

Founded in 1976, Pinnacle is specialized in manufacturing all kinds of machining centers with excellent experience in technology, quality and service. Pinnacle machining centers range from 5-axis, double column, vertical and horizontal types, to CNC lathes as well as conventional milling machines.

Well-trained service engineers are familiar with each step of assembly to ensure our quality service works and keep all machines running in the best status. The sales and service departments provide customers pre-sale and after-sale services. Prompt reaction is just our basic attitude to all customers only, accurate and effective technical solutions are provided within the shortest time.

Product, Quality and Service, Pinnacle exceeds your expectations!



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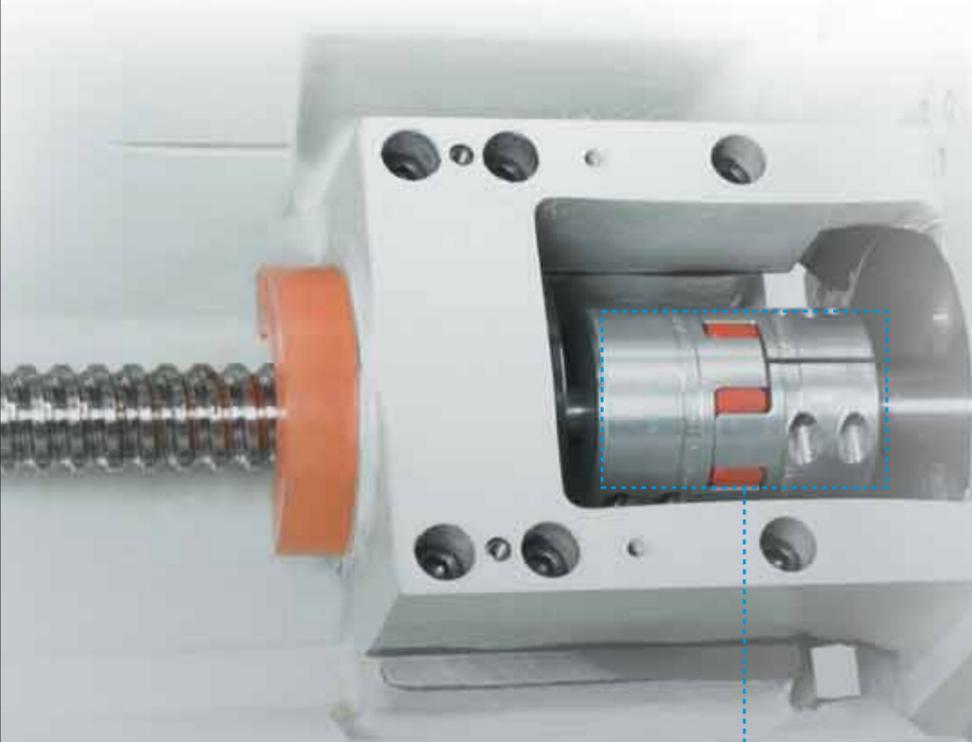
Pinnacle
Since 1976

