

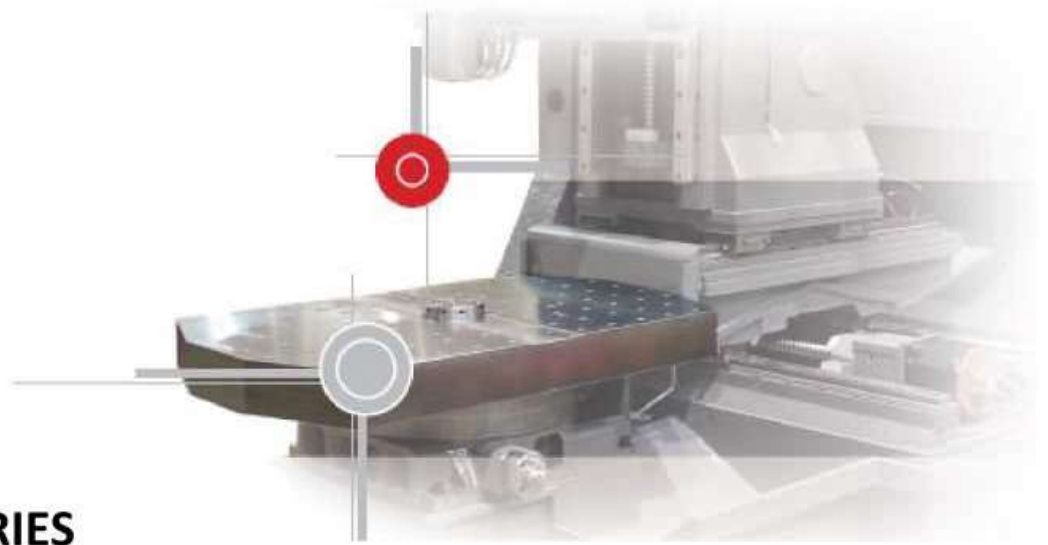


VERTICAL MACHINING CENTER

KDM VC SERIES

www.kiraamerica.com





KDM VC SERIES

KDM 43V / VCXL / VCD

High Spindle Speed Machining Center

- High productivity with rapid change of dual pallet
- Precise machining with Big Plus spindle system
- High productivity with high power, heavy duty cutting with rapid travers



High accuracy design for high precision



Rigid Body

The one piece bed is a rigid, heavily ribbed, Meehanite casting that remains stable under the heaviest cutting conditions. Fine grained Meehanite cast iron is used for its excellent vibration absorbing characteristics.

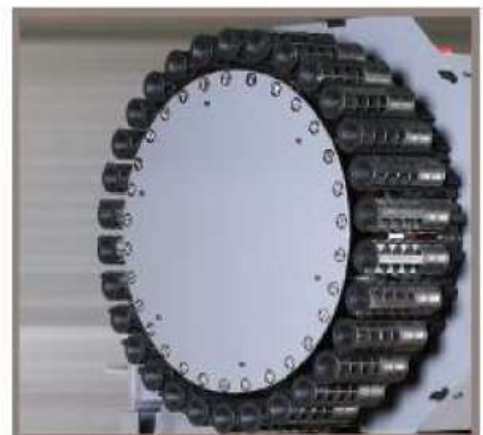


Tool Storage Capacity

The 30 station, automatic tool changer accepts 40 taper tooling. Its reliable double arm system provides a 2.3 second tool-to-tool times. ATC has a bi-directional magazine that automatically takes the shortest path.

Magazine Capacity (Option)

30(24, 40) Tools



Coolant system

Coolant System

The large capacity coolant tank is located on rollers. The coolant tank is isolated from the machine bed to prevent heat transfer and associated thermal distortion. Providing high volume flood coolant as a standard feature.

Through Spindle Coolant

The large-scale cutting oil pump and tank are located away from the machine's main body to prevent heat transfer. The pump generates 60 HZ power when measured at the pump outlet. The main axis cutting oil device (T-S-C) is available as an option.



