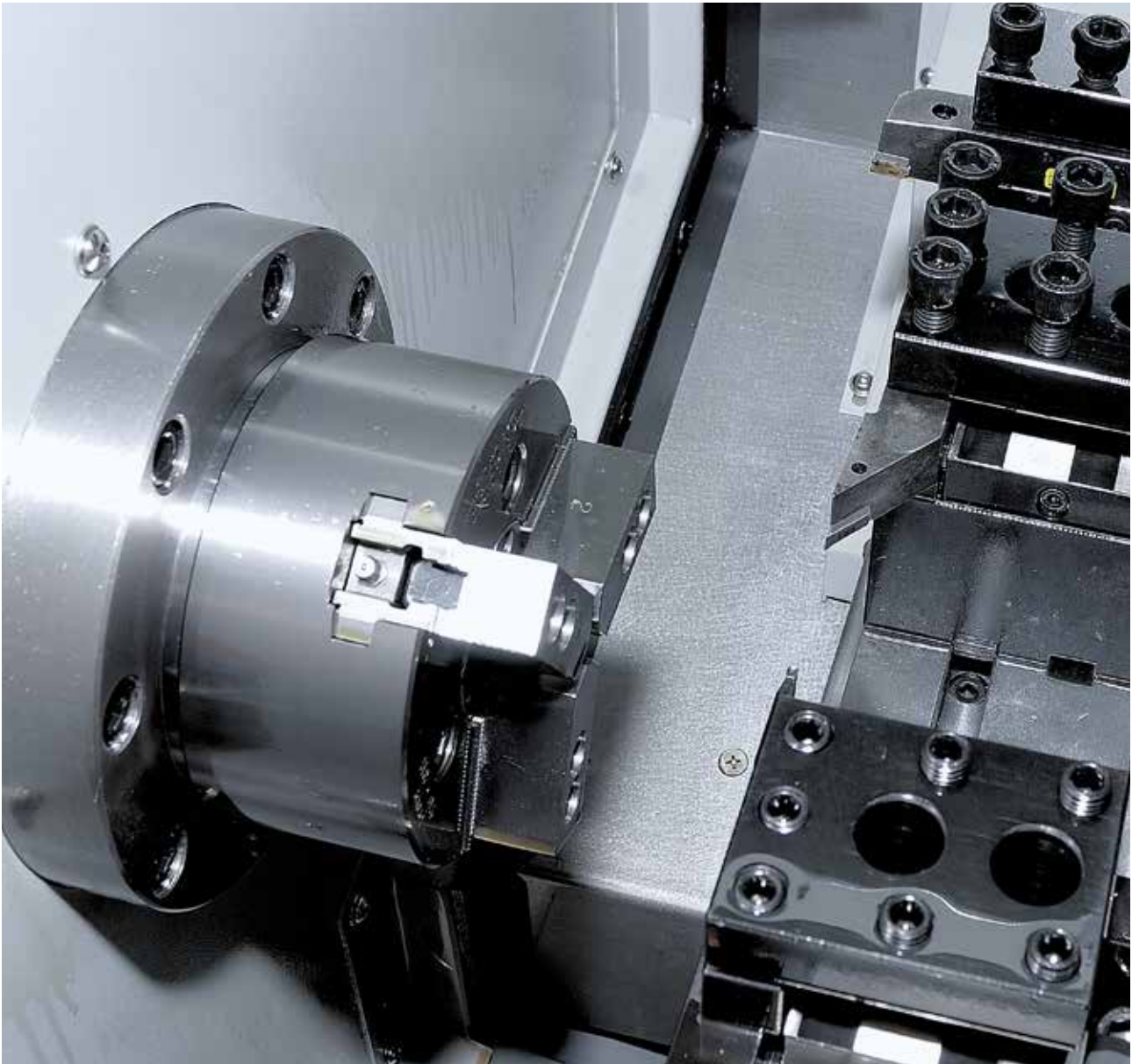


# KIT Series

HYUNDAI WIA Gang Type CNC Turning Center

# Technical Leader

The Gang Type CNC Turning Center Kit Series, designed by Hyundai WIA with years of expertise and the latest technology, is a gang tool CNC Turning Center and has maximized productivity by using a high speed, high performance mechanism.



## KIT250

Swing Over the Bed	mm(in)	Ø320 (12.6")
Max. Turning Length	mm(in)	150 (5.9")
Chuck Size	inch	5"
Bar Capacity	mm(in)	Ø32 (1.3")
Spindle Speed	r/min	7,000
Spindle Output	kW(HP)	5.5/3.7 (7.3/5)
Travel (X/Z)	mm(in)	250/200 (9.8"/7.9")
No. of Tool	EA	4

## KIT450

[HYUNDAI-ITROL]

Swing Over the Bed	mm(in)	Ø530 (20.9")
Max. Turning Length	mm(in)	300 (11.8")
Chuck Size	inch	6"
Bar Capacity	mm(in)	Ø45 (1.8")
Spindle Speed	r/min	6,000 [6,000]
Spindle Output	kW(HP)	15/11 (20.1/14.7) [10.8/9 (14.5/12)]
Travel (X/Z)	mm(in)	450/300 (17.7"/11.8")
No. of Tool	EA	6

Automation/Process Integration,  
Easy to Operate  
Gang Type Turning Center

# KIT Series

- 60° slanted one-piece bed structure with high rigidity (KIT450)
- Stabilized unit structure to minimize thermal displacement
- High productivity achieved with its mechanism
- Fast rapid traverse rate : 30m/min (1,181 ipm)
- Environment considering design with units such as oil skimmer
- Compact design suitable for installation in restricted space
- Ergonomic design for convenient access to chuck and tool

KIT250



KIT450

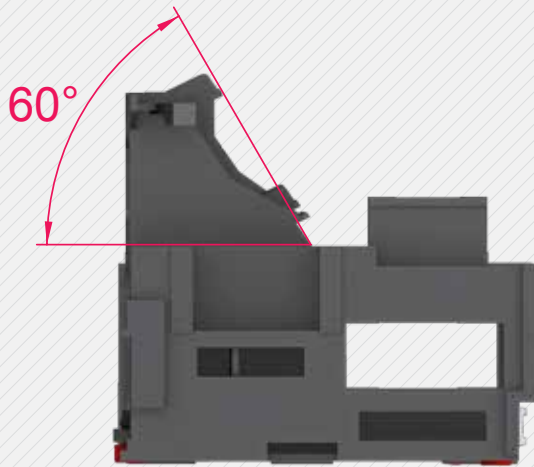


# Basic Features

The Most Advanced Mechanism,  
Revolutionized Productivity

## Slanted Type Bed (KIT450)

Slanted Type Bed structure allows easier chuck access and convenient chip disposal.



01

## One-Piece Bed Structure

The KIT Series one-piece bed structure has an excellent vibration absorbing ability and guarantees high precision manufacturing.

Especially, the KIT Series is designed to minimize thermal displacement in order to maintain high accuracy.

02



## Main Spindle

The high precision gearless spindle is designed with angular contact ball bearings. The bearings minimize thermal displacement and enhance surface machining accuracy.

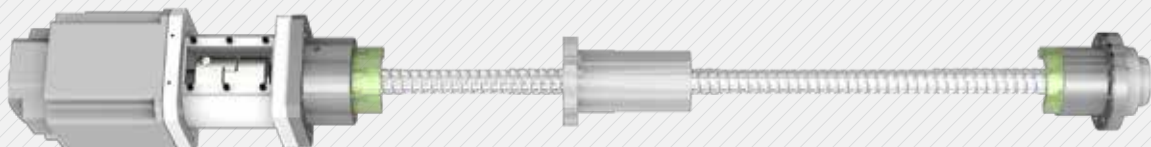
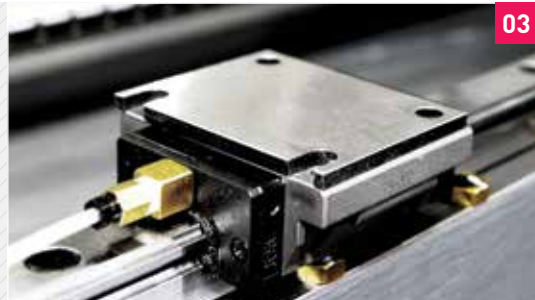
## LM Guide

All axes of KIT Series are designed with LM Guides. It reduces machining noise and enhances productivity through faster traverse rate.

