materials test data

SPECIFICATIONS

Standard & Optional

Spindle		KIT4500
Main Spindle	6"	●
Hollow Chuck 3 Jaw	8"	○
	10"	-
Main Spindle	6"	○
Solid Chuck 3 Jaw	8"	☆
	10"	-
Electric Chuck (SIEMENS)	6"	○
Bar Capacity	Ø45 (Ø1.8")	○
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
2 Steps Hyd. Pressure Device		○
Spindle Inside Stopper		○
5° Index		○
Cs-Axis (0.001°)		○
Block Tool		
Tool Holder		●
Boring Sleeve		●
Drill Socket		●
U-Drill Holder		○
U-Drill Holder Sleeve		○
Ø32 (Ø1.3") Boring Holder		●
Rotating Tool Head (X,Z Axis)		☆
Tail Stock & Steady Rest		
Manual Tail Stock		-
Coolant & Air Blow		
Standard Coolant (Nozzle)		●
Chuck Coolant (Upper Chuck)		○
Gun Coolant		○
Through Spindle Coolant (Only for Special Chuck)		☆
Chuck Air Blow (Upper Chuck)		○
Air Gun		○
Through Spindle Air Blow (Only for Special Chuck)		☆
High Pressure Coolant	0.5Bar (7.3 psi)	●
	6Bar (87 psi)	○
Power Coolant System (For Automation)		☆
Coolant Chiller		☆
Chip Disposal		
Coolant Tank	120 ℓ (31.7 gal)	●
	130 ℓ (34.3 gal)	-
Chip Conveyor (Hinge/Scraper/Screw)	Front (Right)	○
	Front (Rear)	○
Special Chip Conveyor (Drum Filter)		☆
Chip Wagon	Standard (180 ℓ (47.5 gal))	○
	Swing (200 ℓ (52.8 gal))	○
	Large Swing (290 ℓ (76.6 gal))	○
	Large Size (330 ℓ (87.2 gal))	○
	Customized	☆
S/W		
Automatic CAM (HW-ACAM)		-
Dialogue Program (HW-DPRO)		-
DNC software (HW-eDNC)		○
Machine Monitoring System (HW-MMS Cloud)		☆
Machine Monitoring System (Customer Installation : HW-MMS Edge)		☆
Smart Guide-i : FANUC		○
Smart S/W		☆

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

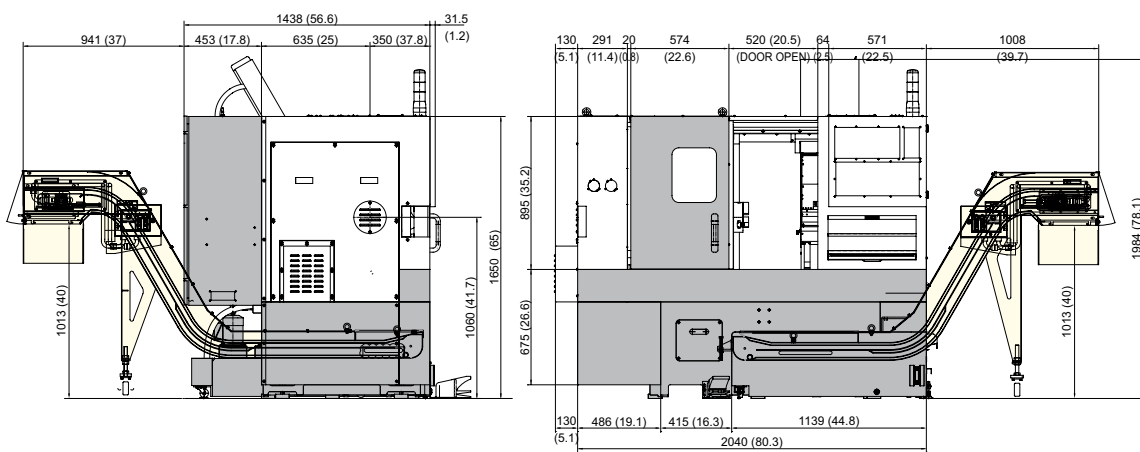
Safety Device		KIT4500
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		○ (CE:●)
Electric Device		
Call Light	1Color : ■	○
Call Light & Buzzer	3Color : ■ ■ ■ B	○
Electric Cabinet Light		○
Controller	FANUC	●
	SIEMENS	○
Remote MPG		-
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	Digital	○
Electric Circuit Breaker	FANUC	○
	SIEMENS	-
AVR (Auto Voltage Regulator)		☆
Transformer	20kVA	○
Auto Power Off		○
Measurement		
Q-Setter		-
Work Close Confirmation Device (Only for Special Chuck)	TACO	○
	SMC	○
Linear Scale	X/Z Axis	○
Coolant Level Sensor (Only for Chip Conveyor)		☆
Environment		
Air Conditioner		○
Oil Mist Collector		☆
Oil Skimmer		○
MQL (Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door		○
Auto Shutter (Only for Automatic System)		○
Sub Operation Panel		☆
Bar Feeder Interface		○
Extra M-Code 4ea		○
Automation Interface		☆
I/O Extension (IN & OUT)	16 Contact	○
	32 Contact	○
Parts Catcher		○
Parts Conveyor		☆
Semi Automation System (Front)		☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 12 ℓ (3.2 gal)	-
	35bar (507.6 psi)/ 15 ℓ (4 gal)	●
ETC		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM Software		☆

