

VT-950⁺/1150⁺

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

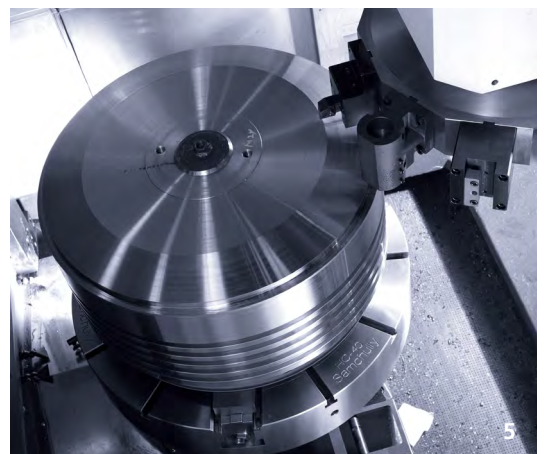
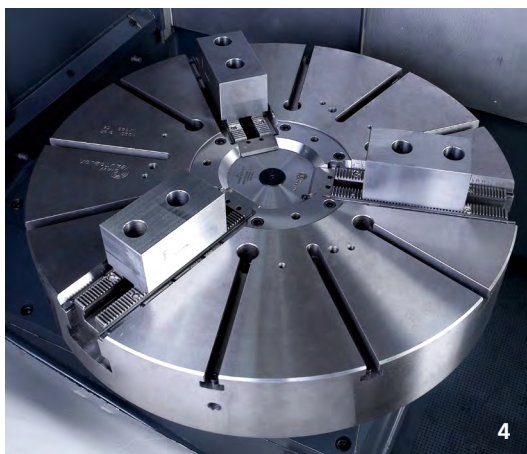
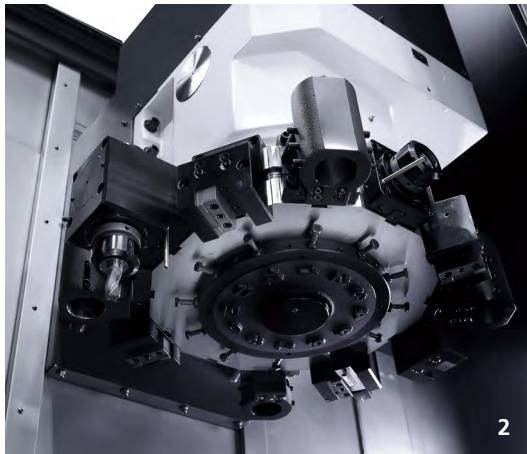




LARGE SIZE VERTICAL TURNING CENTER BUILT IN GEAR BOX WITH 24"-50" CHUCK

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.

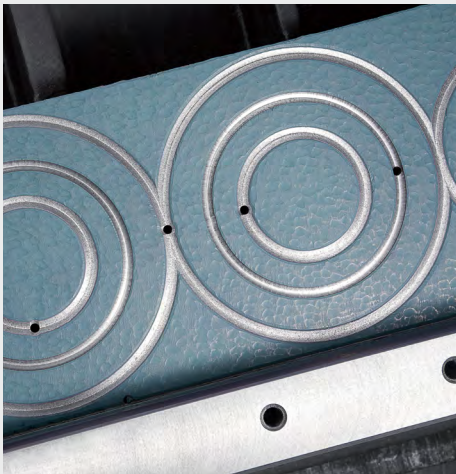
1 Valve / Plant Industry / SCM415 2 BMT85 Turret for Turnmill
3 Flange / Sample / SM45C 4 50" Chuck 5 Piston / Shipment / FCD700



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.