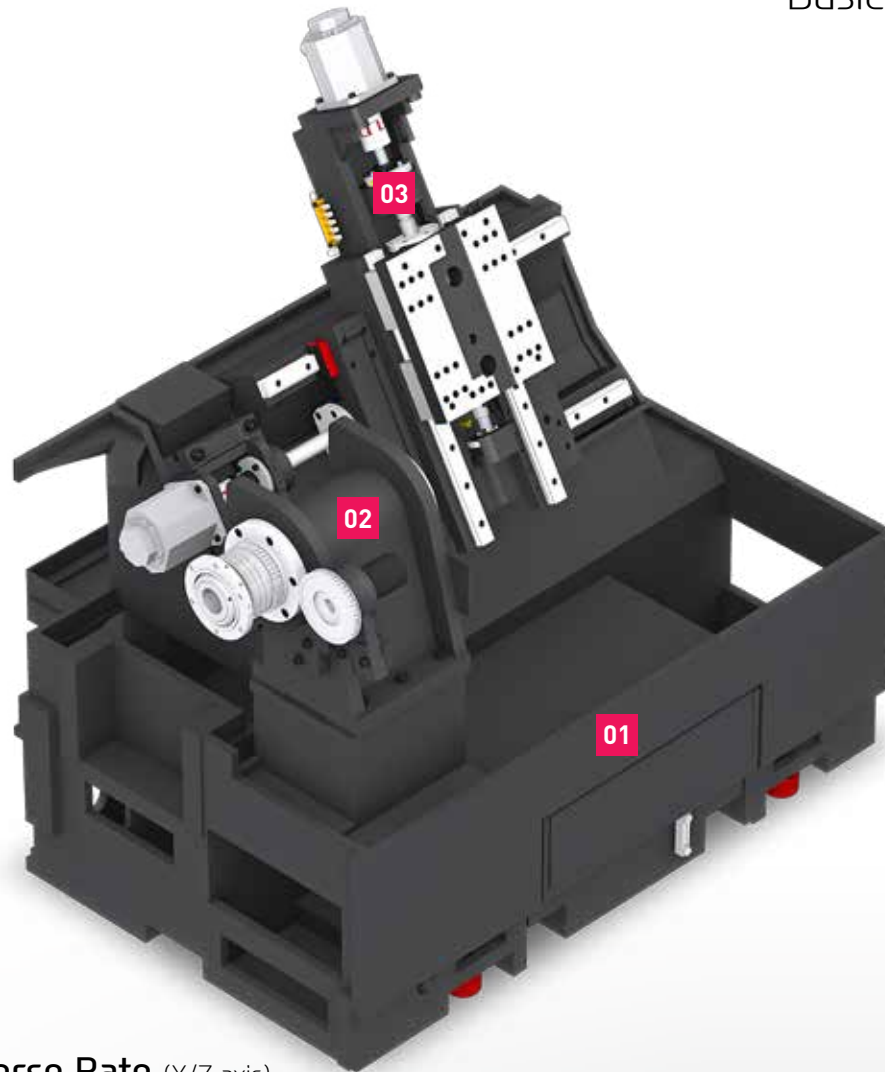
## Double Anchored Ball Screw

In order to eliminate thermal growth and increase accuracy, all axes are driven by high precision double anchored ballscrews.

03



## Basic Structure



Rapid Traverse Rate (X/Z axis)

**24/30** m/min (**945/1,181** ipm) (KIT250)

**30/36** m/min (**1,181/1,417** ipm) (KIT450)

## KIT250

### Bed Flushing

The bed flushing unit is installed as standard to effectively resolve chip disposal problems.

### Flat Type Bed

The gang tool is attached to a flat type bed to ensure high precision during machining process.



# 02

KIT Series

## High Precision Spindle

High Performance Gang Type CNC Turning Center



### Main Spindle

The high precision gearless spindle is designed with angular contact ball bearings. The bearings minimize thermal displacement even at high speeds. Thermal stability leads to high accuracy and high precision.

### Efficient Time Saving Spindle

The installation of a high performance AC spindle motor allows improvement of acc/deceleration time compared to other existing models.

#### Acceleration/Deceleration Time

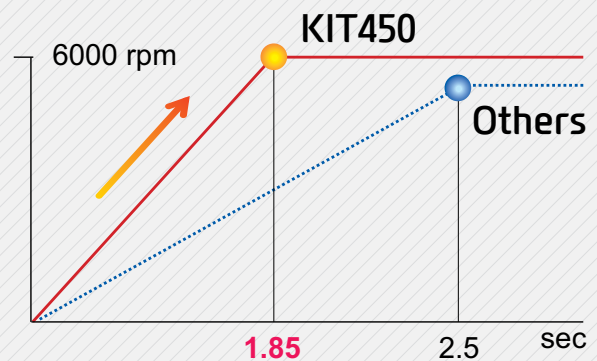
Other Machine

2.5 sec

KIT450

1.85 sec

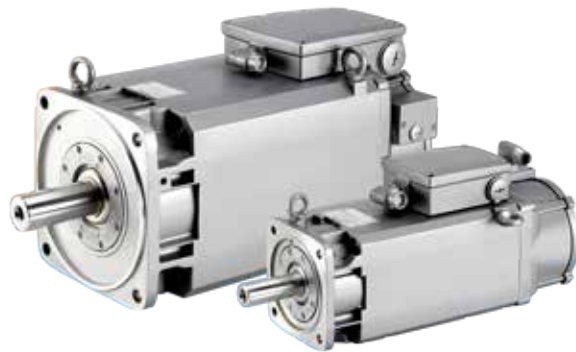
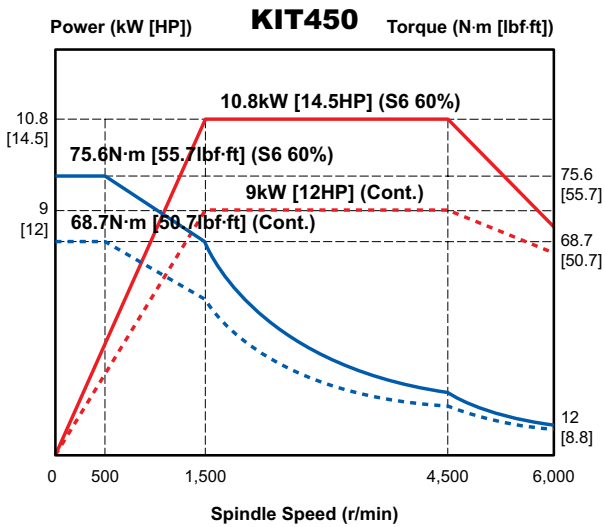
26% reduction



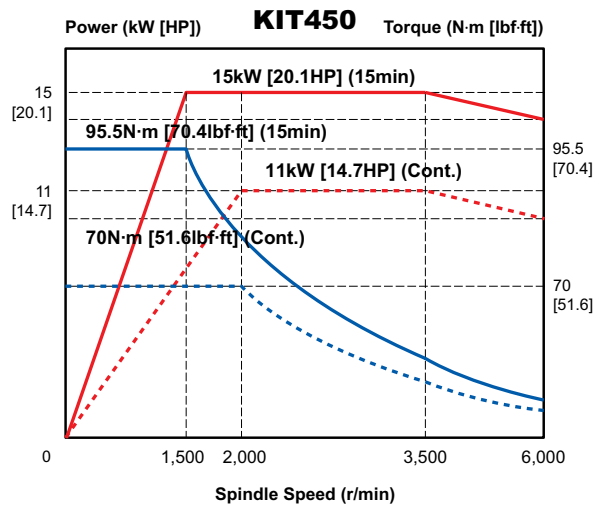
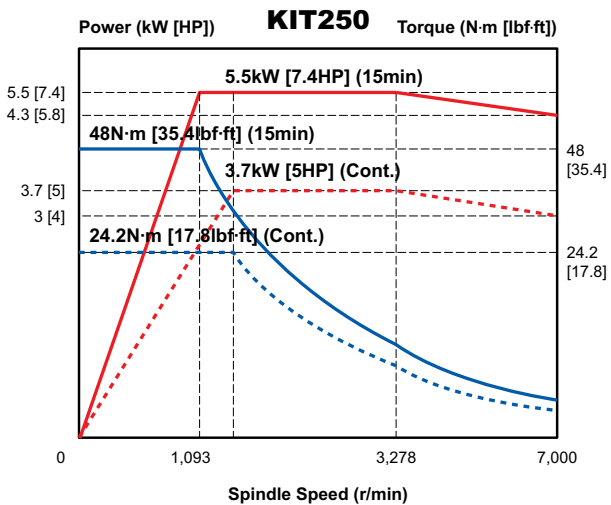
## Spindle Output/Torque Diagram

