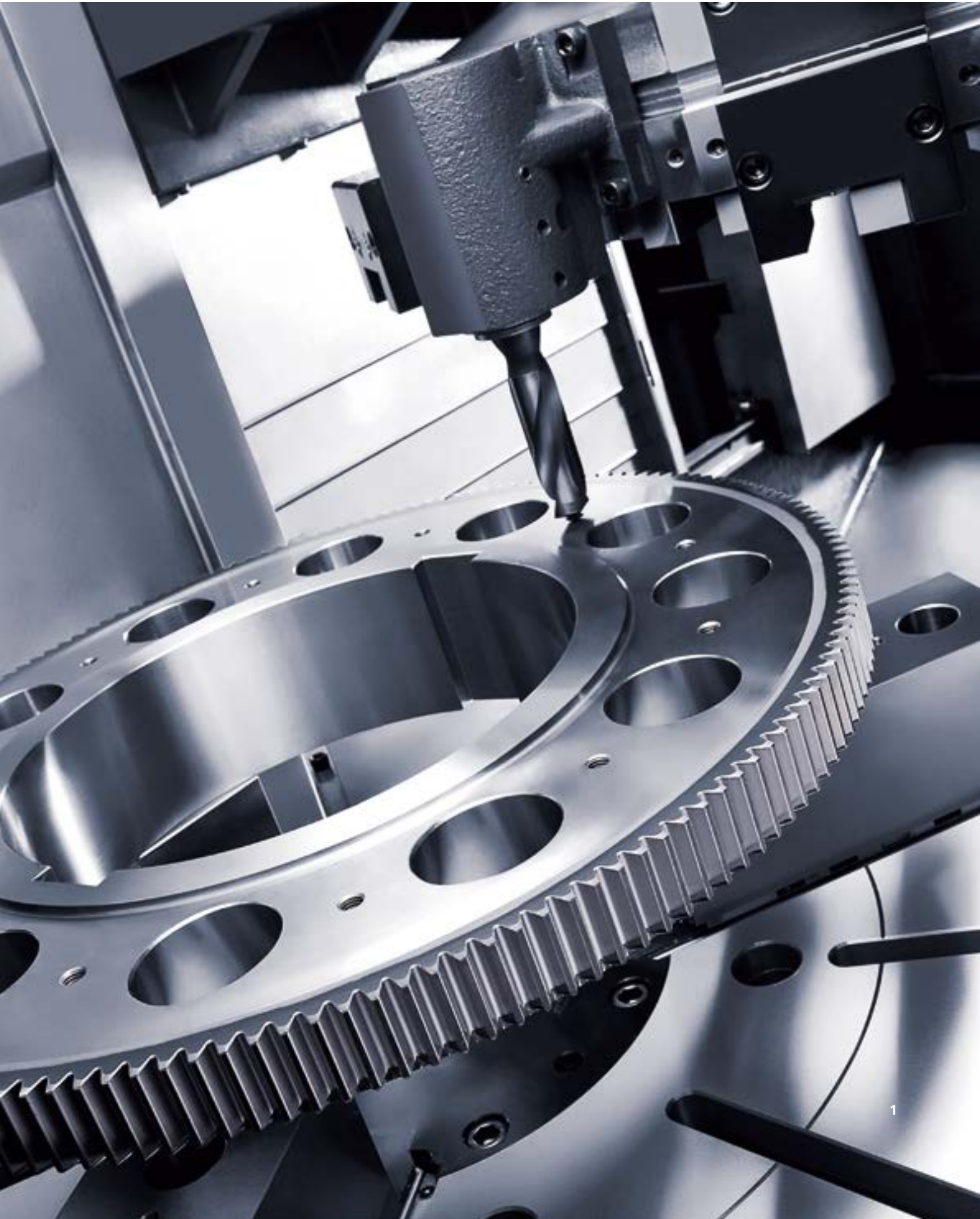


VT-950⁺/1150⁺

Large Size Vertical Turning Center
Built in Gear Box with 24" – 50" Chuck

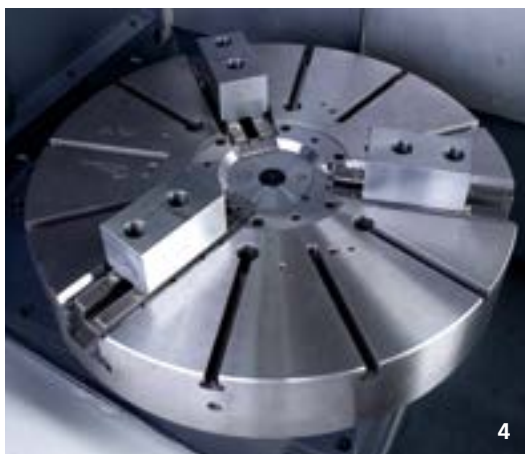
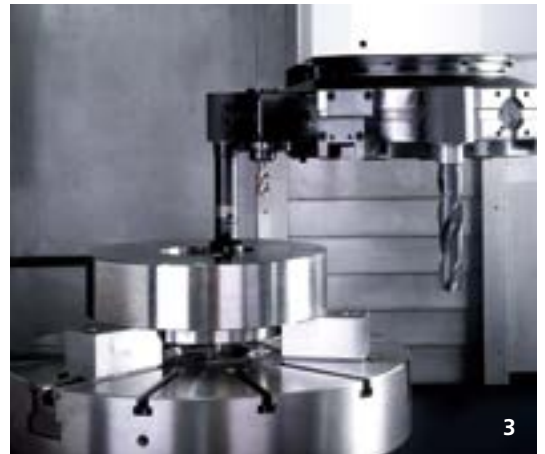
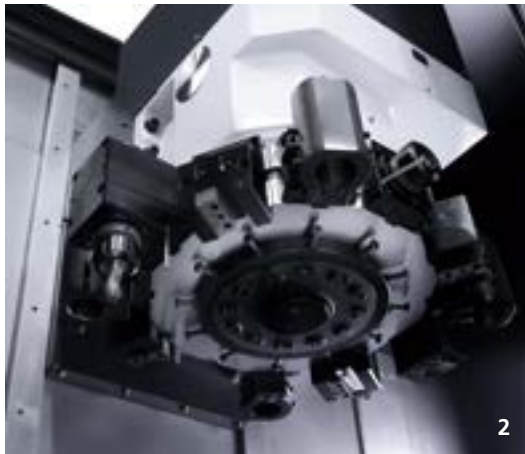




LARGE SIZE VERTICAL TURNING CENTER BUILT IN GEAR BOX WITH 24"-50" CHUCK

The machines can handle a variety of complex processes from turning to milling and drilling in one setting. With the heavy structure this turning centers can cut down your machining process and make your work more precise and productive.