SPECIFICATIONS

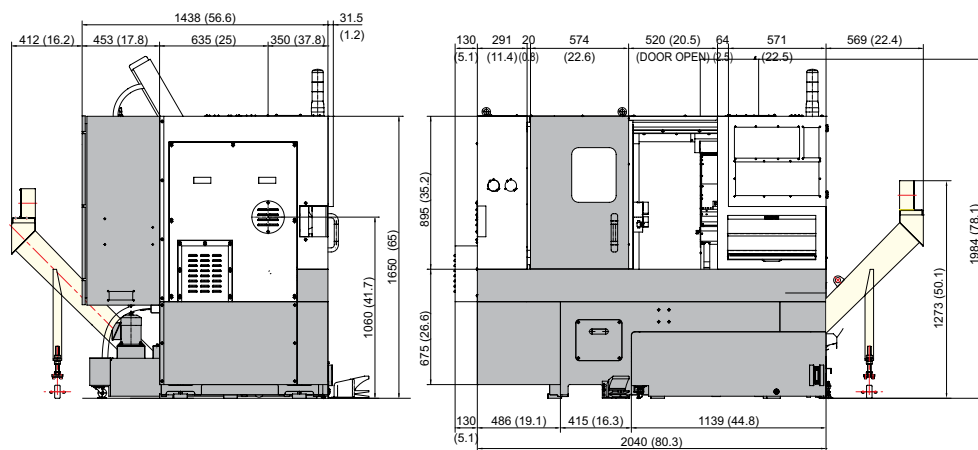
External Dimensions

unit : mm(in)

