

## excelsior® = engraving.

The excelsior® engraving system offers an extremely stable, compact machining area for applications requiring tight tolerances and perfect surface finishes. The one-piece cast steel gantry frame offers superior machining quality compared to other competitive systems with welded-frame style construction. The 11" open height facilitates larger parts like molds or larger workholding like a 4th and 5th rotary axis. A standard 9-tool "station-style" rack with tool-length sensor can be upgraded to an optional 18-tool station for added capacity. The Excelsior is ideal for industrial engraving applications such as embossing and progressive dies, steel stamp and roll dies, coins and medallions, moldmaking or any application requiring superior stability and surface finishes.

### Applications:

- ✦ Embossing and hot stamping dies
- ✦ Steel and brass stamps
- ✦ EDM electrodes
- ✦ Roll dies
- ✦ Mold engraving
- ✦ Micro drilling

### Capabilities:

- ✦ Brass, copper, graphite, aluminum, steel ...
- ✦ Intricate 3D milling with small tools
- ✦ Cylindrical engraving (4th & 5th axis optional)
- ✦ Precision depth engraving

### Features:

- ✦ 60,000 RPM spindle up to 2KW
- ✦ Compact 53" x 57" footprint
- ✦ Machining volume of 15.75" x 15.75" x 7.8"
- ✦ Massive cast-steel construction
- ✦ Ultra-low tool vibration and run-out
- ✦ Tool Changer 9 or 18 tools
- ✦ Automatic tool-length measurement
- ✦ 4th & 5th rotary axis option
- ✦ Windows®-based operating software
- ✦ Interfaces with virtually any CAD/CAM package
- ✦ Digital-servo controlled with look-ahead buffer
- ✦ Optional Z-Probe maps contoured surfaces
- ✦ Best service and support in the industry
- ✦ Smoothing (NURBS technology)

One of the impressive advantages of the Datron **Windows®-based Control Software** is a feature we call smoothing. Essentially the command is a filter that can be turned on or off at any point in a program to optimize the cutting path. The feature "smooths" a high volume of cutting vectors often found when posted from 3D CAD/CAM software. The control automatically calculates a smooth spline over a series of short line vectors, creating an optimized route for acceleration and deceleration of the machine servos. This process will achieve a superior surface finish and faster cycle time.



### Next Generation, Precision High-Speed CNC Machining:

- ✦ Accurate
- ✦ Affordable
- ✦ Compact
- ✦ Easy to operate

**Intricacy. Detail. Speed. Success!**

**Call toll free 888.262.2833**



### Ultra high-speed precision engraving.

With a 60,000 RPM high frequency spindle and feed rates up to 375"/m, the excelsior® virtually flies through the material while at the same time maintaining a superb surface finish. 2D and 3D engraving software packages interface easily to tackle even the most challenging jobs in a short time frame. The excelsior is the perfect solution for high-speed/high-quality milling and engraving on single or multiple parts.



### Quality & versatility.

The excelsior provides exceptional quality in many industries. Our customer's applications include the production of hot stamping and embossing dies, 3D mold making, EDM electrodes, rapid prototyping, 3D precision engraving, and the production of jewelry and aerospace parts. With more than 1000 installations worldwide, DATRON provides high-speed/low-cost, turnkey machining solutions for an extensive variety of applications.

### Exceptional products require superior machining.

The excelsior was designed for ultra-high-speed, precision milling, drilling, thread milling and engraving with intricate tools. The excelsior's capabilities make the transition from conventional engraving to CNC machining a breeze. The excelsior will revolutionize your process by reducing your workload and the time that you spend in front of the pantograph. Let the excelsior produce parts that used to consume your day, so that you can focus on other things.



### Available Options:

- ✦ Extensive CAD/CAM interfaces
- ✦ 3D and Z-Height Correction Probe™
- ✦ Pneumatic and vacuum clamping systems
- ✦ 9- or 18- tool changer with tool-length sensor
- ✦ Micro-jet oil coolant system
- ✦ Dust extraction
- ✦ 4th & 5th axis

Tech Specs	✦ excelsior®
Coordinate Table	Cast steel fixed bridge design with software-corrected precision linear guides
Machining Area (X x Y x Z)	15.75" x 15.75" x 7.8"
Portal Height	11.8"
Drive System	Digital servo drives, extra low-pitch ball screw
CAD Interface	ISO G-Code (standard for NC machining code)
Control System	Microsoft Windows®-based control (open PC), 3-axis decentralized high-speed
Coolant System	Minimal quantity lubrication, electronically adjustable dispensing, Ethanol coolant
Machining Spindle	600W high-frequency spindle, 7,000 - 60,000 rpm 6mm collet
Tool Changer	9-tool changing unit with tool length sensor or 18-tool changing unit with tool length sensor
Accuracy (with pitch compensation)	Resolution: ±0.00008" Absolute: ±0.0003" / Relative: ±0.0001"
Feed Rate	475" per minute
Footprint	53" x 57" x 77" (W x D x H)
Weight	1,584 lbs.
Power Requirement	208/220V, 7Amps (single phase)