



THERMAL DYNAMICS®

AUTOMATION

CUTMASTER®

Automation Series



- Superior Quality
- Economical
- Flexibility
- Increased Productivity
- Easy To Use

Automated Plasma Cutting Systems

Automated Plasma Cutting

CUTMASTER® Automation Series

Introducing the next generation of Automated CUTMASTER Systems from Thermal Dynamics®. Based on the same proven platform as the TRUE Series, the CUTMASTER A-Series offers standard features to meet the needs of many automated applications.

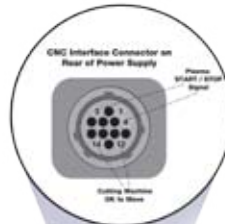
- A powerful 80% Duty Cycle to handle all-day production cutting in the toughest environments
- Light-weight, compact design and convenient mounting feet allow for easy mounting in any application
- Valve in torch design reduces cycle time between parts and increases productivity
- CNC interface connection is located on the rear of the power supply offering “Start/Stop”, and “OK to MOVE” signals
- Full arc voltage is available using an internal terminal connection
- Software automatically detects the torch that is attached and switches between automated and manual modes
- Dedicated automation software improves cycle time and performance in many applications

The new A-Series includes the SL100®SV 1Torch® with standard ATC Quick Disconnect in lengths of 25 ft. (7.6m), 35 ft. (10.7m) and 50 ft. (15.2m) (Longer torch leads up to 100 ft. (30.5m) available). Our 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. With auto-pilot restart, it can also cut expanded metal quickly and easily.

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

FEATURES

- Power Switch
- Mode Selection
- Current Control
- Pressure Control
- Status Display LED's
- Pressure / Error Indicators



- Start / Stop Input
- “OK To Move” Output
- Standard 25' (7.6m), 35' (10.7m) or 50' (15.2m) CNC Cable
- Optional Divided Arc Voltage Board
- Easy Access to Arc Voltage Via Separate Knock out hole and Ring Terminals Inside



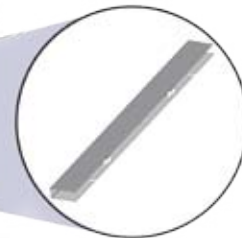
- Multi Voltage Input Power Selection*
- Single or Three Phase*

