

HEAVY DUTY CNC TURNING CENTER

SKT400 Series



SKT400/400M
SKT400C/400LC/LMC

HYUNDAI-KIA MACHINE



SKT
400 Series

SKT400 Series

CNC Turning Center

**High Accuracy, Rigidity & High Performance
CNC Lathe**

- Head stock with minimized heat distortion construction
- Adoption of built-in tail stock helps maintaining high accuracy during heavy-duty cutting
- Flexible model variation for customer' s demand.

HYUNDAI-KIA

World Top Class Quality HYUNDAI-KIA Machine

High Speed, High Accuracy, High Rigidity



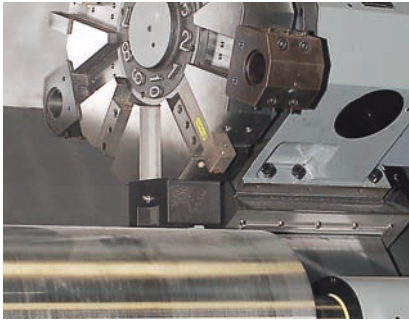
		SKT400	SKT400C	SKT400M	SKT400LC	SKT400LMC
MAX. SWING ON BED	mm(in)	ø 780 (ø 30.7")	ø 780 (ø 30.7")	ø 780 (ø 30.7")	ø 725 (ø 28.5")	ø 725 (ø 28.5")
SPINDLE RPM	rpm	3,000rpm	2,000rpm	3,000rpm	2,000rpm	2,000rpm
MAX. TURNING LENGTH	mm(in)	1,200 (47.2")	1,200 (47.2")	1,180 (46.5")	2,150 (84.6")	2,110 (83.1")
SP. MOTOR	kW(HP)	26/22 (35/30)	26/22 (35/30)	30/22 (40/30)	37/30 (50/40)	37/30 (50/40)