Hinge/Scraper Type

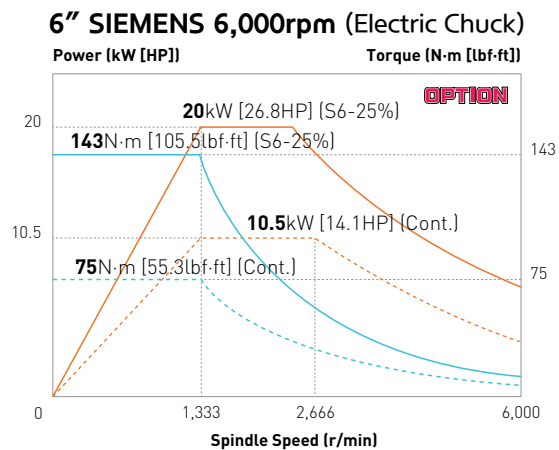
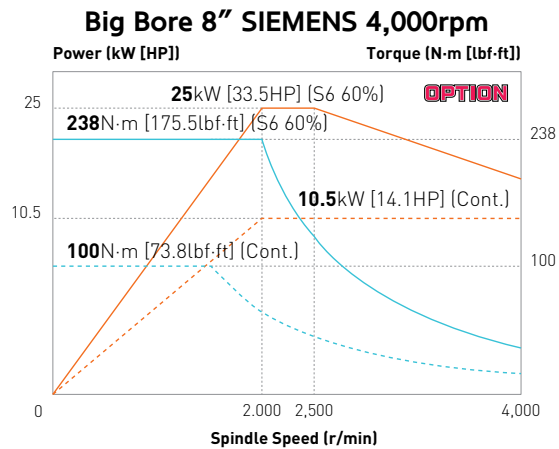
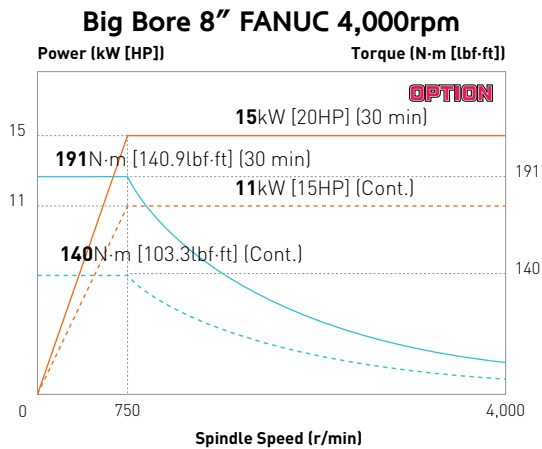
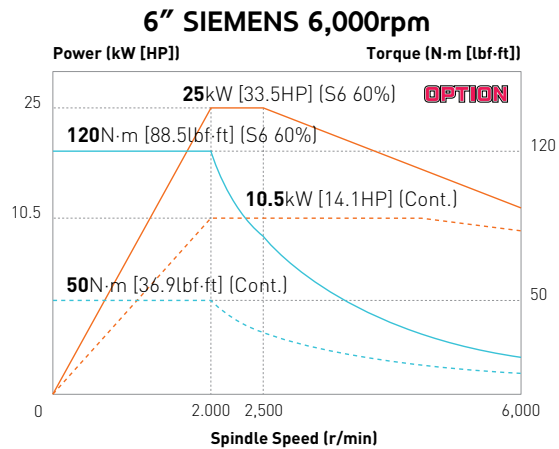
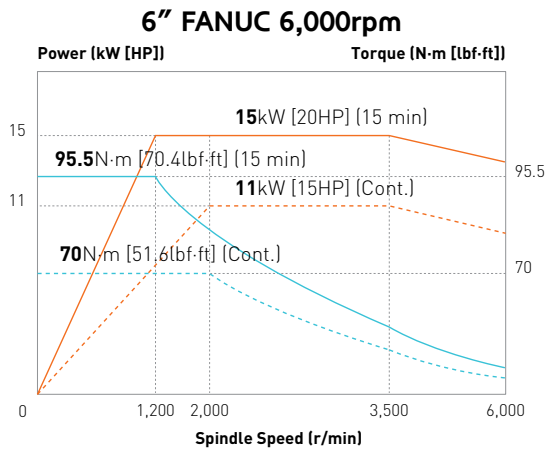


Screw Type



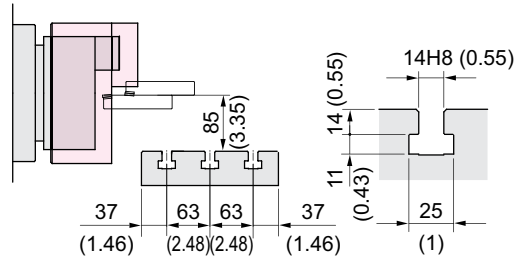
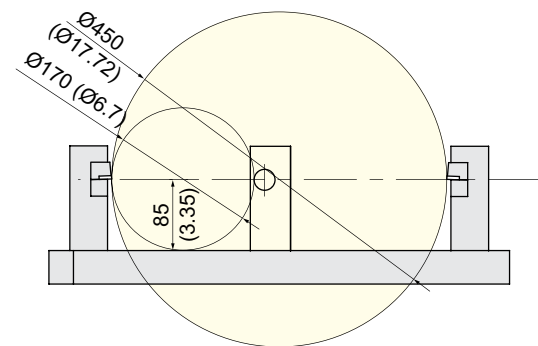
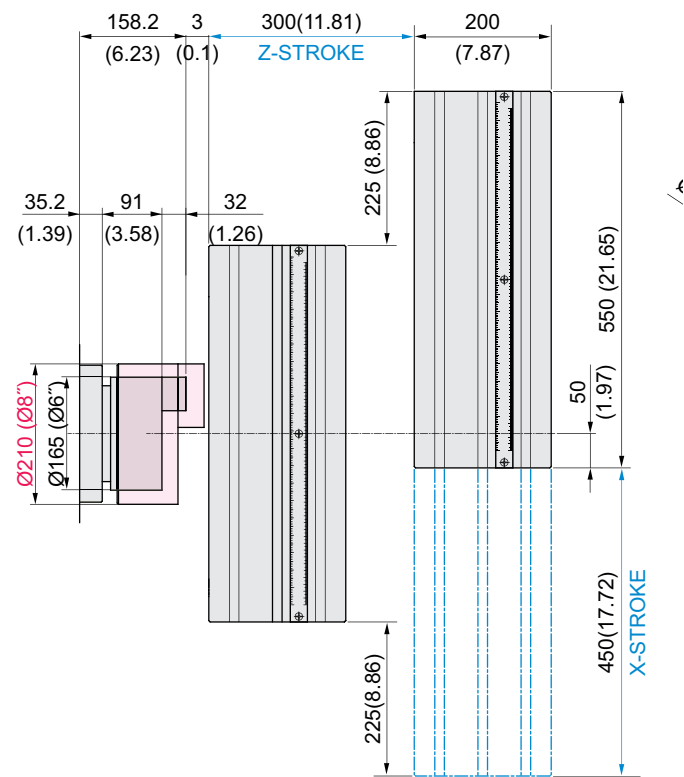
SPECIFICATIONS