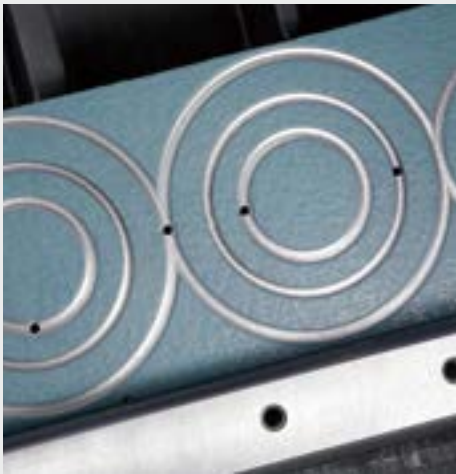
1 Gear / Plant Industry / SCM415 2 BMT85 Turret for Turnmill
3 Flange / Sample / SM45C 4 50" Chuck 5 Piston / Shipment / FCD700



HEAVY DUTY CUTTING FOR LARGE WORKPIECES

VT-950+/1150+ vertical turning centers are the ideal machines for your large size applications. With the precision hand scraped and polished guide way system in all axes, the unique one piece machine bed design, this vertical centers are rigid and built to absorb vibration and best stability. Hwacheon's advanced air floating system keeps the operation stable and allows for smoothest operations.

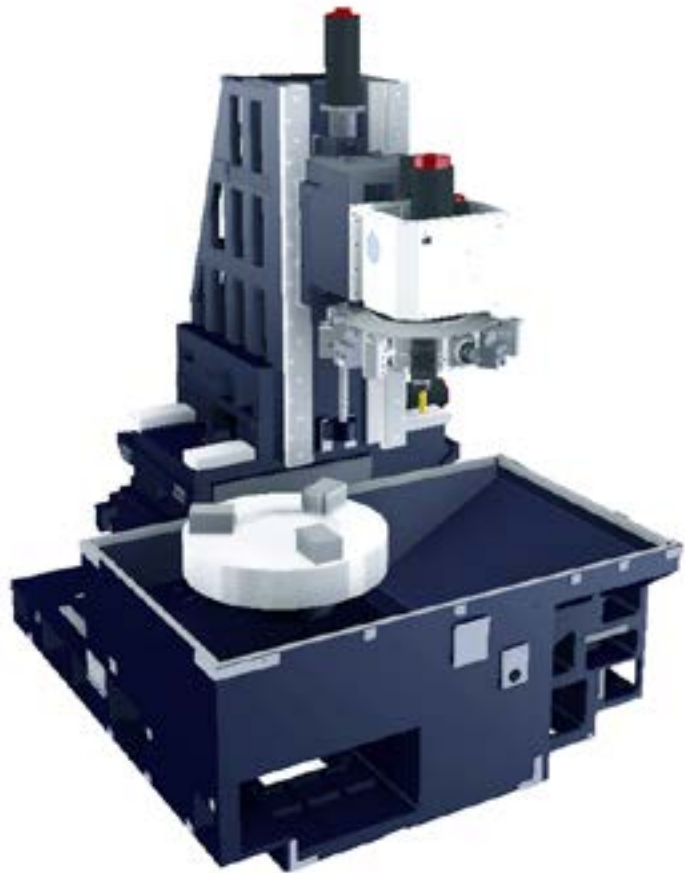




Box Way Design Including Air Floating System

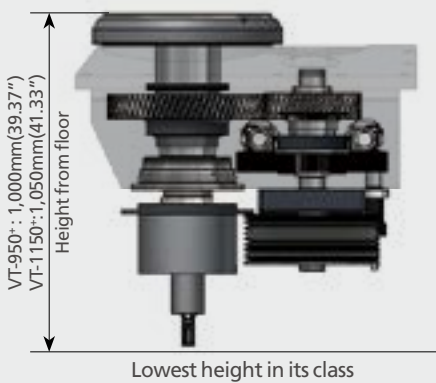
The solid box way guide design used for all axes plus Hwacheon's proprietary air floating technology limit's vibrations and displacement which may occur from the friction heat.

Extra Rigid Machine Structure



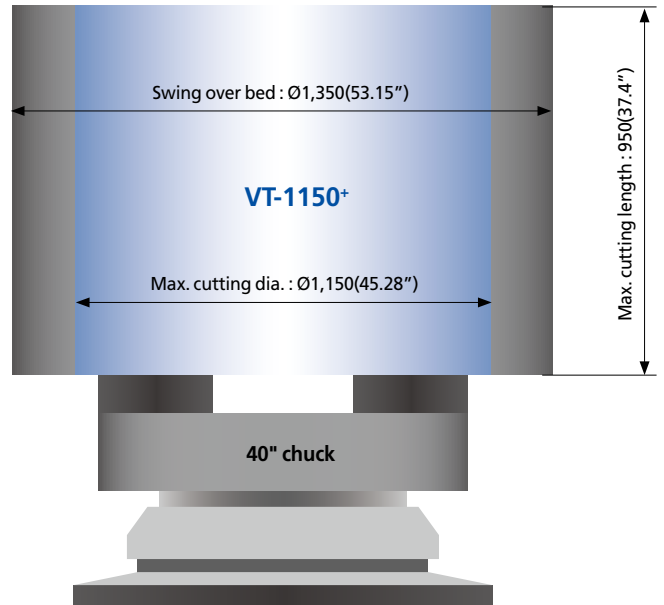
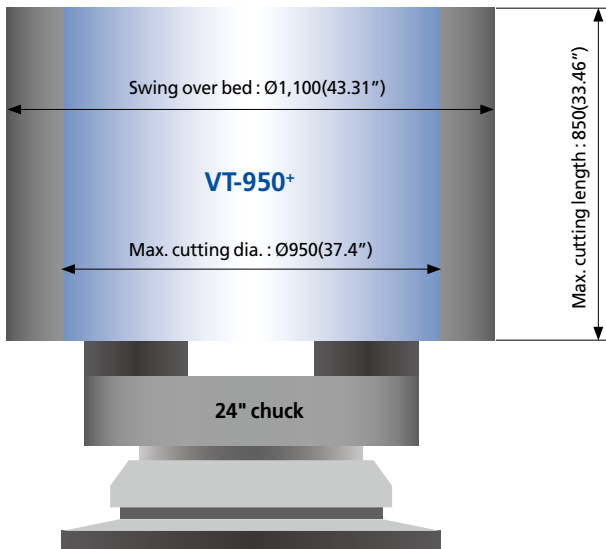
High Performance Integrated Gear System