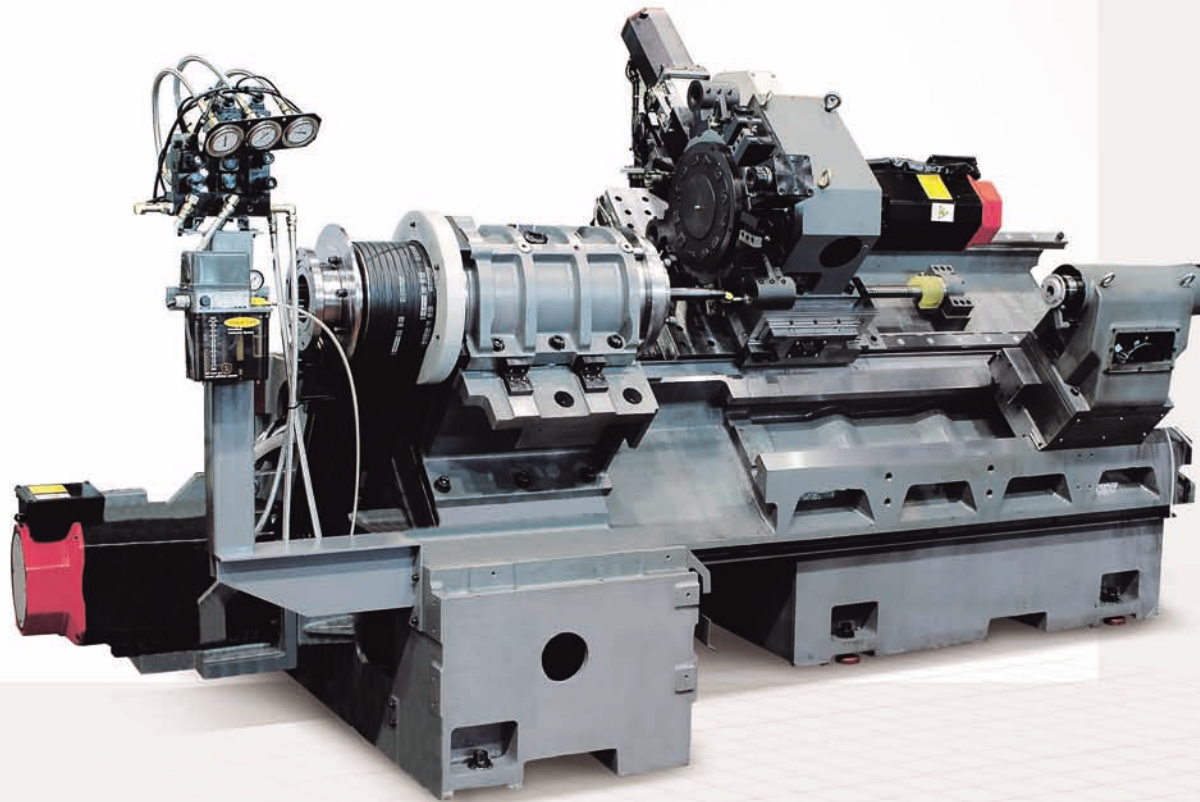
Speed & Power

High Speed, High Accuracy, High Rigidity, Big Work Area and Easy Operation

Heavy Duty Cutting CNC Turning Center



■ Tool Number	SKT400/M/LMC : 12EA SKT400C/LC : [10EA]
■ Tool Size	SKT400/M : □25/φ50 (□1"/φ2") SKT400C/LC/LMC : □32/φ63 (φ2.5"/□1.3")
■ Turret Index	0.2 sec / 1Step
■ Rapid Travel (X/Z)	SKT400/C/M : 20/25 m/min (787/984ipm) SKT400LC/LMC : 20/20 m/min (787/787ipm)
■ Spindle Output	SKT400M : 30/22kW (40/30HP) SKT400/400C : 26/22kW (35/30HP) SKT400LC/400LMC : 37/30kW (50/40HP)



● High Accuracy, High Rigidity one piece bed

- 45° Slant bed has increased number of Ribs than before to improve performance of high speed heavy duty cutting, and Interrupted cutting
- Each axes accomplished high accuracy by direct driving ball-screws with highly reliable digital servo motor

Accomplishment of Heavy Duty Cutting and Wide Working Area

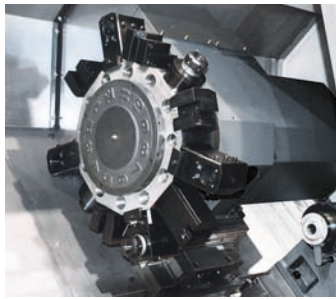
High Speed, High Precision, Highly Reliable Turret



• High Speed, Powerful Turret

12[10] Stations Large Turret does not require re-set after even replacement of work-piece, Permanent Tooling, and is able to place tools on both left and right sides of every stations.

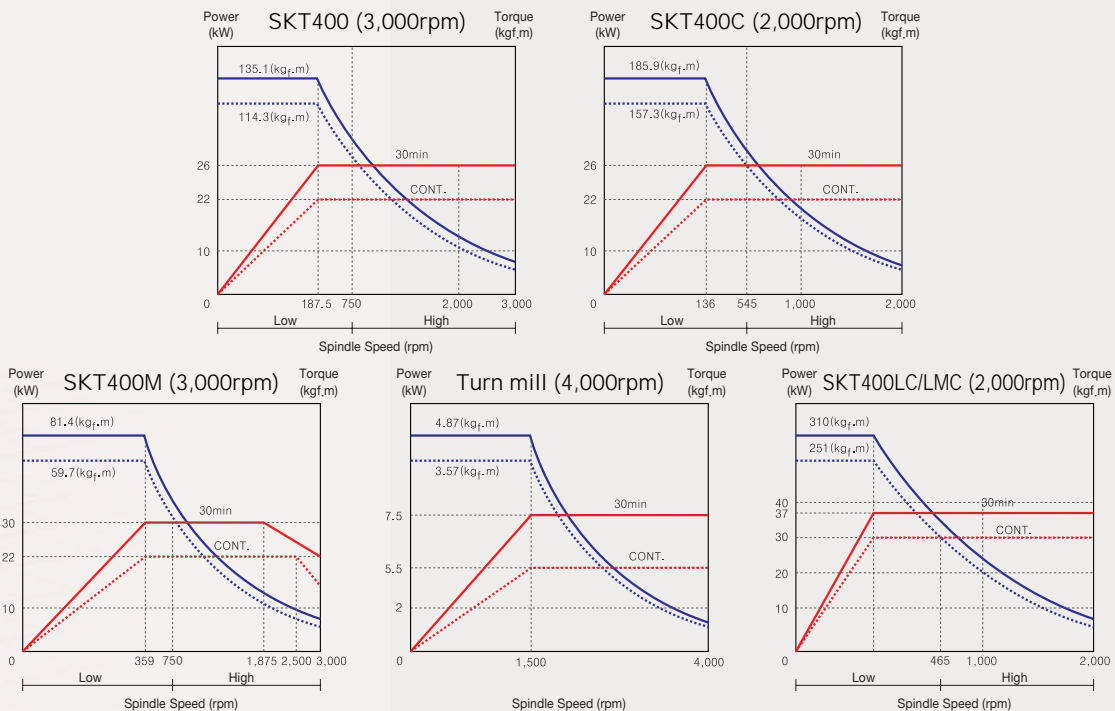
Bi-directional turret can move very accurately (Index Repeatability 1/8,000 °) and fast by high torque motor. $\varnothing 260$ ($\varnothing 10.2''$) large Diameter super precision curvic coupling design with 12ton clamping force satisfies both super accuracy cutting and heavy duty cutting.



