THERMAL DYNAMICS®

AUTOMATION

Ultra-Cut®

High Precision Plasma Cutting System

Best Parts Life In It's Class @ 400A!

Your Partner in Plasma Automation

Automated Plasma Cutting

High Precision Plasma Cutting

The Ultra-Cut® delivers premium precision plasma cutting on mild steel and non-ferrous alloys. For non-ferrous material, **select our unique Water Mist Secondary process** for **best in class cut quality**. In addition, the Ultra-Cut systems can also be used for clean, efficient, **plasma marking** without having to change consumables.

Ultra-Cut Power Supply

Quality

- Excellent dross-free cuts using oxygen (O_2) plasma on mild steel
- Unmatched cut quality on non-ferrous materials by using Thermal Dynamics unique Water Mist Secondary (WMS®) process

Ease of Use

- Fast and easy installation
- Simple set-up and user-friendly gas console
- Quick-change consumable design, SpeedLok™
- Easy to identify and troubleshoot problems
- The automated Digital Flow Control increases ease of use and provides improved cut consistency

Automated Digital Flow Control (DFC-3000)

Productivity

- Highest cut speed in its class on stainless steel. 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™-Torch
- Fastest switching times between marking and cutting processes


GCM-2010 Digitally Controlled Manual Gas Console

RAS-1000 Remote Arc Starter

Technology

- Microprocessor controlled to produce the best cut quality
- Fiber optic communication decreases HF interference
- Precision torch design offers the best cut quality in its class
- Higher cut speed than H35 with the use of N_2/H_20 on non-ferrous

Reliability

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

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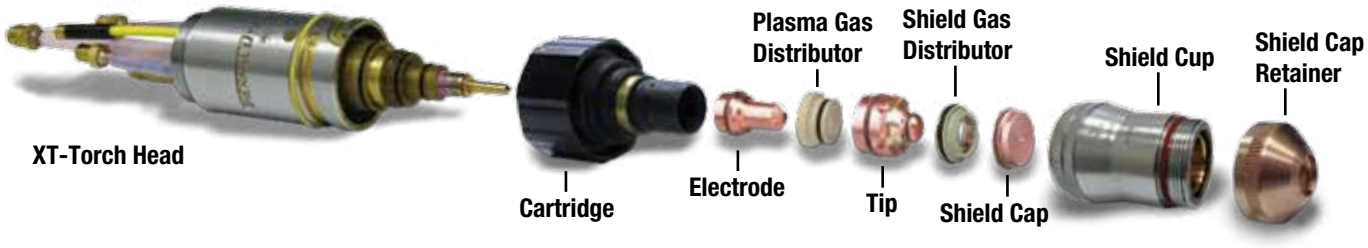
XT™-Torch Technology

Unique 'Keyless' Consumables Cartridge

The unique, SpeedLok™ Consumables Cartridge houses consumable parts only, no built-in head/torch body to drive replacement costs up. Changing cartridges is fast and easy – a couple of twists and the unique 'rapid engagement' retaining collar threads release the cartridge. Down-time is reduced to seconds and you can change from one process to another or from one application to another quickly and easily.



No Tools Required

Unlike other torches, no tools are required to change either the torch consumables or major components in the Torch Head.

'Leakless' Torch Head Design

Coolant doesn't drip from the torch head when the consumables cartridge is removed from the torch head.

Prevents air from entering the system and becoming trapped in the leads.

Self-centering Components

Consumable parts and torch body are precisely engineered to lock into place for absolute alignment and remain positioned cut after cut. Independently-aligned tip and electrode assures accurate re-centering of the consumable cartridge after each parts change. This guarantees best cut quality again and again.

Superior Warranty

Thermal Dynamics' XT-Torch warranty covers components and service for a full 1-year period.

Precision Cuts on all Metals

The XT-Torch dual gas technology provides the highest arc density plasma stream in the industry for precision cuts on mild steel, stainless steel, aluminum and other non-ferrous materials. Choices for plasma gas include Air, N_2, O_2 or Ar-H_2, shield gas choices include Air, N_2, O_2, H_2O, or Ar-H_2.

Relaxed Cutting Parameters

With the XT-Torch the operating window permits wide travel speed variance which means you'll get great cuts more often and less wasted material and time.

