CNC CONTROL of the PLASMA CUTTING PROCESS

The Value of Plasma CUT CHARTS
• For decades CNC controls used for plasma cutting were concerned only with the cutting path.

• In the past, process control was the responsibility of the machine operator.

• The demands of industry require that today’s CNC controls assume responsibility for BOTH path and process.

• Controlling path alone is no longer enough.
Many CNC Controls today offer CUT CHARTS to control plasma process variables.

Some controls offer CUT CHARTS only for plasma systems that accept a serial command.

Some CNC control manufacturers charge extra for CUT CHARTS.
• **All** Hypertherm CNC Controls include CUT CHARTS that control the plasma process to the fullest extent possible for **all** Hypertherm® plasma systems – and even some competitive models.

• If the plasma system cannot accept a serial command to change a process variable, the CUT CHART prompts the machine operator for the correct value.

**NO EXTRA CHARGE**
The Hypertherm CNC control assumes responsibility for the plasma process to fullest extent possible for the configured plasma system.

The following slides are screen captures of the Hypertherm Phoenix motion control software configured with CUT CHART support for operation with a Hypertherm HPR260 plasma system.
Machine operator touches CUT CHART button to set the plasma process parameters.
Drop down menus used by machine operator to set up a cutting process.
Process parameters dynamically filled in based on selection from drop down menus.
Operator selects material type
Operator selects current
### SELECT GASES

#### Plasma 1 Cut Chart - Rev E

**HPR - Process Selection**
- Torch Type: HPR
- Material Type: Mild Steel
- Specific Material: None
- Process Current: 200A
- Plasma / Shield Gases: O2 / Air
- Material Thickness: 0.188

<table>
<thead>
<tr>
<th></th>
<th>Plasma</th>
<th>Shield</th>
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<tbody>
<tr>
<td></td>
<td>Auto</td>
<td>Manual</td>
</tr>
<tr>
<td>Preflow Setting</td>
<td>23</td>
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<tr>
<td>Cutflow Setting</td>
<td>74</td>
<td>69</td>
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<tr>
<td>Mixed Gas</td>
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</tbody>
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**Other Parameters**
- Kerf: 0.078 in
- Pierce Time: 0.2 sec
- Cut Height Delay: 0 sec
- Creep Time: 0 sec
- Cut Height: 0.13 in
- Transfer Height: 200 % 0.28 in
- Pierced Height: 200 % 0.26 in
- Set Arc Voltage: 124 volts
- Set Arc Current: 200 amps

*Double-Click here to Add or Remove a Plasma / Shield Gases*
Operator selects thickness
Operator can create CUT CHARTs for custom material types.
Values in blue indicate user values.

Changes made to CUT CHARTs are SAVED by pressing SAVE PROCESS button.
Press RESET PROCESS button to return that process screen to factory settings.
Press SAVE CUT CHARTS to save all charts to a memory stick for storage outside of the control.
Press LOAD CUT CHARTS to load cut charts from a memory stick. Updated charts are available from time to time at www.hypertherm.com.
Press CHANGE CONSUMABLES button to view correct consumables based on drop down selections.
Correct consumable part numbers displayed for operator reference.
Screen can also be used to track consumable life. Date stamp is entered each time New Nozzle or New Electrode buttons are pressed.
www.retroplasma.com

Thank you