





**VL-1100HR+P**  
BMT85



**VL-1000HR**



**VL-850HR+P**  
BMT75



**VL-850HR+V6**



**VL-600HL**

**VL-600HL/R**

**VL-600HR+P**  
VDI40



**VL-750HL**

**VL-750HL/R**

**VL-750HR+P**  
VDI50

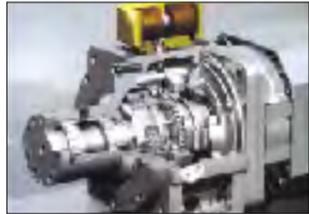


**VL-850HL**

**VL-850HL/R**

**VL-850HR+P**  
VDI50

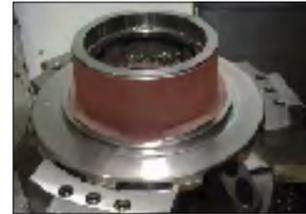




▲ Dual Speed Gearbox



▲ The 4th Axis Brake Disk Special Purpose



▲ Special Chuck Wheel Hub



▲ Special Chuck Brake Drum



▲ Oil Mist Filter



▲ Tool Setting Prob System



▲ +V6 Series



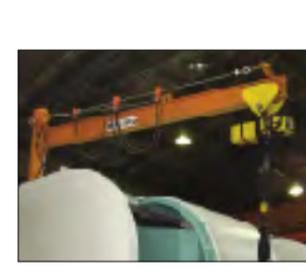
▲ Linear Encoder



▲ Air Conditioner for Electrical Cabinet



▲ Paper Filter



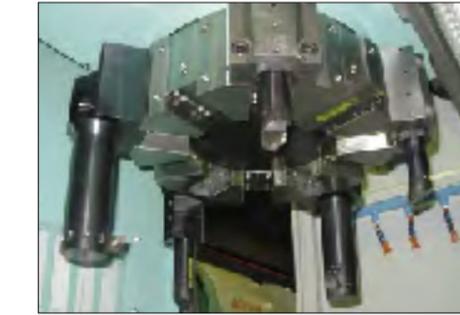
▲ Electric Crane



▲ Side Door Open Capability



▲ Siemens Control

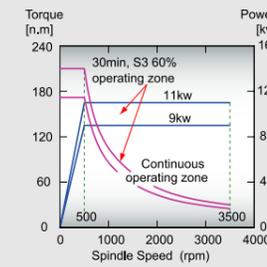


▲ Special Holder



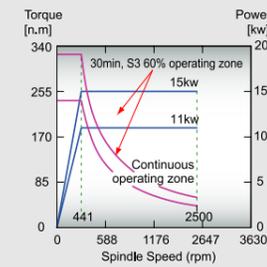
▲ Auto Loading / Unloading System

## VL-350 Series



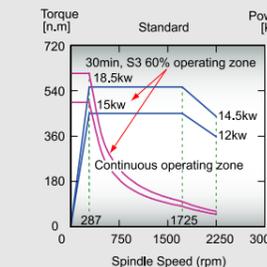
- Fanuc- $\alpha$  18 / 6000ip
- 9 / 11 kw (12 / 15 hp)
- 50~3500 rpm/min

## VL-450 Series

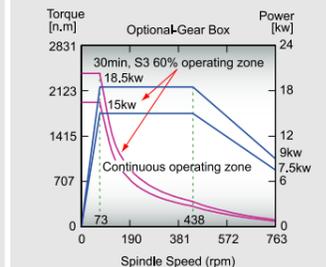


- Fanuc- $\alpha$  22 / 6000ip
- 11 / 15 kw (15 / 20 hp)
- 50~2500 rpm/min

## VL-600 H Series

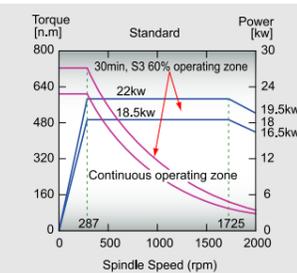


- Fanuc- $\alpha$  30 / 6000ip
- 15 / 18.5 kw (20 / 25 hp)
- 50~2250 rpm/min

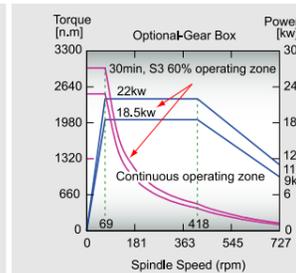


- Fanuc- $\alpha$  30 / 6000ip + ZF Gear Box (1/5.5)
- 15 / 18.5 kw (20 / 25 hp)
- 50~763 rpm/min (low speed)

