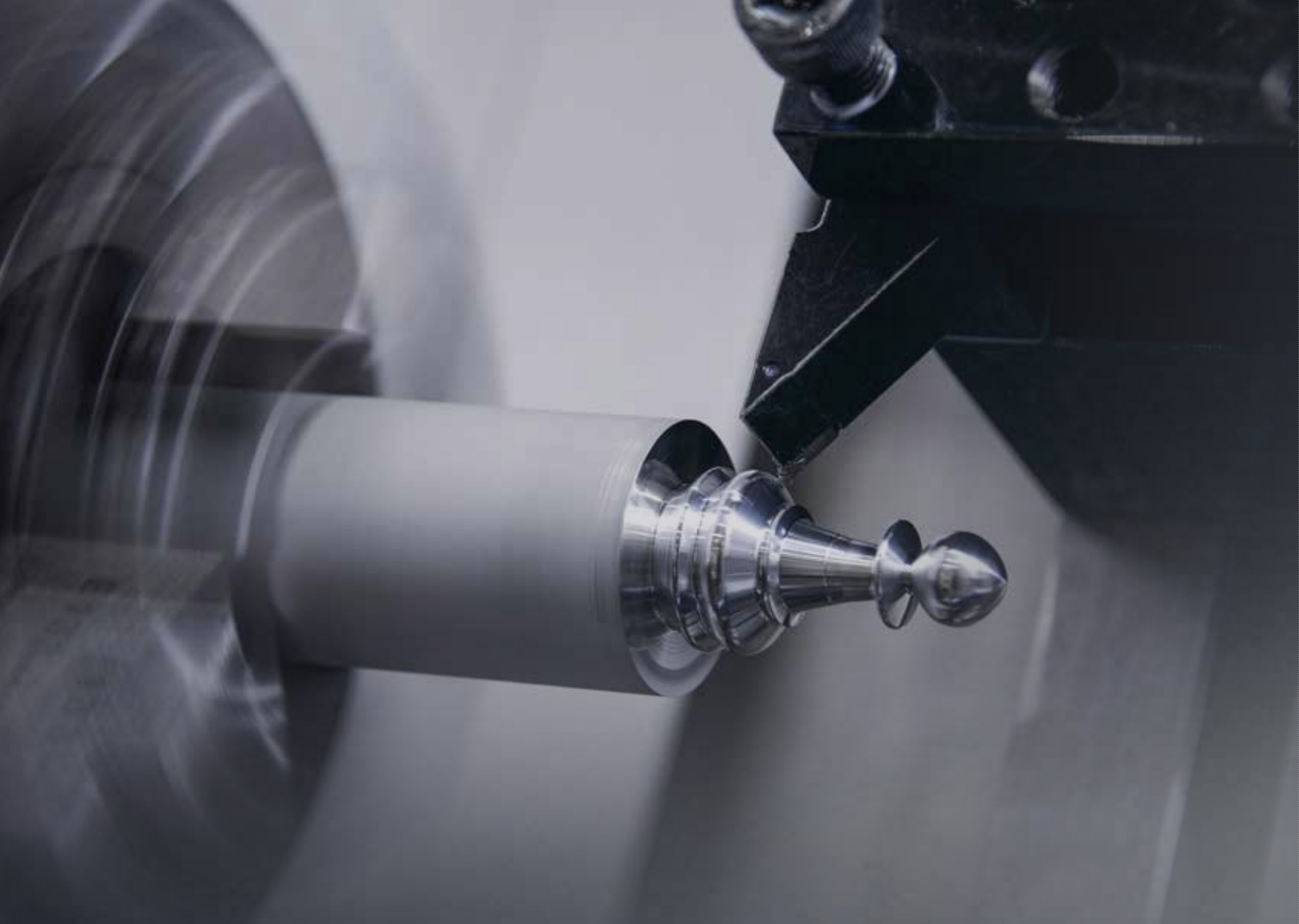
HYUNDAI
MOTOR GROUP

KIT Series

KIT250 | KIT4500 | KIT60G

HYUNDAI WIA Gang Type CNC Turning Center

HYUNDAI WIA | CREATING VALUE IN SEAMLESS MOBILITY



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 which maximizes productivity through high speed and high performance mechanisms.

		KIT250	KIT4500	KIT60G
Max. Swing	mm(in)	Ø160 (Ø6.3″)	Ø530 (Ø20.9″)	Ø780 (Ø30.7″)
Max. Turning Length	mm(in)	150 (5.9″)	300 (11.8″)	530 (20.9″)
Chuck Size	inch	5″	6″ [Big Bore : 8″]	10″
Bar Capacity	mm(in)	Ø32 (Ø1.3″)	Ø51 (Ø2″) [Big Bore : Ø65 (Ø2.6″)]	Ø65 (Ø2.6″)
Sp. Speed	r/min	7,000	6,000 [6,000] [Electric Chuck : 6,000] [Big Bore : 4,000] [Big Bore : 4,000]	4,000
Sp. Motor (Max./Cont.)	kW(HP)	5.5/3.7 (7.4/5)	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)]	15/11 (20/15)
Travel (X/Z)	mm(in)	250/200	450/300 (17.7″/11.8″)	450/550
No. of Tools	EA	Block Tool : 4	Block Tool : 6	Block Tool : 6 [Grinding Sp.]

[ ] : Option ● SIEMENS

KIT Series

Economical Gang Type CNC Turning center

- 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 (KIT4500)
- 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

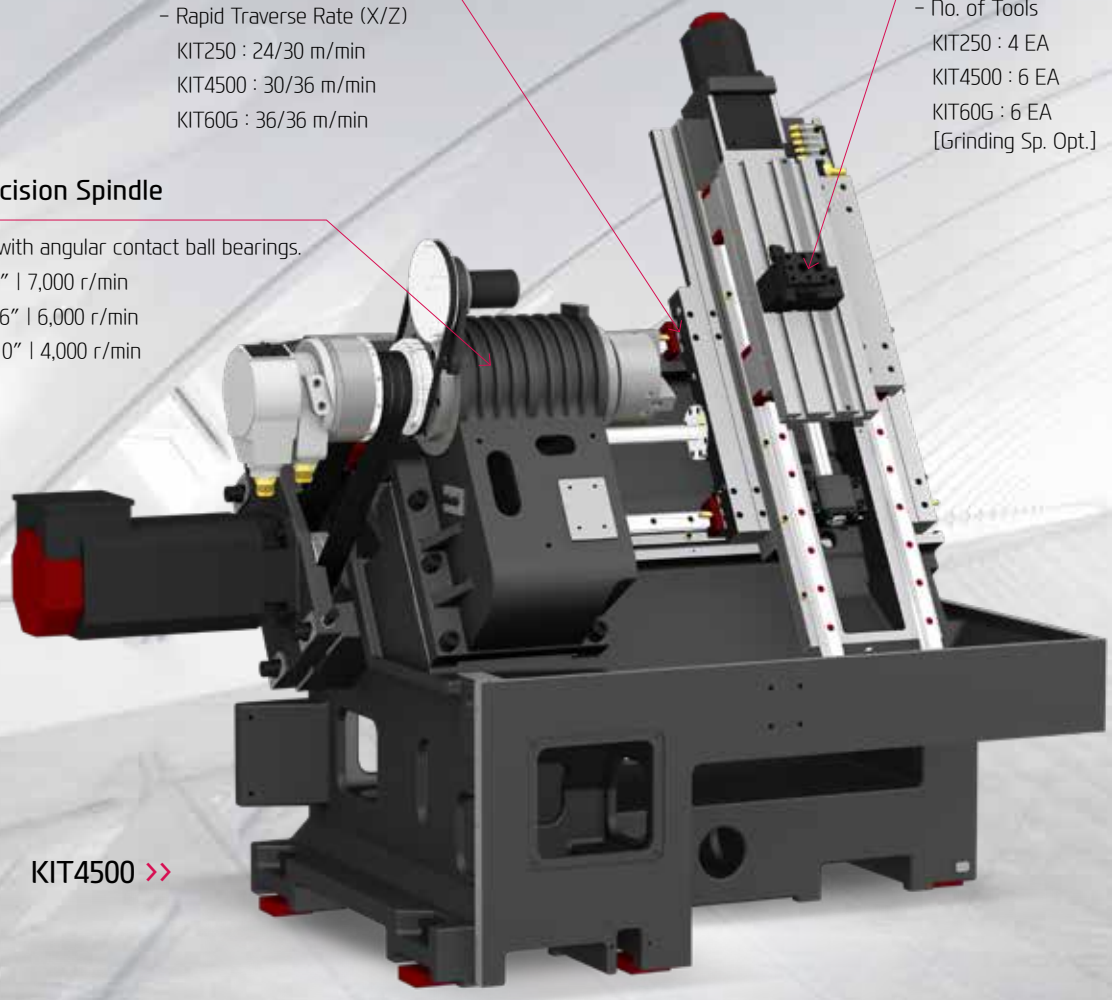
- Rapid Traverse Rate (X/Z)
  KIT250 : 24/30 m/min
  KIT4500 : 30/36 m/min
  KIT60G : 36/36 m/min

