

Strength & Durability -

Increase your profitability with superbly manufactured machine tools from Everricho



Since 1989

EVERRICHO



FMS-A6020202 886-4-2352988



EVERRICHO Company LTD.

No. 22, 37th Road, Taichung Industrial Park,
Taichung City 40768, Taiwan.
TEL:+886-4-23584567
+886-4-23581234
FAX:+886-4-23583111
<http://www.RICHO.com.tw>
email:richo@richo.com.tw

Dealer :

 Everricho

Double column machining center series



series 2212/3212/2616/3216/4016

Double Column Machining Center

Cutting Performance Is Our Speciality

LB series

- Designed exclusively by our experienced senior design team
- Massive machine structure with powerful geared head for heavy duty and high efficiency cutting.
- Optional manual or semi-automatic 90° horizontal milling head for 5 face machining
- Optional direct drive spindle & motor for high speed cutting (BT50 - 10,000rpm)
- High accuracy & superb surface finish suitable for mould work and high precision parts
- Z axis with box ways design for superior rigidity and heavy duty cutting
- Available with direct drive spindles and Z axis roller type linear ways

Model	Ballscrew diameter	Grade	Linear way width	Grade		Block quantity	Block size	Block capacity
LB-3216	X axis ϕ 63	C3	55	P	X Axis	6 Unit	RGW55HC	167.8/348KN (LB2616)
	Y axis ϕ 50	C3	55	P		8 Unit	232x140 mm	(LB2616)
	Z axis ϕ 50	C3	55	P	Y Axis	4 Unit	RGW55HC	167.8 / 348 KN
LB-2212	X axis ϕ 63	C3	55	P		Z Axis	6 Unit	RGH55HA
	Y axis ϕ 50	C3	55	P	232x100 mm			
	Z axis ϕ 50	C3	55	P				

Superior Machine Structure LB 327 427 series

- Ultra rigid machine design giving stability, accuracy and unbeaten performance
- X axis utilises two heavy duty roller type linear ways for low friction at high rigidity and high speed.

Ballscrew diameter	Grade	Linear way width	Grade
X axis ϕ 80	C3	55x2 + 45x2	P
Y axis ϕ 63	C3	65	P
Z axis ϕ 63	C3	55	P



Revolutionary Machine Design

- X axis with 2 roller linear way + 2 ball linear way
- Coolant Through Ballscrew for 3 axis
- High torque for X axis and high resolution **ENCODER**