### HYUNDAI-ITROL SIEMENS 1PH8 Servo Motor

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



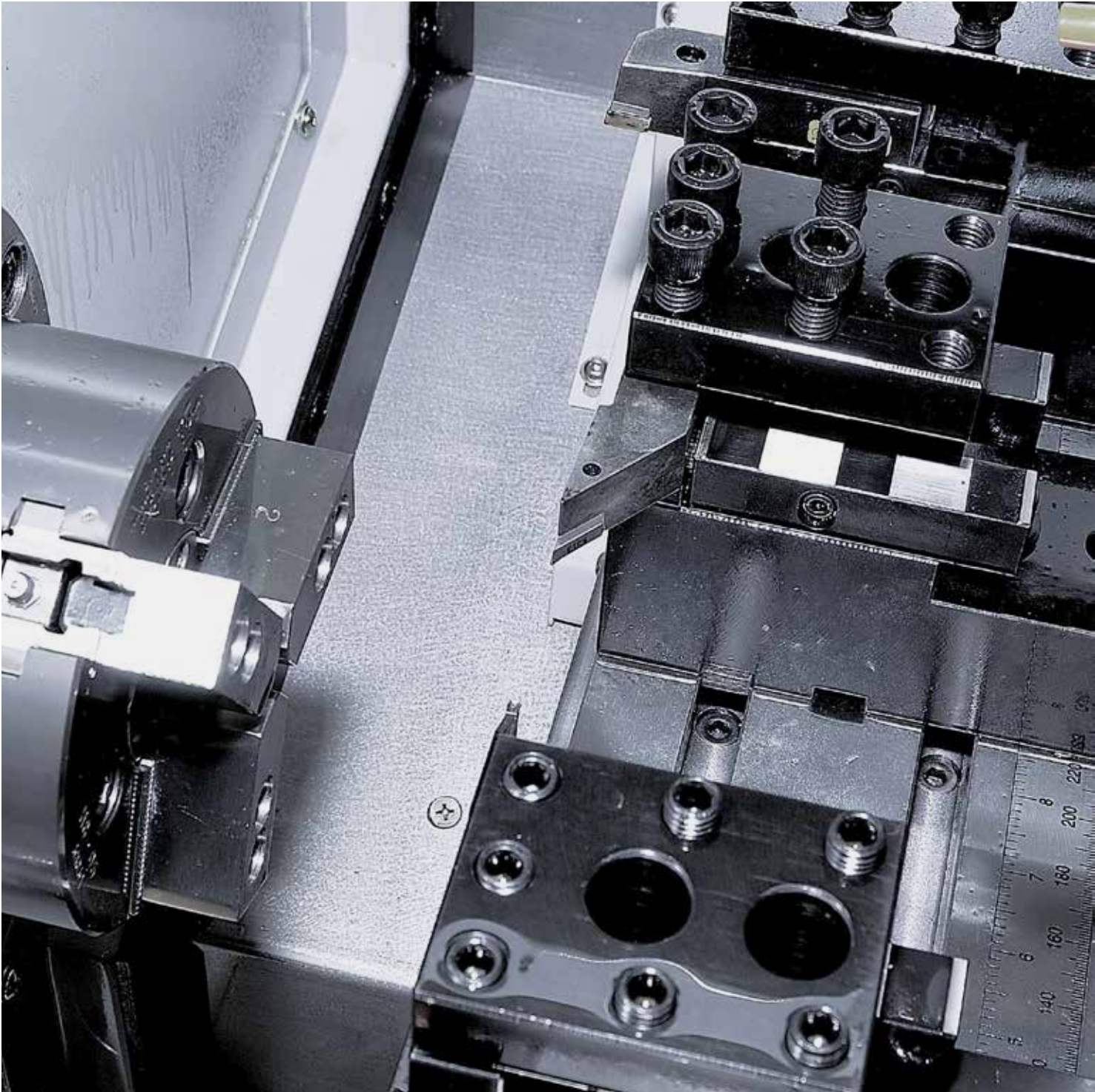
### FANUC



**n3**  
KIT Series

# Gang Type Block Tool

High Precision Mechanism  
Gang Type CNC Turning Center







**04**  
KIT Series

# HYUNDAI-iTROL

The Powerful CNC platform for Machine Tools



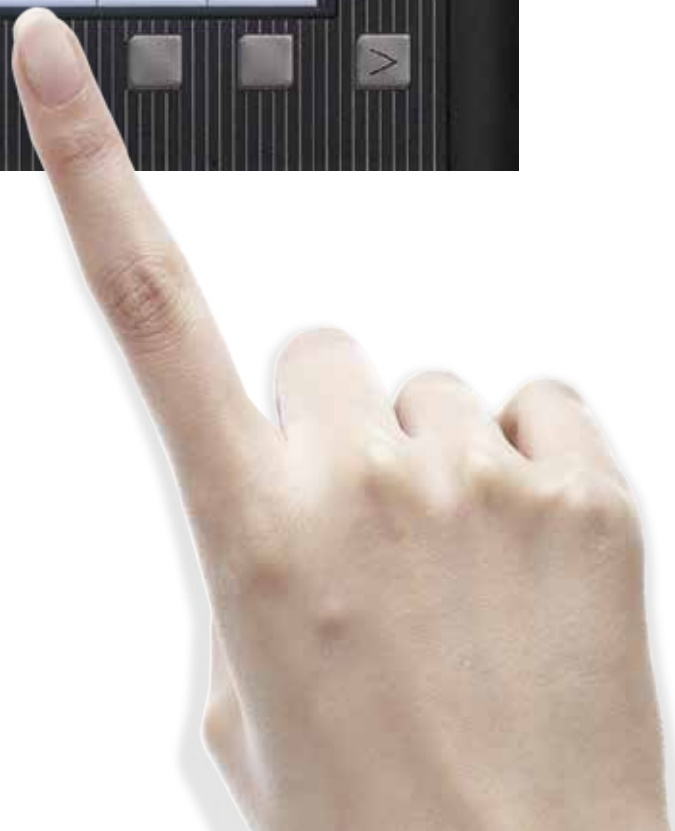
## HYUNDAI - iTROL

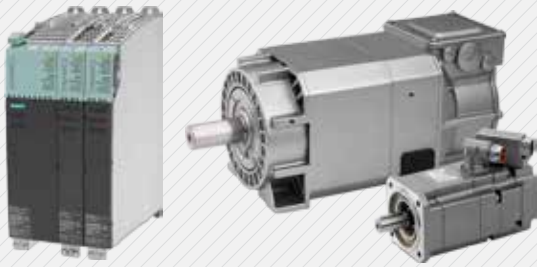
### HYUNDAI Intelligent Control

#### 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.





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

### iTROL Convenient Function

#### Smart System operation preparation

When power is on, HYUNDAI-iTROL gives the worker instructions to do warm-up. HYUNDAI-iTROL also informs the worker of machine problems beforehand by showing current machine status.



#### Quick & Easy Machining Support

The three essential operations for machining are program check, tool measurement and coordinates system setup. HYUNDAI-iTROL provides three operations in consecutive order to prevent error and to enable quick and easy setup.



#### Tool & Spindle Monitoring

Tool and spindle monitoring can be easily done with a simple operation. This helps with tool management, spindle protection and factory automation.



### iTROL Technology

#### COMMUNICATION FUNCTION

RJ 45 Ethernet

USB 2.0

Compact Flash Card



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



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



# N4

KIT Series

## User Convenience

Various Devices for User Convenience

### Bar Feeder System

#### Bar Feeder

Bar feeder system enables automation which leads to efficiency improvement.