Minimum Investment for Maximum Performance
Linear Guide Ways



LV85 / LV105

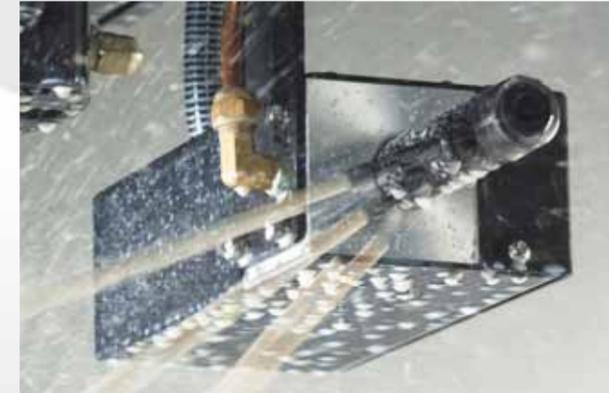
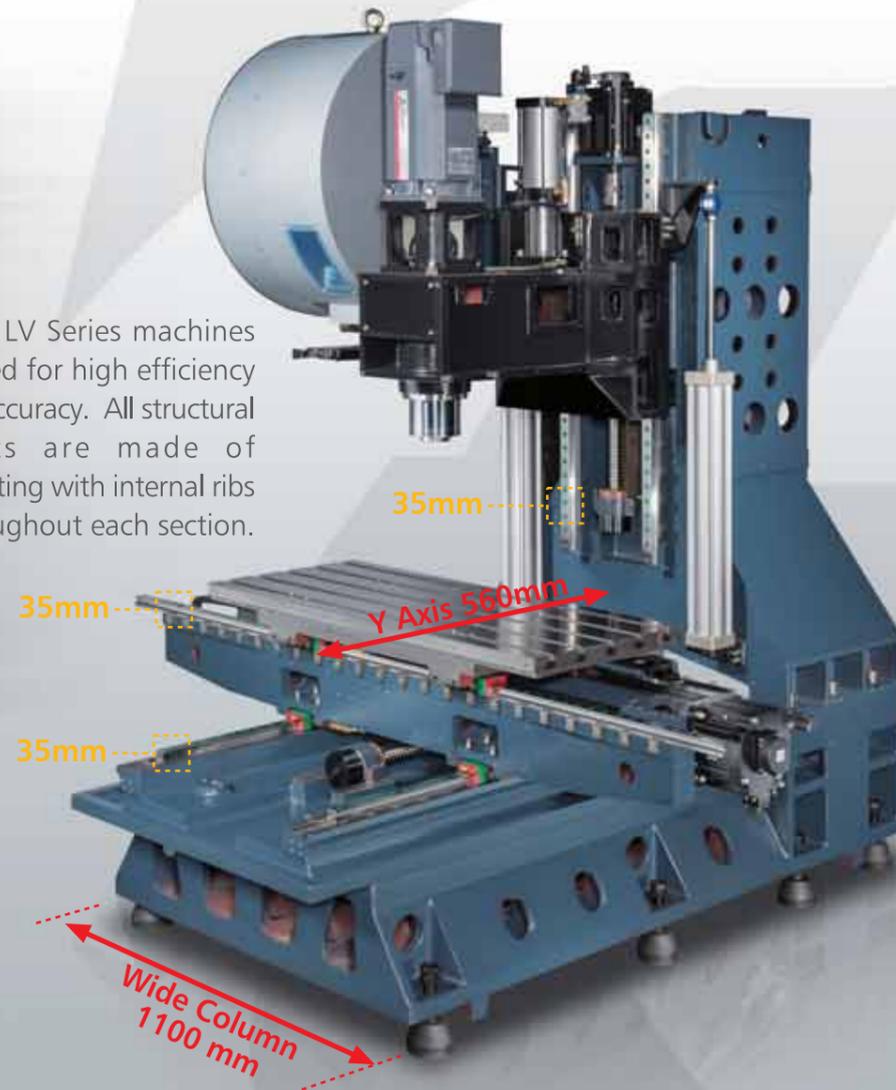
The Best-Selling Pinnacle Models, the First Step to Your Automation
Meehanite Cast Iron with Inner Ribbed Structure



The Pinnacle LV Series machines are engineered for high efficiency with superb accuracy. All structural components are made of Meehanite casting with internal ribs running throughout each section.

Direct Transmission

Each axis is driven by a high precision ball screw which is bolted with angular contact thrust bearings. The preloaded ball screws feature higher machining rigidity and accuracy, better transmission efficiency with minimized backlash.



Programmable Coolant Nozzle (Option)

The coolant is precisely controlled aiming to the cutting point. The function increases lubrication efficiency, stabilizes cutting temperature, and extends cutting tool's lifetime.