## VL-750 H Series

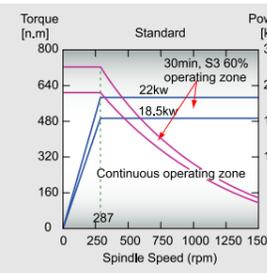


- Fanuc- $\alpha$  40 / 6000ip
- 18.5 / 22 kw (25 / 30 hp)
- 20~2000 rpm/min

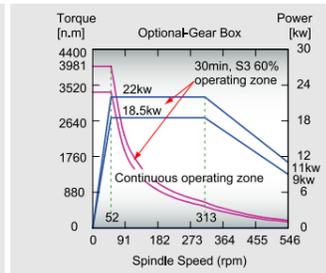


- Fanuc- $\alpha$  40 / 6000ip + ZF Gear Box (1/5.5)
- 18.5 / 22 kw (25 / 30 hp)
- 20~727 rpm/min (low speed)

## VL-850 H Series

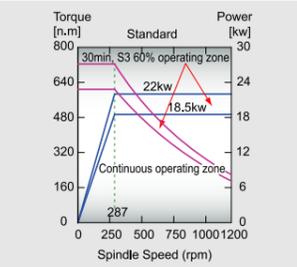


- Fanuc- $\alpha$  40 / 6000ip
- 18.5 / 22 kw (25 / 30 hp)
- 20~1500 rpm/min

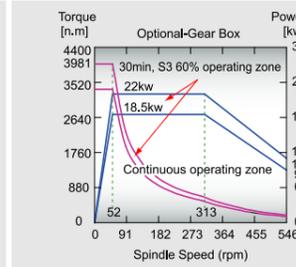


- Fanuc- $\alpha$  40 / 6000ip + ZF Gear Box (1/5.5)
- 18.5 / 22 kw (25 / 30 hp)
- 20~546 rpm/min (low speed)

## VL-1000 H Series

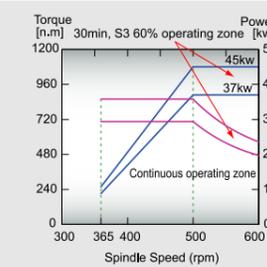


- Fanuc- $\alpha$  40 / 6000ip
- 18.5 / 22 kw (25 / 30 hp)
- 547~1200 rpm/min (high speed)

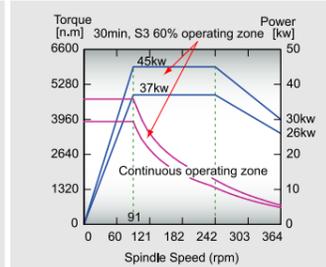


- Fanuc- $\alpha$  40 / 6000ip + ZF Gear Box (1/5.5)
- 18.5 / 22 kw (25 / 30 hp)
- 20~546 rpm/min (low speed)

## VL-1100 H Series Standard-Gear Box



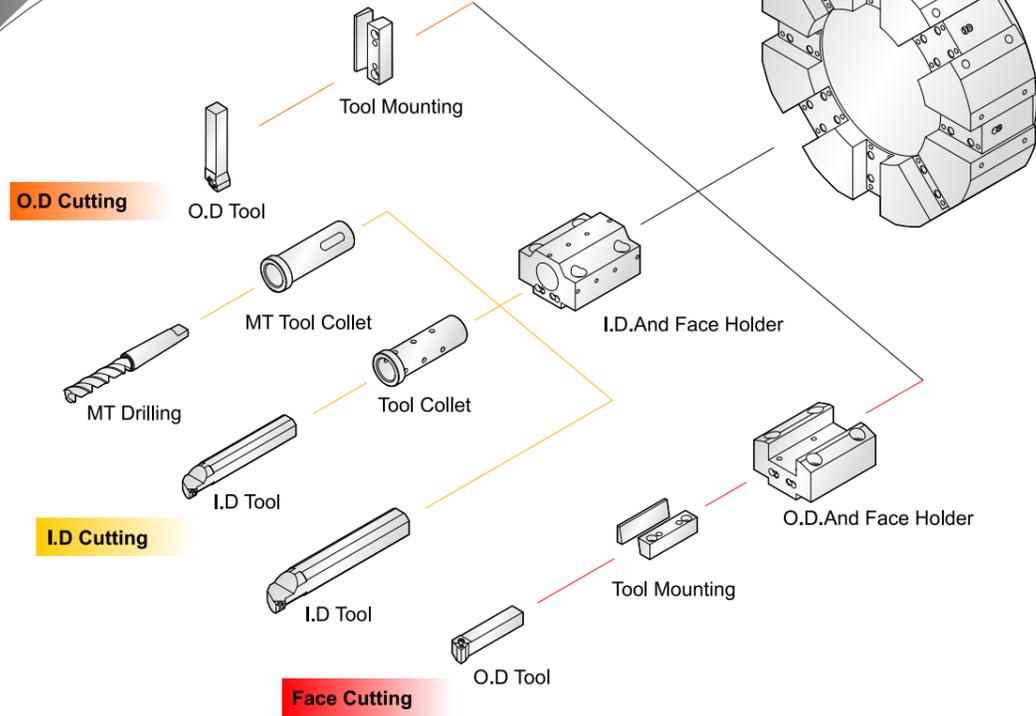
- Fanuc- $\alpha$  40 / 6000i + ZF Gear Box (1/1)
- 37 / 45 kw (50 / 60 hp)
- 365~600 rpm/min (high speed)



