

THERMAL DYNAMICS
Professional 

**3 Year
Warranty**

CUTMASTER® 101
Air Plasma Cutting System



1" (25mm) Genuine Cut
1¼" (32mm) Maximum Cut
1½" (38mm) Severance Cut



**Setting the Standard in
Flexibility, Value and Performance . . .**

**Includes the ATC®
Quick Disconnect 1Torch®**

CUTMASTER® 101

Air Plasma Cutting System

The CUTMASTER 101 is another member of the 1Series™ family of products that builds on the solid reputation earned by the CUTMASTER line known as reliable, rugged systems with excellent cut characteristics. The 1Series provides the same strong performance and includes as standard the revolutionary 1Torch® with built-in ATC® (Advanced Torch Connector) Quick Disconnect. The 1Series offers unique accessories such as torch leads extensions in 15, 25 and 50 ft lengths, a power supply wheel kit and an automation interface kit.

The CUTMASTER 101 is the strongest performer in the 1 inch cutting market. This rugged, portable plasma cutting system provides all the features metal fabrication professionals have come to expect, and more. Backed by a full 3 year warranty for power supply parts & labor and one full year parts and labor on the torch, this system sets the standard for flexibility, performance and value.



Specifications

<p>Cut Capacity: 1" (25mm) Genuine 1¼" (32mm) Maximum 1½" (38mm) Severance ¾" (20mm) Pierce</p> <p>Output Current: 20 – 80 Amps, Adjustable</p> <p>Input Power: 208 / 230V, Single Phase, 50/60 Hz, 74 / 67 Amps 400V, 3 Phase, 50/60 Hz, 20 Amps 460V, 1/3 Phase, 50/60 Hz, 34 / 20 Amps 600V, 3 Phase, 60 Hz, 13 Amps</p> <p>Duty Cycle: 40% @ 80A, 100% @ 45A</p> <p>Dimensions: Length 27.4" (0.7m) Width 12.4" (315mm) Height 18" (457mm)</p> <p>Weight: 83 lbs. (37.6 kg) Including Unit, Power Cable, Torch and Leads</p> <p>Ship Weight: 105 lbs. (47.6 kg)</p> <p>Work Cable: 20' (6.1m)</p> <p>Control: Hand Torch Switch or Hand Pendant Control</p>	<p>Input Power Cable: 10' (3m) with Plug (208/230V) 6' (2m) without Plug (400V) 10' (3m) without Plug (460V and 600V)</p> <p>Gas Type: Air</p> <p>Gas Pressure: 70 psi (4.8 bar)</p> <p>Gas Flow: 6.7 cfm (189 lpm)</p> <p>Pilot: Start Cartridge</p> <p>Torch Configuration</p> <p>Torch: SL100® w/ATC® (hand) SL100® w/ATC® (machine)</p> <p>Hand: 75° Head, 20 ft. (6.1m) or 50 ft. (15.2m) Leads</p> <p>Machine: 180° Head, 25 ft. (7.6m) or 50 ft. (15.2m) Leads</p> <p>Optional Lead Extensions: 15 ft. (4.6m), 25 ft. (7.6m) or 50 ft. (15.2m) Leads</p> <p>Warranty: 3 Years Parts & Labor (Power Supply) 1 Year Parts & Labor (Torch)</p> <p>Certifications: IP-23C, CSA NRTL/C, CE</p>
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Features & Benefits

Tip Saver™

The Thermal Dynamics CUTMASTER 1Series of plasma cutting systems feature our Tip Saver current fold back circuit design which prevents tip failure when the tip touches the work piece at high output current levels, resulting in prolonged consumable parts life.

Optional ATC Lead Extensions for Improved Versatility

The optional ATC Lead Extensions give flexibility and versatility to your cutting operations when you need it. You can easily convert from a hand to a machine torch operation in a matter of seconds. Quick Disconnect Lead Extensions, in 15 ft. (4.6m), 25 ft. (7.6m) and 50 ft. (15.2m) lengths, make it easy and efficient to add (to a total maximum of 100 ft. / 30.5m) or subtract lead length according to the job requirements.

Auto Pilot Restart

Available on all CUTMASTER 1Series systems, this feature is useful for cutting expanded metal or in any application where automatic pilot restart is desirable. In Auto Pilot Restart mode, the operator has continuous operation without having to re-trigger the torch switch.

1Series Start Technology

Our CUTMASTER 1Series start technology eliminates electronic interference that can occur with other designs. The 1Torch technology provides quick, reliable starts, a strong pilot arc to penetrate rust and paint, and the ability to cut expanded metal quickly and easily.

Rugged Case Design

The CUTMASTER 101 is built for hard outdoor use as a portable plasma cutter. The innovative case design is the result of extensive stress testing and field evaluations. The wraparound roll bar protects the case from damage resulting from shocks and collisions. The new powder coat finish provides a harder, more resistant surface for protection against scratches & marks.

1Torch® with ATC® Design



ATC Quick Disconnect

This advanced torch connection makes it quick and easy to connect or disconnect – safely and securely, each and every time.



