



HSD-1000

Double Column Super Precision VMC

- + Heavy-Duty Double-Column Bridge-Style Construction. Like a CMM!
- + 15,000 RPM Inline Direct-Drive Beltless Spindle (other speeds available)
- + Dual contact precision ground Cat-40 spindle (HSK available)
- + 1,181 IPM rapid rates in all three axes for fast production
- + Super High-Speed CNC Control! 2,700 block look-ahead. 4,500 BPS!
- + 48-Tool Automatic Tool Changer
- + Optional 50 Nano-meter Linear Scale Resolution in X, Y, Z axes
- + Large X, Y, Z-axis travels for big work -40.15" x 33.46" x 19.68"

Axis Travel	X-Axis Travel	40.15"	1,020 mm
	Y-Axis Travel	33.46"	850 mm
	Z-Axis Travel	19.68"	500 mm (750 mm option)
	Spindle Nose to Work Table Surface	7.87" – 31.49"	200 – 800 mm
Table	Hardened & ground table & T-slots		
	Table Size (L x W)	47.24" x 39.37"	1,200 mm X 1,000 mm
	T-slot width (6 T-slots total)	30 mm	
	Max. Table Load (evenly distributed)	2,000 lbs.	900 kgs
Spindle	Spindle Speed	15,000 rpm	Spindle chiller included
	Spindle Cooling	Closed circuit refrigeration w/ digital temperature controller	
Axis Feeds	Rapid Traverse X, Y, & Z	1,181 ipm	30 m / minute
	Cutting Feed rate	0.04 - 590 ipm	1,498 mm / min
	Axis Drive Motor Power – X, Y	4.7-HP (3.5 kW)	Mitsubishi HF-345S-3000
	Axis Drive Motor Power – Z	4.7-HP (3.5 kW)	Mitsubishi HF-345BS w/ brake
	Ballscrews – X, Y, Z	50 mm Diameter	10 mm pitch R32-5B1-FDV
	Linear Guideways (X,Y,Z)	45 mm Heavy-Duty	Roller Bearing Linear Guideways
	Least Input Command Increment	0.0001" / 0.000040"	0.001 mm / (40-millionths in metric)
Heidenhein Linear Scale Resolution	0.05 micro meter	50 nano-meter	
Tool Changer	Tool Capacity	48-Tools	
	Tool Shank	CAT#40 Taper	Dual Contact (Shank & Flange)
	Tool Change Time	2.7-sec. Tool-to-Tool	
	Tool Selection / Tool Access	Random access	Bi-directional shortest path
Specifications	Air Service Requirements	85 psi @ 5-scfm	7 kg/cm ²
	Electrical Requirements - connected load	220 vac ±5%, 60-Hz	45 kVA, 75 Amps
	Coolant Capacity / Pressure	82-gallons	310 liters
	Floor space requirements (W x D x H)	130" x 118" x 113"	330 x 300 cm (add 48" for conveyer)
	Machine Weight	28,665 lbs.	13,000 kg
Warranty	Warranty – 1-year machine warranty		
	3-year Mitsubishi control, motors, & drive warranty		