



**MANUAL
PLASMA**



POWER



PORTABILITY

It all adds up to the total plasma cutting package – Cutmaster 30+.

CUTMASTER+

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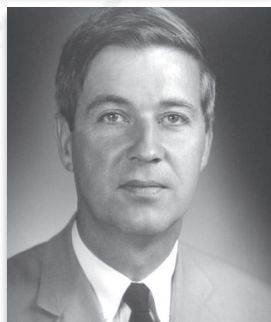
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AT THE FOREFRONT OF PLASMA CUTTING INNOVATION



Dr. James Browning, Founder



1957
Dr. James Browning & Merle Thorpe found Thermal Dynamics.

1970
First PAK® unit-power supply, PAK 40, cooling system, and console combined into one unit.

1975
PAK 44 incorporated plug-in relays, torch auto-pilot, and constant current.

1980
First single phase machine introduced, PAK 5.

1982
PAK-3, the first PAC system to use air as plasma gas, for cutting gauge thickness material.

1990
Plasma gouging introduced. PAK 15XC

1997
PakMaster® XL series and the Econopak® provide more portability.

1998
The Drag-Gun® introduced as the first cutting system with a built-in air compressor.

1999
PakMaster® XL Plus Series introduced.

2000
Cutmaster® 50 & Sure Lok® RPT replacement torches introduced.

2002
Torch® and ATC® connection were introduced with SureLok® technology. First non-High Frequency system introduced with the Cutmaster® 38

2004
Cutmaster 1Series®, 51/81/101 launched.

2008
Cutmaster TRJF™ Series; 39/52/82/102/152 launched.

2011
Cutmaster 42 with SL40 torch utilizing V2S technology.

2014
Thermal Dynamics becomes an ESAB Brand

2017
ESAB launches the Thermal Dynamics Cutmaster 600

2018
Cutmaster 58 is introduced.

2020
Cutmaster 40 is introduced.

2023
Cutmaster 30+ is introduced.



PLASMA CUTTING PROCESS

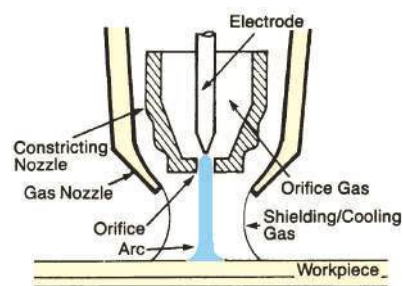
FROM THE MARKET LEADERS

Since Thermal Dynamics® developed the plasma arc process in 1953 and incorporated in 1957, we have introduced a number of innovations to ensure peak performance in plasma cutting and gouging.

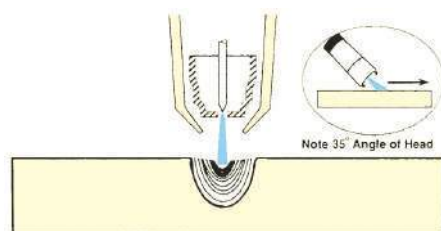
Today, ESAB's product line includes the full range of Thermal Dynamics systems designed to meet your specific needs and applications.



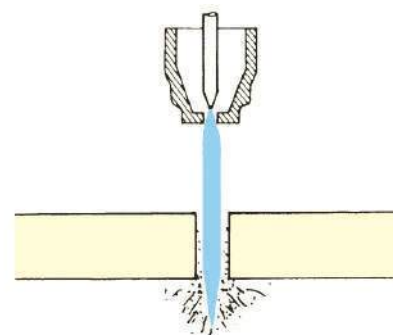
CUTTING MACHINES



Plasma Arc Cutting



Plasma Arc Cutting



Plasma Arc Gouging

PROCESS DESCRIPTION

Plasma arc cutting is a relatively simple operation and widely accepted for cutting ferrous and non-ferrous metals. The plasma arc's straight, narrow, column-like shape and high current density allow the operator to achieve cut consistency without maintaining a constant distance between the nozzle and the workpiece.

Plasma cutting involves using a torch, compressed gas, and a source of electric power to create a constricted arc that melts a localized area of metal and removes the molten material with a high-velocity jet of hot, ionized gas.

During plasma cutting, a compressed gas and an electric arc are simultaneously passed through a small orifice, which is typically 0.040 in. (1.0 mm) to 0.125 in. (3.18 mm) in diameter. An electric arc heats the gas to a plasma state at a temperature as high as 50,000°F (27,760°C). This super-heated plasma jet is directed to the area to be cut, and the jet melts a path through the metal. Because it is a melting process, plasma cutting can cut almost any commercially used metal.

Plasma gouging is a variation of the plasma cutting process. The torch nozzle configuration is designed to produce a lower velocity, broader arc. Rather than cutting completely through the metal, the torch is held at an angle so the arc gouges a U-shaped groove in the metal.

Plasma cutting can be accomplished manually or mechanically. In mechanical setups, a plasma torch is driven by an automatic machine that is typically regulated by a computer numerical control (CNC) to cut a predetermined shape. This section focuses on manual plasma cutting, in which the plasma torch is manipulated by hand to perform a variety of metal cutting tasks.

Manual systems are available in a variety of sizes. Generally rated in amperage output or cutting capacity, the units range from about 15 to 300A output, encompassing a cutting capacity ranging from 1/4 in. (6.35 mm) to approximately 4 in. (101.6 mm).

Manual units can also be divided into two general categories. Stationary or console systems generally are designed to remain fixed in one place, although most are equipped with wheels that make it possible to move them around a shop. Portable systems are designed to be carried around by one or two workers, allowing them to move the system where it is needed rather than taking materials to be cut to one location.