Block Tool

- No. of Tools
  KIT250 : 4 EA
  KIT4500 : 6 EA
  KIT60G : 6 EA
  [Grinding Sp. Opt.]

High Precision Spindle

- designed with angular contact ball bearings.
  KIT250 : 5" | 7,000 r/min
  KIT4500 : 6" | 6,000 r/min
  KIT60G : 10" | 4,000 r/min



KIT4500 >>

60° Slant Bed Structure (KIT4500)

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.

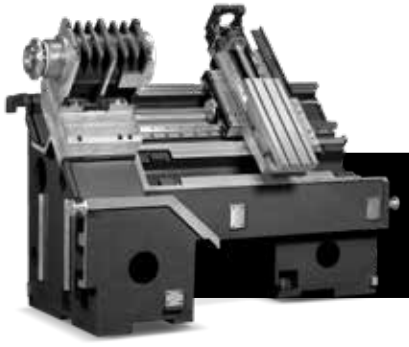
40% reduction of combined thermal displacement

REDUCTION OF NON-CUTTING TIME BY FAST RAPID SPEED

ALL-IN-ONE TYPE OF BED

KIT250 – Flat Type Bed

The bed flushing unit is installed as stardard to effectively resolve chip disposal problems. The gang tool is attached to a flat type bed to ensure high precision during machining process.



KIT60G – 45° Slant Bed Structure

The KIT60G features a 45° slant bed design which is developed through finite element analysis (FEA) to absorb vibration and minimize thermal growth.

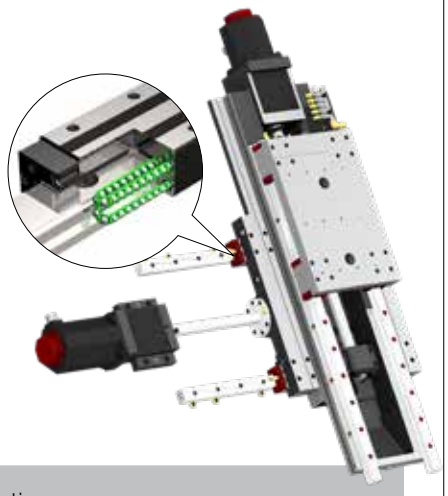
GUIDEWAY

LM Guideway

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

Ball Screw (KIT4500)

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.

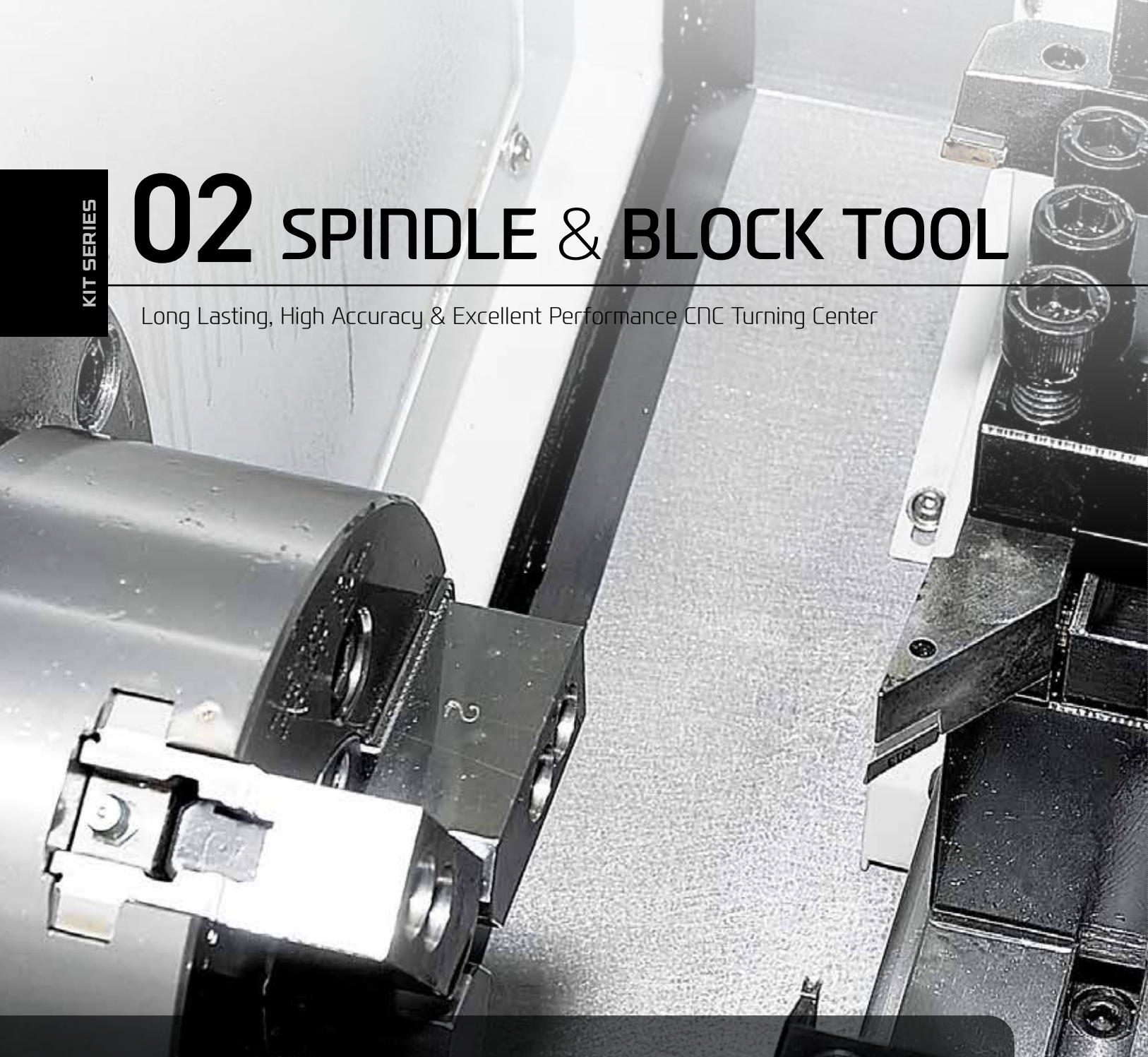


Thermal displacement improvement on the X axis : 50% reduction

Model	KIT250	KIT4500	KIT60G
Rapid Traverse Rate (X/Z)	24/30 m/min	30/36 m/min	36/36 m/min
Travel (X/Z)	250/200 mm (9.8″/7.9″)	450/300 mm (17.7″/11.8″)	450/550 mm (17.7″/21.7″)

