

**CNC BRIDGE TYPE VERTICAL MACHINING CENTER** **AWEA**

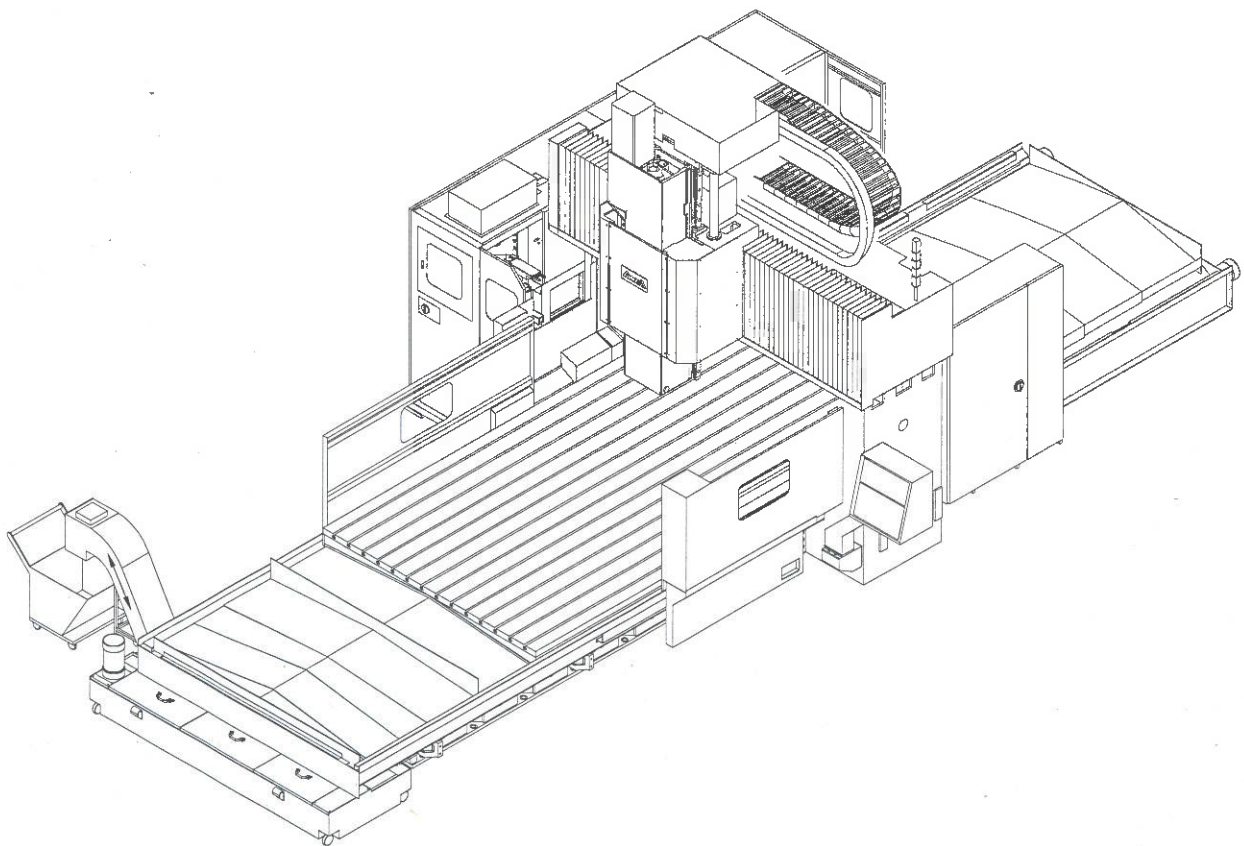
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**TYPE NO. : LP(Y)Z SERIES  
MACHINE MANUAL**

**CONTROLLER: HEIDENHAIN iTNC530 HSCI**

**VER. : LPEKTH10**

**DATE : 2015/05/25**



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**Data name : LP(Y)Z+HEIDENHAIN iTNC530 HSCI Machine manual**

**Model : LP3021Z/4021Z/5021Z/3025Z/4025Z/5025Z  
LP3021YZ/4021YZ/5021YZ/  
LP3025YZ/4025YZ/5025YZ**

**Data number : LPEKTH10**

**Version : 0**

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**Editor : yi-wei Chen**

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## 2.3 Machine spec (iTNC530 HSCI)

