

KMV DOUBLE COLUMN MACHINING CENTER

KMV-32P



1. Overall Machine Construction Castings

The machine base, columns, cross beam, worktable, slide ways, head and all cast parts are of top grade Meehanite Cast Iron and subjected to annealing, to prevent internal stress and deformation.



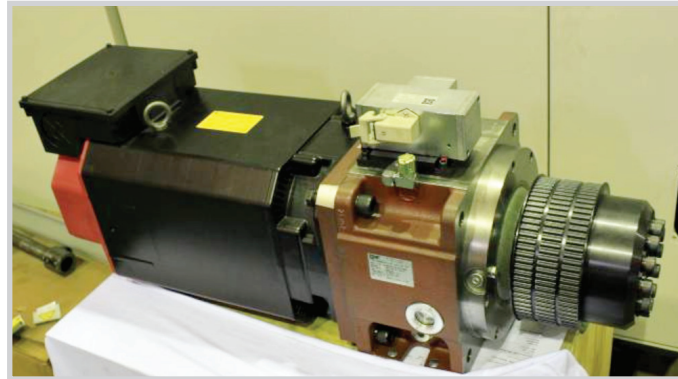
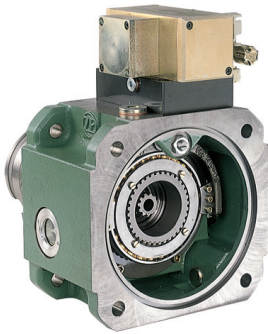
2. Z Axis

The Z-axis is built with a rigid cast iron box way construction reinforced with optimized internal rib support. It is balanced with Nitrogen in conjunction with dual pneumatic cylinders cushioning of the headstock for automatic balancing during vertical motion. Even in a sudden power failure, the head maintains exact positioning without damage to the tools and work piece.



3. ZF Gearbox

The multi-speed spindle adopts a top quality German-built ZF helical planetary gearbox. Fully sealed immersion type lubrication, with an oil-chiller, keeps the machine running cool. The ZF gearbox provides high efficiency with high torque, low noise, and long service life.



4. Heavy Preload Spindle

The spindle is housed in a box type structure and rotates on high precision taper roller bearings allowing for all types of heavy-duty cutting without vibration. Tested and adjusted for dynamic balancing, the spindle incorporates a forced circulatory oil chiller to minimize temperature rise and ensure the long term accuracy and service life. An external high capacity coolant system further protects against thermal deformation during heavy cutting at high speeds.



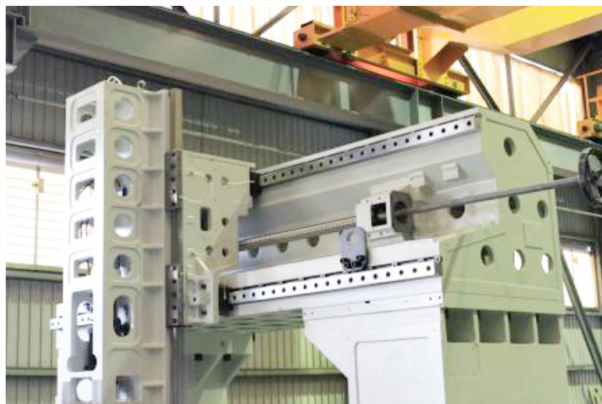
5. High Rigidity Spindle Nose

Spindle nose to Z-axis slide way distance is less than 300mm, providing an excellent design for increased rigidity.



