

**THERMAL  
DYNAMICS**

# AUTOMATED PLASMA CUTTING SYSTEMS

*Thermal Dynamics® introduces*

## AUTO-CUT XT SYSTEMS

The new Auto-Cut® XT systems deliver the next step in flexibility and reliability in heavy plate cutting applications.

- MaximumLife® Parts to Lower Operating Costs
- Increased Productivity for Greater Profits
- Water Mist Secondary (WMS®) for Low Cost, High Quality Cutting on Non-Ferrous Metals



***We Bring Intelligence to the Table.™***

Thermal Dynamics® introduces

# AUTO-CUT XT SYSTEMS

*Auto-Cut 200 XT & 300 XT systems deliver premium cut performance on both mild steel and non-ferrous metals. These power supplies are designed for reliable, low cost operation. Features like the XT™-301 consumable parts cartridge and the Machine Status Message Center make these models easy to operate.*

## The Flexibility to Cut Thick or Thin on All Kinds Of Metals

XT-301 consumable parts are available for cutting metals from 1 mm to a 25 mm plate (35 mm for Auto-Cut 300 XT). Auto-Cut XT systems with the XT-301 torch, are normally operated using economical air plasma and air shield gas for cutting mild steel and most non-ferrous metals. This results in high quality surface finishes and low dross cuts.

For even better cut quality on mild steel, Auto-Cut XT models offers O<sub>2</sub> plasma cutting capability. For lowest cost non-ferrous metal cutting and unmatched cut quality, use our unique Water Mist Secondary (WMS®) process with nitrogen plasma and water shield.

If heavy non-ferrous metal cutting is required, switch to Ar-H<sub>2</sub> (H35) and Nitrogen shield for premium non-ferrous metal performance up to 25 mm or 35 mm for Auto-Cut 300 XT.

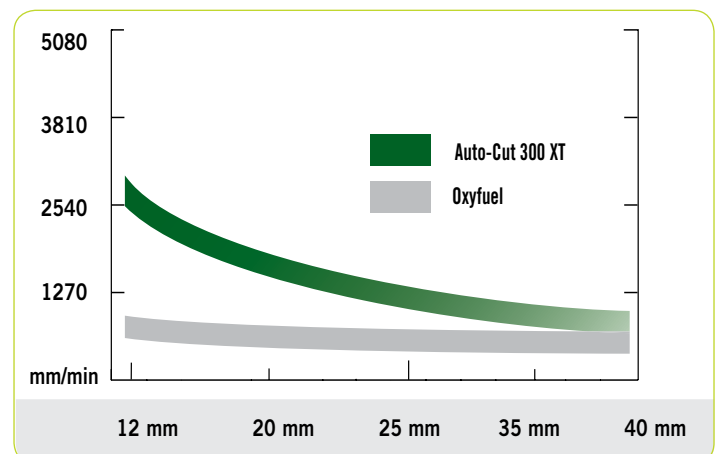


## Cut fast with Air-Air

Thermal Dynamics' patented XT Torch Consumable Technology is ideal for cutting from 1 mm to 25 mm (35 mm for Auto-Cut 300 XT). Excellent quality cuts will be achieved on both ferrous and non-ferrous metals at higher speeds.

- Small heat affected zone and smooth cutting edge surface
- Narrow kerf for tighter angles and radiuses at high speeds
- Wide low dross parameter windows
- Higher arc density for faster speeds without sacrificing cut quality
- Faster cuts with Air/Air on Stainless Steel

## Relative Cutting Speed



## Auto-Cut XT systems offer maximum productivity with reliability and ease

### Productivity

- High cut speed to produce more parts per hour
- With Water Mist Secondary (WMS) the cut speed can be up to 3 times faster than with similar cutting systems
- Highest kW output in its class
- Outstanding parts life
- Reduced downtime during parts changes due to the SpeedLok cartridge design of the XT™ 301-Torch

### Reliability

- Exhaustive lab testing and field trials ensure on-going performance and reliability

### Technology

- Microprocessor controlled to produce the best cut quality
- Precision torch design offers the best cut quality in its class
- Higher cut speed than H35 with the use of N<sub>2</sub>/H<sub>2</sub>O on non-ferrous metals

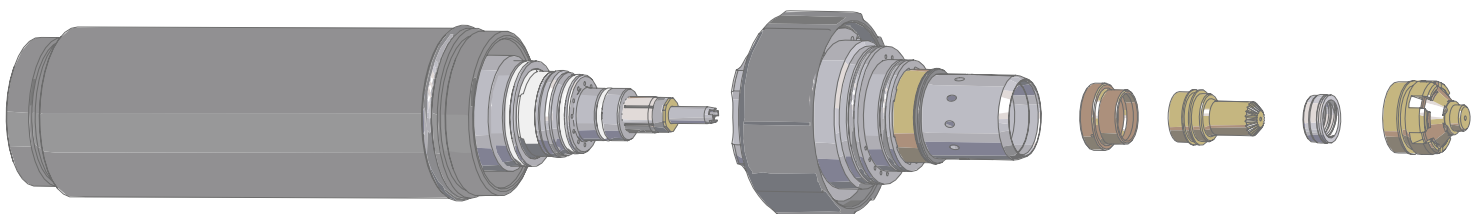
## XT™ 301-Torch Technology

Thermal Dynamics XT Torch Technology delivers productivity and reliability.

