

HONOR SEIKI Co., Ltd.

Precision, Reliability, Performance, No Compromises!

VL
SERIES

Imported by:

CNC
SYSTEMS INC
THE POWER OF PRECISION

14312 Chambers Road Tustin, CA 92780 (714) 838-3999
40 Water Street Kennebunk, ME 04043 (207) 985-6503

Email: info@cncsystems.com Web: www.cncsystems.com



**CNC Vertical
Turning Experts!**

Honor Seiki Company, Ltd.

VL
SERIES

VL-125C/CM
VL-160C/CM
VL-200C/CM
VL-250C/CM



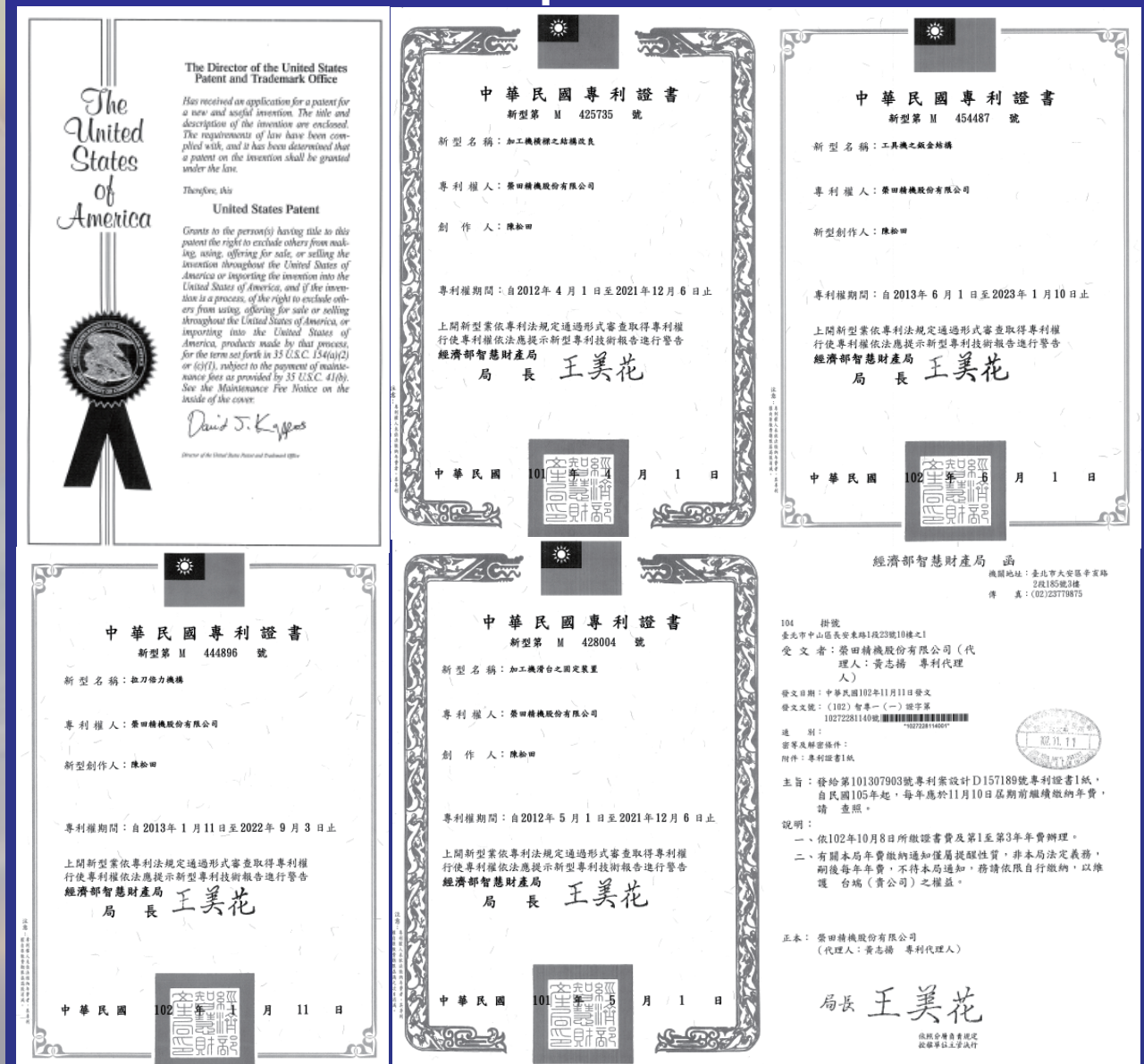
CNC
SYSTEMS INC
THE POWER OF PRECISION



■ Honor Seiki continuous to develop quality machines to meet the highest standards in precision, efficiency and reliability.

With 30 years' experience in machine tool design and manufacturing, HONOR SEIKI is the most professional and largest machine tool maker in CNC Vertical Lathe, Vertical Turning Center and Gantry type Turning/Milling/Grinding Center in Taiwan. Honor Seiki brand is internationally recognized and sold over 50 countries with many repeated orders. Unlike others who over diversify, Honor Seiki focuses solely on vertical turning lathe, with an undivided aim to perfect our product line and bring about greatest customer satisfaction. We are very proud of providing our machines to many leading companies around the world. The industrials we provide include aerospace, automotive, railway, high speed rail, mining, oil and gas, wind power...etc. From outer space rockets to deep ocean submarines, all utilize Honor Seiki vertical lathe to maximize their machining potential. We are proud of our accomplishments in bringing accolades to Taiwan. Our business model is based on cooperation, lasting partnership and mutual benefits in order to best serve our clients and help them reap their greatest gain, with special emphasis on Quality, Efficiency, Accuracy, Honest and Responsibility. We always fulfill our promises to our customers. Honor Seiki LTD is your best partnership to prosper and grow your business.

With Multiple World Wide Patents Let HONOR's Experience Guide You .





**Heavy Duty Ram
Small-Medium Series**

VL-66C/CM
VL-86C/CM
VL-100C/CM



VL-160 CM
C-Axis
Turning
Table diameter
CNC Vertical Lathe



**Heavy Duty Ram
Medium-Large Series**

VL-125C/CM
VL-160C/CM
VL-200C/CM
VL-250C/CM
VL-300C/CM
VL-400C/CM
VL-500C/CM
VL-600C/CM



**Y-Axis with Turning
PL Specialty Series**

PL-160CM
PL-200CM
PL-350CM



Heavy Duty Ram Series



**APC-Automatic or Manual
Type Pallet and Work Changers.**

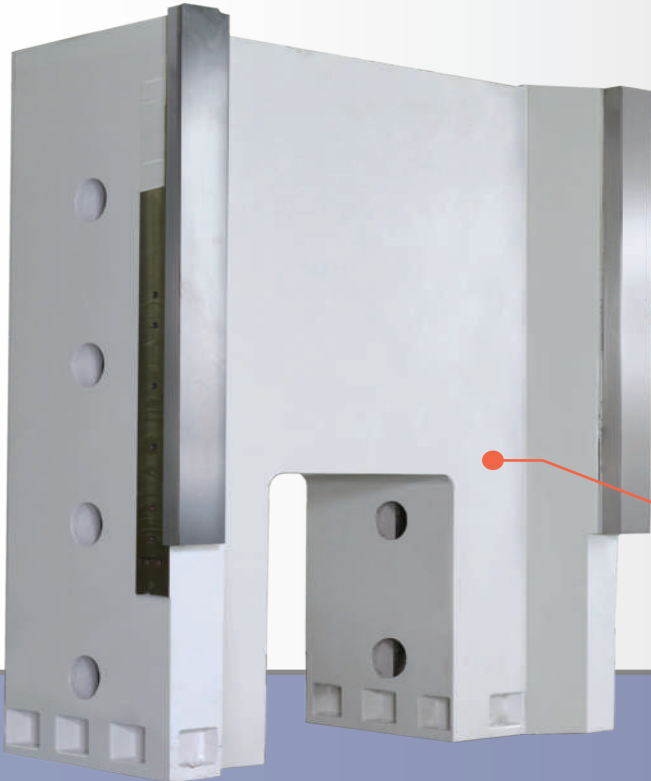
Diverse Fields of Applications:

- Aerospace
- Wind Power
- Oil & Gas
- Defense
- Rail
- Large Valves
- Agricultural
- Automotive
- Power Generation
- Gears
- Marine
- Machine Tool

Machine Structure Design

One Piece Column

The massive symmetrically designed one piece double column is hand scraped and fitted to the oversized base with ultimate precision. The heavily ribbed Meehanite castings ensure dynamic stability, excellent thermal characteristics and high rigidity for machining tough alloy materials. All Honor Seiki machines are designed with massive box ways for superior cutting capabilities.



Heavy Duty

Large Ram with Multiple Tooling Options

The RAM is made of high strength alloy steel specially ground and encapsulated in a heavy duty head casting. The ram is supported on eight (8) surfaces with turcite C that are hand scraped to ensure a high level of rigidity, precision and dynamic stability

- Ram Sizes: 200 x 200 mm
220 x 220 mm
300 x 300 mm



Larger Bearing Size

Largest Bearing Design in its Class

Model	Bearing ID	Bearing Ratio	Bearing ID	Bearing Ratio
Honor Seiki			Other Brand	
VL-125	580mm (22.83")	0.58	457mm (18")	0.48
VL-160	685mm (27")	0.54	580 mm (22.83")	0.45
VL-200	901mm (35.5")	0.55	685mm (27")	0.45
VL-250	1028mm (40.5")	0.53	901mm (35.5")	0.43



The X, and Z axis as well as the traveling cross rail are precision ground box ways with hand scraped turcite "C" mating surfaces. The Class 3 ballscrews are directly driven by high torque servo motors.

All sideways are automatically lubricated by a central system that controls the volume and timing to achieve proper amount of oils needed.

The cross rail is fully programmable in multiple increments of 200mm steps, The rail is precisely positioned by 3" diameter ground shot pins that come to rest on ground mating surfaces to ensure the highest level of accuracy and repeatability while changing the location plain.



The spindle transmission bevel gears are made from high grade carbonized JIS grade SCM440 material ensuring an extremely efficient smooth running gear with low noise and a prolonged life.

The 2-speed transmission driven by a majority of Fanuc or Siemens motors produces torque from 14,000 NM (VL125C with 60HP) to over 59,000 NM for the VL-250 with 100HP drive.

The CM model with full C-axis uses a separate servo motor to engage the main gear with a zero-backlash system for highly accurate drilling and milling type work

Large Beveled Gears Ensures Higher Torque and Low Noise

Servo Driven Split Gear for a "0" Zero Backlash C-Axis Drive System

Heavy Duty Spindle

Dual Servo Driven "0" Zero Backlash C-Axis Drive System

**VL-300C/CM
VL-400C/CM
VL-500C/CM**

**2-Speed Transmission
Large Carbonized Gears**

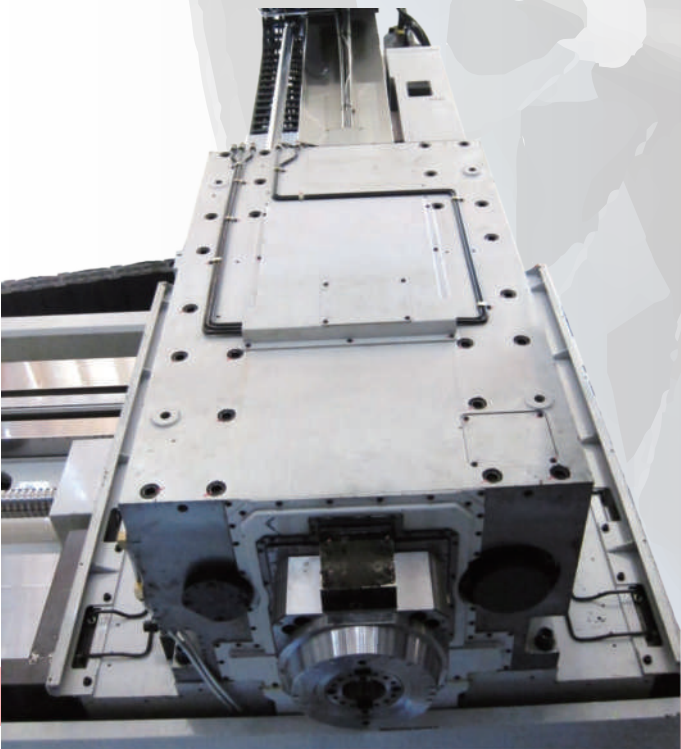
Oversized Main Bearings

**VL
SERIES**

8 Turcite support surfaces



The machine headstock is designed for ultimate rigidity and accuracy by incorporating eight (8) Hand scraped turcite support surfaces for heavy machining of all materials.

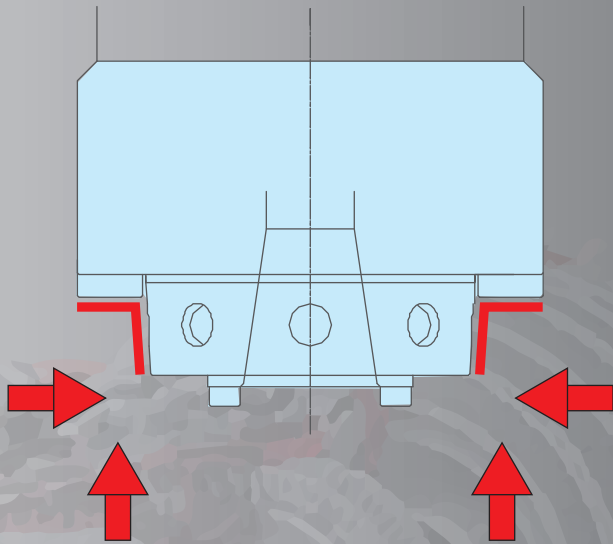


17,600 Lbs.
clamping force



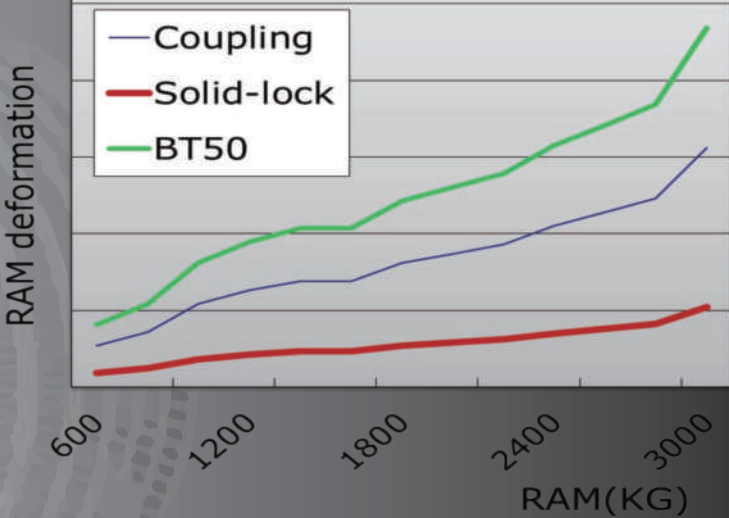
The Patented and extremely rigid Solid Lock tooling system is where Honor Seiki machines out perform all other brands. Utilizing a high level of tool holder and ram contact surface with the special ball lock clamping 100 HP cuts in exotic materials is easily achieved.