• New BMT Milling Turret (M Type)

Large 12 station turret equipped with BMT can do milling with even advanced accuracy by only one chucking. Each new design BMT holders are fixed by 4 screws to perform heavy duty cutting with the best optimized condition. Also, this turret can do drilling, and tapping, too. Each turret movements are controlled by high torque servo motor, and bi-directional turret can index speed of 0.2sec/face.

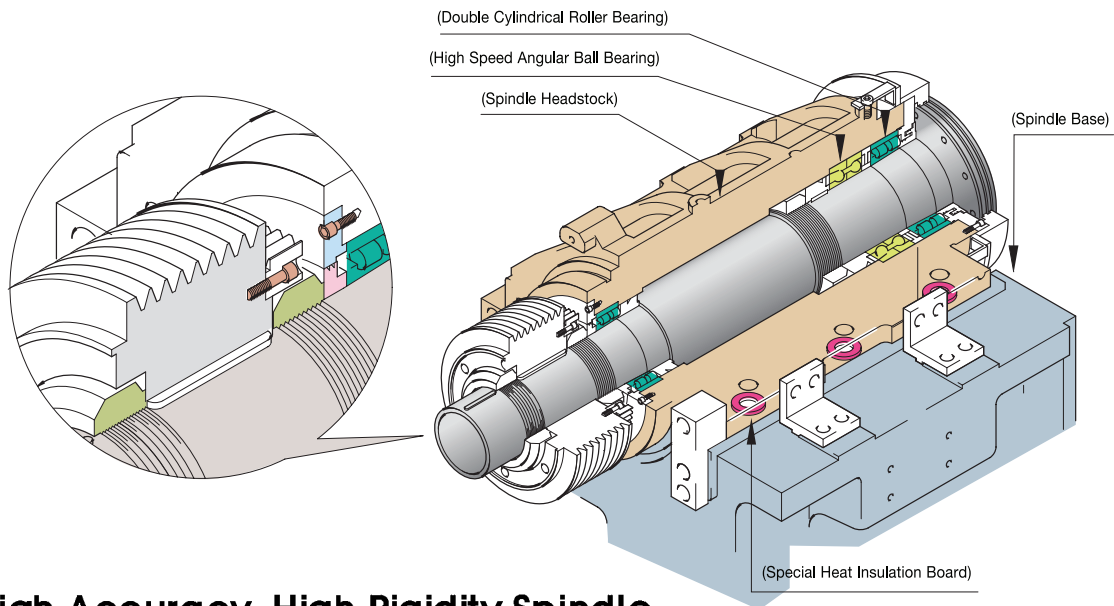
Spindle Output Torque Diagram





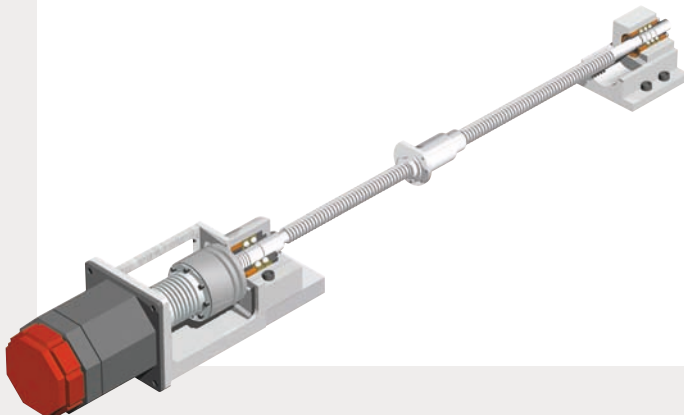
Accuracy

Super Accuracy for Long Life Time, and Easy Operation



High Accuracy, High Rigidity Spindle

- Thermally Symmetrical Headstock has Special Heat Insulation Board, which insulates heat from Base, maintains high accuracy during long hour's continuous operation.
- To accomplish advanced stability even during heavy duty cutting, appropriate composition of P4 level Double Cylindrical Roller Bearing and angular bearing were adopted.
- Bearing Assembly area of spindle and headstock were precisely grinded for maintaining high accuracy even after long hour's operation.
- Adopted Double Locking Device, separations of spindle bearing and pulley, to prevent releasing of spindle bearing pretension from Interrupted cutting, Heavy Duty cutting, Chuck cylinder operation, and Belt pulley tension.



Pre-tensioned and Double Anchored Ballscrew

All axes with pretensioned heat treated large diameter ball-screws, fixed by double anchors on both ends, to provide rigidity and minimum thermal growth.