02 SPINDLE & BLOCK TOOL

Long Lasting, High Accuracy & Excellent Performance CNC Turning Center



Spindle Specifications

[ ] : Option

Model	Chuck Size	Spindle Speed	Motor (Max./Cont.)	Torque (Max./Cont.)
KIT250	5″	7,000 rpm	5.5/3.7 kW (7.4/5.5 HP)	48/32.4 N·m (35.4/23.9 lbf·ft)
KIT4500 (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 (Big Bore)]	15/11 kW (20/15 HP)	[191/140 N·m (140.9/103.3 lbf·ft)]
KIT4500 (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 (Big Bore)]	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)]
KIT60G	10″	4,000 rpm	15/11 kW (20/15 HP)	191/140 N·m (140.9/103.3 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.

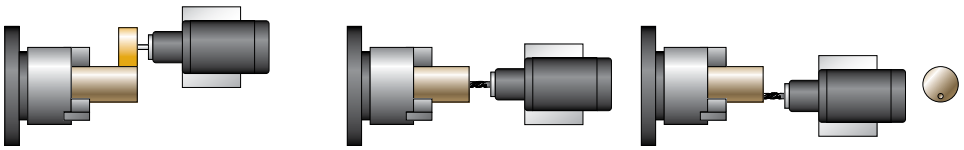
Application of 3V Belt (KIT4500)

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.

High Frequency Spindle Motor (KIT60G)

By preparing for high frequency spindle as an option, the processing area has been increased. (BT40, BT50 Opt.)

Drill/PCD Processing :As it is able to perform the drilling and PCD processing using a high frequency of spindle, the processing width has increased.



BLOCK TOOL

Gang Type Block Tool

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

Model	No. of Tool	Tool Size (O.D/I.D)	Table Size
KIT250	4 EA	□ 20/Ø20 mm (□ 0.8″/Ø0.8″)	200×550 mm (7.9″/21.7″)
KIT4500	6 EA	□ 20/Ø32 mm (□ 0.8″/Ø1.3″)	200×550 mm (7.9″/21.7″)
KIT60G	6 EA [Opt. Grinding Sp.]	□ 25/Ø32 mm (□ 1″/Ø1.3″)	200×600 mm (7.9″/23.6″)

03 USER CONVENIENCE

Various Devices for User Friendly

BAR FEEDER SYSTEM OPTION

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.

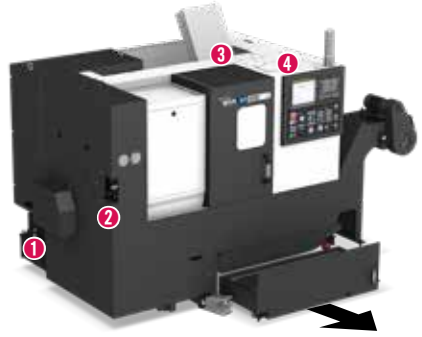
Auto Door

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 (KIT4500)

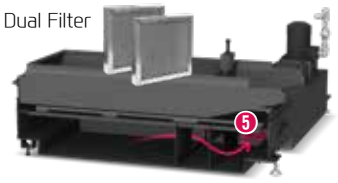


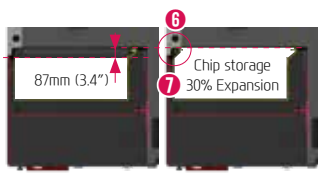
Independent separation of only the coolant tank without the separation of chip pan and chip conveyor (common for the side and back)

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 >





❶ Arrangement of hydraulic unit on the backend

❷ 2-directional (front / left side) pressure controller

❸ Top hole for the dust collector installation

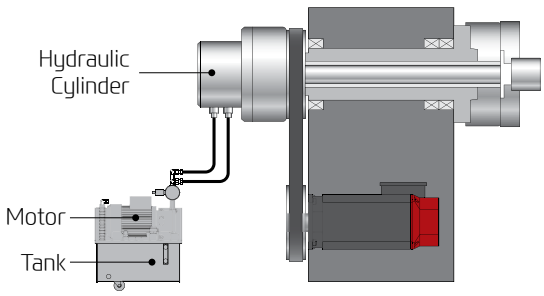
❹ Sockets for piping option such as air tool, hydraulic, etc. (3 points)

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.

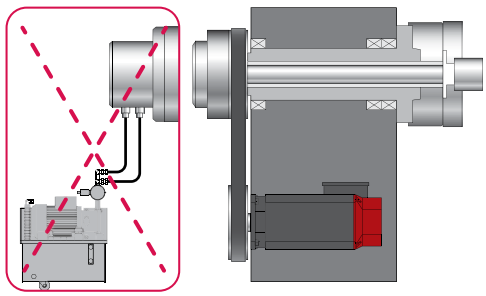
ELECTRIC CHUCK SYSTEM (KIT4500) OPTION

- 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

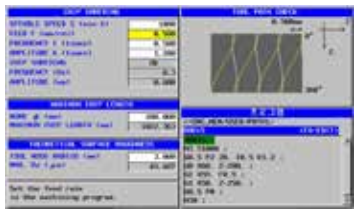
Hydraulic Chuck System



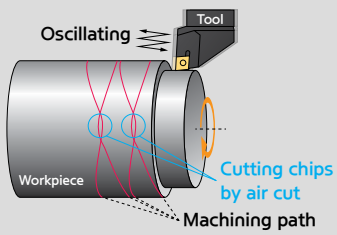
Electric Chuck System



SERVO LEARNING OSCILLIATION FUNCTION FOR CHIP BREAKING OPTION



- **Machining Method** : he tool cuts the workpiece moving in a zigzag pattern. (Oscillating) → Air cut section occurs → Long chips break
- **Advantage** : Increase tool life, Enhance surface finishing, Improve chip disposal
- **Machine** : All turning centers with FANUC controller (Option)



(Developed special screen page for servo learning oscilliation function / Even when this function is applied, the cycle time remains same.)