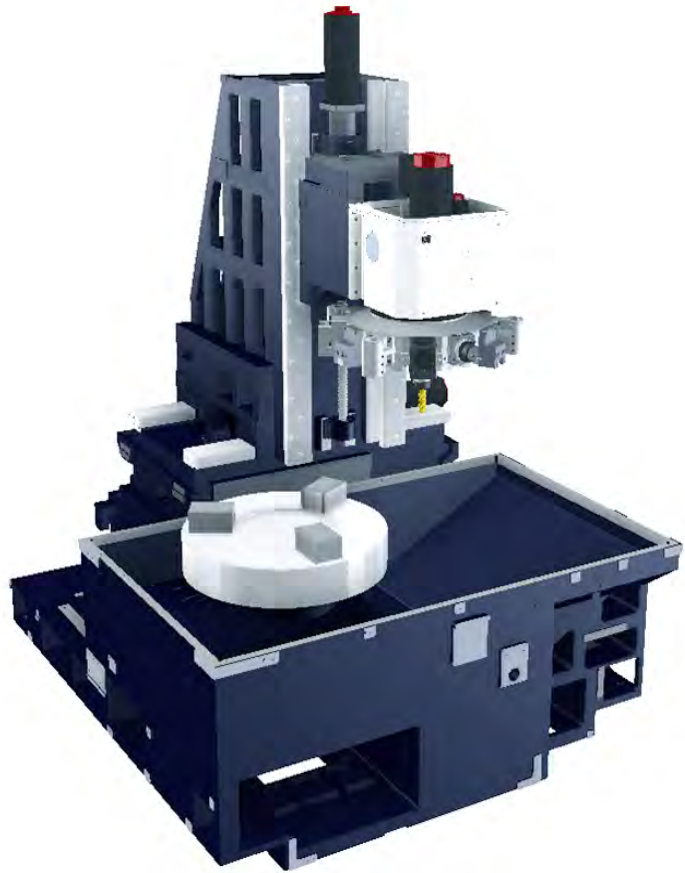




Box Way Design Including Air Floating System

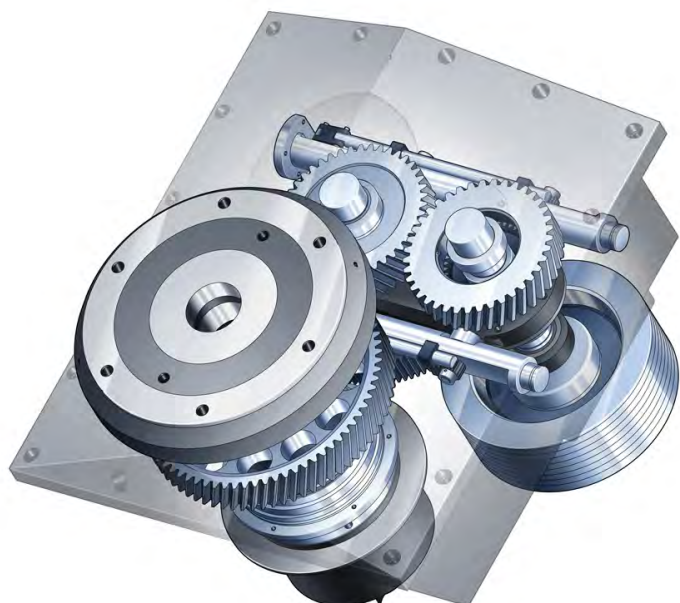
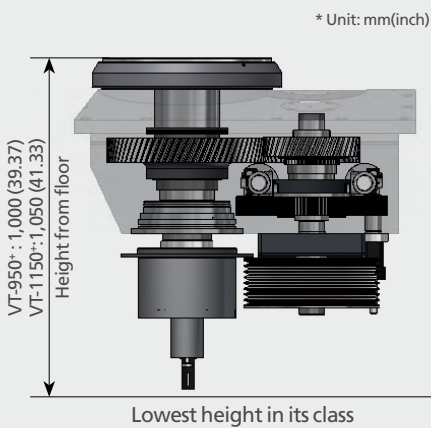
The solid box way guide design used for all axes plus Hwacheon's proprietary air floating technology limit's vibrations and displacement which may occur from the friction heat.

Extra Rigid Machine Structure



High Performance Integrated Gear System

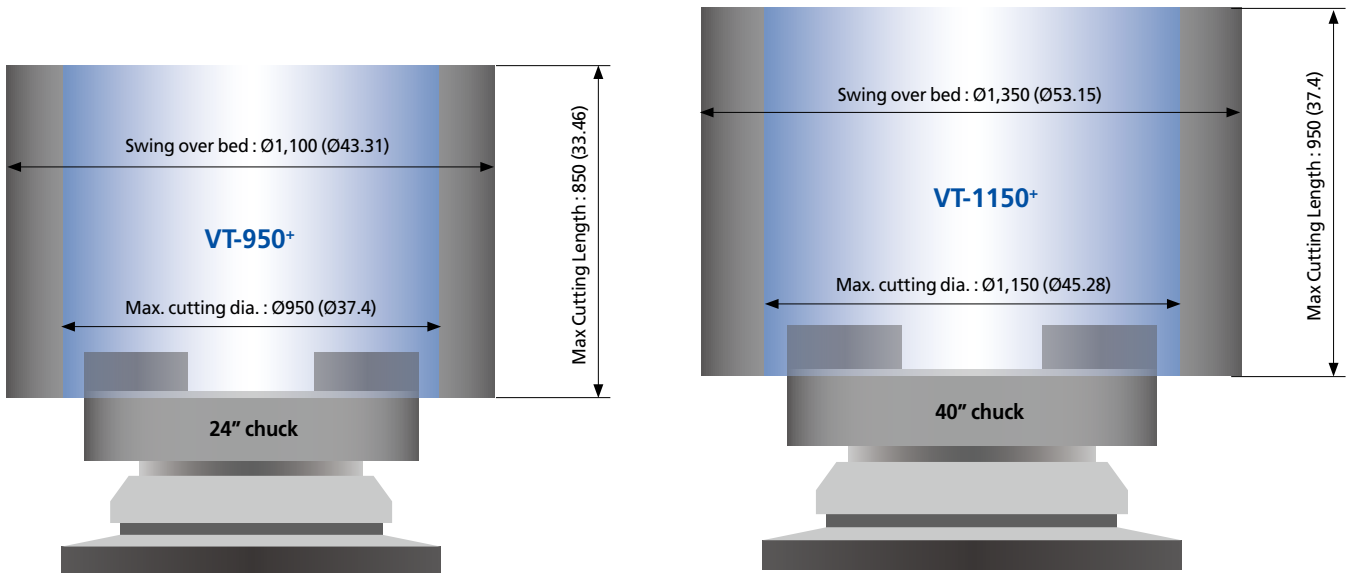
The high performance spindle with a built-in high torque gear offers extra high torque at low speed operations and stability as well as precision.



Interference Free Operation

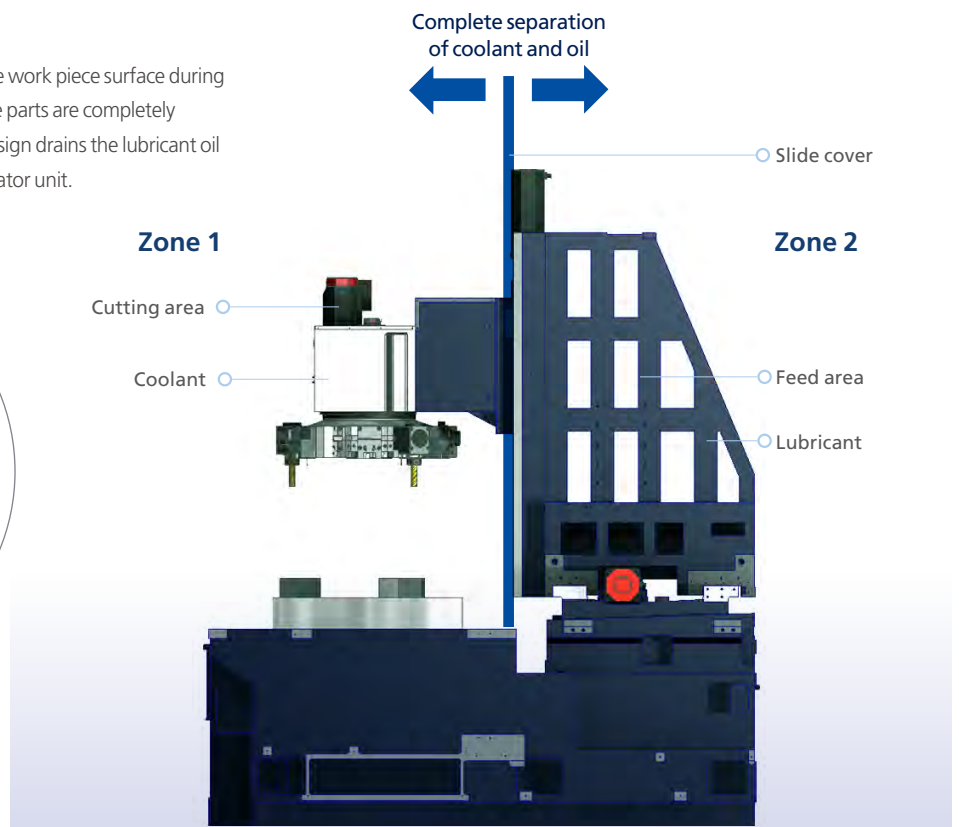
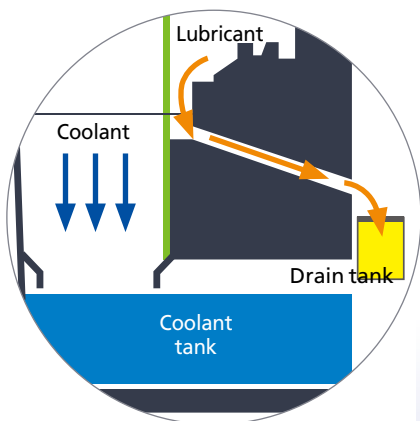
The max. turning diameter zone is designed to provide interference free operations. Providing same max. diameter at full length even on larger work pieces.

