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CNC PLASMA 15000 mm X 3000 mm

Working Area	1500 x 3000 x 200 mm
Working Material	Mild steel, Stainless steel, Aluminum
Cutting Thickness	0,5 – 25 mm
Cutting Speed	0 – 10000 mm / Min
Input voltage	3 phase – 380 Volt
Power Frequency	50 hz
	Close loop stepper Motors, 2 in axis Y, 1 in Axis X
	Hiwin linear
	Bellows for linear protection
	Cnc control systems 4 axis
	Fastcam software, pro version
	Stand Alone Torch height controls

Specifications:

metal cnc plasma cutting machine

1. CE

2. cutting thickness: 0,5-25mm

3. high precision

4. USA hyperther power

Scope of application:

cnc plasma engraving machine is a atomatic and high efficiency engraving equipment. It is widely used in all kinds of carbon materials, stainness steel and nonferrous metal precision sheet metal cutting. cnc plasma machine is used in all kinds of carbon materials, stainness steel, nonferrous metal precision sheet special for metal.

Features of machine:

- **The beam uses light structural design,with good rigidity structure, light deadweight and small movement inertia.**

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- **The gantry structure, Y axis used dual-motor dual-driven system,X,Y,Z axis all use dual-straight rail that make the machine driving smoothly with high-precision.**
- **Aiming at cutting three dimension LED character, trough metal panels and floor cutting, the accuracy can reach good indicators. Equipped with other advertise equipment (blister machine, engraving machine), forming the advertising word processing pipeline. Completely solve the traditional manual processing methods. Improve the efficiency of several times.**
- **Cutting mouth is small, tidy,and avoid a second dressing processing.**
- **It can apply to iron sheet, the aluminium sheet, the galvanized sheet, hundred steel plates , metal plates and so on.**
- **High cutting speed, high precision, and low cost**
- **The numerical control system disposes high, the automatic striking arc, the performance is stable.**
- **Support standard G code. The control system uses the U-disk exchange processing document, easy to operate.**

Stand Alone Torch height controls

Stand alone CNC Torch Height controller is Arc Voltage Torch Height controller, Full of completely functions applied for Plasma cutter or plasma cutting machine

Feature

Automatic HIS:

Divide into checking method of torching retaining cap HIS and Proximity switch HIS checking method which has NPN and PNP two types;

Anti-Bump of Torch:

After cutting torch bumps into the steel plate in any condition, when examines the electric circuit movement, will make the cutting prmote to height;

Freeze Auto Height Control on Corner Signal: can recognize Corner Signal from CNC and freeze Auto Control Model on receiving this signal, and we have a unique design to backup this function. We set 30V (adjustable) as Turning Point according to our years practice. When the Actual Arc Voltage is higher than Set Arc Voltage over 30V, THC Auto Control Mode freezes to avoid torch head diving, until it goes back to 30V range. This Over Voltage protection can avoid torch diving on voltage spikes (Corner Turning, Kerf Crossing) effectively;

Set Pierce Time:

Set the Button (Set PIERE) to set Pierce Time;

Manual Operation:

Many functions can be Manually operated on THC Operation Panel such as setting Auto/Manual, Up and Down, testing of IHS and Arc Start

Parameters

- **Working Voltage: AC24V+/-5%, 50Hz/60Hz**
- **Down/up Motor: 24V DC motor**
- **Driver: PWM**
- **Outpour Current: 1A-4A**
- **Output Power: 100W,**
- **Working Temperature: -10-60C**
- **HIS mode:**
- **Proximity switch HIS**
- **HIS of Torch Retaining Cap**
- **Running Transmission Mode: Check the Arc Voltage to make sure fulfill the output**
- **Divide-Volt Ratio: 100:1**
- **Precision:+/-1V - +/-5V**
- **Shape Size: Length Xwidth X height: 320+260+90mm**
- **The Speed of upgrading: 1000mm/m**