* U.S. Models Only



ATC® Quick Disconnect

- Torch Detection Allows Fast Change From An Automation Torch To A Hand Torch



- Standard Keyhole Mounting Feet

PRODUCT SELECTION

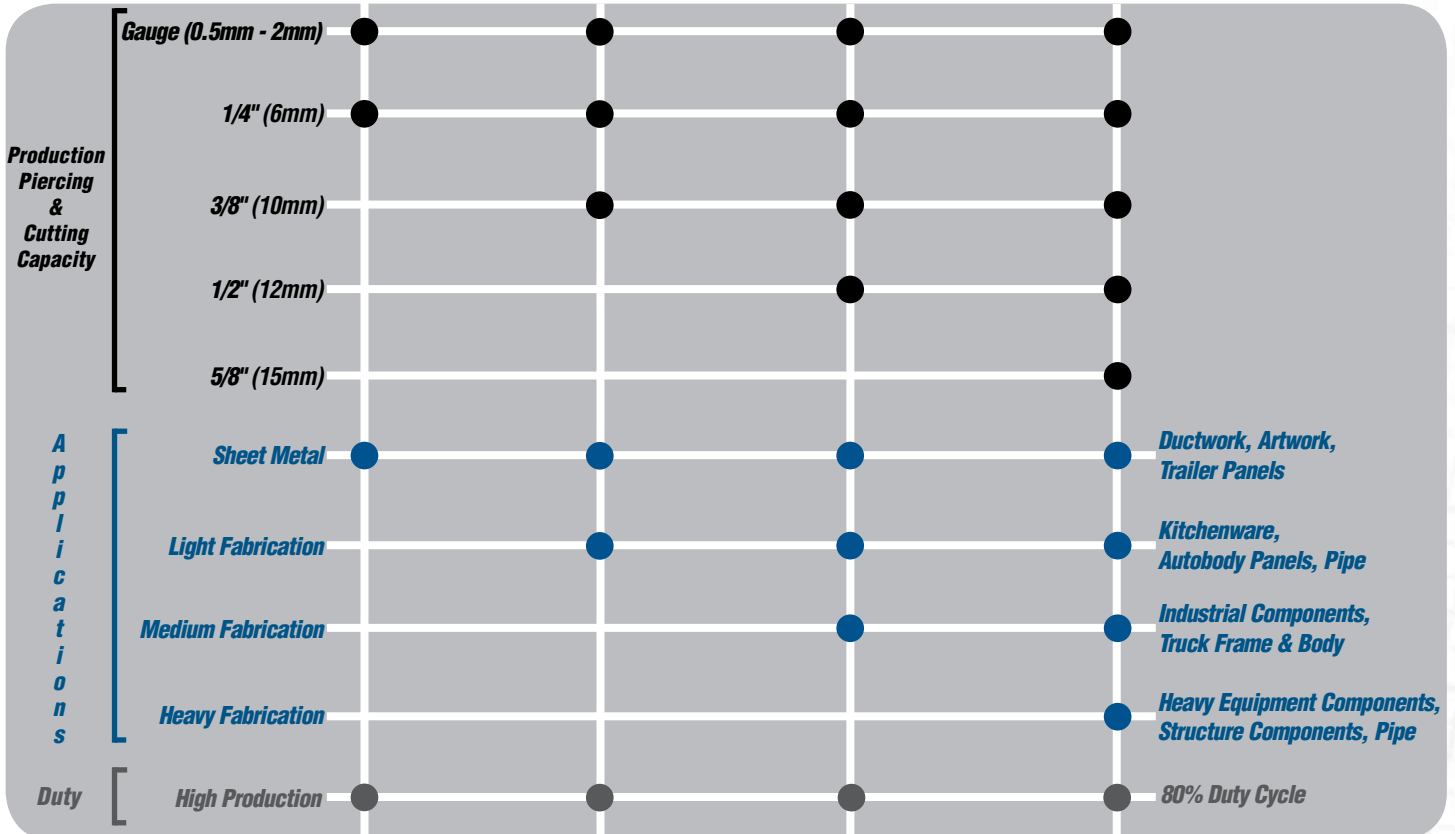
Light *Medium* *Heavy*

CUTMASTER® A40

CUTMASTER A60

CUTMASTER A80

CUTMASTER A120



Automated Plasma Cutting

CUTMASTER® A40

**1/4" (6mm)
PRODUCTION
CUT**

**80%
DUTY CYCLE**

**Air
PLASMA**

**60A
MAXIMUM
OUTPUT**

Specifications

(subject to change without notice)

Rated Output	40 Amps
Output Range	20 - 40 Amps, 60 Amps Max., Adjustable
Production Piercing and Cutting Capacity	1/4" (6mm)
Maximum Piercing and Cutting Capacity	1/2" (12mm)
Maximum Edge Start	1" (25mm)
Input Volts	208-230/460V, 1/3ph, 50/60 Hz, 380/400V, 3 ph, 50/60 Hz, 600V, 3 ph, 60 Hz
Input Amps @ Max Output	47 (208V, 1 ph) 26 (208V, 3 ph) 45 (230V, 1 ph) 24 (230V, 3 ph) 16 (380V, 3 ph) 16 (400V, 3 ph) 31 (460V, 1 ph) 16 (460V, 3 ph)
Kilowatt Output	6.3 kW
Duty Cycle	80% @ 40 Amps
MAX OCV	260 VDC
Gas Type	Air @ 75 psi (5.2 bar) @ 6.7cfm (189 lpm)
Pilot	Start Cartridge
Weight	43 lbs. (19.5kg) - Unit, Power Cable, (Torch and Leads)
Dimensions	H 13.5" (343mm) x W 9.75" (248mm) x L 21.0" (533mm)
Work Cable	20' (6.1m)
Control	CNC rear panel connector, Start/Stop and OK to Move
Input Power Cable	10' (3m) with plug (208/230V) 6' (2m) without plug (400V)
Warranty	4 Years Power Supply & 1 Year Torch - Americas 3 Years Power Supply & 1 Year Torch - International
Certifications	IP-23C, CSA, NTRL/C, CE, CCC
Torch Configuration	
Torch	SL100®SV w/ATC®, 180° Automation