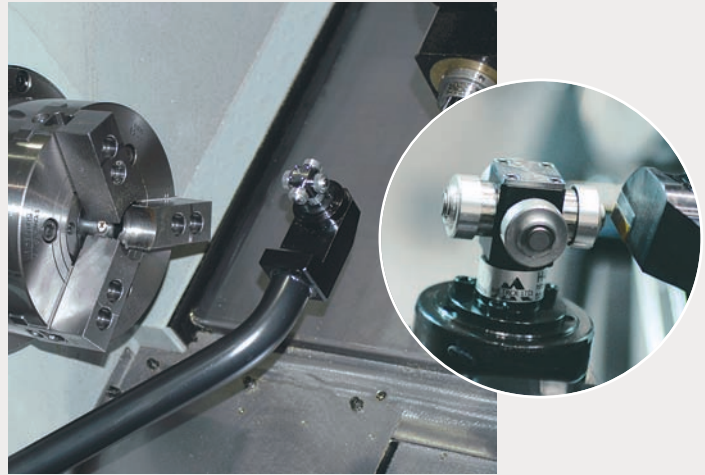
Automatic Tool-Setter

Tool-setter can obtain tool offset automatically by touching tool, this eliminates the trial cutting, measurements, and tool offset inputs.

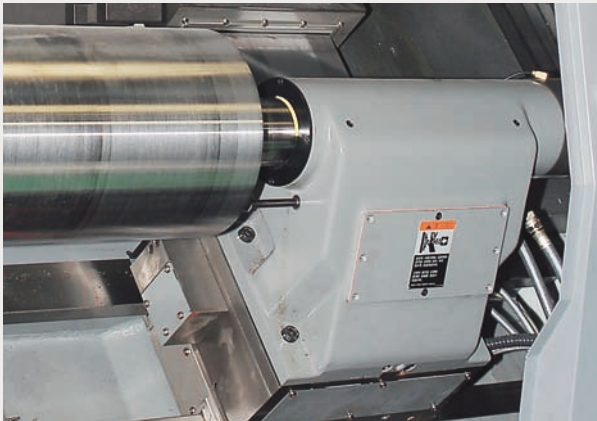
Even a beginner can finish tool compensation within 40 seconds.

Easy Work Coordinate Setting

Work coordinate is automatically set by just input the cut off depth on control panel as a parameter after slightly cutting the work surface. Neither measuring nor calculating is needed, and work coordinate can be set within 30 seconds.



Built-in Tail Stock for Heavy Work-piece



Large Built-in Tail Stock maintains high accuracy, and each function is controlled by program both automatically and manually.

ITEM	SKT400/M/C	SKT400LC/LMC
Tail Stock Taper	MT#4 (BuiltIn)	MT#5 (BuiltIn)
Quill Diameter	∅ 100mm (∅ 3.94")	∅ 150mm (∅ 5.9")
Quill Travel	130mm (5.12")	150mm (5.9")
Tail Stock Travel	1,100mm (43.3")	2,100mm (82.7")
Tail Stock Thrust	880kgf (1,940 lbf)	2,120kgf (4,674 lbf)

Centralized Control Panel



Central Integrated Operational Panel rotates 90°, and alarm messages supports of wide range of machine and control devices' errors increase efficiencies of operator.

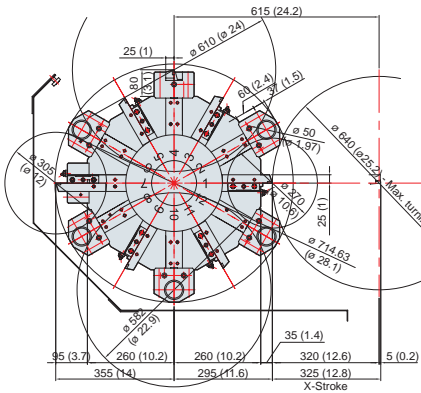
Conversational Programming (Fanuc 21i-T)

Capable of machining multi-shape work-pieces by simply selecting few menus

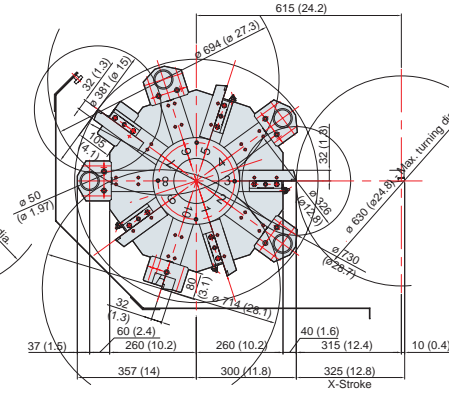
CNC Turning Center SKT400 Series

Tool Interference Diagram

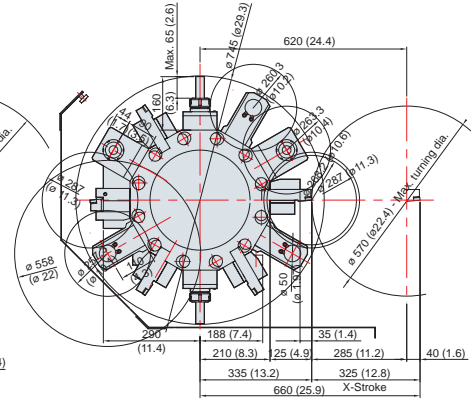
Unit:mm(in)



