



THERMAL DYNAMICS®

AUTOMATION

Auto-Cut 300₂TM

Automated Plasma Cutting System

Now with SpeedLokTM
Technology

- **MaximumLife[®] Consumables - Best Parts Life in its Class**
- **High Speed Oxygen Cutting**
- **XTTM-301 Torch**
- **Water Mist Secondary (WMS[®])**



Automated Plasma Cutting System

Automated Plasma Cutting

Auto-Cut™ 300₂

Automated Plasma Cutting System

Quality

- Excellent, virtually dross-free cuts using Oxygen (O₂) 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 300₂
Power Supply

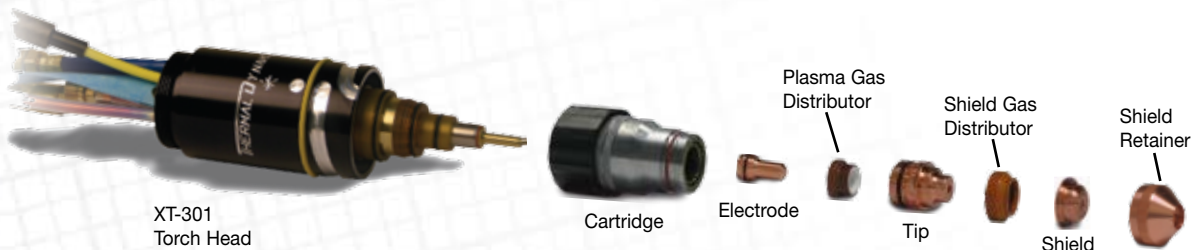


GCM-2000
Gas Control
Console



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

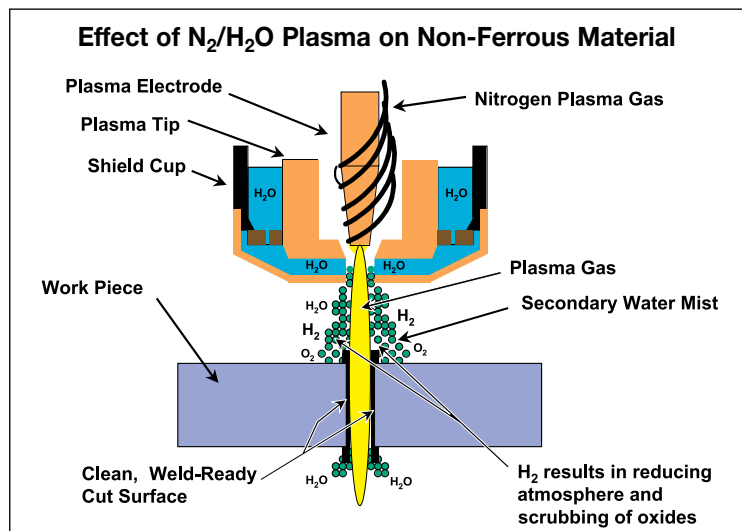
XT™-301 Torch Technology



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_2 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.

