

CUTTING SPEED CHART

Material	Amps	Plasma/ Shield	Thickness [mm]	Speed mm/min
Mild Steel	40	Air/Air	1	3990
			2	2920
			3	1810
	60	Air/Air	4	1345
			5	3650
			6	2145
	80	Air/Air	10	1180
			12	795
			15	610
	100	Air/Air	10	1790
			12	1310
			20	490
	120	Air/Air	10	2100
			12	1860
			15	1320
20			720	
Stainless Steel	40	Air/Air	2	1140
			3	980
			5	715
	60	Air/Air	4	2865
			6	1790
			10	725
	80	Air/Air	6	580
			10	2765
			12	1070
	100	Air/Air	10	1575
			12	1255
			15	685
	120	Air/Air	10	2390
			12	1750
			15	1160
Aluminium	40	Air/Air	2	3500
			3	2350
			5	1740
	60	Air/Air	4	5230
			6	2640
			10	1085
	80	Air/Air	6	845
			10	3190
			12	1330
	100	Air/Air	10	1060
			12	745
			15	470
	120	Air/Air	10	2660
			12	2100
			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 does not come from their operating manuals. Cut speeds in the competitor's brochure may be inflated by as much as 30-40% over the cut charts in their operating manuals.



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

1TORCH, SL100SV and ATC, trademarks of Thermal Dynamics, 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, contact the local trademark offices in the countries of interest.



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 thick plate or cutting ornamental shapes, the Thermal Dynamics® Automation Series is perfect for the job. At 120 Amp output, the Thermal Dynamics® A120 produces the BEST CUT on 12 mm mild steel plate at 1.86m/min. For those cutting intricate shapes, select low amperage tips for kerf widths less than 1.14 mm wide. Whether you cut plate, HVAC duct work or ornamental shapes, the 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. The Start Cartridge is in contact with the tip while the torch is inactive. When a start signal is given, air forces the cartridge to break contact with the tip and 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. The start cartridge is the only moving part in the SL100SV torch. Unlike competitive torches, where the moving part is in the torch head. If the moving parts of a competitor's torch fails, the entire torch head has to be replaced. This is expensive, complicated, and time consuming.



Choice of Tip Shielding

Choose from two consumable styles:

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



Exposed Tip



Shielded Tip

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

ACCESSORIES

CNC Interface Cable

Shielded multi pair cable includes start/stop, OK to move, and divided arc voltage.
7.6 m 9-1125
10.6 m 9-1126
15.2 m 9-1127

1Torch® Automation Leads Packages

SL100® SV 180' - (Torch/Leads)
7.6 m 7-4001 23 m 7-4004
10.6 m 7-4002 30.5 m 7-4005
15.2 m 7-4003

Pinion Assembly

Cat. No. 7-2827 35 mm Diameter

Single Stage Air Filter Kit

Cat. No. 7-7507 (Filter Body 9-7740, Hose 9-7742, Filter Element 9-7741)

Two Stage Air Filter Kit

Cat. No. 9-9387
1st Stage Replacement Cartridge 9-1021
2nd Stage Replacement Cartridge 9-1022

Remote Pendant Control

6.1 m Cat. No. 7-3460
Remote Pendant Control for your mechanized application.

Hand Pendant Extension

7.6 m Cat. No. 7-7744



AUTOMATED PLASMA CUTTING SYSTEMS

Automation Series A80 / A120



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



We Bring Intelligence to the Table.™

AUTOMATED PLASMA CUTTING

Thermal Dynamics® Automation Series

The Thermal Dynamics A Series takes advantage of the reliability of the Cutmaster platform and proven 1Torch technology to offer the following advantages:

- 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 located on the rear of the power supply offering "Start/Stop", "OK to MOVE" and Divided Arc Voltage
- Full arc voltage is available using an internal terminal connection
- 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 7.6m, 10.6m and 15.2m (Longer torch leads up to 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.