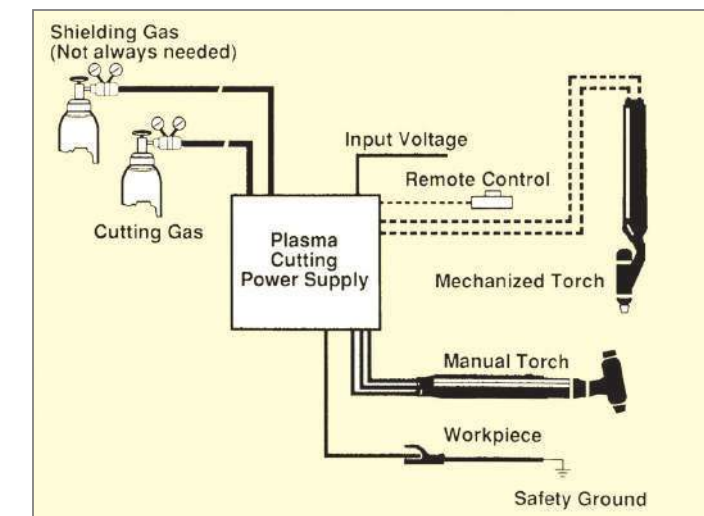
PLASMA CUTTING PROCESS

THE CUTTING TORCH

One of the most important considerations in choosing a system is the front-end design of the plasma cutting torch, because it controls the cut and most heavily influences the operating costs of the setup. If reaching tight places is important, a torch with a small or narrow front end is a good choice. A smaller front end may also be a better choice in applications that require a clear line of vision to follow a cut line, because a larger front end could obscure vision.

In addition to the up-front costs for nozzles, electrodes, and other front-end parts, you should consider the durability of the parts and the life in arc hours you can expect from the nozzle and electrode combination. These factors are better indicators of operating costs than are the prices of the parts alone.

Plasma cutting torch parts are generally made to very high tolerances. Make sure that any replacement parts you use are made to proper specifications. The wrong replacement parts can result in poor performance and damage to the torch head, which could require an expensive repair.



RECOMMENDED CUTTING GASES

Compressed Air is the most commonly used gas for lower current plasma cutting and works well for most metals from gauge thickness to 1 in. (25.4 mm). It leaves an oxidized cut surface. Compressed air can also be used for plasma gouging on carbon steel.

Nitrogen (N₂) is often used for higher current plasma systems and for cutting materials up to 3 in. (76.2 mm) thick. It produces excellent quality cuts on most materials.

Argon-Hydrogen Mixtures (H-35) are generally used for cutting stainless steel and aluminum. They produce a clean, high quality cut face. Argon-Hydrogen is required for mechanized cutting of any material more than 3 in. (76.2 mm) thick. This mixture also provides an excellent gas for plasma gouging on all materials.

Finally, the best way to evaluate a manual plasma cutting system for your application is to ask for a demonstration. Many of the factors that determine which unit is right for you become obvious when you see the unit demonstrated in your own shop. Pay particular attention to cut speed, quality, ease of use, and portability, if that is an issue. If access is limited to an area to be cut, make sure that the cutter you evaluate can do the job.

Important Product Safety

Sound common sense procedures must be followed for personal protection and operating efficiency when using manual plasma cutting equipment. Always comply with the manufacturer's recommendations for operating and maintaining the equipment, as set forth in the instructions provided with each unit. Also, be certain to use all applicable safety precautions, as described in [Precautions and Safe Practices for Arc Welding, Cutting and Gouging \(F-52-529\)](#), which is available by contacting ESAB at 1-800-ESAB.123 or visiting [esabna.com](#).



CUTMASTER® 30+

Highest Power-To-Weight Ratio in its Class

- Portable and durable with three handles and lightweight, industrial all-weather housing
- Bright 4.3 in. TFT LCD display with glove-friendly adjustment knob simplifies use and provides greater control and flexibility
- Dual input 110-240 V, 1 ph power with automatic voltage detection that sets max output amperage
- Comes with industrial SL60 1Torch featuring 2T/4T function, safety trigger lock, and double-tap trigger to conserve bottled air
- Switch between normal and grate cutting modes
- Automatic air pressure detection and post-cut air purge to expand consumable life
- 40% duty cycle @ 30 A, 100% @ 20 A
- Cutmaster Black Series consumables included for up to 60% longer life
- Industry leading 3-year warranty on power supply and 1-year warranty on torch and leads



Specifications			
Input Voltage	Recommended Generator Size	Open Circuit Voltage	Amperage Output
110 – 240 VAC +/- 10%, 1 ph, 50/60 Hz	4.5 kW (full output)	290 V	10 – 30 A, continuously adjustable
Rated Duty Cycle	Amperage Draw	Input Power Cable and Plug	Work Lead with Ground Clamp
40% @ 30 A 100% @ 20 A	19 A @ 230 V 20 A @ 120 V 1 ph (limited output)	4 m (13 ft) 10mm ² work cable with 25 mm Dinse connection	4 m (13 ft) 10mm ² work cable with 25 mm Dinse connection
Recommended Cut	Maximum Sever	Pierce Rating	Gas Requirements
up to 3/8 in. (10 mm)	5/8 in. (16 mm)	up to 3/8 in. (10 mm)	Compressed air
SL60QD Torch Duty Cycle	Air Flow Requirements (cutting & gouging)	Operating Input Air Pressure Range	Operating Temperature Range
100% at 30 A @ 350 scfh air flow	170 – 350 cfm (80 – 150 l/m)	90 – 125 psi (6.2 – 8.6 bar) (0.62 – 0.86 Mpa)	14 – 122° F (-10° – 50° C)
Torches	Power Supply Air Filter	Dimensions L x W x H	Weight (including torch)
SL60 1Torch (supplied)	Built-in	18.3 x 7.9 x 12.4 in. (465 x 200 x 315 mm)	24.25 lbs. (11 kg)

Ordering Information

TD Cutmaster 30+ Package, 120 – 240 V 1 ph (NEMA 6-50 plug, 115 V adapters) CSA 1-3000-1

Cutmaster 30+ power supply, SL60 75° torch with lead, 3 m (10 ft) work lead with ground clamp, consumables kit, regional input power plugs per above, 1/4 in. NPT air fitting. Cutmaster 30+ is compatible with all 1Torch ATC torch connections.