Spindle Output/Torque Diagram



The Stroke of Table

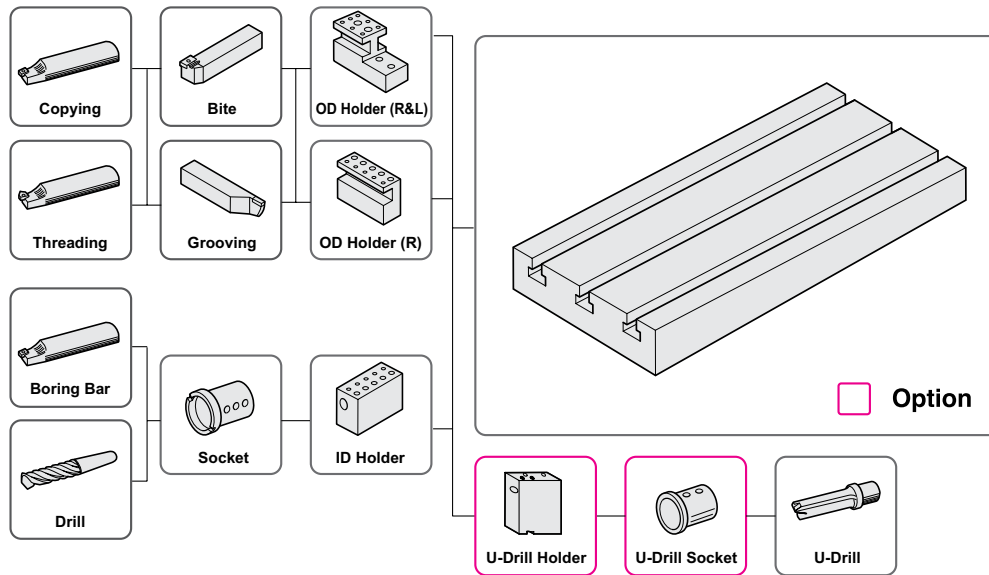
unit : mm(in)



SPECIFICATIONS

Tooling Travel Range

unit : mm(in)



Tooling Parts Detail

ITEM			KIT4500	
			mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left : $\phi 20$ ($\phi 3/4"$)	2	2
		Double : $\phi 20$ ($\phi 3/4"$)	1	1
		Right/Left : $\phi 25$ ($\phi 1"$)	Opt	Opt
		Double OD : $\phi 25$ ($\phi 1"$)	Opt	Opt
Boring Holder	I.D Holder	Single : $\phi 32$ ($\phi 1 1/4"$)	2	2
	U-Drill Holder	Tool Holder	Opt	-
		Cap	Opt	-
Socket	Boring	$\phi 8$ ($\phi 5/16"$)	Opt	-
		$\phi 10$ ($\phi 3/8"$)	1	1
		$\phi 12$ ($\phi 1/2"$)	1	1
		$\phi 16$ ($\phi 5/8"$)	1	1
		$\phi 20$ ($\phi 3/4"$)	Opt	Opt
		$\phi 25$ ($\phi 1"$)	Opt	Opt
	Drill	MT 1 $\times$ MT 2	1	1
		MT 2	Opt	Opt
		$\phi 20$ ($3/4"$)	Opt	-
		$\phi 25$ ($1"$)	Opt	-

