

VX400 / VX500 / VX650



Vertical Machining Center

New Technology, Compact Design
Vertical Machining Center for the Future

Hyundai-Kia Vertical Machining Center Series accomplished super power heavy duty cutting with high accuracy, high rigidity, and high precision performance, based on minimized heat distortion super precision spindle with angular contact ball bearing. Vertical Machining Center Series could be born because traditions of long time machine builder, his Know-How and mixture of newly developed technology.

		VX400	VX500	VX500/50	VX600	VX650/50
Table Size (length x width)	mm [in]	1,000 × 460 [39.4x18.1]	1,200 × 500 [47.2x19.7]	1,200 × 500 [47.2x19.7]	1,600 × 650 [63x25.6]	1,600 × 650 [63x25.6]
Table Load	kgf [lbs]	600 [1,323]	800 [1,764]	800 [1,764]	1,300 [2,866]	1,300 [2,866]
Travel	X	800 [31.5]	1,060 [41.7]	1,100 [43.3]	1,400 [55.1]	1,400 [55.1]
	Y	460 [18.1]	510 [20.1]	510 [20.1]	660 [26]	660 [26]
	Z	520 [20.5]	635 [25.0]	635 [25.0]	635 [25.0]	635 [25]
Spindle Taper	mm [in]	NT # 40	NT # 40	NT # 50	NT # 40	NT # 50
Spindle Speed	STD rpm	8,000	8,000	6,000	8,000	6,000
Spindle Power	Main kw [hp]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	22/18.5 [29.5/24.8]
Rapid Traverse	X,Y axis	32 [1,260]	36 [1,417]	36 [1,417]	36 [1,417]	36 [1,417]
	Z axis	32 [1,260]	30 [1,181]	30 [1,181]	30 [1,181]	30 [1,181]
Tool Storage Capacity	STD	24	24	24	24	24
	OPT	30	30		30	

Design and Specifications are subject to change without prior notice.

**HYUNDAI-KIA MACHINE
AMERICA CORP.**

Power of Evolution

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VX400 / VX500

Specification

ITEM			VX400	VX500	VX500/50	
TABLE	Size (length x width)		mm [in]	1,000 × 460 [39.4x18.1]	1,200 × 500 [47.2x19.7]	1,200 × 500 [47.2x19.7]
	Max. load on table		kgf [lbs]	600 [1,323]	800 [1,764]	800 [1,764]
	Table type			T-slot	T-slot	T-slot
TRAVEL	Table longitudinal	X	mm [in]	800 [31.5]	1,060 [41.7]	1,100 [43.3]
	Table cross	Y		460 [18.1]	510 [20.1]	510 [20.1]
	Spindle head verticle	Z		520 [20.5]	635 [25.0]	635 [25.0]
	Tilting	A	degree	-	-	-
	Rotating	C		-	-	-
	Distance from column to spindle center			475 [18.7]	615 [24.2]	615 [24.2]
	Distance from table surface to spindle nose			130 ~ 650 [5.1~25.6]	150 ~ 785 [5.9~30.9]	150 ~ 785 [5.9~30.9]
SPINDLE	Taper			NT # 40	NT # 40	NT # 50
	Speed	STD	rpm	8,000	8,000	6,000
		OPT		12,000	10,000	
	Power	STD	kw [hp]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	15/11 [20.1/14.7]
		OPT		11/7.5 [14.7/10]		
	Torque	STD	kgf-m [ft-lbs]	9.7 [70.4]	29.2 [12] [211.2]	36.5 [264]
OPT		7.1 [51.4]				
Spindle Drive		STD	Direct	Helical belt	Helical belt	
FEED	Rapid	X,Y axis	m/min [ipm]	32 [1,260]	36 [1,417]	36 [1,417]
		Z axis		32 [1,260]	30 [1,181]	30 [1,181]
	Tilting	A	rpm	-	-	-
	Rotating	C		-	-	-
Cutting feed rate			m/min [ipm]	10 [394]	15 [591]	15 [591]
ATC	Type			twin arm	twin arm	twin arm
	Tool storage capacity	STD	EA	24	24	24
		OPT		30	30	
	Max. tool diameter		mm [in]	90 [3.5]	95 [3.7]	110 [4.3]
	Max. tool diameter (without adjacent tool)			150 [5.9]	150 [5.9]	200 [7.9]
	Max. tool length			300 [11.8]	250 [9.8]	300 [11.8]
	Max. tool weight		kgf [lbs]	8 [17.6]	8 [17.6]	15 [33.1]
	Tool selection type			Random	Random	Random
Tool change time	tool to tool chip to chip	sec.	2.1	3.0	4.0	
			7.0	7.0	8.0	
MOTOR	Spindle	Main	kw [hp]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	15/11 [20.1/14.7]
	Feed	X / Y		1.8/2.5 [2.4/3.3]	3/3 [4/4]	3/3 [4/4]
		Z / B		2.5 [3.3]	4 [5.4]	4 [5.4]
Coolant						
APC	Pallet change type					
	Pallet change time		sec.			
Coolant through spingle (Option)				20BAR	20BAR	20BAR
Rigid tapping				STD	STD	STD
Electric capacity			kVA	36	25	25
Floor space			mm [in]	3,050 × 2,100 [120.1x82.7]	3,220 × 2,560 [126.8x100.8]	2,910 × 2,860 [114.6x112.6]
Slide way				LM guide	LM guide	LM guide
Machine weight			kgf [lbs]	5,100 [11,243]	7,000 [15,432]	7,000 [15,432]
Controller			STD	FANUC 0iM	FANUC 0iM	FANUC 0iM
			OPT	FANUC 21iM	FANUC 21iM	FANUC 21iM