Dual indexing pallet (APC)

The automatic 180 degree indexing pallet table is an integral part of the VC 430. The table mechanism is mounted directly to the bed of the machine on a horizontal plane to enhance the table rigidity. Because the table is stationary during machining, the non-cutting side of the indexing table can be set-up while the workpiece is being machined on the machine side. The maximum workpiece weight is 300 kg per table side. The indexing table rotation time, including clamp and unclamp, is only 5 seconds. As an added feature, rotary table cables and work holding hoses can be run down from the sheet metal wall.



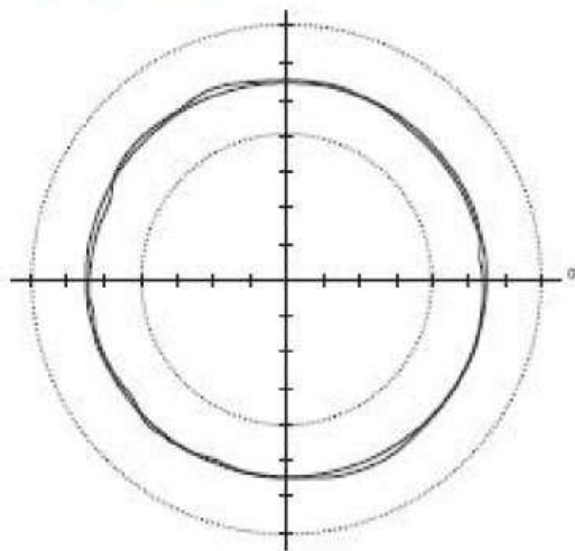
Rigid tapping

A standard rigid tapping function allows synchronized, high-speed tapping with a standard collet chuck. This eliminates the need for special tap holders. The tapping depth can be accurately controlled.



High precision

■ Roundness



Roundness **6.0** μm

Machine	KDM 43VCD
Material	A 1050P
Tool	$\varnothing 1 \times 4T$
Spindle Speed	1,500RPM
Depth of Cut	0.1mm
Work Size	$\varnothing 7.09 \text{''}$
Cutting Feedrate	11.8 ipm

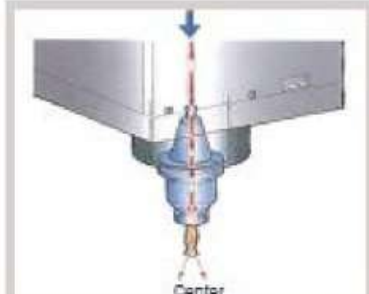
Accessories (Option)



AUTO TOOL LENGTH MEASUREMENT SYSTEM



GUN COOLANT



THROUGH-SPINDLE COOLANT SYSTEM



OIL MIST SYSTEM



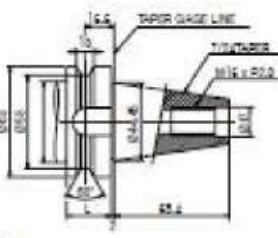
CNC ROTARY TABLE



CHIP CONVEYOR

Dual indexing pallet (APC)

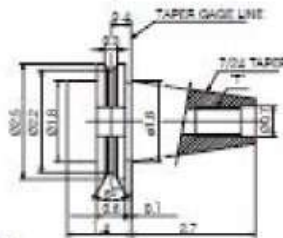
UNIT : mm



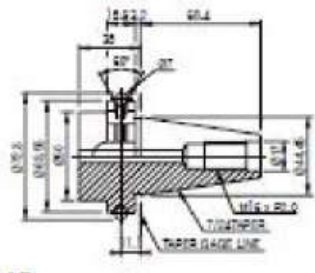
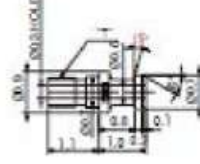
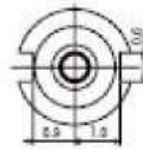
BBT40