* Unit: mm(inch)



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.



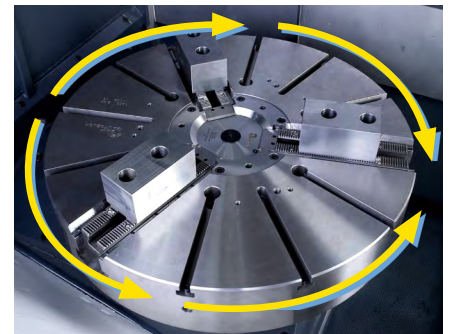


USER FRIENDLY DESIGN, A WIDE RANGE OF OPTIONAL FEATURES

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.

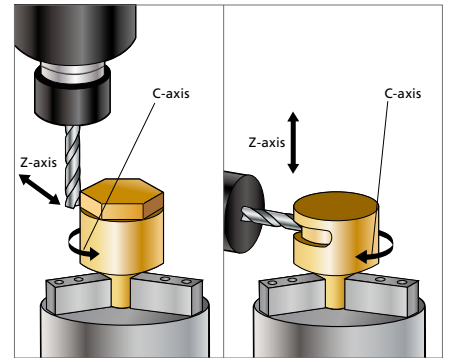


Coolant Bed Flushing

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 0.0001-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.



Turnmill(Optional)

		VT-950+	VT-1150+
Capacity	Drilling End milling	Ø32 mm (Ø1.25 inch)	
	Tapping	M24	M24 (Turnmill Spindle Motor 7.5 / 5.5 kW) M30 (Turnmill Spindle Motor 11 / 7.5 kW)

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



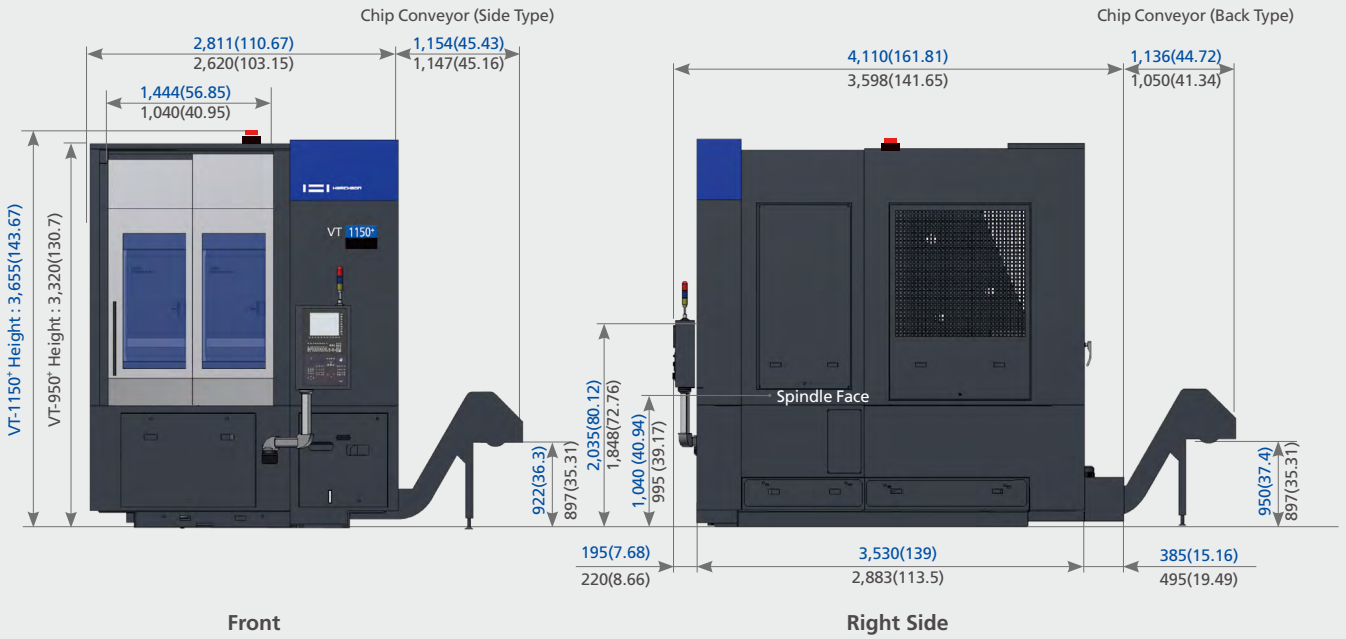
The Hwacheon Lathe Tool Load Detect System constantly detects and diagnoses the tool load under a process to prevent tool wear and damage, and to keep your machine and tools in optimal shape.

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.