New Improved Torch Leads

1Torch leads are lightweight, extremely flexible and tough. Optional ATC Lead Extensions offer additional flexibility.



New Ergonomic Torch Handle

With an innovative, easy-to use torch trigger release and precisely engineered grip, the 1Torch is both easy and comfortable to use.



Encapsulated Torch Head

The new encapsulated head protects the working parts.



SureLok® Electrode Technology

The innovative, patented electrode self-locking mechanism eliminates the need for an installation tool and ensures that the electrode and tip will be in perfect alignment. Both the electrode and tip are stationary which results in a well defined arc and precise cuts. This perfect alignment also means longer tip and electrode life, reducing operating costs.



Start Cartridge

This unique design allows the pilot arc to start without moving consumable parts, resulting in better parts life and cut performance.



Precision Engineered Torch Tips

1Torch introduces a completely new tip technology. Each tip is uniquely tuned to optimize cut performance at its rated cutting current. The result is precision gas management, longer consumable parts life and better cut performance across the entire range of 1Torch tips.



Two Choices in Shield Cups

We offer two styles of shield cups to suit your cutting style:

- An Extended Tip for greater visibility and control and precision drag cutting at low power.
- A Protected Tip for on-the-plate drag cutting at high power up to 80 amps.



Cut Quality

Genuine Cut – The Thermal Dynamics standard for a genuine cut is an excellent, smooth cut surface with little or no dross. CUTMASTER® 101 produces that excellent cut on 1 inch (25mm) mild steel.

Maximum Cut – At 1 1/4 inch (32mm) maximum cut rating, CUTMASTER 101 still has plenty of power. This extra capacity is important for the fabricator who occasionally needs to cut thicker material or needs to bevel cut thick plate.

Severance Cut – At 1 1/2 inch (38mm), CUTMASTER 101 still has the power to cut with accuracy and control.

Plasma Arc Gouging (PAG) – Plasma Arc Gouging is a fast, economical and an environmentally friendly method of removing metal. A simple change of torch tip can convert the CUTMASTER 101 into a versatile gouging system. High arc transfer distance and long arc characteristics allow excellent accessibility and visibility while maintaining uniform metal removal.

Beveling – Extended tips result in excellent visibility and control. High travel speeds and minimal heat input make this an efficient and cost effective way to prepare the edge of pipe or plate.

Cut Speed

CUTMASTER 1Series™ systems will deliver both speed and cutting power. 1Torch may be used in both drag and standoff cutting models for top cut quality on thin and thick materials.

* Recommended cut speeds are approximately 80% of maximum.

Material Thickness	Output Current	Approximate Cutting Speed*					
		Mild Steel		Stainless Steel		Aluminum	
		in./min.	mm/min.	in./min.	mm/min.	in./min.	mm/min.
16 ga. (1.5mm)	40 A	275	6985	275	6985	275	6985
	80 A	350	8890	350	8890	350	8890
1/4 in. (6mm)	40 A	39	991	40	1016	40	1016
	80 A	112	2845	112	2845	112	2845
1/2 in. (13mm)	80 A	38	965	38	965	38	965
3/4 in. (20mm)	80 A	18	457	18	457	18	457
1 in. (25mm)	80 A	10	254	10	254	10	254
1 1/4in. (32mm)	80 A	6	152	6	152	9	229


Ordering Information

Product Description	Catalog No.		
Systems include power supply, torch and lead, spare parts kit, input power cable, work cable and clamp.	208-230V 1 phase	460V 1/3 phase	Other
CUTMASTER® 101 with SL100® 75° hand torch, 20 ft. (6.1m) lead	1-1320-1	1-1320-2	1-1320-V
CUTMASTER 101 with SL100 75° hand torch, 50 ft. (15.2m) lead	1-1321-1	1-1321-2	1-1321-V
CUTMASTER 101 with SL100 180° machine torch, 25 ft. (7.6m) lead *	1-1322-1	1-1322-2	1-1322-V
CUTMASTER 101 with SL100 180° machine torch, 50 ft. (15.2m) lead *	1-1323-1	1-1323-2	1-1323-V

* Systems include machine torch with 1-3/8" (34.9mm) Diameter / 32 Pitch Rack Mounting Tube, Hand Pendant Control and Pinch Block. Pinion Assembly to be ordered as an accessory.

V = Voltage (3 = 3ph 400V, 4 = 3ph 400V CE, 5 = 600V)

ACCESSORIES

Single Stage Air Filter	7-7507	Straight Line Cutting Guide	7-8911
Replacement Filter	9-7741		
Automation Interface Kit	9-8310		
CNC Interface Cable (25ft./7.6m)	9-8312		
CNC Interface Cable (50ft./15.2m)	9-8313	Pinion Assembly	7-2827

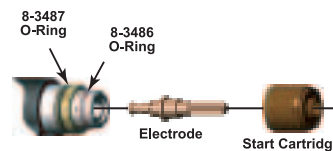
Product Description	Catalog No.
ACCESSORIES (CONT.)	
ATC® Leads Extensions	
15 ft. (4.6m)	7-7544
25 ft. (7.6m)	7-7545
50 ft. (15.2m)	7-7552
Leather Leads Cover	
15 ft. (4.6m)	9-1258
20 ft. (6.1m)	9-1260
25 ft. (7.6m)	9-1270
50 ft. (15.2m)	9-1280
Cutting Guide Kit	7-8910
Wheel Kit	9-8331
Multi-Purpose Cart	7-8888

Product Description Catalog No.