Specifications

[] : Option

ITEM			KIT4500
CAPACITY	Swing Over the Bed	mm(in)	Ø530 (Ø20.9")
	Max. Turning Dia.	mm(in)	Ø165 (Ø6.5")
	Max. Turning Length	mm(in)	300 (11.8") [Big Bore : 273 (10.7")]
	Bar Capacity	mm(in)	Ø51 (Ø2") [Big Bore : Ø65 (Ø2.6")]
SPINDLE	Chuck Size	mm(in)	6" [Big Bore : 8"]
	Spindle Bore	mm(in)	Ø61 (Ø2.4") [Big Bore : Ø76 (Ø3")]
	Spindle Speed (rpm)	r/min	6,000 [6,000] [Electric Chuck : 6,000] [Big Bore : 4,000 / 4,000]
	Motor (Max/Cont.)	kW(HP)	15/11 (20/15) [25/10.5 (33.5/14.1)] [Electric Chuck : 20/10.5 (26.8/14.1)] [Big Bore : 15/11(20/15) / 25/10.5 (33.5/14.1)]
	Torque (Max/Cont.)	N·m(lbf·ft)	95.5/70 (70.4/51.6) [120/50 (88.5/36.9)] [Electric Chuck : 143/75 (105.5/55.3)] [Big Bore : 191/140 (140.9/103.3) / 238/100 (175.5/73.8)]
	Spindle Type	-	3V BELT
	Spindle Nose	-	A2-5 [Big Bore : A2-6]
FEED	Travel (X/Z)	mm(in)	450/300 (17.7"/11.8")
	Rapid Traverse Rate (X/Z)	m/min(ipm)	30/36 (1,181/1,417)
	Slide Type	-	LM GUIDE
BLOCK TOOL	No. of Tools EA		6
	Tool Size	OD mm(in)	□ 20 (□ 0.8")
		ID mm(in)	Ø32 (1.2")
TANK CAPACITY	Coolant Tank	ℓ (gal)	120 (31.7)
	Lubricating Tank	ℓ (gal)	1.8 (0.5)
POWER SUPPLY	Electric Power Supply	kVA	17
	Thickness of Power Cable	mm²	OVER 16
	Voltage	V/Hz	220/60 (200/50*)
MACHINE	Floor Space (L×W)	mm(in)	2,170×1,470 (85.4" x 57.9")
	Height	mm(in)	1,984 (78.1")
	Weight	kg(lb)	2,800 (110.2")
NC	Controller	-	HYUNDAI WIA FANUC i Series – SMART PLUS [SIEMENS 828D]

*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)
Specifications are subject to change without notice for improvement.