CUTMASTER® 40

Highest Power-To-Weight Ratio in its Class

- Built for portability and durability with the integral multi-handle design
- 40% Duty Cycle depending on application. Automatic voltage input detection from 110-240V and will automatically set the max output. 27 amps for 110 and 40 amps for 200-240V
- Industrial SL60 1Torch with ATC® (Advanced Torch Connector)
- Up to 1/2 in. (12 mm) recommended pierce and cut capacity with maximum sever of 1 in. (25 mm)
- Cutmaster Black Series electrode included for up to 60% longer life of consumable parts
- Industry leading 4-year warranty on power supply and 1-year warranty on torch



Specifications									
Input Voltage	Recommended Cut	Maximum Sever	Duty Cycle	Open Circuit Voltage (OCV)	Pierce Rating	Max Amperage Output	Torch Air Pressure	SL60 Torch Duty Cycle	Min. Air Flow Requirements
110-240 VAC +/- 10%, 1 ph, 50/60 Hz	up to 1/2 in (12 mm)	1 in (25 mm)	40% @ 40 A 60% @ 30 A 100% @ 20 A	300 V	1/2 in (12 mm)	15 – 40 A continuously adjustable	90-125 psi (6.2-8.6 bar)	100% at 40 A @ 400 cfm (189 l/min) air	170 cfm (80 l/min)
Amperage Draw	Gouging Profiles	Output Range	Temp. Range	Recommended Generator	Gas Requirements	Dimensions L x W x H	Weight		
29 A @ 208 V 26 A @ 230 V 25.3 A @ 115 V	Tip A (SL60 torch only)	40 A (Max)	32° – 122° F (0° – 50° C)	8.0 kW	Compressed Air	18.1 x 7.9 x 12.8 in. (460 x 200 x 320 mm)	22 lbs. (10 kg)		

Ordering Information

Cutmaster 40, SL40 75° hand torch, 15 ft. (4.5 m), 120/230 V, 1ph 1-4000-1

Cutmaster 40 power supply, SL60 90° torch with lead, work lead with ground clamp, spare parts kit, input power adapters: 50A to 20A and 20A to 15A, 1/4" NPT air fitting with quick connect, and operating manual. Cutmaster 40 is compatible with all 1Torch ATC torch connections.

CUTMASTER® 58

Medium Duty, Portable Plasma Cutting System

- The Cutmaster® 58 is the most powerful 5/8 in. (16 mm) machine on the market today
- Cuts through mild and stainless steel, or aluminum up to 1 in. (25 mm) thick, 1/2 in. (13 mm) pierce rating
- Combines power with the well-known performance and features of the industry-leading 1Torch®
- 6.2 kW rated output, 60% duty cycle at 50A, available in either 208-480V or 600V system - either system is capable of being wired single or three phase
- Simple switch at the back of the system allows for low or high voltage applications and automatic voltage detection within each range
- Built for portability and durability with the integral multi-handle design



Specifications					
Input Voltage	Recommended Cut	Pierce Rating	Max Amperage Output	Output Power	Torch
208-230/460 V, 1/3 ph, 50/60 Hz 400 V, 3 ph, 50 Hz 600 V, 3 ph, 50/60 Hz	5/8 in. (16 mm)	1/2 in. (12 mm)	60 A	6.2 kW	SL60QD Air Pressure - 75 psi (5.2 bar) Consumption - 6.7 cfm (190 l/m)
Duty Cycle	Amperage draw	Maximum Cut	Dimensions L x W x H	Weight	
40% @ 60 A 60% @ 50 A 100% @ 30 A	45 A @ 230 V, 1 ph 24 A @ 230 V, 3 ph 16 A @ 460 V, 3 ph	1 in. (25 mm)	24 x 12 x 15 in. (610 x 305 x 381 mm)	43 lbs. (19.5 kg)	

Ordering Information

Cutmaster 58, 20 ft. (6 m), SL60QD, 208-230 VAC	1-5830-1	Cutmaster 58, 20 ft. (6 m), SL60QD, 400-480 VAC	1-5830-2
Cutmaster 58, 20 ft. (6 m), SL60QD, 600 VAC	1-5830-5	Cutmaster 58, 50 ft. (15.2 m), SL60QD, 208-230 VAC	1-5831-1
Cutmaster 58, 50 ft. (15.2 m), SL60QD, 400-480 VAC	1-5831-2	Cutmaster 58, 50 ft. (15.2 m), SL60QD, 600 VAC	1-5831-5

Cutmaster 58 systems include: Power supply, torch, spare parts kit, input power cable, work cable and clamp.



CUTMASTER® 60i

The New Frontier in Plasma

CUTTING MACHINES

- Packed with power and offering the highest power-to-weight ratio in its class, the Cutmaster® 60i with SL60QD 1Torch® also has best-in-class cutting arc length and the most empowering and engaging user experience no matter the application
- Built for portability and durability with the integral multi-handle design, available in either a 1 phase or 3 phase unit
- Cutmaster MechPak is also available for easy integration into semi-automatic cutting processes (MechPak sold separately)
- 50% Duty Cycle at 60A with automatic multi-voltage detection from 208-480V
- Industrial SL60QD 1Torch quick disconnect with ATC® (Advanced Torch Connector) allowing selective replacement of either the torch handle assembly or the torch leads, using the patented SureLok® technology
- Up to 3/4 in. (20 mm) recommended cut capacity with maximum sever of 1-1/2 in. (38 mm) and 3/4 in. (20 mm) pierce capability
- High-visibility, oversized display with gas optimizer technology and consumables end-of-life indicator, makes setup and usage simple and productive
- Cutmaster Black Series electrode included for up to 60% longer life of consumable parts
- Industry leading 4-year warranty on power supply and 1-year warranty on torch

