



# THERMAL DYNAMICS®

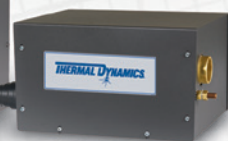
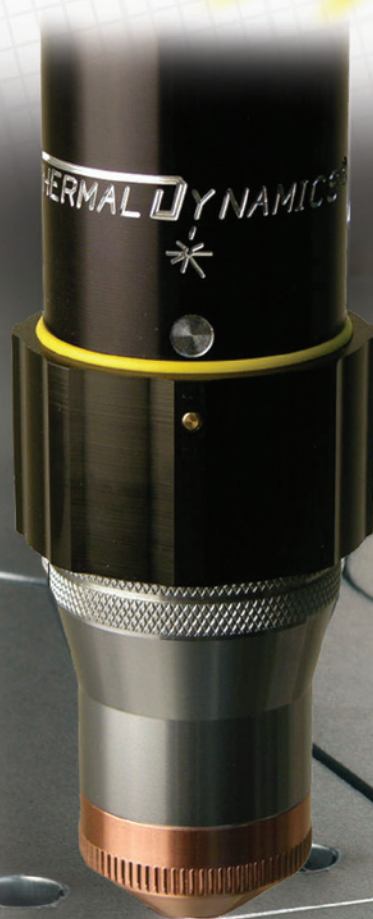
AUTOMATION

## Auto-Cut™ 300<sub>2</sub>

Automated Plasma Cutting System

Now with SpeedLok™ Technology

- MaximumLife® Consumables - Best Parts Life in its Class
- High Speed Oxygen Cutting
- XT™-301 Torch
- Water Mist Secondary (WMS®)



Automated Plasma Cutting System

# Automated Plasma Cutting

## Auto-Cut™ 300<sub>2</sub>

### Automated Plasma Cutting System

#### Quality

- Excellent, virtually dross-free cuts using Oxygen (O<sub>2</sub>) plasma.
- Unmatched cut quality on non-ferrous materials to 1.25" (30mm) using our unique Water Mist Secondary system (WMS®).

#### Ease of Use

- Fast and easy installation.
- Simple set-up and user-friendly gas console.
- Quick-change, consumable design.
- Easy to identify and troubleshoot problems.

#### Productivity

- Highest cut speed in its class.
- Best parts life in its class.
- Reduced downtime during parts changes due to the revolutionary SpeedLok™ cartridge design of the XT™-301 torch.

#### Technology

- Microprocessor controlled to produce the best cut quality every cut.
- Fiber optic communication means less HF interference.
- Precision torch design for the best cut quality in its class.

#### Reliability

- Advanced testing in lab and field trials ensures ongoing performance and reliability.

