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Stepper DaVinci

CNC Router Systems

CATALOG NUMBERS

DAVINCI 1:   **HL33SBM242500** (8"x8"x5")
DAVINCI 2:   **HL33SBM242510** (8"x10"x5")
DAVINCI 3:   **HL33SBM242512** (10"x12"x3.5")
DaVinci Stand: **HX3500-242123V**

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FEATURES

- Choice of 8"x8"x5", 8"x10"x5" or 10"x12"x3.5" work envelope (see specs for exact travel in mm)

- The system includes a T-slotted work surface, 2 cam clamps, 2 clamp bars (page 112), and a 600 Watt variable high-speed spindle (page 104) with 1/4" collet

- 16 mm diameter ball screw with 4 mm screw pitch on X, Y and Z axes, adjusted for zero backlash operation

- CNC and DNC programming via RS232 interface

- T-slotted Z-axis face plate for easy mounting of optional tooling on 8"x10" and 10"x12" models

- 3-axis linear and 2-axis circular interpolation

- 1 Relay output (250V, 3A)

- 32 kB RAM for program storage of up to 600-line program in unit

- Can be programmed in both incremental and absolute coordinates

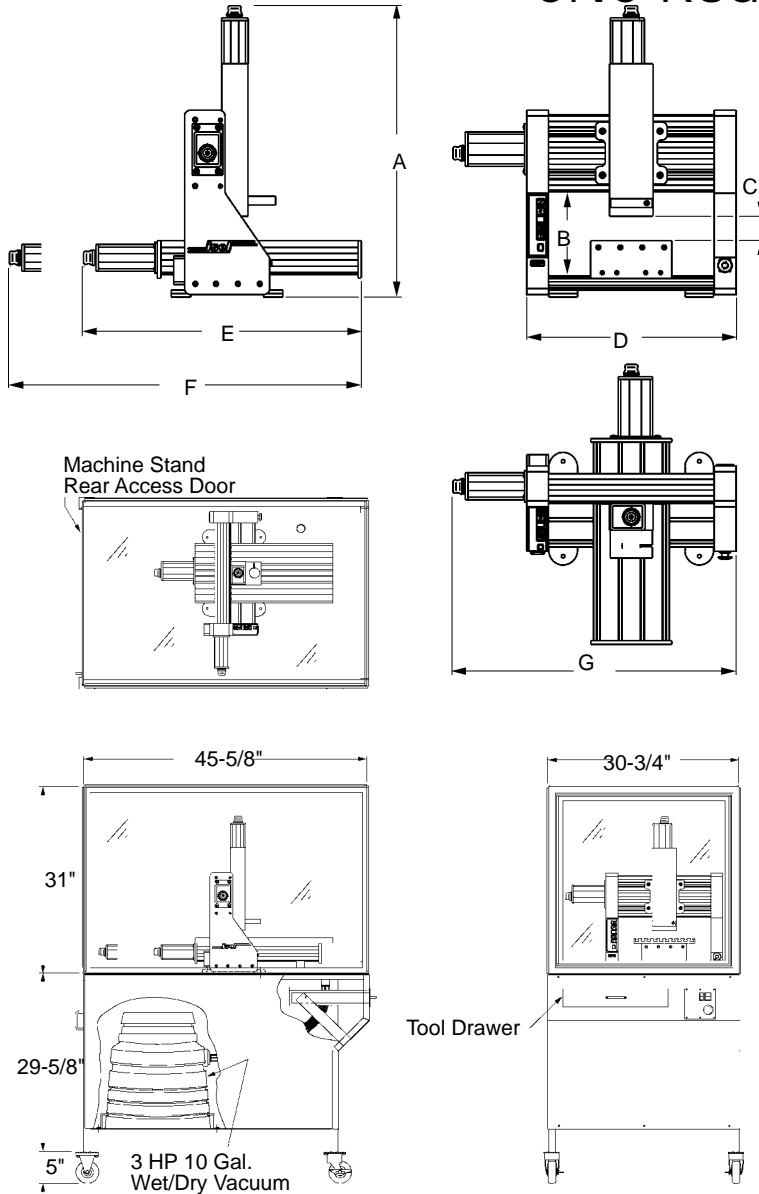- Comes fully assembled and ready-to-use, including RS232 cable