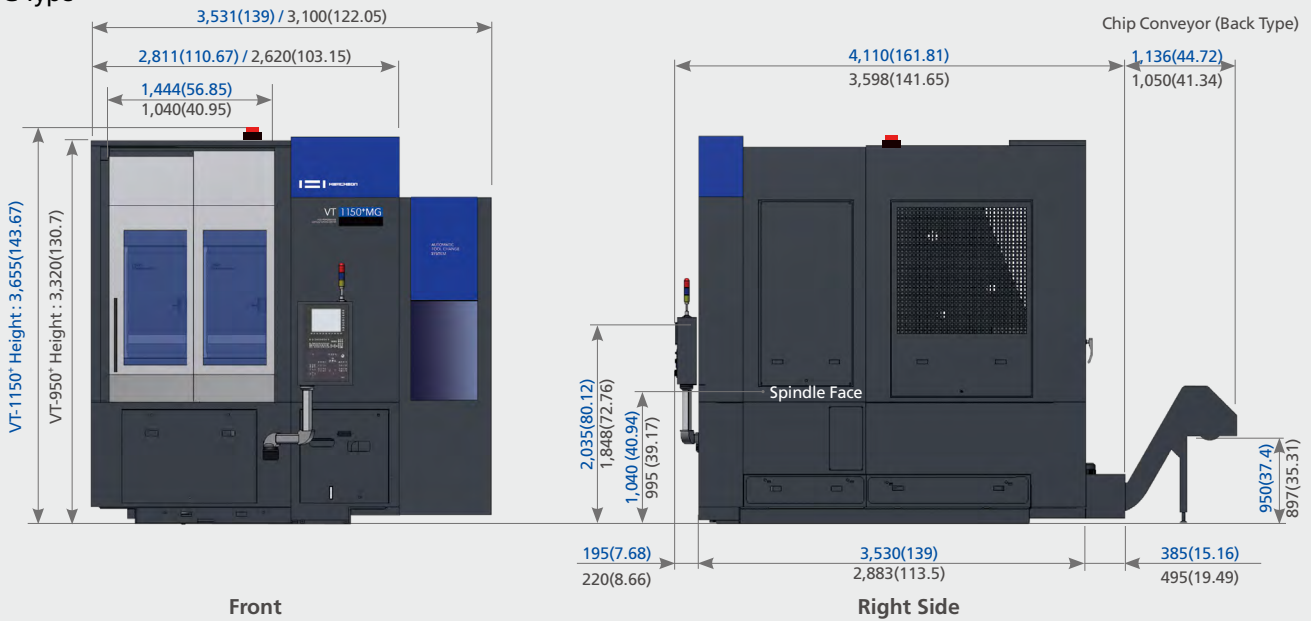
Product Data

■ VT-950+ ■ VT-1150+

* Unit: mm(inch)

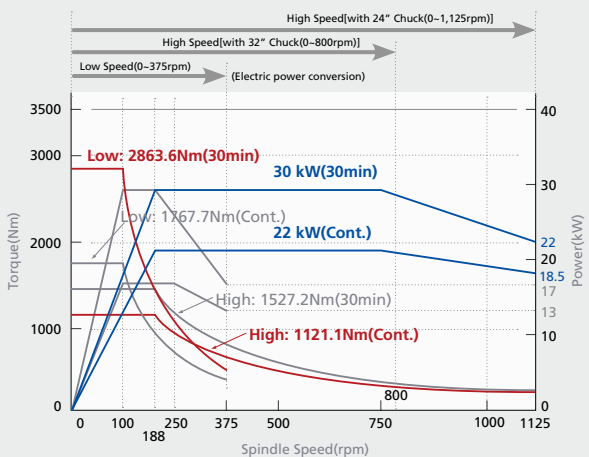


MG Type

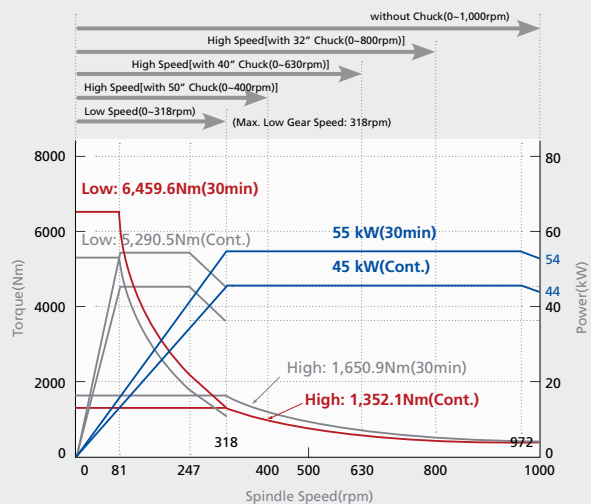


Spindle Power-Torque Diagram

VT-950+(STD)