The high performance spindle with a built-in high torque gear offers extra high torque at low speed operations and stability as well as precision.



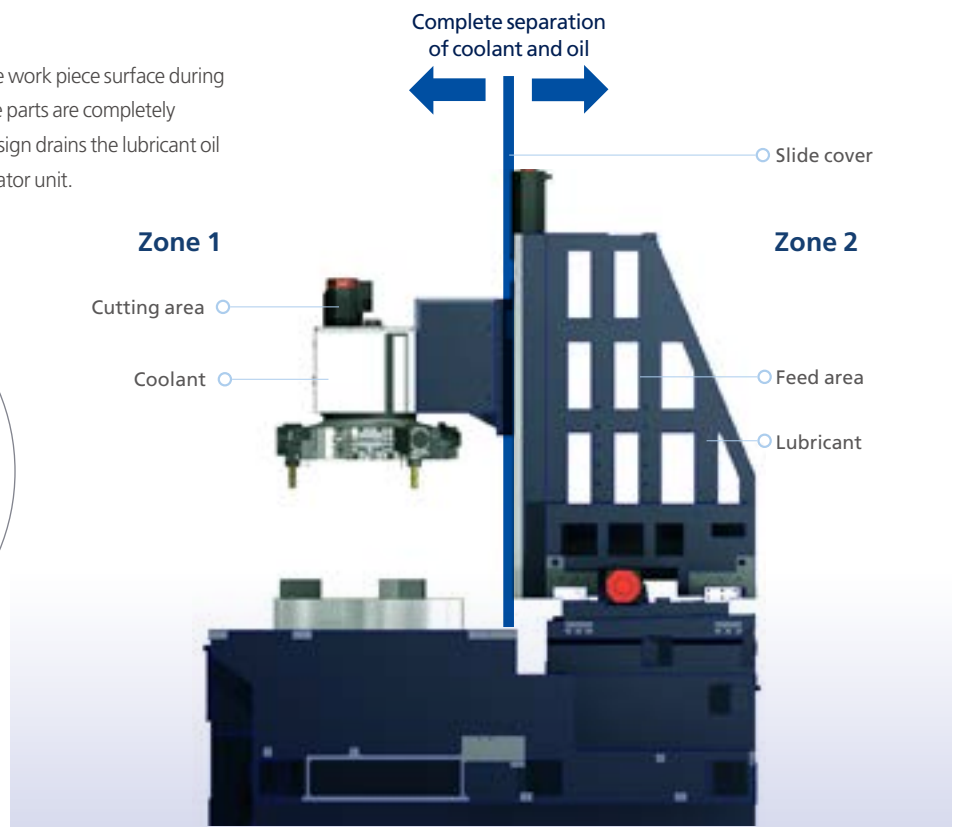
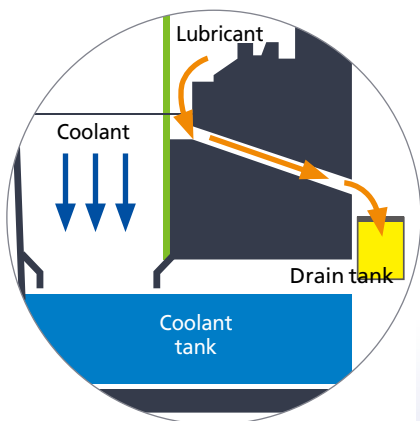
Interference Free Operation

The max. turning diameter zone is designed to provide interference free operations. Providing same max. diameter at full length even on larger work pieces.



Environment-Friendly Design

To prevent the lubrication oil from dripping on the work piece surface during dry cutting, the cutting area and moving machine parts are completely separated. The environment-friendly machine design drains the lubricant oil separately and is eliminating the need for a separator unit.



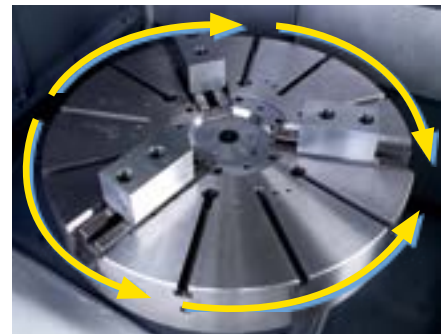


USER FRIENDLY DESIGN, A WIDE RANGE OF OPTIONAL FEATURES

VT-950+/1150+ vertical turning centers are designed with the user in mind. The user-friendly machine design and a variety of supplementary features make for stronger, faster, and more precise machining performance.

Fast Chip Removal

The wide, sloped slide cover design and the chip flushing at each side of the table remove the chips quickly and effectively.



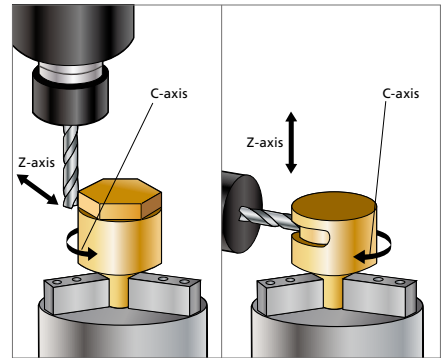
Coolant Bed Flushing

Best milling performance in its class

The milling system of the VT-950+ and 1150+ is powered by a high output spindle motor, the C-axis with 0.001-degree indexing allows the functionalities of a complete machining center in three axis simultaneously.