### 2.3.1 Machine standards and specs

#### ※ LPxx21Z series



Item	Name	Unit	LP3021Z	LP4021Z	LP5021Z
1.	X axis Travel	mm	3,000	4,000	5,000
2.	Y axis Travel	mm	2,100	=	=
3.	Z axis Travel	mm	1,000	=	=
4.	Distance between two columns	mm	2,300	=	=
5. *	Distance between spindle nose to machine table top(Standard machine/Manual angle head)	mm	200-1200	=	=
6.	Distance of center line of 90° angle head (bottom surface) to the machine table surface	mm	10~1010 (-88~912)	=	=
7.	Machine table size(X direction x Y direction)	mm	3,020 x 2,010	4,020 x 2,010	5,020 x 2,010
8.	T-slot dimension (width x length) of the Machine table	mm	28 x 200	=	=
9.	Machine table load caoacity	kg	10,000	12,000	15,000
10.	Spindle motor (cont./30 min.rating) [HEIDENHAIN QAN 260U]	KW(HP)(HEIDENHAIN QAN 260U)	24/30(32.2/40.2)	=	=
11.*	Spindle speed	rpm	10 - 4,000	=	=
12.*	Spindle transmission (Gear box of Continuously Variable Transmission)	G.S	2	=	=
13.	Taper of spindle inner hole		7/24	=	=
14.	Tool clamping force(Standard 6000 gear type spindle)	kg	2,200	=	=
15.*	Spindle taper		BT50	=	=
16.*	pull stud type		MAS403P50T-1(45°)	=	=
17.	Rapids (X axis)	mm/min	20,000	15,000	10,000
	(Y axis)	mm/min	15,000	=	=
	(Z axis)	mm/min	10,000	=	=
18.	Cutting feedrate	mm/min	1 - 10,000	=	1 - 8,000
19. *	Tool magazine capacity	set	32	=	=
20.	Max. tool diameter/adjacent pocket empty	mm	127 / 215	=	=
21.	Max. tool length	mm	350	=	=
22.	Max. tool weight	kg	20	=	=
23.	Tool change time (tool to tool)	sec	8	=	=
24.	Positioning accuracy (JISB6338)(Standard type)	mm	±0.015/ Full Length	=	=
	(VDI/DGQ 3441)(Standard type)	mm	P=0.025/ Full Length	P=0.030/ Full Length	P=0.040/ Full length
25.	Reproducibility (JISB6338)(Standard type)	mm	±0.003	=	=
	(VDI/DGQ 3441)(Standard type)	mm	Ps=0.020	Ps=0.025	Ps=0.030
26. *	Coolant tank capacity	liter	650	=	=
27. *	Pump pressure of the coolant(Max.)	kgf/cm <sup>2</sup>	8.16	=	=
	Pump flow rate of the coolant(Max.)	ℓ/min	100	=	=
	Pump horsepower of the coolant tank	HP	2	=	=
28.	Central lubricating unit capacity	liter	6	=	=
29.	Hydraulic unit tank capacity	liter	120	=	=