- Less critical standoff height
- Wider 'Operating Window' for dross-free cutting

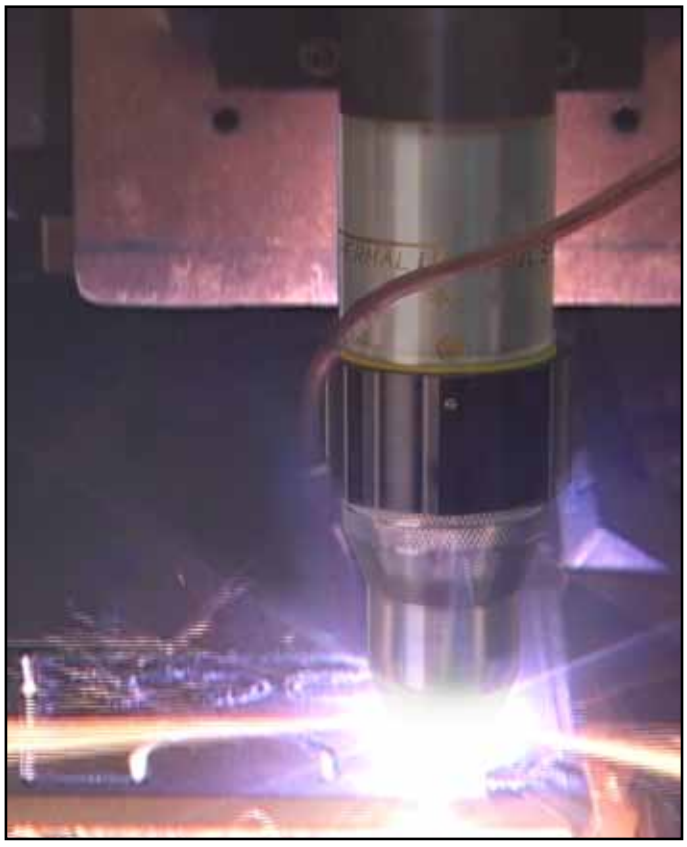
Automated Plasma Cutting

Automated Digital Flow Control (DFC-3000)

Designed specifically for use with the high-precision Ultra-Cut systems, the automated DFC-3000 (Digital Flow Control) consists of three separate modules.

- The **TSC-3000 (Touch Screen Controller)** offers the only touch screen in the plasma industry today. The interface allows operators to quickly choose one of potentially 1000's of stored programs and start cutting by touching the green "Go" button. Future software upgrades can be made through the standard USB port.

- With the TSC-3000 older CNC's can also be used with an automatic gas console. No new CNC has to be purchased.



- The **DMC-3000 (Digital Manifold Control)** functions as the central manifold for all incoming gases. Having (7) inputs and (5) outputs, this unit enables the gas to be used according to the program selected.

- The **DPC-3000 (Digital Pressure Control)** controls/maintains gas flows and pressures needed to optimize the cutting process. The unit is normally mounted within 4' (1.2 m) of the cutting torch to minimize time to switch between processes.

- This automated Digital Flow Control system reduces set up time, minimizes set up errors, provides consistent performance, and offers the industry's only touch screen controller for easy set up and operation.

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Why choose the automated Digital Flow Control?

- Easier to use
- No setup errors
- No need for CNC to control the DFC
- Uses the same parts for cutting and marking
- Reduced set up times
- Consistent cut quality
- Improved parts life and cut quality
- Easily switch between marking and cutting
- Integrates easily to most CNC's

TSC-3000 with Material Screen Shot

Marking Samples

Three Easy Setup Steps

1. Select the material
2. Select the thickness
3. Select the cut type
   - Best
   - Fastest
   - Robotic Bevel

You're Done!

When To Choose The Automated Digital Flow Control

Consider the automated DFC for:

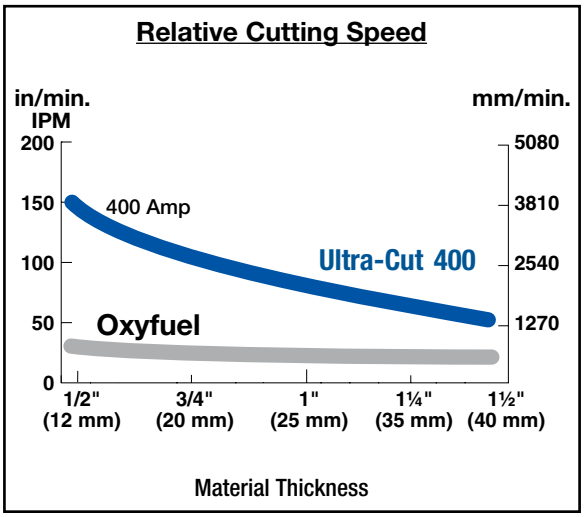
- Easy setup
- More consistent cut quality
- Plasma marking
- When applications call for frequent changes in material types or thicknesses
- Optimizing cut quality
- Controlling the Ultra-Cut® system automatically