VT-950+/1150+ vertical turning centers perform turning, milling, drilling and tapping in one setting.

		VT-950+	VT-1150+
Capacity	Drilling End milling	Ø32mm(Ø1.25")	
	Tapping	M24	



Turnmill(Optional)

L-HTLD: Hwacheon Lathe Tool Load Detect System (Option)



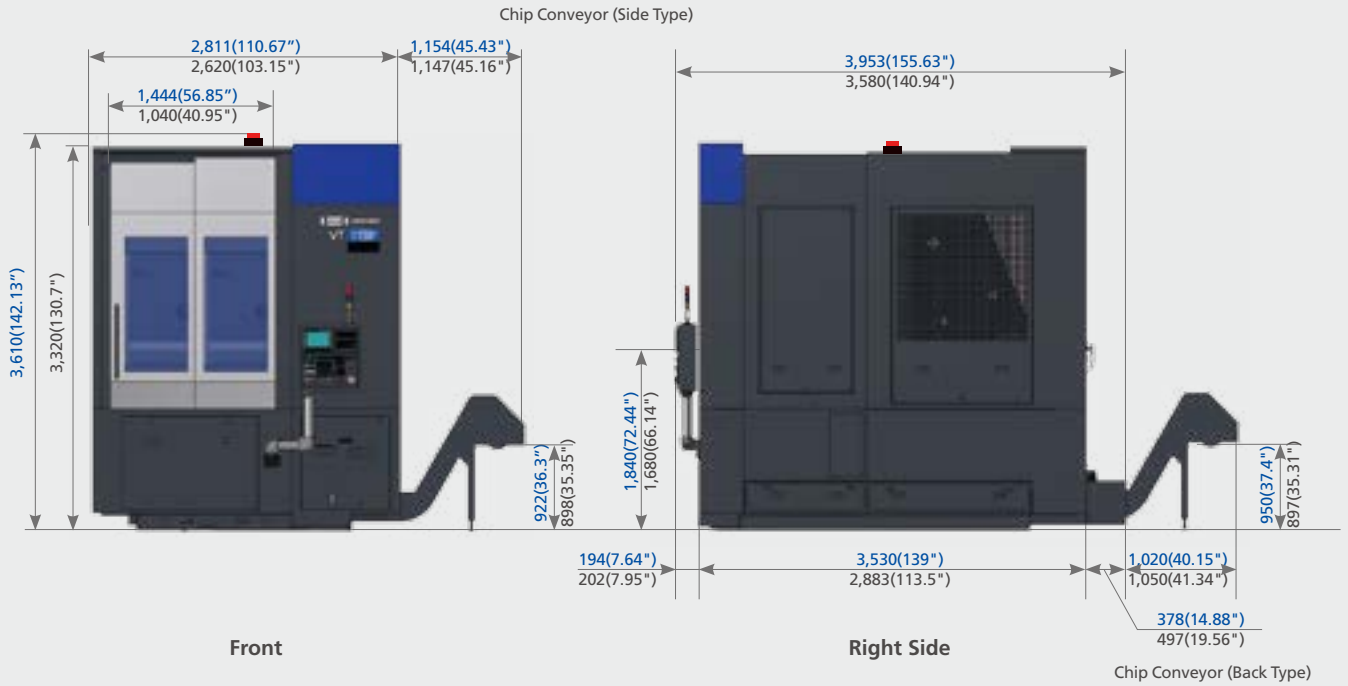
The Hwacheon Lathe Tool Load Detect System constantly detects and diagnoses the tool load under a process to prevent tool wear and damage, and to keep your machine and tools in optimal shape.

Load Detection Limit 1	Load Detection Limit 2
Alarm + Feed Hold	Alarm + Machine Stop
> When the LIMIT 1 Alarm sounds, the system holds the feed and the machine goes into standby.	> When the LIMIT 2 Alarm sounds, the system stops the machine, and must be reset to operate it.

Product Data

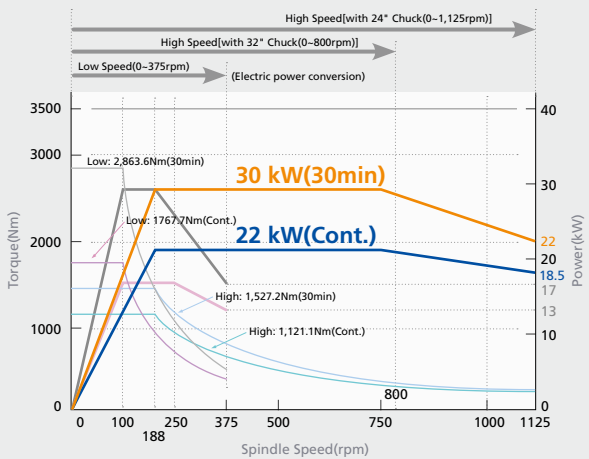
■ VT-950+ ■ VT-1150+

* Unit: mm(inch)

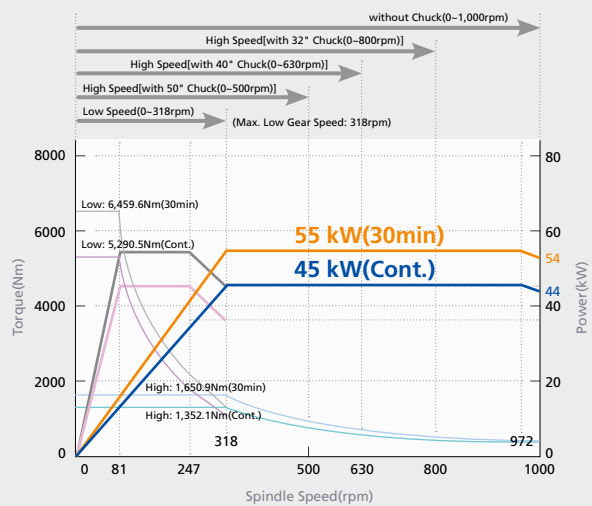


Spindle Power-Torque Diagram

VT-950+(STD)