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VX650

Specification

ITEM			VX650	VX650/50		
TABLE	Size (length x width)		mm [in]	1,600 × 650 [63x25.6]	1,600 × 650 [63x25.6]	
	Max. load on table		kgf [lbs]	1,300 [2,866]	1,300 [2,866]	
	Table type			T-slot	T-slot	
TRAVEL	Table longitudinal	X	mm [in]	1,400 [55.1]	1,400 [55.1]	
	Table cross	Y		660 [26]	660 [26]	
	Spindle head verticle	Z		635 [25.0]	635 [25]	
	Tilting	A	degree	-	-	
	Rotating	C		-	-	
	Distance from column to spindle center			765 [30.1]	765 [30.1]	
	Distance from table surface to spindle nose			150 ~ 785 [5.9~30.9]	150 ~ 785 [5.9~30.9]	
SPINDLE	Taper			NT # 40	NT # 50	
	Speed	STD	rpm	8,000	6,000	
		OPT		10,000	-	
	Power	STD	kw [hp]	15/11 [20.1/14.7]	15/11 [20.1/14.7]	
		OPT		18.5/15 [24.8/20.1]	-	
	Torque	STD	kgf-m [ft-lbs]	29.2 [211.2]	36.5 [264]	
OPT		12 [86.8]				
Spindle Drive		STD	Helical belt	Helical belt		
FEED	Rapid	X,Y axis	m/min [ipm]	36 [1,417]	36 [1,417]	
		Z axis		30 [1,181]	30 [1,181]	
	Tilting	A	rpm	-	-	
	Rotating	C		-	-	
Cutting feed rate			m/min [ipm]	15 [591]	15 [591]	
ATC	Type			twin arm	twin arm	
	Tool storage capacity	STD	EA	24	24	
		OPT		30		
	Max. tool diameter			mm [in]	95 [3.7]	110 [4.3]
	Max. tool diameter (without adjacent tool)			mm [in]	150 [5.9]	200 [7.9]
	Max. tool length			mm [in]	250 [9.8]	300 [11.8]
	Max. tool weight			kgf [lbs]	8 [17.6]	15 [33.1]
Tool selection type				Random	Random	
MOTOR	Tool change time	tool to tool chip to chip	sec.	3.0	4.0	
				7.0	8.0	
	Spindle	Main	kw [hp]	15/11 [20.1/14.7]	22/18.5 [29.5/24.8]	
Feed	X / Y	4/4 [5.4/5.4]		3.0/3.0 [4.0/4.0]		
	Z / B	4 [5.4]				
Coolant						
APC	Pallet change type					
	Pallet change time		sec.			
Coolant through spingle (Option)				30 bar	30 bar	
Rigid tapping				STD	STD	
Electric capacity			kVA	30	30	
Floor space			mm [in]	3,500 × 2,560 [137.8x100.8]	4,620 × 2,560 [181.9x100.8]	
Slide way				LM guide	LM guide	
Machine weight			kgf [lbs]	9,500 [20,944]	9,500 [20,944]	
Controller			STD	FANUC 0iM	FANUC 0iM	
			OPT	FANUC 21iM	FANUC 21iM	