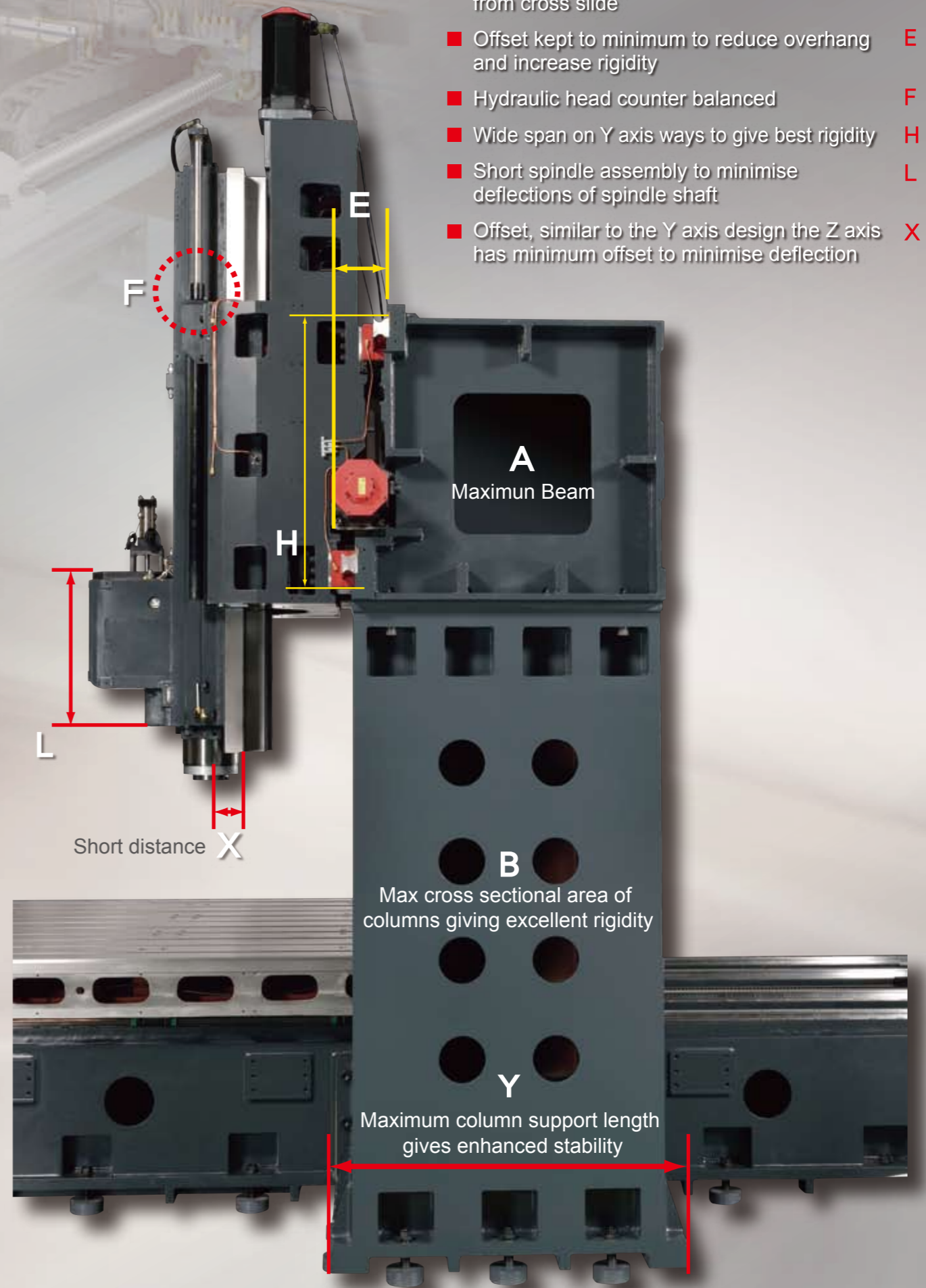


Widely door easy for workpiece load



X axis with 4 linear way, High resolution **ENCODER**, Coolant Through Ballscrew Design.

- Large cross sectional area of beam from cross slide **A**
- Offset kept to minimum to reduce overhang and increase rigidity **E**
- Hydraulic head counter balanced **F**
- Wide span on Y axis ways to give best rigidity **H**
- Short spindle assembly to minimise deflections of spindle shaft **L**
- Offset, similar to the Y axis design the Z axis has minimum offset to minimise deflection **X**



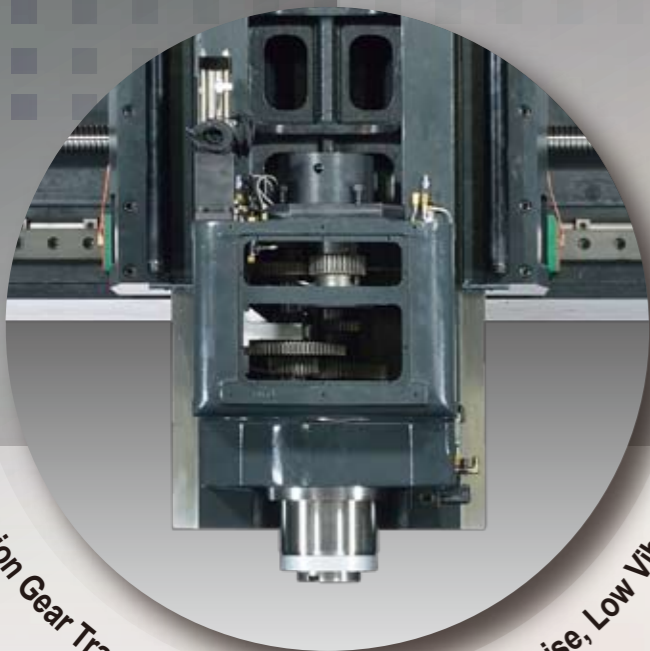
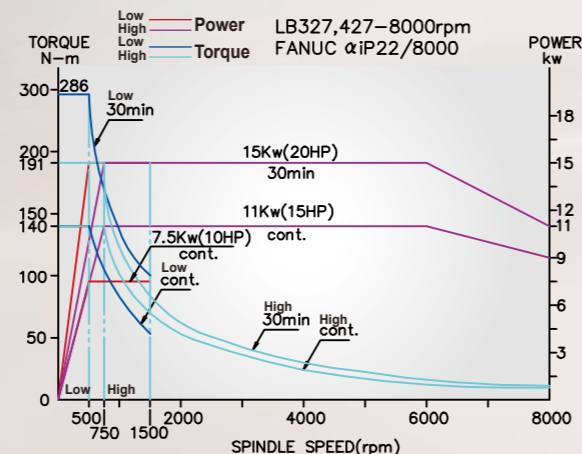
LB327/427 series

