

# ***Phoenix™ Software Demonstration for HyPrecision™ Waterjet***

## **Application Note**

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## Phoenix Software Demo for HyPrecision Waterjet

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This demonstration (demo) software showcases the HyPrecision waterjet cut process with Phoenix, the motion-control software on Hypertherm CNCs.

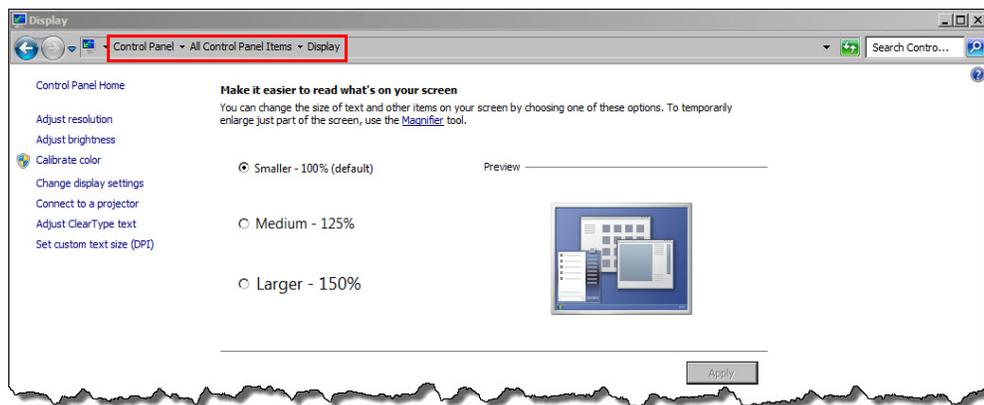
### System requirements

- Microsoft® Windows® XP SP3 or higher
- 2 GHz processor or higher
- 1GB memory or higher
- 1,024 x 768 display resolution

 Phoenix Version 9.75.0 or higher demo software can run on both 32-bit and 64-bit Windows operating systems.

### Before you begin

- For best performance, close all other applications when running the demo.
- Depending on your Windows display settings, the Phoenix software may have a different appearance than it does on the CNC. If you are running Phoenix Demo on Windows 7, set Display to Smaller – 100% (default) for best results.



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Phoenix is designed for use with a touchscreen so you will need to use your mouse to navigate the software. You can also use these keyboard shortcuts:

Function	Keyboard shortcut
Assigned soft keys	F1 – F8
Start	F9
Stop	F10
Manual mode	F11
Help	F12
Previous	Home
Next	End
Cancel	Esc
Exit demo	Alt + F4

You can use the following view-only passwords for password-protected screens to see the screens but not make changes to the parameters. Not all screens will have full functionality with the view only passwords.

- Machine Setups – 2865
- Special Setups – 5682
- Station Configuration – 4532

### Start the demo

1. Double-click the Phoenix 9.75 Demo HyPrecision Waterjet desktop icon or choose Start > All Programs > Hypertherm Phoenix > Phoenix 9.75 Demo HyPrecision Waterjet.
2. Click OK to exit the copyright notification, documentation update, and torch height control messages. After a few moments, the CutPro® Wizard launches.
3. Choose Begin.

### CutPro® Wizard demo

The CutPro Wizard automates the most common tasks on the CNC.

- Load a part. The CutPro Wizard displays the Waterjet process for the HyPrecision pump.
- Change the material type and thickness. Click Next to proceed from step to step.
- Load consumables. The CutPro Wizard displays the consumable part numbers for Hypertherm systems.
- Align a workpiece. Move the tool to the start point on the plate or select the location of a skewed plate using a step-by-step process.
- Enter an amount for scrap clearance.