Plasma CNC cutting system

ADT-HC8200 is new high-end gantry type CNC Cutting Controller: Passed CE, ISO certificates; adopts Inter Atom low power CPU Processing Cores; industrial computer (IPC) & windows operating system with multi-task/windows; flexible response and conveniently

Feature

- **Windows operation system;**
- **IPC (Industrial computer) processor core;**
- **Multi-language compile, supports CAD, DXF file transformation;**
- **Perfect process for plasma/oxy-fuel cutting/ plasma mark/ powder-spraying laying out;**
- **Kerf, gas compensation function;**
- **User friendly operation interface; editable graphics library;**
- **The breakpoint memory function: supports sudden pause process memory, alarm & power off memory;**
- **Product Configuration:**
- **CPU: Intel(R) Atom(TM) CPU N270 @ 1.60GHz**

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- **Display (all-in-one machine): 15 Inch industrial LCD colorful display screen**
- **Storage & Hardware: 1GB 16G, CF card**
- **USB: USB2.0**
- **Keyboard: industrial keyboard**
- **Case: Steel Structure**
- **Power: PS/2 standard, ATX Power 300W AC 220 Input**
- **Interface Board Power: 24V**
- **Max. pulse frequency: 1HMZ**

Function

- **2-4 Axis close loop step motor control CNC cutting Controller;**
- **Window Operation System, Multi language compile;**
- **Compatible ISO-G code and ESSI Code;**
- **Kerf, gas compensation function;**
- **Free set for plate steel area;**
- **Pause, continue, breakpoint & power failure memory, backward, forward and other practical functions;**
- **The breakpoint memory function: supports sudden pause process memory, alarm & power off memory;**
- **Hand/Auto optional operation for ignite, gas, cutting gas, plasma torch height, preheat gas, arc stick, perforate etc;**
- **Auto-return absolute zero function, relevant zero setting function;**
- **Calibration functions for cutting parts;**
- **Real time Display: current coordinates, control status & speed real-time display;**
- **Radom control speed of Acc/Dec & Corner Intelligence ACC/DEC in the process of cutting;**
- **Supporting time memory: Reminding time for change spare parts;**
- **Diagnosis function, help users to solve machine failure quickly;**
- **Support graphics library;**
- **Support touch screen, standard PS / 2 and a USB mouse, keyboard;**
- **Work Conditions:**

Work Conditions		
Temperature	Work	-5℃ ~ 50℃
	Storage transport	-30℃ ~ 70℃
Relative Humidity	Work	20% ~ 90% (℃)
	Storage transport	10% ~ 95% (℃)
Atmospheric Pressure		86Kpa ~ 106Kpa
Power supply		AC 220V
Power		300W
Consumption		300W

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Fastcam (nesting software) professional version

EASY, 2D CNC PROGRAMMING

CAM CNC Software Series for Plate Shape Cutting with integrated 2D drawing, tool pathing, true shape nesting, code verification & NC generation, offering a complete low-cost solution to profile cutting.

The FastCAM® System has been designed to draw, nest and cut metal as simply and efficiently as possible. Ease of use is as important as the high levels of materials utilization and optimization the software provides.
FastCAM® is more affordable and far less complex than other systems. Easy Editing & Verification of geometry combined with one step nesting makes the system instantly productive. FastCAM's long experience in heavy plate fabrication makes the system ideal for even the largest construction jobs. The FastCAM® System is used successfully in Service Centers, Shipbuilding, Mining, Steel Fabrication, Metal Fabrication & Sign Cutting.
FastCAM® supports all combinations of machine and controller as well as ESSI, EIA and ISO NC languages in both inch and metric. NC output can be Absolute or Incremental.
Where drawing information exists electronically, FastCAM® has an extremely Powerful CAD interface that cleans and compresses code ready for quality cutting. FastCAM® can read or convert DXF, DWG, DSTV, StruCAD and IGES file formats.
FastCAM® offers various editions with different levels of automation to suit your needs and budget. For repetition cutting, where there is no need for nesting, we offer the simplest, lowest cost solution with our FastCAM® NC Edition.

