Swift-Cut FAQ's

What is a Swift-Cut plasma cutting table? Swift-Cut CNC plasma cutting tables allow users to cut a range of metals, including steel, to any shape with a very high degree of accuracy and with a smooth edge. The range of plasma cutting tables are designed to suit metal fabricators of all types, including artists, structural engineers, blacksmiths, educators, and more.

Are the machines easy to use? Swift-Cut designed the entire range of CNC Plasma Cutting Tables to be easy to use, safe, and cost-effective. With a basic knowledge of computers, anyone can quickly become a competent user of the Swift-Cut system. To ensure customers are confident and comfortable with their machines, we can include comprehensive training as part of our Swift-Cut package and are always available to answer questions should they arise.

What is DCC? DCC (Dynamic Cut Control) gives you ultimate control over your plasma machine and cut path, allowing you to fine tune any part of the cut profile. Swift-Cut are proud to offer this unique feature on their plasma cutting range, giving you the best cut possible every time you use one of their machines.

What is DTHC? DTHC (Digital Torch Height Control) maintains an even cut across the material you're cutting, even if you're cutting a warped or uneven piece of metal. Each of our machines is equipped with the very latest DTHC technology to give you the best cut possible, every time.

What is CAD and CAM? Swift-Cut plasma cutting machines come with a console PC fully equipped with CAD (Computer Aided Design) software. This software allows you to create and upload digital images and will convert them into machine code, this is called CAM (Computer Aided Manufacturing), so they can then be processed and produced by the plasma cutting machine.

What is G-Code? G-Code is the language used to tell the cutting head where to go and where to cut.

How fast will the machine cut steel? Swift-Cut tables can cut at a maximum speed of 12.7 metres per minute but please keep in mind that the cutting speed depends on the thickness of steel as well as which Hypertherm Powermax unit is being used.

What thickness of material will it cut? Swift-Cut machines cut to a maximum metal thickness of 22mm. It's not the table model that mandates the thickness of the metal being cut but rather the power of the plasma unit being used. For more information, please contact us we're more than happy to guide you toward choosing the right Hypertherm Powermax unit for your metal cutting needs.

Can I cut small holes in a steel plate? Swift-Cut tables follow the 2D Rule. As such, when cutting a plate that is 2mm thick, the smallest hole that it can cut is 4mm in diameter.

What exactly is plasma and how does it work to cut metal? Coming after solid, liquid, and gas, plasma is the 4th state of matter. When you heat gas enough, the atoms split, separating the electrons form the nucleus. Once the heat releases the electrons, they begin to move quickly. These electrons are negatively charged and, as they move, they leave behind a positively charged nuclei known as an ion. When these ions and electrons collide, they release energy– lots of it!– and it is this energy that gives plasma its great cutting power.

Plasma cutters operate by sending pressurised gas, such as nitrogen, argon or oxygen, through a small channel with a negatively charged electrode in the center of it. When power is applied to this negative electrode and the nozzle touches the metal, a circuit is created and a spark is generated between the electrode and the metal. This spark heats the inert gas to the point that it turns into plasma and is releases a direct stream. This plasma stream is approximately 16,649˚ C and moves at a speed of 20,000 feet per second. When it comes in contact with metal, the plasma reduces it to molten slag.

As long as power is supplied to the electrode and the plasma stays in contact with the metal, this plasma arc will be continuous. To maintain this connection, the nozzle releases a constant flow of shielding gas around the cutting area and the radius of the plasma beam will be dependent on the pressure of this gas shield.

What is the benefit of the water table? Water tables are a cost-effective way of minimising harmful sparks and fumes that come as a result of cutting certain types of metals. Water tables are easy to care for, quiet, and less expensive than downdraft machines. Available on all the Swift-Cut models, water tables are a great option for many of our customers.

Can I use my own CAD program such as AutoCAD? Yes. The CAD software used on our tables reads .DXF files. Whether you're creating an image in Corel Draw, AutoCAD or Adobe Illustrator, if file is saved as a .DXF, it is compatible with our software.

Can I see a demo? Absolutely. Please contact us to schedule a demonstration. If you send us a drawing of a part you would like to make as a .DXF file we'll show you how easy it is to program the machine.

How long do the consumable tips last on the Hypertherm machine? The lifespan of your consumables will be determined by how often the machine is used, what materials it's cutting, and which Hypertherm Powermax unit is being used. It's important to us that our customers get the absolute most out of their machines, so all Swift-Cut machines are supplied as standard with DTHC (Digital Torch Height Control) to maximise the lifespan of consumables. Dry air is also a very important in maximising the lifespan of the consumables, so please make sure your machine is kept in a dry environment.