m³ plasma™
A New Dimension in Plasma Performance

PRECISION. PERFORMANCE. VERSATILITY.
ESAB makes plasma cutting and marking easier than ever.

m³ plasma - An innovative, high-performance plasma system utilizing the latest in modern technology to provide high precision plasma cutting over a wide range of materials. Expanded functionality allows great versatility with a system that fully automates the entire plasma process.

**MATERIALS AND THICKNESSES**

**MILD STEEL**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Cutting Current</th>
<th>Material Thickness</th>
</tr>
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<tbody>
<tr>
<td>m³ plasma™ 201</td>
<td>30 – 200 Ampere</td>
<td>0.040 – 1.250 inch¹</td>
</tr>
<tr>
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<td>0.040 – 1.500 inch¹</td>
</tr>
<tr>
<td>m³ plasma™ 450</td>
<td>35 – 450 Ampere</td>
<td>0.040 – 2.000 inch¹</td>
</tr>
<tr>
<td>m³ plasma™ 501</td>
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<td>0.040 – 2.000 inch¹</td>
</tr>
<tr>
<td>m³ plasma™ 720</td>
<td>35 – 720 Ampere</td>
<td>0.040 – 6.000 inch¹</td>
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¹ Recommended range for production cutting and piercing mild steel with O₂.

**STAINLESS STEEL**

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<td>m³ plasma™ 450</td>
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<tr>
<td>m³ plasma™ 601</td>
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<td>0.040 – 6.000 inch¹</td>
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<td>m³ plasma™ 720</td>
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¹ Recommended range for production cutting of Stainless Steel.

**ALUMINIUM**

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¹ Recommended range for production cutting of Aluminum.

**Wide Range of Applications:**
m³ plasma cuts material thicknesses from 0.040 inch to 3 inch mild steel, or up to 6 inch stainless steel and aluminum.

**Outstanding Results:**
In precision mode, m³ plasma cut quality meets or exceeds the specifications of the ISO 9013 range 3 international standard for cut-edge quality.

**Easy marking and labeling:**
- Marking and cutting with the same nozzle
- Variable line width and depth
- Line marking up to 400 in/min

**Highly Accurate Precision Cutting:**
- Flat cut face
- Sharp top edge
- Virtually dross free

**Superb Bevel Cutting:**
- Weld bevel angle from 0 degrees to +/- 45 degrees
- Innovative torch geometry is optimized for bevel cutting

Perfect bevel cutting
Minimum corner radius
Smooth cut surface
High quality bevel cutting
Sharp edges

**Recommended range for production cutting of Stainless Steel:**
Piercing and cutting up to 3 inch thick with H-35 gas (65% argon/35% hydrogen) at 450 and 500 A. Cutting from 3 inch to 6 inch stainless steel is edge starting ONLY.

**Recommended range for production cutting of Aluminum:**
Piercing and cutting up to 3 inch thick with H-35 gas (65% argon/35% hydrogen) at 450 and 720 A. Cutting from 3 inch to 6 inch aluminum is edge starting ONLY.
Form Follows Function
The innovative torch design.

Rugged and robust, with a sharply beveled front end, the PT-36 plasma torch is purpose built for heavy-duty industrial plasma cutting.

With the PT-36, innovative torch design leads to enhanced cutting capabilities. The torch geometry allows excellent cutting characteristics, outstanding precision in bevel cutting, and a substantially longer life span.

01 Wide Range of Applications
Thanks to the electronically controlled power supplies, the PT-36 easily cuts materials 0.040 inch to 6 inch thick.

02 Longer Life Span
The optimized front-end geometry offers less contact surface for pierce spatter, resulting in longer consumable life.

03 Superb Bevel Cutting
With its pointed front end, the PT-36 keeps the nozzle closer to the work piece, even at steep bevel angles, producing perfect welding bevels from 0 to +/- 45 degrees - without requiring special consumables.
Focused Plasma Energy
Advanced shield gas technology brings more power and precision.