LV85 / LV105

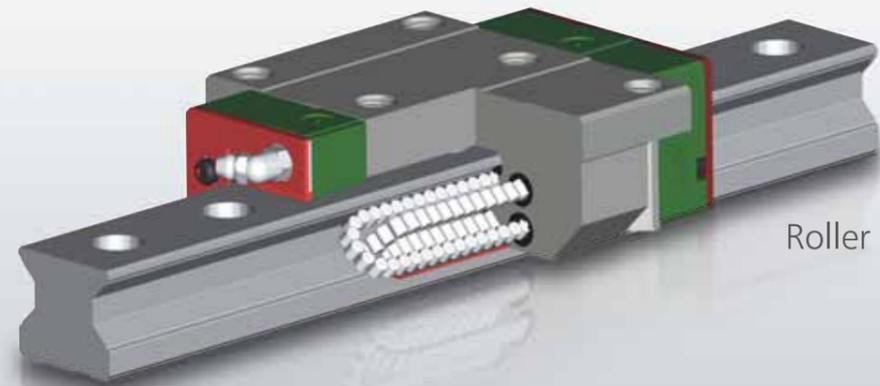
- 850(1020) x 560 x 560 mm Travel
- Rapid Feedrate 36 / 36 / 24 m/min
- 10 HP Spindle Motor
- ISO40 Spindle Taper
- Spindle Speed 10,000 rpm
- Direct drive 12,000 / 15,000 rpm (option)
- X, Y & Z Axis Linear Way



From 1994 until today, there are more than 2,000 units of Pinnacle LV