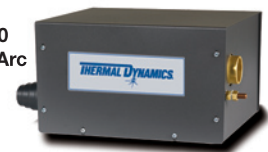


Auto-Cut 300<sub>2</sub>  
Power Supply

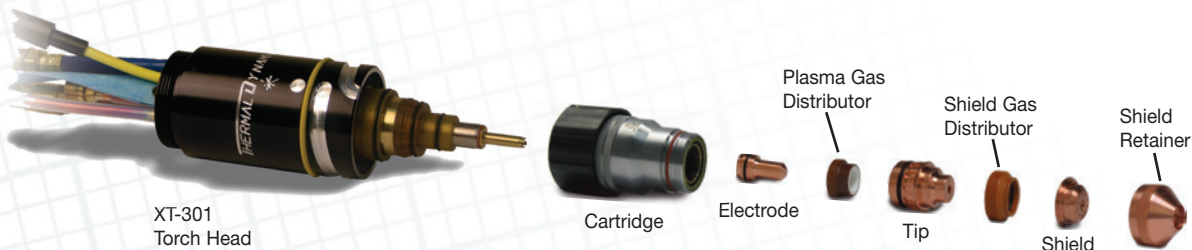


GCM-2000  
Gas Control  
Console

RAS-1000  
Remote Arc  
Starter



### XT Torch Technology for Maximum Performance



XT-301  
Torch Head

Cartridge

Electrode

Plasma Gas  
Distributor

Shield Gas  
Distributor

Tip

Shield

Shield  
Retainer

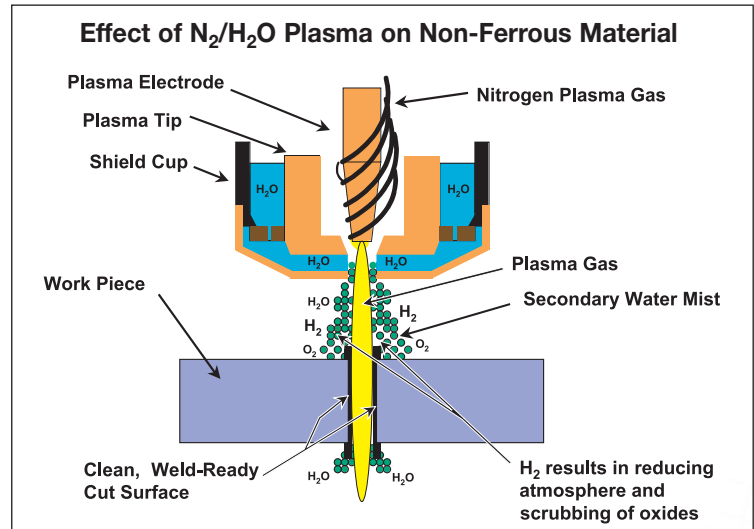
### XT™-301 Torch Technology



1.25" (30mm) Water Mist Stainless Steel Cut

Thermal Dynamics' patented **XT Torch Technology** delivers productivity and performance you can measure.

- Keyless Consumable Cartridge for Rapid Process Changes
- Precision Construction Insuring Accurate Re-Centering of Consumable Cartridge After Parts Change
- Rapid Parts Changes With SpeedLok™ Consumable Cartridge
- Spring Loaded Leak-Less Coolant Tube Design



**Water Mist Secondary (WMS®) optimizes non-ferrous cutting.**

WMS delivers excellent cut quality on non-ferrous materials with low cost of operation by using N<sub>2</sub> as plasma gas and ordinary tap water as the secondary. A reducing atmosphere is produced in the cut by the release of Hydrogen from the secondary water. This reducing atmosphere decreases oxidation on the cut face surface. WMS is recommended for materials up to 1.25" (30mm) thick.

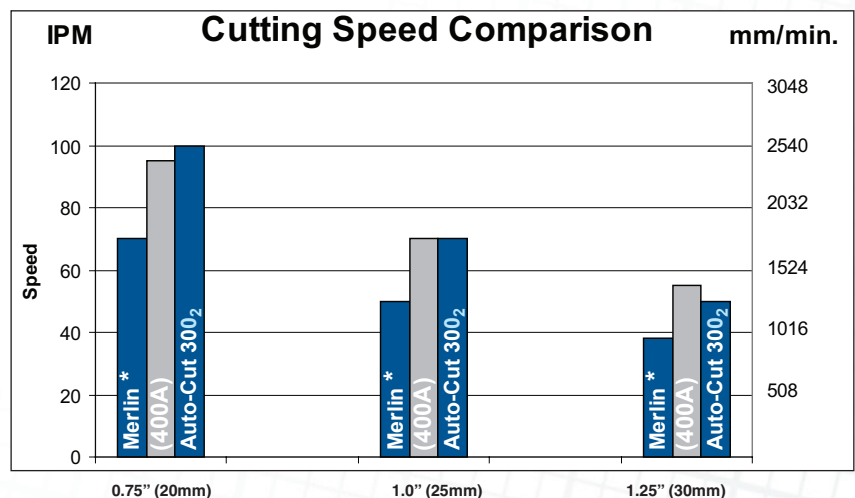
### Competitive Comparison

Thermal Dynamics' patented **XT Torch Consumable Technology** is ideal for cutting from gauge (1.5mm) to 1.5" (40mm). Excellent quality cuts will be achieved on both ferrous and non-ferrous materials at higher speeds.

- Small Heat Affected Zone, Smooth Cutting Edge Surface
- Wide, Virtually Dross-free Parameter Windows
- Higher Arc Density for Faster Cut Speeds



1.25" (30mm) Mild Steel Cut



Data gathered by cutting with Oxygen at 300 Amps unless otherwise specified.

\* Merlin 6000 GST @ 300A

# Auto-Cut™ 300<sub>2</sub>

## Automated Plasma Cutting System

<b>Rated Output</b>	300 Amps
<b>Output Range (A)</b>	10 - 300 Amps
<b>Output (V)</b>	80 - 180V
<b>Input Volts</b>	208-230/460V, 3ph, 50-60 Hz, 400V, 3 ph, 50-60 Hz, 600V, 3 ph, 50-60 Hz
<b>Input Amps @ Rated Output</b>	206A @ 208V 181A @ 230V 112A @ 460V, 109A @ 400V 78A @ 600V
<b>Duty Cycle (@104°F / 40°C)</b>	100% @ 300A @ 180V (54kW)
<b>MAX OCV</b>	380 VDC
<b>Pre-Flow Gas</b>	Air @ 120psi (8.3 bar)
<b>Plasma Gas</b>	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> , Air @ 120psi (8.3 bar)
<b>Shield Gas</b>	Air, N <sub>2</sub> @ 120 psi (8.3bar) H <sub>2</sub> O 55 psi (3.8bar) @ 10 GPH (0.6 l/min).
<b>Weight</b>	Power Supply - 535 lbs. (243kg) Torch Assy & Mounting Tube - 3 lbs. (1.3kg) Lead Set (15ft/4.6m) - 12 lbs. (5.4kg) Torch Leads (per ft.) - 0.8 lb. (0.36kg) Torch Solenoid Assy - 3 lbs. (1.36kg)
<b>Dimensions</b>	53.1" (1298mm) H x 27.5" (700mm) W x 38.5" (978mm) D (Fully Assembled Power Supply)
<b>Warranty</b>	Two Years Power Supply & One Year Torch
<b>Certifications</b>	CE, CCC, CSA