- Keyless consumable cartridges for rapid process changes
- Precision construction insuring accurate re-centering of consumable cartridge after parts change
- Rapid engagement SpeedLock retaining collar
- Liquid cooled consumable parts electrical connections
- Spring loaded leak-less coolant tube design
- Increased cooling of tip and electrode
- Improved life through patent alignment control

### Ease of Use

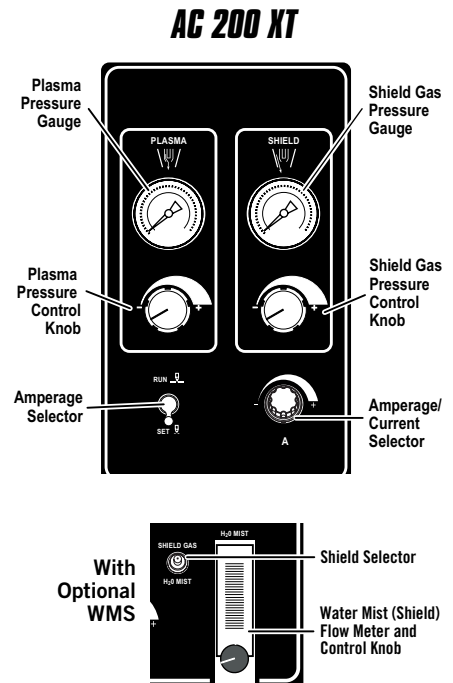
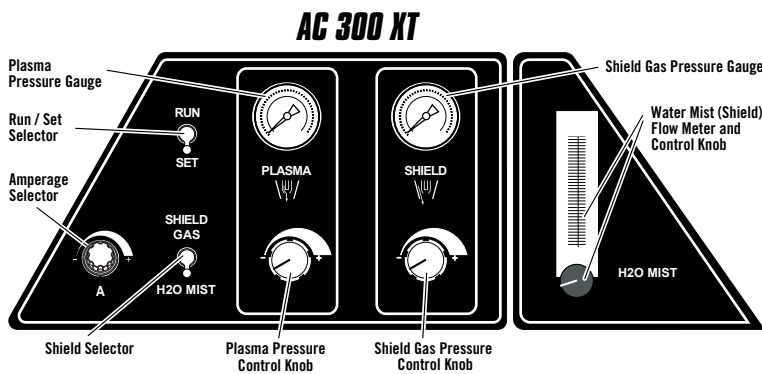
- Fast and easy installation
- Simple set-up and user-friendly gas console
- SpeedLok™ quick-change consumable design
- Easy to identify and troubleshoot problems



# We Bring Intelligence to the Table.™

## Full Featured Gas Control

Plasma, secondary pressures and flows are precisely controlled at the power supply with individual single stage regulators. Changing from the secondary gas to water mist secondary is simple with the front panel mounted selector switch.

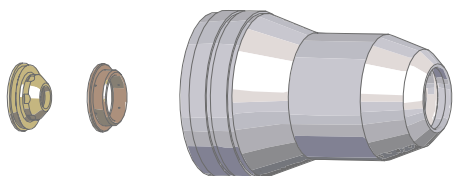
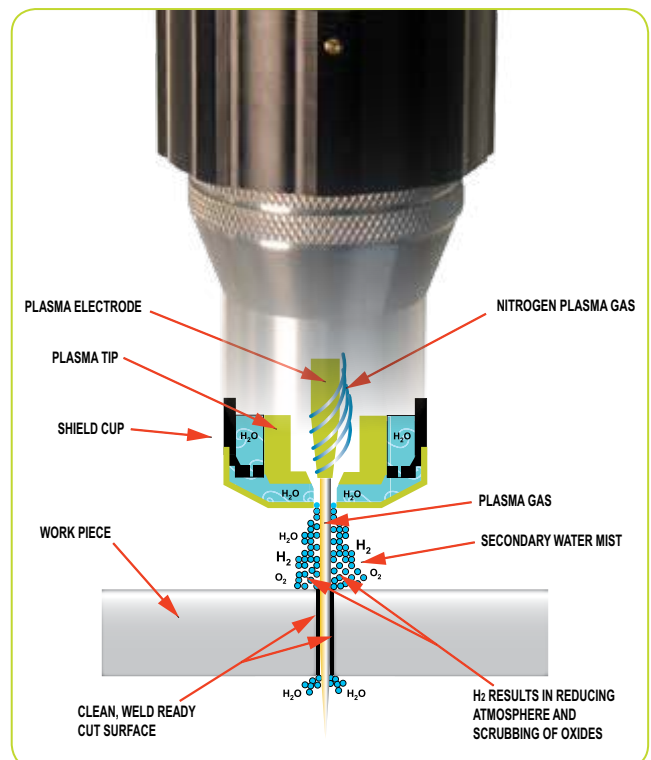