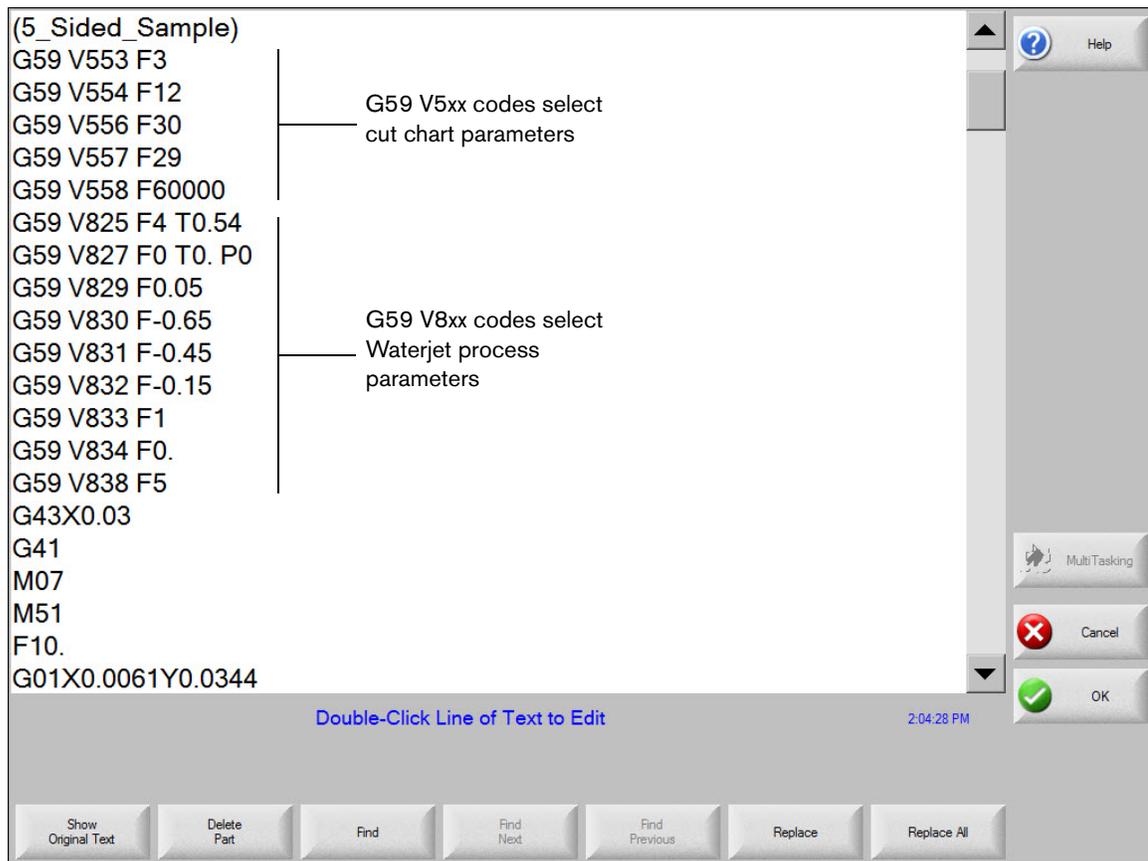
- Review the settings.
- Select Cut Mode.
- Start cutting.

When the part finishes trialing or cutting, click Yes to return the cutting head to the start point. The CutPro Wizard restarts after 10 seconds.

## Alternate demos

Load the 0\_250in\_5sidedSamplePart program from the Demo Parts folder to see the advantages of the part program support from Hypertherm CAM Solutions.

- When you load the sample part into the CutPro Wizard, it automatically displays the plate size and selects the waterjet process.
- Additional information is embedded into the part program by the CAM solutions software product ProNest®, including consumable information, material type, thickness, and cut pressure values to allow dynamic adjustments to the process while cutting. You can view the codes that ProNest embeds in the part program by choosing Shape Manager > Shape Wizard from the Main screen.



Additionally, you can load a customer EIA or ESSI part file by placing it in the root of a USB memory stick. Change the folder location to memory stick and then select the part you want to load.



Loading existing customer part files may require adjustment to I/O or other parameters to allow simulated motion.