- Fanuc- $\alpha$  40 / 6000i + ZF Gear Box (1/5.5)
- 37 / 45 kw (50 / 60 hp)
- 10~364 rpm/min (low speed)

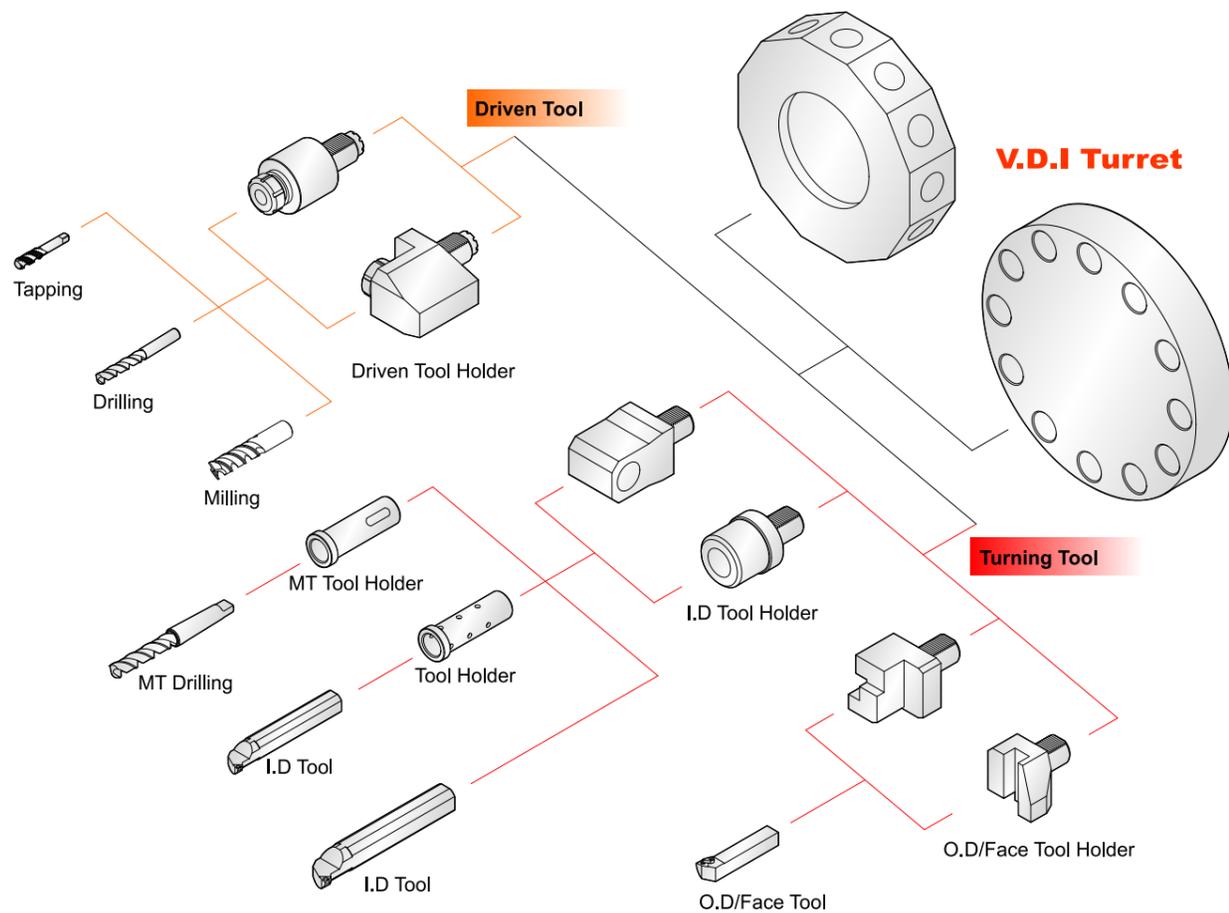
# Tooling System

## 8/10/12 Station Turret



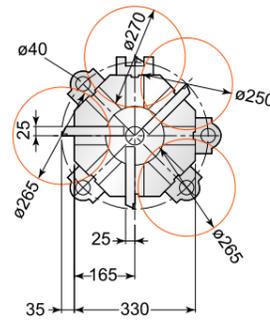
## Driven Tool

## V.D.I Turret

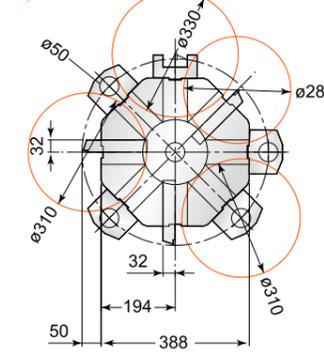


# Tooling Interference

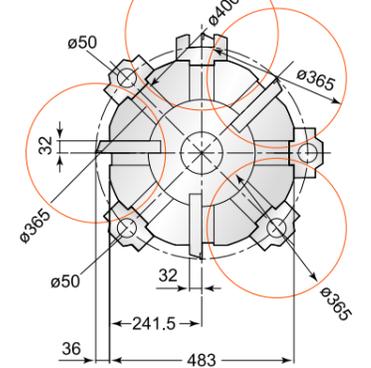
## VL-350R, VL-450R



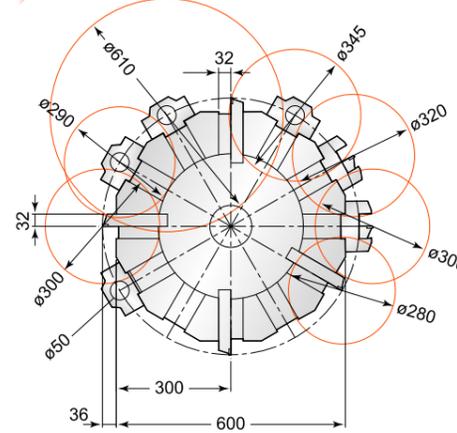
## VL-600HR



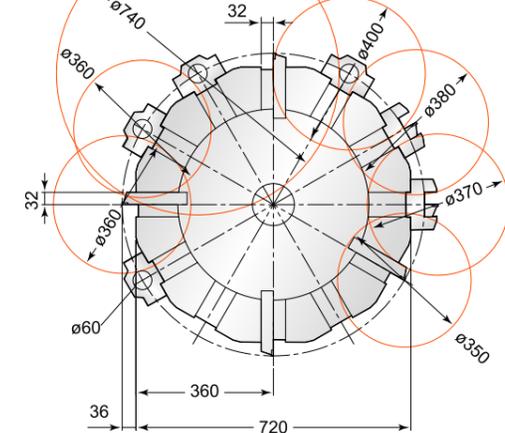
## VL750HR, VL-850HR



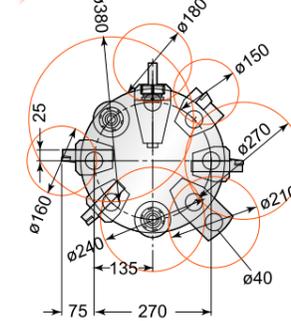