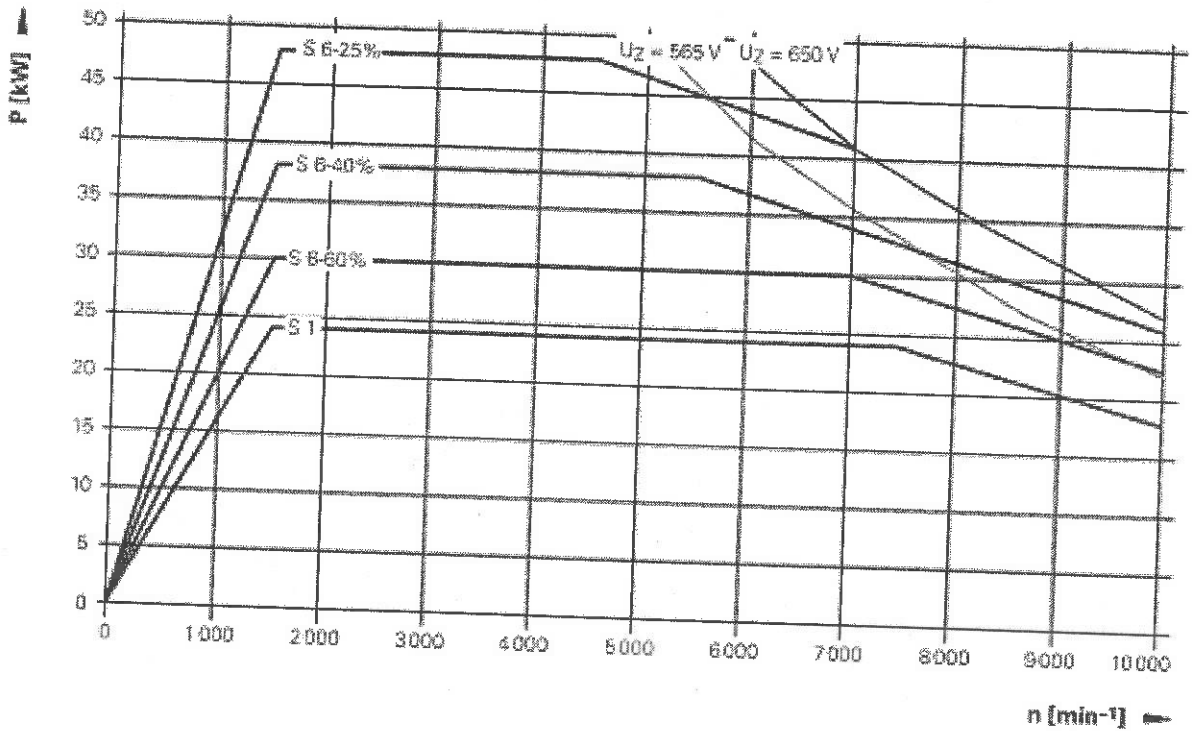


Item	Name	Unit	LP3021Z	LP4021Z	LP5021Z
30.	Hydraulic pump	HP	10	=	=
31.	Pneumatic pressure requirement (Min.)	kg/cm <sup>2</sup>	5 ~ 8 ( 5 )	=	=
32. *	Power requirement	Vac	400±10%	=	=
		kVA	90	=	=
		phase	3	=	=
		Hz	50/60	=	=
33.	Floor area occupied by the machine (Length)	mm(About)	8,580	10,680	12,680
	(Width)	mm(About)	5,600	=	=
34.	Machine height (Min.)	mm(About)	4,100	=	=
	(Max.)	mm(About)	5,100	=	=
35.	Machine weight	kg(About)	34,000	39,000	43,000
36.	Max. dimension of the workpiece (Tool length 350mm)				
	Length (X axis)	mm	3,000	4,000	5,000
	Width (Y axis)	mm	2,000	=	=
	Height (Z axis)	mm	850	=	=

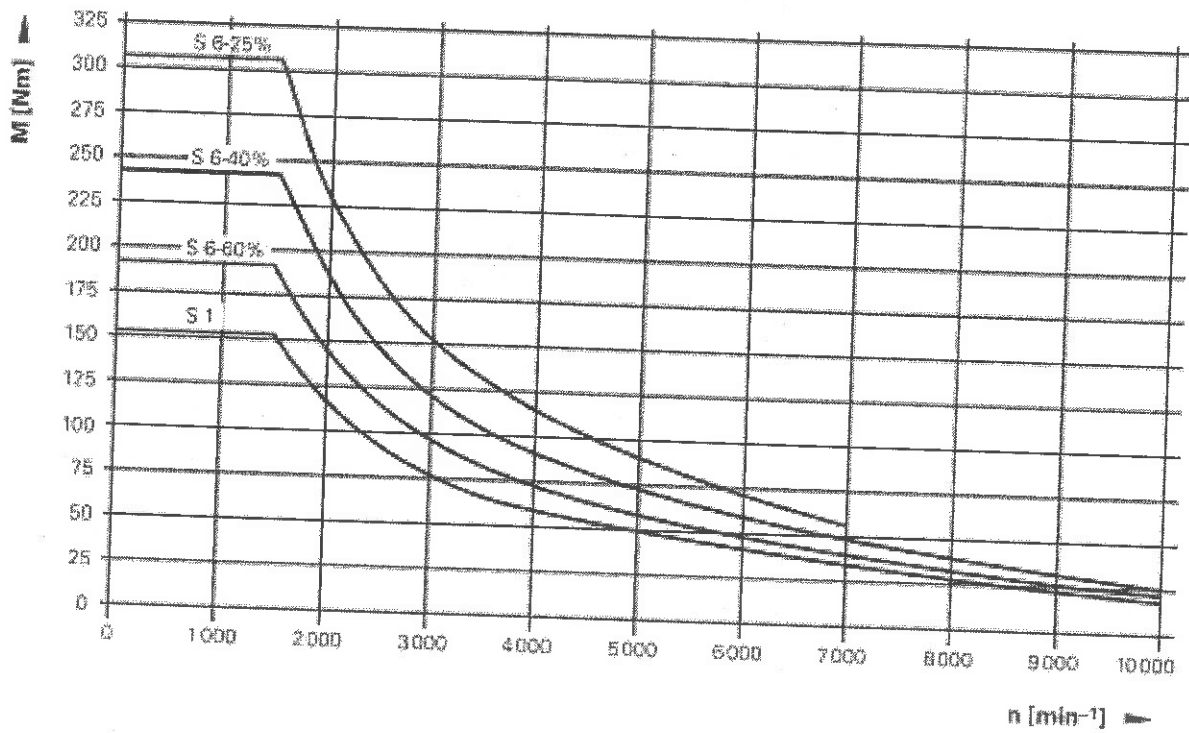
Note: \*means there is other option spec, = means it is the same as the spec on the left, —— means this spec is not certain yet.

