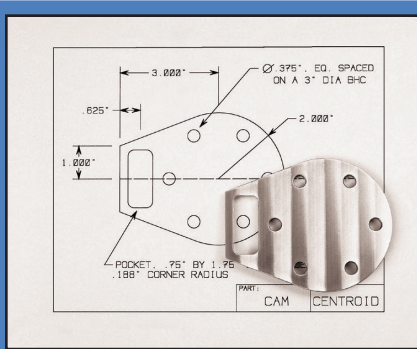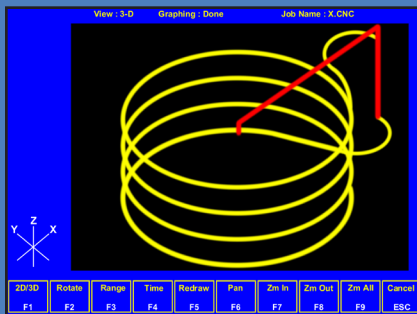# CENTROID™

# M-400 CNC Control For Mills

MADE IN USA

## So Easy, You'll Cut Parts The First Day!



*From print to part... in minutes!*





### Threadmilling



### Easy file transfer with USB & LAN

**www.centroidcnc.com**

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**15" color LCD, Touch Screen*** | **Spindle control** | **USB 2.0 ports**

**LAN connection**

**Remote Access**

**Coolant control**

**Dedicated axis jog buttons**

**Feedrate override**

**MPG handwheel***

**Win7 OS**

**Solid State Drive (SSD)**



## Do more with a CENTROID!

- Cut parts the first day with intuitive, straightforward operation
- Increase production with faster setups and easier programming
- Expand your machining applications and compete on higher paying jobs without higher cost
- Win7 OS: Connect easily to any computer system by using USB, LAN, or Internet Remote access

## Advanced features include:

- 3 axis with spindle control standard
- 5,6,7,8 axis simultaneous contouring optional
- High-speed machining with superior accel/decel look ahead
- Digital servo amplifiers and motors
- Standard Solid State Drive (SSD)
- AC or DC servo motors

- Easy-to-use part and tool setup menus
- Large, easy-to-read color LCD display
- 3D tool path graphics, with runtime display
- Runs on industry standard G&M codes
- Compatible with popular CAD/CAM systems
- Remote Access support via internet connection
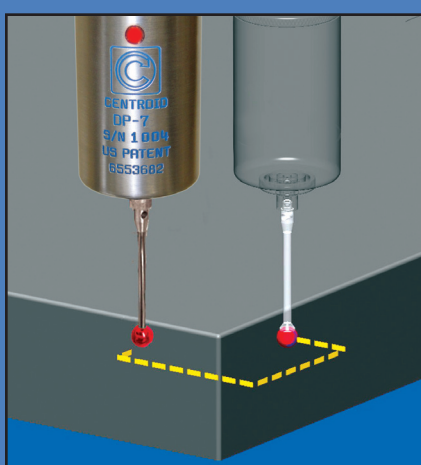- Win7 OS, easy networking & file transfers

## Intercon conversational programming

- Quickly create part programs right at the control
- Easy "fill in the blank" menus
- Graphical help menu with math assistance for missing dimensions
- Software automatically generates the G-code
- Check work instantly with 3D tool path graphics
- No knowledge of G-codes necessary
- Drilling cycles: Deep hole, Chip breaking, Regular
- Drill BHC, Drill array, Drill repeat

- Pockets: rectangular, circular and irregular with auto-cleanout, island avoidance and finish passes
- Repeat whole parts, events, or a matrix of holes
- Mirror and rotate whole parts or one entity
- Threadmilling: inside, outside, left and right handed
- Lines: end points and polar
- Arcs: EP & R, CP & A, CP & EP and 3-points
- Frames: inside and outside of rectangular, circular
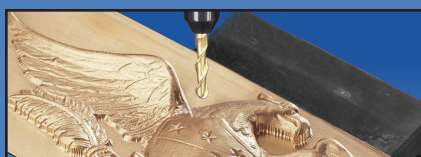- Teach mode

## Rigid tapping*

- Perfect, repeatable threads each and every time
- Allows use of solid tool holders with your tap
- Special deep hole tapping cycle for large-diameters and threadmilling for even larger diameters



*optional

**Automatic part setup with probing cycles***



**High speed machining**



**Automatic tool setter***

## Fast, menu-driven part & tool setups



**Set Part 0/Position**

1) Select Axis with F1
2) Jog to Touch Off on Pa...
3) Edit the Value if Necess...
4) Press F10 to Set Positio...