Ordering Information

Product Description	208-230V, 1ph	460V, 1/3 ph	Other
Cutmaster A40 with SL100SV 180° Machine Torch, 25 ft. (7.6m) Lead*	1-5134-1	1-5134-2	1-5134-V
Cutmaster A40 with SL100SV 180° Machine Torch, 35 ft. (10.7m) Lead*	1-5136-1	1-5136-2	1-5136-V
Cutmaster A40 with SL100SV 180° Machine Torch, 50 ft. (15.2m) Lead*	1-5135-1	1-5135-2	1-5135-V

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

V (Voltage): 3 = 380/400V 3ph, 4 = 400V 3ph CE, 5 = 600V

CUTMASTER® A60

3/8" (10mm) PRODUCTION CUT	80% DUTY CYCLE
Air PLASMA	80A MAXIMUM OUTPUT

Specifications

(subject to change without notice)

Rated Output	60 Amps
Output Range	20 - 60 Amps, 80 Amps Max., Adjustable
Production Piercing and Cutting Capacity	3/8" (10mm)
Maximum Piercing and Cutting Capacity	5/8" (15mm)
Maximum Edge Start	1" (25mm)
Input Volts	208-230/460V, 1/3ph, 50/60 Hz, 380/400V, 3 ph, 50/60 Hz, 600V, 3 ph, 60 Hz
Input Amps @ Max Output	75 (208V, 1 ph) 40 (208V, 3 ph) 72 (230V, 1 ph) 39 (230V, 3 ph) 18 (380V, 3 ph) 17 (400V, 3 ph) 44 (460V, 1 ph) 21 (460V, 3 ph)
Kilowatt Output	9 kW
Duty Cycle	80% @ 60 Amps
MAX OCV	260 VDC
Gas Type	Air @ 75 psi (5.2 bar) @ 6.7cfm (189 lpm)
Pilot	Start Cartridge
Weight	43 lbs. (19.5kg) - Unit, Power Cable, (Torch and Leads)
Dimensions	H 13.5" (343mm) x W 9.75" (248mm) x L 21.0" (533mm)
Work Cable	20' (6.1m)
Control	CNC rear panel connector, Start/Stop and OK to Move
Input Power Cable	10' (3m) with plug (208/230V) 6' (2m) without plug (400V)
Warranty	4 Years Power Supply & 1 Year Torch - Americas 3 Years Power Supply & 1 Year Torch - International
Certifications	IP-23C, CSA, NTRL/C, CE, CCC
Torch Configuration	
Torch	SL100®SV w/ATC®, 180° Automation



Ordering Information

Product Description	208-230V, 1ph	460V, 1/3 ph	Other
Cutmaster A60 with SL100SV 180° Machine Torch, 25 ft. (7.6m) Lead*	1-1134-1	1-1134-2	1-1134-V
Cutmaster A60 with SL100SV 180° Machine Torch, 35 ft. (10.7m) Lead*	1-1136-1	1-1136-2	1-1136-V
Cutmaster A60 with SL100SV 180° Machine Torch, 50 ft. (15.2m) Lead*	1-1135-1	1-1135-2	1-1135-V