CONTROLLER

HYUNDAI WIA FANUC i Series – SMART PLUS

[] : Option

Controlled axis / Display / Accuracy Compensation	
Control axes	2 axes (X, Z) / 3 axes (X, Z, C) / 4 axes (X, Z, Y, C) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A) 7 axes (X1/Z1, X2/Z2, B2, C1/C2)
Simultaneously controlled axes	2 axes [Max. 4 axes]
Designation of spindle axes	3 axes [Max. 4 axes]
Least setting Unit	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg
Least input increment	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 0.001 deg
Inch / Metric conversion	G20 / G21
High response vector control	
Interlock	All axes / Each axis
Machine lock	All axes
Backlash compensation	± 0~9999 pulses (exc. Rapid traverse / Cutting feed)
Position switch	
LCD / MDI	10.4 inch LCD unit
Feedback	Absolute motor feedback
Stored stroke check 1	Over travel
Stored stroke check 2, 3	
PMC axis control	
Operation	
Automatic operation (Memory)	
MDI operation	
DNC operation	Needed DNC software / CF card
Program restart	
Wrong operation prevention	
Program check function	Dry run
Single block	
Search function	Program Number / Sequence Number
Interpolation functions	
Nano interpolation	
Positioning	G00
Linear interpolation	G01
Circular interpolation	G02, G03
Exact stop mode	Single : G09, Continuous : G61
Dwell	G04, 0 ~ 9999.9999 sec
Skip	G31
Reference position return	1st reference : G28, 2nd reference : G30 Ref. position check : G27
Thread synchronous cutting	G33
Thread cutting retract	
Variable lead thread cutting	
Multi / Continuous threading	
Feed function / Acc. & Dec. control	
Manual feed	Rapid traverse Jog : 0~2,000 mm/min (79 ipm) Manual handle : x1, x10, x100 pulses Reference position return
Cutting Feed command	Direct input F code
Feedrate override	0 ~ 200% (10% Unit)
Rapid traverse override	1%, F25%, 50%, 100%
Override cancel	
Feed per minute	G98
Feed per revolution	G99
Look-ahead block	1 block
Program input	
Tape Code	EIA / ISO
Optional block skip	9 ea
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, B/C
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 & 5 digit, Binary output
Spindle override	0% ~ 150% (10% Unit)
Multi position spindle orientation	M19 (S##)
FSSB Rigid tapping	
Constant surface speed control	G96, G97
Tool function / Tool compensation	
Tool function	T & 2 digit + Offset 2 digit
Tool life management	
Tool offset pairs	128 pairs
Tool nose radius compensation	G40, G41, G42
Geometry / Wear compensation	
Direct input of offset measured B	
Editing function	
Part program storage size	5,120m (2MB)
No. of registerable programs	1,000 ea
Program protect	
Background editing	
Extended part program editing	Copy, move and change of NC program
Memory card program edit	
Data input / output & Interface	
I/O interface	CF card, USB memory Embedded Ethernet interface
Screen hard copy	
External message	
External key input	
External workpiece number search	
Automatic data backup	
Setting, display and diagnosis	
Self-diagnosis function	
History display & Operation	Alarm & Operator message & Operation
Run hour / Parts count display	
Maintenance information	
Actual cutting feedrate display	
Display of spindle speed / T code	
Graphic display	
Operating monitor screen	Spindle / Servo load etc.
Power consumption monitoring	Spindle & Servo
Spindle / Servo setting screen	
Multi language display	Support 24 languages
Display language switching	Selection of 5 optional Languages
LCD Screen Saver	Screen saver
Unexpected disturbance torque	BST (Back spin torque limit)
Function for machine type	
Cs contour control (C & A axes)	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Polar coordinate interpolation	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Cylindrical interpolation	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Polygon turning (2 Spindles)	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Canned cycle for drilling	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Spindle orientation expansion	MS, SY TTS, TTMS, TTSY
Spindle synchronous control	MS, SY TTS, TTMS, TTSY
Torque control	MS, SY TTS, TTMS, TTSY
Y axis offset	Y, SY, TTSY
Arbitrary angular control	Y, SY, TTSY
Composite / Superimposed control	MS, SY, TTS, TTMS, TTSY
Balance cutting	TTS, TTMS, TTSY
Option	
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Tool offset pairs	200 pairs
Helical interpolation	
Conversational Program	SmartGuide-i
Optional block skip	40 ea, 200 ea (AICC II)

Figures in inch are converted from metric values.

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

CONTROLLER

SIEMENS 828D

[] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation

Control axes	2 axes (X, Z) – Std.
	3 axes (X, Z, C) – Mill
	4 axes (X, Z, Y, C) – Y
	5 axes (X, Z, B, C, A) – MS
	6 axes (X, Z, Y, B, C, A) – SY
Simultaneously controlled axes	Max. 4 axes
Least setting Unit	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 1 deg [0.001] deg
Least input increment	X, Z, Y, B axes : 0.001 mm (0.0001 inch) C, A axes : 1 deg [0.001] deg
Inch / Metric changeover	G70 (inch) / G71 (metric)
Interlock	All axes / Each axis
Backlash compensation	
Pitch error compensation	Leadscrew pitch error compensation
LCD / MDI	10.4 inch color LCD [15 inch color LCD (With Touch panel)]
Keyboard	QWERTY full keyboard
Stored stroke check	Over travel

Operation

Automatic operation	
MDI operation	
Program restart	
Program check function	Dry run / Program check / Machine lock
Single block	
Block search	Block search
Reposition	
Working area limit	Working area limitations