Solid Lock System



• Honor Patent !

Clamping Stiffness Comparision



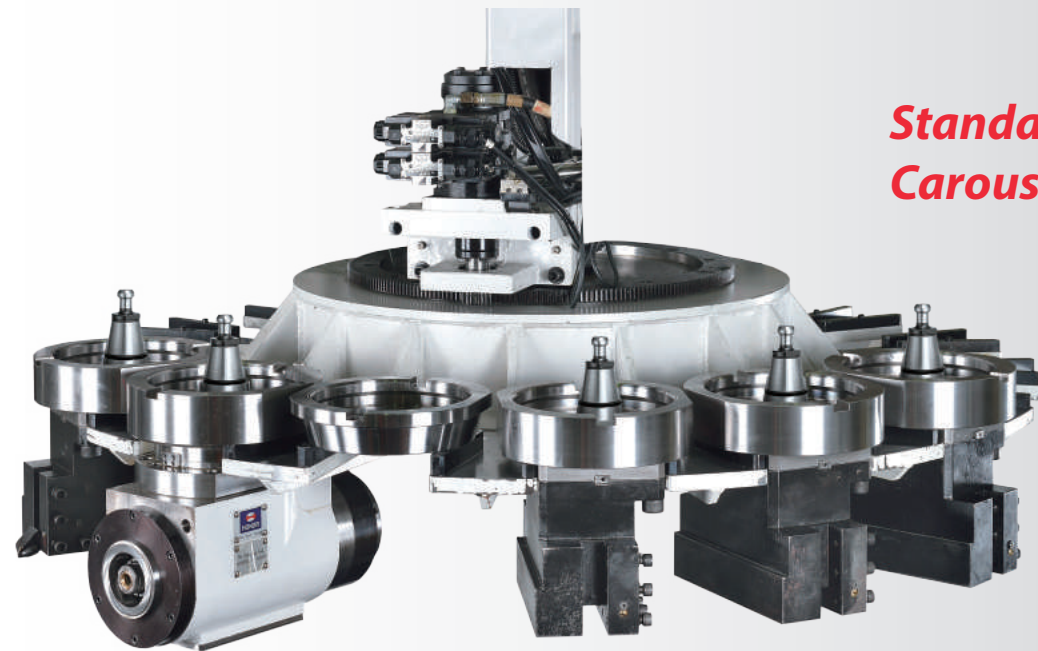
■ Milling Capacity

Model	VL-160CM
Spindle motor	11/15 kW
Material	S45C
Milling cutters	Ø100x7
Cutting depth	4.5 mm
Feed rate	720 mm/min
Cutting speed	160 m/min
Material removable rate	320 cm³/min

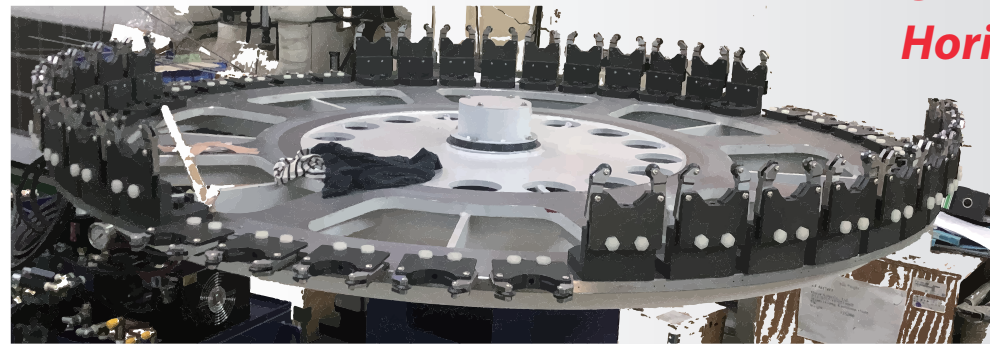
VL
SERIES



VL-Series Tool Changers

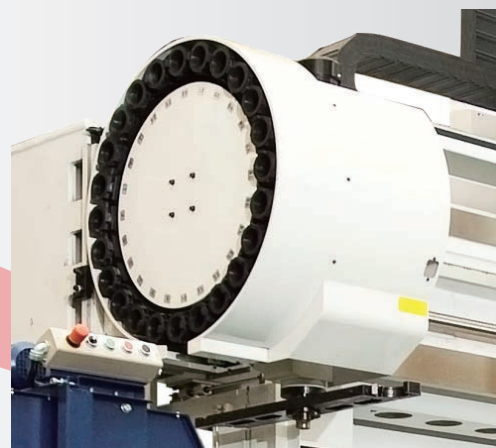
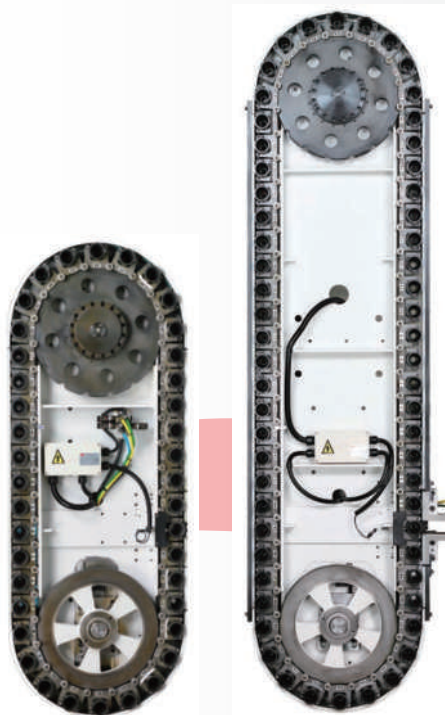


**Standard 12 to 24
Carousel Type ATC**



**CAPTO Vertical and
Horizontal Type ATC**

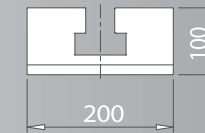
**Multiple Variations of Double Arm
Floor Mounted and Machine Mounted
Automatic Tool Changers Available**



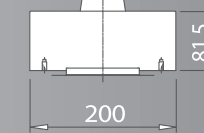
VL-Series Tooling Charts

■ Tool holder base :

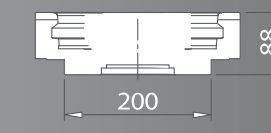
GC-200
(Gear Coupling)



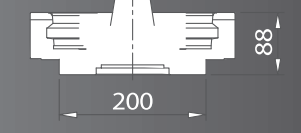
BT-50(□200/□220)
(BT 50)



SL-17T(□220/□250)
(Two face contact tooling)



SL-17A(□220)
(Two face contact tooling)

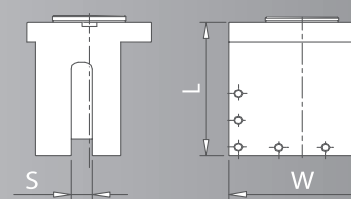


SL-22A (□250/300)
(Two face contact tooling)