Long Type	3 m (118.1")
Max Bar Capacity	Ø42 mm (1.7")
Shot Type	1.5 m (59.1")
Max Bar Capacity	Ø65 mm (2.6")



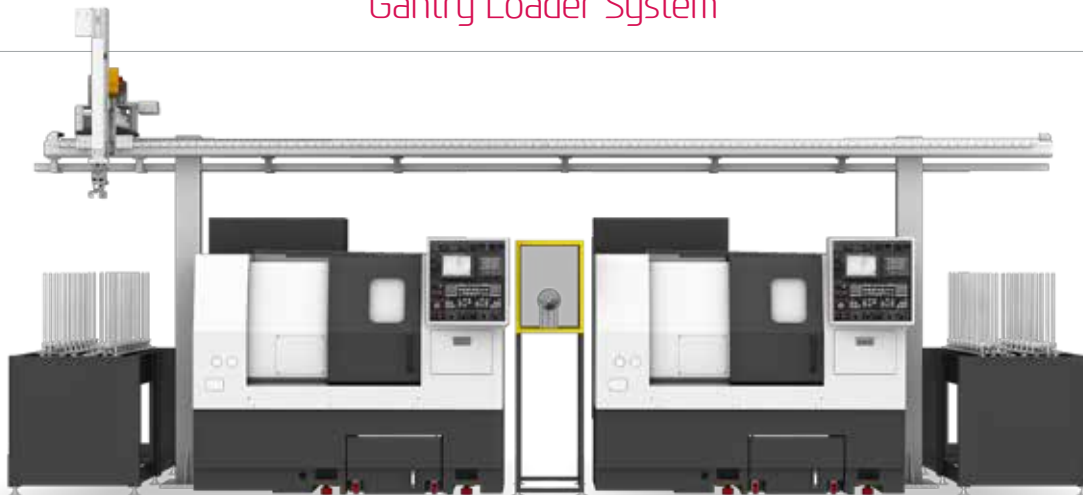
#### Parts Conveyor

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



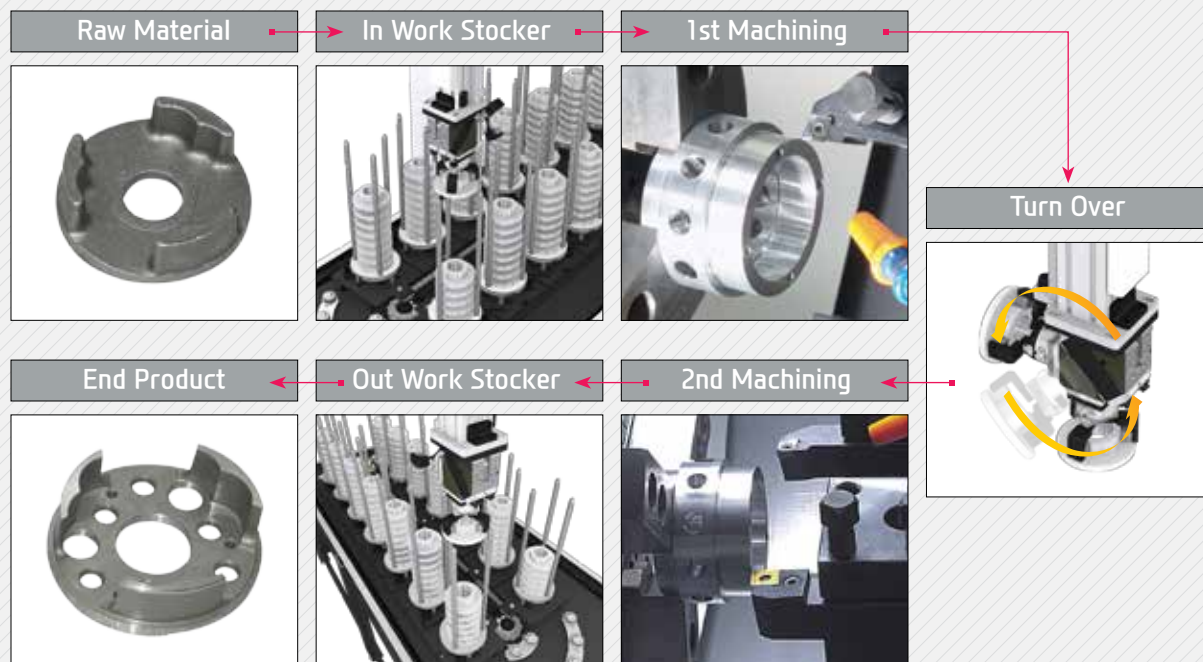
Optional

## Gantry Loader System



### Gantry Loader Machining Process

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



# SPECIFICATIONS

## Standard & Optional

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

Spindle		KIT250
Main Spindle	5"	●
Hollow Chuck 3 Jaw	6"	○
Main Spindle	5"	☆
Solid Chuck 3 Jaw	6"	☆
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
Chuck Open/Close Confirmation Device		○ (CE: ●)
2 Steps Hyd. Pressure Device		☆
2 Steps Chuck Foot Switch		☆
Spindle Inside Stopper		☆
5° Index		○
Cs-Axis (0.001°)		☆
Block Tool		
Tool Holder		●
Boring Sleeve		●
Drill Socket		●
U-Drill Holder		☆
U-Drill Holder Sleeve		☆
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	0.4Bar (5.8 psi) 6Bar (87 psi)	● ○
Power Coolant System (For Automation)		☆
Bed Coolant		○
Coolant Chiller		☆
Chip Disposal		
Coolant Tank	115 ℓ (30.4 gal)	●
Chip Conveyor (Hinge/ Scraper/Screw)	Front (Right) Right (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	☆
Safety Device		
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		○ (CE: ●)
Electric Device		
Call Light	1Color : ■	○
Call Light	2Color : ■ ■	○
Call Light	3Color : ■ ■ ■	○
Call Light & Buzzer	3Color : ■ ■ ■ B	○

Electric Device		KIT250
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	20 kVA	○
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		○
MLQ (Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door		○
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		○
Parts Conveyor		☆
Semi Automation System (Upper)	Only for Bearing Parts	☆
Semi Automation System (Front)	General Turning	☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 15 ℓ (4gal)	●
S/W		
Machine Guidance (HW-MCG )		☆
Energy Saving System (HW-ESS)		●
Tool Monitoring (HW-TM)		○
DNC software (HW-eDNC)		○
Monitoring of the state of equipment (HW-MMS)		☆
Conversational Program (HW-DPRO)		☆
ETC		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM		☆

# SPECIFICATIONS

## Standard & Optional

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

Spindle		KIT450
Main Spindle Hollow Chuck 3 Jaw	6"	●
	8"	○
	10"	-
Main Spindle Solid Chuck 3 Jaw	6"	○
	8"	☆
	10"	-
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
2 Steps Hyd. Pressure Device		○
Spindle Inside Stopper		☆
5° Index		○
C5-Axis (0.001°)		○
<b>Block Tool</b>		
Tool Holder		●
Boring Sleeve		●
Drill Socket		●
U-Drill Holder		○
U-Drill Holder Sleeve		○
Ø32 (Ø1.3") Boring Holder		●
Rotating Tool Head (X,Z Axis)		☆
<b>Tail Stock &amp; Steady Rest</b>		
Manual Tail Stock		-
<b>Coolant &amp; Air Blow</b>		
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	0.4Bar (5.8 psi)	●
	6Bar (87 psi)	○
Power Coolant System (For Automation)		☆
Coolant Chiller		☆
<b>Chip Disposal</b>		
Coolant Tank	100 ℓ (26.4gal)	●
	130 ℓ (34.3gal)	-
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	☆
<b>Safety Device</b>		
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		○(CE: ●)
<b>Electric Device</b>		
Call Light	1Color : ■	○
Call Light	2Color : ■ ■	○
Call Light	3Color : ■ ■ ■	○
Call Light & Buzzer	3Color : ■ ■ ■ B	○