Powerful Cutting Performance

Workpiece material	S45C
Face Cutter Dia.	φ 100
Spindle rpm	560 rpm
Cutting Width	85 mm
Cutting Depth	7.1 mm
Cutting Feed Rate	1,000 mm/min
Spindle Motor	22 / 26 kw
Total Chip Removal	600 cc/min
Workpiece Height	330 mm

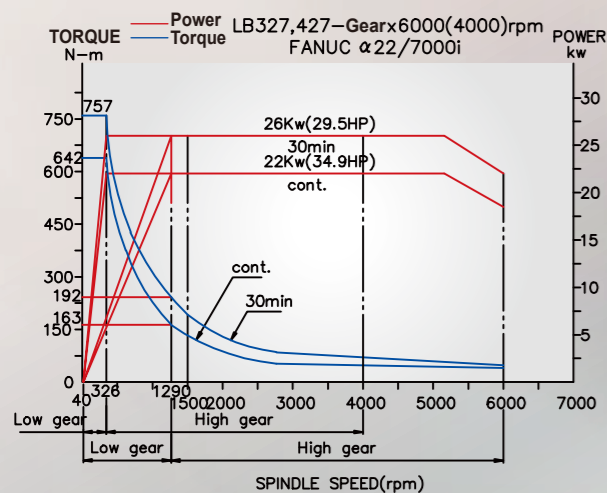
1. Increased torque from geared head
 2. Larger spindle bearing - ID to 100mm
 3. New spindle design
- 22/26 kw powerful spindle motor, #50 taper two speeds gear change 6000rpm spindle, max. torque 642/757 N-m, excellent for heavy duty cutting.
 - For heavier cutting, #50/4000rpm gear head available.
 - Direct drive spindle (#50/10000rpm) available for high speed and fine surface finish workpiece.

- 8,000rpm Direct drive wide range spindle motor (Option) (FANUC α 22iP/8,000)

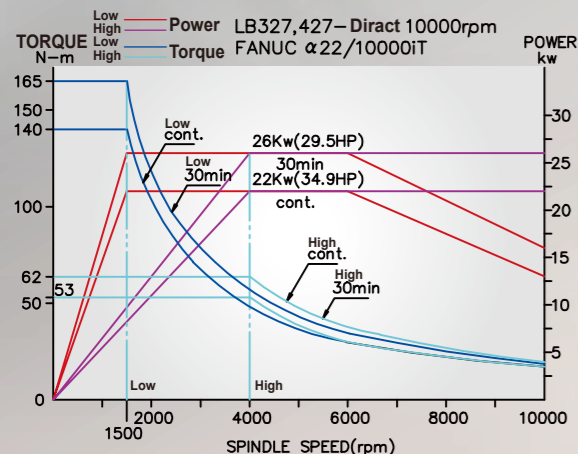


Precision Gear Transmission, Cutting Power, Low Noise, Low Vibration

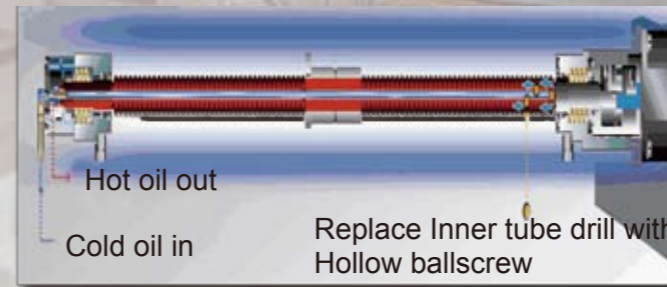
- BT50 6,000rpm gear head (FANUC α 22i/7,000)