- Purpose built: Best Fit, Best Value for Metal Profilers and Fabricators.
- Affordable and easy to use. Minimum training required.
- Support for all additional machine processes; marking, text marking, drilling, multiple torches, multi-torch nesting, multi pass single torch bevel cutting and more.
- Compatible with most popular cutting equipment and industry standard file formats.
- CAD Compatible - DXF layer support for different processes.
- Tool Path Generation and Code Verification.
- Choose from drawing only, no nesting, manual or automatic nesting.
- Inch & Metric.
- International software (Multi-language interface).

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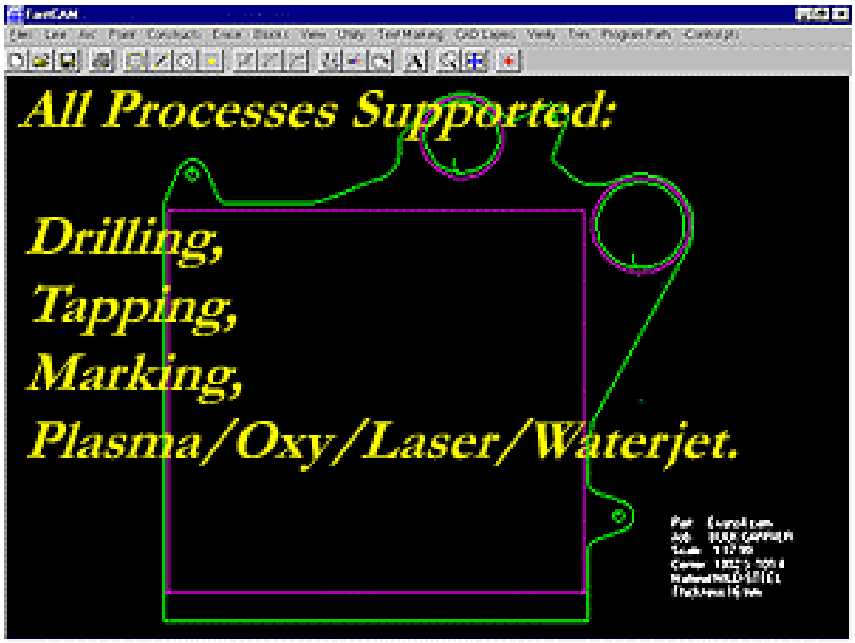