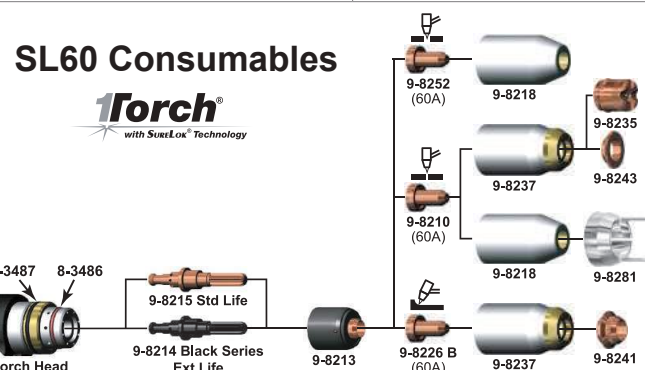


Specifications			
Input Voltage	Recommended Generator Size	Open Circuit Voltage	Amperage Output
208 – 480 VAC +/- 10%, 1 ph or 3 ph, 50/60 Hz	15 kW (full output)	300 V	10 – 60 A, continuously adjustable
Rated Duty Cycle	Amperage Draw	Input Power Cable and Plug	Work Lead with Ground Clamp
50% @ 60 A 60% @ 50 A 100% @ 40 A	43 A @ 208 V 1 ph / 26 A @ 208 V 3 ph 39 A @ 230 V 1 ph / 23 A @ 230 V 3 ph 19 A @ 480 V 1 ph / 11 A @ 480 V 3 ph	9 ft. (2.7 m) 1 ph 8 AWG 3/C with NEMA 6-50P plug 9 ft. (2.7 m) 3 ph 12 AWG 4/C cable without plug	20 ft. (6 m) #8 work cable with 50 mm connection
Recommended Cut	Maximum Sever	Pierce Rating	Gas Requirements
up to 3/4 in. (20 mm)	1-1/2 in. (38 mm)	3/4 in. (20 mm)	Compressed air
SL60QD Torch Duty Cycle	Air Flow Requirements (cutting & gouging)	Operating Input Air Pressure Range	Operating Temperature Range
100% at 60 A @ 400 scfh air flow	300 – 500 cfm (142 – 235 l/m)	90 – 125 psi (6.2 – 8.6 bar)	32 – 122° F (0° – 50° C)
Torches	Power Supply Gas Filtering Ability	Dimensions L x W x H	Weight
SL60QD 1Torch (supplied) SL60/SL100 1Torch SL100 Mechanized 1Torch SL100SLV Automated 1Torch	Particulates to 5 Microns	21.12 x 7.85 x 14.15 in. (536 x 199 x 593 mm)	37 lbs. (16.8 kg)

Ordering Information	
Cutmaster 60i, 1 ph with SL60QD 1Torch 20 ft. (6.1 m) 75° Head	1-5630-1X
Cutmaster 60i, 1 ph with SL60QD 1Torch 50 ft. (15.2 m) 75° Head	1-5631-1X
Cutmaster 60i, 3 ph with SL60QD 1Torch 20 ft. (6.1 m) 75° Head	1-5630-2X
Cutmaster 60i, 3 ph with SL60QD 1Torch 50 ft. (15.2 m) 75° Head	1-5631-2X

Cutmaster 60i systems include: power supply, SL60QD 75° torch with lead, 20 ft. (6.1 m) work lead with ground clamp, spare parts kit, operating manual, and filter wrench.

Cutmaster 60i is compatible with all 1Torch® ATC torch connections.



WE'VE CREATED A CUTTING BEAST.



THE FIERCEST PLASMA CUTTER IN ITS CLASS.
KILLER POWER-TO-WEIGHT RATIO // INSANE CUTTING ARC
VICIOUS TORCH // MONSTROUS DISPLAY

Find out how you can unleash the Thermal Dynamics® Cutmaster® 60i at esab.com.



CUTMASTER® 82

Medium/Heavy Duty, Portable Plasma Cutting System

- The Cutmaster® 82 weighs in at only 43 lbs. (19.5 kg) while still offering superior cutting power
- Cuts 3/4 in. (20 mm) with a maximum capability of 1-1/2 in. (40 mm)
- Versatile 1Torch® with ATC® disconnect makes it easy to add lead extensions or convert to a machine torch
- True Guard roll bar provides easy transportation and protection for unmatched durability
- Auto Pilot Restart feature instantly reignites the pilot arc while cutting expanded metals



Specifications					
Input Voltage	Recommended Cut	Pierce Rating	Output Power	Max Amperage Output	Torch
208 – 230/460 V, 1/3 ph, 50/60 Hz 400 V, 3 ph, 50 Hz 600 V, 3 ph, 50/60 Hz	3/4 in. (20 mm)	5/8 in. (15 mm)	9 kW	80 A	SL60 Air Pressure - 70 psi (4.8 bar) 6.7 cfm (190 l/m)
Maximum Cut	Amperage Draw	Duty Cycle (@ 104°F/40°C)	Dimensions L x W x H	Weight	
Change to 1-1/2" (38mm)	72 A @ 230 V, 1 ph 39 A @ 230 V, 3 ph 21 A @ 460 V, 3 ph	40% @ 80 A 60% @ 65 A 100% @ 55 A	24 x 12 x 15 in. (610 x 305 x 381 mm)	43 lbs. (19.5 kg)	

Ordering Information				
Cutmaster 82, SL60 75°, 20 ft. (6.1 m), 208-230 V, 1 ph	1-1130-1	Cutmaster 82, SL60 75°, 20 ft. (6.1 m), 460 V, 3 ph	1-1130-2	
Cutmaster 82, SL60 75°, 20 ft. (6.1 m), 600 V, 3 ph	1-1130-5	Cutmaster 82, SL60 75°, 50 ft. (15.2 m), 208-230 V, 1 ph	1-1131-1	
Cutmaster 82, SL60 75°, 50 ft. (15.2 m), 460 V, 3 ph	1-1131-2	Cutmaster 82, SL60 75°, 50 ft. (15.2 m), 600 V, 3 ph	1-1131-5	

Cutmaster 82 systems include: power supply, torch, spare parts kit, input power cable, work cable and clamp, and an instructional DVD.