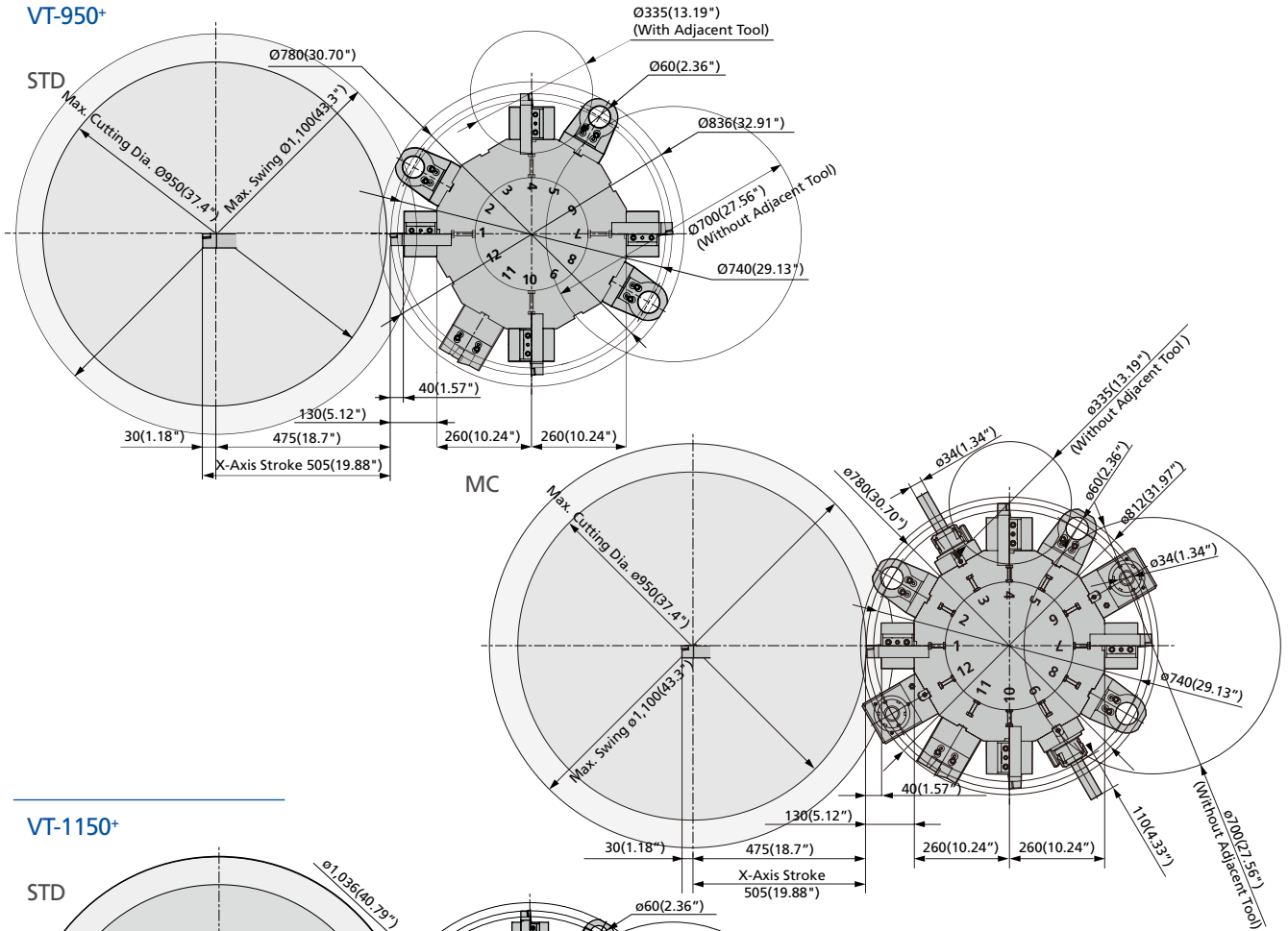
VT-1150+(STD)