FEATURES

Front Panel Controls

- Power Switch
- Mode Selection
- Current Control
- Pressure control
- Status display LEDs
- Pressure / Error indicators

ATC® Quick Disconnect

- Torch detection allows fast change from an automation torch to a hand torch



CNC Interface Connector on Rear of Power Supply

- 3, 4 Plasma Start/Stop Signal
- 5, 6 Divided Arc voltage
- 10, 11, 13 Plate contact for Ohmic sensing
- 12, 14 Ok-to-Move

- Standard Keyhole Mounting Feet



Thermal Dynamics® Automation Series



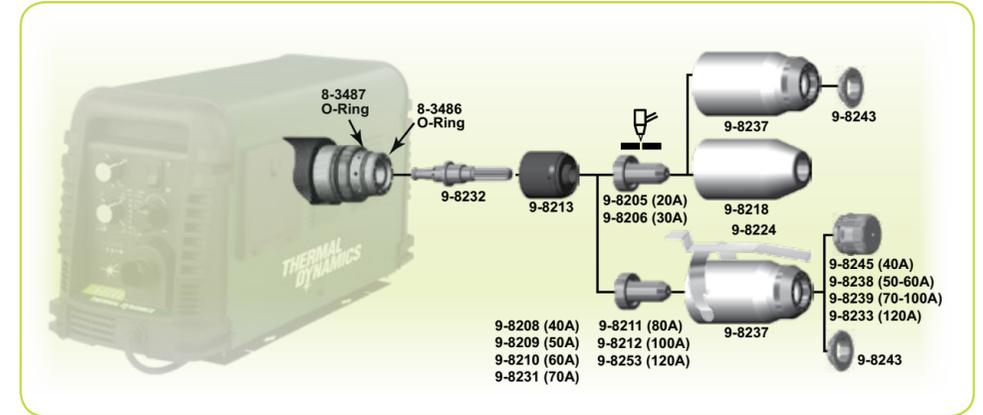
Specifications

	A80	A120
Rated Output	80 Amps	120 Amps
Output Range	30 - 80 Amps, 100 Amps Max., Adjustable	30 - 120 Amps, 120 Amps Max., Adjustable
Production Piercing and Cutting Capacity	12 mm	15 mm
Maximum Piercing and Cutting Capacity	20 mm	20 mm
Maximum Edge Start	30 mm	40 mm
Input Volts	380/400V, 3 ph, 50/60 Hz	380/400V, 3 ph, 50/60 Hz
Input Amps @ Max Output	29 (380V, 3 ph) 28 (400V, 3 ph)	35 (380V, 3 ph) 36 (400V, 3 ph)
Kilowatt Output	12 kW	15.4 kW
Duty Cycle	80% @ 80 Amps 100% @ 70 Amps	80% @ 120 Amps 100% @ 100 Amps
MAX OCV	260 VDC	260 VDC
Gas Type	Air @ 5.2 bar @ 189 lpm	Air @ 5.5 bar @ 189 lpm
Pilot	Start Cartridge	Start Cartridge
Weight	28.6kg - Unit, Power Cable, (Torch and Leads)	28.6kg - Unit, Power Cable, (Torch and Leads)
Dimensions	H 343 mm x W 248 mm x L 660 mm	H 343 mm x W 248 mm x L 660 mm
Work Cable	6.1 m	6.1 m
Control	CNC rear panel connector, Start/Stop OK to Move, and divided arc voltage	CNC rear panel connector, Start/Stop OK to Move, and divided arc voltage
Input Power Cable	2 m without plug (400V)	2 m without plug (400V)
Warranty	3 Years Power Supply & 1 Year Torch	3 Years Power Supply & 1 Year Torch
Certifications	IP-23C, CSA, NTRL/C, CE, CCC	IP-23C, CSA, NTRL/C, CE, CCC
Torch Configuration	SL100®SV w/ATC®, 180° Automation	

*Systems include: power supply, automation torch with 35 mm diameter non-metallic mounting tube / 32 pitch rack (detachable), pinch block assembly, CNC interface cable, spare parts kit (15 tips, 3 electrodes, start cartridge), input power cable (selected systems), work cable, and clamp.
(subject to change without notice)

We Bring Intelligence to the Table.™

CONSUMABLE PARTS



PRODUCT SELECTION

Medium

Heavy

A80

A120