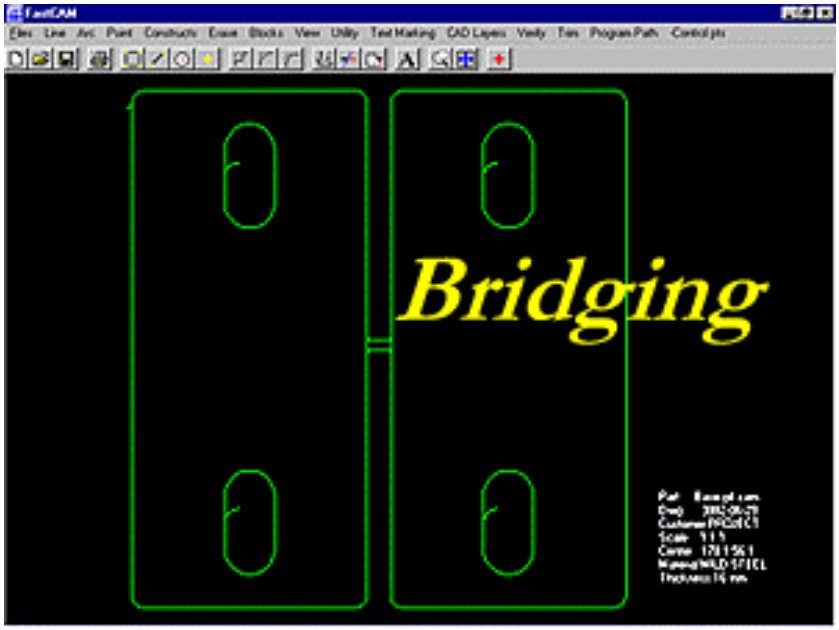

COST JOBS & DEBUG CNC CODE BEFORE PROCESSING

FastPLOT™ allows complete verification of machine code on a personal computer. You can debug CNC code quickly and easily. Our NC Verification & Code Editor will also provide cutting time and distances as well as net and gross material utilisation thereby making it ideal for costing and estimating of individual parts or complete nests. The program can also read and convert existing NC code for reverse engineering into CAD DXF files or proprietary FastCAM® CAM files.

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FastPLOT™ offers the following features and benefits:

- **Direct NC Editor, Read and write NC code with full simulation.**
- **Automatic NC collision checker to detect overlap mistakes.**
- **Point & Click search locates specific code for each entity in part program.**
- **Costing data, includes Time and Distance for all processes Cutting, Marking etc.**
- **Simulation shows individual processes by colour and line type**
- **Supports all additional machine processes including, marking, text marking, drilling, multiple torches, multi-torch nesting, Oxy-fuel & multi pass plasma bevel cutting and more.**
- **Supports all combinations of machine and controller as well as ESSI, EIA and ISO NC languages in both Inch and metric.**

EASY, 'TRUE' SHAPE NESTING

FastNEST® provides easy, true shape nesting for CNC shape cutting machines. The FastNEST® nesting algorithm is designed to optimise both the material usage and the sequence of cutting. C-Shaped and L-Shaped parts are allowed to interlock which allows unlike parts to be nested together as well as nesting one part inside the cutout of another part. The rotations of the parts are all considered before the shapes are layed out. In most cases, FastNEST® will automatically provide the maximum utilization of material in the minimum amount of time, however there are instances where operators need to change nests and manually position components. Other factors such as grain can often preclude automatic nesting. For this reason, FastNEST® has many manual and semi-automatic features.
FastNEST® can quickly identify better stock utilization by running 'what ifs' from your cutting lists. FastNEST® can nest into standard stock plates or any remnant shape. Integrating the optional FastTRACK® remnant database system further optimizes and automates the utilization of cut plate. Multiple primary processes are supported such as mixed Oxy-fuel and Plasma cutting and a large range of NC controls are supported for output. FastNEST® also supports all secondary machine processes such as marking, text marking, drilling, multiple torches, multi-torch nesting, multi pass single torch bevel cutting etc.

FastNEST® features :

- Reads/Nests NC Code including, Unix-based, ISO, EIA, ESSI in Metric & Imperial.
- Nests (Fast)CAM and DWG/DXF, IGES & DSTV.
- Fast, single and auto pair arrays (including offset arrays) for same parts.
- Nests into Remnant or scrap material.
- Jostle feature to super pack nests.
- Pre-pierce option for better quality cuts and torch optimization.
- Moveable pierce points with simple point & click.
- Easy dynamic part rotation for fast manual optimization of nests.
- Small hole option allows for variations in cutting speed.
- Hole avoidance (Rectangular & Straight) to produce nests that can be run unattended.