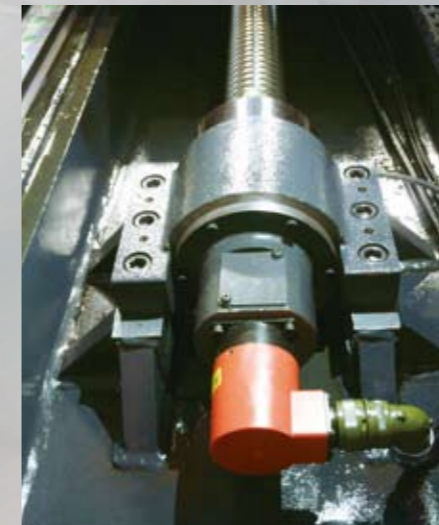
- 10,000rpm Direct drive (Option) (FANUC α 22i/10,000)



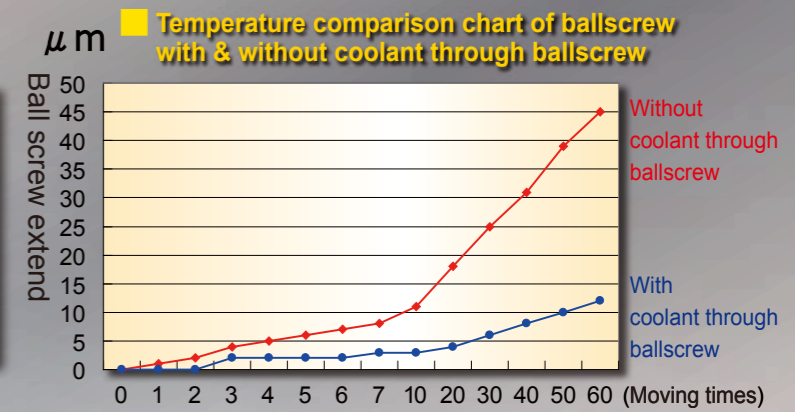
Coolant Through Ballscrew Design



Taiwan patent no. M329126



X axis with high resolution encoder, ballscrew refrigeration through centre. (Taiwan patent no. M443587, M329126)

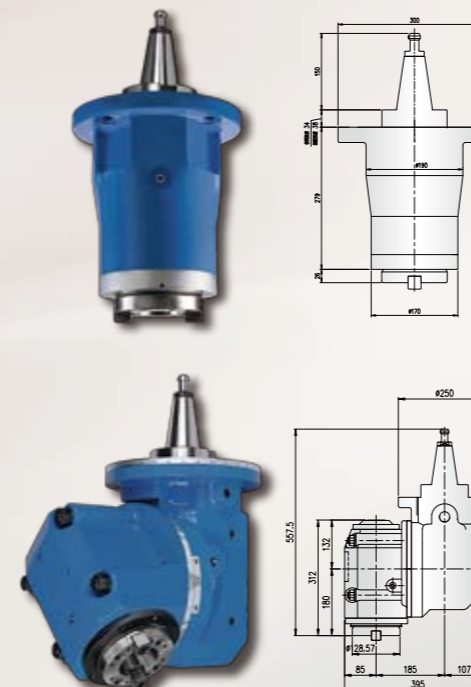


Above test room temperature 24°C, the measured value will vary in different environments.