Axis | Part Position | Edge Diam
X | 0.0000 | 0.20

WCS #1 (G54)

| Next Axis | | | Auto | Probe | Prev WCS |

**Tool Geometry Offset Library**

Z Ref : 4.2598

| | Height Offset | | Diameter |
|---|---|---|---|
| H001 | -1.1234 | D001 | 0.1250 |
| H002 | -1.3562 | D001 | 0.2500 |
| H003 | 0.0600 | D001 | 0.5000 |
| H004 | -0.1324 | D001 | 0.3750 |
| H005 | -3.1749 | D001 | 0.6750 |
| H006 | 0.0000 | D001 | 0.0000 |
| H007 | 0.0000 | D001 | 0.0000 |
| H008 | 0.0000 | D001 | 0.0000 |
| H009 | 0.0000 | D001 | 0.0000 |
| H010 | 0.0000 | D001 | 0.0000 |

| Z Ref | Manual | Auto | | +.001 | -.001 |

## Probing Cycles*

• Touch probe with Probing cycles offers easy, push-button use
• Automatically set Part Zero position, quicker and more accurately than manual methods
• Finds edges, corners, bore centers, boss centers and fixture offsets & angles
• Coordinate System Rotation*, never manually tram a vise again
• Reset fixtures locations automatically, never use a center finder again

## High speed machining

• Run large, complex CAD/CAM or engraving programs without worry, with unlimited file size*
• High-block throughput, combined with superior 2000 line accel and decel lookahead
• Fast, smooth cuts accomplished at highest possible speed, while holding tight tolerances

## Digitizing*



• Duplicate parts in 2D or 3D
• Perform grid, radial and contour/wall following digitizing
• Automatically generates G-code from Digitizing, ready to cut the part
• Export data to most any CAD/CAM system for further editing
• Mold Magic software provides for "plug to mold" or "mold to plug" data manipulation with scaling and auto rough and finish passes

## Automatic tool setter*

• Measure tool height offsets more quickly and accurately than manual methods.
• Conductive and Non-Conductive models available.
• One-touch operation sets tool heights within 0.0001" in seconds
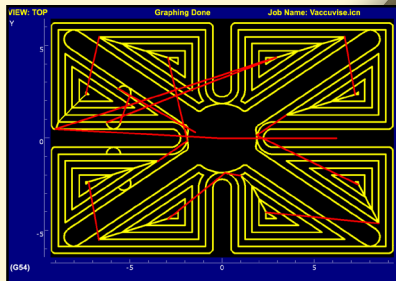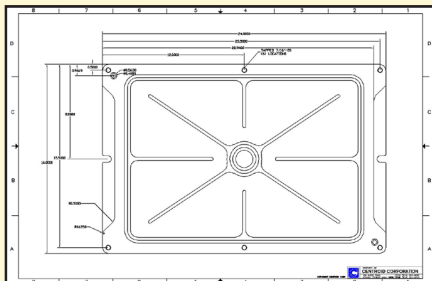• Press one button to measure *all* ATC tools automatically

*optional

# From print...                    To part...

Built-in conversational programming for quick part creation without a CAD/CAM system or G&M-code knowledge.

# M-400 Options

- Precision rotary tables
- 2D & 3D digitizing software
- Probing cycles
- DP-4, DP-7 digitizing probe
- TT-1, TT-2 automatic tool setter
- Engraving software
- Smart ATC control
- Extended Work Coordinate Systems
- Rigid Tapping
- Scaling & Mirroring
- Unlimited part program size
- Coordinate System Rotation
- MPG handwheel
- Console floor stand
- Electrical cabinet mounting stand
- Sealed Qwerty Keyboard

## Engraving*

- Engrave letters, numbers, symbols & logos
- Import DXF CAD drawings
- Create programs on a Windows PC
- Engrave on arcs, spheres, slopes and more
- Create your own logos and characters from imported files
- Transfer designs using USB or LAN

## Smart automatic tool changer control*

- Controls carousel or swing-arm tool changers
- Control up to 200 tools
- Menu-driven tool changing w/o using G-code

## OEM & retrofit CNC control systems

- Pre-engineered CNC control packages are available for: kneemills, bedmills, machining centers, boring mills, routers, and water jets
- Specialty uses include: Automotive CNC machine tools, welders, lasers, plasma cutters
- Common CNC control configurations are in stock and ready for immediate shipment
- CENTROID retrofit upgrade kits are perfect for good machines with obsolete controls

## Designed to last, with over 33 years of experience

- CENTROID designs and manufactures its own state-of-the-art CNC control components. This allows us to provide the industry's most affordable replacement CNC parts and support long after the sale. Low CENTROID CNC control operating costs increase your bottom line.
- CENTROID is a U.S.-owned and operated company with thousands of CNC controls in operation worldwide
- US Patent 6,490,500

## Certified worldwide support

- Worldwide network of factory certified technicians provide fast and affordable CNC sales, training, service, installation and support.

## Distributor:

## CENTROID
159 Gates Road • Howard, PA 16841
Sales: (814) 353.9256 • Fax: (814) 353.9265
**www.centroidcnc.com**

*Applies to "D" version Export models:*
- "Numerical control" units have four axis simultaneous contouring
- CAD data input (DXFin) is by manual off-line means

*optional