

THERMAL DYNAMICS[®]

CUTMASTER™ 1Series™

A THERMADYNE[®] Company

**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**

NEW in 2004!
CUTMASTER includes ATC™
Quick Disconnect 1Torch™

Setting the Standard in
Flexibility, Value and Performance.

CUTMASTER™ 1Series™

CUTMASTER™ 101

Air Plasma Cutting System

Introducing the next generation of innovative CUTMASTER Plasma Cutting Systems from Thermal Dynamics®.

The new 1Series™ CUTMASTER Plasma Cutting systems include, as standard equipment, the revolutionary 1Torch™ universal plasma cutting torch and the easy-to-use ATC™ (Advanced Torch Connector) Quick Disconnect. All the advantages of 1Torch combined with proven CUTMASTER reliability and performance make CUTMASTER 1Series the new standard for flexibility, performance and value.

The CUTMASTER 101 is an exceptionally sturdy and precise metal cutting system designed for the 1 inch cutting market. True to Thermal Dynamics' tradition of quality and innovation, CUTMASTER 101 delivers the features and advantages metal fabrication professionals have come to expect.



SPECIFICATIONS

Cut Capacity:	1" (25mm) Genuine 1½" (32mm) Maximum 1½" (38mm) Severance ¾" (20mm) Pierce	Input Power Cable:	10' (3m) with Plug (208/230V) 6' (2m) without Plug (400V) 10' (3m) without Plug (460V and 600V)
Output Current:	20 – 80 Amps, Adjustable	Gas Type:	Air
Input Power:	208 / 230V, Single Phase, 50/60 Hz, 74 / 67 Amps 400V, 3 Phase, 50/60 Hz, 20 Amps 460V, 1/3 Phase, 60 Hz, 34 / 20 Amps 600V, 3 Phase, 60 Hz, 13 Amps	Gas Pressure:	60 psi (4.1 bar)
Duty Cycle:	40% @ 80A, 100% @ 45A	Gas Flow:	8.2 cfm (231 lpm)
Dimensions:	Length 27.4" (0.7m) Width 12.4" (315mm) Height 18" (457mm)	Pilot:	Start Cartridge
Weight:	83 lbs. (37.6 kg) Including Unit, Power Cable, Torch and Leads	Torch Configuration	
Ship Weight:	105 lbs. (47.6 kg)	Torch:	SL100™ w/ATC™ (hand) SL100™ w/ATC™ (machine)
Work Cable:	20' (6.1m)	Hand:	75° Head, 20 ft. (6.1m) or 50 ft. (15.2m) Leads
Control:	Hand Torch Switch or Hand Pendant Control	Machine:	180° Head, 25 ft. (7.6m) or 50 ft. (15.2m) Leads
		Optional Lead Extensions:	15 ft. (4.6m), 25 ft. (7.6m) or 50 ft. (15.2m) Leads
		Warranty:	Limited Warranty; 3 yr. Power Supply, 1 yr. Torch
		Certifications:	IP-23C, CSA NTRL/C, CE

CUTMASTER 101 – The Next Generation

1Torch with ATC Quick Disconnect

The CUTMASTER 101 is equipped with the same great 1Torch we introduced in 2002 as a universal replacement torch. We've added the ATC Quick Disconnect to the CUTMASTER 101 so you can easily convert from a hand to a machine torch operation in a matter of seconds.

Optional ATC Lead Extensions for Improved Versatility

The optional ATC Lead Extensions give flexibility and versatility to your cutting operations when you need it. 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 new 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.

New 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 inches (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 inches (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.

See us at www.thermal-dynamics.com for our full line of quality products.


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 1/4 in. (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	I-1320-1	I-1320-2	I-1320-V
CUTMASTER 101 with SL100 75° hand torch, 50 ft. (15.2m) lead	I-1321-1	I-1321-2	I-1321-V
CUTMASTER 101 with SL100 180° machine torch, 25 ft. (7.6m) lead*	I-1322-1	I-1322-2	I-1322-V
CUTMASTER 101 with SL100 180° machine torch, 50 ft. (15.2m) lead*	I-1323-1	I-1323-2	I-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

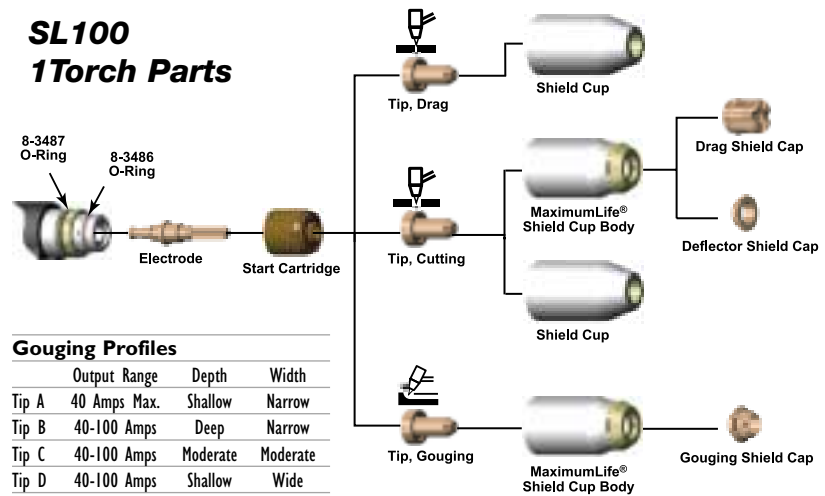
Product Description	Catalog No.
ACCESSORIES (cont.)	
ATC™ Leads Extensions	
15 ft. (4.6m)	7-7544
25 ft. (7.6m)	7-7545
50 ft. (15.2m)	7-7552
Leather Leads Cover	
15 ft. (4.6m)	9-1258
20 ft. (6.1m)	9-1260
25 ft. (7.6m)	9-1270
50 ft. (15.2m)	9-1280
Cutting Guide Kit	7-8910
	
Wheel Kit	9-8331
Multi-Purpose 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 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	5-0110
Spare Parts Kit, 80A, Machine includes three (3) Electrodes, ten (10) Tips, one (1) Start Cartridge, one (1) Shield Cup, two (2) O-Rings, one (1) Utility Box	5-0120
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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