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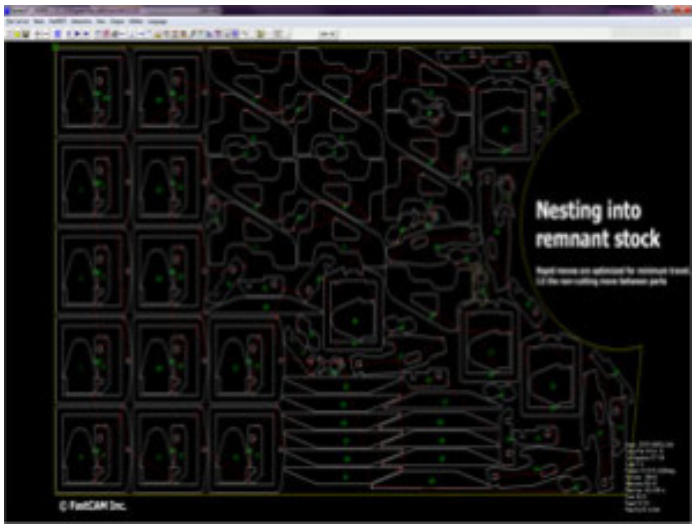
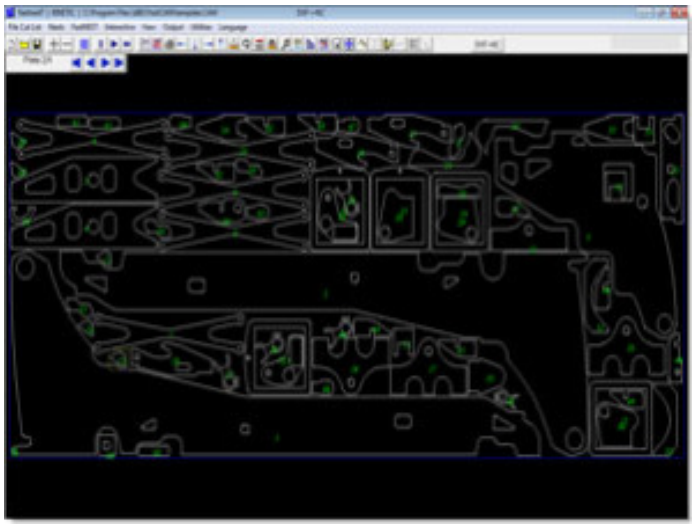
- Automatic Kerf compensation.
- Multi-Torch simulation to run through different scenarios before cutting.
- Trim Plate after nesting for return to stock (Straight or contoured).
- Cut in Part or by Process. Eg. Cut 'Process by Process' (Mark entire nest, then Drill entire nest, finally Cut entire nest) OR process Part by Part, meaning that each part will be processed before moving onto the next part (Eg, Mark, Drill, Cut).
- Common Cut Nesting & Post nest optimization including Bridging, Tabbing, Chain Cutting & Stitch Cutting
- Multiple Strip Cutting & Multi Pass Cutting (checks for Patterns or Arrays to improve speed).
- Collision checker to detect cutting mistakes.





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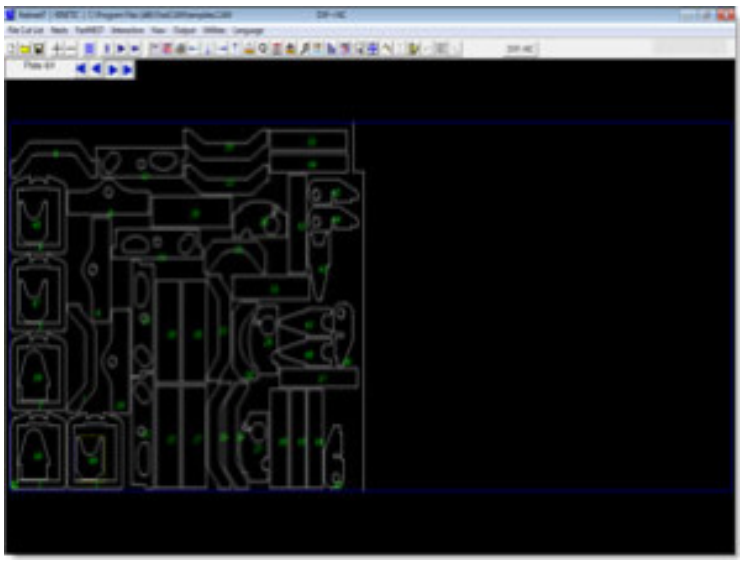

DESPITE THE LOW PRICE, FASTCAM SHINES

Today's CAD files contain an enormous amount of information and are much bigger in size, however FastCAM® v7 can examine even the largest drawings microscopically, without loss of speed.