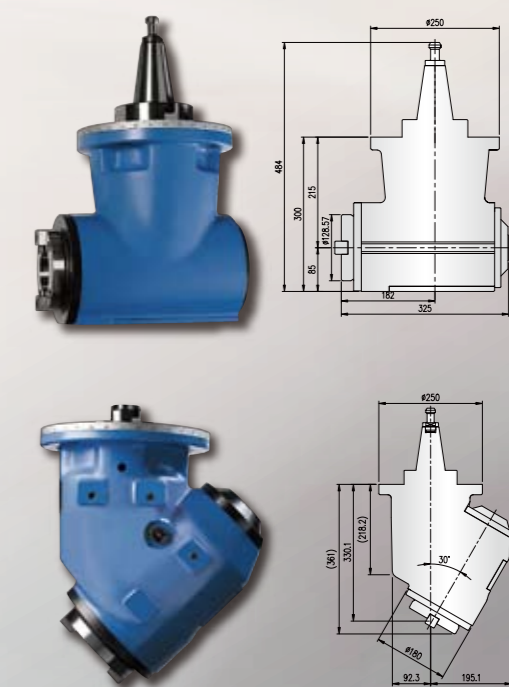


Tool magazine 32T

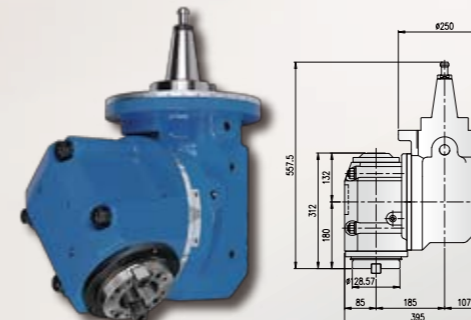
Optional multi-function angle milling head



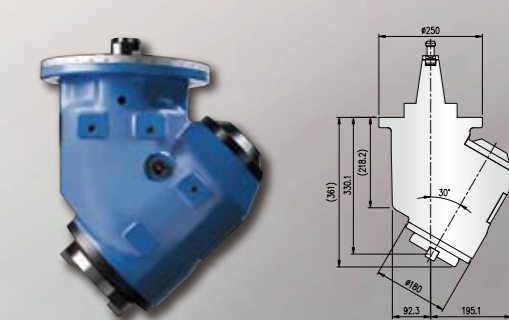
Extension milling head
Manual mount head & tools
No indexing function
Max. 2000rpm



90° angle milling head
Manual mount head & tools
Manual indexing
Max. 2000rpm



Universal milling head
Manual mount head & tools
Manual indexing
Max. 2000rpm



30° angle milling head
Manual mount head & tools
Manual indexing
Max. 2000rpm

High Accuracy, High Torque Design

- Tool magazine 32T
- Left-up chip conveyor



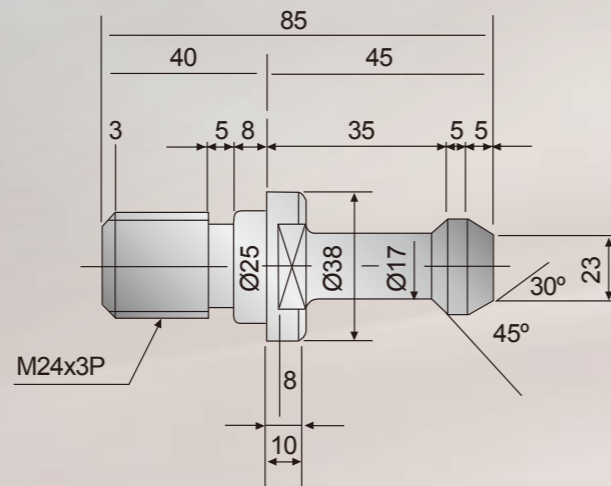
Manual 90° angle head
(allows 5 face milling)
Manual changing head,
auto hyd. tool clamping.