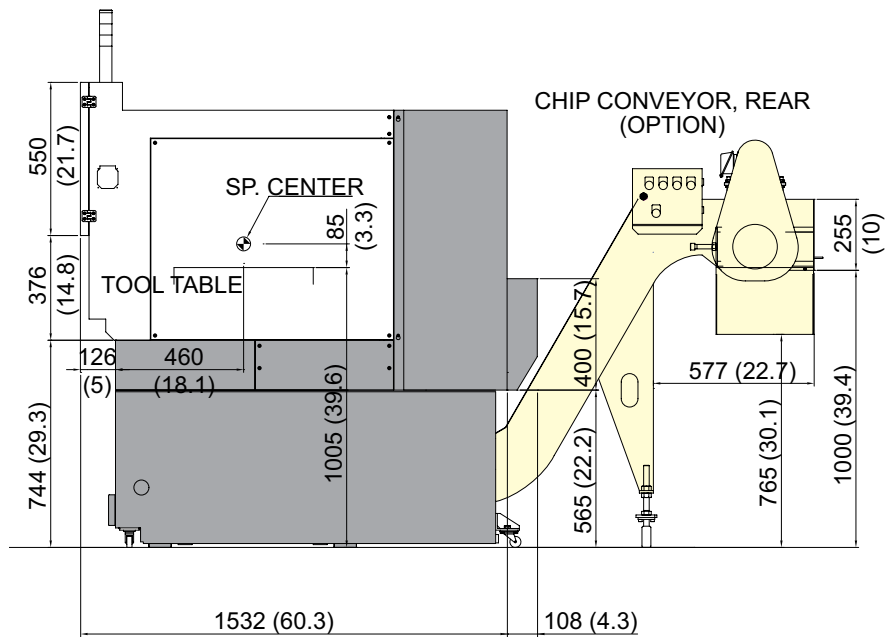
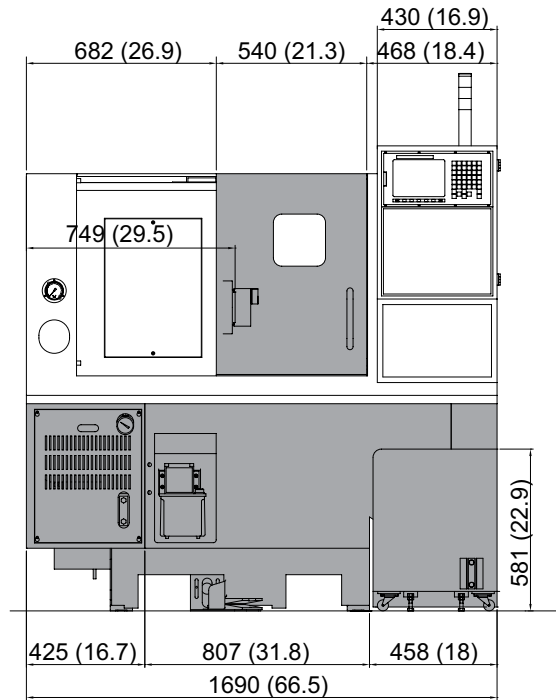
Electric Device		KIT450
Electric Cabinet Light		○
Controller	FANUC	●
	HYUNDAI-ITROL	○
Remote MPG		-
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	Digital	○
Electric Circuit Breaker		○
AVR (Auto Voltage Regulator)		☆
Transformer	20kVA	○
Auto Power Off		○
<b>Measurement</b>		
Q-Setter		-
Work Close Confirmation Device (Only for Special Chuck)	TACO	○
	SMC	○
Linear Scale	X/Z Axis	-
Coolant Level Sensor (Only for Chip Conveyor)		☆
<b>Environment</b>		
Air Conditioner		○
Oil Mist Collector		○
Oil Skimmer (Only for Chip Conveyor)		●
MQL (Minimal Quantity Lubrication)		☆
<b>Fixture &amp; Automation</b>		
Auto Door		○
Auto Shutter (Only for Automatic System)		☆
Sub Operation Pannel		☆
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)		☆
<b>Hyd. Device</b>		
Standard Hyd. Cylinder	Hollow	●
	35bar (507.6 psi)/ 12 ℓ (3.2 gal)	-
Standard Hyd. Unit	35bar (507.6 psi)/ 15 ℓ (4 gal)	●
<b>S/W</b>		
Machine Guidance (HW-MCG)		☆
Energy Saving System (HW-ESS)		●
Tool Monitoring (HW-TM)		○
DNC software (HW-eDNC)		○
Monitoring of the state of equipment (HW-MMS)		☆
Conversational Program (HW-DPRO)		☆
<b>ETC</b>		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM Software		☆

# SPECIFICATIONS

## External Dimensions

unit : mm(in)

KIT250



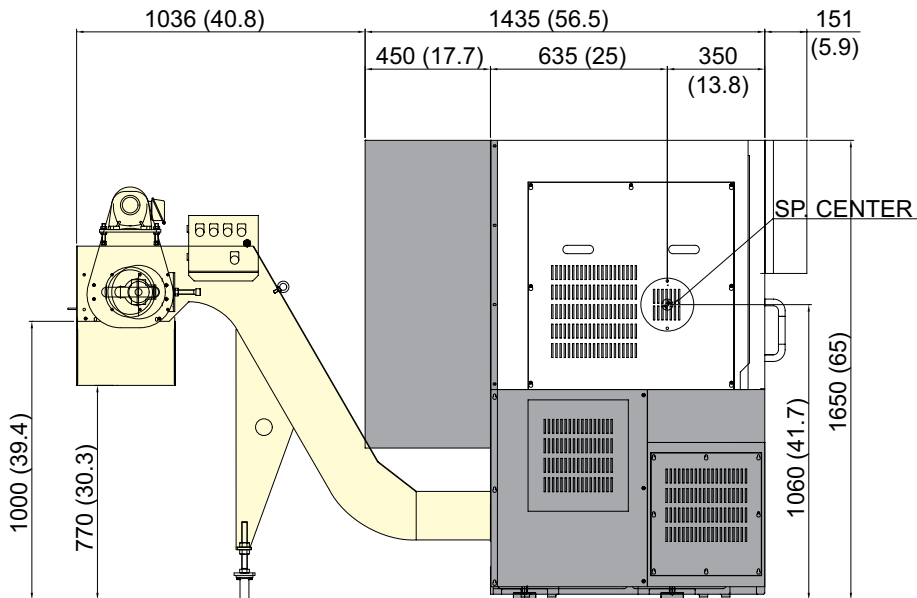
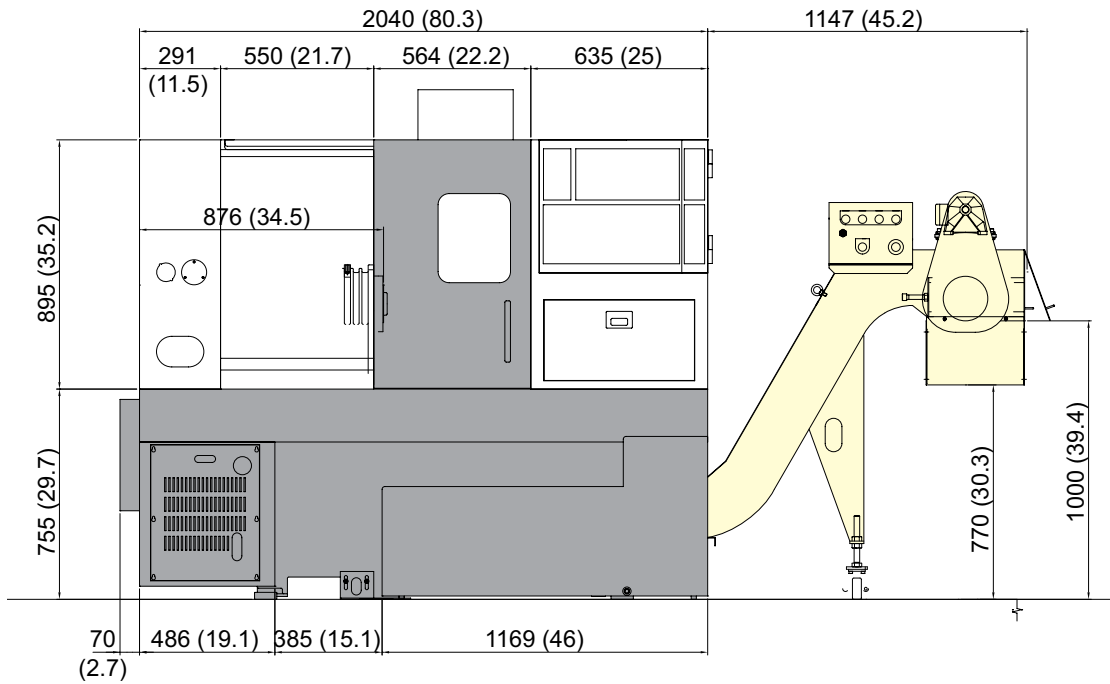


# SPECIFICATIONS

## External Dimensions

unit : mm(in)

### KIT450

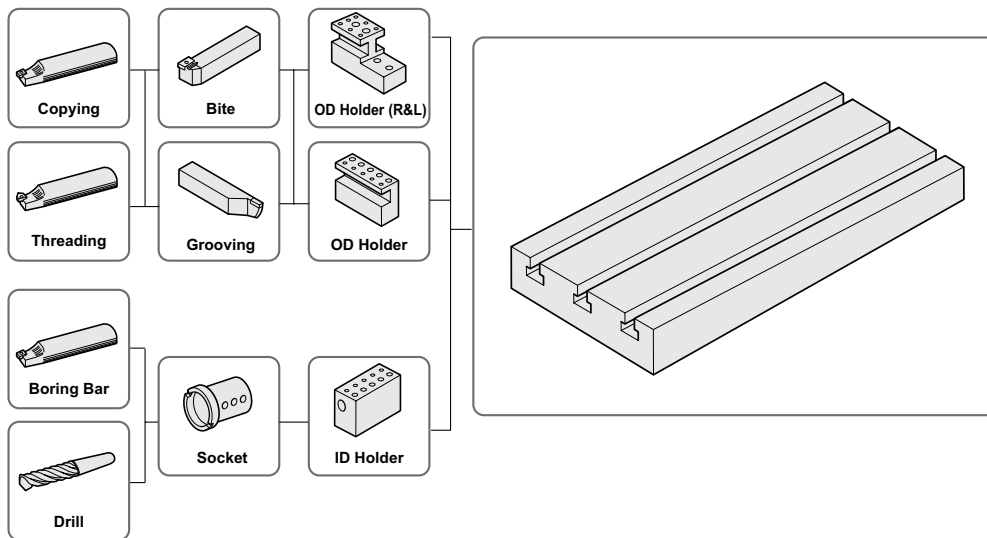


# SPECIFICATIONS

## Tooling Travel Range

unit : mm(in)