CUTMASTER® 102

Heavy Duty, Portable Plasma Cutting System

- The Cutmaster® 102 weighs in at 62 lbs. (28 kg) and provides 100 A of cutting power
- This unit combined with the 1Torch® has a maximum cut capacity of 1-3/4 in. (45 mm)
- Versatile 1Torch with ATC® disconnect makes it easy to add lead extensions or convert to a machine torch
- True Guard roll bar provides easy transportation and protection for unmatched durability
- Auto Pilot Restart feature instantly reignites the pilot arc while cutting expanded metals



Specifications					
Input Voltage	Recommended Cut	Pierce Rating	Output Power	Max Amperage Output	Torch
208 – 230/460 V, 1/3 ph, 50/60 Hz 400 V, 3 ph, 50 Hz 600 V, 3 ph, 50/60 Hz	1 in. (25 mm)	3/4 in. (20 mm)	12 kW	100 A	SL100 Air Pressure - 70 psi (4.8 bar) 7.5 cfm (212 l/m)
Amperage Draw	Maximum Cut	Duty Cycle	Dimensions L x W x H	Weight	
95 A @ 230 V, 1 ph 45 A @ 230 V, 3 ph 29 A @ 460 V, 3 ph	1 3/4 in. (45 mm)	60% @ 100 A 80% @ 80 A 100% @ 70 A	30 x 12 x 15 in. (762 x 305 x 381 mm)	62 lbs. (28.1 kg)	

Ordering Information				
Cutmaster 102, SL100 75°, 20 ft. (6.1 m), 208-230 V, 1 ph	1-1330-1	Cutmaster 102, SL100 75°, 20 ft. (6.1 m), 460 V, 3 ph	1-1330-2	
Cutmaster 102, SL100 75°, 20 ft. (6.1 m), 600 V, 3 ph	1-1330-5	Cutmaster 102, SL100 75°, 50 ft. (15.2 m), 208-230 V, 1 ph	1-1331-1	
Cutmaster 102, SL100 75°, 50 ft. (15.2 m), 460 V, 3 ph	1-1331-2	Cutmaster 102, SL100 75°, 50 ft. (15.2 m), 600 V, 3 ph	1-1331-5	

Cutmaster 102 systems include: power supply, torch, spare parts kit, input power cable, work cable and clamp, and an instructional DVD.

CUTMASTER® 152

Extra Heavy Duty Cutting System

- The Cutmaster® 152, weighing only 62 lbs. (28 kg), offers multi-voltage 1-or 3-phase input capability and provides 120 A of cutting power for a 1-1/4 in. (30 mm) recommended cut and 2 in. (50 mm) maximum cut
- Comes standard with the 1Torch® providing you with the well known comfort and reliability famous throughout the industry
- Front Panel LEDs indicate status conditions for maximum efficiency and storage compartment for convenient access to spare parts and consumables
- True Guard roll bar provides easy transportation and protection for unmatched durability
- Auto Pilot Restart feature instantly reignites the pilot arc while cutting expanded metals



Specifications					
Input Voltage	Recommended Cut	Pierce Rating	Output Power	Max Amperage Output	Torch
208 – 230/460 V, 1/3 ph, 50/60 Hz 400 V, 3 ph, 50 Hz 600 V, 3 ph, 50/60 Hz	1-1/4 in. (30 mm)	1 in. (25 mm)	15.4 kW	120 A	SL100 Air Pressure - 70 psi (4.8 bar) 7.5 cfm (212 l/m)
Amperage Draw	Maximum Cut	Duty Cycle	Dimensions L x W x H	Weight	
120 A @ 230 V, 1 ph 56 A @ 230 V, 3 ph 37 A @ 460 V, 3 ph	2 in. (50 mm)	80% @ 120 A 100% @ 100 A	30 x 12 x 15 in. (762 x 305 x 281 mm)	62 lbs. (28.1 kg)	

Ordering Information				
Cutmaster 152, SL100 75°, 20 ft. (6.1 m), 208-230 V, 1 ph	1-1730-1	Cutmaster 152, SL100 75°, 20 ft. (6.1 m), 460 V, 3 ph	1-1730-2	
Cutmaster 152, SL100 75°, 20 ft. (6.1 m), 600 V, 3 ph	1-1730-5	Cutmaster 152, SL100 75°, 50 ft. (15.2 m), 208-230 V, 1 ph	1-1731-1	
Cutmaster 152, SL100 75°, 50 ft. (15.2 m), 460 V, 3 ph	1-1731-2	Cutmaster 152, SL100 75°, 50 ft. (15.2 m), 600 V, 3 ph	1-1731-5	

Cutmaster 152 systems include: power supply, torch, spare parts kit, input power cable, work cable and clamp, and an instructional DVD.

PAK® 200i

Manual Air-Plasma Cutting and Gouging System

- Capable of hand cutting at 200 A with the ability to cut up to 2-3/4 in. (70 mm) on mild steel; at full output this unit will cut 10 ipm (254 mm/min) on 2 in. (51 mm) carbon steel
- 100% duty cycle at full output
- Dual Gas Capability – the dual gas system ensures superior quality and performance on ferrous and non-ferrous materials (Plasma Gas: Air, ArH2, Secondary Gas: Air, N2)
- High Gouging Removal Rate – with the ability to remove up to 25 lbs. (11.3 kg) of carbon steel per hour
- Tip Saver for Optimal Tip Life – this ensures that any accidental contact between the tip and the work at high power levels will not damage the tip



All PAK 200i systems include power supply, torch and leads, spare parts kit, 25 ft. (7.6 m) work cable and clamp, and torch coolant.