■ GC-200 / RG250 / SL-17T / SL-17A / SL-22A Tool holder :

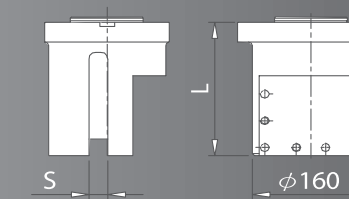
O.D. / Facing tool holder



Model	L	S	W
IDF25-200-200	200	25	200
IDF32-200-200	200	32	200
* IDF32-240-200	200	32	240
IDF40-285-200	200	40	285

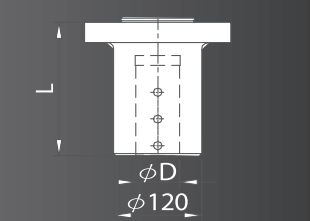
Note : Only for SL-17A & SL-22A

I.D. / Facing tool holder



Model	L	S
IFL25-160-200	200	25
IFL32-160-200	200	32

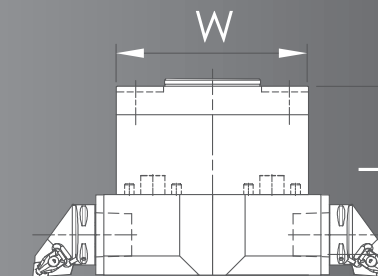
Boring tool holder



Model	L	D
BOS40-120-200	200	40
BOS50-120-200	200	50
BOS60-120-200	200	60

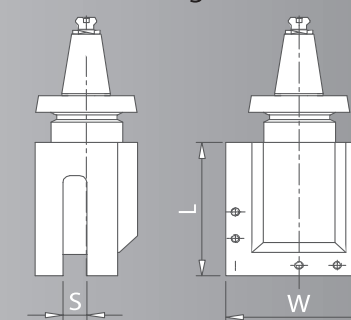
■ Capto Tool Holder

Model	L	W
BDC6-220-200	200	220
BDC6-250-200	200	250



■ BT50 Tool holder :

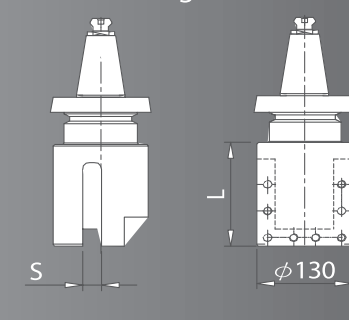
O.D. / Facing tool holder



Model	L	S	W
BT50-IDF25-200-200	200	25	200
BT50-IDF32-200-200	200	32	200
BT50-IDF32-240-200	200	32	240

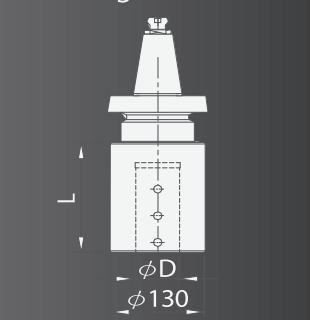
Note : W200 is only for □220 / W240 is only for □250

I.D. / Facing tool holder



Model	L	S
BT50-IFL25-130-200	200	25
BT50-IFL32-130-200	200	32

Boring tool holder

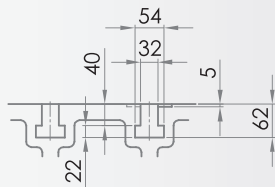
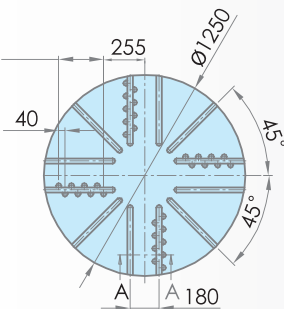


Model	L	D
BT50-BOS40-130-200	200	40
BT50-BOS50-130-200	200	50
BT50-BOS60-130-200	200	60

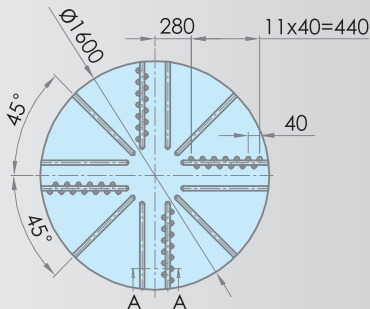
Table / Working Area / Jaws

Machine Dimensions

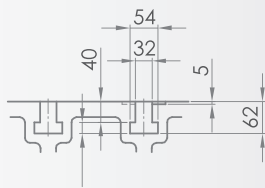
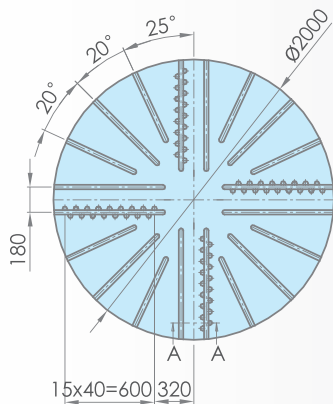
VL-125 Series



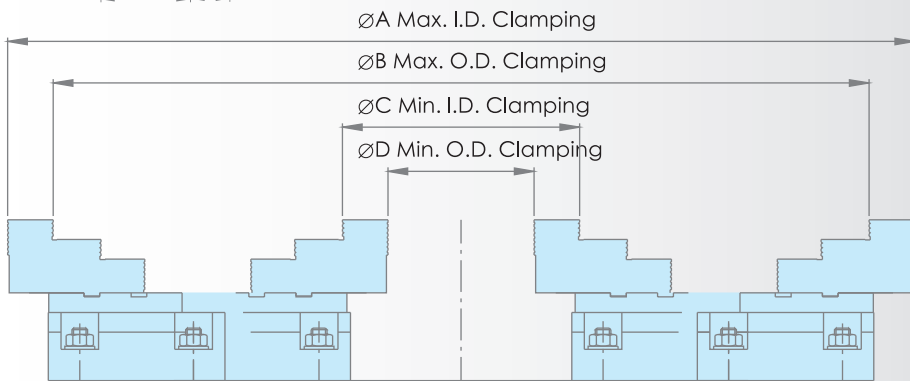
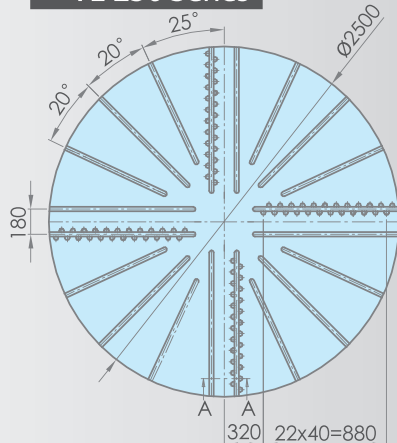
VL-160 Series



VL-200 Series



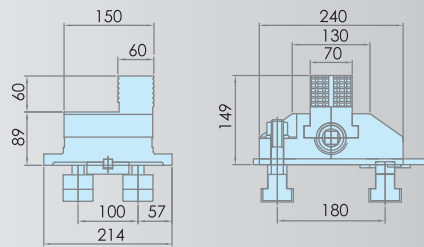
VL-250 Series



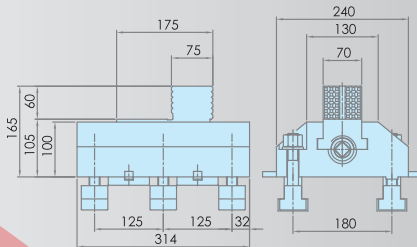
Model	A	B	C	D
VL-125	1340	1230	370	250
VL-160	1720	1600	420	300

