ACETYLENE

HAND/MACHINE CUTTING

6290-S Single Piece Cutting Tips

6290-AC Two Piece Cutting Tips

Heavy preheat for rusty or scaled surfaces

6290-NX Cutting Tips

Medium preheat for clean surfaces

6290-AC & 6290-S Tips for Oxy-Acetylene

6290-AC for Oxy-Acetylene Cutting

6290-NX for Alternate Fuel Cutting

6290-NXM for Mapp® Gas Cutting

6290-VVC & VVCU Tips for Propane/Natural Gas

THICKNESS TIP PRESSURE FUEL GAS EQUAL ORIFICE DRILL

PLATE 6290 OXYGEN ACETYLENE CUTTING

PLATE 6290-S OXYGEN ACETYLENE CUTTING

THICKNESS TIP PRESSURE PRESSURE ORIFICE DRILL

6290-AC Tips for Oxy-Acetylene

6290-NX Tips for Alternate Fuel

6290-NF Tips for Alternate Fuel

6290-NX & NXM Tips for Propane

6290-VX Tips for Propane/Natural Gas

6290-VVC & VVCU Tips for Propane/Natural Gas

MACHINE CUTTING

Cleaning: Use Harris tip cleaner E-9 (P/N 9000160) for cleaning pre-heat holes and removing spatter from the tip face. When cleaning the preheat slots, do not brush across the slots as this motion can damage the slots. Always brush along the length of the slot to remove dirt or spatter.

Additional copies are available at www.harrisproductsgroup.com

** To provide required gas flow, use 3/8" I.D. hose for size 4 and larger.

NOTE:

• Correct cutting oxygen pressure must be available at torch entry.

• Oxygen preheat pressures are for three hose torches.

• For two hose torches set same gas pressures for both high and low preheat.

Cleaning: Use Harris tip cleaner C-9 (P/N 9000156) for single piece tips.

** To provide required gas flow, use 3/8" I.D. hose for size 4 and larger.

Cleaning: Use Harris tip cleaner E-9 (P/N 9000160) for two piece tips.

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** To provide required gas flow, use 3/8" I.D. hose for size 4 and larger.

Cleaning: Use Harris tip cleaner E-9 (P/N 9000160) for two piece tips.

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**MACHINE CUTTING GUIDE**

**PERFECT CUT** - Regular surface with slightly sloping drag line marks a perfect cut. A slight amount of scale at the top of the cut is caused by preheat flames and is easily removed. This surface can be used for many purposes without machining.

**PRODUCTION CUT** - Moderately sloping drag lines and a reasonably smooth surface characteristics a production cut. For production operations cut of this type represents the best combination of quality and economy.

**DIRTY TIP** - Cut in scale in the tip will deflect the oxygen stream and cause one or more of the following problems: Excess slag on the work, an irregular cut surface, pitting and undercutting.

**CUTTING SPEED**

**EXTREMELY FAST** - Fast angle of drag lines shows extremely fast cutting speed. Top edge is good and cut face is smooth. However, slag adheres to the bottom side and there is danger of losing the cut. Not enough time is allowed for slag to be removed. This surface can be used for many purposes without machining.

**EXTREMELY SLOW** - Drag lines incline backwards, marks appear closer to the bottom edge until they finally disappear. As oxygen volume nears correct proportions, pressure marks appear closer to the top of the cut is caused by preheat flames and is easily removed. This surface can be used for many purposes without machining.

**SLIGHTLY TOO FAST** - Drag lines incline backwards, but a “drop cut” is still attained. Top edge is good, cut face is smooth and slag free. Quality is satisfactory for much production work.

**SLIGHTLY TOO SLOW** - Cut is high quality although there is some surface roughness caused by vertical drag lines. Top edge is usually slightly beaded. Quality is generally acceptable, but faster speeds are more desirable.

**TIP DISTANCE**

**TOO CLOSE** - Grooves and drag lines too close to each other caused by available cutting action. Part of preheat cone burns inside kerf where normal gas expansion defocuses oxygen cutting stream. 

**TOO HIGH** - Top edge is heated or rounded, cut face is not smooth and often is slightly beveled when preheat effectiveness is partially lost due to the tip having being too hot. Cutting speed is reduced because of the danger of losing this cut.

**GAS ASJUSTMENT**

**TOO MUCH CUTTING OXYGEN** - Pressure marks are caused by too much cutting oxygen. When more oxygen is supplied than can be consumed in oxidation, the remainder goes around the slag creating gouges, or pressure marks. Correct this fault by lowering cutting oxygen pressure, increasing speed, or using a smaller tip. As oxygen volume nears correct proportion, pressure marks appear closer to the top of the cut is caused by preheat flames and is easily removed. This surface can be used for many purposes without machining.

**TOO HIGH PREHEAT** - Rounded top edge caused by too much preheat. Excess preheat does not increase cutting speed. It only wastes gases.

**WHAT TO LOOK FOR IN BEVEL CUTTING**

**GOOD QUALITY** - Top edge is smooth and cut face extremely smooth. Slag should be easy to remove and the cut part dimensionally accurate. Cutting speed is slower than vertical cutting because preheat effect is partially deflected from plate.

**POOR QUALITY** - Sloping is the most common fault, and is caused by preheat not being hot enough to preheat to face to face. Another fault is a rounded top edge, caused by too much preheat resulting in excessive gas consumption.

**PROPYLENE/MAPP®**

**MACHINE CUTTING**

**Series 6290-VVCP**

**Series 6290-VVCM**

**PROPERTIES FOR TIPS FOR PROPYLENE**

<table>
<thead>
<tr>
<th>PLATE THICKNESS</th>
<th>INCHES</th>
<th>SIZE</th>
<th>PATTERN</th>
<th>BEVELING</th>
<th>OXYGEN</th>
<th>FUEL GAS</th>
<th>WIDTH</th>
<th>CUTTING TIPS</th>
<th>MATERIAL</th>
<th>FUEL PRESSURE</th>
<th>CUTTING PRESSURE</th>
<th>KERF ORIFICE</th>
<th>DRILL SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8-1/4</td>
<td>1/16</td>
<td>01/2</td>
<td>VVCP &amp; VVCM</td>
<td>13-15</td>
<td>50</td>
<td>25/8</td>
<td>4 oz. to 2 PSI</td>
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