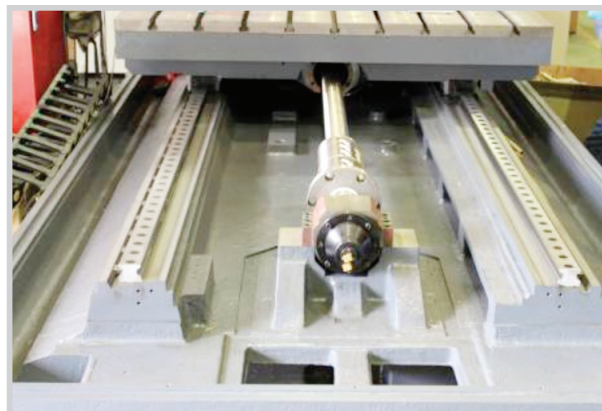
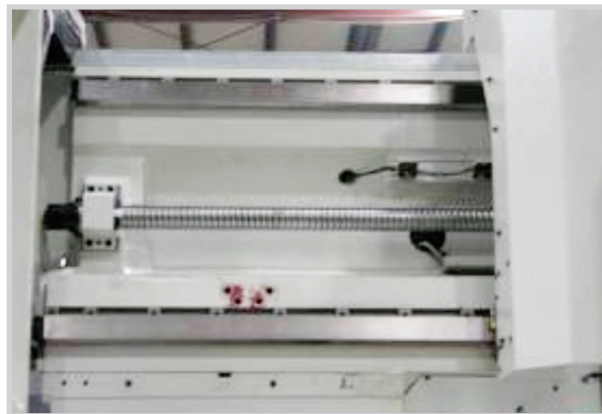
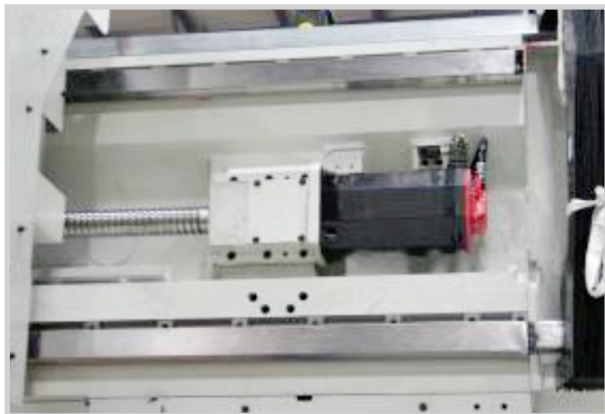
6. Wide Span Ladder Type Cross slide

Ultra wide ladder type cross beam with dual LM linear guide ways are designed to handle increased inertia. This design ensures rigidity and stability of the spindle and prevents tilting, particularly during heavy duty cutting.



