



VCM740-M400 /3DH

Hybrid Additive/Subtractive Machining Platform

Combines both additive and subtractive processes on one machine



- ▶ 4 Axis CNC Machining Center
- ▶ 3D Laser Printer (DED)
- ▶ Additive and Subtractive Conversational Programming
- ▶ 3D print parts
- ▶ Add metal to existing parts
- ▶ CNC Machine part then add metal
- ▶ 3D print part and then machine

The **VCM740-M400** machining center is one of Viwa's popular models which combines a fully enclosed and compact machine with 30" by 16" XY travels, 20" vertical travel and 10 HP spindle motor with the powerful and user friendly PC based M400 control made by Centroid in America. The machine is assembled in Mexico by Industrias Viwa and supported in the U.S. by Centroid's network of qualified engineers.

The optional **VCM740-Hybrid** version has the addition of Optomec's LENS Print Engine and a CDRH Class 1 laser safe enclosure. The LENS Print Engine made in America by Optomec includes its proven dual hopper powder feeder, print head, and an industrial fiber laser. This upgrade has the added capability of laser based metal deposition for 3D Printing of parts, and "printing on" or "hard facing" of machined parts for unique build and/or repair applications.



CNC MACHINE

X axis travel	(750mm) 30"
Y axis travel	(400mm) 16"
Z axis travel	(500mm) 20"
Spindle motor power	10 HP
Spindle speed	100-8000 rpm
Spindle nose to table distance	100-670 mm 4"-26.5"
Spindle diameter	3 15/16"
Spindle taper	BT-40 / CAT-40
Spindle center to column	18.5"
Table size	13" x 50"
Table T-slots	16 X 4 X 63 mm"
Maximum table load	(500 Kg) 1100 lbs
Servo motor power (X,Y,Z)	1kW / 1kW / 2kW
Rapid positioning rate	(15 m/min) 590 ipm
Lube pump	40 W
Coolant pump	750 W
Guarding	Fully enclosed
Way covers	Metallic cover on 3 axes
Tool changer	16 tool armless (umbrella type) tool changer
Prismatic ways and structure	Hardened and ground ways. Box ways on Y,Z, dovetail on X axis. Reinforced Meehanite casting
Net weight	(2900 Kgs) 6400 lbs
Machine dimensions	2200x 2250x 2400mm
Power requirement	220 VAC, 3 phase
Energy Consumption	15 kVA

HYBRID 3D+CNC OPTION

Print Head	Optomec LPH
Laser	400 W Fiber laser
Powder feeder	Single or Dual
Deposition speed	up to 80 g/hr
Process environment	Open atmosphere with inert gas shield
Laser safeguards	Laser safe windows and door interlocks

CONTROLLER:

Centroid M400 control
 AC brushless servo motors
 Operator console with 15" color LCD screen
 PC based control with Windows 10 OS

Standard G and M code execution
 On screen color 3D graphics
 Job execution time estimation
 Conversational programming (Intercon)
 Solid state hard drive
 Dual digital processor system for high block throughput (600 blocks per second) and 2000 line look ahead for high speed machining
 Digital servo drives
 Spindle on/off and RPM control
 Programmable coolant pump and lubrication pump control
 4MB basic program memory
 USB and Ethernet ports
 Multiple work coordinates (G55-G59)
 Macros and subprograms

SOFTWARE OPTIONS

Unlimited file size option
 Scaling and mirroring
 Spindle orientation
 DXF import
 Coordinate system rotation

OPTIONAL CNC ACCESORIES

Tool touch off TT-1
 Probing and digitizing DP-4
 4th axis (rotary table)