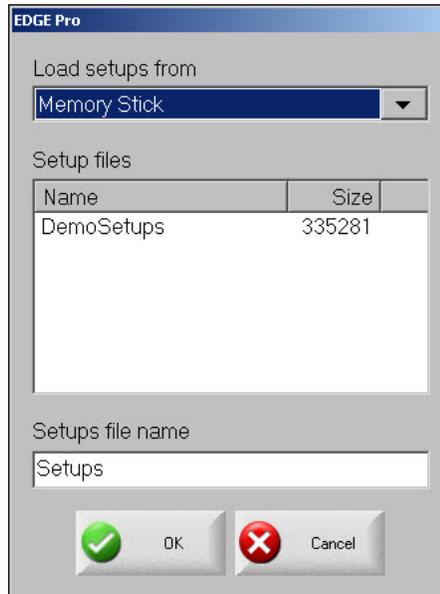
## Load and Save Setup files

The Phoenix Demo allows you to load and save unique setup files to a USB memory stick. You can view parameters in existing machine setup files or customize the demo setup file to show specific functions.

 Loading a custom setup file may require adjustments to I/O or other parameters to allow simulated motion.

 Before loading a custom setup file, save the setup file that was provided with the demo under a new name.

1. Insert a USB memory stick.
2. On the Main screen, click Setups.
3. Click Password and enter the Special Setups password.
4. On the Special Setups screen click Load Setups. A password provided by a Hypertherm distributor is needed to continue.
5. Select Memory Stick on the dialog box and click the desired file to load.

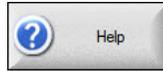


6. To save a setup file, click Save Setups on the Special Setups screen.

## Additional features

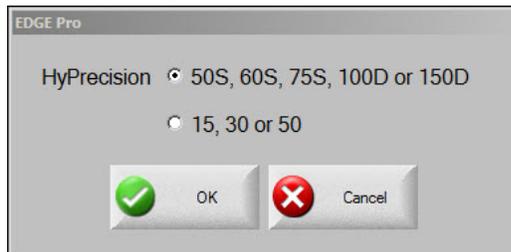
Please take a few minutes to review these unique features of the software.

### Help



Click the Help soft key on any screen to open to the relevant page of the manual.

On the Help screen, click the HyPrecision manual soft key. Select the 50S, 60S, 75S, 100D, or 150D radio button or the 15, 30, 50 radio button to display the corresponding manual.



 You can locate additional Hypertherm product manuals by visiting [www.hypertherm.com](http://www.hypertherm.com) and choosing the Downloads Library link.

### Watch Windows



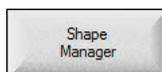
Press the right and left arrow keys at the lower right corner of the Main screen to quickly scroll through important operational information such as Cut Estimate Timer, Pierce Counter, consumable-life tracking, and System Errors. These screens can also be modified to suit table configurations and customer needs.

### Remote Help



Remote Help allows you to connect the CNC to technical support staff over the Internet. Technicians can have remote access to critical information on CNC parameters and diagnostic tools to provide immediate response. Remote Help uses built-in Microsoft Lync® software. The first time you access remote help, Phoenix will launch a web browser and open the Lync web application.

### Shape Library and Nesting



Open the Shape Manager screen to view and load simple shapes, and access text editors, manual nesting, and more.