## VL-1000HR



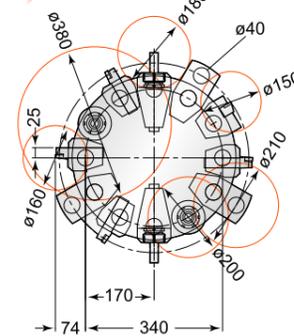
## VL-1100HR



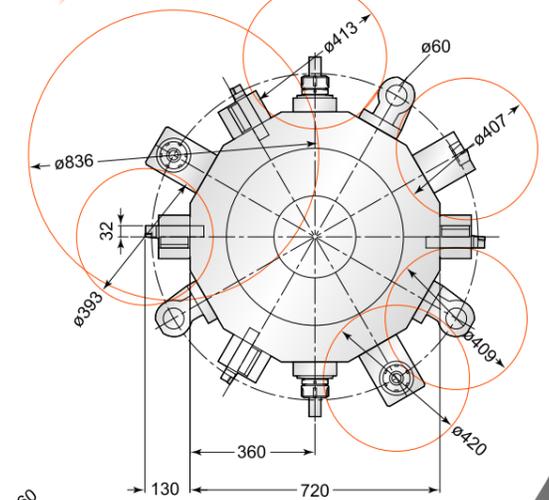
## VL-350R+P, VL-450R+P



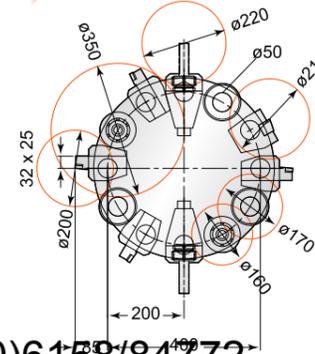
## VL-600HR+P



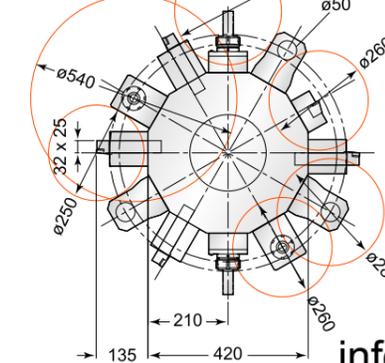
## VL-1100HR+P



## VL-750HR+P, VL-850HR+P



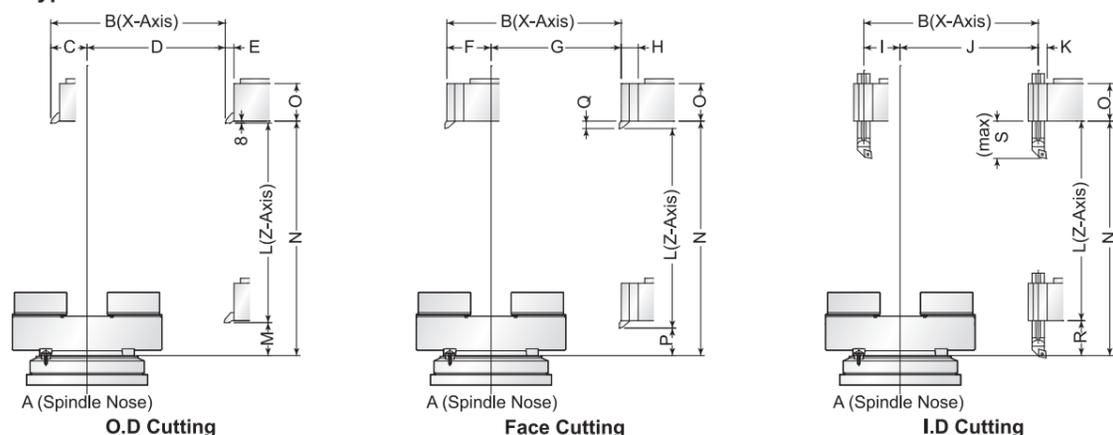
## VL-1000HR+P



# Axis Travel Diagram

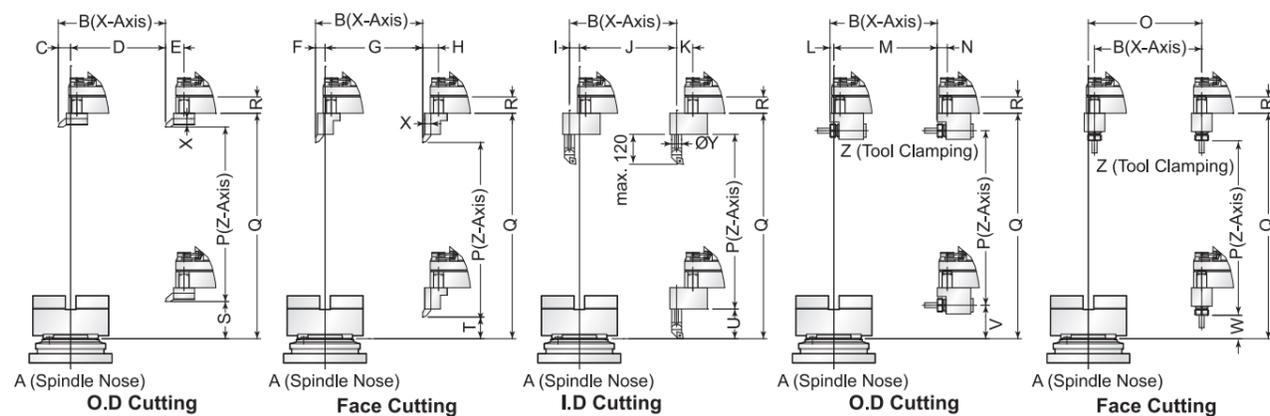
Unit: mm

## Single Type



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
VL-350R	A2-6	250	40	210	35	55	195	50	40	210	35	400	133	540	90	110	30	140	120
VL-450R	A2-8	300	40	260	35	55	245	50	40	260	35	450	133	590	90	110	30	140	120
VL-600HR	A2-8	350	35	310	35	60	290	60	50	300	50	500	153	660	95	130	30	160	150
VL-750HR	A2-11	500	42	458	35	75	425	68	43	457	36	800	213	1021	150	191	30	221	150
VL-850HR	A2-11	550	87	463	35	120	430	68	88	462	36	800	132	940	150	110	30	140	150
VL-1000HR	A2-15	700	145	555	35	177	522	68	146	554	36	800	132	940	150	110	30	140	150
VL-1100HR	A2-15	700	25	670	35	58	642	68	34	666	44	1000	197	1205	150	175	30	205	180

