

THERMAL DYNAMICS[®]



A THERMADYNE[®] Company

AUTOMATION

CUTMASTER[™] 151

100 Amp Air Plasma Cutting System

CE



**NEW Warranty
from Thermal Dynamics!**

3 Years (System)

1 Year (Torch)

Includes Repair Parts and Labor

Automated Plasma Cutting System

Automated Plasma Cutting

CUTMASTER™ 151

100 Amp Air Plasma Cutting System

Introducing the next generation of innovative CUTMASTER™ 1Series™ Automated Plasma Cutting Systems from Thermal Dynamics®.

Designed to satisfy the needs of the 100 amp automated plasma cutting market, the new CUTMASTER 151 includes the SL100™ 1Torch® with Advanced Torch Connector (ATC™) Quick Disconnect as standard equipment with lead lengths of 25 ft. (7.6m), 35 ft. (10.7m) or 50 ft. (15.2m). Our new 1Torch start technology eliminates the electronic interference that can occur with other designs. 1Torch provides quick, reliable starts and a strong pilot arc to pierce heavy plate. It can even cut expanded metal quickly and easily.

CUTMASTER 1Series Automation Systems include a full-featured CNC interface accessible from either a CPC connector on the rear of the power supply or inside on a terminal strip. The CNC interface includes ON/OFF, OK to MOVE and an adjustable divided voltage signal. Full arc voltage is available inside the power supply.

With all the advantages of 1Torch and proven CUTMASTER reliability, the new automated CUTMASTER 151 delivers the best in productivity, precision and performance.

IGBT Inverter Power Supply

SL100 Torch & Leads

Pinch Block Assembly

End Cap Assembly

Detachable 32 Pitch Gear Rack

Ohmic Clip

1Torch SL100 with ATC for Quick Disconnect



Superior Cutting Performance

SureLok® Electrode Technology

The innovative, patented, self-locking electrode mechanism, eliminates the need for an installation tool and ensures precise electrode and tip alignment. Both the electrode and tip are stationary which results in a highly defined arc and precise cuts. SureLok alignment also means longer tip and electrode life and reduced operating costs.



Total Gas Management™

The SL100™ 1Torch® introduces a completely new tip technology which eliminates the need for a separate plasma gas distributor. Each tip includes plasma gas ports uniquely tuned to optimize cutting performance at its rated current. Select from 20, 30, 40, 60, 80 or 100 Amp tips to optimize your cutting. The result is Total Gas Management. Precision gas control, longer consumable parts life and better cut performance.



Superior Quality at All Amperages

Whether you are fabricating 1/2" (12mm) plate or cutting ornamental shapes, the CUTMASTER™ 151 is perfect for the job.

At full 100 Amp output, CUTMASTER 151 produces BEST CUT on 1/2" (12mm) mild steel plate at 65 IPM (1.4m/min). For those cutting intricate shapes, select low amperage tips for kerf widths less

than .020" (0.5mm) wide. Whether you cut heavy plate, HVAC duct work or ornamental shapes, the CUTMASTER 151 is right for you.

Start Cartridge

High Frequency has been completely eliminated from the plasma system. A patent pending component called the "Start Cartridge" sits between the tip and electrode. It is normally in contact with the tip, but when air forces the tip and cartridge apart, the pilot arc is started. This unique design allows the pilot arc to start without moving either the tip or electrode, resulting in better parts life, cut performance and reliability.



Choice of Tip Shielding

Choose from two consumables styles:

- Extended Tip for cutting thin sheet at low power & narrow kerf
- Shielded Tip for heavier plate piercing and cutting



Extended Tip

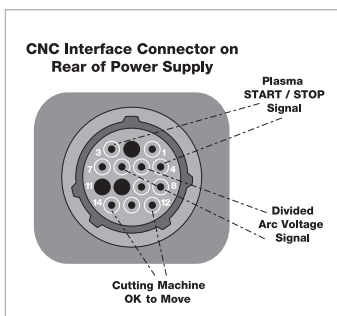


Shielded Tip

Note: Use the Ohmic Clip with the Shielded Tip design if ohmic plate sensing is required.

Advanced Features

Enhanced CNC Interface Connection



A CPC connector on the rear of the power supply provides access to START/STOP, OK TO MOVE and an adjustable Divided Arc Voltage signal suitable for controlling torch height control. Voltage is adjustable in 256 increments between 16.3:1 and 50:1. Full arc voltage is available inside the power supply.

ATC™ Quick Disconnect

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



Operator Controls

Simple front panel controls that provide the user flexibility and ease:

- (1) Current Control (Infinite from 25-100 Amps)
- (2) ON / OFF Switch
- (3) LED Indicators
 - AC
 - GAS
 - TEMP
 - DC
- (4) RUN / RAPID AUTO RESTART / SET Switch
- (5) ATC Female Receptacle

CUTMASTER™ 151

100 Amp Air Plasma Cutting System



Ordering Information

Product Description	Catalog No.		
	208-230V, 1ph	460V, 3 ph	Other
CUTMASTER™ 151 with SL100™ 180° Machine Torch, 25 ft. (7.6m) Lead*	1-1724-1	1-1724-2	1-1724-V
CUTMASTER™ 151 with SL100™ 180° Machine Torch, 35 ft. (10.7m) Lead*	1-1726-1	1-1726-2	1-1726-V
CUTMASTER™ 151 with SL100™ 180° Machine Torch, 50 ft. (15.2m) Lead*	1-1725-1	1-1725-2	1-1725-V

*Systems include Power Supply, Machine Torch with 1-3/8" (35mm) Diameter Non-Metallic Mounting Tube / 32 Pitch Rack (Detachable), Pinch Block Assembly, CNC Interface Cable, Hand Pendant, Spare Parts Kit, Input Power Cable (selected systems), Work Cable and Clamp.