Pull Stud Specification

BT50#



Optional attachment: N75B



Dimension & Specification

Table Dimension

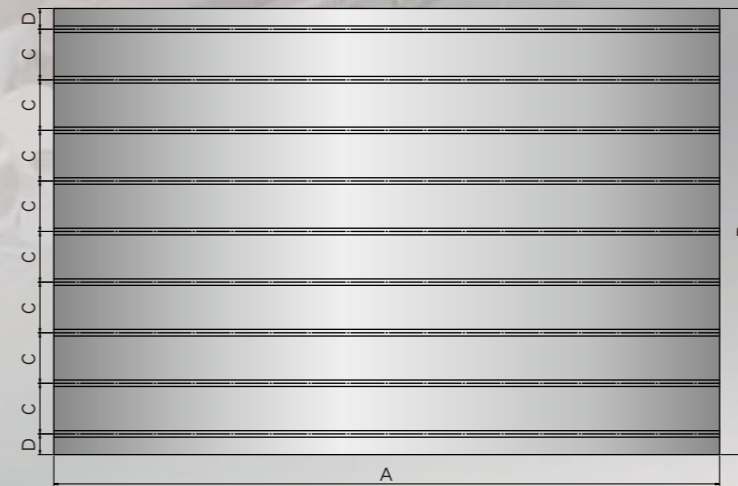
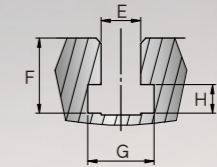


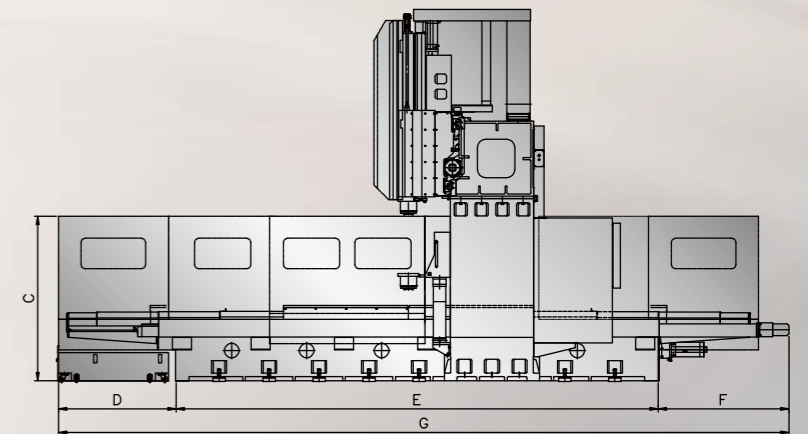
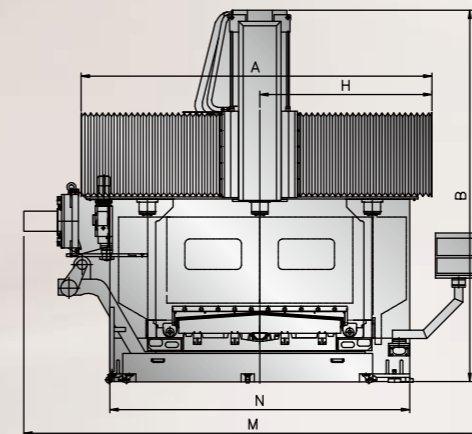
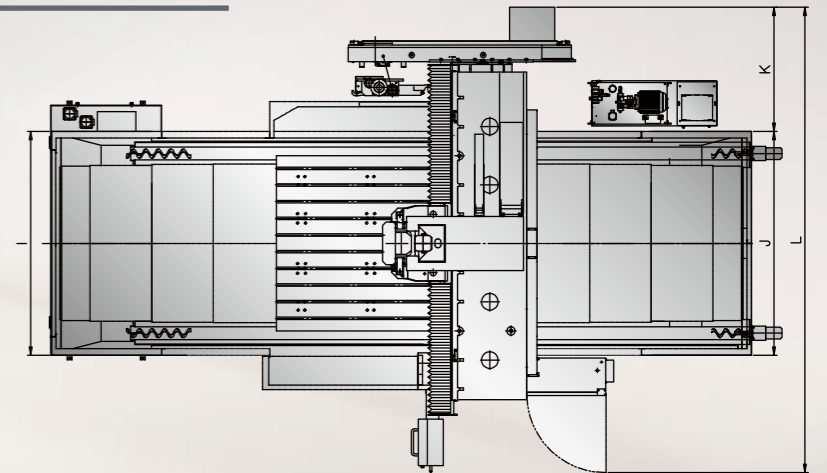
Table Dimension