## Power Turret Type



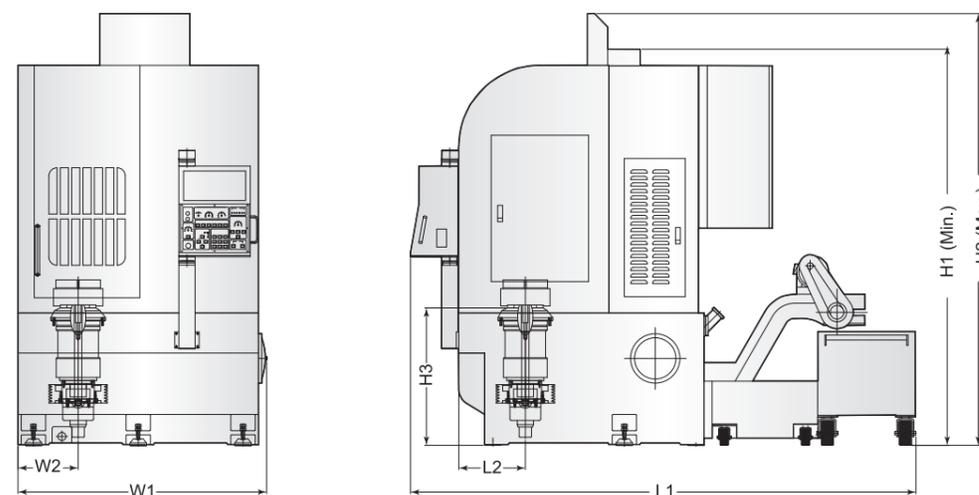
	A	B	C	D	E	F	G	H	I	J	K	L	M
VL-350R+P	A2-6	250	50	201	74	39	212	63	40	210	65	15	235
VL-450R+P	A2-8	300	50	251	74	39	262	63	40	260	65	15	285
VL-600HR+P	A2-8	350	49	301	74	39	311	63	40	310	65	15	335
VL-750HR+P	A2-11	500	92	408	85	65	435	58	7	493	0	48	452
VL-850HR+P	A2-11	550	120	430	85	93	457	58	35	515	0	76	474
VL-1000HR+P	A2-15	700	120	580	85	93	607	58	35	665	0	76	624
VL-1100HR+P	A2-15	700	100	600	130	116	584	146	80	620	110	73	627

	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
VL-350R+P	40	275	400	604	66	149	87	119	134	94	25	40	ER32
VL-450R+P	40	325	450	654	66	149	87	119	134	94	25	40	ER32
VL-600HR+P	40	375	500	704	66	149	87	119	134	94	25	40	ER32
VL-750HR+P	41	493	800	1074	82	211	139	179	189	150	25	50	ER40
VL-850HR+P	41	515	800	1007	82	144	72	112	122	83	25	50	ER40
VL-1000HR+P	41	665	800	1007	82	144	72	112	122	83	25	50	ER40
VL-1100HR+P	103	645	1000	1210	125	158	127	210	272	130	32	60	ER50