SKT400



SKT400C/LC

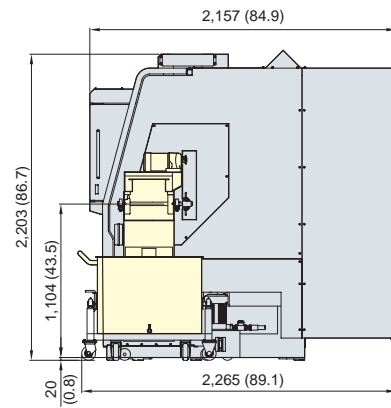
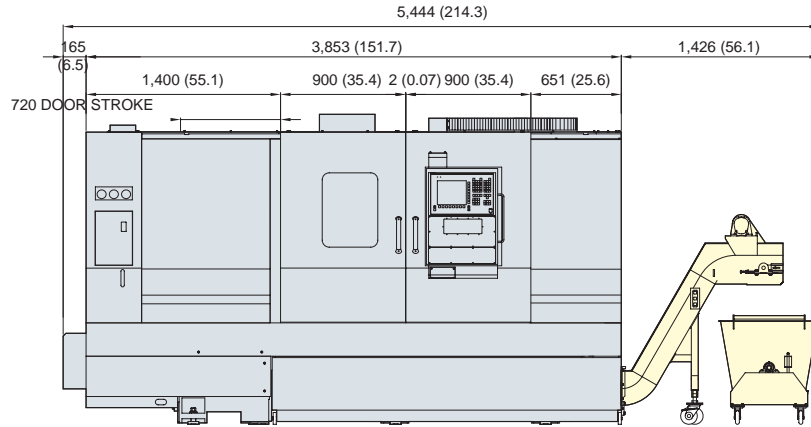


SKT400M/LMC

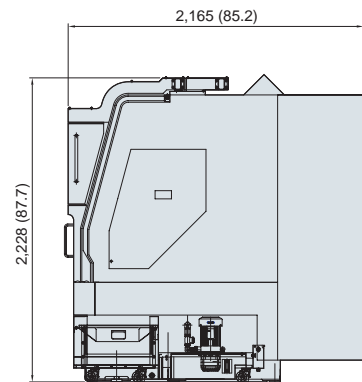
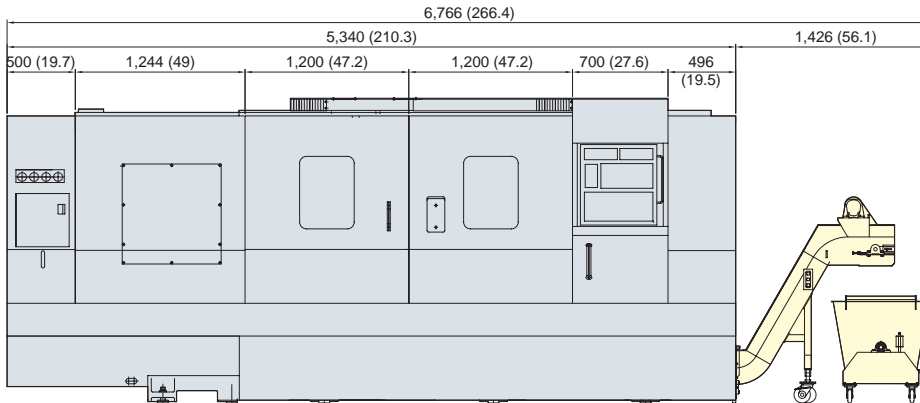
External Dimensions

Unit:mm(in)