Model	A	B	C	D
VL-200	1950	1740	750	530
VL-250	2500	2220	750	530

VL-125,VL-160 Series



VL-200,VL-250 Series

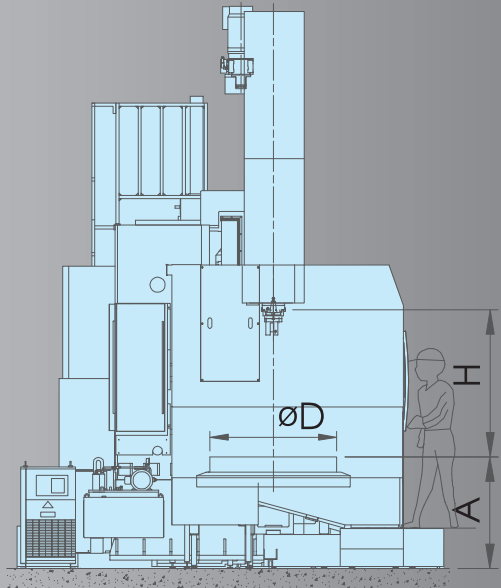


Model	A	ØB	C	ØD	ØE	F	G	H	I
VL-125	220	1250	20	1600	330	900	650-1450	950	200
VL-160	220	1600	20	2000	330	900	650-1450	1150	200
VL-200	250	2000	40	2500	360	1200	825-1825	1450	300
VL-250	250	2500	5	2970	360	1200	825-1825	1650	300



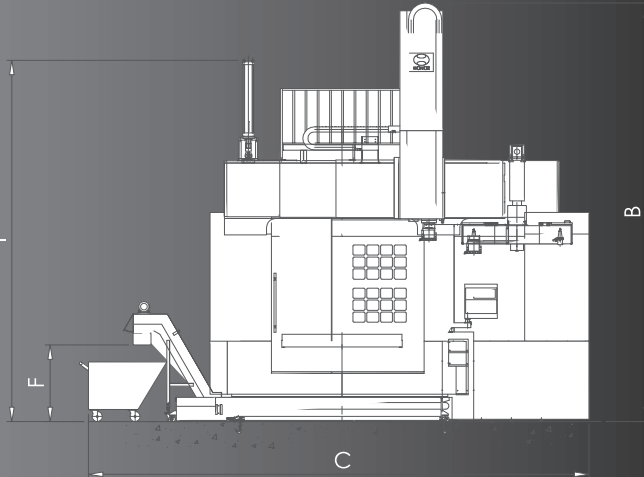
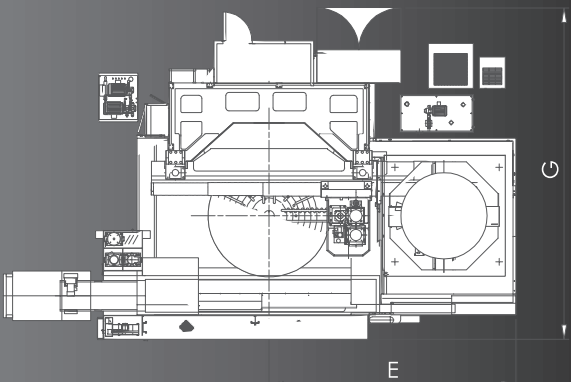
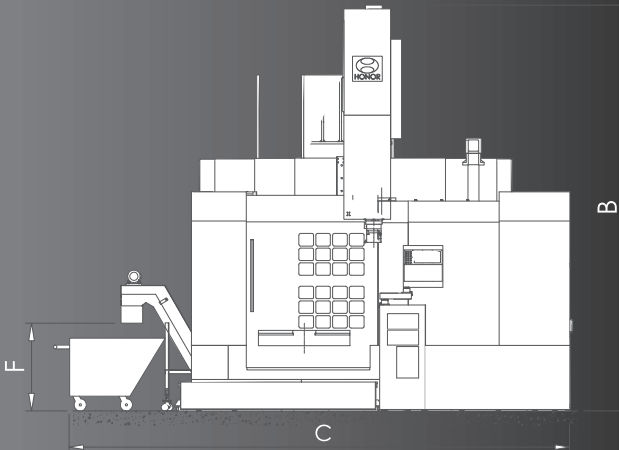
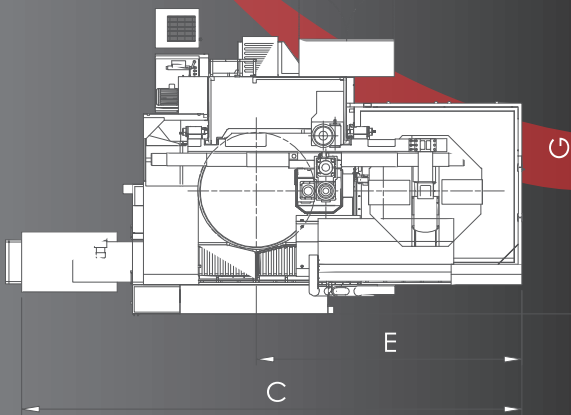
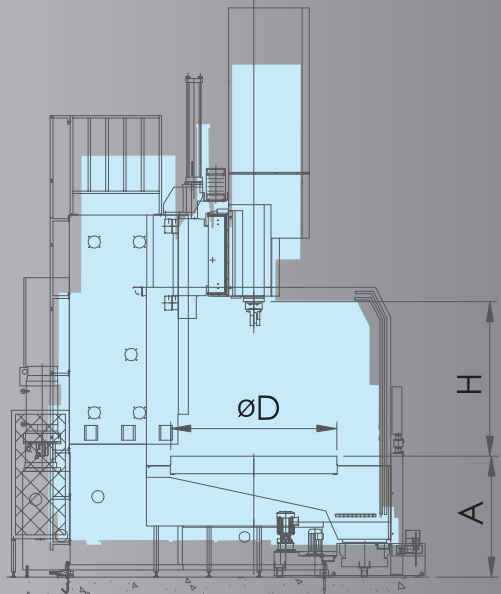
(unit:mm)

	A	B	C	ØD	E	F	G	H
VL-125C	1100	5250	6480	Ø1250	3277	1200	4875	650~1450
VL-125CM	1100	5650	6850	Ø1250	3625	1200	4875	650~1450
VL-160C	1100	5250	7035	Ø1600	3500	1200	5175	650~1450
VL-160CM	1100	5650	7380	Ø1600	3825	1200	5175	650~1450



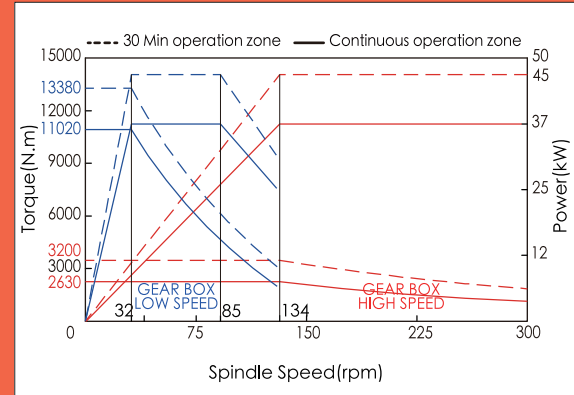
(unit:mm)