### AUTO-CUT 300<sub>2</sub> Automated Systems include:

- 300A Power Supply
- XT-301 Torch and leads
- Torch Parts Kit
- GCM-2000
- RAS-1000

### Options & Accessories:

- Spare Parts Kit
- Wheel Kit

For complete ordering information contact Thermal Dynamics or your local Thermal Dynamics Automation Distributor.

#### DISTRIBUTED BY:

--

### Cutting Speed Chart

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

Torch Model		XT™-301				
Production Piercing & Cutting Capacity		1.5" (40mm)				
Maximum Piercing & Cutting Capacity		1.75" (45mm)				
Maximum Edge Start		3.0" (75mm)				
Material	Thickness Inch	Speed IPM	Amps	Plasma/Shield	Thickness mm	Speed mm/min.
<b>Mild Steel</b>						
	10 ga.	190	55	Air/Air	3	5460
	3/16	130			5	3180
	10 ga.	180	55	O <sub>2</sub> /Air	3	5830
	3/16	120			5	2920
	1/4	150	100	Air/Air	6	4150
	3/8	85			10	2120
	1/2	75			12	1960
	1/4	130	100	O <sub>2</sub> /Air	6	3610
	1/2	57			12	1580
	3/8	130	200	Air/Air	10	3190
	1/2	100			12	2710
	3/8	160	200	O <sub>2</sub> /Air	10	390
	1/2	125			12	340
	3/4	100	300	O <sub>2</sub> /Air	20	2540
	1	70			25	1780
	1-1/2	35			40	660
<b>Stainless Steel</b>						
	10 ga.	100	55	Air/Air	4	2180
	3/16	60			5	1450
	1/4	100	100	Air/Air	6	3020
	3/8	65			10	1580
	1/2	45			12	1260
	1/4	60	100	N <sub>2</sub> /H <sub>2</sub> O	6	1750
	3/8	50			10	1210
	1/2	35			12	970
	3/8	50	100	Ar-H <sub>2</sub> /N <sub>2</sub>	10	1220
	1/2	37			12	1010
	1/2	145	200	Air/Air	12	3990
	3/4	80			20	1880
	1/2	65	200	H35/N <sub>2</sub>	12	1790
	3/4	40			20	980
	3/4	55	300	N <sub>2</sub> /H <sub>2</sub> O	20	1320
	1	40			25	1030
	3/4	55	300	H35/N <sub>2</sub>	20	1320
	1	35			25	920
<b>Aluminum</b>						
	16 ga.	400	55	Air/Air	2	8790
	3/16	100			5	2360
	1/4	100	100	Air/Air	6	2650
	1/2	45			12	1310
	3/4	35			20	890
	1/4	60	100	N <sub>2</sub> /H <sub>2</sub> O	6	1640
	3/8	50			10	1210
	1/2	35			12	970
	3/8	60	100	Ar-H <sub>2</sub> /N <sub>2</sub>	10	1450
	1/2	40			12	1130
	3/4	70	200	H35/N <sub>2</sub>	20	1750
	1	40			25	1060
	1/2	120	200	Air/Air	12	2500
	3/4	70			20	1060
	3/4	80	300	N <sub>2</sub> /H <sub>2</sub> O	20	1960
	1	60			25	1560
	3/4	110	300	H35/N <sub>2</sub>	20	2680
	1	85			25	2190

Note: Take care in comparison. The speeds noted above are best cut speeds. Often, competitors show maximum cutting speeds. Although much higher speeds can be achieved, edge quality and bevel angle may be compromised. The capabilities shown in this table were obtained by using new consumables, correct gas and current settings, accurate torch height control and with the torch perpendicular to the workpiece. The operating chart does not list all processes available for the Auto-Cut 300<sub>2</sub>. Please contact Thermal Dynamics for more information.

U.S. Plasma Automation Customer Care: 866-279-2628 / FAX 800-221-4401 • International Customer Care: 905-827-9777 / FAX 905-827-9797

[www.thermal-dynamics.com](http://www.thermal-dynamics.com)



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

A Global Cutting & Welding Market Leader™

#### THE AMERICAS

Denton, TX USA  
U.S. Customer Care  
Ph: (1) 800-426-1888  
Fax: (1) 800-535-0557

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

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  
Customer Care  
Ph: (39) 0236546801  
Fax: (39) 0236546840

#### 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