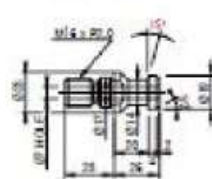
(DIN shape)



CAT40



DIN40



Machine Layout & Accessories

UNIT : inch

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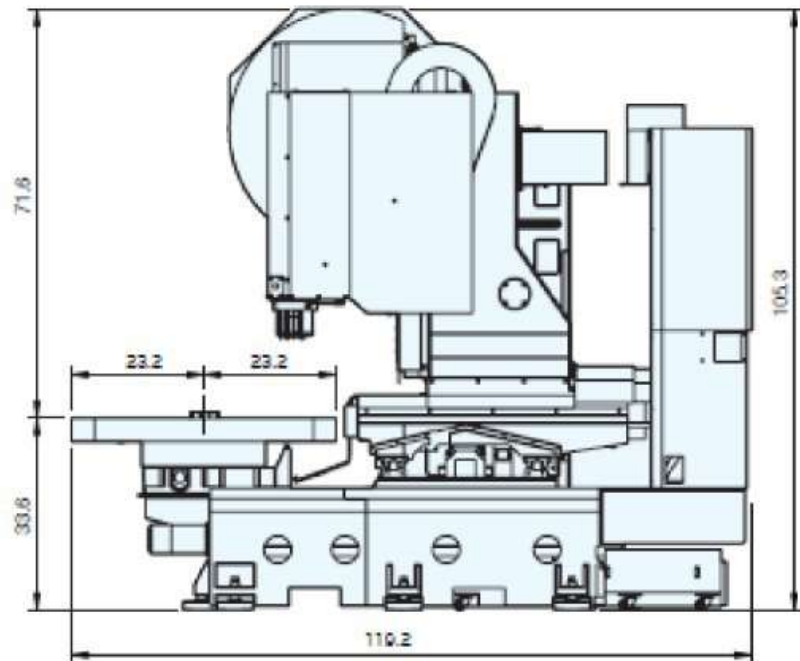
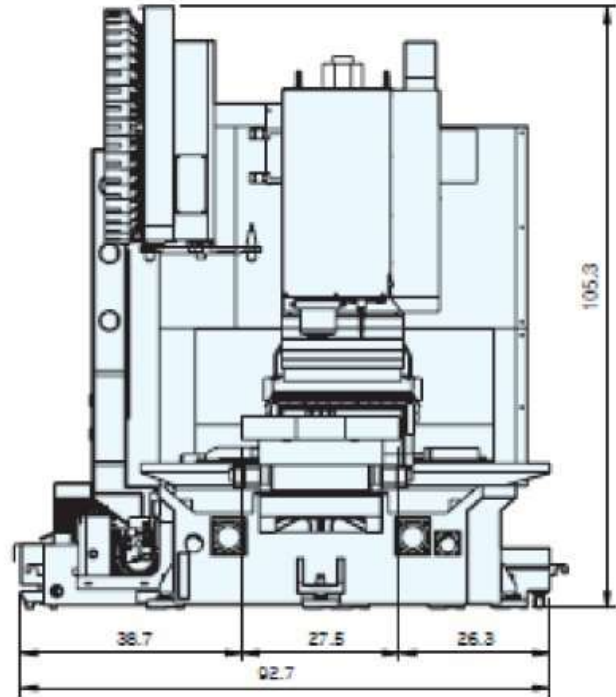
KDM 43VCD

Standard

- 10.4" TFT LCD
- Twin chip augers in Y-axis(internal)
- Machine work light
- Coolant system splash guard
- Lubrication system
- Levelling blocks
- 3 Color status light
- Rigid tapping
- Manuals

Option

- Through spindle coolant (20 bar)
- 12,000rpm with spindle cooling unit
- Top cover
- Additional 4th axis
- Additional 5th axis
- Chipconveyor
- Chipbucket