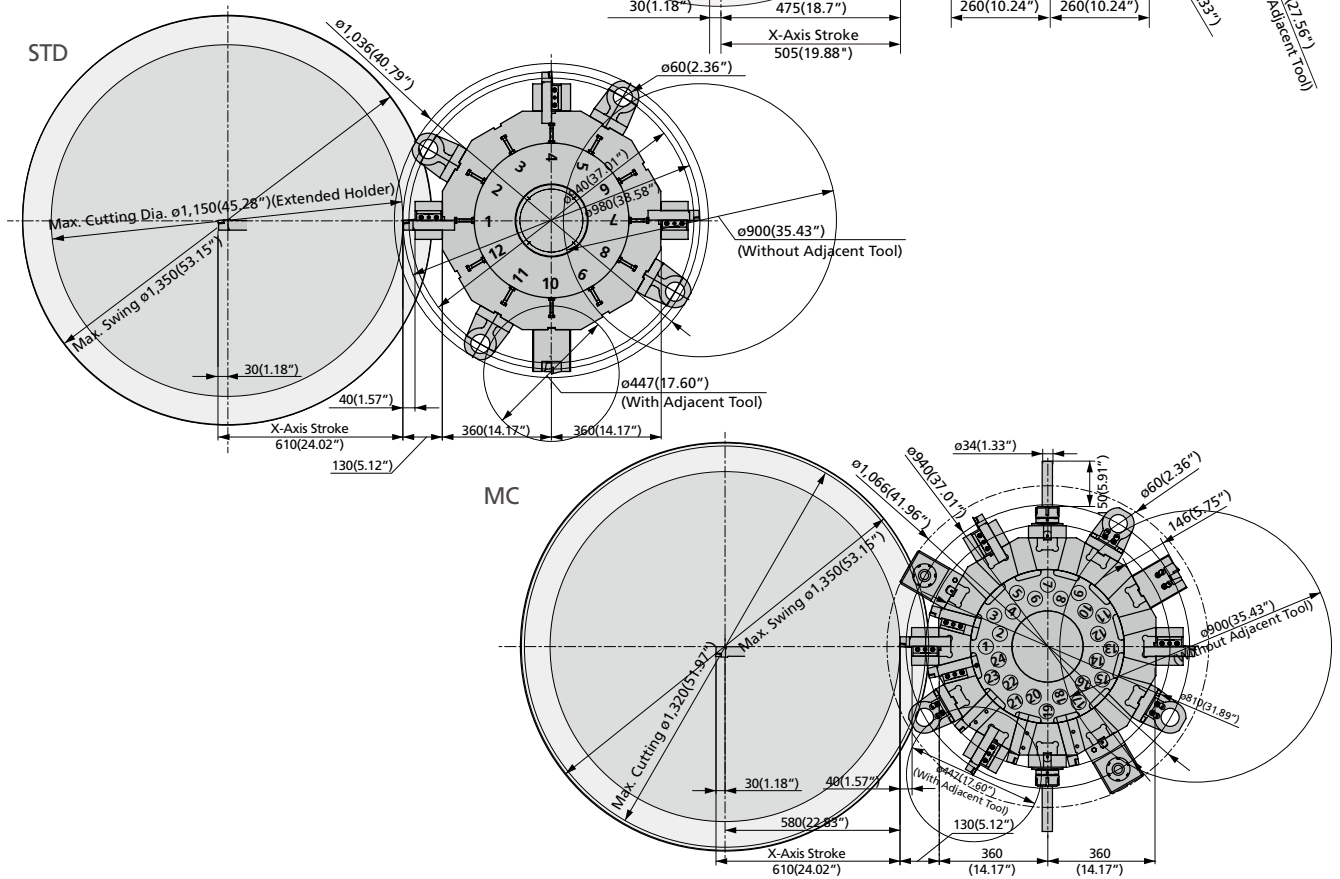
Tool Interference Diagram

※ Unit : mm(inch)

VT-950+



VT-1150+

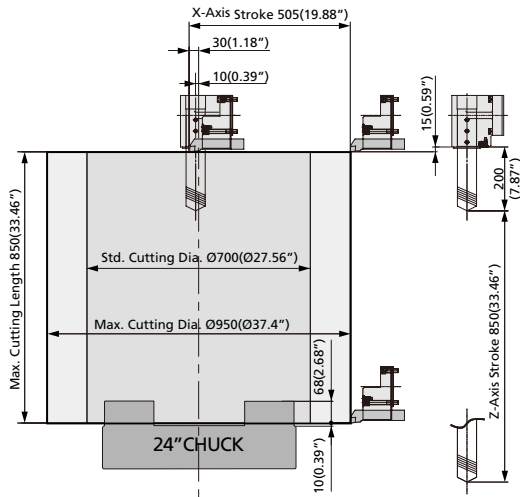


Moving Range

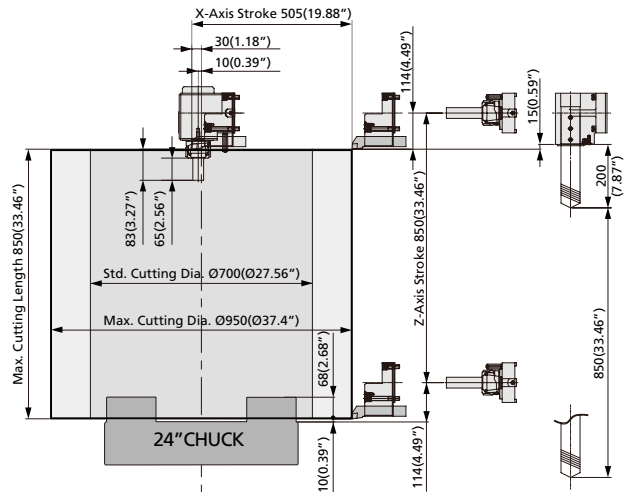
※ Unit: mm(inch)