	A	B	C	ØD	E	F	G	H	I
VL-200C	1455	6635	7970	Ø2000	3960	1280	5532	825~1825	6030
VL-200CM	1455	6970	8400	Ø2000	4120	1280	5532	825~1860	6030
VL-250C	1455	6635	8295	Ø2500	3915	1280	5564	825~1825	6030
VL-250CM	1455	6970	8580	Ø2500	4200	1280	5564	825~1860	6030

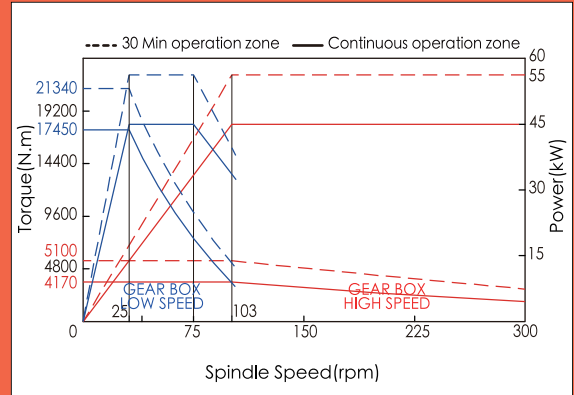


Main Spindle Power Charts

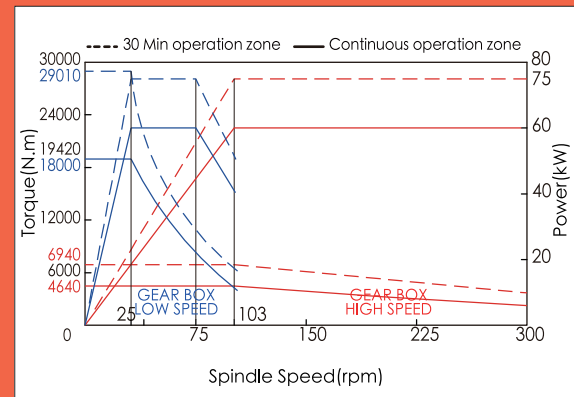
VL-125 Series 37/45kW, 2 steps



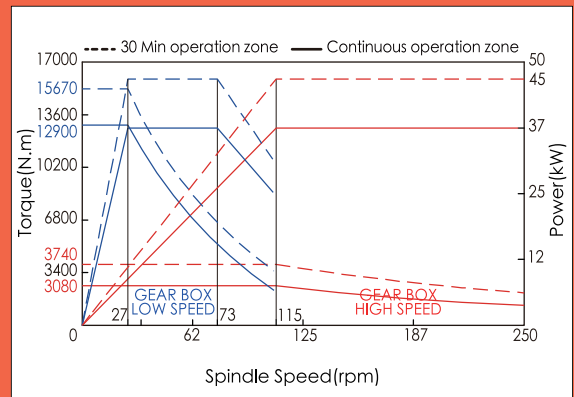
VL-125 Series 45/55kW, 2 steps (Option)



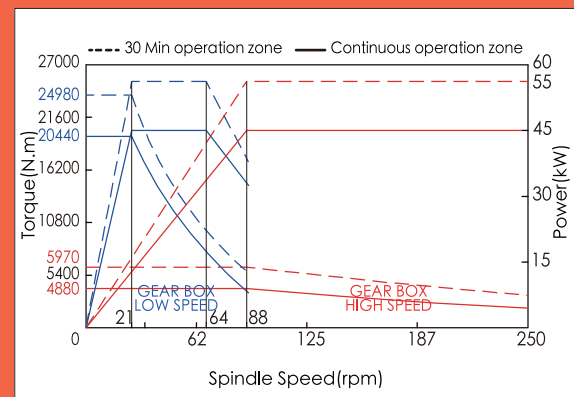
VL-125 Series 60/75kW, 2 steps (Option)



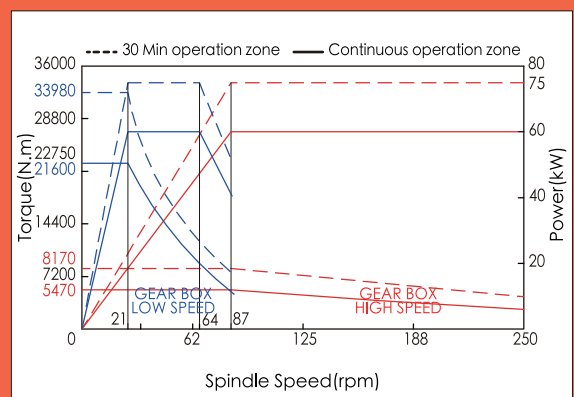
VL-160 Series 37/45kW, 2 steps



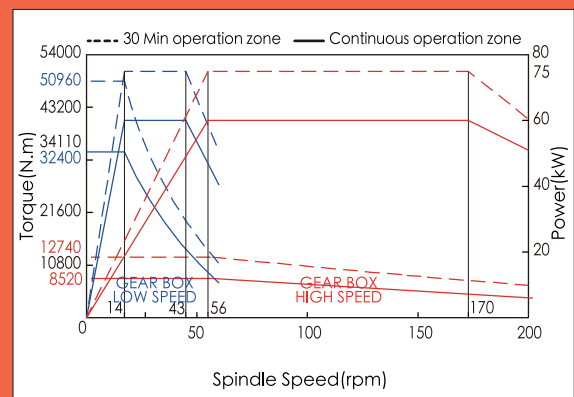
VL-160 Series 45/55kW, 2 steps (Option)



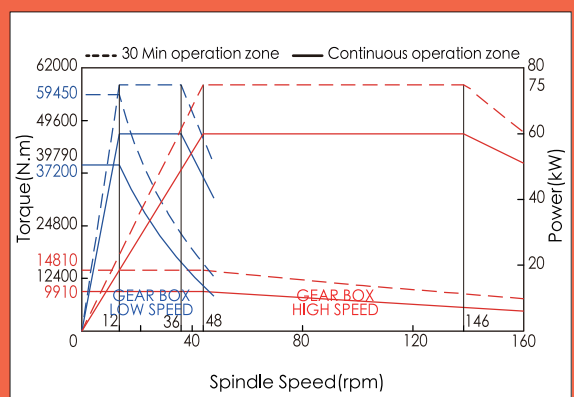
VL-160 Series 60/75kW, 2 steps (Option)