Specifications						
Input Voltage	Output Power	Recommended Cut	Maximum Cut	Pierce Rating	Duty Cycle	Torch
380 – 415 V, 3 ph, 50/60 Hz / 480 V, 3 ph, 50/60 Hz	40 kW	1-1/2 in. (40 mm)	2 3/4 in. (70 mm)	1 1/4 in. (32 mm)	100% @ 200 A	PCH200 Hand/Machine
Output Current	Amperage Draw	Specifications	Dimensions L x W x H	Weight		
35-200 A	60 A @ 380 V 57 A @ 400 V 47 A @ 480 V	Plasma Gas - Air, ArH2, N2 Secondary Gas - Air, N2	40.6 x 48 x 27.5 in. (1031 x 1219 x 698 mm)	490 lbs. (222 kg) w/o torch Fully Assembled Power Supply		

Ordering Information						
PAK 200i - 70° Torch, 25 ft. (7.6 m), 480 V	1-2239	PAK 200i - 70° Torch, 50 ft. (15.2 m), 480 V	1-2240	PAK 200i - 90° Torch, 25 ft. (7.6 m), 480 V	1-2241	
PAK 200i - 70° Torch, 25 ft. (7.6 m), 400 V	1-2245	PAK 200i - 70° Torch, 50 ft. (15.2 m), 400 V	1-2246	PAK 200i - 90° Torch, 25 ft. (7.6 m), 400 V	1-2247	
PAK 200i - 90° Torch, 50 ft. (15.2 m), 480 V	1-2242	PAK 200i - 90° Torch, 50 ft. (15.2 m), 400 V	1-2248	PAK 200i - 180° Torch, 25 ft. (7.6 m), 480 V	1-2243	
PAK 200i - 180° Torch, 25 ft. (7.6 m), 400 V	1-2249	PAK 200i - 180° Torch, 50 ft. (15.2 m), 480 V	1-2244	PAK 200i - 180° Torch, 50 ft. (15.2 m), 400 V	1-2250	

1TORCH® SL60

Light/Medium Duty Torch (20 – 80 A)

- As a replacement (RPT®) torch, the 1Torch® has the ability to work on the majority of plasma power supplies on the market today
- Its unique design allows the 1Torch the ability to work with high frequency, touch, CD, and moving parts (blow back) start systems



Ordering Information			
SL60, 75, 20 ft. (6.1 m) Standard RPT Connect	7-5200	SL60, 90, 20 ft. (6.1 m) Standard RPT Connect	7-5261
SL60, 75, 50 ft. (15.2 m) Standard RPT Connect	7-5201	SL60, 90, 50 ft. (15.2 m) Standard RPT Connect	7-5262
SL60, 75, 20 ft. (6.1 m) ATC Connect	7-5204	SL60, 90, 20 ft. (6.1 m) ATC Connect	7-5260
SL60, 75, 50 ft. (15.2 m) ATC Connect	7-5205	SL60, 90, 50 ft. (15.2 m) ATC Connect (lead extension 7-7545 required)	7-5260
SL60QD Torch and Lead 20 ft. (6.1 m) 75° Head	7-5620	SL60QD Torch and Lead 50 ft. (15.2 m) 75° Head	7-5650

1TORCH® SL100

Medium/Heavy Duty Torch (20 – 120 A)

- Hand torches offer ergonomic handles with easy-to-use trigger release that provides comfort during prolonged use
- 75° and 90° heads offer operators a choice of positions



Ordering Information			
SL100, 75°, 20 ft. (6.1 m) Standard RPT Connect	7-5202	SL100, 90°, 20 ft. (6.1 m) Standard RPT Connect	7-5264
SL100, 75°, 50 ft. (15.2 m) Standard RPT Connect	7-5203	SL100, 90°, 50 ft. (15.2 m) Standard RPT Connect	7-5265
SL100, 75°, 20 ft. (6.1 m) ATC Connect	7-5206	SL100, 90°, 20 ft. (6.1 m) ATC Connect	7-5263
SL100, 75°, 50 ft. (15.2 m) ATC Connect	7-5208	SL100, 90°, 50 ft. (15.2 m) ATC Connect (lead extension 7-7545 required)	7-5263

1TORCH® MECHANIZED SL100, AUTOMATION SL100SV

Medium/Heavy Duty Torch (20 – 120 A)

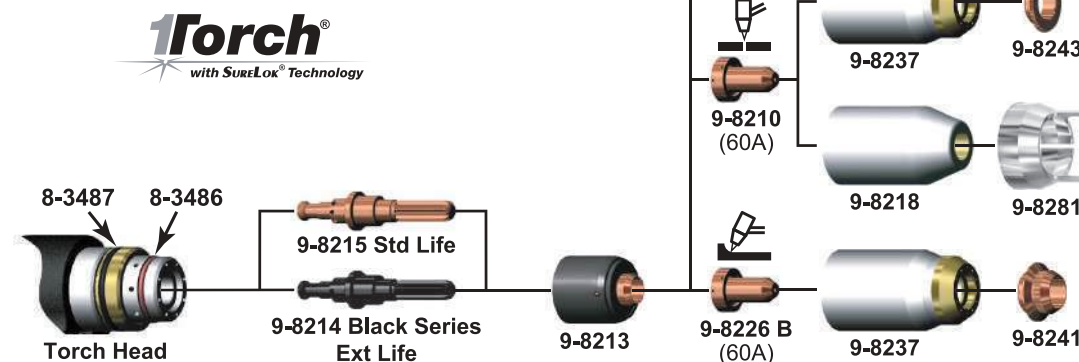
- Only 34 consumable parts cover the full range of cutting and gouging up to 120 A
- Stocking parts for a fleet of plasma units can be simplified using the 1Torch®