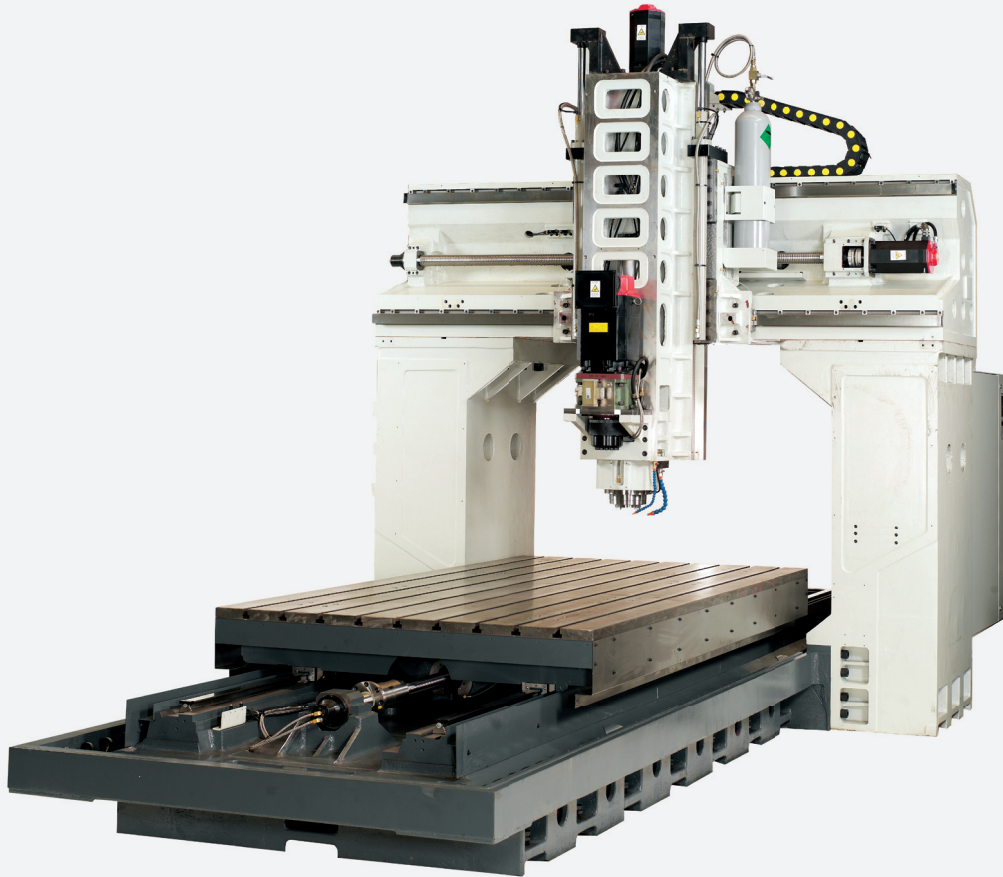
7. Heavy Load LM Linear Guides

Both X and Y-axes are equipped with high precision heavy duty LM guide ways. This design makes for more accurate movement and easier precision control during machining mid sized to large work pieces.



8. Super Strong Structure

Both the table and base of the machine efficiently distribute heavy loads via A type structural design. The column is cross-rib reinforced to minimize the deformation during high torque conditions. All the major castings are of rational design and of superior grade Meehanite to guarantee rigidity, precision, and long term service life.



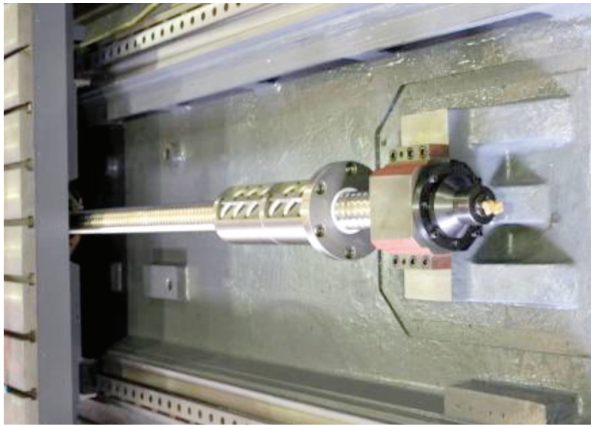
9. Lubrication

Precision scraped Turcites coated on slideways and lubricant pressure fed at a volumetric ratio provide an uniform film of lubricant on all contact surfaces which eliminates both drifting at high speed traverse and slow acceleration during machining.



10. Transmission

All three axes employ high precision ball screws and servomotors with a direct drive transmission, and each ball screw with a dual pretension nut system and preloaded support at both ends for superior rigidity.



11. Oil Chiller

The spindle and ball screws at all three axes are cooled by an oil chiller, preventing heat deformation, extending the life of spindle bearings and guaranteeing accuracy at each axis.

12. Ergonomic Operator Control Panel

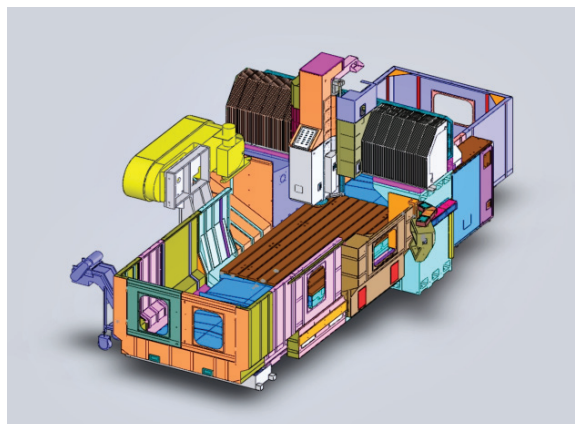
The Fanuc 0iMB, 8.4" Color Screen control panel is ergonomically positioned, so the operators get the most advantageous viewpoint during operation.