DAVINCI Table
(Available in 3 sizes)

DAVINCI Table
(Shown on machine stand)

The DaVinci CNC Production Center is a 3-axis stepper motor-driven unit which incorporates an enclosed linear bearing system with **ground steel rails** and **recirculating bearings**, as well as **anti-backlash ball nuts** and **ball screws**. This mechanical system provides durable play-free motion that is rigid and stiff enough for cutting, engraving, milling, routing, etc. The DaVinci has all drive electronics built-in so that no separate controller is required. The DaVinci's size and weight mean it is both compact and sturdy, making it ideal for any number of CAD/CAM applications. Programming can be done using the easy-to-use, English-based, PAL software which comes with the system. Interfaces for practically all popular CAD or CAM programs, including DXF, HPGL and G-Code, are available. In addition, 2D or 3D CAD/CAM software can be added to make the DaVinci a complete prototyping system.

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Stepper DaVinci CNC Router Systems

Machine Stand
Rear Access Door

45-5/8"

31"

29-5/8"

5"   3 HP 10 Gal.
Wet/Dry Vacuum

30-3/4"

Tool Drawer

SPECIFICATIONS	DAVINCI 1	DAVINCI 2	DAVINCI 3
Travel*	200x200x125 mm (8"x8"x5")	200x240x125 mm (8"x10"x5")	250x300x90 mm (10"x12"x3.5")
Weight	32 kg (70 lbs)	36 kg (80 lbs)	43 kg (95 lbs)
Dimensions	850x650x650 mm (33"x26"x26")	950x650x650 mm (37"x26"x26")	1040x700x770 mm (41"x28"x30")
Repeatability	≤ 0.01 mm (≤ .0004 in) per axis		
Positioning Accuracy	≤ 0.1 mm (≤ .004 in) per axis		
Vertical Static Load Capacity	6.8 kg (15 lbs)		
Single Axis No Load Speed	0.3 – 60 mm/sec (0.01 – 2.36 in/sec)		
2-Axis Interpolation Speed	0.3 – 40 mm/sec (0.01 – 1.58 in/sec)		
Resolution	0.01 mm (.0004 in)		

Dimension	DAVINCI		
	1	2	3
A	650	650	770
B	190	190	190
C	125	125	90
D	470	470	520
E	650	635	745
F	850	875	1040
G	650	650	700

NOTE: Dimensions are in mm

* Metric values indicate actual travel dimensions.
DaVinci stand includes:
- Fully enclosed machine stand
- Dust collector and hoses
- AC relay connector
- Vacuum shroud