ITEM	UNIT	KDM 43VC	KDM 43VCXL	KDM 43VCD
Travel	X-axis travel	inch	23.62	165.35
	Y-axis travel	inch	16.92	16.92
	Z-axis travel	inch	22.44	22.44
	Spindle nose to table surface	inch	7.87~30.31	7.87~30.31
Table	Table dimensions	inch	27.56×17.72	169.29×17.72
	Maximum load	lbf	1,323	1,323
Main spindle	Spindle speed	rpm	8,000[10,000/12,000]	8,000[10,000/12,000]
	Spindle motor power	hp	15/20	15/20
	Spindle drive method	-	Belt	Belt
Rapid Traverse	X-axis rapid traverse	ipm	1,890	1,890
	Y-axis rapid traverse	ipm	1,890	1,890
	Z-axis rapid traverse	ipm	1,890	1,890
ATC	Tool changing time	Tool-Tool	sec	1.3
		Chip-Chip	sec	3.9
	Tool storage capacity	ea	30[24,40]	30[24,40]
	Tool shank	type	BBT40 / CAT 40	BBT40 / CAT 40
	Pull stud	type	PS 806(15°)	PS 806(15°)
	Max. tool weight	lbs	17.64	17.64
	Max. tool length	inch	11.81	11.81
	Max. tool diameter<without adjacent>	inch	3.15<4.92>	3.15<4.92>
	Floor Space(L X W)	inch	93.11×110.23	196.85×110.23
	Machine Height	inch	107.48	107.48
Machine Weight	lbs	14,329	26,455	
Power capacity	kVA	30	30	
CNC CONTROLLER		F Oi-MD	F Oi-MD	

NC Specification

Controls	
Controlled Axes	"KDL Series 2-Axis (X,Z) KDT, KDL, KM Series 3-Axis (X,Y,Z)"
Spindle Control Axis	"1 Axis (TM, TBM C Axis ADD)" Axis Functions
Axis Functions	
Backlash Compensation	Max. 255 pulses
Chamfering On/Off	
HRV 2/3 Control	
Inch/Metric Conversion	G20 / G21
Increment System 1/10	0.0001mm/0.00001deg/0.0001inch
Mirror Image	
Feed Functions	
Cutting Feedrate Clamp	
Feed per Minute	G98
Feed per Revolution	G99
Feedrate Override	0-150% (10% unit)
Rapid Traverse Override	F0 / 25 / 50 / 100%
Auxiliary & Spindle Functions	
1st Spindle Orientation	
ConConstant Surface Speed Control	"G96, G97"
High Speed M/S/T Interface	
M-Function	M3 digit
Rigid Tapping	
Spindle Speed Override	50-150%
High Speed M/S/T Interface	
Programming Functions	
Absolute/Incremental programming	
Additional Block Skip	Total 9 (Only NC function)
Circular Interpolation by R Programming	
Drilling Canned Cycle (G80 Series)	
G Code System B/C (selectable)	
Input Code	"ISO840, E1A R5422"
Manual Absolute On & Off	
Maximum Command Dimension	099999.999mm (09999.999 inch)
Multi-Repetitive Canned Cycle	G70-G76
Multi-Repetitive Canned Cycle 2	
Programmable Data Input	G10
Simple Canned Cycle	"G90,G92,G94"
Sub Program Call	Nexted holds up to 4
Work Coordinate System Selection	G52-G59
Tool Functions	
Auto Tool Offset	
Direct Input of Tool Offset Avlue Measured B	
Number of Tool Offsets	64 EA
Tool Geometry / Wear Offset	Geometry & wear data
Tool Nose Radius Compensation	G40-G42
Tool Number Command (T-Code Function)	14-digit
Tool Offset	"G43,G44,G49"
Editing Op Functions	
Expanded Part Program Editing	
"Copy, Move, Change of NC program"	
No. of Registered Programs	400 EA
Part Program Storage Length	512K
Program Protect	
Others	
MDI / Display Unit	10.4" TFT LCD Color Monitor
PMC System	