Interpolation functions

Positioning	G00
Linear interpolation	G01
Circular interpolation	Circular interpolation CW (G02)
	Circular interpolation CCW (G03)
Exact position stop	Single block exact stop (G09)
	Exact stop G60 (G601, G602, G603)
Dwell	Dwell (G04)
Reference position return	Return to reference point
	Return to 2nd reference point

Helical interpolation

Thread synchronous cutting	
Thread cutting retract	
Spline interpolation	Non-uniform rational B splines

Feed function / Acc. & Dec. control

Manual feed	Rapid traverse
	Jog
	Manual handle
	Reference position return
Cutting Feed command	Direct input F code
Feedrate override	0 ~ 200% (10% Unit)
Rapid traverse override	1%, 25%, 50%, 100%
Feed per minute	G94
Feed per revolution	G95
Look-ahead block	1 block

Program input

ISO support	G291 (ISO) / G290 (SIEMENS)
	(ISO G Code system-A)
Optional block skip	2
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999.999 mm, ± 99,999.9999 inch
Plane selection	X-Y : G17, X-Z : G18, Y-Z : G19
Workpiece coordinate system	G54 ~ G57, G505~G549
	G500 (Basic frame – settable zero offset)
	G53 (Work offset non modal)
	G153 (basic frame non modal)
Sub program call	11 folds nested
G code preventing buffering	STOPRE
Turning Cycle	Turning programming (Cycle 93, 94, 95, 97)
User Cycle	

Auxiliary function / Spindle speed function

Auxiliary function	M Code 4 digit
Spindle speed function	S Code 5 digit
Spindle override	0% ~ 150% (10% Unit)
Spindle orientation	SPOS
Rigid tapping	
Automatic mode interchange	Spindle / Axis mode
Constant surface speed control	G96, G97
Spindle speed limitation	LIMS

Tool function / Tool compensation

Tool function	Tool number & Tool name
	Tool : T + Offset : D
Tool life management	128 ea : Std.
	256 ea : Mill
	768 ea : Y, MS, SY
Tools in tool list	256 ea : Std.
	512 ea : Mill
	1,536 ea : Y, MS, SY
Cutting Edges in tool list	ISO (G40, G41, G42)
Tool nose radius compensation	
Geometry / Wear compensation	
Measurement of tool length	
Tool management function	

Editing function

Part program storage size	3MB – Std.
	5MB – Mill
	10MB – Y, MS, SY
No. of registerable programs	750 ea
External Storage devices	Local network, Server, USB, Flash drive
Background editing	
Extended part program editing	Copy, move and change of NC program
Memory card program edit	

Data input / output & Interface

I/O interface	CF card interface (ONLY 10.4")
	USB memory interface
	Embedded Ethernet memory interface

Screenshot

Setting, display and diagnosis

Self-diagnosis function	
History display & Operation	Alarm & Operator message & Operation
Run hour / Parts count display	
Maintenance information	
Actual cutting feedrate display	
Display of spindle speed / T code	
Graphic display	
Operating monitor screen	Spindle / Servo load etc.

Multi language display	Support 9 languages
	Chinese (Simplified/Traditional), English, French, German, Italian, Korean, Portuguese, Spanish
	[☆ Support 22 languages : Inquiry need]

LCD Screen Saver

	Screen saver & Motion sensing
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Function for machine type

Cs contour control (C & A axes)	Mill, MS, Y, SY model
Polar coordinate interpolation	Mill, MS, Y, SY model
Cylindrical interpolation	Mill, MS, Y, SY model
Canned cycle for drilling	Mill, MS, Y, SY model
[Polygon turning (CP-Basic)]	Mill, MS, Y, SY model
[Hobbing / Skybing (CP-Comfort)]	Mill, MS, Y, SY model
Spindle synchronous control	MS, SY model
Servo tailstock function	MS, SY model

Option

Additional optional block skip	10
Contour handwheel	
3D simulation	
Real time simulation	
Shop Turn	Machining step programming for turning

MOVEMENT FOR BETTER TOMORROW



ECO FRIENDLY

Protect the environment for all humanity and generation to come

01

**Achieve
carbon
neutrality**

- Develop Net-zero Roadmap
- Heighten carbon emissions management
- Achieve carbon neutrality goals