SPECIFICATIONS

KIT250 Standard & Optional

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

Spindle		KIT250
Main Spindle Hollow Chuck 3 Jaw	5″	●
	6″	○
Main Spindle Solid Chuck 3 Jaw	5″	☆
	6″	☆
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
2 Steps Hyd. Pressure Device		☆
Chuck Open/Close Confirmation 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		☆
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	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)	–
	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		
Dialogue Program (HW-DPRO)		–
DNC software (HW-eDNC)		○
Machine Monitoring System (HW-MMS Cloud)		☆
Smart Guide-i : FANUC		○
Smart S/W		☆

Safety Device		KIT250
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		○ (CE: ●)
Electric Device		
Call Light	1Color : ■	○
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	15kVA	○
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 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 (Only for Bearing Parts)		☆
Semi Automation System (General Turning)		☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 15 ℓ (4 gal)	●
ETC		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM Software		☆

❖ 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. / Please refer to the S/W catalog (iRiS) for details by S/W product.

SPECIFICATIONS

KIT4500 Standard & Optional

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

Spindle		KIT4500
Main Spindle Hollow Chuck 3 Jaw	6″	●
	8″	○
	10″	–
Main Spindle Solid Chuck 3 Jaw	6″	○
	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	120ℓ (31.7 gal)	●
	130ℓ (34.3 gal)	–
Chip Conveyor (Hinge/Scraper/Screw)	Front (Right)	○
	Front (Rear)	○
Special Chip Conveyor (Drum Filter)		☆
Chip Wagon	Standard (180ℓ [47.5 gal])	○
	Swing (200ℓ [52.8 gal])	○
	Large Swing (290ℓ [76.6 gal])	○
	Large Size (330ℓ [87.2 gal])	○
	Customized	☆
S/W		
Dialogue Program (HW-DPRO)		–
DNC software (HW-eDNC)		○
Machine Monitoring System (HW-MMS Cloud)		☆
Smart Guide-i : FANUC		○
Smart S/W		☆

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 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)		☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 12ℓ (3.2 gal)	–
	35bar (507.6 psi)/ 15ℓ (4 gal)	●
ETC		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM Software		☆

❖ 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. / Please refer to the S/W catalog (iRiS) for details by S/W product.

SPECIFICATIONS

KIT60G Standard & Optional

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

Spindle		KIT60G
Main Spindle Hollow Chuck 3 Jaw	10″	●
	12″	–
Main Spindle Solid Chuck 3 Jaw	10″	☆
	12″	–
Scroll Chuck	12″	○
Grinding Spindle		○
Standard Soft Jaw (1set)		●
Chuck Clamp Foot Switch		●
2 Steps Hyd. Pressure Device		○
Chuck Open/Close Confirmation 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		☆
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	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)	○
	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		
Dialogue Program (HW-DPRO)		–
DNC software (HW-eDNC)		○
Machine Monitoring System (HW-MMS Cloud)		☆
Smart Guide-i : FANUC		○
Smart S/W		☆

Safety Device		KIT60G
Total Splash Guard		●
Chuck hydraulic pressure maintenance interlock		○ (CE: ●)
Electric Device		
Call Light	1Color : ■	○
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	15kVA	○
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 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)		☆
Hyd. Device		
Standard Hyd. Cylinder	Hollow	●
Standard Hyd. Unit	35bar (507.6 psi)/ 15 ℓ (4 gal)	●
ETC		
Tool Box		●
Customized Color	Need Munsel No.	☆
CAD & CAM Software		☆

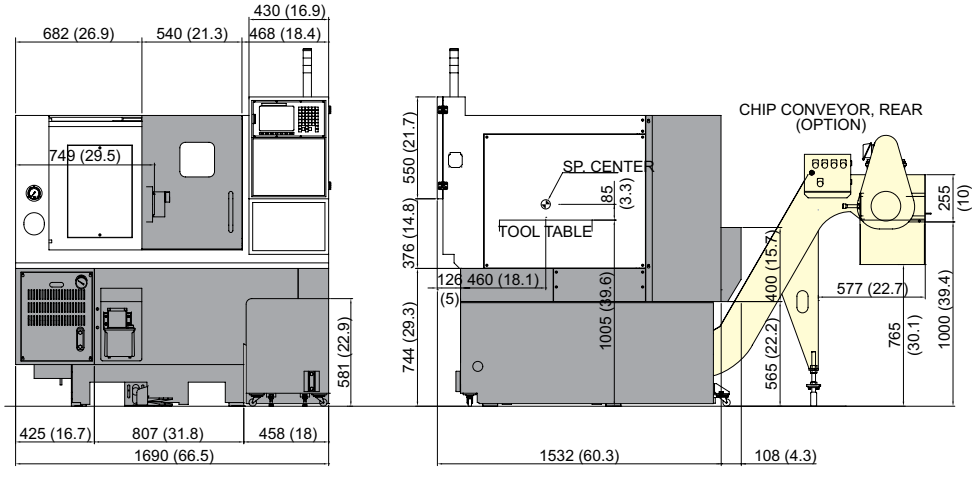
❖ 4 channel of TDC(Thermal Displacement Compensation) device is recommended, when more than 6 bar of high pressure coolant is applied, for the high quality machining.

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (iRiS) for details by S/W product.

External Dimensions

unit : mm(in)

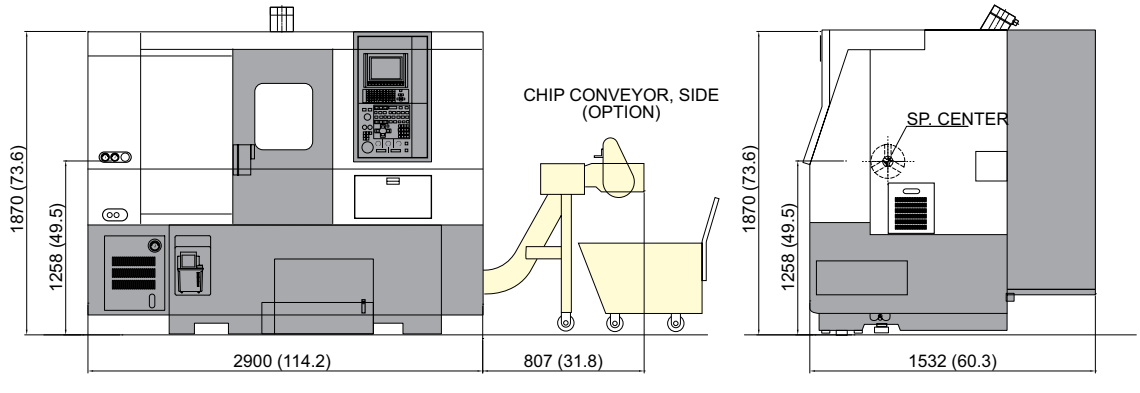
KIT250



External Dimensions

unit : mm(in)