ESAB uses a ground-breaking process as a driving force for high performance.

The Principle:
Gas mixing and precision flow control of the secondary shield gas stabilizes, focuses and enhances the plasma jet.

The Result:
With the exceptionally fine, accurate arc, cutting capacity is substantially higher than conventional plasma processes, while angular deviation is visibly reduced.

The Advantages:
- Higher cutting speeds
- More precise cut edges
- Smooth cut surfaces
- Underwater cutting is possible
- Marking and cutting with the same consumables

The Right Mixture
With these gases, m³-plasma™ can handle any cutting task.

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<tr>
<th>Gas Type</th>
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<th>Stainless Steel / Aluminum</th>
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<tr>
<td>Start Gas</td>
<td>Nitrogen (N₂) or Compressed Air</td>
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</tr>
<tr>
<td>Cutting Gas</td>
<td>Oxygen (O₂), Air</td>
<td>Nitrogen (N₂), Argon-Hydrogen (H₂:35)</td>
</tr>
<tr>
<td>Secondary Shield Gas</td>
<td>Oxygen (O₂), Nitrogen (N₂)</td>
<td>Nitrogen (N₂), Methane (CH₄), Water</td>
</tr>
<tr>
<td>Marking Gas</td>
<td>Argon (Ar)</td>
<td>Argon (Ar)</td>
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</table>

Note: The gas mixes indicated here are guidelines. Depending on the cutting task, different gas combinations may be required.
The Components of Your Success

m³ plasma™ for an integrated cutting process.

ESAB offers a seamless range of services for plasma cutting.

As a system partner to industry, ESAB is familiar with your specific requirements. What you want are complete solutions from one source, suitable for integration into your existing process. So, all the components from ESAB work seamlessly with m³ plasma to form an integrated, automated production process.

01 Vision® control
For complete process automation.
- All plasma controls are integrated
- Plasma cuts and marks are easily programmed
- On-screen display of wear parts

02 Plasma Control
For precision control of the plasma process.
- Innovative gas flow control
- High precision through electronic gas control
- Fast switching between cutting and marking

03 Current source with water cooling unit
For superior power supply
- Accurately controllable current delivery
- Wide range of applications
- High efficiency (> 90 %)

Water Cooling Unit
An external cooling unit provides effective, economical cooling.

Power Supply

Products may vary from those pictured.
Clean Working Environment
Underwater cutting with m³-plasma™.

Even marking and labeling under water is no problem with m³-plasma. The PT-36 plasma torch and advanced shield gas technology make it possible. And in many cases, underwater cutting is an economical alternative to dry cutting. The advantages: less noise, reduced emission of dust and fumes, dramatically lower UV radiation, and less heat affected zone around the cut edge. Contact ESAB about a customized solution for under water cutting with m³-plasma that meets your production and environmental needs.

ESAB’s unique SpeedLoader system makes life easier for plasma operators, increases up-time, and reduces operating cost. The SpeedLoader allows pre-assembly of front end parts for quick swap out of consumables.

In addition, ESAB’s patented Posi-Thread design makes torch assembly faster and easier, and prevents damage from overtightening.

A water cutting table from ESAB offers improved working conditions with high-performance plasma cutting.

Innovations in Plasma Productivity
More innovative ways to increase your throughput.

The m³ plasma system brings innovations that improve plasma cutting and ensure longer service life.

ESAB’s unique SpeedLoader system makes life easier for plasma operators, increases up-time, and reduces operating cost. The SpeedLoader allows pre-assembly of front end parts for quick swap out of consumables.
When you buy ESAB, you get more than just a machine. You get an experienced and dedicated partner supporting you throughout the life of your machine.

We are committed to exceeding your expectations of after-sales service and support, to providing an efficient supply chain for spares, wear and consumables; and to offering a comprehensive range of services and products to ensure your continuing success.

Quality products, innovative technology and dedicated customer service... these are the hallmarks of your partnership with ESAB.