VT-950+

STD

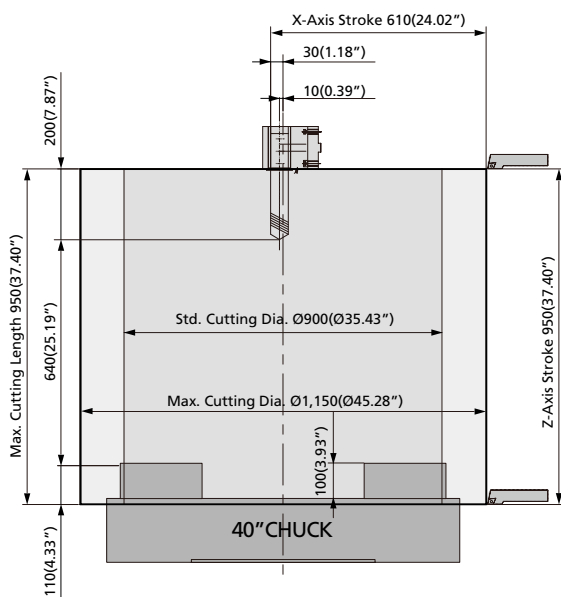


MC

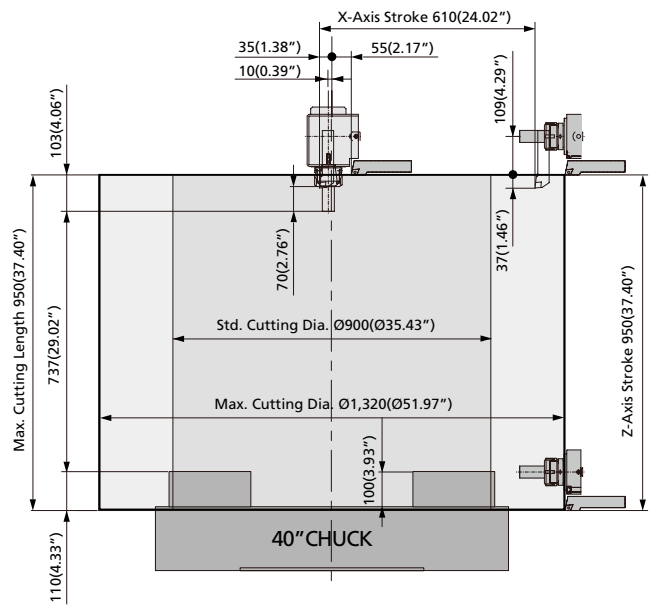


VT-1150+

STD

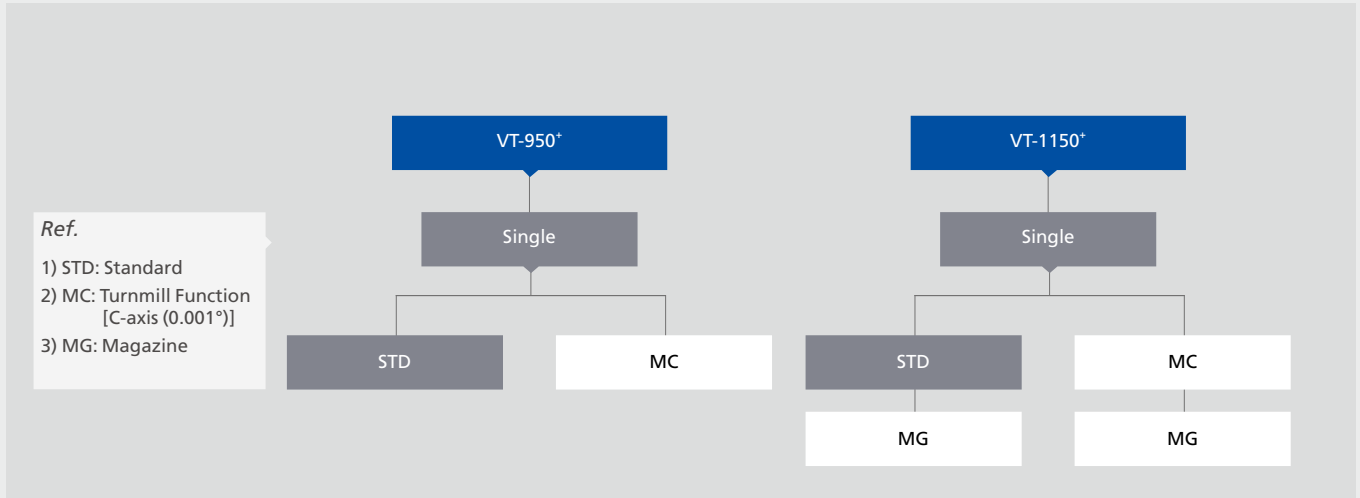


MC



Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM		VT-950+	VT-950+MC	VT-1150+[MG]	VT-1150+[MG/MC]
Capacity					
Swing over Bed	mm(inch)	Ø1,100 (43.31")		Ø1,350 (53.15")	
Max. Cutting Diameter	mm(inch)	Ø950 (37.40")		Ø1,150 (45.28")	MC: Ø1,320(51.97") [MG/MC : Ø1,150(45.28")]
Standard Cutting Diameter	mm(inch)	Ø700 (27.56")		Ø900 (35.43")	
Max. Cutting Length	mm(inch)	850 (33.46")		950 (37.40")	
Chuck Size	inch	24"(Opt.: 32")		40"(Opt.: 32" / 50")	
Spindle					
Type of Spindle Nose	-	Ø380 Flat		Ø520 Flat	
Max. Spindle Speed	rpm	1,125		630	
Spindle Bearing Inner Diameter	mm(inch)	Ø240 (9.44")		Ø240 (9.44")	
Spindle Motor	kW(HP)	30 / 22 (40 / 30)		55 / 45 (73.5 / 60)	
Turret					
Number of Tool Station	ea	12		12	12(MG16) MC: 24 [MG/MC: 12(MG16)]
Tool Size	mm(inch)	□32 x Ø60 (□1.25" x Ø2.5")		□32 x Ø60 (□1.25" x Ø2.5")(MG Type : Holder Opt.)	
Turret Indexing Time	sec/step	0.18		0.2	
Axes					
Rapid Speed (X/Z)	m/min(ipm)	24 / 24(944.88/944.88)		24 / 20(944.88/787.4)	
Max. Stroke (X/Z)	mm(inch)	505 / 850 (19.88" / 33.46")		610 / 950 (24.02" / 37.40")	
Feed Motor (X/Z)	kW(HP)	7.0 / 9.0 (9.5 / 12)		6.0 / 9.0 (8 / 12)	
Turnmill (Opt.)					
Spindle Motor	kW(HP)	-	Opt 1: 7.5 / 5.5 (10 / 7.5) Opt 2: 11 / 7.5 (15 / 10)	-	7.5 / 5.5 (10 / 7.5) [Opt : 11 / 7.5 (15 / 10)]
Max. Spindle Speed	rpm	-	3,000	-	3,000
Max. Drill/Tap Size	mm	-	Ø32 (1.25") / M24	-	Ø32 (1.25") / M24
Min. Index Angle	°(deg)	-	0.001°	-	0.001°
Tank Capacity					
Lubrication	ℓ (gal)	12 (3.17)		12 (3.17)	
Hydraulic	ℓ (gal)	50 (13.21)		50 (13.21)	
Coolant	ℓ (gal)	266 (70.26)		266 (70.26)	
Power Sources					
Electrical Power Supply	kVA	75		100	
Dimension					
Height	mm(inch)	3,320 (130.71")		3,610 (142.13")	
Floor Space (LxW)	mm(inch)	2,620 x 3,580 (103.15" x 140.94")		2,811 x 3,953 (110.67" x 155.63")	3,531 x 3,953 (139" x 155.63") MC: 2,811 x 3,953 (110.67" x 155.63") [MG/MC: 3,531 x 3,953 (139" x 155.63")]
Weight	kg.(lb.)	15,000 (33,069)	15,100 (33,290)	24,000 (52,911)	25,100(55,336) MC: 24,100 (53,131) [MG/MC: 25,200 (55,556)]
NC Controller Fanuc Oi-TF					