KIT60G

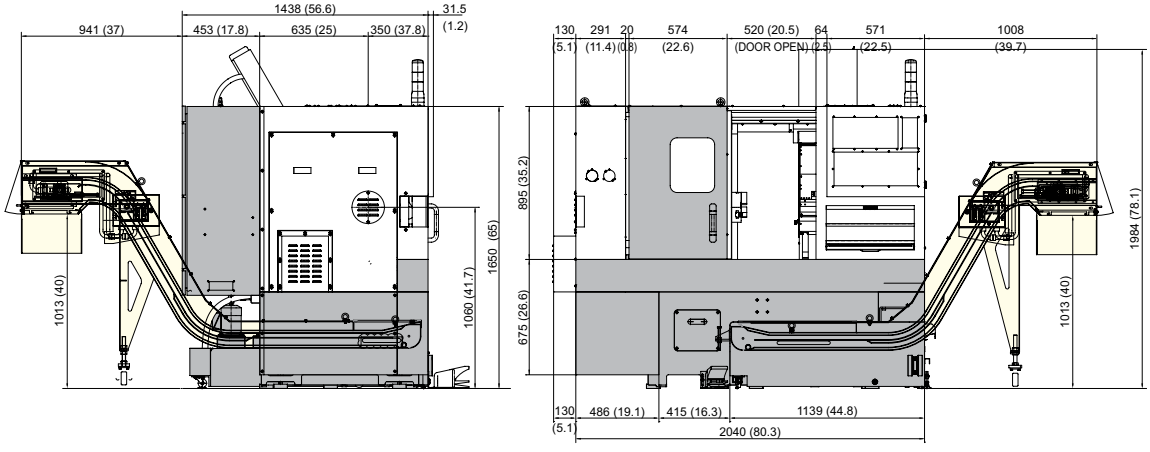


SPECIFICATIONS

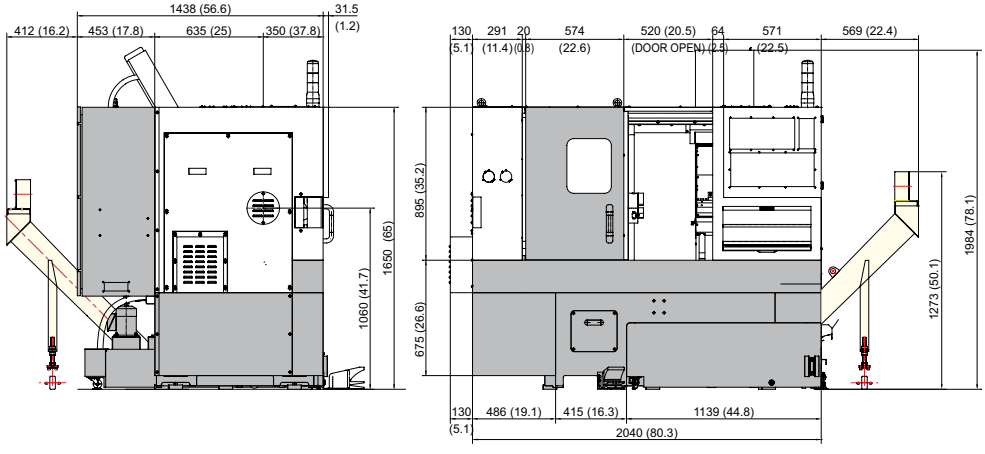
External Dimensions

unit : mm(in)