### 5.3.2 Direct drive type spindle(option) : QAN 260U

#### Power characteristic curve



#### Torque characteristic curve



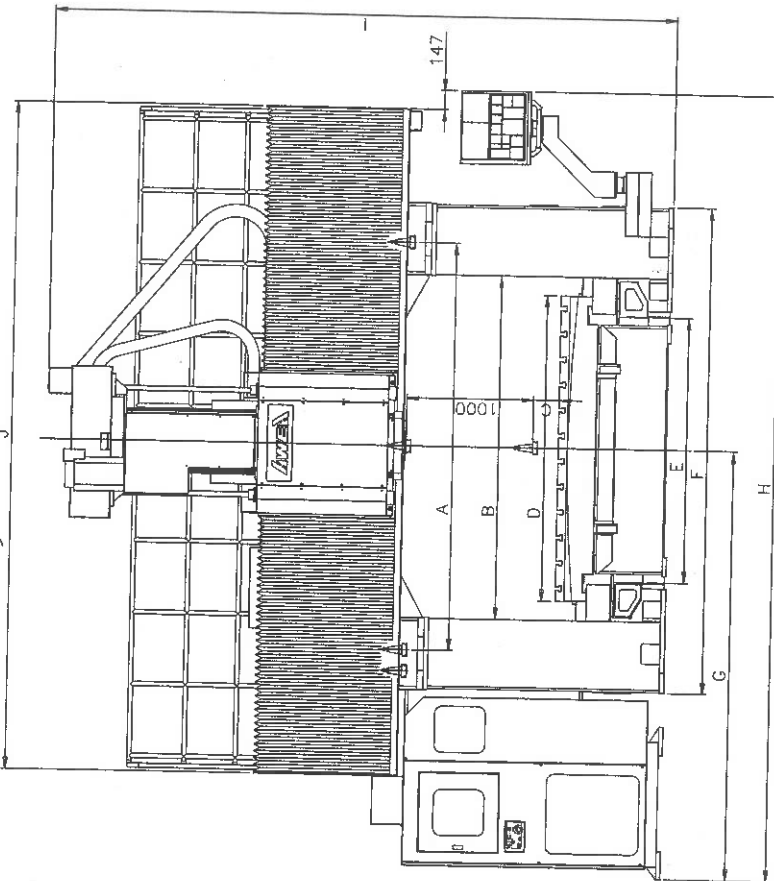
### 5.4 Layout of the machine

#### 5.4.1 Layout of the machine –Front view

- 1.Machine type : LP(Y)Z  
 2.Spindle type: 4KG/5KG/6KB/8KB  
 3.Y axis travel : 2100-4000  
 4.Z axis travel : 1000

(Unit :mm)