SKT400C/M



SKT400LC/LMC

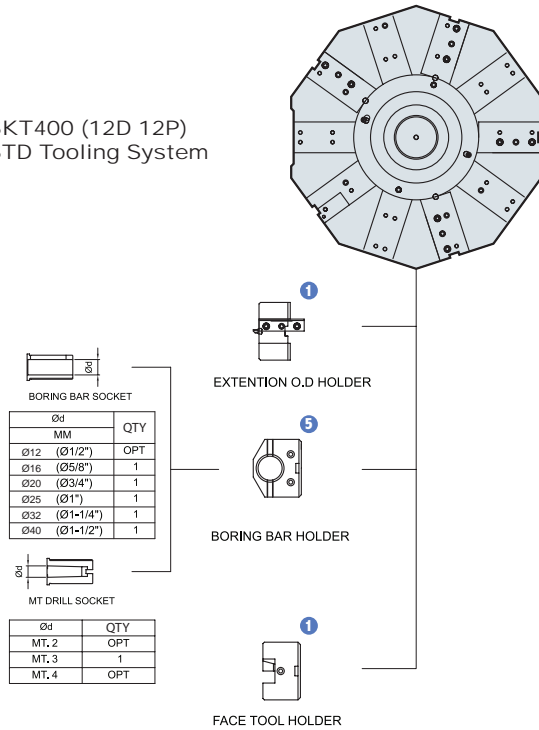


Specification

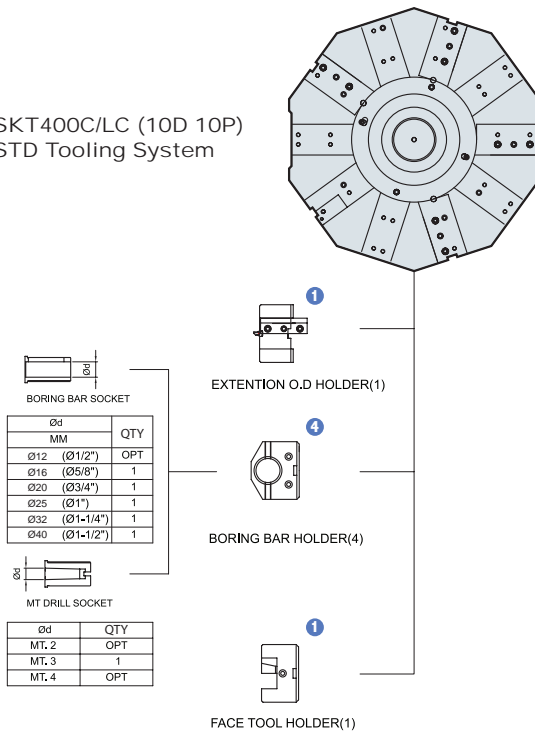
Tooling System

Unit:mm(in)

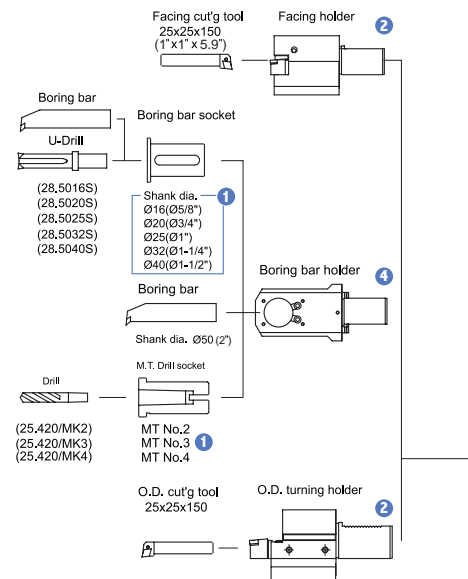
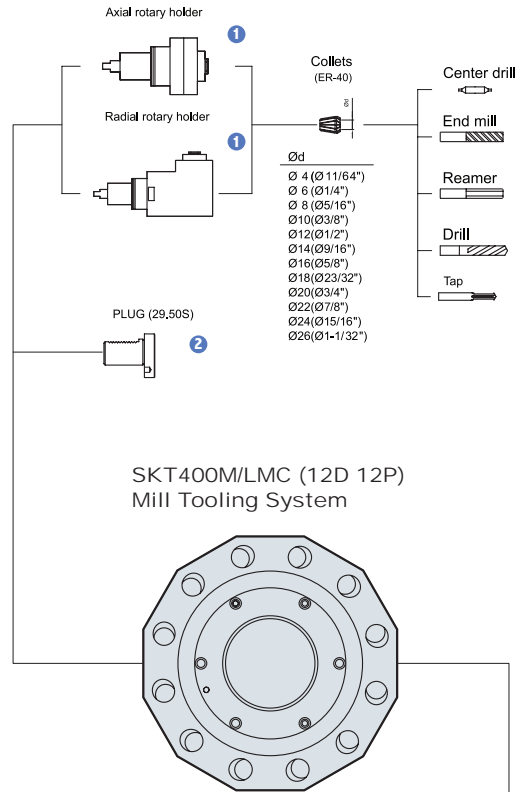
SKT400 (12D 12P)
STD Tooling System