series, including their previous versions, that have been sold to more than 35 countries. No matter if it is for mold making or for mass production purpose, the LV85 is the best general purpose machine for your versatile work shop.

LV116 / LV126

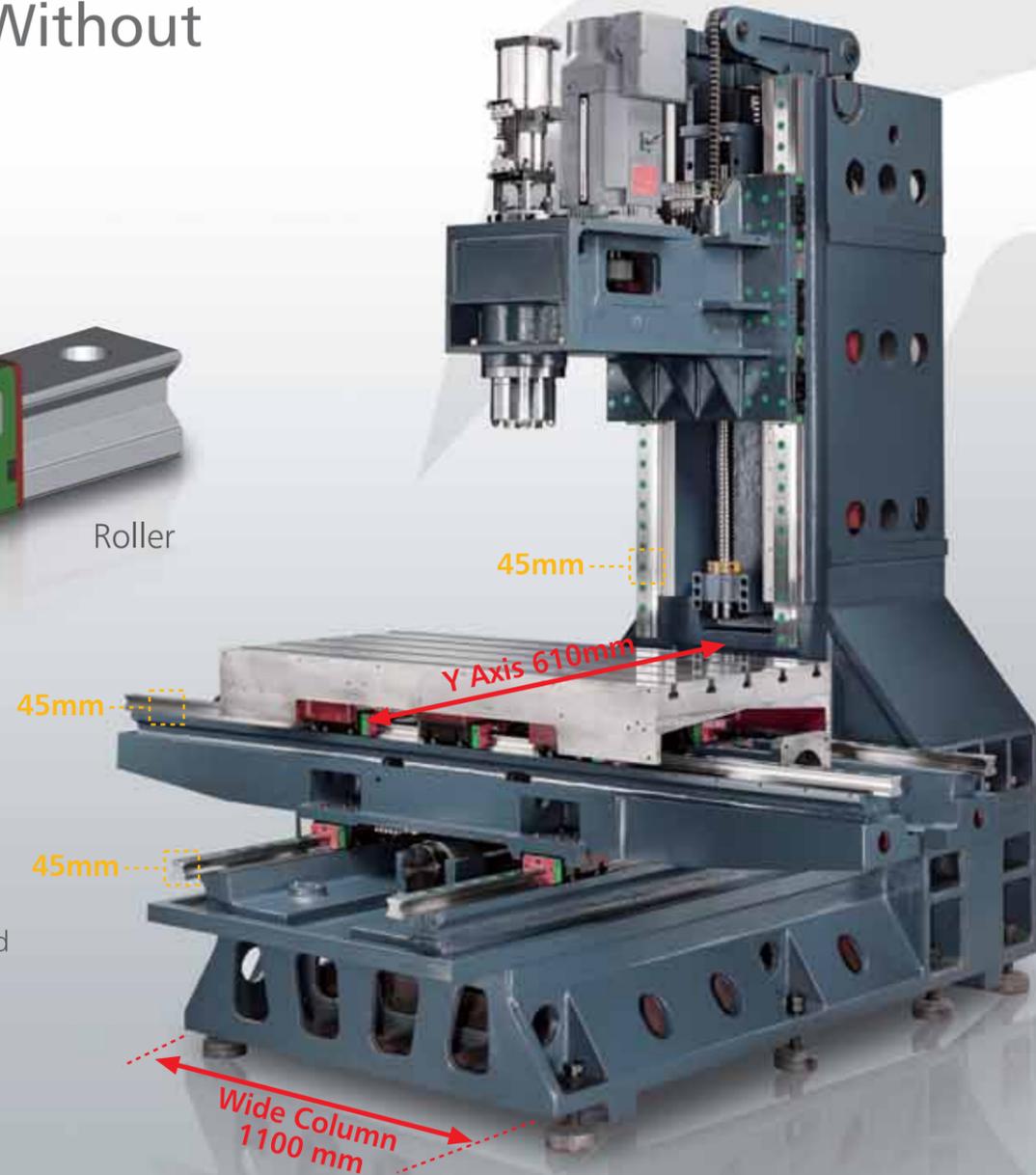
Maintaining Efficiency Without Sacrificing Rigidity