Hinge/Scraper Type



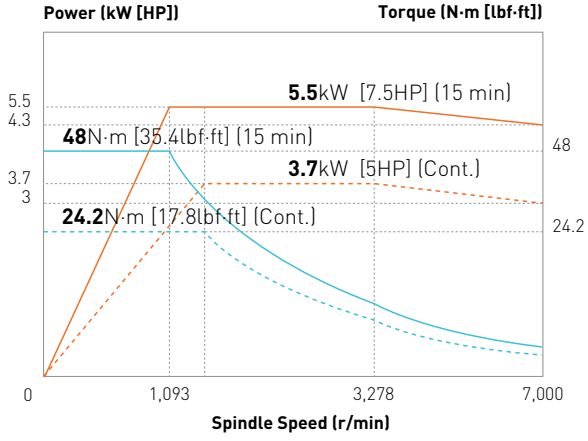
Screw Type



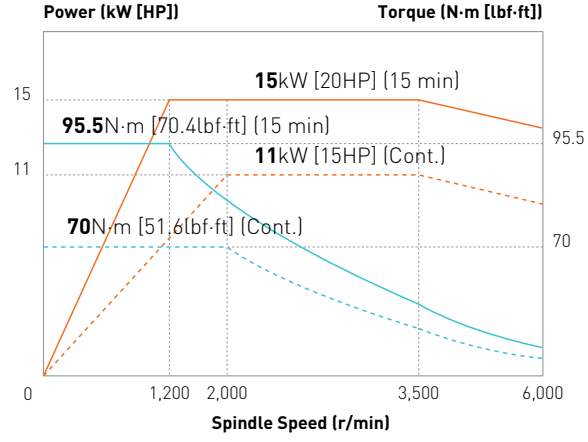
SPECIFICATIONS

FANUC Spindle Output/Torque Diagram

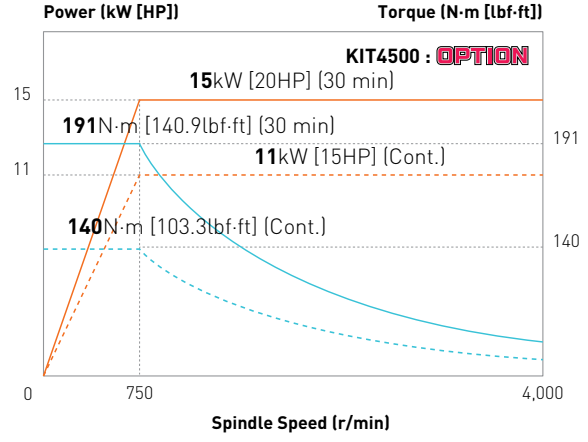
KIT250 : 5″ - 7,000rpm



KIT4500 : 6″ - 6,000rpm



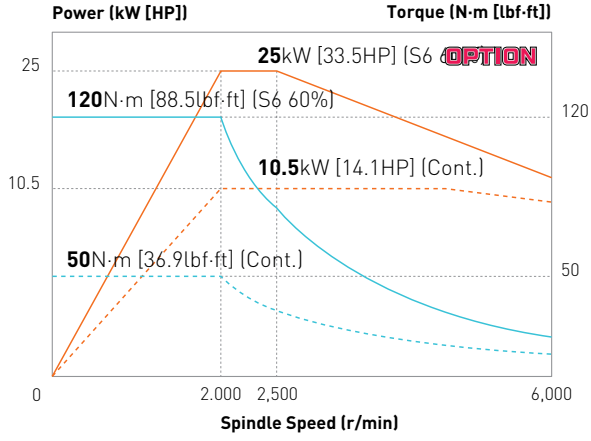
KIT4500 : 8″ / KIT60G : 10″ - 4,000rpm



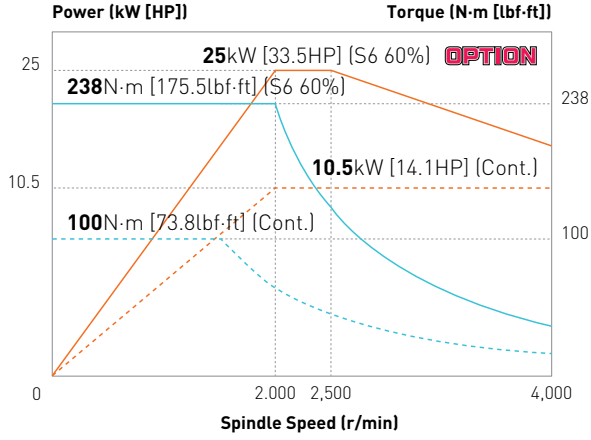
SPECIFICATIONS

SIEMENS Spindle Output/Torque Diagram

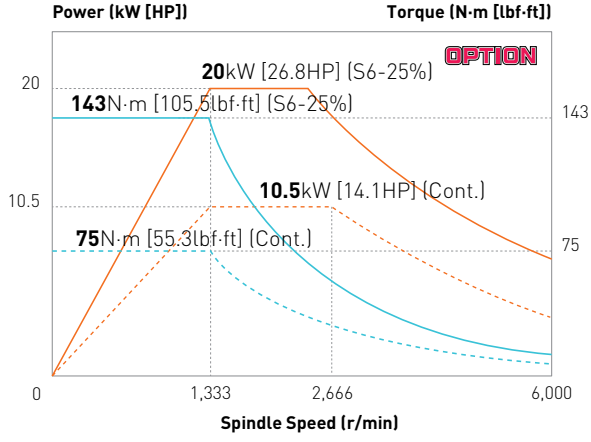
KIT4500 : 6″ - 6,000rpm



KIT4500 : Big Bore 8″ - 4,000rpm



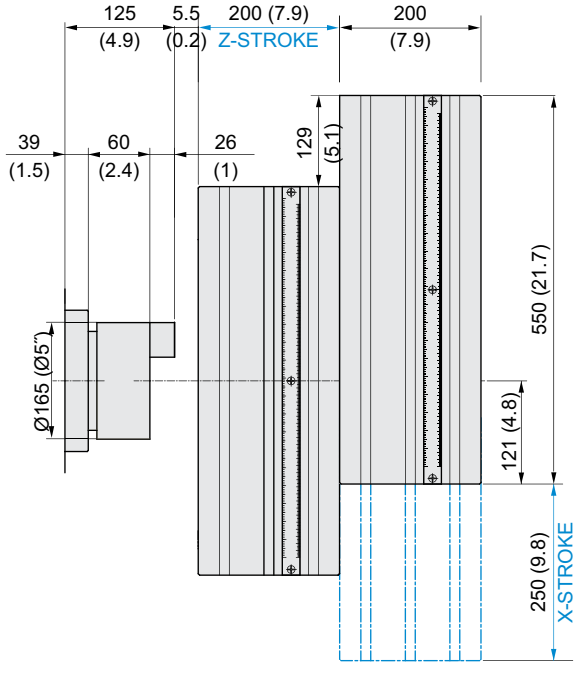
KIT4500 : 6″ - 6,000rpm (Electric Chuck)

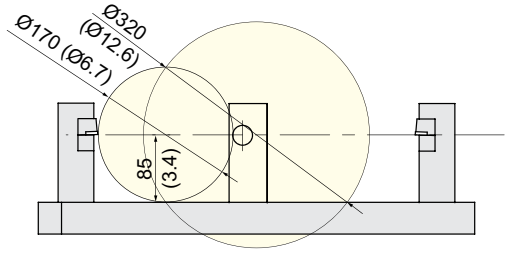


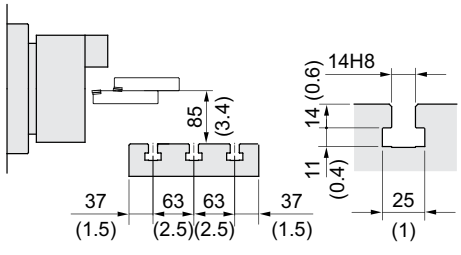
The Stroke of Table

unit : mm(in)

KIT250





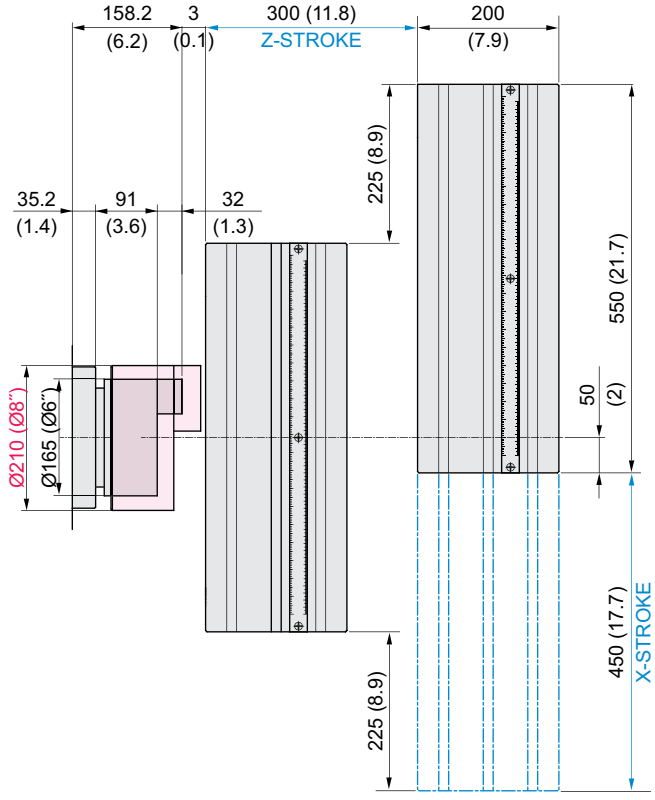


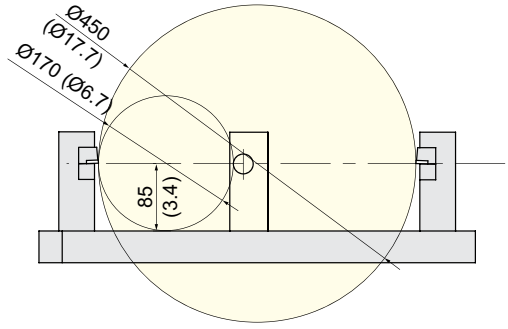
SPECIFICATIONS

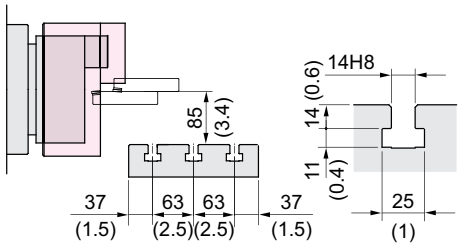
The Stroke of Table

unit : mm(in)