# Machine Dimensions

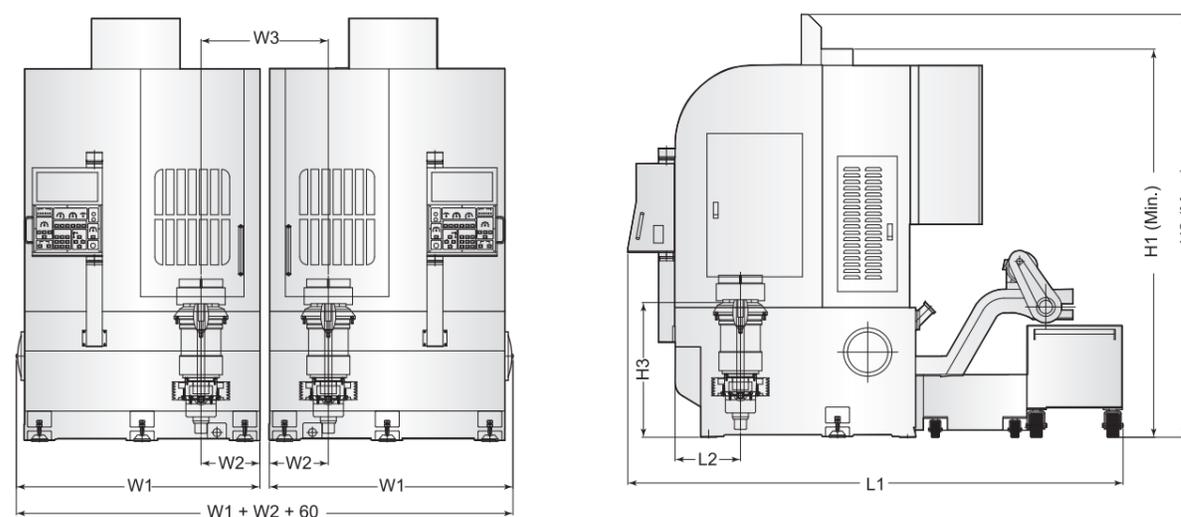
Unit: mm

## Single Type



	L1	L2	W1	W2	H1	H2	H3
VL-350R Series	2900	310	1500	270	2250	2700	950
VL-450R Series	3000	360	1510	320	2350	2800	970
VL-600HR Series	3100	410	1510	370	2600	3030	1020
VL-750HR Series	3400	500	1780	425	3130	3855	1120
VL-850HR Series	4285	600	2300	535	3220	4020	1226
VL-1000HR Series	4285	750	2900	735	3220	4020	1226
VL-1100HR Series	4500	726	2520	700	3725	4605	1322

## Twin Star Type



	L1	L2	W1	W2	W3	H1	H2	H3
VL-600HL/R	3100	410	1510	370	800	2600	3030	1020
VL-750HL/R	3400	500	1780	425	910	3130	3855	1120
VL-850HL/R	4285	600	2300	535	1130	3256	4020	1226

## Specifications

(Opt.)=Optional    N/A=Not Available    \* Specifications are subject to change without notice in advance.