Ordering Information			
SL100 Mechanized, 180°, 25 ft. (7.6 m), Standard	7-5209	SL100 Mechanized, 180°, 50 ft. (15.2 m), Standard	7-5210
SL100 Mechanized, 180°, 25 ft. (7.6 m), Shielded	7-5211	SL100 Mechanized, 180°, 50 ft. (15.2 m), Shielded	7-5212
SL100 Mechanized, 180°, 5 ft. (1.5 m), Standard ATC Connect	7-5213	SL100 Mechanized, 180°, 10 ft. (3.0 m), Standard ATC Connect	7-5214
SL100 Mechanized, 180°, 25 ft. (7.6 m), Standard ATC Connect	7-5215	SL100 Mechanized, 180°, 50 ft. (15.2 m), Standard ATC Connect	7-5216
SL100 Mechanized, 180°, 5 ft. (1.5 m), Shielded ATC Connect	7-5219	SL100 Mechanized, 180°, 10 ft. (3.0 m), Shielded ATC Connect	7-5220
SL100 Mechanized, 180°, 25 ft. (7.6 m), Shielded ATC Connect	7-5221	SL100 Mechanized, 180°, 50 ft. (15.2 m), Shielded ATC Connect	7-5222
SL100SV Automated, 180°, 25 ft. (7.6 m), Standard ATC Connect	7-4001	SL100SV Automated, 180°, 35 ft. (10.6 m), Standard ATC Connect	7-4002
SL100SV Automated, 180°, 50 ft. (15.2 m), Standard ATC Connect	7-4003	SL100SV Automated, 180°, 75 ft. (22.8 m), Standard ATC Connect	7-4004
SL100SV Automated, 180°, 100 ft. (30.4 m), Standard ATC Connect	7-4005		

1TORCH® CONSUMABLES

SL60 Consumables



Description	Part Number	
O-Ring	8-3487	
O-Ring	8-3486	
O-Ring Lubricant	8-4025	
Black Series Electrode	9-8214	
Electrode	9-8215	
Start Cartridge	9-8213	
Heavy Duty Start Cartridge (non HF systems only)	9-8277	
Drag	Tip, 20A, Drag	9-8205
	Tip, 30A, Drag	9-8206
	Tip, 40A, Drag	9-8207
	Tip, 60A, Drag	9-8252
	Tip, 80A, Drag	9-8211
Standoff	Tip, 40A, Standoff	9-8208
	Tip, 50/55A, Standoff	9-8209
	Tip, 60A, Standoff	9-8210
	Tip, 70A, Standoff	9-8231
	Tip, 80A, Standoff	9-8211
	Tip, 90/100A, Standoff	9-8212
Gouge	Tip, 120A, Standoff	9-8253
	Tip, A, Gouging	9-8225
	Tip, B, Gouging	9-8226
	Tip, C, Gouging	9-8227
	Tip, D, Gouging	9-8228
Shield Cup	9-8218	
Shield Cup Body, MaximumLife®	9-8237	

Description	Part Number	
Drag	Shield Cap, Drag, 40A	9-8244
	Shield Cap, Drag, 50-60A	9-8235
	Shield Cap, Drag, 70-100A	9-8236
	Shield Cap, Drag, 120A	9-8258
Mechanized	Shield Cap, Mechanized, 40A	9-8245
	Shield Cap, Mechanized, 50-60A	9-8238
	Shield Cap, Mechanized, 70-100A	9-8239
Shield Cap, Deflector	Shield Cap, Mechanized, 120A	9-8256
	Shield Cap, Deflector	9-8243
	Shield Cap, Gouging	9-8241
	Ohmic Clip	9-8224
Ohmic clip for manual torches	9-8259	
Spare Parts Kit, 30A	5-2550	
Spare Parts Kit, 40A	5-2551	
Spare Parts Kit, 50/55A	5-2552	
Spare Parts Kit, 60A	5-2553	
Spare Parts Kit, 70A	5-2554	
Spare Parts Kit, 80A	5-2555	
Spare Parts Kit, 90/100A	5-2556	

Note: All Spare Parts Kits above include ten (10) tips, five (5) electrodes and one (1) start cartridge.

1TORCH® Consumables Parts Application Guide

For SL60®/SL100® Manual Cutting and Gouging Operations.

DRAG TIP CUTTING The preferred method of cutting light gauge metal up to 1/4 in. (6 mm) thickness. Produces the best cut quality narrowest kerf width, fastest cutting speeds, and with little to no distortion. Traditional drag cutting was limited to 40 Amps or less; now with Thermal Dynamics TRUE Cut Drag Tip Series™ technology, it is possible to cut up to 60 Amps. For best results, use the Shield Cup with the torch tip in direct contact with the work (up to 60 Amps).

DRAG SHIELD CUTTING This is an operator-friendly method of cutting between 70 to 120 Amps while maintaining a constant standoff distance. For metal thickness greater than 1/4 in. (6 mm), simply drag the shield cap in contact with the work piece. Use the shield cup body with the appropriate drag shield cap matching the current level being used. This method is not recommended for cutting light-gauge sheet metal.

STANDOFF CUTTING The preferred method of cutting metal thicker than 1/4 in. (6 mm) and at current levels above 60 Amps. Provides maximum visibility and accessibility. Shield cup for 'standoff' cutting (with the torch tip 1/8 in. (3 mm) to 1/4 in. (6 mm) from the work piece). Use the shield cup body together with the deflector for extended parts life and improved resistance to reflect heat. This combination provides cutting results similar to the single piece shield cup, as well as easy changeover to gouging or drag shield cutting.