## Water Mist Secondary (WMS) optimizes non-ferrous metal cutting (optional for Auto-Cut 200 XT)

### WMS Benefits

- Excellent non-ferrous metal cut quality using N<sub>2</sub> as plasma gas and ordinary tap water as the secondary
- Lowest operating cost
- Dross-free cutting from 1 mm to 20 mm
- Oxide-free cut face surface
- Wide parameter window
- Easy-to-use
- High cut speeds compared to H35 cutting
- Standard with AC 300, Optional with AC 200

### N<sub>2</sub> / H<sub>2</sub>O Plasma on Non-Ferrous



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## Specifications



### Auto-Cut 200 XT

#### Unit Specifications\*

Rated Output (Amps)	200 A
Output Range (Amps)	5-200 A
Output (Volts)	170 V
Input Volts (Volts, Phase, Hertz)	400V, 3 ph, 50-60 Hz
Input Amps (Amps, Volts)	60 A @ 400 V
Duty Cycle (@ 104°F / 40° C)	100% (40 kW)
Max OCV @ 400V	425 V
Plasma Gas	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 8.3 bar
Shield Gas	Air, N <sub>2</sub> @ 8.3 bar
Water Mist Secondary (WMS) (Optional)	H <sub>2</sub> O @ 0.6 l/min
Power Supply Weight	215 kg
Dimensions (H x W x D)	1219 mm x 698 mm x 1031 mm

#### Cutting Capacity

	Mild Steel	Stainless Steel	Aluminium
Production Piercing	25 mm	25 mm	25 mm
Maximum Piercing	35 mm	35 mm	35 mm
Maximum Edge Start	50 mm	50 mm	50 mm



### Auto-Cut 300 XT

#### Unit Specifications\*

Rated Output	300 A
Output Range	5-300 A
Output	180 V
Input Volts	400V, 3 ph, 50-60 Hz
Input Amps	93 A @ 400 V
Duty Cycle (@ 104°F / 40° C)	100% (60 kW)
Max OCV @ 400V	425 V
Plasma Gas	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 8.3 bar
Shield Gas	Air, N <sub>2</sub> @ 8.3 bar
Water Mist Secondary (WMS)	H <sub>2</sub> O @ 0.6 l/min
Power Supply Weight	268 kg
Dimensions (H x W x D)	1371 mm x 698 mm x 1031 mm

#### Cutting Capacity

	Mild Steel	Stainless Steel	Aluminium
Production Piercing	35 mm	35 mm	35 mm
Maximum Piercing	40 mm	40 mm	40 mm
Maximum Edge Start	70 mm	70 mm	70 mm

\* Subject to change without notice



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## Cut Speeds with Reliable Performance

Cutting Speed Chart For Auto-Cut XT Systems

Material	Amps	Plasma /Shield	Thickness (mm)	Speed mm/min.		
Mild Steel	55	Air/Air	1	11500		
			3	5460		
			5	3180		
	100	Air/Air	6	4150		
			12	1960		
			20	720		
			25	520		
	200	Air/Air	10	3190		
			12	2710		
			20	1430		
			25	920		
			300	Air/Air	12	2790
			20	1960		
			25	1300		
		35	920			
		38	510			
		50	220			
		70	100			
Stainless Steel	55	Air/Air	1.5	9750		
			4	2180		
			5	1450		
	100	Air/Air	6	3020		
			10	1580		
			12	1260		
	100	N <sub>2</sub> /H <sub>2</sub> O	6	1750		
			10	1210		
			12	970		
	200	N <sub>2</sub> /H <sub>2</sub> O	20	1450		
			25	1000		
			300	Air/Air	20	3020
			25	1750		
			35	1060		
Aluminium	55	Air/Air	2	8790		
			5	2360		
			100	Air/Air	6	2650
	100	Air/Air	12	1310		
			20	890		
			100	N <sub>2</sub> /H <sub>2</sub> O	6	1640
	100	N <sub>2</sub> /H <sub>2</sub> O	10	1210		
			12	970		
			200	N <sub>2</sub> /H <sub>2</sub> O	20	1700
	200	N <sub>2</sub> /H <sub>2</sub> O	25	1000		
			300	Air/Air	20	1600
					25	1490
			35	1320		



WMS Cut Example



Examples for 15 mm on Aluminium and 20mm on Stainless Steel

Air/Air Cut Example



Example for 20mm cutting with Air/Air on Mild Steel

Note: The cutting speed chart includes preliminary data and is subject to change without notice. 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 200 & 300 XT. Please contact Thermal Dynamics for more information.

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