## Loading files



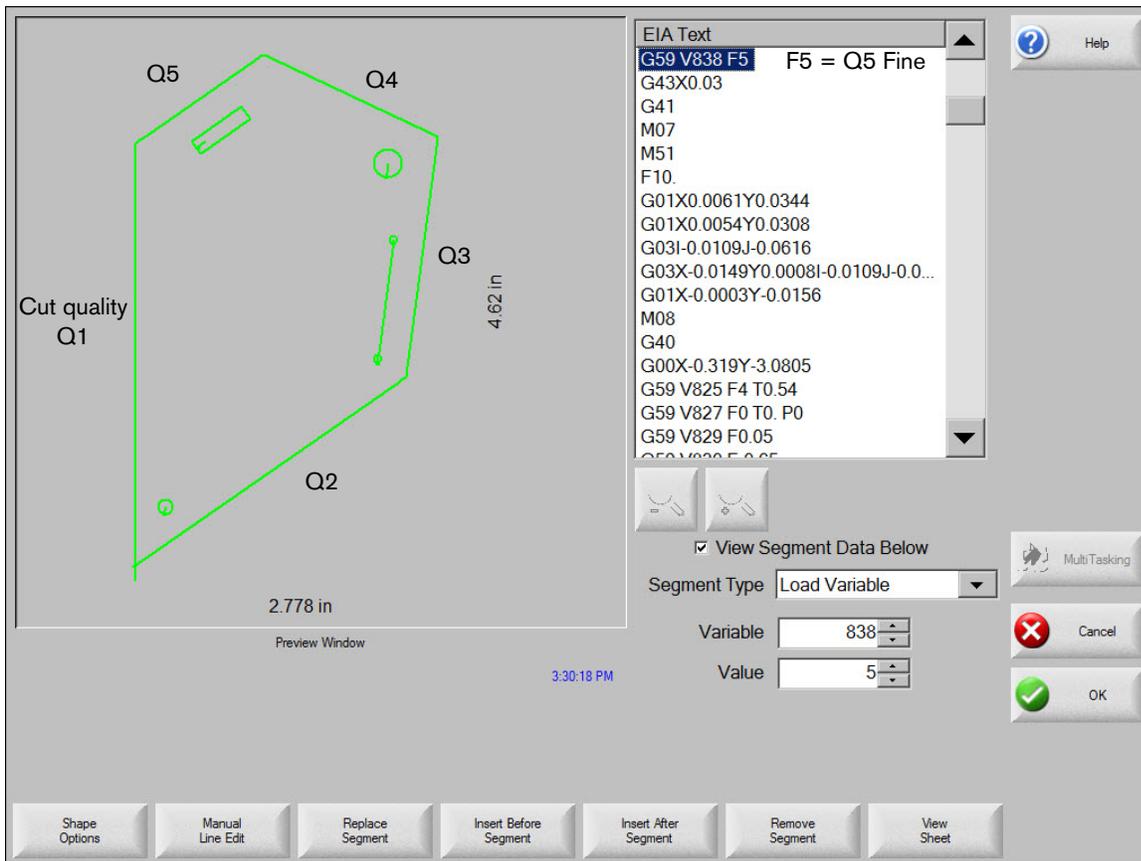
Choose Files on the Main screen to highlight the features for loading parts from a USB memory stick, hard drive, network drives and serial communication to a host PC. In addition, you can save diagnostic log and system files for technicians with the Save function.

## Diagnostics



From the Main screen, choose Setups > Diagnostics. Note the soft keys available for checking Control Information, I/O, Oscilloscope, Drives and Motors, Machine Interface, and Operator Interface. The I/O, Drives and Motors, and Machine Interface screens require a password provided by a Hypertherm distributor to continue.

## Part program features



Load the sample part program. The part program has embedded code to set the edge quality on each of the five sides with the corresponding speed. Each side is designed to take 3.1 seconds to demonstrate the ability to select higher quality or higher productivity. The pierce type is also embedded in the program to simplify the setup for the operator.

## Cut charts

Open the cut chart screen to view the available parameters that you can customize to create unique cut charts.



Waterjet Cut Chart - Rev 0C

Process Selection

Material Type: Mild Steel

Specific Material: None

Orifice Size: 0.012"

Nozzle Size: 0.030"

Material Thickness: 6GA

Cut Pressure: 60000 psi

Waterjet Mode: Q5 Fine

Cut Speed: Q1 Rough, Q2 Coarse, Q3 Medium, Q4 Smooth, Q5 Fine, Q6 Wet Run

Abrasive Flow: Q5 Fine

Abrasive Flow Rate: 0.794 lb/min

Abrasive Flow Rate Low: 0.794 lb/min

Kerf: 0.03 in

Pierce Type: Dynamic

Pierce Time: Dynamic

Pierce Speed: Wiggle

Pierce Displacement: 0 in

Low Pressure Pierce: Off

Low Pressure: 60000 psi

Low Pressure Pierce Time: 0 sec

Cut Height: 0.125 in

Cut Speed Calculator

Cancel

OK

3:33:58 PM

Save Process, Reset Process, Save Cut Charts, Load Cut Charts, Change Consumables

### Cut speed calculator

Hypertherm provides a cut speed calculator that helps you to plan and estimate your cutting jobs, and to generate values for additional waterjet cut charts. To launch the calculator, from the Main screen, choose the Waterjet Cut Chart soft key, then choose the Cut Speed Calculator soft key.