Roller

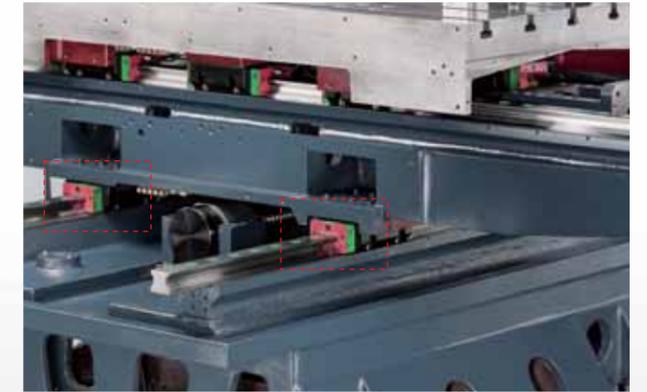
6 Rollers Support on X / Z Axis

For added support, each roller set is internally preloaded diagonally in a cross combination. Six sets of rollers are used in each roller pack.



Extra-wide Machine Base and Column

The extra large machine base and column are both sized 1,100 mm in width. The oversized machine structure features excellent damping coefficient and stable metallic stability.



Low Friction, High Efficiency

The Pinnacle LV series machines adopt heavy duty Roller linear guide ways instead of steel ball ones. Combining the benefit of box and linear guide ways, the machine's dynamic motion control features high sensitivity with heavy loading capacity.

LV116 / LV126

- 1140(1270) x 610 x 610 mm Travel
- Rapid Feedrate 30 / 30 / 24 m/min
- 15 HP Spindle Motor
- ISO40 (ISO50) Spindle Taper
- Spindle Speed 8,000 rpm
- 10,000 rpm (option)
- Direct drive 12,000 / 15,000 rpm (option)
- X, Y & Z Axis Linear Way

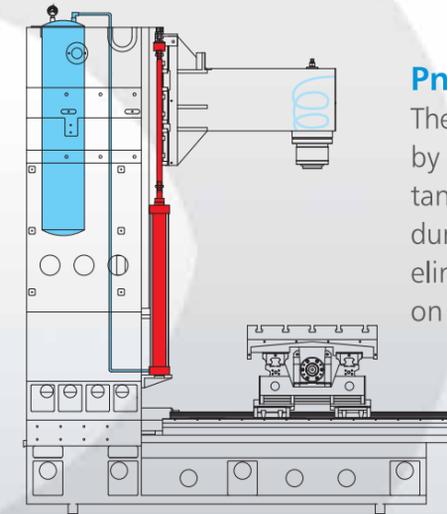
LV117 / LV137 / LV147

Sturdy Structure with Pneumatic Balancing System



Smooth Motion Control

Based on different performance demands, the LV series machines are designed with different counter-balancing mechanism.