	A	B	C	D	E	F	G	I	T tank
2616	2400	1500	170	70	22	42	37	16	9
3216	3000	1500	170	70	22	42	37	16	9
4016	4000	1500	170	70	22	42	37	16	9
327	3000	2100	200	150	28	48	46	20	10
427	4000	2100	200	150	28	48	46	20	10



Machine Dimension

**LB2616/3216/4016/
LB327/427**



LB series

Machine Dimension

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2616	3082	4304	1923	1370	4590	1535	7495	1513	1890	1890	1337	4612	4500	2700
3216	3082	4304	1923	1370	5790	1535	8695	1513	1890	1890	1337	4612	4500	2700
4016	3082	4304	1923	1370	7650	1535	10555	1513	1890	1890	1337	4612	4500	2700
327	4210	4454	1973	1410	5785	1570	8765	2065	2690	2690	1487	5582	5500	3600
427	4210	4454	1973	1410	7785	1570	10765	2065	2690	2690	1487	5582	5500	3600

Double Column Machining Center

● Note: We reserve the rights for further design modification without prior notice.

Specification / Model		Unit	LB-2212	LB-3212	LB-2616	LB-3216	LB-4016	LB-327	LB-427	
Travel	X axis travel	mm	2200	3200	2600	3200	4060	3200	4200	
	Y axis travel	mm	1200	1200	1600	1600	1600	2700	2700	
	Z axis travel	mm	850	850	900 (1000 Opt.)	900 (1000 Opt.)	900 (1000 Opt.)	900 (1100 Opt.)	900 (1100 Opt.)	
	Spindle nose to table	mm	200-1050	200-1050	165-1065	165-1065	165-1065	200-1100 (200-1300 Opt.)		
	Between Column Distance	mm	1300	1300	1700	1700	1700	2500	2500	
Table	Table Size (X)	mm	2000	3000	2500	3100	4000	3000	4000	
	Table Size (Y)	mm	1100	1100	1500	1500	1500	2100	2100	
	Table Loading Capacity	kg	4000	5000	9000	11000	12000	12000	15000	
	T-Slot	mm	22 x 160 x 7			22 x 170 x 9			28 x 200 x 10	
Spindle	Spindle Horse Power (Continuous/30min)	kW	15 / 18.5 (Opt. 22 / 26)		22 / 26			22 / 26		
	Max. Spindle rpm	rpm	Hi/Lo gear change 6000rpm (4000rpm gear head, 10000rpm direct drive Opt.)							
	Spindle max. Torque	Nm	438 / 537 (Opt. 642 / 757)			642 / 757			642 / 757	
	Spindle Taper / Pull Stud	#	BT50 / 45° (MAS407-P50T-1)			BT50 / 45° (MAS407-P50T-1)				
	Spindle Tool Clamping Force	kg	1800			1800				
	Spindle Bearing ID	mm	100			100				
Feed rate	Rapid Feed Rate (X)	M / min	20		20			16		
	Rapid Feed Rate (Y/Z)	M / min	20 / 15		20 / 15			16 / 15		
	Cutting Feed Rate (X/Y/Z)	MM / min	1-10000		1-10000			1-10000		
	X/Y/Z Axial Motor	kW	4 / 4 / 4	7 / 4 / 7	7 / 4 / 7			7 / 7 / 7		
	XYZ Linear way width		X:55 mm, Y:55mm Roller Type Linear Ways. (Z axis box way or roller type linear way)						X:55mm roller+45mm ball linear ways. Y:65mm roller linear ways. (Z axis box or roller linear ways)	
	X axis Ballscrew (DxP)	mm	φ 63 x P20		φ 63 x P20			φ 90 x P25		
	Y axis Ballscrew (DxP)	mm	φ 50 x P12		φ 50 x P12			φ 63 x 12		
Z axis Ballscrew (DxP)	mm	φ 50 x P12		φ 50 x P10			φ 63 x 12			
Tool Magazine	Tool Magazine Capacity	pcs	32 (24, 40, 60 Opt.)		32 (24, 40, 60 Opt.)			32 (24, 40, 60 Opt.)		
	Max. Tool dia/without adjacent tool diameter	mm	φ 127 / 215		φ 127 / 215			φ 127 / 215		
	Max. Tool Length	mm	300		300			300		
	Max. Tool Weight	kg	20		20			20		
Accuracy	Positioning Accuracy (JIS 6336)	mm	±0.010 / 300		±0.010 / 300			±0.010 / 300		
	Positioning Accuracy (VDI 3441)	mm	P≤0.02	P≤0.025	P≤0.025			P≤0.025	P≤0.030	
	Repeatability Accuracy (JIS 6336)	mm	±0.003 / 300		±0.003 / 300			±0.003 / 300		
	Repeatability Accuracy Ps max. (VDI 3441)	mm	Ps≤0.015	Ps≤0.02	Ps≤0.02			Ps≤0.020	Ps≤0.025	
Others	Electric Power		AC220V±10%, 3 φ, 60 / 50Hz			AC220V±10%, 3 φ, 60 / 50Hz				
	Total Electric Power requirement	KVA	50		50			60		
	Air Pressure requirement	kg / cm ²	Min. 5		Min. 5			Min. 5		
	Hyd tank volume (hyd. motor HP)	liter	120 (7.5HP)		120 (7.5HP)			125L (7.5HP)		
	Lubrication oil tank volume	liter	6		6			6		
	Coolant tank & motor hp	liter	350 (1HP)	500 (1.5HP)	500 (1.5HP)			500L (1.5HP)		
	Control system		FANUC 0iMF			FANUC 0iMF			FANUC 0iMF	
	Machine LxWxH	mm	6000 x 4200 x 4200	7600 x 4200 x 4200	7495 x 4500 x 4304	8695 x 4500 x 4304	10555 x 4500 x 4304	8765 x 5500 x 4454	10765 x 5500 x 4454	
Machine gross Weight	kg	21,000	25,000	24,000	26,000	28,000	34,000	39,000		