FastCAM® System v7 highlights :

- Support for huge CAD files :
  - Entities in a single drawing up to 500,000 (from 32,767).
  - Long integers up to 1 billion without loss of accuracy. (Previously 32,767).
  - Double precision for DXF files: 16 digit accuracy.
  - Faster CAD Clean analysis with high speed linearization and automatic closure on the whole drawing. CAD Fix also now finds and repairs the smallest breaks and discontinuities on these very large DXF files. Results in less stoppages, faster cutting and better part quality using new and improved logic/calculation.
- *Automatic* true offset arrays in FastNEST®. Also known as triangular nesting or when parts aren't quite rectangular such as diamond shapes, odd shapes (e.g. flanges).
- EdgeSmart™ (Patented) improvements - Edge starting is a technique that uses the edge of the material to begin the cutting process. By avoiding long pre-heat times especially on heavy materials productivity increases dramatically.
  - Kerf Start - places the torch on a previous cut edge allowing rapid starts within the body of the nest.
  - Box Start - creates 'opportunities' or strategic torch entry points within a nest. Whilst cutting the torch moves away from the cut path creating a small void, the torch then returns to the cut path. The resulting box created is used for the next pierce point. As well as increasing productivity these boxes reduce potential damage to cut parts from the piercing process.

  - Auto plate breakup before part removal - for convenience and improved safety in skeleton removal.
  - Plate edge starts for zero pierce nests - Edge Starting begins each cutting job on the plate edge, when combined with kerf and or box starts it is possible to create zero pierce nests.
  - Dual kerf cutting to minimize movement - This balanced cutting technique minimizes part movement by cutting first one way and then the other, typically used to cut long rectangular parts. By using two start points the thermal movement is balanced resulting in higher accuracy.
  - Entries automatically positioned to minimize movement for a given cut sequence - Intelligent placement of pierce points within a nest has multiple benefits; reduces head travel between parts, avoids previously cut components and potential head crashes improves productivity generally.
- Ability to move entries (lead-ins) and exits (lead-outs) after allocation in FastCAM® and after pathing in FastNEST®.
- Support for 2 ½ axis routers with multiple pass and variable height tabs.
- More types of moveable bridges: Positive, negative, single tabs, opposite tabs, tabs with entries.
- Fully automatic common cutting (pairs and complete nests). Parts are even kerf compensated on output.
- Variable multi torch pass which examines the nest and looks for patterns or arrays within a nest, improving speed.
- New class of Holes - Small Hole, Medium Hole, Large Hole and Outside Contour Distinctions for using different Feedrates and different M-codes.
- Movement (thermal) Analysis to highlight parts in danger of heat distortion.
- Multi stage corner and hole size deceleration and acceleration in NC output option improves cut quality on corners and small holes.
- Automatic NC collision checker prevents overlap cutting mistakes. Especially valuable in big complex nests.
- Support for Microsoft Windows 7 & 8 Operating Systems.

Development work on previous versions of FastCAM® has now ceased so we encourage all customers to move to the new version as soon as possible. Customers on Annual Service & Maintenance Agreements can download updates from the Web Portal.

FastCAM PRO , Feature Check List
2D Drawing Editor with CAD Tools
Import DXF, DWG, StruCAD, DSTV, IGES files.
Multi-torch & hi-def plasma support
Secondary process support (drilling, marking etc)
Integrated postprocessors with ESSI, EIA machine language support
Interpret/clean/compress CAD files
CAD part extraction and cut list
Automatic nesting from cut list
Edit, Verify and Output NC code
Output (Fast)CAM, DXF, IGES & NC code.
Kerf compensation (offset)