KIT4500



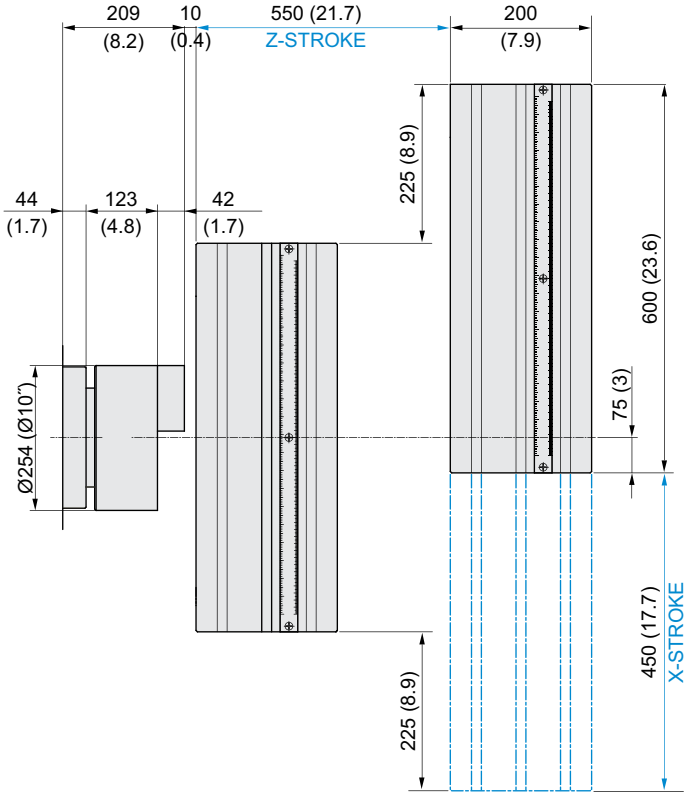


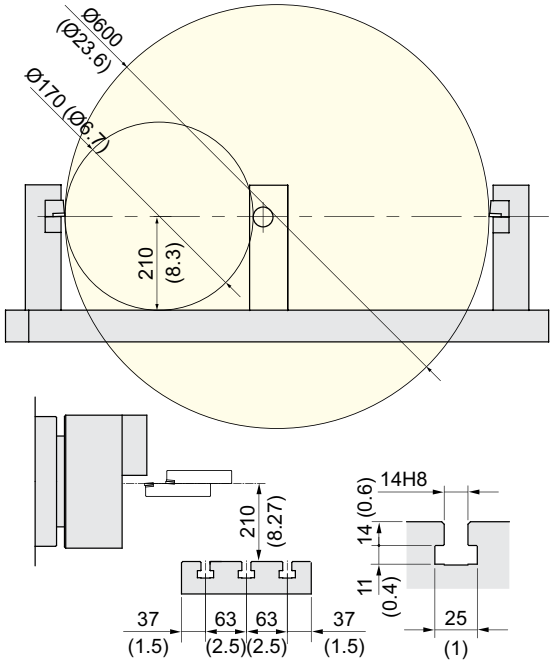


The Stroke of Table

unit : mm(in)

KIT60G



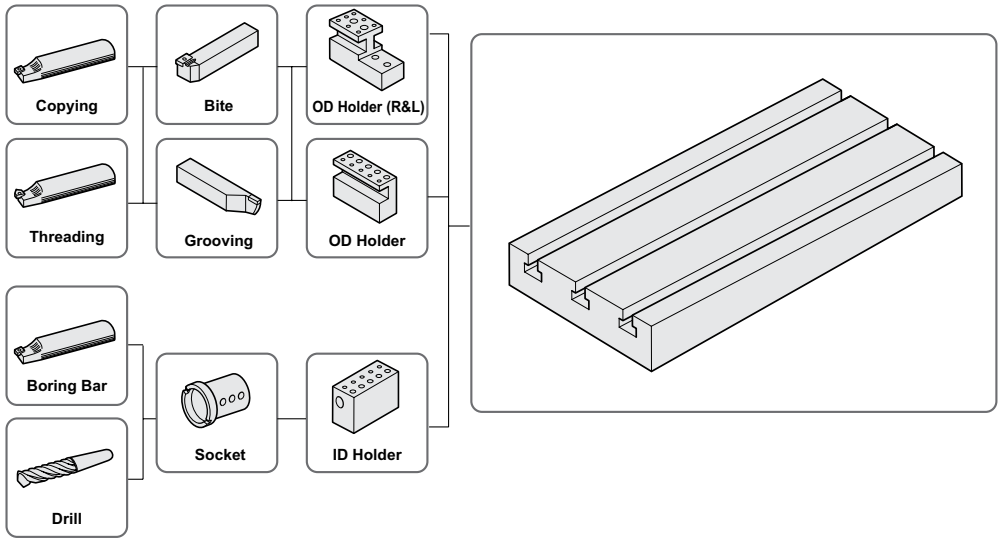


SPECIFICATIONS

Tooling Travel Range

unit : mm(in)

KIT250



Tooling Parts Detail

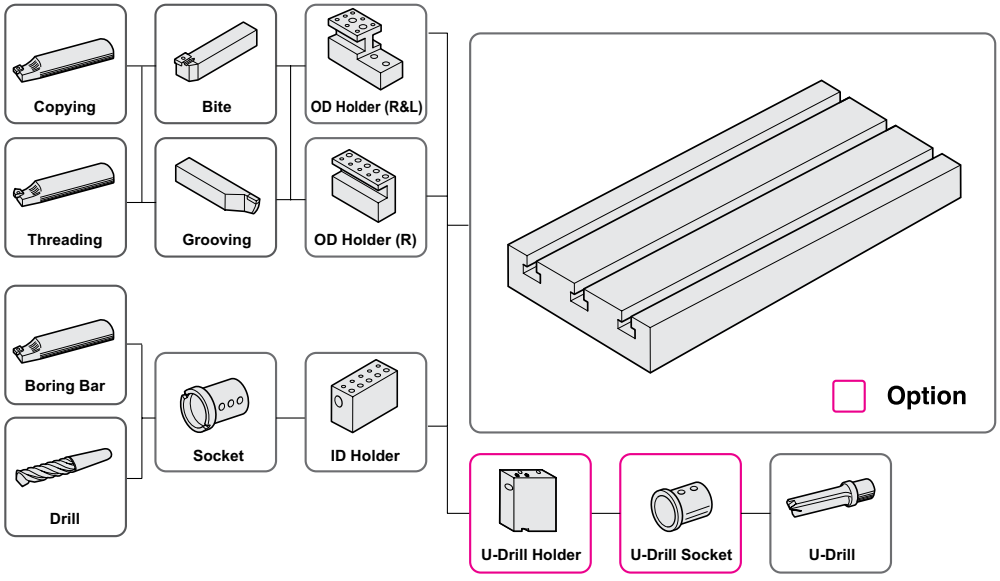
ITEM			KIT250	
			mm Unit	inch Unit
Boring Holder	O.D Holder	Right/Left : □ 20 (□ 3/4")	1	1
		Double : □ 20 (□ 3/4")	1	1
		Right/Left : □ 25 (□ 1")	-	-
		Double OD : □ 25 (□ 1")	-	-
Boring Holder	I.D Holder	Single : Ø32 (Ø1 1/4")	1	1
	U-Drill Holder	Tool Holder	-	-
		Cap	-	-
Socket	Boring	Ø8 (Ø5/16")	1	1
		Ø10 (Ø3/8")	1	1
		Ø12 (Ø1/2")	1	1
		Ø16 (Ø5/8")	-	-
		Ø20 (Ø3/4")	-	-
		Ø25 (Ø1")	-	-
	Drill	MT 1× MT 2	1	1
		MT 2	1	1
	U-Drill	Ø20 (3/4")	-	-
		Ø25 (1")	-	-

SPECIFICATIONS

Tooling Travel Range

unit : mm(in)