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

Specifications (subject to change without notice)

Rated Output	100 Amps
Output Range (A)	25-100 Amps
Input Volts	208/230V ±10%, 1 ph, 50/60 Hz 400V ±10%, 3 ph, 50 Hz 460V ±10%, 1/3 ph, 60 Hz 600V ±10%, 3 ph, 60 Hz
Input Amps @ Rated Output	92A @ 208 VAC, 1 ph 87A @ 230 VAC, 1 ph 46A @ 460 VAC, 1 ph 26A @ 400 VAC, 3 ph 24A @ 460 VAC, 3 ph 16A @ 600 VAC, 3 ph
Duty Cycle	104°F (40°C) 40% @ 100A @ 120 VDC, 100% @ 50A @ 98 VDC 68°F (20°C) 75% @ 100A @ 120 VDC
MAX OCV	260 VDC
Gas Type	Air @ 70 psi (4.8 bar) @ 7.5 cfm (212 lpm)
Pilot	Start Cartridge
Weight	83 lbs. (37.6kg) Power Supply, Power Cable, Torch & Leads 1.6 lbs. (0.7kg) Torch Assembly & Mounting Tube 7.0 lbs. (3.2kg) 25ft./7.6m Lead Set with ATC™ (with Pigtail) 0.3 lbs. (0.1kg) Torch Leads (per ft.)
Shipping Weight	105 lbs. (47.6kg) Power Supply, Power Cable, Torch & Leads
Dimensions	18.0" (457mm) H x 12.4" (315mm) W x 27.4" (696mm) D
Work Cable	20 ft. (6.1m)
Control	CNC Interface - Rear CPC 14 Pin Connector with Standard TDC Pin-Out and Internal Terminal Strip
Input Power Cable	10 ft. (3.0m) with Plug (208/230V) 10 ft. (3.0m) without Plug (400V, 460V & 600V)
Limited Warranty	Three Years Power Supply & One Year Torch
Certifications	CSA, IP-23CS, CSA NRTL/C, CE, CCC
Torch Configuration	
Torch	SL100™ 180° Machine Torch & Leads w/ ATC™
Leads	5 ft. (1.5m), 10 ft. (3.0m), 25 ft. (7.6m), 35 ft. (10.7m), or 50 ft. (15.2m)
Optional Leads Ext.	15 ft. (4.6m), 25 ft. (7.6m), or 50 ft. (15.2m) Not to exceed 100 ft. (30.4m) maximum length.

Spare Parts Kits

Product Description	Catalog No.
VIP Spare Parts Kit, 100A	5-0172
Spare Parts Kit, Gouging	5-0173
Spare Parts Kit, 100A, Automation	5-0174

Cutting Speed Chart

Torch Model	SL100™					
Recommended Cutting Capacity	1/2" (12mm)					
Maximum Pierce Cutting Capacity	3/4" (20mm)					
Max Cutting Capacity (edge start)	1-1/2" (40mm)					
Material	Thickness (inch)	Best Cut Speed (FPM)	Current (Amps)	Thickness (mm)	Best Cut Speed (m/min)	
Mild Steel						
Air	16 ga.	180	20	1.5	4.57	
	16 ga.	240	30	1.5	6.10	
	10 ga.	175	40	3	4.45	
	16 ga.	350	60	1.5	8.89	
	10 ga.	175		3	4.45	
	10 ga.	230	80	3	5.84	
	1/4	129	100	6	3.28	
	3/8	65		10	1.65	
	1/2	49		12	1.24	
	3/4	24		20	0.61	
	1	16		25	0.41	
	1-1/4	10		30	0.25	
	Stainless Steel					
	Air	16 ga.	180	20	1.5	4.57
16 ga.		240	30	1.5	6.10	
10 ga.		175	40	3	4.45	
16 ga.		350	60	1.5	8.89	
10 ga.		175		3	4.45	
10 ga.		200	80	3	5.08	
1/4		134	100	6	3.40	
3/8		67		10	1.70	
1/2		40		12	1.02	
3/4		22		20	0.56	
1		12		25	0.30	
1-1/4		9		30	0.23	
Aluminum						
Air		16 ga.	180	20	1.5	4.57
	16 ga.	240	30	1.5	6.10	
	10 ga.	175	40	3	4.45	
	16 ga.	350	60	1.5	8.89	
	10 ga.	175		3	4.45	
	10 ga.	230	80	3	5.84	
	1/4	149	100	6	3.78	
	3/8	99		10	2.51	
	1/2	65		12	1.65	
	3/4	30		20	0.76	
	1	19		25	0.48	
	1-1/4	14		30	0.36	

1TORCH, a trademark of Thermal Dynamics Corporation, is registered with the U.S. Patent and Trademark Office, and is the subject of trademark registrations and pending applications in numerous other countries. For information on trademark registrations of Thermal Dynamics Corporation, contact the local trademark offices in the countries of interest.



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