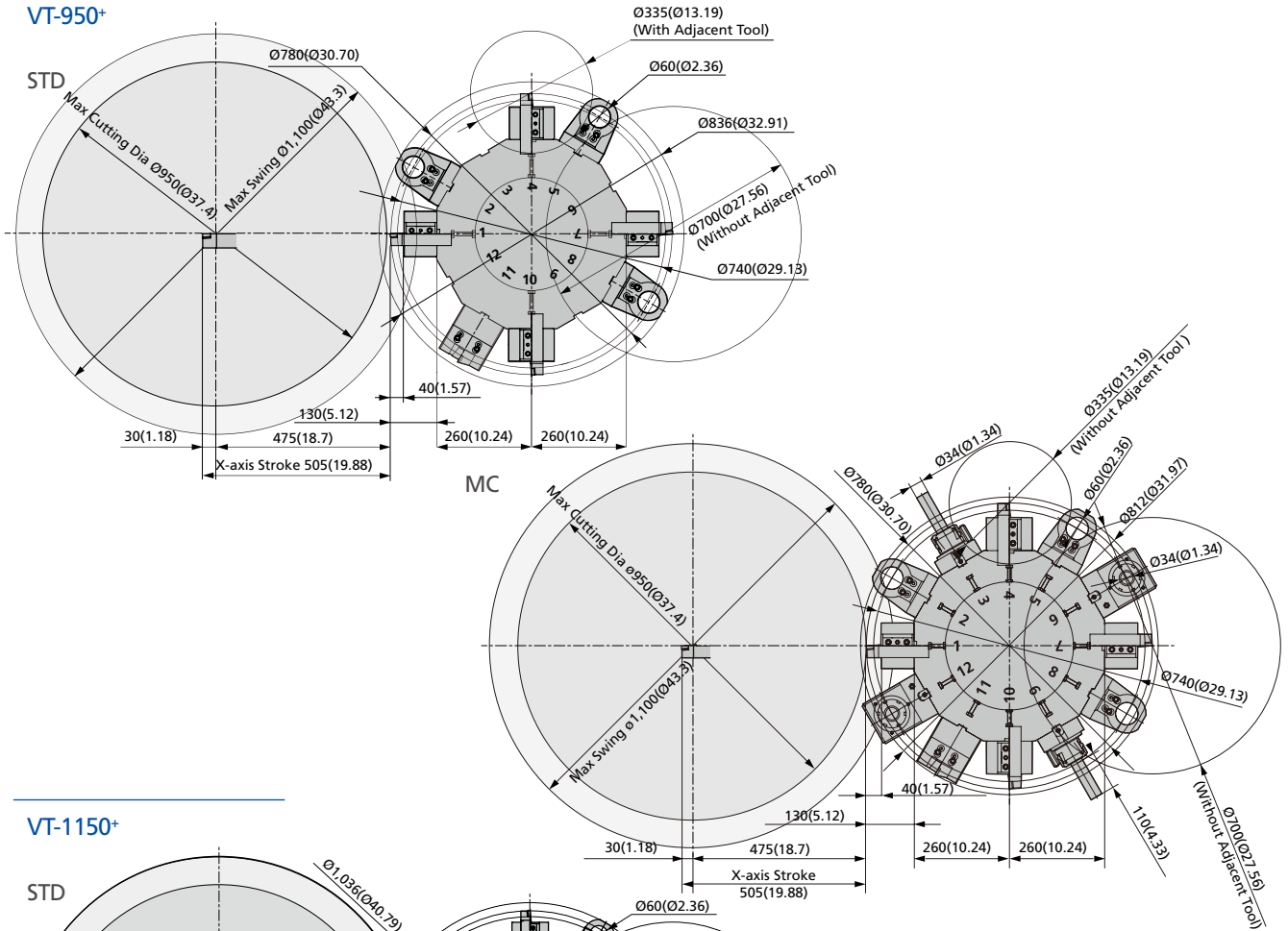
VT-1150+(STD)



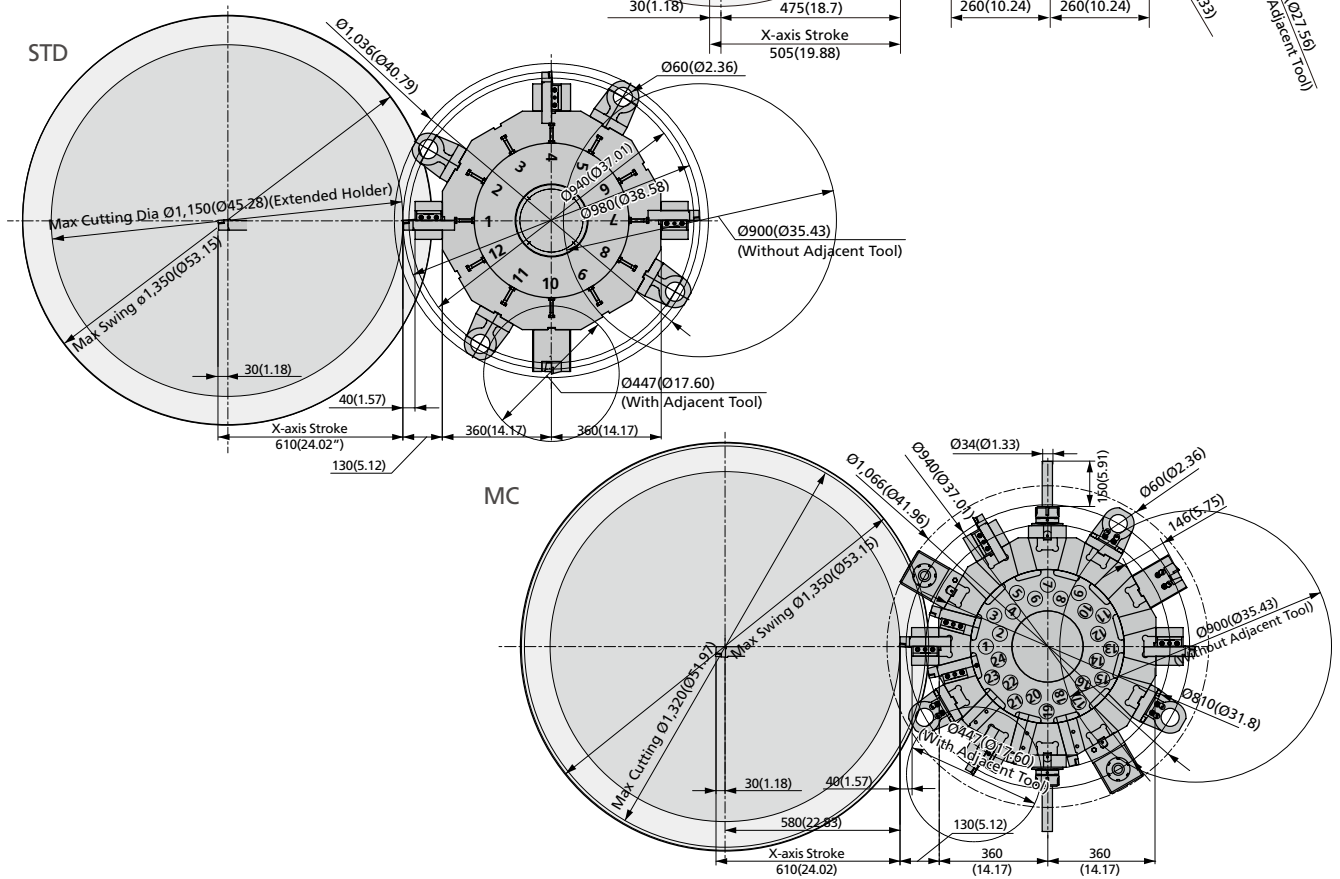
Tool Interference Diagram

※ Unit : mm(inch)