KIT4500



Tooling Parts Detail

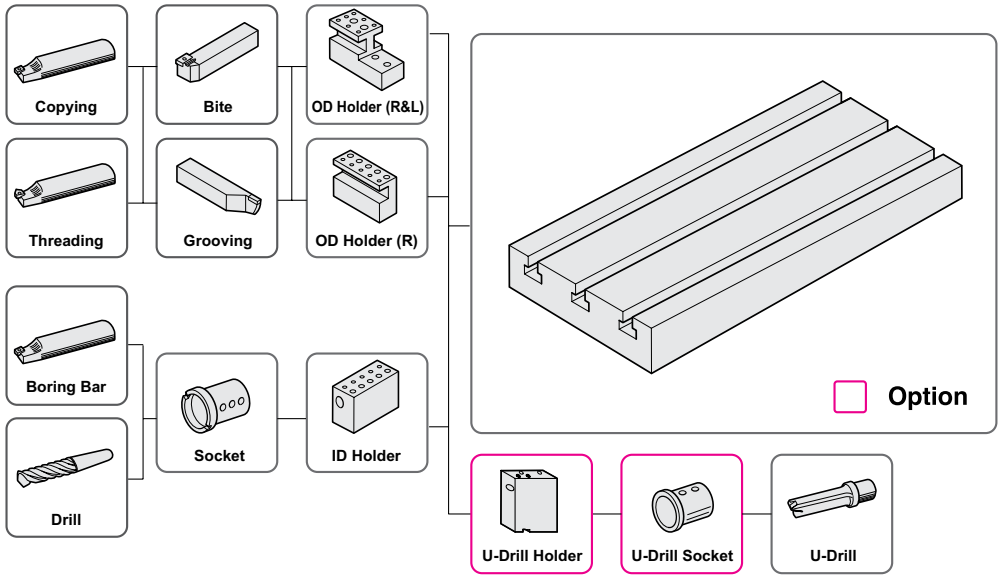
ITEM			KIT4500	
			mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left : □ 20 (□ 3/4")	2	2
		Double : □ 20 (□ 3/4")	1	1
		Right/Left : □ 25 (□ 1")	Opt	Opt
		Double OD : □ 25 (□ 1")	Opt	Opt
Boring Holder	I.D Holder	Single : Ø32 (Ø1 1/4")	2	2
	U-Drill Holder	Tool Holder	Opt	-
		Cap	Opt	-
Socket	Boring	Ø8 (Ø5/16")	Opt	-
		Ø10 (Ø3/8")	1	1
		Ø12 (Ø1/2")	1	1
		Ø16 (Ø5/8")	1	1
		Ø20 (Ø3/4")	Opt	Opt
		Ø25 (Ø1")	Opt	Opt
	Drill	MT 1× MT 2	1	1
		MT 2	Opt	Opt
		ø20 (3/4")	Opt	-
		ø25 (1")	Opt	-

SPECIFICATIONS

Tooling Travel Range

unit : mm(in)

KIT60G



Tooling Parts Detail

ITEM			KIT60G	
			mm Unit	inch Unit
Turning Holder	O.D Holder	Right/Left : □25 (□1")	2	2
		Double : □25 (□1")	1	1
Boring Holder	I.D Holder	Single : Ø32 (Ø1 1/4")	2	2
	U-Drill Holder	Tool Holder	Opt	-
		Cap	Opt	-
Socket	Boring	Ø8 (Ø5/16")	Opt	-
		Ø10 (Ø3/8")	1	1
		Ø12 (Ø1/2")	1	1
		Ø16 (Ø5/8")	1	1
		Ø20 (Ø3/4")	Opt	Opt
		Ø25 (Ø1")	Opt	Opt
	Drill	MT 1× MT 2	1	1
		MT 2	Opt	Opt
		ø20 (3/4")	Opt	-
		ø25 (1")	Opt	-

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)	5″
	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 Tools		EA	4
	Tool Size	OD	mm(in)	□ 20 (□ 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		mm²	OVER 16
	Voltage		V/Hz	220/60 (200/50*)
MACHINE	Floor Space (L×W)		mm(in)	1,690x1,640 (66.5″x64.6″)
	Height		mm(in)	1,670 (65.7″)
	Weight		kg(lb)	1,900 (4,189)
NC	Controller		-	HYUNDAI WIA FANUC i Series – Smart plus

*) 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				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		mm^2	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.

SPECIFICATIONS

Specifications

[ ] : Option

ITEM				KIT60G
CAPACITY	Swing Over the Bed		mm(in)	Ø780 (Ø30.7")
	Max. Turning Dia.		mm(in)	Ø254 (Ø10")
	Max. Turning Length		mm(in)	530 (20.9")
	Bar Capacity		mm(in)	Ø65 (Ø2.6")
SPINDLE	Chuck Size		mm(in)	10"
	Spindle Bore		mm(in)	Ø66.2 (Ø2.6")
	Spindle Speed (rpm)		r/min	4,000
	Motor (Max/Cont.)		kW(HP)	15/11 (20/15)
	Torque (Max/Cont.)		N·m(lbf·ft)	191/140 (140.9/103.3)
	Spindle Type		-	BELT
	Spindle Nose		-	A2-10
FEED	Travel (X/Z)		mm(in)	450/550 (17.7"/21.7")
	Rapid Traverse Rate (X/Z)		m/min(ipm)	36/36 (1,417/1,417)
	Slide Type		-	LM GUIDE
BLOCK TOOL	No. of Tools		EA	6 [Grinding Spindle]
	Tool Size	OD	mm(in)	□25 (□1")
		ID	mm(in)	Ø32 (1.3")
TANK CAPACITY	Coolant Tank		ℓ (gal)	274 (72.4)
	Lubricating Tank		ℓ (gal)	1.8 (0.5)
POWER SUPPLY	Electric Power Supply		kVA	20
	Thickness of Power Cable		mm^2	OVER 16
	Voltage		V/Hz	220/60 (200/50*)
MACHINE	Floor Space (L×W)		mm(in)	2,900×1,650 (114.2" x 65")
	Height		mm(in)	1,870 (73.6")
	Weight		kg(lb)	4,300 (9,479.9)
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 axis	2 axis (X, Z) / 3 axis (X, Z, C) / 4 axis (X,Z,Y,C)
	5 axis (X, Z, B, C, A) / 6 axis (X, Z, Y, B, C, A)
	7 axis (X1/Z1, X2/Z2, B2, C1/C2)
Simultaneously controlled axis	2 axis [Max. 4 axis]
Designation of spindle axis	3 axis [Max. 4 axis]
Least setting Unit	X, Z, Y, B axis : 0.001 mm (0.0001 inch)
	C, A axis : 0.001 deg
Least input increment	X, Z, Y, B axis : 0.001 mm (0.0001 inch)
	C, A axis : 0.001 deg
Inch / Metric conversion	G20 / G21
High response vector control	
Interlock	All axis / Each axis
Machine lock	All axis
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 axis)	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 axis	2 axis (X, Z) – Std.
	3 axis (X, Z, C) – Mill
	4 axis (X, Z, Y, C) – Y
	5 axis (X, Z, B, C, A) – MS
	6 axis (X, Z, Y, B, C, A) – SY
Simultaneously controlled axis	Max. 4 axis
Least setting Unit	X, Z, Y, B axis : 0.001 mm (0.0001 inch)
	C, A axis : 1 deg [0.001] deg
Least input increment	X, Z, Y, B axis : 0.001 mm (0.0001 inch)
	C, A axis : 1 deg [0.001] deg
Inch / Metric changeover	G70 (inch) / G71 (metric)
Interlock	All axis / Each axis
Backlash compensation	
Pitch error compensation	Leadscrew pitch errror 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 + setable 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 programing (Clycle 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	
Autometic 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	
Tools in tool list	128 ea : Std.
	256 ea : Mill
	768 ea : Y, MS, SY
Cutting Edges in tool list	256 ea : Std.
	512 ea : Mill
	1,536 ea : Y, MS, SY
Tool nose radius compensation	ISO (G40, G41, G42)
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 Strorage 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
Function for machine type	
Cs contour control (C & A axis)	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

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