### KIT250



## Tooling Parts Detail

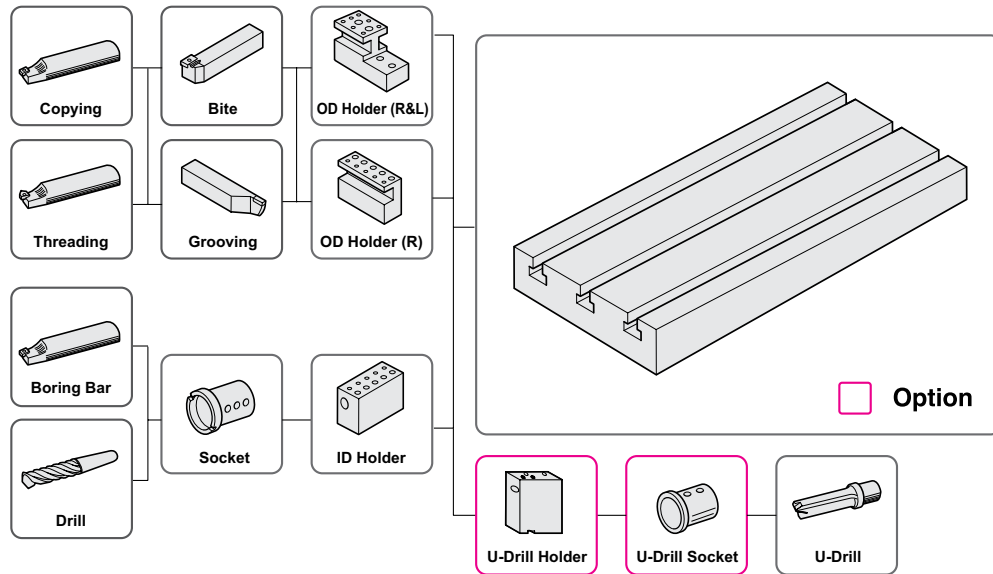
ITEM			KIT250	
			mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left : $\phi 20$ ( $\phi 3/4"$ )	1	1
		Right/Left : $\phi 25$ ( $\phi 1"$ )	-	-
		Double : $\phi 20$ ( $\phi 3/4"$ )	1	1
		Double OD : $\phi 25$ ( $\phi 1"$ )	-	-
Boring Holder	I.D Holder	Single : $\phi 32$ ( $\phi 1 1/4"$ )	1	1
	U-Drill Holder	$\phi 20$ ( $\phi 3/4"$ )	-	-
		$\phi 25$ ( $\phi 1"$ )	-	-
Socket	Boring	$\phi 8$ ( $\phi 5/16"$ )	1	1
		$\phi 10$ ( $\phi 3/8"$ )	1	1
		$\phi 12$ ( $\phi 1/2"$ )	1	1
	Drill	MT 1 $\times$ MT 2	1	1
		MT 2	1	1
	ER Collet		-	-

# SPECIFICATIONS

## Tooling Travel Range

unit : mm(in)

### KIT450



## Tooling Parts Detail

ITEM		KIT450		
		mm Unit	inch Unit	
Turning Holder	O.D Holder	Right/Left : $\varnothing 20$ ( $\varnothing 3/4"$ )	2	2
		Double : $\varnothing 20$ ( $\varnothing 3/4"$ )	1	1
		Right/Left : $\varnothing 25$ ( $\varnothing 1"$ )	Opt	Opt
		Double OD : $\varnothing 25$ ( $\varnothing 1"$ )	Opt	Opt
Boring Holder	I.D Holder	Single : $\varnothing 32$ ( $\varnothing 1 1/4"$ )	2	2
	U-Drill Holder	Tool Holder	Opt	-
		Cap	Opt	-
Socket	Boring	$\varnothing 8$ ( $\varnothing 5/16"$ )	Opt	-
		$\varnothing 10$ ( $\varnothing 3/8"$ )	1	1
		$\varnothing 12$ ( $\varnothing 1/2"$ )	1	1
		$\varnothing 16$ ( $\varnothing 5/8"$ )	1	1
		$\varnothing 20$ ( $\varnothing 3/4"$ )	Opt	Opt
		$\varnothing 25$ ( $\varnothing 1"$ )	Opt	Opt
	Drill	MT 1 $\times$ MT 2	1	1
		MT 2	Opt	Opt
		$\varnothing 20$ ( $3/4"$ )	Opt	-
		$\varnothing 25$ ( $1"$ )	Opt	-

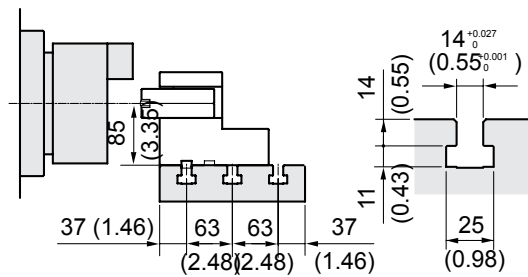
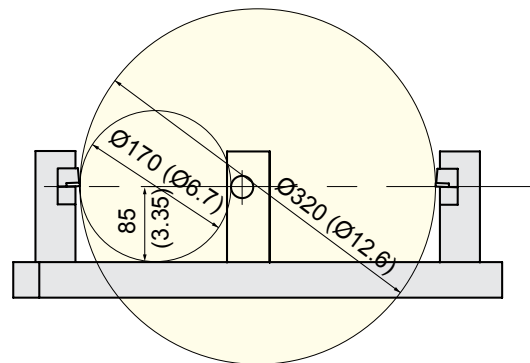
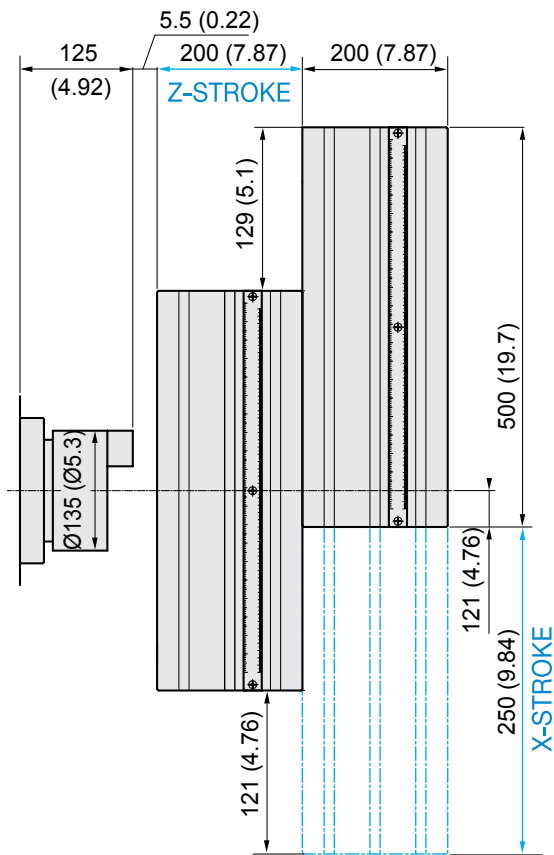
Specifications are subject to change without notice for improvement.