VT-950+



VT-1150+

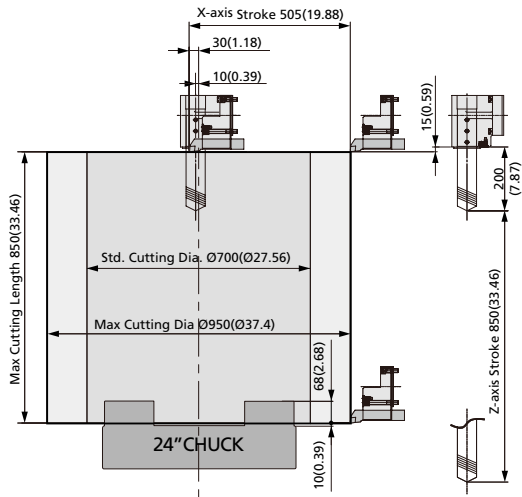


Moving Range

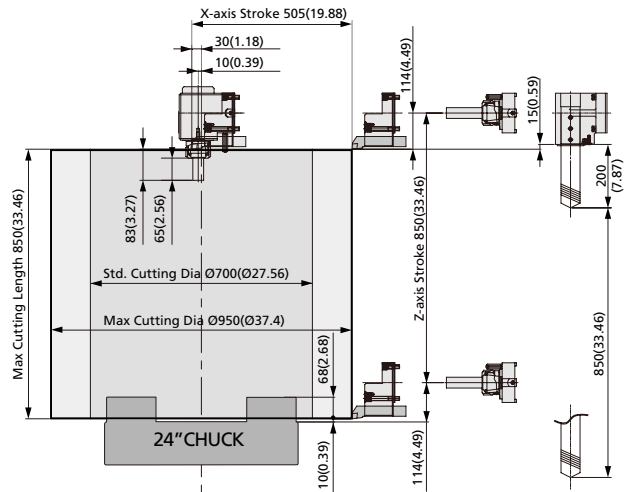
※ Unit : mm(inch)

