CNC VERTICAL LATHES

Ram Type Vertical Lathes

After a tedious and unyielding process of research, design and testing, Alex-Tech has proudly developed its full line of high quality VTLs for manufacturers specialized in automotive, wind power, large-size valves and airplane engine components.

Our VTLs offer two different styles of table drive mechanism for different cutting requirements:

(1) Cross roller bearings offer super dynamic characteristics for medium to heavy table loads, and they are available on VTL-12/16, VTL-16/20 and VTL-20/25. Optional duo spindle configuration for driving the table with improved Cs axis accuracy (which has been previously offered with VTL-12/16 and VTL-16/20) is now also available on VTL-20/25.

(2) Our traditional hydro-dynamic bearings with patented support rings still offer the best solution for ultra-heavy cutting requirements. This mechanism allows for loading work pieces as heavy as 28,000 kg (60,000 lb.) and offers 20 arc sec of C-axis accuracy for live tooling applications. VTL model size up to 27/34.

Ram Type Vertical Lathe with New Guarding

In addition to our current round guarding,
a new fully enclosed guarding has been designed for the VTL-10/14,
VTL-16/20 and the VTL-12/16 to provide a modern look at this size.

VTL12/16

CNC VERTICAL LATHES Machine Specifications

ITEM	UNITS	VTL-10/14(M)	VTL-12/16 (M)	VTL-16/20(M)
Table Diameter	mm/ Inch	Ø1,000 / 40	Ø1250 / 49.2	Ø1,600 / 63
Max. Turning Diameter	mm/ Inch	Ø1,400 / 55.1	Ø1600 / 62.99	Ø2,000 / 78.75
Max. Swing	mm/ Inch	Ø1,400 / 55.1	Ø1600 / 62.99	Ø2,000 / 78.75
Max. Turning Height	mm/ inch	9,00 / 34.5	1250 / 49	1,500 / 59.06
Max. Mass of Workpiece	kg/ Lbs	4,500 / 9,900	5,900 / 12,980	8,000 / 17,600
Max. Torque of Table	NM/ lbs-ft	10,370 / 7,637	12007 / 8,843	20,000 / 14,750
Max. Cutting Force	N / Lb	20,740 / 4,656	19,211 / 4,312	25,000 / 5,620
X axis Stroke	mm/ inch	1200 / 47.2	1405(-200+1205) / 55.3"	1,635 / 64.37
X axis ballscrew diameter	mm/ inch	50XP12 / 2XP0.5	63XP12 / 2.5XP0.5	63XP12 / 2.5XP0.5
X axis Torque	NM/ lbs-ft	114 / 83.9	114 / 83.9	114 / 83.9
Z axis Stroke	mm/ inch	800 / 31.5	1000 / 39.4	1,000 / 39.4
Z axis ballscrew diameter	mm/ inch	50XP10 / 2XP0.39	50XP10 / 2XP0.39	50XP10 / 2XP0.39
Ram Size	mm/ inch	180×180 / 7.08×7.08	230×230 / 9.06×9.06	230×230 / 9.06×9.06
Min. I.D. for Ram Pass	mm/ inch	Ø250 / 9.8	Ø330 / 13	Ø330 / 13
Table Speed(2 steps)	rpm	1-120, 120-400	1~120,100~350	1~91, 85~250
Rapid traverse (X axis)	mm/min	12,000	12,000	12,000
	inch/min	472	472	472.5
Rapid traverse (Z axis)	mm/min	10,000	10,000	10,000
	inch/min	393	393	393
Crossrail Stroke	mm/ inch	-	600 / 23.6	800 / 31.5
Crossrail Step	mm/ inch x step	-	200x4 / 7.87x4	200x5 / 7.87x5
Table Main Motor	kw	37/30(a30) / [45/37(a40)]	37 / 30(a30) / [45/37(a40)]	45 / 37(a40)
	HP	50 / 40 [60/50]	50 / 40 [60/50]	60 / 50
X axis Servo Motor	Kw/HP	6.0 / 8.0(a40)	6.0 / 8.0(a40)	6.0 / 8(a40)
Z axis Servo Motor	Kw/HP	6.0 / 8.0(a40)	6.0 / 8.0(a40)	6.0 / 8.0(a40)
ATC Servo Motor	Kw/HP	0.75 / 1.0(a4)	0.75 / 1.0(a4)	0.75 / 1.0(a4)
Hydraulic Motor	kw	3.75	3.75	1.5
	HP	5	5	2
Crossrail Motor	kw	-	5.5	5.5
	HP	-	7.5	7.5
Lube. Motor	kw	0.75	0.75	0.75
	HP	1	1	1
ATC Magazine Capacity	Tool	12(Turing:6, Milling:6)	18(Turing:9, Milling:9)	18(Turing:9, Milling:9)
Max. Tool Length	mm/ inch	350 / 13.78	350 / 13.78	450 / 17.72
Max. Drill Diameter	mm/ inch	40/1.6 (Carbon Steel Workpiece)	40/1.6 (Carbon Steel Workpiece)	50.8/2 (Carbon Steel Workpiece)
Max. Taping Diameter	mm/ inch	M25/1.0 (Carbon Steel Workpiece)	M25/1.0 (Carbon Steel Workpiece)	M30/1.2 (Carbon Steel Workpiece)
Max. Torque for Drilling	NM/ lbs-ft	196 / 145	196 / 145	196 / 145
Live Spindle Speed	rpm	2500	2500	30~2000
Table Index Speed (C)	Min	3	3	3
Live Spindle Motor	HP	10 / 15(30min)	10 / 15(30min)	15 / 20(30min)
	kw	AC7.5 / 11(a8)	AC7.5 / 11(a8)	AC11 / 15(a12)
Tool Shank Size	mm/ inch	32x32 / 1.26x1.26	32x32 / 1.26x1.26	32x32 / 1.26x1.26
Max. Tool Projection	mm/ inch	ID 175 / 6.89"	ID 175 / 6.89"	ID 175 / 6.89"
Tool Taper		No. 50(BIG-PLUS)	No. 50(BIG-PLUS)	No. 50(BIG-PLUS)
Pull Stud		P50T-1(MAS403)	P50T-1(MAS403)	P50T-1(MAS403)
Total Power Capacity	KVA	50(3~,208V)	60(3~,208V)	60(3~,208V)
Tank Capacity	L	500L	580L	600L
Floor Space (LxWxH)	mm	5075x3402x4650	5424x3727x5205	6182x4167x5700
	inch	199.8x133.9x138	213.5x146.7x204.9	243.4x164x224.4
Machine Weight	kg/ Lbs.	21,000 / 46,200	24,000 / 52,800	29,000 / 63,800

Design and specifications are subject to change without prior notice.

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