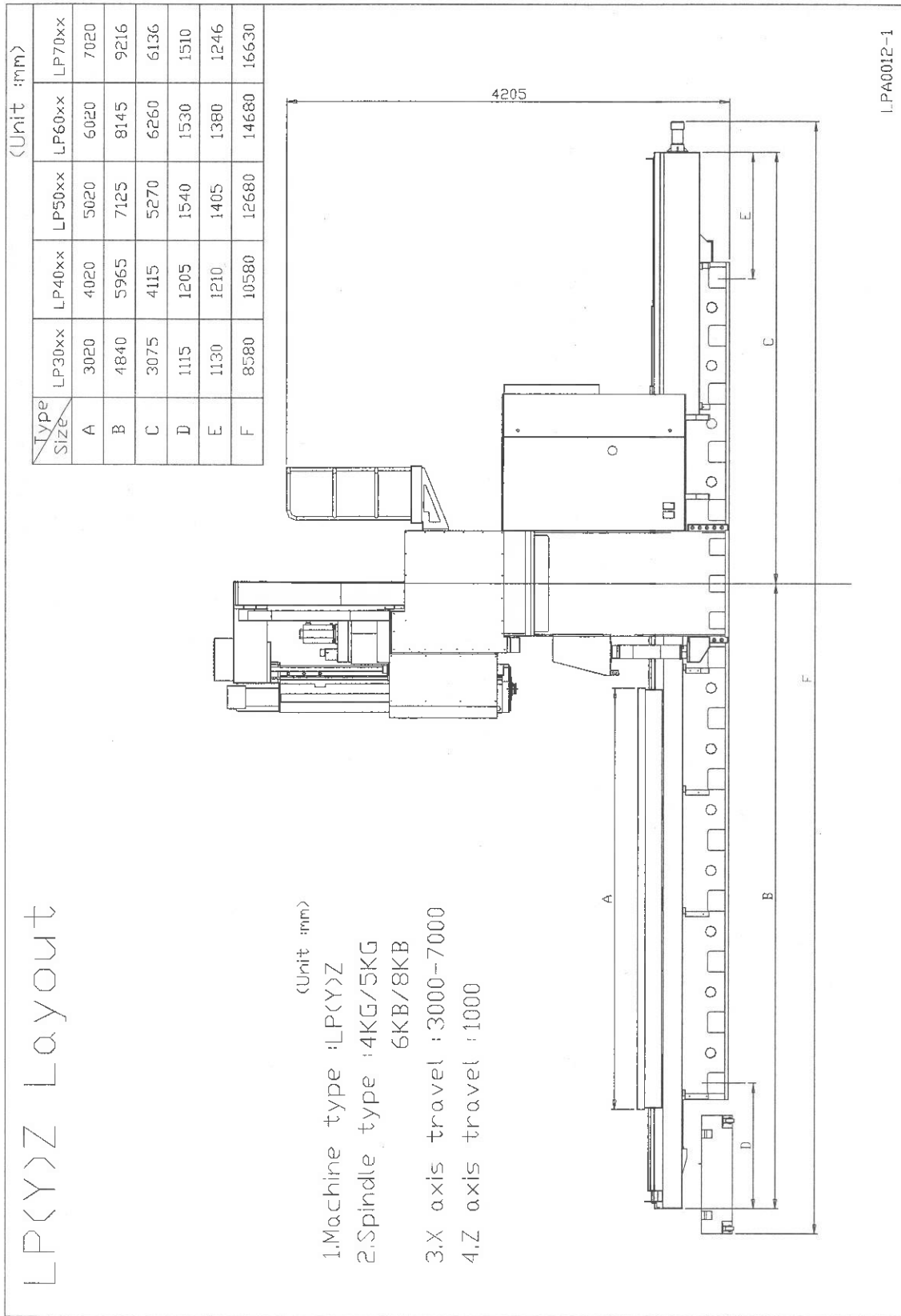
LP(Y)Z Layout



Type Size	LPxx21Z	LPxx25Z	LPxx33Z	LPxx25YZ	LPxx33YZ
A	2100	2500	3300	3200	4000
B	2316	2716	3516	2704	3516
C	200	200	200	200	200
D	2010	2400	2400	2400	2400
E	1800	2100	2100	2100	2100
F	3416	3816	4624	3804	4740
G	2820	3020	3420	3370	3775
H	4850	5250	6050	6050	6750
I	4850	4850	4850	4850	4850
J	4160	4560	5370	5235	6060

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### 5.4.2 Layout of the machine –Side view



### 5.4.3 Layout of the machine –Top view