# SPECIFICATIONS

The Stroke of Table

unit : mm(in)

KIT250

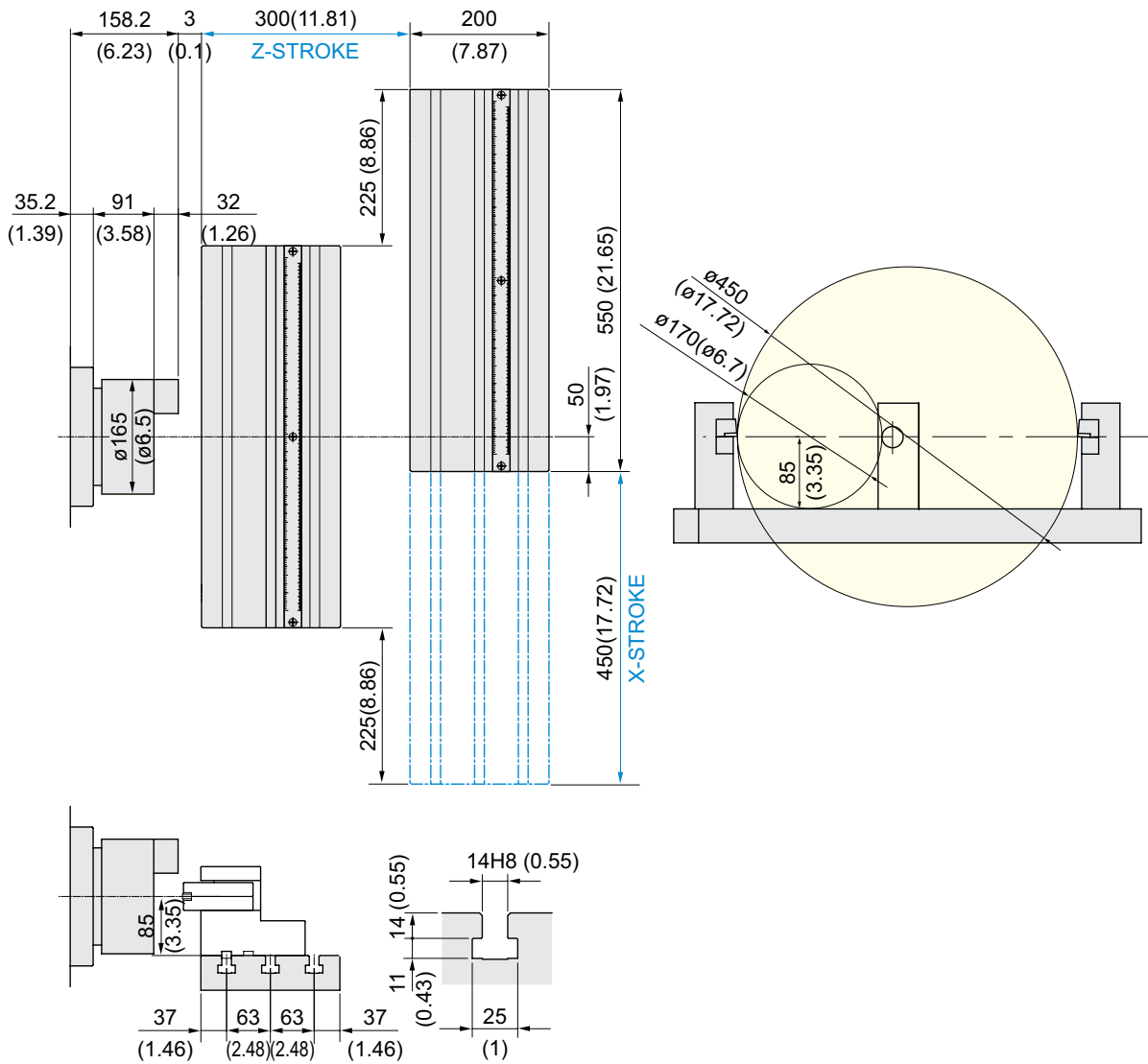


# SPECIFICATIONS

## The Stroke of Table

unit : mm(in)

### KIT450



# SPECIFICATIONS

## Specifications

[ ] : Option

ITEM			KIT250	
CAPACITY	Swing Over the Bed	mm(in)	Ø320 (12.6")	
	Max. Turning Dia.	mm(in)	Ø135 (5.3")	
	Max. Turning Length	mm(in)	150 (5.9")	
	Bar Capacity	mm(in)	Ø32 (1.3")	
SPINDLE	Chuck Size	mm(in)	Ø135 (5.3")	
	Spindle Bore	mm(in)	Ø42 (1.7")	
	Spindle Speed (rpm)	r/min	7,000	
	Motor (Max/Cont.)	kW(HP)	5.5/3.7 (7.4/5)	
	Torque (Max/Cont.)	N·m(lbf·ft)	48/32.4 (35.4/23.9)	
	Spindle Type	-	BELT	
	Spindle Nose	-	FLAT Ø110 (4.3")	
FEED	Travel (X/Z)	mm(in)	250/200 (9.8"/7.9")	
	Rapid Traverse Rate (X/Z)	m/min(ipm)	24/30 (944.8/1,181)	
	Slide Type	-	LM GUIDE	
BLOCK TOOL	No. of Tool	EA	4	
	Tool Size	OD	mm(in)	□ 20×20 (□ 0.8"×□ 0.8")
		ID	mm(in)	Ø25 (1")
TANK CAPACITY	Coolant Tank	ℓ (gal)	115 (30.4)	
	Lubricating Tank	ℓ (gal)	1.8 (0.5)	
POWER SUPPLY	Electric Power Supply	kVA	8	
	Thickness of Power Cable	Sq	OVER 16	
	Voltage	V/Hz	220/60 (200/50*)	
MACHINE	Floor Space (L×W)	mm(in)	1,690×1,640 (66.5"×64.6")	
	Height	mm(in)	1,670 (65.7")	
	Weight	kg(lb)	1,900 (4,189)	
NC	Controller	-	HYUNDAI WIA FANUC i Series	

\*) 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.

# SPECIFICATIONS

## Specifications

[ ] : Option

ITEM			KIT450
CAPACITY	Swing Over the Bed	mm(in)	Ø530 (20.9")
	Max. Turning Dia.	mm(in)	Ø170 (6.7")
	Max. Turning Length	mm(in)	300 (11.8")
	Bar Capacity	mm(in)	Ø45 (1.8")
SPINDLE	Chuck Size	mm(in)	Ø169 (6.7")
	Spindle Bore	mm(in)	Ø53 (2.1")
	Spindle Speed (rpm)	r/min	6,000 [6,000]
	Motor (Max/Cont.)	kW(HP)	15/11 (20.1/14.7) [10.8/9 (14.5/12)]
	Torque (Max/Cont.)	N·m(lbf·ft)	95.5/70 (70.4/51.6) [75.6/68.7 (55.7/50.6)]
	Spindle Type	-	BELT
	Spindle Nose	-	A2-5
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 Tool	EA	6
	Tool Size	OD	□ 20×20 (□ 0.8"×□ 0.8")
		ID	Ø32 (1.3")
TANK CAPACITY	Coolant Tank	ℓ (gal)	100 (26.4)
	Lubricating Tank	ℓ (gal)	1.8 (0.5)
POWER SUPPLY	Electric Power Supply	kVA	17
	Thickness of Power Cable	Sq	OVER 16
	Voltage	V/Hz	220/60 (200/50*)
MACHINE	Floor Space (L×W)	mm(in)	2,110×1,586 (83.1"×62.4")
	Height	mm(in)	1,830 (72")
	Weight	kg(lb)	2,700 (5,952)
PC	Controller	-	HYUNDAI WIA FANUC i Series [HYUNDAI-iTROL]

\*) 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-iTROL (KIT450)

Control & Composition	
Number of axis/Spindles	2 axes (X, Z) / 3 axes (X, Z, C)
Number of axis/Spindles, max.	8 axes (Axis + Spindle)
Color display	TFT 10.4" Color (800 x 600)
Keyboard	QWERTY Full Keyboard
Part program storage	1MB, 3MB, 5MB
Addition of part program on CF card	
Transfer Function	
Feedrate override	0% ~ 200%
Transfer value input range	± 999999999
Unlimited rotation of rotation axis	
Acc./Dec. with jerk limitation	
Measuring systems 1 and 2, selectable	
Travel to fixed stop	
Auto servo drive tuning	
Spindle Function	
Spindle override	0% ~ 150%
Spindle speed, max. programmable value range	1000000 ~ 0.0001
Automatic gear stage selection	
Spindle orientation	
Spindle speed limitation	
Rigid tapping	
Spindle control with PLC	
Interpolation	
Linear interpolation axis, max.	4 axis
Circle via center point and end point	
Circle via interpolation point	
Helical interpolation	
Non-uniform rational B splines	
Continuous - path mode with programmable rounding clearance	
Program Function	
Subroutine levels, max.	7
Interrupt routines, max.	2
Number of levels for skip blocks	2
Polar Coordinates	
Dimensions inch/metric, changeover manually or via program	
Dynamic preprocessing memory FIFO	
Look ahead	1
Absolute/Incremental command	G90 / G91
Scaling/Rotation	
Read/Write system variables	
Block search	
Edit background	
Processing program number, max.	750
Using of CF Card, USB	
Basic coordinate number, max.	1
Work coordinate number, max.	100
Basic/Work coordinate programming change	
Scratching function	
Global and Local user data (GUD/LUD)	
Global program user data	
Conversational Cycle Program	
Tool Function	
Tool radius compensations	
Tool offset selection via T/D numbers	
Tools / Cutting edges in tool list	128 / 256, 256 / 512
Monitoring Function	
Working area limit	
Software and Hardware limit	
Zero-speed/Clamping monitoring	
2D/3D protection zones	
Contour monitoring	