VL-200 Series 60/75kW, 2 steps

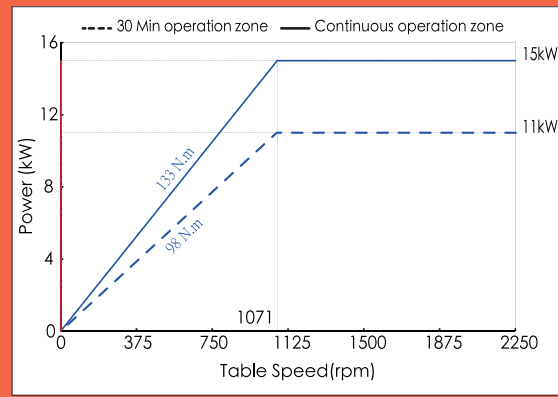


VL-250 Series 60/75kW, 2 steps

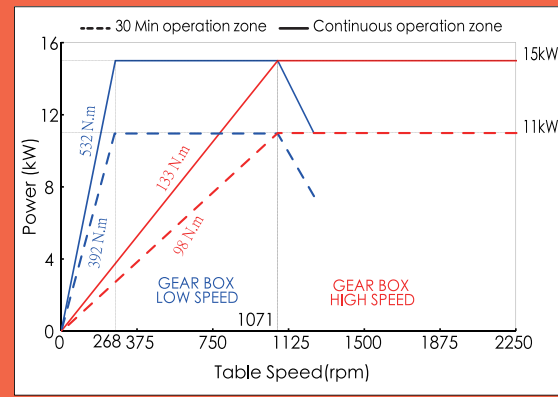


Milling Spindle Power

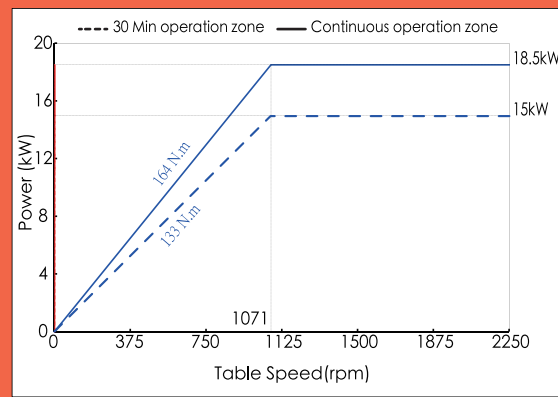
MODEL : α12 11/15kW



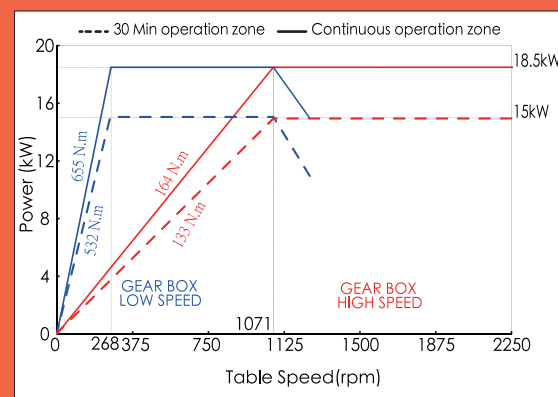
MODEL : α12 11/15kW, 2 steps (Option)



MODEL : α15 15/18.5kW



MODEL : α15 15/18.5kW, 2 steps (Option)



Milling Capacity



Milling Capacity

Model	VL-160CM
Spindle motor	11/15 kW
Material	S45C
Milling cutters	Ø100x7
Cutting depth	4.5 mm
Feed rate	720 mm/min
Cutting speed	160 m/min
Material removable rate	320 cm ³ /min



VL-125C/SL~ VL-250C/SL Specifications

SPECIFICATION	Unit	VL-125C / CSL	VL-160C / CSL	VL-200CSL	VL-250CSL
Capacity					
Table Diameter	mm/In	1250 /49"	1600 / 63"	2000 / 78"	2500 / 98"
Max. Swing diameter	mm/In	1600 /63"	2000 / 78"	2500 / 98"	3000 / 118"
Max. Turning diameter	mm/In	1600 /63"	2000 / 78"	2500 / 98"	2970 /116"
Max. turning height	mm/In	1200 (47")	1200 (47")	1480/58.26"	1480/58.26"
Table to Ram Face Dimension	Inch	25"-57" / (22.8"-56.7")	25"-57" / (22.8"-56.7")	30.9" - 70.3"	30.9" - 70.3"
Max. Work Piece weight	Kg/Lbs	5000/11,000	8000/17,600	12000 / 26,400	15000 / 33,000
Travel					
X axis travel	in	L 7.87" R 37.40"	L 7.87" R 45.27"	L 11.81" R 57.08"	L 11.81" R 64.96"
Z axis travel	in	35.43"	35.43"	47.27"	47.24"
Cross rail travel	in	31.49" (7.87"x 4steps)	31.49" (7.87"x 4steps)	39.37 (9.84" x4 steps)	39.37 (9.84" x4 steps)
Ram Size	in	8.66" x 8.66"	8.66 x 8.66	9.84" x9.84"	9.85" x 9.85"
Spindle					
Transmission Steps		2	2	2	2
Spindle Speed Low Gear	rpm/min	3-96	3-82	3-50	5-40
Spindle Speed High Gear	rpm/min	102-300	81-250	20-200	10-160
Max. Spindle torque NM	Nm	13,000	15,100	55,782	55,000
Live Tool Speed (CM only)	rpm/min		50-2250	50-2250	50-2250
Fanuc Motor					
Main Spindle	KW/HP	45 / 60	45 / 60	75 / 101	75 / 101
X-axis servo motor	KW/HP	7/9.51	7/9.51	5.5 / 7.4	5.5 / 7.4
Z-axis servo motor	KW/HP	7/9.51	7/9.51	5.5 / 7.4	5.5 / 7.4
C-axis servo motor	KW/HP				
Live tool spindle motor	KW/HP				
Feed					
Rapid Feedrate X axis	m/in	10/393.70"	10/393.70"	10/393.70"	10/393.70"
Rapid Feedrate Z axis	m/in	10/393.70"	10/393.70"	10/393.70"	10/393.70"
Cutting Feedrate	m/min	0.001~5	0.001~5	0.001~5	0.001~5
Manual jog feedrate	m/in	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm
Tool Magazine and ATC (OPT)					
Number of Tool Positions	pcs	12	12	12	12
Tool Size	mm/in	25/0.98" 32/ 1.25"	25/0.98" 32/ 1.25"	32/ 1.25" 40/1.57"	25/0.98" 32/ 1.25" 40/1.57"
Max Tool Length in ATC	mm/in	300/11.81"	300/11.81"	400/15.74"	400/15.74"
Max total tool weight of magazine	Kg	450	450	450	450
Max. Tool Weight	kg	40	40	50	50
Approx tool to tool ATC time	sec	40	40	45	45
Machine Tank Capacity					
Hydraulic tank	L	150	150	220	220
Coolant tank	L	580ML	710ML	1050L	1130L
Lubrication tank	L	Slide Way: 4 L	Slide Way: 4 L	Slide Way: 4 L	Slide Way: 4 L
Spindle cooler tank	L	150	150	300	300
Machine dimensions					
Air Consumption	kgf/cm²	5	5	5	5
Electric Power Supply	KVA	75	75	90	90
Floor space (L x W)	mm	6463 x 5700	7032 x 6000	9455 x 6405	7800 x 6100
Machine Height	mm	5330	5350	6470	6650
Machine Weight	kg/Lbs	24,500/54,000	30,800 /67,800	47,000 / 103,400	51,000 /112,200

Specifications are subject to change for improvement without notice:

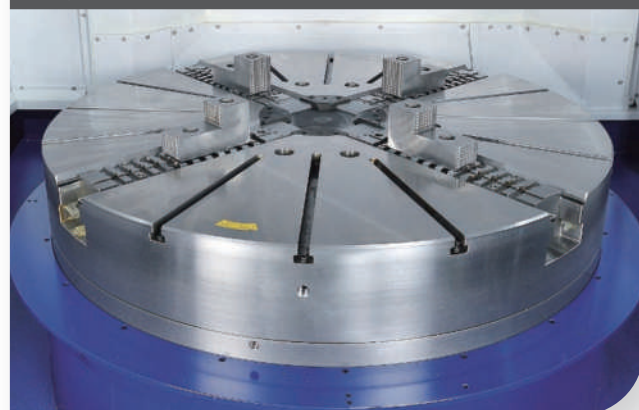
VL-125CM /SL~ VL-250CM/SL Specifications