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

V (Voltage): 3 = 380/400V 3ph, 4 = 400V 3ph CE, 5 = 600V

Automated Plasma Cutting

CUTMASTER® A80

**1/2" (12mm)
PRODUCTION
CUT**

**80%
DUTY CYCLE**

**Air
PLASMA**

**100A
MAXIMUM
OUTPUT**

Specifications

(subject to change without notice)

Rated Output	80 Amps
Output Range	30 - 80 Amps, 100 Amps Max., Adjustable
Production Piercing and Cutting Capacity	1/2" (12mm)
Maximum Piercing and Cutting Capacity	3/4" (20mm)
Maximum Edge Start	1 1/4" (30mm)
Input Volts	208-230/460V, 1/3ph, 50/60 Hz, 380/400V, 3 ph, 50/60 Hz, 600V, 3 ph, 60 Hz
Input Amps @ Max Output	99 (208V, 1 ph) 49 (208V, 3 ph) 95 (230V, 1 ph) 45 (230V, 3 ph) 28 (380V, 3 ph) 27 (400V, 3 ph) 60 (460V, 1 ph) 29 (460V, 3 ph)
Kilowatt Output	12 kW
Duty Cycle	80% @ 80 Amps
MAX OCV	260 VDC
Gas Type	Air @ 75 psi (5.2 bar) @ 6.7cfm (189 lpm)
Pilot	Start Cartridge
Weight	63 lbs. (28.6kg) - Unit, Power Cable, (Torch and Leads)
Dimensions	H 13.5" (343mm) x W 9.75" (248mm) x L 26.0" (660mm)
Work Cable	20' (6.1m)
Control	CNC rear panel connector, Start/Stop and OK to Move
Input Power Cable	10' (3m) with plug (208/230V) 6' (2m) without plug (400V)
Warranty	4 Years Power Supply & 1 Year Torch - Americas 3 Years Power Supply & 1 Year Torch - International
Certifications	IP-23C, CSA, NTRL/C, CE, CCC
Torch Configuration	
Torch	SL100®SV w/ATC®, 180° Automation



Ordering Information

Product Description	208-230V, 1ph	460V, 1/3 ph	Other
Cutmaster A80 with SL100SV 180° Machine Torch, 25 ft. (7.6m) Lead*	1-1334-1	1-1334-2	1-1334-V
Cutmaster A80 with SL100SV 180° Machine Torch, 35 ft. (10.7m) Lead*	1-1336-1	1-1336-2	1-1336-V
Cutmaster A80 with SL100SV 180° Machine Torch, 50 ft. (15.2m) Lead*	1-1335-1	1-1335-2	1-1335-V

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

V (Voltage): 3 = 380/400V 3ph, 4 = 400V 3ph CE, 5 = 600V

CUTMASTER® A120

**5/8" (15mm)
PRODUCTION
CUT**

**80%
DUTY CYCLE**

**Air
PLASMA**

**120A
MAXIMUM
OUTPUT**

Specifications

(subject to change without notice)

Rated Output	120 Amps
Output Range	30 - 120 Amps, 120 Amps Max., Adjustable
Production Piercing and Cutting Capacity	5/8" (15mm)
Maximum Piercing and Cutting Capacity	3/4" (20mm)
Maximum Edge Start	1½" (40mm)
Input Volts	208-230/460V, 1/3ph, 50/60 Hz, 380/400V, 3 ph, 50/60 Hz, 600V, 3 ph, 60 Hz
Input Amps @ Max Output	126 (208V, 1 ph) 60 (208V, 3 ph) 120 (230V, 1 ph) 56 (230V, 3 ph) 35 (380V, 3 ph) 34 (400V, 3 ph) 76 (460V, 1 ph) 37 (460V, 3 ph)
Kilowatt Output	15.4 kW
Duty Cycle	80% @ 120 Amps
MAX OCV	260 VDC
Gas Type	Air @ 80 psi (5.5 bar) @ 6.7cfm (189 lpm)
Pilot	Start Cartridge
Weight	63 lbs. (28.6kg) - Unit, Power Cable, (Torch and Leads)
Dimensions	H 13.5" (343mm) x W 9.75" (248mm) x L 26.0" (660mm)
Work Cable	20' (6.1m)
Control	CNC rear panel connector, Start/Stop and OK to Move
Input Power Cable	10' (3m) with plug (208/230V) 6' (2m) without plug (400V)
Warranty	4 Years Power Supply & 1 Year Torch - Americas 3 Years Power Supply & 1 Year Torch - International
Certifications	IP-23C, CSA, NTRL/C, CE, CCC
Torch Configuration	
Torch	SL100®SV w/ATC®, 180° Automation