Standard and Optional product components

■ Common ■ VT-950+ ■ VT-1150+

Standard Accessories		Optional Accessories	
• Air Gun	• Manual & Parts List	• Air Blower	• Mist Collector
• Chuck Pressure Compensation	• Manual Guide i	• Auto Door	• NC Cooler
• Coolant System	• Set of Soft Jaws (24")	• Chip Conveyor & Bucket, Back Type / Side Type	• Set of Hard Jaws - 32"
• Door Interlock	• Set of Soft Jaws (40")	• Chuck Dual Pressure System	• Set of Hard Jaws - 32" / 40" / 50"
• Foot Switch	• Signal Lamp with 2 Colors (R, G)	• Chuck Pressure Check Switch	• Signal Lamp with 3 Colors (R,G,Y)
• High Pressure Pump (6bar)	• Spindle Cooling System	• Chuck Pressure Compensation	• Tool & Work Counter, External / Internal
• Hydraulic Chuck & Cylinder (24" Solid)	• Tool Kit & Box	• Coolant Gun	• Tool Life Management
• Hydraulic Chuck & Cylinder (40" Solid)	• Tooling System	• Gap 120mm	• Tool Presetter (Automatic)
• Hydraulic Unit 40kg/cm ²	• Turret 12 Station	• High Pressure Pump 15bar	• Transformer
• Leveling Bolt & Plate	• Work Light	• Hydraulic Chuck, 32" / 50" Solid	• Turnmill Function Including C-axis (0.001")
• Lubrication Unit	• 10.4" Color LCD	• Independent Chuck, 32" (4-jaw)	- Opt 1 : α6 / 10,000i Motor
		• Independent Chuck, 40" / 50" (4-jaw)	- Opt 2 : α8 / 10,000i Motor
		• L-HTLD (Lathe-Hwacheon Tool Load Detect)	- 7.5/5.5kW (10/7.5HP)[Opt : 11/7.5kW(15/10HP)]
		• Linear Scale (X / Z)	• Turnmill Holder, Axial / Radial
		• Magazine 16 Tools	• U-Drill Holder
			• 15" Color LCD (only FANUC)




NC Specifications [Fanuc0i-TF]

* : Not available S : Standard O : Option

ITEM	SPECIFICATION	STD	MC
Controlled axis			
Controlled axis (Cs axis)	2-Axes	2-Axes	3-Axes
Simultaneously controlled axes	2-Axes	2-Axes	3-Axes
Least input increment	0.001mm, 0.001deg, 0.0001inch	S	S
Least input increment 1/10	0.0001mm, 0.0001deg, 0.00001inch	O	O
inch/metric conversion	G20, G21	S	S
Stored stroke check 1,2,3		S	S
Chamfering on/off		S	S
Backlash compensation		S	S
Operation			
Automatic & MDI operation		S	S
Program number search		S	S
Sequence number search		S	S
Dry run, single block		S	S
Manual handle feed	1Unit	S	S
Manual handle feed rate	x1, x10, x100	S	S
Interpolation function			
Positioning	G00	S	S
Linear interpolation	G01	S	S
Circular interpolation	G02, G03	S	S
Dwell (Per seconds)	G04	S	S
Polar coordinate interpolation	G12.1 / G13.1	-	S
Cylindrical interpolation	G7.1	-	S
Threading	G32	S	S
Multiple threading		S	S
Threading retract		S	S
Continuous threading		S	S
Variable lead threading	G34	S	S
Reference position return 1st	G28	S	S
Reference position return check	G27	S	S
2,3,4th reference position return	G30	S	S
Feed function			
Rapid traverse override	F0, F25, F50, F100	S	S
Feed per minute (mm/min)	G98	S	S
Feed per revolution (mm/rev)	G99	S	S
Rapid traverse bell-shaped acceleration/deceleration		S	S
Feedrate override	0 - 150 %	S	S
Jog feed override	0 - 1,260 mm/min	S	S
Program input			
Tape code	EIA / ISO	S	S
Optional block skip	9ea	S	S
Program number	O4-Digits	S	S
Sequence number	N8-Digits	S	S
Decimal point programming		S	S
Coordinate system setting	G50	S	S
Coordinate system shift		S	S
Workpiece coordinate system	G54 - G59	S	S
Workpiece coordinate system preset	G92.1	S	S
Direct drawing dimension programming		S	S
G code system	A	S	S

ITEM	SPECIFICATION	STD	MC
Program input			
Programmable data input	G10	S	S
Sub program call	10 folds nested	S	S
Custom macro B		S	S
Addition of custom macro -common variables	#100-#199, #500-#999	S	S
Canned cycles		S	S
Multiple repetitive cycle		S	S
Multiple repetitive cycle II		S	S
Canned cycles for drilling		S	S
Manual Guide i		S	S
Spindle speed function			
Constant surface speed control	G96 / G97	S	S
Spindle override	50 - 120%	S	S
Spindle orientation		S	S
Rigid tapping		O	S
Spindle synchronous control		-	-
Tool function / compensation			
Tool function	T4-digits	S	S
Tool offset pairs	128pairs	S	S
Tool nose radius compensation		S	S
Tool geometry/wear compensation		S	S
Tool life management		O	O
Automatic tool offset	Tool presetter option is required	O	O
Direct input tool offset value measured B	Tool presetter option is required	O	O
Editing operation			
Part program storage length	1,280m(512kB)	S	S
Number of register able programs	400ea	S	S
Background editing		S	S
Extended part program editing		S	S
Play back		S	S
Operation/Display			
Clock function		S	S
Self-diagnosis function		S	S
Alarm history display		S	S
Help function		S	S
Run hour and parts count display		S	S
Graphic function		S	S
Dynamic Graphic display		O	O
Multi-language display	English, German, French, Italian, Chinese, Spanish, Korean, Portuguese, Polish, Hungarian, Swedish, Russian	S	S
Data input/output			
Reader/Puncher interface CH1	RS232C	S	S
Reader/Puncher interface CH2	RS232C	S	S
Ethernet interface	Embedded Ethernet	S	S
Memory card interface		S	S
USB card interface		S	S
Others			
Display unit	10.4" Color LCD	S	S

Hwacheon Global Network

 Hwacheon Headquarter  Hwacheon America  Hwacheon Europe  Hwacheon Asia



HWACHEON

Please call us for product inquiries.

www.hwacheon.com

The product design and specifications may change without prior notice.
Read the operation manual carefully and thoroughly before operating the product,
and always follow the safety instructions and warnings labels attached on the surfaces of the machines.

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