SKT400C/LC (10D 10P)
STD Tooling System



STANDARD



CNC Turning Center SKT400 Series

Specifications

ITEM			SKT400	SKT400M	SKT400C	SKT400LC	SKT400LMC	
CAPACITY	SWING ON THE BED	mm(in)	ø 780 (ø 30.7")			ø 725 (ø 28.5")		
	MAX. TURNING DIA.	mm(in)	ø 640 (ø 25.2")	ø 570 (ø 22.4")	ø 630 (ø 24.8")	ø 570 (ø 22.4")		
	MAX. TURNING LENGTH	mm(in)	1,200 (47.2")	1,180 (46.5")	1,200 (47.2")	2,150 (84.6")	2,110 (83.1")	
	BAR CAPACITY	mm(in)	ø 90 (ø 3.5")			ø 117 (ø 4.6")		
SPINDLE	CHUCK SIZE	mm(in)	ø 304 (ø 12")			ø 380 (ø 15")		
	SPEED	rpm	3,000			2,000		
	SPINDLE NOSE	-	A2-8			A2-11		
	SPINDLE BORE	mm(in)	ø 104 (ø 4.1")			ø 130 (ø 5.1")		
	C-AXIS INDEXING	deg	-	0,001	-	0,001		
TURRET	NUMBER OF TOOL	EA	12			10		
	TOOLS SIZE(OD/ID)	mm(in)	□25 × ø 50 (□1" × ø 2")			□32 × ø 50 (□1.3" × ø 2")		□32 × ø 63 (□1.3" × ø 2.5")
	TURRET INDEXING TIME	sec	0.2					
	MAX. MILLING TOOL SPEED	rpm	-	4,000	-	4,000		
	MECHANISM	-	-	BMT75 [VDI50]	-	BMT75 [VDI50]		
FEED	TRAVEL (X/Z)	mm(in)	320/1,200 (12.6"/47.2")			320/2,200 (12.6"/86.6")		
	RAPID TRAVERSE (X/Z)	m/min(ipm)	20/25 (78.7/98.4)			20/20 (78.7/78.7)		
TAIL STOCK	TAPER	-	MT #4 (Built-In Type)			MT #5 (Built-In Type)		
	DIA METER	mm(in)	100 (3.9")			150 (5.9")		
	QUILL TRAVEL	mm(in)	130 (5.1")			150 (5.9")		
	TRAVEL	mm(in)	1,100 (43.3")			2,100 (82.7")		
MOTOR	SPINDLE MOTOR (30min/Cont)	kW(HP)	26/22 (35/30)	30/22 (40/30)	26/22 (35/30)	37/30 (50/40)		
	FEED MOTOR (X/Z)	kW(HP)	4.0/4.0 (5.4/5.4)			7.0/7.0 (9.4/9.4)		
	MILLING TOOL MOTOR	kW(HP)	-	7.5/5.5 (10/7)	-	7.5/5.5 (10/7)		
MACHINE SIZE	FLOOR SPACE(L x W)	mm(in)	4,120 × 2,157 (162.2" × 84.9")			5,340 × 2,165 (210.2" × 85.2")		
	HEIGHT(H)	mm(in)	2,203 (86.7")			2,228 (87.7")		
	WEIGHT	kg(lb)	8,500 (18,739)			10,000 (22,046)		
ELECTRIC POWER SUPPLY			kVA	30	40	35	40	
CONTROLLER				FANUC 0i-T	FANUC 21i-T	FANUC 0i-T [FANUC 21i-T]	FANUC 21i-T	

※ Machine specifications and other features are subject to change without notice.

[] : Option

STANDARD

- HYDRAULIC HOLLOW CHUCK(12") & CYLINDER
- PROGRAMMABLE TAIL STOCK
- COOLANT SYSTEM
- SPLASH GUARD
- TOOL BOX & HAND TOOL KIT
- DOOR INTER-LOCK
- MANUAL
- WORK LIGHT
- OIL/WATER SEPARATOR

OPTION

- HYDRAULIC HOLLOW CHUCK(15")
- AUTO DOOR
- 2STEP CHUCK PRESSURE DEVICE
- Q-SETTER(AUTOMATION)
- CALL LIGHT(3COLORS)
- CHIP CONVEYOR
- SPINDLE ORIENTATION
- CHUCK OPEN/CLOSE CONFIRMATION DEVICE
- CHIP BOX
- AUTOMATIC POWER CUT-OFF DEVICE
- DOUBLE FOOT SWITCH