1TORCH® SL100 CONSUMABLES / PARTS

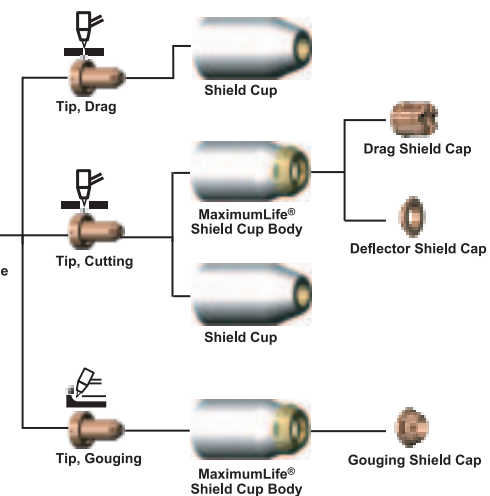
STANDARD	
Torch Head, 75°	9-8219
O-Ring	8-3487
O-Ring	8-3486
Electrode, MaximumLife®	9-8215
Start Cartridge	9-8213
Tip, 80A	9-8211
Shield Cup	9-8218
Spare Parts Kit, 80A, Manual	5-0110
includes three (3) Electrodes, seven (7) Tips, one (1) Shield Cup Body, one (1) Shield Cap-Drag, two (2) O-Rings, one (1) Utility Box	
VIP Spare Parts Kit, 80A, Manual	5-0101
Spare Parts Kit, 80A, Machine	5-0120
includes three (3) Electrodes, ten (10) Tips, one (1) Start Cartridge, one (1) Shield Cup, two (2) O-Rings, one (1) Utility Box	
OPTIONAL	
Tip, 40A, Drag	9-8207
Tip, 60A	9-8210
Tip, B, Gouging	9-8226
Tip, C, Gouging	9-8227
Tip, D, Gouging	9-8228
Shield Cup Body, MaximumLife	9-8237
Shield Cap, 50/60A, Drag	9-8235
Shield Cap, 70/100A, Drag	9-8236
Shield Cap, 40A, Machine	9-8245
Shield Cap, 50/60A, Machine	9-8238
Shield Cap, 70/100A, Machine	9-8239
Shield Cap, Deflector	9-8243
Shield Cap, Gouging	9-8241

SL100 1Torch Parts



Gouging Profiles

	Output Range	Depth	Width
Tip A	40 Amps Max.	Shallow	Narrow
Tip B	40-100 Amps	Deep	Narrow
Tip C	40-100 Amps	Moderate	Moderate
Tip D	40-100 Amps	Shallow	Wide



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U.S. Plasma Manual Customer Care: 800-752-7621 / FAX 800-221-4401 • International Customer Care: 905-827-9777 / FAX 905-827-9797
U.S. Plasma Automation Customer Care: 866-279-2628 / FAX 316-941-4491 • www.thermal-dynamics.com



WORLD HEADQUARTERS: 16052 Swingley Ridge Road, Suite 300 • St. Louis, Missouri 63017 U.S.A.

THE AMERICAS

Denton, TX USA
U.S. Customer Care
Ph: (1) 800-752-7621
Fax: (1) 800-221-4401

Miami, FL USA
Sales Office, Latin America
Ph: (1) 954-727-8371
Fax: (1) 954-727-8376

West Lebanon, NH USA
Customer Care, Plasma
Ph: (1) 800-752-7621
Fax: (1) 800-221-4401

Oakville, Ontario, Canada
International Customer Care
Ph: (1) 905-827-9777
Fax: (1) 905-827-9797

Rio de Janeiro, Brazil
Customer Care
Ph: (55) 21-2485-8998
Fax: (55) 21-2485-8866

EUROPE

Chorley, United Kingdom
Customer Care
Ph: (44) 1257-261755
Fax: (44) 1257-224800

Milan, Italy
Sales Office
Ph: (39) 02-98-80320
Fax: (39) 02-98-281773

ASIA/PACIFIC

Cikarang, Indonesia
Customer Care
Ph: 62 21+ 8983-0011 / 0012
Fax: 62 21+ 893-6067

Osaka, Japan
Sales Office
Ph: 816-4809-8411
Fax: 816-4809-8412

Melbourne, Australia
Customer Care:
Ph: 1300-654-674
Fax: 613- 9474-7391
International:
Ph: 613- 9474-7508
Fax: 613- 9474-7488

Rawang, Malaysia
Customer Care
Ph: 603+ 6092-2988
Fax: 603+ 6092-1085

Shanghai, China
Sales Office
Ph: 86 21+ 6280-1273
Fax: 86 21+ 3226-0955

Singapore
Sales Office
Ph: 65+ 6832-8066
Fax: 65+ 6763-5812