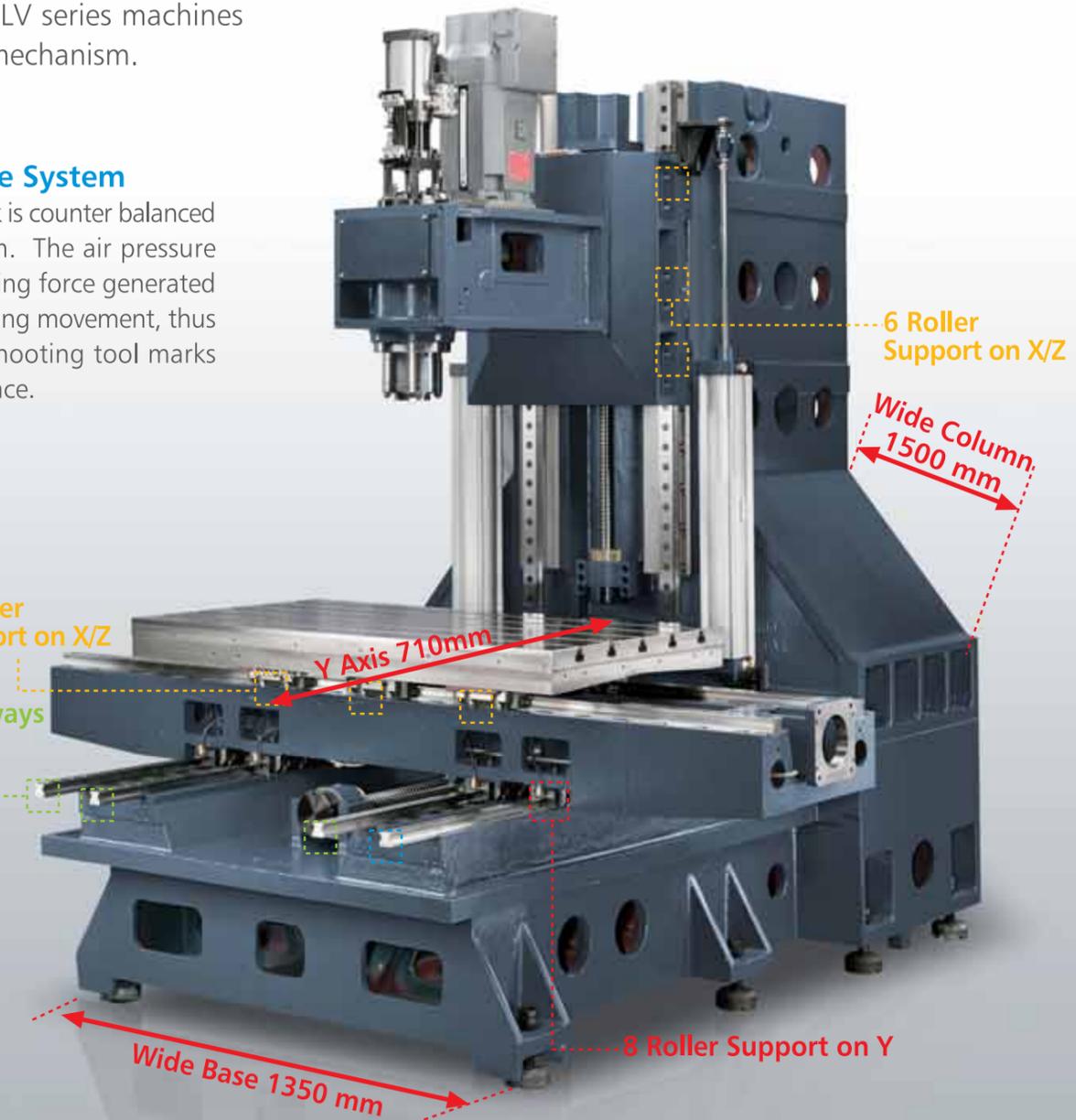


Pneumatic Balance System

The machine head stock is counter balanced by a pneumatic system. The air pressure tank absorbs mass jerking force generated during Z axis reciprocating movement, thus eliminating the over shooting tool marks on the workpiece surface.

LV117 / LV137 / LV147

- 1140(1300)(1400) x 710 x 610 mm Travel
- Rapid Feedrate 24 (30) / 24 (30) / 24 m/min
- 15 HP Spindle Motor
- ISO40 (ISO50 option) Spindle Taper
- Spindle Speed 8,000 rpm,
- 10,000 rpm (option),
- Direct drive 12,000 / 15,000 rpm (option)
- X, Y & Z Axis Linear Way



Automatic Tool Changer



Magazine: Armless Type
Capacity: 20 Tools
The armless carousel type tool magazine features simple construction, easy maintenance and trouble-free operations.

Magazine: Arm Type
Capacity: 24 / 30 Tools
The arm type tool magazine is activated by an electric motor transmitted via a U-Cam mechanism, featuring stable and rapid tool change.

Power Spindles

From high speed to high torque, from power milling to small radius interpolation, Pinnacle offers a wide range spindle specifications to choose from. Plus, the peripheral functions such as coolant through spindle and coolant curtain, the LV series machines are capable of handling all cutting conditions you need.