VT-950+

STD

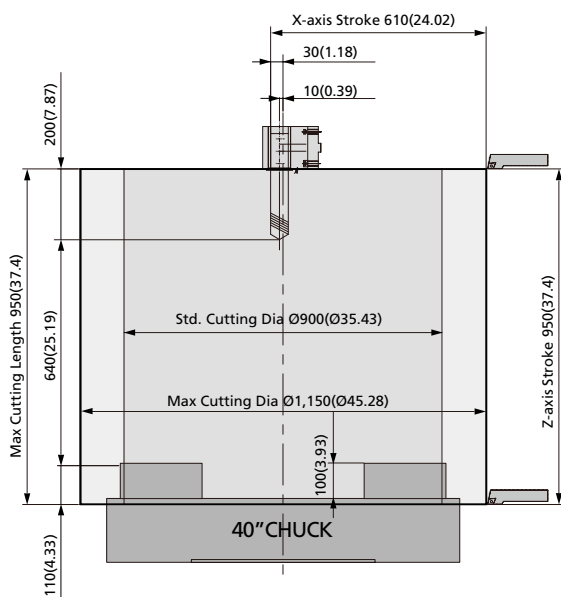


MC

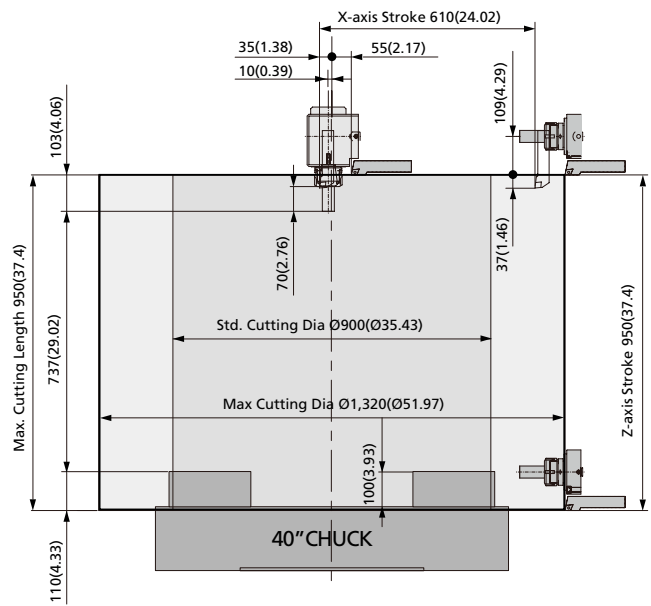


VT-1150+

STD

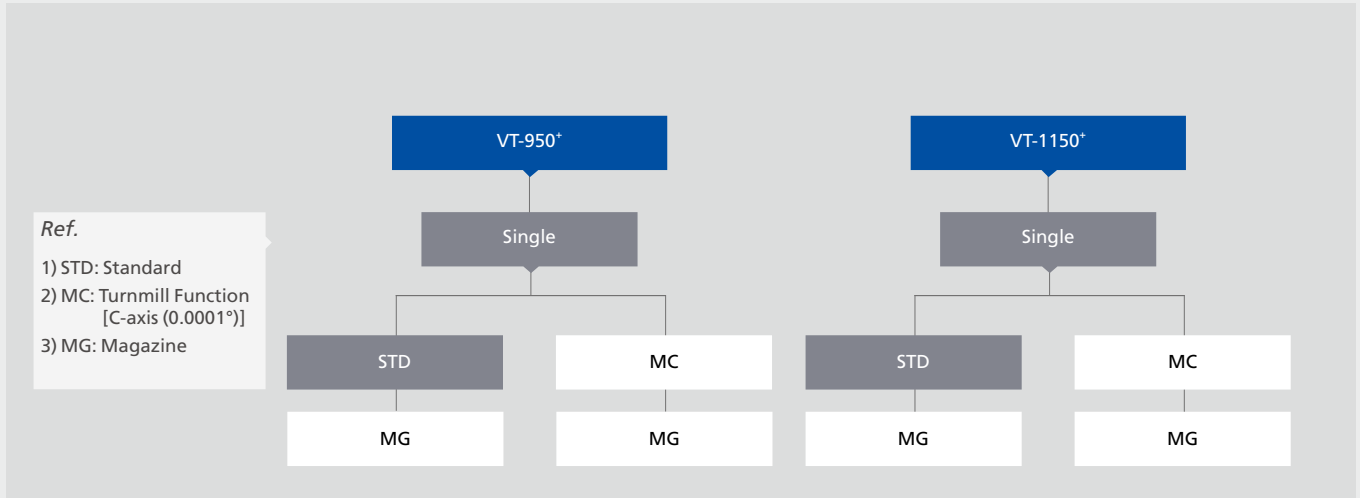


MC



Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM		VT-950*	VT-950*MG	VT-950*/MC	VT-950*/MG/MC	VT-1150*	VT-1150*MG	VT-1150*/MC	VT-1150*/MG/MC
Capacity									
Swing over Bed	mm(inch)	Ø1,100 (Ø43.31)				Ø1,350 (Ø53.15)			
Max Cutting Diameter	mm(inch)	Ø950 (Ø37.4)				Ø1,150 (Ø45.28)		Ø1,320 (Ø51.97)	Ø1,150 (Ø45.28)
Standard Cutting Diameter	mm(inch)	Ø700 (Ø27.56)				Ø900 (Ø35.43)			
Max Cutting Length	mm(inch)	850 (33.46)				950 (37.4)			
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 (Opt.1 : 1,500 / Opt.2 : 1,125 / Opt.3 : 800)				630			
Spindle Bearing Inner Diameter	mm(inch)	Ø240 (Ø9.44)				Ø240 (Ø9.44)			
Spindle Motor	kW(HP)	30 / 22 (40 / 30) [Opt. 45 / 37 (60 / 50)]				55 / 45 (73.5 / 60)			
Turret									
Number of Tool Station	ea	12	10 (MG16)	12	10 (MG16)	12	Capto C6:12 Capto C8:10 (MG16)	24	Capto C6:12 Capto C8:10 (MG16)
Tool Size	mm(inch)	□32 x Ø60 (□1.25 x Ø2.5)(MG Type : Holder Opt.)				□32 x Ø60 (□1.25 x Ø2.5)(MG Type : Holder Opt.)			
Turret Indexing Time	sec/step	0.18				0.2			
Axes									
Rapid Traverse (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 / 37.4)			
Feed Motor (X/Z)	kW(HP)	7.0 / 9.0 (9.5 / 12)				6.0 / 9.0 (8 / 12)			
Turnmill									
Spindle Motor	kW(HP)	-		7.5 / 5.5 (10 / 7.5) [Opt.: 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(inch)	-		Ø32 (Ø1.25) / M24		-		Ø32 (Ø1.25) / M24 , M30	
Min Index Angle	deg	-		0.0001		-		0.0001	
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	85				100			
Dimension									
Height	mm(inch)	3,320 (130.71)				3,655 (143.67)			
Floor Space (LxW)	mm(inch)	2,620 x 3,598 (103.15 x 141.65)	3,100 x 3,598 (122.05 x 141.65)	2,620 x 3,598 (103.15 x 141.65)	3,100 x 3,598 (122.05 x 141.65)	2,811 x 4,110 (110.67 x 161.81)	3,531 x 4,110 (139 x 161.81)	2,811 x 4,110 (110.67 x 161.81)	3,531 x 4,110 (139 x 161.81)
Weight	kg,(lb)	15,000 (33,069)	16,000 (35,274)	15,100 (33,290)	16,100 (35,494)	24,500 (54,013)	25,000 (55,116)	24,600 (54,234)	25,100 (55,336)
NC Controller		Fanuc 0i-TF Plus							

Standard and Optional product components

■ Common ■ VT-950+ ■ VT-1150+

Standard Accessories		Optional Accessories	
• Air Gun	• Hydraulic Unit 40kgf /cm ²	• Air Blower	• Magazine 16 Tools
• Chuck Pressure Compensation	• Leveling Bolt & Plate	• Auto Door	• Mist Collector
• Coolant System	• Linear Scale (X / Z)	• Chip Conveyor & Bucket, Back Type / Side Type	• NC Cooler
• Door Interlock	• Lubrication Unit	• Chuck Clamp/Unclamp Confirm Switch	• Set of Hard Jaws - 32"
• Dual Pressure (C-axis brake)	• Manual & Parts List	• Chuck Pressure Check Switch	• Set of Hard Jaws - 32" / 40" / 50"
• Foot Switch	• Manual Guide i	• Coolant Gun	• Tool & Work Counter, External / Internal
• High Pressure Pump, 0.6 MPa	• Set of Soft Jaws (24")	• Dual Pressure (Chuck)	• Tool Presetter (Automatic)
• Hydraulic Chuck & Cylinder (24" Solid)	• Set of Soft Jaws (40")	• Gap 120mm	• Transformer
• Hydraulic Chuck & Cylinder (40" Solid)	• Signal Lamp with 3 Colors (R,G,Y)	• High Pressure Pump, 1.5 MPa	• Turnmill Function Including C-axis (0.0001°)
• HLVC (Hwacheon Lathe Vibration Control)	• Spindle Cooling System	• Hydraulic Chuck, 32" / 50" Solid	- Opt 1 : α6 / 10,000i Motor
• L-HTLD (Lathe-Hwacheon Tool Load Detect)	• Tool Kit & Box	• Independent Chuck, 32"(4-jaw)	- Opt 2 : α8 / 10,000i Motor
• L-CAL (Lathe Calculator Function)	• Tool Life Management	• Independent Chuck, 40" / 50" (4-jaw)	• Turnmill Holder, Axial / Radial
• L-COUNT (Work / Tool Counter Management)	• Tooling System	• Linear Scale (X / Z)	• U-Drill Holder
	• Turret 12 Station		• 15" Touch type display (only FANUC)
	• Work Light		
	• 15" Non touch display (only FANUC)		

NC Specifications [Fanuc0i-TF Plus]