		GUIDEWAY SERIES								BOXWAY SERIES												
Unit		VL-350R	VL-350R+P	VL-450R	VL-450R+P	VL-600HR	VL-600HR+P	VL-600HL/R	VL-750HR	VL-750HR+P	VL-750HR+V6	VL-750HL/R	VL-850HR	VL-850HR+P	VL-850HR+V6	VL-850HL/R	VL-1000HR	VL-1000HR+P	VL-1000HR+V6	VL-1100HR	VL-1100HR+P	
<b>CAPACITY</b>																						
Max. Swing Diameter	mm	ø450	ø450	ø550	ø550	ø650	ø650	ø650	ø780	ø780	ø780	ø780	ø1000	ø1000	ø1000	ø1000	ø1200	ø1200	ø1200	ø1250	ø1250	
Max. Cutting Diameter	mm	ø350	ø350	ø450	ø450	ø600	ø600	ø600	ø750	ø750	ø750	ø750	ø850	ø850	ø850	ø850	ø1000	ø1000	ø1000	ø1100	ø1100	
Max. Cutting Height	mm	400	400	450	450	500	500	500	650 / 850 (Opt.)	750 / 950 (Opt.)	1000	1000										
<b>SPINDLE</b>																						
Spindle Nose		A2-6	A2-6	A2-8	A2-8	A2-8	A2-8	A2-8	A2-11	A2-15	A2-15	A2-15	A2-15	A2-15								
Spindle Speed	rpm	50~3500	50~3500	50~2500	50~2500	50~2250	50~2250	50~2250	50~2000	50~2000	50~2000	50~2000	20~1500	20~1500	20~1500	20~1500	20~1200	20~1200	20~1200	20~600	20~600	
Max. #2 Spindle Speed	rpm	N/A	6000	N/A	6000	N/A	5000	N/A	N/A	5000	N/A	N/A	N/A	5000	N/A	N/A	N/A	4000	N/A	N/A	3500	
Spindle Bearing Diameter	mm	ø90	ø90	ø110	ø110	ø130	ø130	ø130	ø170	ø170	ø170	ø170	ø220	ø220								
<b>TURRET</b>																						
Turret Type		Horizontal	VDI 40	Horizontal	VDI 40	Horizontal	VDI 40	Horizontal	Horizontal	VDI 50	Vertical	Horizontal	Horizontal	VDI 50	Vertical	Horizontal	Horizontal	VDI 50	Vertical	Horizontal	VDI 60	
Number of Tools	pcs	8	8	8	8	8 / 12 (Opt.)	12	8 / 12 (Opt.)	8 / 10, 12 (Opt.)	12	6	8 / 10, 12 (Opt.)	8 / 10, 12 (Opt.)	12	6	8 / 10, 12 (Opt.)	12	12	6	12	12	
Tool Size	mm	□25, ø40	□25, ø40	□25, ø40	□25, ø40	□32, ø50	□25, ø40	□32, ø50	□32, ø50	□32 x 25, ø50	□32, ø50	□32, ø50	□32, ø50	□32 x 25, ø50	□32, ø50	□32, ø50	□32, ø50	□32, ø50	□32 x 25, ø50	□32, ø50	□32, ø60	□32, ø60
<b>TRAVEL / FEEDRATE</b>																						
X Axis Travel	mm	250	250	300	300	340	340	340	480	480	480	480	500	500	500	500	700	700	700	700	700	
Z Axis Travel	mm	400	400	450	450	500	500	500	650 / 800 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	800 / 1000 (Opt.)	1000	1000				
X Axis Rapid Feedrate	m/min	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	10	10
Z Axis Rapid Feedrate	m/min	24	24	24	24	24	24	24	20	20	20	20	20	20	20	20	20	20	20	20	10	10
<b>MOTOR</b>																						
Spindle Motor (Cont./30min)	kw	α P18 (9 / 11)	α P18 (9 / 11)	α P22 (11 / 15)	α P22 (11 / 15)	α P30 (15 / 18.5)	α P30 (15 / 18.5)	α P30 (15 / 18.5)	α P40 (18.5 / 22)	α 40 (37 / 45)	α 40 (37 / 45)											
#2 Spindle Motor	kw	N/A	α 2 (2.2 / 3.7)	N/A	α 2 (2.2 / 3.7)	N/A	α 6 (5.5 / 7.5)	N/A	N/A	α 8 (7.5 / 11)	N/A	N/A	N/A	α 8 (7.5 / 11)	N/A	N/A	N/A	α 8 (7.5 / 11)	N/A	N/A	α 8 (7.5 / 11)	α 8 (7.5 / 11)
X Axis Servo Motor	kw	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3	3	3	3	4	4	4	4	4	4	4	4	7	7
Z Axis Servo Motor	kw	3	3	3	3	3	3	3	4	4	4	4	7	7	7	7	7	7	7	7	7	7
Hydraulic Motor	kw	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Conveyor Motor	kw	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Pump	kw	0.75+1.1	0.75+1.1	0.75+1.1	0.75+1.1	0.75+1.1	0.75+1.1	0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1	0.75+0.75+1.1
<b>OTHER</b>																						
3-Jaw Power Chuck	inch	8"	8"	10"	10"	12"	12"	12"	15"	15"	15"	15"	24"	24"	24"	24"	24"	24"	24"	24"	32"	32"
Tool Holder	pcs	6	N/A	6	N/A	6	N/A	6+6	6	N/A	6	6+6	6	N/A	6	6+6	8	N/A	6	8	N/A	
Tool Collet	pcs	3	N/A	3	N/A	4	N/A	4+4	4	N/A	4	4+4	4	N/A	4	4+4	4	N/A	4	5	N/A	
<b>MACHINE BODY</b>																						
Machine (L x W)	mm	2900 x 1500	2900 x 1500	3000 x 1500	3000 x 1500	3100 x 1510	3100 x 1510	3100 x 1510	3400 x 1780	3400 x 1780	3400 x 1780	3400 x 1780	4285 x 2300	4285 x 2300	4285 x 2300	4285 x 2300	4435 x 2900	4435 x 2900	4435 x 2900	4500 x 2520	4500 x 2520	
Machine (H)	mm	2500	2500	2600	2600	2910	2910	2910	3520	3520	3520	3520	4020	4020	4020	4020	4020	4020	4020	4605	4605	
Machine Weight	kg	3500	4000	4500	5000	5500	6000	11000	9000	9500	8800	18000	13000	13500	12800	26000	15000	15500	14800	18000	18500	
Power Requirement	kva	25	30	30	35	35	40	35	40	45	40	40	45	50	45	45	45	50	45	65	70	

## Standard Accessories

- Coolant System
- Hinged Belt Chip Conveyor and Chip Cart
- Hydraulic Unit
- Heat Exchanger for Electrical Cabinet

- Auto Lubrication System
- Oil / Water Separator
- Lighting Lamp & Warning Light
- Protection Door
- Tool Kit

- FANUC Oi-T Controller System
- Manual of Operation & Maintenance
- Manual of Electrical & Hydraulic Circuit Diagram

## Optional Accessories

- 3-Jaw Power Chuck 15", 18", 21", 24", 32", 40"
- Auto Loading / Unloading System
- Hard Jaws of Chuck
- Special Holder / Chucks
- Dual Pressure Chuck
- Side Door Open Capability

- Coolant Through Tool Holder
- The 4th Axis
- Electrical Crane
- Caliper Unit Tools
- Tool Setting Probing System
- Custom Color Optional
- Air Conditioner for Electrical Box

- Spindle Motor α P30 (15/18.5 kw), α P40 (18.5/22 kw)
- Two Speed Gearboxes (VL-1100HR-Standard)
- Spindle Motor α 30 (30/37 kw), α 40 (37/45 kw)
- Transformer

- Linear Encoders
- Fanuc System 18i / 32i
- Oil Mist Filter
- Siemens System 810 / 840
- Scraper Chip Conveyor
- CE Mark