Compensation	
Backlash compensation	
Leadscrew error compensation	
Measuring system error compensation	
Feedforward control (Speed control)	
Safety Function	
Safe torque off (STO)	
Safe brake control (SBC)	
Safe stop 1 (SS1)	
Diagnostic Function	
Alarm/Message . Alarm log	
PLC status/LAD online display	
PLC remote connection (Ethernet)	
Automation Support Function	
Actual velocity display	
Tool life management	As time / As amount
Work counter/Cycle time	Embedded
2D simulation	
Manual Operation	
Manual handle/Log transfer	
Manual measurement of workpiece / tool offset	
Automatic tool/Workpiece measurement	
Automatic/Program reference approach	
Automatic Operation	
Program run as using CF card/USB	
Program control/modification	
Block search	
Reposition	
Preset (Set actual value)	
Data Transmission	
Ethernet network	
USB memory stick & CF card	
Convenience Function	
Processing setting	Coordinate system setting, Auto tool length measurement
Processing support	Tool Monitoring, Spindle overload monitoring
Maintenance	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



# CONTROLLER

## HYUNDAI WIA FANUC i Series

[ ] : Option

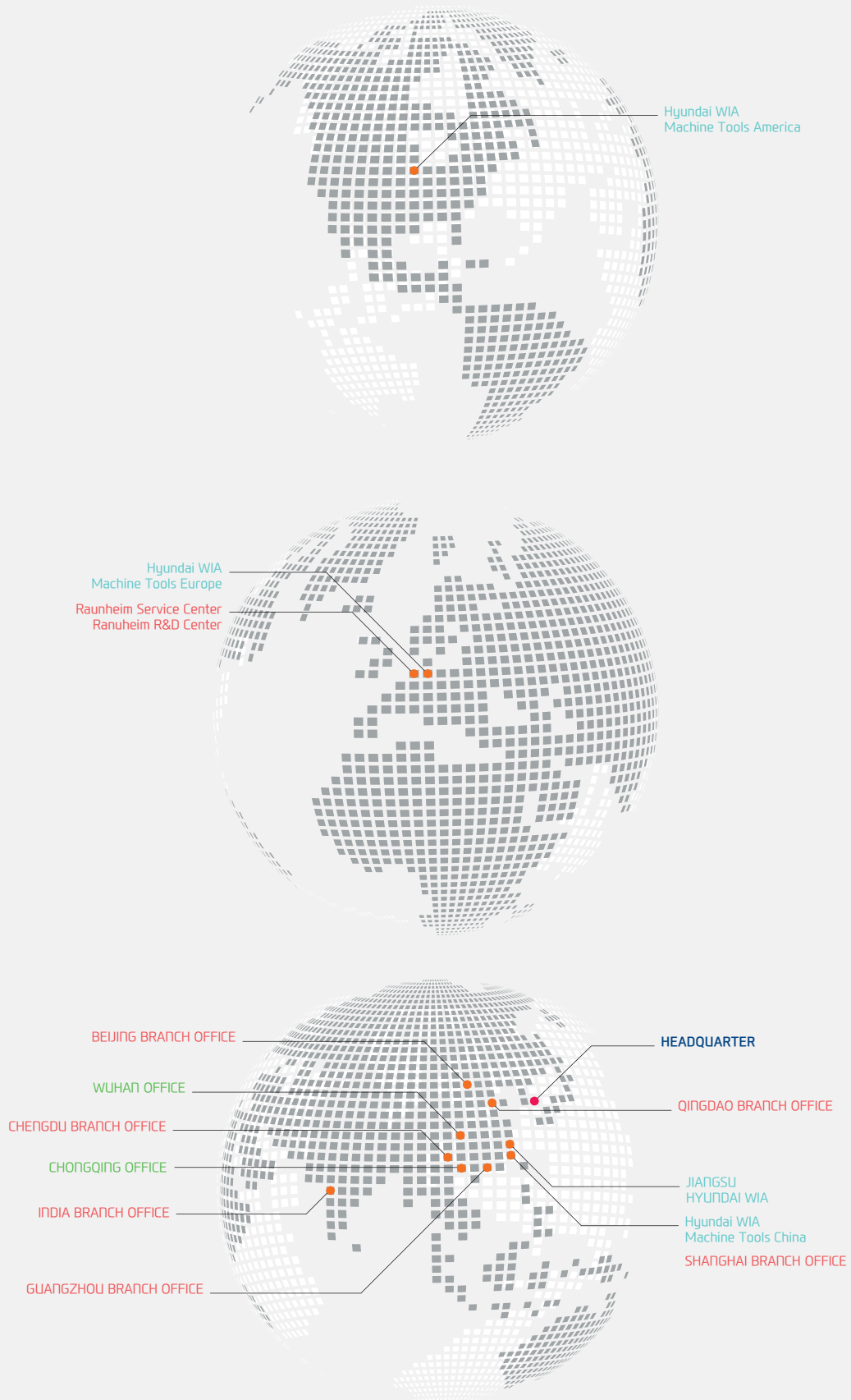
Controlled axis / Display / Accuracy Compensation	
Control axes	2 axes (X, Z) / 3 axes (X, Z, C / X, Z, B) / 4 axes (X, Z, Y, C) 5 axes (X, Z, B, C, A) / 6 axes (X, Z, Y, B, C, A)
Simultaneously controlled axes	2 axes [Max. 4 axes]
Designation of spindle axes	3 axes (1 path)
Least setting Unit	X, Z, 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	8.4 inch / 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	F1%, F5%, 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
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
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	
Optional block skip	9 ea
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Tool offset pairs	200 pairs
Part program storage size	5120m (2MB)
Polygon turning (2 Spindles)	Mill, MS, Y, SY, LF-Mill, TTMS, TTSY
Helical interpolation	
Manual Guide i	Conversational auto program
Dynamic graphic display	

Figures in inch are converted from metric values.

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

# GLOBAL NETWORK



# 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 8209 Fax : +82 55 210 9804

## OVERSEAS OFFICES

### HYUNDAI WIA Machine Tools America

265, Spring Lake Drive, Itasca, IL, 60143  
TEL : +1 630 625 5600  
FAX : +1 630 625 4733

### Jiangsu HYUNDAI WIA

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

### 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

### HYUNDAI WIA Machine Tools Europe

Kaiserleipromenade 5, 63067 Offenbach,  
Germany  
TEL : +49 69271 472 701  
FAX : +49 69271 472 719

### Hyundai WIA Machine Tools China Shanghai Branch Office

1-3F, Bldg6, No.1535 Hongmei Road,  
Xuhui District, Shanghai, China  
TEL : +86 021 6427 9885  
FAX : +86 021 6427 9890

### Qingdao Branch Office

Room 1207, Cai Fu Building, 182-6 Haier  
Middle Road, Qingdao, China  
TEL : +86 532 8667 9334  
FAX : +86 532 8667 9338

### Raunheim Service Center Raunheim R&D Center

Frankfurter. 63, 65479 Raunheim,  
Germany  
TEL : +49 6142 9256 111  
FAX : +49 6142 9256 100

### 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

### Wuhan Office

306-2, A Tower, Jiayu Gpmggian, No12  
Chuangye Road, Economic Development  
Zone, Wuhan, Hubei, China  
TEL : +86 027 5952 3256  
FAX : +86 027 5952 3256

### India Branch Office

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

### Guangzhou Branch Office

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

### Chongqing Office

Room 951, #3, Jinrongcheng T3, Jiangbei,  
Chongqing, China  
TEL : +86 23 6701 2970



KIT450 Movie



<http://machine.hyundai-wia.com>

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**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 31 593 8173

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**HYUNDAI WIA Machine Tools America**

265 Spring Lake Drive, Itasca, IL, 60143 **Tel** +1 (630) 625 5600 **Fax** +1 (630) 625 4733

**HYUNDAI WIA Machine Tools Europe**

Kaiserleipromenade 5, D-63067 Offenbach, Germany **Tel** +49 69271 472 701 **Fax** +49 69271 472 719

**India Branch Office**

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