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Estimating data (cut time, distance, material etc)
Reverse engineer NC files
Convert holes to points (for drilling)
Line & drill point marking
Tabbing & ability to move pierce points
Manual tool pathing
Automatic tool pathing, nest analysis, collision check
Full Shape Nesting - DXF, DWG, NC, CAM, DSTV
Triangular (odd shape) Nesting
Manual Array Nesting
Automatic Array Nest (matches similar size parts)
Remnant Nesting (nest into cut plate)
Manual Nesting (add parts one at a time)
Interactive Nesting (jostle, move, rotate parts)
Automatic Nesting (nest multiple parts based on your settings)
Common Cut Nesting
[Simple] Bridging (manually connect parts)
Bridge Nesting (various automatic options)
Chain cutting & Stitch cutting
Multi torch cutting
Multi torch variable cutting
EdgeSmart Patented Technology
Bulk processing of files
Single plate nesting
Nesting over multiple plate
Cut Nest by Process OR Part
Part Marking in Nesting (visual ID)
Marking
FastCAM Text Marking -for part ID (with scribe)
Movement Thermal Anaylsis
Gas Axe (skeleton breakup)

Plasma Powermax45

High performance industrial products for every cutting and gouging need

Hypertherm's Powermax line of products consists of six highly portable air plasma systems for hand or automated cutting and gouging of any electrically conductive metal. With a severance cut capacity range from 5/8" at 30 A to 2 1/4" at 125 A, Powermax systems will help you get your work done faster, easier, more reliably and at lower cost

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Specifications

Input voltages	CSA	200 – 240 V, 1-PH, 50-60 Hz
(± 10%)		480 V, 3-PH, 50-60 Hz
	CE	230 V, 1-PH, 50-60 Hz
		400 V, 3-PH, 50-60 Hz
Input Current @ 5.95 kW	CSA	200/230 V, 1-PH, 34/28 A
		480 V, 3-PH, 9 A
	CE	230 V, 1-PH, 30 A
		380/400 V, 3-PH, 10.5/10 A
Output current	20 - 45 A	
Rated output voltage	132 VDC	
Duty cycle @ 40°C (104°F)	CSA	50% @ 45 A, 200 – 240 V, 1-PH
		60% @ 41 A, 200 – 240 V, 1-PH
		100% @ 32 A, 200 – 240 V, 1-PH
	CE	50% @ 45 A, 230 V, 1-PH
		60% @ 41 A, 230 V, 1-PH
		100% @ 32 A, 230 V, 1-PH
	CE	50% @ 45 A, 380/400 V, 3-PH
		60% @ 41 A, 380/400 V, 3-PH
		100% @ 32 A, 380/400 V, 3-PH
Open circuit voltage (OCV)	275 VDC	
Dimensions with handles	426 mm (16.75") D; 172 mm (6.75") W;	
	348 mm (13.7") H	
Weight with 6.1 m (20') torch	CSA	17 kg (37 lbs)
	CE	16 kg (35 lbs)
Gas Supply	Clean, dry, oil-free air or nitrogen	
Recommended gas inlet	Cutting: 170 l/min (360 scfh; 6 scfm) @ 80 psi (5.5 bar)	
flow rate / pressure	Gouging: 360 scfh; 170 l/min (6 scfm) @ 60 psi (4.1 bar)	
Input power cable length	3 m (10')	
Power supply type	Inverter - IGBT	

Engine-driven generator operation

Engine drive rating	System output current	Performance (arc stretch)
8 kW	45 A	Full
6 kW	45 A	Limited
6 kW	30 A	Full

Production cut chart

Material	Thickness	Current	Maximum cut speed*

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	inches	mm	amps	ipm	mm/min
Mild steel	10 GA	3	45	175	4445
	¼	6	45	75	1905
	3/8	10	45	40	1016
	½	12	45	25	635
	¾	19	45	10	254
	1	25	45	5	127
Stainless steel	10GA	3	45	150	3810
	1/4	6	45	55	1397
	3/8	10	45	32	813
	1/2	12	45	18	457
	3/4	19	45	9	229
Aluminum	10 GA	3	45	280	7112
	1/4	6	45	100	2540
	3/8	10	45	42	1067
	1/2	12	45	25	635
	3/4	19	45	10	254

***Maximum cut speeds are the results of Hypertherm's laboratory testing.**

For optimum cut performance, actual cutting speeds may vary based on different cutting applications.

Refer to the operator manual for more details.

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