* : Not available S : Standard O : Option

ITEM	SPECIFICATION	STD	MC	ITEM	SPECIFICATION	STD	MC
Controlled axis				Program input			
Controlled axis (Cs axis)	2-Axes	2-Axes	3-Axes	Decimal point programming		S	S
Simultaneously controlled axes	2-Axes	2-Axes	3-Axes	Coordinate system setting	G50	S	S
Least input increment	0.001mm, 0.0001deg, 0.0001inch	S	S	Coordinate system shift		S	S
Least input increment 1/10	0.0001mm, 0.00001inch	O	O	Workpiece coordinate system	G52-G59	S	S
inch/metric conversion	G20, G21	S	S	Workpiece coordinate system preset	G92.1	S	S
Stored stroke check 1,2,3		S	S	Direct drawing dimension programming		S	S
Chamfering on/off		S	S	G code system	A	S	S
Backlash compensation		S	S	Programmable data input	G10	S	S
Operation				Sub program call	10Folds Nested	S	S
Automatic & MDI operation		S	S	Custom macro B		S	S
Program number search		S	S	Addition of custom macro -common variables	#100-#199, #500-#999	S	S
Sequence number search		S	S	Canned cycles		S	S
Dry run, single block		S	S	Multiple repetitive cycle		S	S
Manual handle feed	1Unit	S	S	Multiple repetitive cycle II		S	S
Manual handle feed rate	x1, x10, x100	S	S	Canned cycles for drilling		S	S
Interpolation function				Manual Guide i		S	S
Positioning	G00	S	S	Spindle speed function			
Linear interpolation	G01	S	S	Constant surface speed control	G96 / G97	S	S
Circular interpolation	G02, G03	S	S	Spindle override	0-150%	S	S
Dwell (Per seconds)	G04	S	S	Spindle orientation		S	S
Polar coordinate interpolation	G12.1/G13.1	-	S	Rigid tapping		S	S
Cylindrical interpolation	G7.1	-	S	Spindle synchronous control		-	-
Threading	G32	S	S	Editing operation			
Multiple threading		S	S	Part program storage length	5,120 m (2MB)	S	S
Threading retract		S	S	Number of register able programs	Max.1000 ea	S	S
Continuous threading		S	S	Background editing		S	S
Variable lead threading	G34	S	S	Extended part program editing		S	S
Reference position return 1st	G28	S	S	Play back		S	S
Reference position return check	G27	S	S	Operation/Display			
2,3,4th reference position return	G30	S	S	Clock function		S	S
Arbitrary speed threading		O	O	Self-diagnosis function		S	S
Feed function				Alarm history display		S	S
Rapid traverse override	F0, F25, F50, F100	S	S	Help function		S	S
Feed per minute (mm/min)	G98	S	S	Run hour and parts count display		S	S
Feed per revolution (mm/rev)	G99	S	S	Graphic function		S	S
Rapid traverse bell-shaped acceleration/deceleration		S	S	Multi-language display			
Feedrate override	0-150 %	S	S		English, German, French, Italian, Chinese, Spanish, Korean, Portuguese, Polish, Hungarian, Swedish,Russian	S	S
Jog feed override	0-1,260 mm/min	S	S	Data input/output			
Tool function / compensation				Ethernet interface		S	S
Tool function	T4-digits	S	S	Memory card interface		S	S
Tool offset pairs	128pairs	S	S	USB card interface		S	S
Tool nose radius compensation		S	S	Others			
Tool geometry/wear compensation		S	S	Display Unit	15" Non touch display	S	S
Tool life management		S	S	Fanuc i-HMI	15" Touch type display	O	O
Automatic tool offset	Tool presetter option is required	S	S	HWACHEON Machining Software			
Direct input tool offset value measured B	Tool presetter option is required	S	S	L-HTLD (Hwacheon Tool Load Detect System)		S	S
Program input				L-CAL (Lathe Calculator Function)		S	S
Tape code	EIA / ISO	S	S	L-COUNT (Work / Tool Counter Management)		S	S
Optional block skip	9ea	S	S	HLVC (Hwacheon Lathe Vibration Control)		S	S
Program number	O4-digits(1-9999)	S	S	M-VISION Pro		O	O
Sequence number	N8-Digits	S	S				

Hwacheon Global Network

 Hwacheon Headquarter  Hwacheon America  Hwacheon Europe  Hwacheon Asia



HWACHEON

Please contact 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.

HEAD OFFICE

HWACHEON MACHINE TOOL CO., LTD.

123-17, HANAMSANDAN 4BEON-RO, GWANGSAN-GU, GWANGJU, KOREA
TEL: +82-62-951-5111 FAX: +82-62-951-0086

SEOUL OFFICE

46, BANGBAE-RO, SEOCHO-GU, SEOUL, KOREA
TEL: +82-2-523-7766 FAX: +82-2-523-2867

USA

HWACHEON MACHINERY AMERICA, INC.

555 BOND STREET, LINCOLNSHIRE, ILLINOIS, 60069, USA
TEL: +1-847-573-0100 FAX: +1-847-573-9900

SINGAPORE

HWACHEON ASIA PACIFIC PTE. LTD.

21 BUKIT BATOK CRESCENT, #08-79 WCEGA TOWER,
658065, SINGAPORE
TEL: +65-6515-4357 FAX: +65-6515-4358

VIETNAM

HWACHEON MACHINE TOOL VIETNAM CO., LTD.

HCM: TRANING CENTER, KCM CAO, Q.9, HCMC, VIET NAM
TEL: +84-28-6275-7011
HN: SO 11, D. HUU NGHI, VSIP BAC NINH, VIET NAM
TEL: +84-22-2390-8981

GERMANY

HWACHEON MACHINERY EUROPE GMBH

JOSEF-BAUMANN STR. 25, 44805, BOCHUM, GERMANY
TEL: +49-234-912-816-0 FAX: +49-234-912-816-60

INDIA

HWACHEON MACHINE TOOL INDIA PVT. LTD.

LUNKAD SKY VISTA, UNIT NO.202, 2ND FLOOR PLOT NO.84,
LOHEGAON, VIMAN NAGAR, PUNE 411014, INDIA
TEL: +91-96-73-986633

CHINA

HWACHEON MACHINE TOOL CHINA CO., LTD.

B03A LIANGUAN JUHE INTERNATIONAL HARDWARE CITY, NO.
143 ZHENANZHONG ROAD, JINXIA, CHANGAN TOWN,
DONGGUAN CITY, GUANDONG PROVINCE, CHINA #523852
TEL: +86-769-8932-0601 FAX: +86-769-8932-0602