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Torchmate II CNC Plasma/Torch Cutter *Guide to Contract Services*

Overview

The Torchmate is a computer controlled plasma cutter that can cut a variety of metals. A file containing an image or part is interpreted via computer and the information is sent to a gantry system holding the plasma cutting torch. This gantry system moves the torch around according to the information in the file; as the torch moves around, it cuts through the metal.

The maximum piercing and cutting thickness is 3/4"; however, the Torchmate can cut up to 1.25" if the cut starts on the edge of the material. The Torchmate bed is 4'x4'. We also have a rotary attachment that allows cutting of steel tubing with an outer diameter of 2"-8".

NextFab Studio can supply material specifically for your project, or we can work with your clean, uncoated material. Job turnaround is typically 2-3 business days, but we do offer rush services.

About Plasma Cut Parts

There are several factors to keep in mind with plasma cutting. In steel, the edge left by a plasma cutter is not weldable due to nitride buildup in the region near the cut. The plasma cutter leaves a rough edge and as the material is heated and blown away by the air, an uneven surface is left. If precision is a concern, parts should be cut over-sized and then ground down.

The kerf, or amount of material removed by the cutting process, should also be considered. All cuts from a plasma cutter will have a bevel on them. The side to the right of the cut (along the direction of torch travel) will be closer to vertical. There is some spatter buildup on the top and bottom of the cut. Spatter on the bottom of the cut is easily removed with a chisel, while spatter on the top is much harder.

To request contract Torchmate plasma cutting services:

1. Submit your design in person, or by email to quotes@nextfabstudio.com. We have specific file requirements listed below. We also offer a service to take a sketch from paper and turn it into a digital file, more information is in the file preparation section.
2. We will estimate job setup and machine time and provide a quote for your approval. Included in this quote is an estimate for material.
3. Upon approval we will run the job and will notify you when the parts are ready for pickup. See below for payment terms.



An example of a Torchmate cut part.

Please include the following information in your request for contract work:

- a file containing the appropriate information (see the file requirements guidelines);
- the material you want your parts cut out from and whether you will supply that material or purchase it from NextFab;
- the date parts are needed by; typical job turn around is 2-3 days depending on the file and machine time.

Email questions, files and plasma cutting contract work to quotes@nextfabstudio.com.

File Requirements

NextFab offers file-creation services. However, if you would like to setup your own files please follow these guidelines.

Supported File Formats:

- DXF (Polyarc is preferable to Polyline or Poly-Spline)
- Monochromatic bitmaps

To ensure your parts are properly scaled, please include the desired dimensions of your part. DXF files are infinitely scalable, so size must be specified.

File Preparation Services

Nextfab Studio can transform a sketch on paper or a description of the parts needed into a vector file suitable for plasma cutting or a variety of other processes. For a written description, be sure to include dimensions, material type, and any special directions when requesting a quote. If you would like a sketch transformed into a vector file, scan the drawing into a .pdf, .jpg, .tif, .psd, .gif or .bmp file format. The scan should be at 300 dpi and the smallest dimension should be no less than 6". High-contrast gray-scale images convert to vector files the most reliably. Include dimensions of the plasma cut part.



Pricing / Payment Terms

The job setup fee includes verifying the file, laying out the part and setting up the machine. Machine time and setup time can be broken into increments as small as 15 minutes. Machine time depends on several factors, including material, material thickness, and path length. Aluminum jobs are typically cheaper, as the plasma cutter can run much faster.

Standard post-processing services can include grinding, slag removal, and buffing. Please inquire for additional options.

Jobs over \$500 require 25% deposit prior to initiation of work. Payment due in full upon delivery. All major credit cards accepted.

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