SPECIFICATION	Unit	VL-125CM / (CMSL)	VL-160CM / (CMSL)	VL-200CMSL	VL-250CMSL
Capacity					
Table Diameter	mm/In	1250 /49"	1600 / 63"	2000 / 78"	2500 / 98"
Max. Swing diameter	mm/In	1600 /63"	2000 / 78"	2500 / 98"	3000 / 118"
Max. Turning diameter	mm/In	1600 /63"	2000 / 78"	2500 / 98"	2970 /116"
Max. turning height	mm/In	46" / (45")	46" / (45")	1480/58.26"	1480/58.26"
Table to Ram Face Dimension	Inch	25"-56.5" / (22.8"-54.4")	25"-56.5" / (22.8"-54.4")	30.9" - 70.3"	30.9" - 70.3"
Max. Work Piece weight	Kg/Lbs	5000/11,000	8000/17,600	12000 / 26,400	15000 / 33,000
Travel					
X axis travel	in	L 7.87" R 37.42"	L 7.87" R 45.27"	L 11.81" R 57.08"	L 11.81" R 64.96"
Z axis travel	in	35.43"	35.43"	47.27"	47.24"
Cross rail travel	in	31.49" (7.87"x 4steps)	31.49" (7.87"x 4steps)	39.37 (9.84" x4 steps)	39.37 (9.84" x4 steps)
Ram Size	in	8.66" x 8.66"	8.66" x 8.66"	9.84" x9.84"	9.85" x 9.85"
Spindle					
Transmission Steps		2	2	2	2
Spindle Speed Low Gear	rpm/min	3-96	3-82	3-50	5-40
Spindle Speed High Gear	rpm/min	102-300	81-250	20-200	10-160
Max. Spindle torque NM	Nm	13,000	15,100	55,782	55000
Live Tool Speed (CM only)	rpm/min	50-2250	50-2250	50-2250	50-2250
Fanuc Motor					
Main Spindle	KW/HP	45 / 60	45 / 60	75 / 101	75 / 101
X-axis servo motor	KW/HP	7/9.51	7/9.51	5.5 / 7.4	5.5 / 7.4
Z-axis servo motor	KW/HP	7/9.51	7/9.51	5.5 / 7.4	5.5 / 7.4
C-axis servo motor	KW/HP	4 / 5.4	4 / 5.4	5.5 / 7.4	5.5 / 7.4
Live tool spindle motor	KW/HP	15/20.39	15/20.39	15/20.39	15/20.39
Feed					
Rapid Feedrate X axis	m/in	10/393.70"	10/393.70"	10/393.70"	10/393.70"
Rapid Feedrate Z axis	m/in	10/393.70"	10/393.70"	10/393.70"	10/393.70"
Cutting Feedrate	m/min	0.001~5	0.001~5	0.001~5	0.001~5
Manual jog feedrate	m/in	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm	X1: 0.001mm X10: 0.01mm X100: 0.1mm
Tool Magazine and ATC (OPT)					
Number of Tool Positions	pcs	16	16	16	16
Tool Size	mm/in	25/0.98" 32/ 1.25"	25/0.98" 32/ 1.25"	32/ 1.25" 40/1.57"	25/0.98" 32/ 1.25" 40/1.57"
Max Tool Length in ATC	mm/in	300/11.81"	300/11.81"	400/15.74"	400/15.74"
Max total tool weight of magazine	Kg	450	450	600	600
Max. Tool Weight	kg	40	40	50	50
Approx tool to tool ATC time	sec	45	45	45	45
Machine Tank Capacity					
Hydraulic tank	L	150	150	220	220
Coolant tank	L	580ML	710ML	1050L	1130L
Lubrication tank	L	Slide Way: 4 L	Slide Way: 4 L	Slide Way: 4 L	Slide Way: 4 L
Spindle cooler tank	L	150	150	300	300
Machine dimensions					
Air Consumption	kgf/cm²	5	5	5	5
Electric Power Supply	KVA	90	90	105	105
Floor space (L x W)	mm	6811 x 5700	7380 x 6000	9455x 6405	7800 x 6100
Machine Height	mm	5670	5700	6,470	7000
Machine Weight	kg/Lbs	27,500/60,630	31,000/68,350	52,800 / 116,400	53,000 /116,850

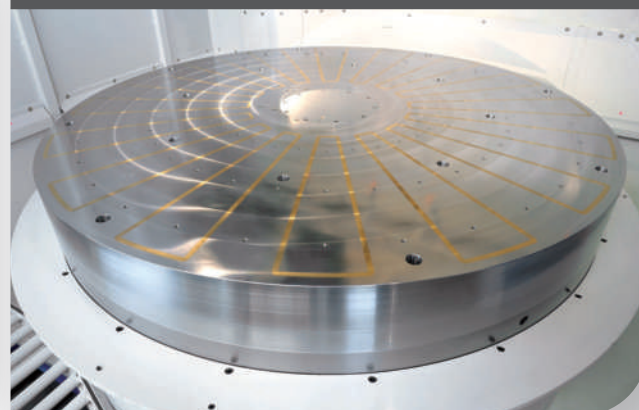


Optional Accessories

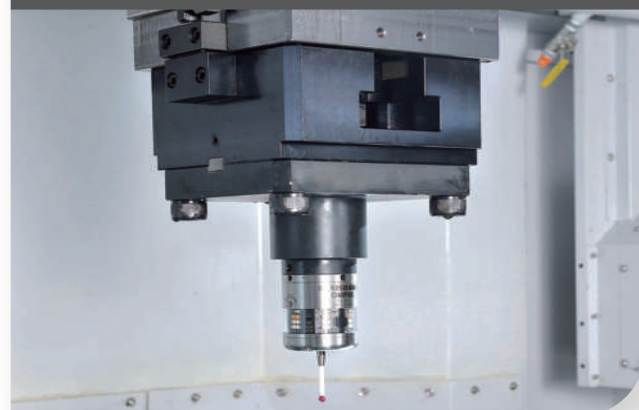
• Hydraulic chuck



• Magnetic chuck



• Touch probe (workpiece inspection)



• Tool presetter



• Siemens controller



• Oil skimmer (disk)



• Air conditioner for electrical cabinet



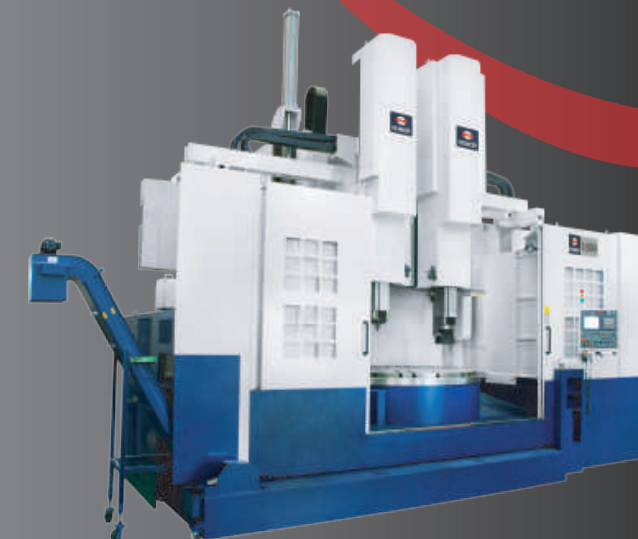
• Right Angle Tools



Specialized Machines



Y-Axis + Turning Machines



Dual Ram Machines



Pallet Machines



Special Guarding



Vertical Grinding Machines



Production Machines