Ordering Information

Product Description	208-230V, 1ph	460V, 1/3 ph	Other
Cutmaster A120 with SL100SV 180° Machine Torch, 25 ft. (7.6m) Lead*	1-1734-1	1-1734-2	1-1734-V
Cutmaster A120 with SL100SV 180° Machine Torch, 35 ft. (10.7m) Lead*	1-1736-1	1-1736-2	1-1736-V
Cutmaster A120 with SL100SV 180° Machine Torch, 50 ft. (15.2m) Lead*	1-1735-1	1-1735-2	1-1735-V

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

V (Voltage): 3 = 380/400V 3ph, 4 = 400V 3ph CE, 5 = 600V

Automated Plasma Cutting

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®SV 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, 100 or 120 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 from thick plate or cutting ornamental shapes, the CUTMASTER® Automation Series is perfect for the job.

At 120 Amp output, the CUTMASTER A120 produces the BEST CUT on 1/2" (12mm) mild steel plate at 70 IPM (1.86m/min). For those cutting intricate shapes, select low amperage tips for kerf widths less than 0.045" (1.14mm) wide.

Whether you cut plate, HVAC duct work or ornamental shapes, the CUTMASTER Automation Series is right for you.

Start Cartridge

High Frequency has been completely eliminated from the plasma system. A patented component called the "Start Cartridge" sits between the tip and electrode. It is normally in contact with the tip, air forces the plunger to compress and separate from the tip, initiating the pilot arc. 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.



The start cartridge is the only moving part in the SL100SV torch. Unlike the competitive torches, where the moving part is the torch head. If the moving parts of a competitor's torch fails, you must replace the entire torch head. This is expensive, complicated, and time consuming. If our start cartridge fails, it's economical, simple, and quick to replace. In less than a minute you're back in full production.

Choice of Tip Shielding

Choose from two consumable 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

CUTTING SPEED CHART

Material	Thickness Inch	Speed IPM	Amps	Plasma/ Shield	Thickness [mm]	Speed mm/min
Mild Steel						
	16 ga.	180	20	Air/Air	1.5	4.57
	16 ga.	240	30	Air/Air	1.5	6.10
	20 ga.	160	40	Air/Air	1	3990
	16 ga.	140			2	2920
	3/16	55			3	1810
	1/4	40			5	1345
	3/16	100	60	Air/Air	4	3650
	1/4	80			6	2145
	3/8	50			10	1180
	1/2	26			12	795
	1/4	100	80	Air/Air	6	2745
	3/8	42			10	1060
	1/2	40			12	1025
	5/8	18			15	610
	3/8	75	100	Air/Air	10	1790
	1/2	45			12	1310
	3/4	20			20	490
	3/8	85	120	Air/Air	10	2100
	1/2	70			12	1860
	5/8	45			15	1320
	3/4	30			20	720
Stainless Steel						
	16 ga.	180	20	Air/Air	1.5	4.57
	16 ga.	240	30	Air/Air	1.5	6.10
	16 ga.	50	40	Air/Air	2	1140
	3/16	30			3	980
	1/4	18			5	715
	3/16	90	60	Air/Air	4	2865
	1/4	65			6	1790
	3/8	30			10	725
	1/2	21			12	580
	1/4	100	80	Air/Air	6	2765
	3/8	45			10	1070
	1/2	26			12	765
	3/8	65	100	Air/Air	10	1575
	1/2	45			12	1255
	5/8	20			15	685
	3/8	100	120	Air/Air	10	2390
	1/2	60			12	1750
	5/8	40			15	1160
Aluminum						
	16 ga.	180	20	Air/Air	1.5	4.57
	16 ga.	240	30	Air/Air	1.5	6.10
	16 ga.	170	40	Air/Air	2	3500
	3/16	75			3	2350
	1/4	30			5	1740
	3/16	170	60	Air/Air	4	5230
	1/4	85			6	2640
	3/8	45			10	1085
	1/2	30			12	845
	1/4	110	80	Air/Air	6	3190
	3/8	55			10	1330
	1/2	38			12	1060
	5/8	26			15	745
	3/8	65	100	Air/Air	10	1575
	1/2	45			12	1255
	3/4	20			20	470
	3/8	110	120	Air/Air	10	2660
	1/2	75			12	2100
	5/8	50			15	1445