BT50 Gear



BT40 Direct Drive



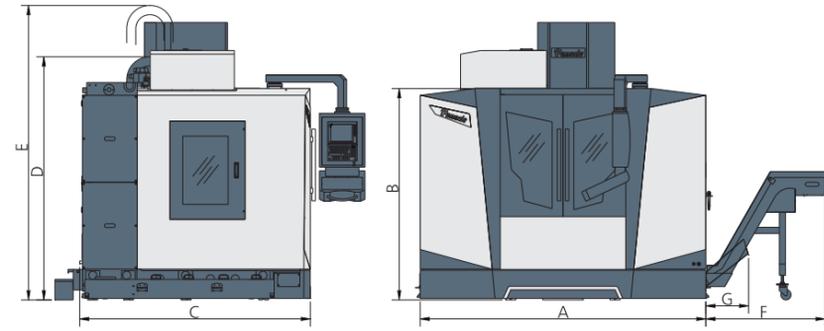
BT40 Belt



Built-in

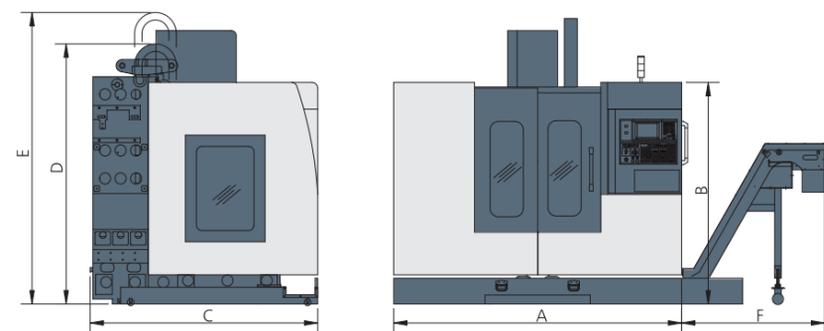


LV85 / LV105



MODEL	A	B	C	D	E	F	G
LV85	2600	2060	2280	2370	2650	1180	430
LV105	2820	2060	2280	2370	2650	1180	430

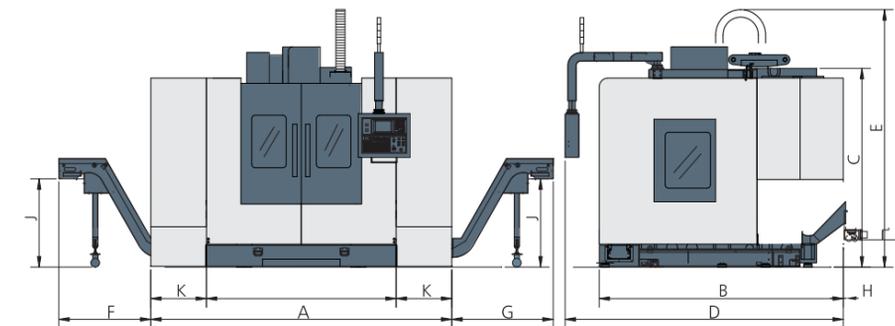
LV116 / LV126



MODEL	A	B	C	D	E	F
LV116	3100	2145	2230	2365	2670	1180
LV126	3400	2145	2230	2365	2670	1180

Machine Dimensions

LV117 / LV137 / LV147



MODEL	A	B	C	D	E	F	G	H	J	K
LV117	3250	3080	2285	3475	2950	1180	1180	28	1000	525
LV137	3490	3080	2285	3475	2950	1060	1180	28	1000	645
LV147	3890	3080	2285	3475	2950	860	1180	28	1000	845



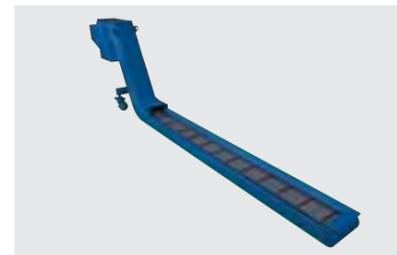
20 Bar Hi-pressure Pump And Tank
20 μm filter and extra large coolant tank to assure CTS system offers the highest efficiency. (optional)



Coolants Jets Around Spindle
Improved cooling efficiency on workpiece. (ISO 40 standard, ISO 50 optional)



Chips Flushing Nozzles
Coolant flushing nozzles on rear inner wall of guard prevent jam of chips during operation.



Chip Conveyor
Chip conveyor device in the front side of machine removes chips efficiently. (optional)

SPECIFICATIONS:

MODEL	LV85	LV105	LV116	LV126	LV117	LV137	LV147
TABLE							
Table Size (mm)	1000 x 510	1200 x 510	1300 x 610	1400 x 610	1300 x 700	1500 x 700	1600 x 700
Travel Ranges (X x Y x Z mm)	850 x 560 x 560	1020 x 560 x 560	1140 x 610 x 610	1270 x 610 x 610	1140 x 710 x 610	1300 x 710 x 610	1400 x 710 x 610
Max. Table Load (Kgs)	600	600	850	850	1000	1200	1500
Spindle Nose to Table Surface (mm)	100~660	100~660	110~720	110~720	110~720	110~720	110~720
T-Slot (Width x Distance x Number mm)	18 x 100 x 5	18 x 100 x 5	18 x 125 x 5	18 x 125 x 5	18 x 125 x 5	18 x 125 x 5	18 x 125 x 5
SPINDLE							
Distance Between Column (mm)	ISO40		ISO40	ISO50	ISO40	ISO50	
Spindle Inner Diameter (mm)	Ø60		Ø70	Ø80	Ø70	Ø100	
Spindle Center to Column (mm)	620		675	675	760	760	
Spindle Speed (rpm) Belt	60~10000		60~8000 (10,000)	60~8000 (10,000)	40~8000	40~6000 (8000)	
Spindle Speed (rpm) Gear	-		L40~2000, H2001~8000	-	L40~2000, H2001~8000	L40~1500, H1501~6000	
Spindle Speed (rpm) Direct-Drive	10000 (12000/15000)		12000	-	12000 (15000)	-	
Draw Bar Force (kgf)	700		950	2000	950	2000	
Main Motor (con/30 min Kw)	5.5 / 7.5 (7.5 / 11)		7.5 / 11	11 / 15	7.5 / 11	11 / 15	
FEED RATE							
Rapid Feed Rate (X/Y/Z m/min)	36 / 36 / 24		30 / 30 / 24		24(30) / 24(30) / 24		
Feed Rate (X/Y/Z mm/min)	10000		10000		10000		
AXIS SERVOMOTOR							
Mitsubishi X/Y/Z (Kw)	HF354 (3.5)		HF354 (3.5)		HF354 (3.5)	HF453 (3.5)	HF453 (3.5)
Fanuc (Kw)	B22/2,000 i (2.5) or α 12/3,000 i (3.0)		B22/2,000 i (2.5) or α 12/3,000 i (3.0)		B22/2,000 i (2.5) or α 12/3,000 i (3.0)		
Siemens (Kw)	1FK7 063 (2.9)		1FK7 063 (2.9)		1FK7 083 (4.0)		
Fagor (Kw)	FKM 64.30A		FKM 64.30A		FKM 64.3 (5.2)		
Heidenhain (Kw)	QSY155B (2.47)		QSY155B (2.47)		QSY155D (5.68)		
AUTO TOOL CHANGER							
ATC Type	PLATE / DISK		ISO40	ISO50	ISO40	ISO50	
Cam Type	GENOVA / DAUL ARM		GENOVA / DAUL ARM		GENOVA / DAUL ARM		GENOVA / DAUL ARM
Tool Selection (Bi-direction)	ABSOLUTE / RANDOM		ABSOLUTE / RANDOM		ABSOLUTE / RANDOM		ABSOLUTE / RANDOM
Tool Storage Capacity (PCs)	20 / (24)		20 / 24	16 / 24	20 / 24 (30)		16 / 24
Max. Tool Diameter (mm)	Ø100 / Ø90		Ø100 / Ø90	Ø115 / Ø115	Ø100 / Ø90 (Ø77)		Ø115 / Ø127
Max. Tool Length (mm), Weight (kgs)	250, 8		250, 8	300, 15	250, 8		300, 15
MISCELLANEOUS							
Air Requirement (Kg/cm ²)	6		6		6		
Voltage	220		220		220		
Power Requirement (KVA)	20		25	30	25	30	
Coolant Tank Capacity (L)	200		300		300		
Machine Weight (Kgs)	5500	5700	6500	6800	9000	10000	11000
Machine Height (mm)	2750		2950		3000	3000	3000
Floor Space (L x W mm)	2600 x 2280	2820 x 2280	3100 x 2230	3400 x 2230	3250 x 3080	3490 x 3080	3890 x 3080
Packing Size (L x W x H mm)	2900 x 2300 x 2540	2900 x 2300 x 2540	3450 x 2300 x 2530	3450 x 2300 x 2530	2250 x 3130 x 2550	2250 x 3130 x 2550	2250 x 3130 x 2550

● ALL SPECIFICATIONS AND DESIGNS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Standard Accessories:

- Air blast through spindle
- Air blast for workpiece (nose)
- Coolant flushing system
- 3 axes telescopic covers
- Full splash guard
- Centralized automatic lubrication system
- Working lamp
- Operation status light
- Cooling system
- Air gun and water spray-gun
- MPG handwheel
- Heat exchanger
- RS-232 Interface
- Rigid tapping
- Spindle oil cooler
- Adjusting tools and box
- Leveling bolts and pads
- Operation and programming manual

Control System:

- Mitsubishi: M70/ M720
- Fanuc: 0i-MD / 31i-MB
- Heidenhain: iTNC530 / TNC620
- Siemens: 828D
- Fagor: 8055i Plus