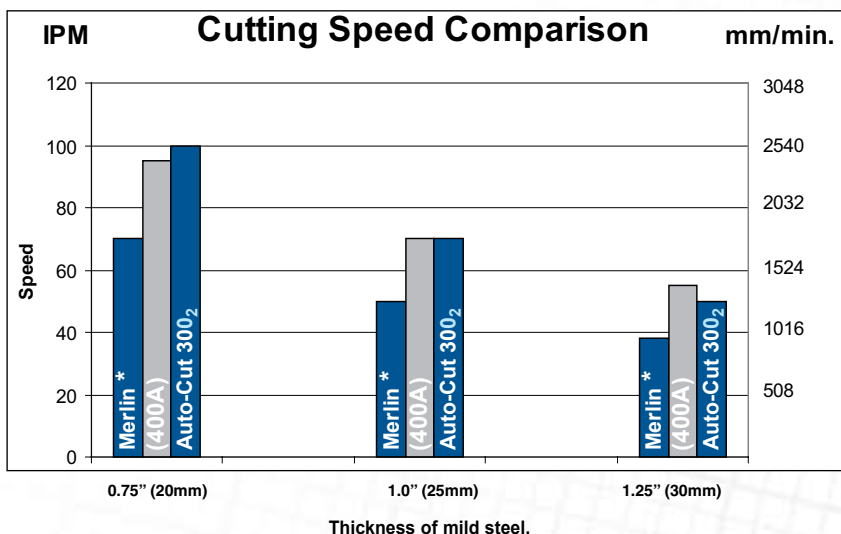
Competitive Comparison

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™ 300₂

Automated Plasma Cutting System

| | |
|-----------------------------------|---|
| Rated Output | 300 Amps |
| Output Range (A) | 10 - 300 Amps |
| Output (V) | 80 - 180V |
| Input Volts | 208-230/460V, 3ph, 50-60 Hz, 400V, 3 ph, 50-60 Hz, 600V, 3 ph, 50-60 Hz |
| Input Amps @ Rated Output | 206A @ 208V 181A @ 230V 112A @ 460V, 109A @ 400V 78A @ 600V |
| Duty Cycle (@104°F / 40°C) | 100% @ 300A @ 180V (54kW) |
| MAX OCV | 380 VDC |
| Pre-Flow Gas | Air @ 120psi (8.3 bar) |
| Plasma Gas | Air, O ₂ , Ar-H ₂ , N ₂ , Air @ 120psi (8.3 bar) |
| Shield Gas | Air, N ₂ @ 120 psi (8.3bar) H ₂ O 55 psi (3.8bar) @ 10 GPH (0.6 l/min). |
| Weight | 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) |
| Dimensions | 53.1" (1298mm) H x 27.5" (700mm) W x 38.5" (978mm) D (Fully Assembled Power Supply) |
| Warranty | Two Years Power Supply & One Year Torch |
| Certifications | CE, CCC, CSA |

AUTO-CUT 300₂ 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:

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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. |
| Mild Steel | | | | | | |
| | 10 ga. | 190 | 55 | Air/Air | 3 | 5460 |
| | 3/16 | 130 | | | 5 | 3180 |
| | 10 ga. | 180 | 55 | O ₂ /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 ₂ /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 ₂ /Air | 10 | 390 |
| | 1/2 | 125 | | | 12 | 340 |
| | 3/4 | 100 | 300 | O ₂ /Air | 20 | 2540 |
| | 1 | 70 | | | 25 | 1780 |
| | 1-1/2 | 35 | | | 40 | 660 |
| Stainless Steel | | | | | | |
| | 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 ₂ /H ₂ O | 6 | 1750 |
| | 3/8 | 50 | | | 10 | 1210 |
| | 1/2 | 35 | | | 12 | 970 |
| | 3/8 | 50 | 100 | Ar-H ₂ /N ₂ | 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 ₂ | 12 | 1790 |
| | 3/4 | 40 | | | 20 | 980 |
| | 3/4 | 55 | 300 | N ₂ /H ₂ O | 20 | 1320 |
| | 1 | 40 | | | 25 | 1030 |
| | 3/4 | 55 | 300 | H35/N ₂ | 20 | 1320 |
| | 1 | 35 | | | 25 | 920 |
| Aluminum | | | | | | |
| | 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 ₂ /H ₂ O | 6 | 1640 |
| | 3/8 | 50 | | | 10 | 1210 |
| | 1/2 | 35 | | | 12 | 970 |
| | 3/8 | 60 | 100 | Ar-H ₂ /N ₂ | 10 | 1450 |
| | 1/2 | 40 | | | 12 | 1130 |
| | 3/4 | 70 | 200 | H35/N ₂ | 20 | 1750 |
| | 1 | 40 | | | 25 | 1060 |
| | 1/2 | 120 | 200 | Air/Air | 12 | 2500 |
| | 3/4 | 70 | | | 20 | 1060 |
| | 3/4 | 80 | 300 | N ₂ /H ₂ O | 20 | 1960 |
| | 1 | 60 | | | 25 | 1560 |
| | 3/4 | 110 | 300 | H35/N ₂ | 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 300₂. Please contact Thermal Dynamics for more information.

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