

OPS INGERSOLL V7

MILLING MACHINE

PRECISION

The Eagle V7-Linear is engineered for precision high-speed machining: a rigid, vibration-damped gantry design with linear-motor performance and direct-drive rotary axes, paired with laser scale feedback and automated calibration/thermal compensation, to maintain tight volumetric accuracy even under high-G, fast production workloads. Available in graphite (dry) and coolant (wet) packages.

HIGH SPEED
EAGLE V7
LINEAR

OPS  INGERSOLL
Fly with the eagle!



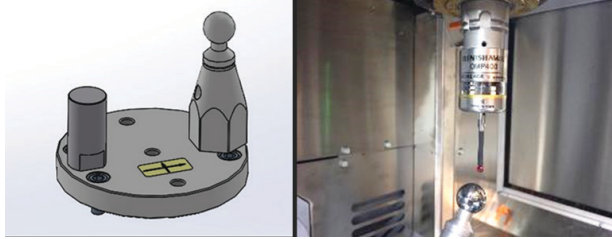
STANDARD FEATURES

- Linear Motor Drives in X, Y and Z axes. Travels: X, Y, Z: 23.6" x 26" x 15.75"
- Direct Drive Integrated 4/5th Axis
- Rapid Traverse: - 2,360 in/min (X, Y, Z)
- Max Acceleration: 98ft/s² (3G)
- CFC Shaft-Cooled Spindle 20 HP, 42,000 RPM, HSK-E40, 51 pos. ATC
- The CFC shaft-cooled spindle optimizes thermal performance for maximum precision, repeatability, and superior surface finishes.
- Vibration Dampening Polymer Concrete Machine Bed.
- Two (2) GWP Compliant Chillers for Linear Motors and Spindle cooling.
- Linear motion ways of the heavy-duty roller guide type are used on all three axes to withstand heavy loads, tolerate high acceleration and rapid movement, ensure precise positioning, and provide the best surface finish.
- Gantry Style Design ensures high dynamics and stiffness assuring high accuracy processing.



HEIDENHAIN TNC-7

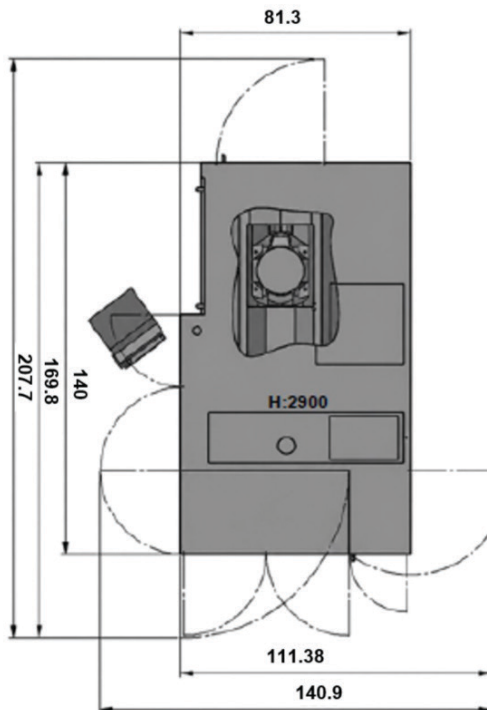
The HEIDENHAIN TNC-7 offers a 24" color display with a 32 GB SSDR, using fully digital internal communication. It supports fast control performance with extensive look-ahead (5,000 blocks) and 0.5 ms block processing (up to 120,000 BPM).



CYCLE 320

OPS Ingersoll Cycle 320 automates 5-axis calibration, including axis calibration plus probe and tool laser measurement, and applies 5-axis cross-grid and temperature drift compensation (about 20 minutes).

Machine Layout



Machine Specifications

Specification	Unit	Eagle V7
X x Y x Z-Axis Travel	in	23.6 x 26 x 15.75
B-Axis Tilt Range	deg	-100 ~ +100
C-Axis Rotation Range	deg	360
Rotary Table		
Faceplate Size	in	16.93 dia.
Max. Workpiece Height (pallet)	in	11.8
Center Hole Size - Diameter	mm	25 x 5L
Max. Load Capacity	lb	440
Spindle Nose to Faceplate	in	6.65 ~ 22.4
Spindle		
Spindle Speed	RPM	42,000 (STD)
Tool Capacity		51 (STD)
		96 / 197 (OPT)
		Includes additional (3) pockets: Probe / Calibr. Ball / Calibr. Endmill for Cycle 320
Tool-to-Tool Change Time	sec	8
Max. Tool Diameter	in/mm	.630 (16) (STD)
Max. Tool Length	in/mm	6.3 (160)
Max. Tool Weight	lb	4.4
ATC Type	—	High Speed Chain
Tool Shank	—	HSK-E40 (STD)
Motor		
Spindle Motor (Cont. / 30min.)	HP	20.4 / 23.5
X/Y/Z Motor	—	Linear
B/C-Axis Motor	HP	Direct Drive
Rapid Speed		
X/Y/Z Rapid Speed	in/min	2,360
B/C Rapid Speed (Direct Drive C-Axis)	RPM	100/100
Cutting Feed Rate (Max)	in/min	2,360
Controller		
Heidenhain		TNC-7
Miscellaneous		
3-Axis Static Laser Measured Positioning Accuracy (X,Y,Z)	in	.000197 Full Travel
3-Axis Static Laser Measured Repeatability (X,Y,Z)	in	.000118 Full Travel
Positioning Accuracy (A/C-Axis)	arc sec	7
Repeatability (A/C-Axis)	arc sec	3
Heidenhain Glass Scale Resolution	in (mm)	0.0000003937 (.00001)
Machine Weight	lb	20,950
5-Axis Power Requirement	V / KVA	400 / 40
Compressed Air Requirement	Cu.ft./min	31.8
Air Source	psi	130
Available Coolant Method	—	ATC Mist Lube is STD
Machine Footprint W x D x H	in	82.7 x 141.8 x 114.2



MC Machinery Systems, Inc.
85 Northwest Point Blvd.
Elk Grove Village, IL 60007
Phone: (630) 616-5920
www.mcmachinery.com

**MC MACHINERY
SYSTEMS, INC.**

a subsidiary of Mitsubishi Corporation