GOUGING A simple method of metal removal by angling the torch to a lead angle of 35°-45°, and using a gouging tip. While maintaining a constant standoff distance, this allows for only a partial penetration into the work, thus removing metal from the surface. The amount of current, travel speed, standoff distance, lead angle, and tip size will determine the amount of material removed and the profile of the gouge. You can use the shield cup body with either the gouging shield cap or the shield deflector. Also, you can use the single piece shield cup.

Gouging Profiles			
Output Range	Depth	Width	
40A (MAX)	Shallow	Narrow	
50-100A	Deep	Narrow	
60-120A	Moderate	Moderate	
60-120A	Shallow	Wide	



PLASMA ACCESSORIES



CUTTING GUIDE CUTTING KIT (DELUXE)

Part Number: 7-8910

Cuts circles from 2-1/8 in. (54 mm) to 41-1/2 in. (1054 mm) with proper cutting attachments. Includes easy add-on attachments to fit most Thermal Dynamics torches for precise straight line, circle cutting and beveling. Carrying case, radius/roller kit (7-7501), circle cutting guide (7-3291), magnetic pivot, suction pivot included.



CIRCLE GUIDE CUTTING KIT

Part Number: 7-3291

Cuts 2-1/8 in. (54 mm) to 27-3/4 in. (705 mm) circles (using magnetic attachment) when cutting or beveling is required. For use with most Thermal Dynamics torches.



RADIUS/ROLLER CUTTING GUIDE KIT

Part Number: 7-7501

This easy-to-use guide cuts circles from 3 in. (76 mm) up to 28-3/4 in. (730 mm). Maintains a consistent height off the work piece whether you are using the circle cutting attachment for cutting circles or the roller guide feature to improve your straight-line cutting. Both novices and experts will see noticeable improvement in quality, speed, and parts life. Cutting Bushing (7-2915) for use with the SL40 torch.



SINGLE STAGE AIR FILTER KIT

Part Number: 7-7507

(Filter Body 9-7740, Hose 9-7742, Filter Element 9-7741). For use with shop compressed air systems, this in-line filter will not allow moisture or water to pass through the filter element even if it becomes completely saturated. This hi-tech filter element actually blocks the absorption of water to increase performance and improve consumable parts life.



TWO STAGE AIR FILTER

Part Number: 9-9387

First Stage Element 9-1021, Second Stage Element 9-1022). The Two Stage Air Filter will remove moisture and contaminants from the air stream when using compressed air. The filter is capable of filtering to at least 5 microns. The filter assembly is pre-assembled and need only be installed on the power supply.



MULTI-PURPOSE CART

Part Number: 7-8888

Designed for most portable manual cutting systems or any similar sized systems. This rugged steel cart has easy rolling 8 in. (203 mm) diameter wheels along with 3" (76 mm) front mounted casters. This cart also serves as an excellent showroom display stand.



STRAIGHT LINE CUTTING GUIDE

Part Number: 7-8911

This versatile, straight line cutter is for hand held systems and it cuts vertical, 90° or bevel cuts. Magnetic mounts ensure placement and ease of use. Optional suction plates available for non-magnetic applications (i.e. aluminum and stainless steel). Includes: 4 ft. (1.2 m) standard rail torch holder and bushing heavy duty magnets (2 ea.) slide assembly wheels and fasteners. optional 4 ft. (1.2 m) extensions (9-7971) available.



STANDOFF CUTTING GUIDES

Part Number: 9-0090 (SL40 Torch)
Part Number: 9-8251 (SL60/SL100 Torch, 40A)
Part Number: 9-8281 (SL60/SL100 Torch, 60-100A)

Available for SL40 torch, SL60 and SL100 torches.



CUTTING GUIDE BUSHING

Part Number: 7-2915

Designed to fit the SL40 torch specific to the Cutmaster 42 system. This bushing accommodates the use of the SL40 torch with the cutting guides.



CUTMASTER MECHPAK KIT

Part Number: 7-7725 [25 ft. (7.6 m)]
Part Number: 7-7750 [50 ft. (15.2 m)]

For easy integration into semi-automatic cutting processes.

TRIGGER GUARD GUIDES

Part Number: 9-8420

1Torch (SL60 and SL100). These guards offer additional protection from accidental activation or damage to the torch switch.

CNC HARNESS CABLE

Part Number: 9-9385

Assembly of electrical cables or wires which transmit signals or electrical power.



LEATHER LEAD COVERS

Part Number: 9-1258 [15 ft. (4.6 m)]
Part Number: 9-1260 [20 ft. (6.1 m)]
Part Number: 9-1270 [25 ft. (7.6 m)]
Part Number: 9-1280 [50 ft. (15.2 m)]

These lead covers are suitable for both 1Torch and SureLok leads. Snaps make it easy to install. For wider torches, consider snapping two covers together width wise.



REMOTE PENDANT CONTROL

Part Number: 7-3460

20 ft. (6.1 m) Remote Pendant Control for your mechanized application.



ATC LEAD EXTENSIONS

Part Number: 7-7544 [15 ft. (4.6 m)]
Part Number: 7-7545 [25 ft. (7.6 m)]
Part Number: 7-7552 [50 ft. (15.2 m)]

Available for any system using hand or mechanized 1Torch with ATC Quick Disconnect. Leads Extensions enable you to customize your lead length to suit the cutting job.

HAND PENDANT EXTENSION

Part Number: 7-7744

25 ft. (7.6 m).

CNC INTERFACE CABLE

Part Number: 9-1008 [25 ft. (7.6 m)]
Part Number: 9-1010 [35 ft. (10.6 m)]
Part Number: 9-1011 [50 ft. (15.2 m)]

For "Start/Stop" and "OK to Move" Only.

AUTOMATION INTERFACE KIT

Part Number: 9-8311

For Cutmaster TRUE Series (52, 82, 102, 152). This kit adds a divided low volt output for height controls that can use 50:1 arc voltage. Required for the Thermal Dynamics SC-11 height control.

PINION ASSEMBLY

Part Number: 7-2827

1-3/8 in. (35 mm) Diameter