SPECIFICATIONS

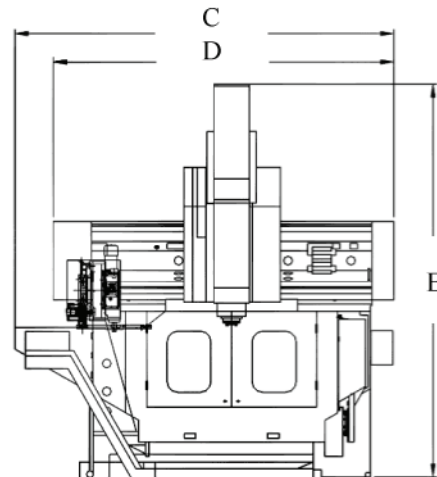
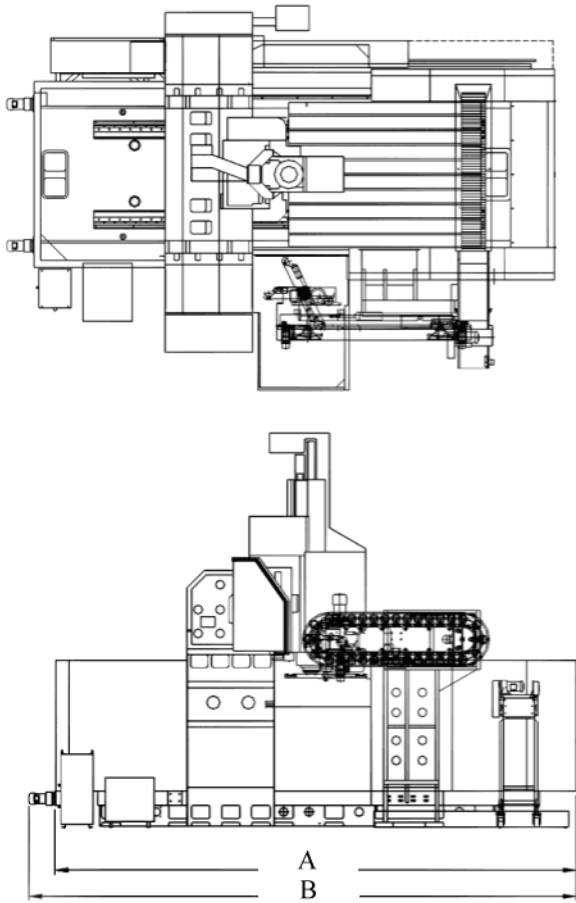
KMV-32P

Specifications		KMV-32P	
Travel	Longitudinal Travel (X)	3200 mm (126")	
	Cross Travel (Y)	2000 mm (78.7")	
	Head Stock Travel(Z)	900 mm (35.4")	
	Distance between columns	2070 mm (81.5")	
	Spindle Nose to Table	40-940 mm (1.57"~37")	
Table	Length x Width	3200x1650 mm (126"x65")	
	T-Slots Size W.x NO.xPitch	22 mmx9 mmx170 mm	
	Max Table Load (Center)	8000 kg (17630 lbs)	
Spindle	Spindle Speed	30~4500 rpm	
	Spindle type	BT 50	
Motors	Spindle Motor	18.5 / 22 KW (25 HP / 30 HP)	
	Drive Motor	X-axis	4+Reducer KW (5 HP + Reducer)
		Y-axis	7 KW (10 HP)
		Z-axis	7 KW (10 HP)
Control	Fanuc	Oi-MD Package A	
Tooling	Max Tool length	Ø125x1350 (Ø4.9"x53")	
	Max Tool Weight	18 kg (40 lbs)	
	Tool selection	Bi-Directional	
	ATC	32-60 Tools	
Accuracy	Positioning X, Y, Z	±0.005/300 mm (±0.00020" over 11.8")	
	Repeatability X, Y, Z	±0.005/300 mm (±0.00020" over 11.8")	
General	Machine Dimensions	8452x4330x4518 mm (332"x170"x177")	
	Net Weight	37370 kg (82390 lbs)	
Feed rate	Rapid Traverse (X/Y/Z)	10/12/12 m/min (393 / 472 / 472 ipm)	
	Cutting Feed rate	1~10,000 mm/min (0.040~393 ipm)	



DIMENSIONS

KMV-32P



Size	KMV-32P
A	7035 mm (277 inch)
B	8452 mm (332 inch)
C	4330 mm (170 inch)
D	3893 mm (153 inch)
E	4518 mm (177 inch)



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