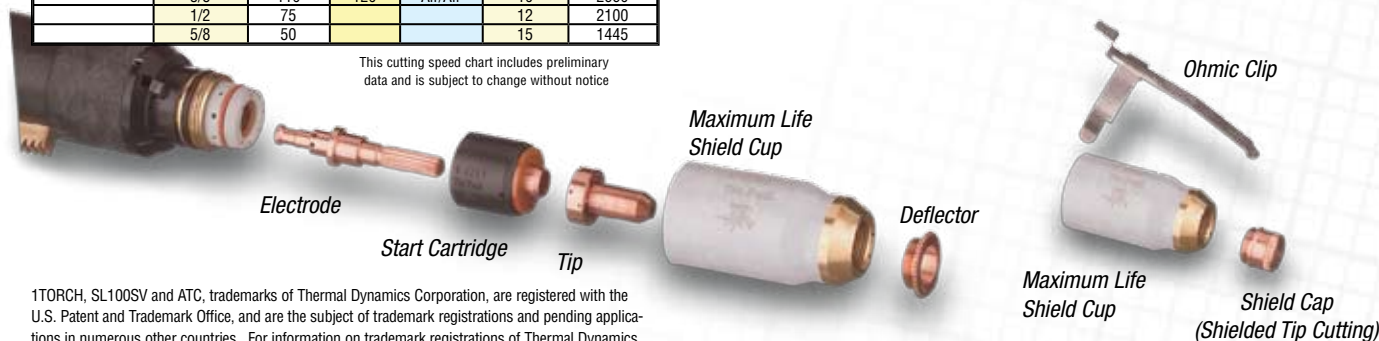
NOTE: Speeds reflected in this cutting chart are representative of optimum quality and speed. The chart data comes directly from the operating manual. BEWARE of competitor's claims, as the data represented in their brochure may not come from their operating manuals. Cut speeds in the competitor's brochures may be inflated by as much as 30-40% over the cut charts in their operating manuals.