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Servo DaVinci

CNC Router Systems

CATALOG NUMBERS

DaVinci 4:   **HX☐3VBM242201☐**

└ **E** Full enclosure option (only available with Turnkey option)
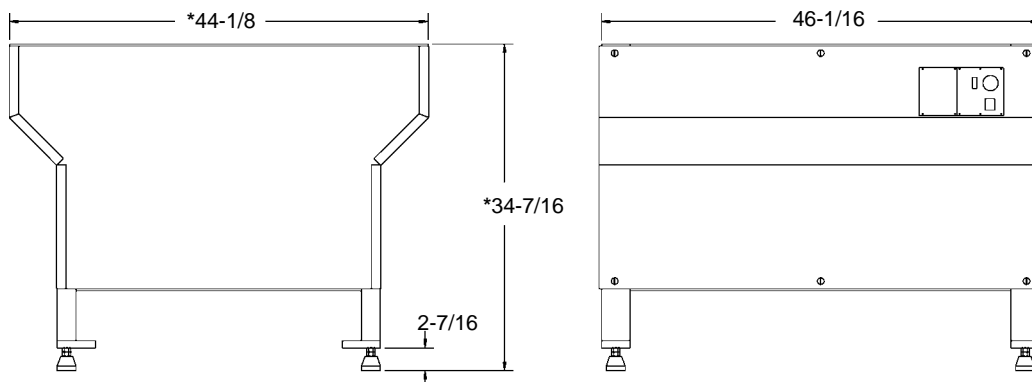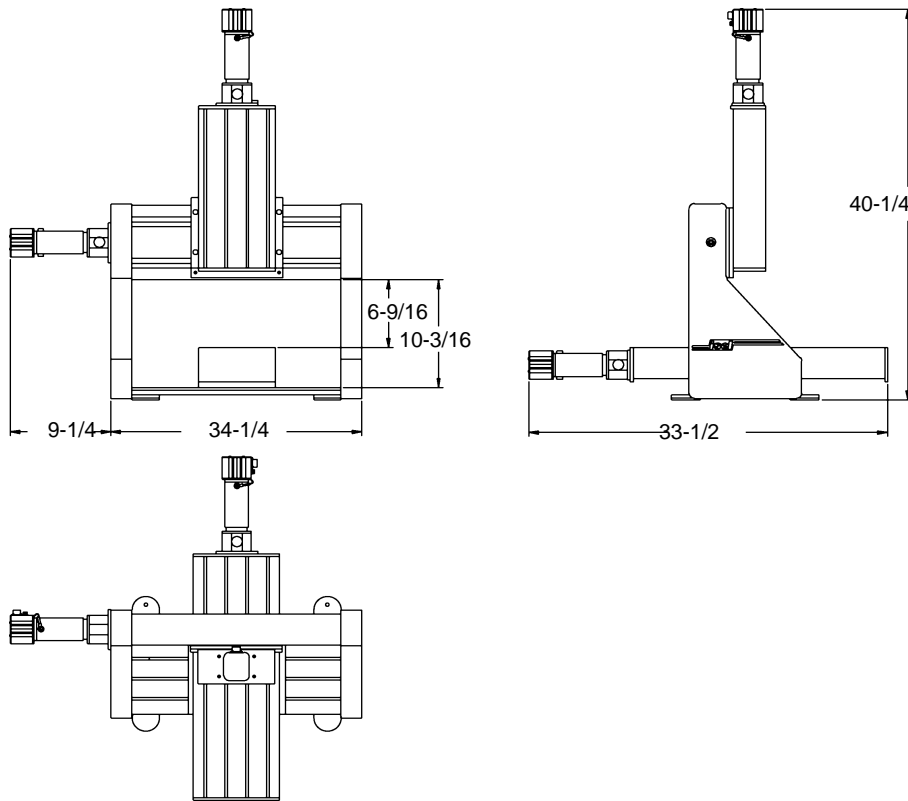
3 Standard Machine (14.7" x 19.6" table)

4 Turnkey System includes: machine base, cable carriers, touch & go kit for jogging machine and Touch Pad for tool length calibration and work holding clamps

FEATURES

- 3-D linear, 2-axis circular (XY, XZ, YZ) toolpath capability

- 4 patented double-bearing blocks on each axis

- 4 T-slots on 50 mm centers are provided to mount the tools

- Work surface flatness: .008"/ft. (.65 mm/m)

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DaVinci Servo System
14" x 19"

SPECIFICATIONS

- **Drive System:** Ball screws with anti-backlash ball nuts: ø.63", pitch .19" (ø16mm, pitch 5mm)
- **Repeatability:** ±.0004" (±.01mm)
- **Accuracy:** ±.0004"/in (±.1mm/300mm)
- **X-Y Axes Travel:** 19.6" x 14.7" (500 mm x 375 mm)
- **Z Axis Travel:** 6.8" (175 mm)
- **Resolution:** .0005" (.0125 mm) on all axes
- **Thrust:** 250 lbs. (115 kgf) on all axes at low speed
- **Motors:** - 50 oz•in continuous/250 oz•in peak brush type servo motor on X and Y axes
  - 55 oz•in continuous/300 oz•in peak brush type servo motor (with brake) for Z axis
- **Rapid Travel:** 250 in/min (6000 mm/min)
- **Cutting feed rate:** 200 in/min (5000 mm/min)

40-1/4

6-9/16
10-3/16

9-1/4   34-1/4

33-1/2

*44-1/8

46-1/16

*34-7/16

2-7/16

* For full enclosure option,
dimensions are:
Length = 59-9/32" and
Height = 77-3/4"