Standard Accessories

- 6000 rpm, Hi/Lo gear auto change spindle
- XYZ refrigeration through ballscrew
- Chain type tool magazine 32 tool capacity
- Twin arm type auto tool change system
- Double air cylinder counterbalance system
- Pneumatic system (excluding outer air piping)
- Spindle oil chiller
- Centralised lubrication system
- Lift-up chip conveyor
- Fully enclosed splash guard design
- Coolant system (tank & motor)
- Dual chip auger
- Swarf conveyor and bin
- Foundation pads & bolts
- Tool box with tools
- Sealed electrical cabinet with heat exchanger
- Over arm type operational panel box
- Portable type MPG wheel
- Pedal switch for tool clamp/unclamp
- Work light
- Programme finish and alarm light
- RS 232C transmission plug
- Rigid tapping
- Auto power off
- Technical manual one set including operator's manual, wiring diagram, ladder diagram
- Transformer
- CE certification

Optional Accessories

- 4000rpm gear head
- Direct drive high speed spindle, 10,000rpm
- Coolant through spindle (Form A) 20,70 bar+paper filter
- 60 tools tool magazine
- Column raiser block (200 or 300mm)
- Sub work table, select according to models
- XYZ three axes linear scale
- Fully enclosed splash guard with top guard and multi-layer operation doors.
- Semi auto 90° milling head (for 5 facing) Manual change head, auto hyd. tool clamp.
- Arm type milling head magazine
- 90°, 30° milling heads
- Horizontal Pendant operation panel
- 5 face pendant operation panel
- Air conditioner for electrical cabinet
- Hyd. tank with chiller
- Auto tool length measurement
- Auto workpiece measurement
- Auto heat distortion compensation
- 4th axis rotary table
- Coolant through tool interfacing without tool
- Spindle oil mist cutting blast system
- Oil mist collector
- Scraper type swarf conveyor
- Circular type oil/water separator
- Data server with 2GB memory
- AICC2 pre-view 600 blocks
- AICC2 pre-view 1000 blocks
- XYZ independent MPG
- Digital display MPG
- 3D coordinate and zero point auto shift