SL100®SV Automation 1Torch

- Valve In Torch Design
- Patented 1Torch Consumable
- ATC Quick Disconnect



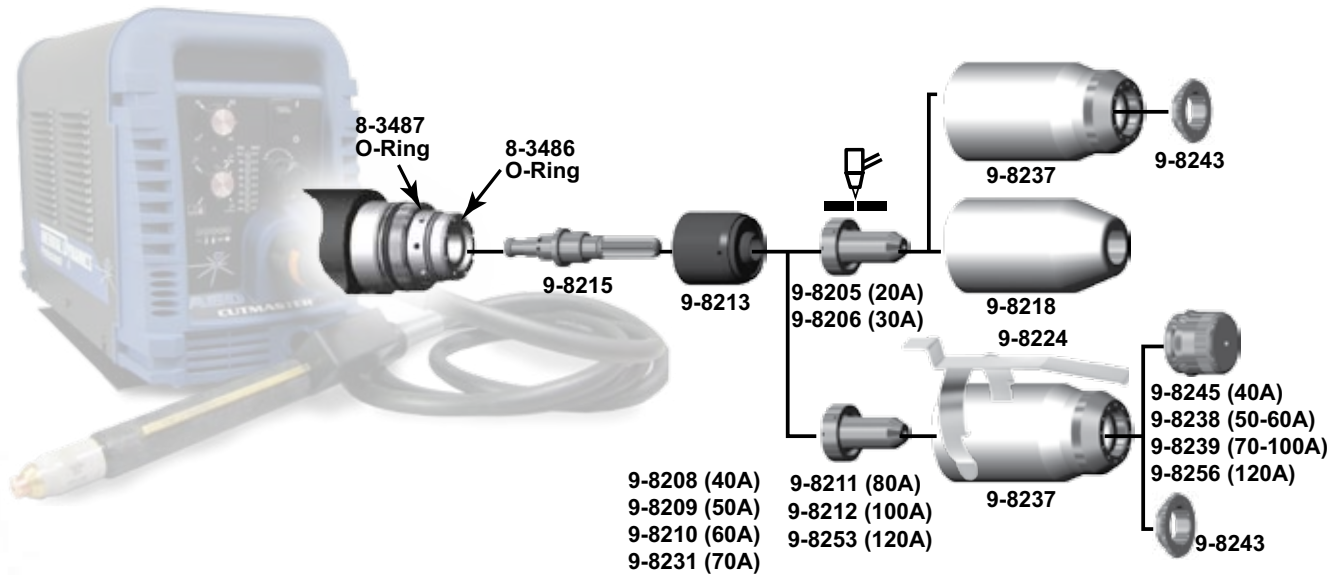
This cutting speed chart includes preliminary data and is subject to change without notice



1TORCH, SL100SV and ATC, trademarks of Thermal Dynamics Corporation, are registered with the U.S. Patent and Trademark Office, and are 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.

Automated Plasma Cutting

CONSUMABLES



ACCESSORIES

Automation Interface Kit

Cat. No. 9-8311 - For CUTMASTER and Automation Series (A40, A60, A80, and A120). This kit adds a divided low volt output for height controls that can use 50:1 arc voltage. Also used with the Thermal Dynamics® SC-11 height control.

CNC Interface Cable

Shielded multi pair cable includes Start/Stop, OK to Move, divided arc voltage, and is SC-11 height control compatible

25 ft. (7.6m)	9-8312	100 ft. (30.5m)	9-8316
50 ft. (15.2m)	9-8313	125 ft. (38.0m)	9-8317
75 ft. (22.8m)	9-8315		

Pinion Assembly

Cat. No. 7-2827 - 1 3/8" (35mm) Diameter



1 Torch Leads Packages

Mechanized

SL100®180°

5 ft. (1.5m) Torch/Leads	7-5213
10 ft. (3.0m) Torch/Leads	7-5214
25 ft. (7.6m) Torch/Leads	7-5215
50 ft. (15.2m) Torch/Leads	7-5216

Hand

SL60	20 ft. (6.1m) Torch/Leads	7-5204
	50 ft. (15.2m) Torch/Leads	7-5205
SL100	20 ft. (6.1m) Torch/Leads	7-5206
	50 ft. (15.2m) Torch/Leads	7-5208

For improved consumable parts life and overall performance, Thermal Dynamics recommends Air Filter Kits be used on all plasma cutting systems.

Single Stage Air Filter Kit

Cat. No. 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 blocks the absorption of water to increase performance and improve consumable parts life.



Two Stage Air Filter Kit

Cat. No. 9-9387

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 5 microns. The filter assembly is assembled at the factory and can be installed directly to the power supply.



Remote Pendant Control

20 ft. (6.1m) Cat. No. 7-3460
Remote Pendant Control for your mechanized application.



Hand Pendant Extension

25 ft. (7.6m) Cat. No. 7-7744

performance
technology
reliability
innovation
service®

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