### Cut edge quality

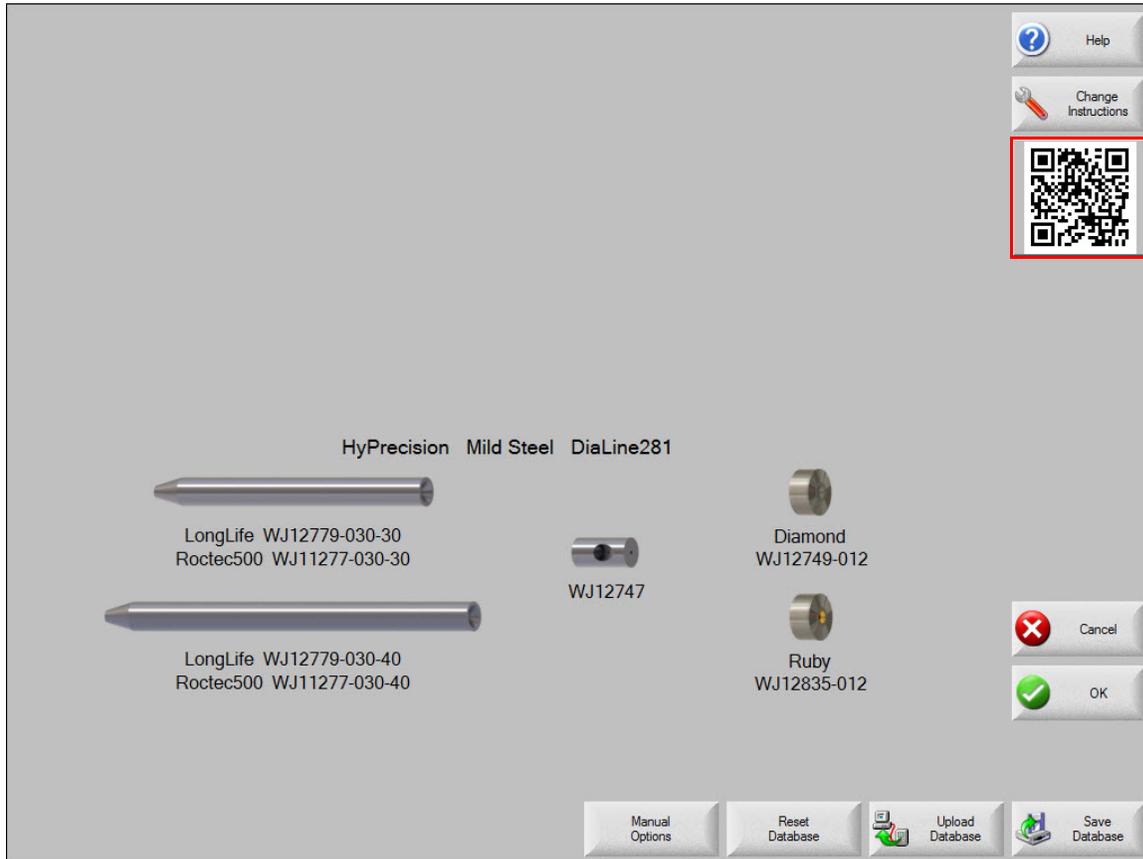
The drop down menu under Waterjet Mode gives you the ability to select cut edge quality. This will apply the cut quality to the entire part. The Pronest code overwrites the entry by default.

### Pierce type

The drop down menu under Pierce Type gives you the ability to select multiple pierce types. This will apply the pierce type to all pierces in the part. The Pronest code overwrites the entry by default.

## Change consumables screen

Open the change consumables screen from the Main screen to view the consumables used for each process and their part numbers.



## Quick Response (QR) code

The QR code in the upper right corner of the screen provides a link to the Hypertherm website where you can find detailed information on maintenance and parts. If you are connected to the Internet you can click on the QR code or you can scan it with a smart device to get to the website. You will see the HyPrecision how-to guides for waterjet system support and maintenance for pumps, cutting heads, abrasive delivery and much more.