Specification

Controller

FANUC Oi-T

Controls	Controlled Axes Simultaneous Controllable Axes Least Input and Command Increment	2(X,Z) axes(Max. 4 axes are available) 2 axes(Max. 4 axes) 0.001mm(0.0001")
Spindle functions	Spindle Speed Command Spindle Speed Override Spindle Orientation(1 Position)	S5 digits, Binary Output 50% - 150%(10 Steps) Provided
Program functions	Maximum Programmable Dimensions Decimal Point Input Direct Drawing Dimension Programming Miscellaneous Function Canned Cycle: G90, G92, G94 Multiple Canned Cycle: G70 ~ G72, G74 ~ G76 Program Stop and End Programmable Data Input(G10)	+8 Digits Provided Provided M2 Turning, Threading, Facing Finish, Rough, Peck Drill, Groove, Thread M00,M01 Provided
Feed functions	Manual Jog Feed:Rapid, Jog Feed, Handle Manual Handle Feedrate Feed-rate Override Jog Override Rapid Traverse Override Override Cancel Dwell Manual Continuous Feed Jog-Handle (same mode) Incremental Feed	Provided x1, x10, x100 0-200% : 21 step 0~2,000mm/min[79 ipm] : 21 step F0, F5, F25/F50, F100% Provided G04,0-99999.999 sec Simultaneous,1 Axis Provided X1-1000
Reference functions	Manual Reference Point Return Automatic Reference Point Return Reference Point Return Check Second Reference Point Return	Provided G28,G29 G27 G30
Tool functions	Tool Nose Radius Compensation Tool Function Geometry / Wear Compensation Direct Input of Tool Offset Value Measured B Tool Offset Amount Tool Offset Pairs Tool Life Management	G40-G42 T7+1 / T6+2 digits Provided Provided ±6 digits 32 Pairs Provided
Coordinate functions	Inch / Metric Conversion Workpiece Coordinate System(G52 ~ G59)	Provided Provided
Tape functions	Tape Code Number of Registerable Program Part Program Storage Length Reader/Puncher Interface Buffer Register(256byte)	EIA RS-244-A/ISO 840(Automatic Recognition) 200 EA 640M(2,100FT) RS232C Provided
General functions	Custom Macro B Block Skip/Optional Block Skip(/2 ~ /9) Optional Chamfering/Corner R CRT/MDI Back Ground Editing Run Hour / Parts Count Display Program Restart	Provided Provided Provided 8.4" Color LCD Provided Provided Provided

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

Controller

FANUC 21i-T

Controls	Controlled Axes Simultaneous Controllable Axes Least Input and Command Increment	2(X,Z) axes(Max. 4 axes are available) 2 axes(Max. 4 axes) 0.001mm(0.0001')
Spindle functions	Spindle Speed Command Spindle Speed Override Spindle Orientation(1 Position)	S5 digits, Binary Output 50% - 150%(10 Steps) Provided
Program functions	Maximum Programmable Dimensions Decimal Point Input Direct Drawing Dimension Programming Miscellaneous Function Canned Cycle: G90, G92, G94 Multiple Canned Cycle: G70 ~ G72, G74 ~ G76 Program Stop and End Programmable Data Input(G10)	±8 Digits Provided Provided M2 Turning, Threading, Facing Finish, Rough, Peck Drill, Groove, Thread M00,M0,M02,M30 Provided
Feed functions	Manual Jog Feed:Rapid, Jog Feed, Handle Manual Handle Feedrate Feed-rate Override Jog Override Rapid Traverse Override Override Cancel Dwell Manual Continuous Feed Jog-Handle (same mode) Incremental Feed	Provided x1, x10, x100 0-200% : 21 step 0~2,000mm/min[79 ipm] : 21 step F0, F5, F25/F50, F100% Provided G04,0-9999.9999 sec Simultaneous,1 Axis Provided X1-1000
Reference functions	Manual Reference Point Return Automatic Reference Point Return Reference Point Return Check Second Reference Point Return	Provided G28,G29 G27 G30
Tool functions	Tool Nose Radius Compensation Tool Function Geometry / Wear Compensation Direct Input of Tool Offset Value Measured B Tool Offset Amount Tool Offset Pairs Tool Life Management	G40-G42 T7+1 / T6+2 digits Provided Provided ±6 digits 32 Pairs (64EA) Provided
Coordinate functions	Inch / Metric Conversion Workpiece Coordinate System(G52 ~ G59)	Provided Provided
Tape functions	Tape Code Number of Registerable Program Part Program Storage Length Reader/Puncher Interface Buffer Register(256byte)	EIA RS-244-A/ISO 840(Automatic Recognition) 200 EA 320M(1,050FT) RS232C Provided
General functions	Custom Macro B Block Skip/Optional Block Skip Optional Chamfering/Corner R CRT/MDI Back Ground Editing Run Hour / Parts Count Display Program Restart	Provided Provided Provided 10.4" LCD (Color) Provided Provided Provided

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

HYUNDAI-KIA MACHINE



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Jungdong Plant



Banwol Plant



Gwangju Plant



Machine Tools 2nd Plant



Posung Plant



Seosan Plant



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