02

**Boost
resource
circulation**

- Detail plans to reduce environmental impact
- Gradually reduce pollutant emissions
- Build eco-friendly supply chain

03

**Establish
environmental
management
framework**

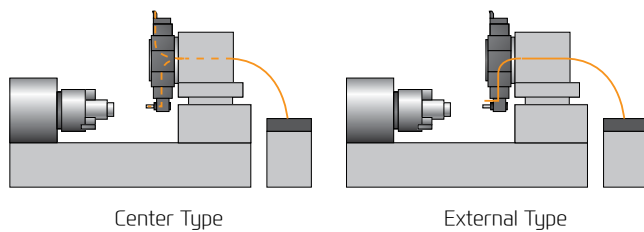
- Set up environmental management process
- Assess business impact of climate change risks

HYUNDAI WIA ECO SYSTEM

MQL (Minimal Quantity Lubrication)

The goal of this system is to spray only the amount of lubricant required to prevent heat and chip build up at the cutting tool or work piece face.

Example of Turning Center Application

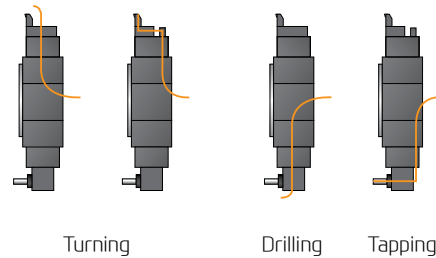


Center Type

External Type

Example of Etc.

Turning Center



Turning

Drilling

Tapping



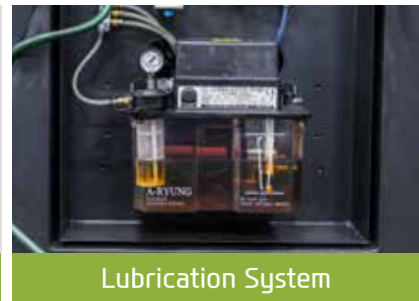
Oil Skimmer

An oil skimmer can increase coolant and tool life by removing tramp oil contaminants.



Mist Collector

Mist Collector reduces the amount of smoke and oil mist in the air. This helps build a safe and comfortable working environment and improve durability.



Lubrication System

By applying lubricant only when the machines axis are moving lubrication consumption is reduced by compared to standard systems.

HYUNDAI WIA ENERGY SAVING

HW-ESS (HYUNDAI WIA Energy Saving System)

HYUNDAI WIA Machine tool provides the optimum power saving function that can easily save energy with an intuitive user interface.



- 1. Machine-ready power saving function** : Put all servo motors and other motors into sleep mode when no control or operation is done for a set time
- 2. Work light auto-off function** : The work light is turned off automatically when no control or operation is done for a set time
- 3. Chip conveyor auto power saving** : Operation/non operation time (timer) can be set to save energy
- 4. Auto Power-off** : Auto power off after ending the an operation after a period of time
- 5. Eco function** : Machine ready sleep mode can be activated/de-activated from the controller panel
- 6. Power consumption monitor** : Real time power consumption can be monitored through the OP screen



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

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HEADQUARTER

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

Overseas Sales Team /R&D Center 37, Cheoldobangmulgwan-ro, Uiwang-si, Gyeonggi-do, Korea TEL : +82 31 8090 2539

OVERSEAS OFFICES

HYUNDAI WIA Machine America corp. 450 Commerce Blvd, Carlstadt, NJ 07072, USA TEL : +1-201-987-7298

HYUNDAI WIA Europe GmbH Alexander-Fleming-Ring 57, 65428 Rüsselsheim Germany TEL : +49-0-6142-9256-0

HYUNDAI WIA Machine Tools China 2-3F, Bldg6, No.1535 Hongmei Road, Xuhui District, Shanghai, China TEL : +86-21-6427-9885

India Branch Office #4/169, 1st Floor, LOTTE BLDG, Rajiv Gandhi Salai, (OMR), Kandanchavadi, Chennai - 600096, Tamilnadu, India TEL : +91-76-0490-3348

Vietnam Branch Office Flat number 05, Service and Trade Center of Viet Huong Industrial Zone, Highway 13, Thuan Giao, Thuan An, Binh Duong, Vietnam TEL : +84-3-5399-5099