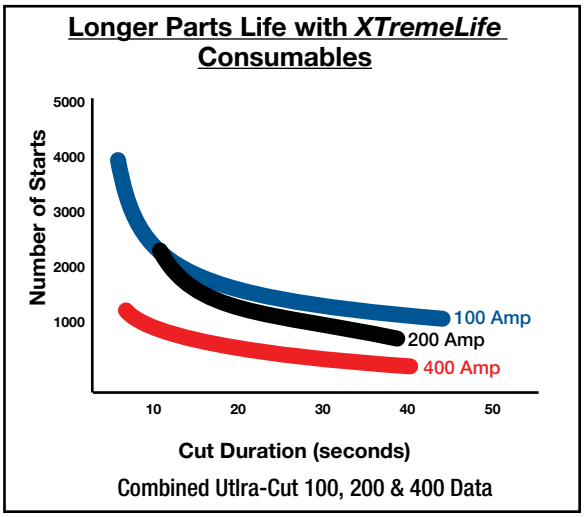
Automated Plasma Cutting

XTremeLife™ Consumables For Mild Steel

The *XTremeLife* technology delivers the parts life and cut quality on mild steel with O_2 plasma that the high-end customer expects. Unrivaled cut quality from gauge (0.5 mm) to 2" (50 mm) material with the widest range of consumables in the market.

- Bevel angles range three or better according to ISO 9013
- Square cut face with minimal top edge rounding
- Smooth cut edge surface
- Virtually dross-free parameter window up to 2" (50 mm)
- Consistent cut quality over entire parts life





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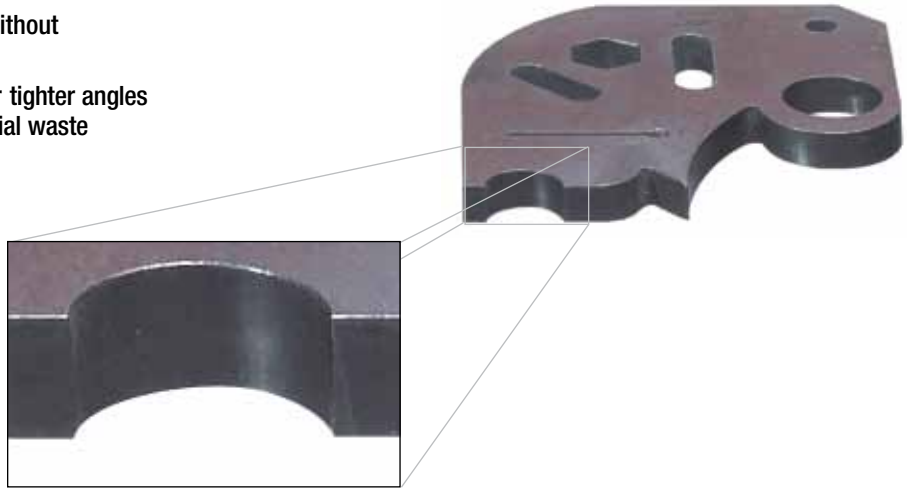
Ultra-Cut® 400 vs Oxyfuel

- Averages 3 times faster cut speeds
- Pierces 1¼" (35 mm) in 1.5 seconds
- One Ultra-Cut 400 can replace up to 4 oxy-fuel torches - each requiring their own height controls.
- Ultra-Cut 400 provides superior stainless steel and aluminum cut quality
- Higher arc density equals faster speeds without sacrificing cut quality
- Smaller tip orifices create a narrow kerf for tighter angles and radiuses at higher speeds - less material waste
- Patented consumable technology



1/2" (12 mm) Cut Sample (detail)

XTR™ Robotic Torch

- Specifically designed for the Ultra-Cut® precision cutting systems
- One of the shortest Robotic torches on the market for ease of articulation and improved access. Only 9.3 (236 mm) in length
- Profile/Bevel consumables for improved access and bevel cutting

Easy Access Consumables

- Ultra-light, ultra-flexible, robust torch leads
- Torch mounting indicators for positive torch positioning
- Position teach tool for point to point programming

New 15A and 30A O2 consumables

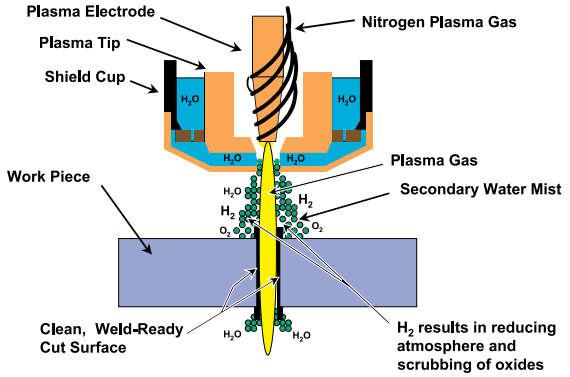
Automated Plasma Cutting

Water Mist Secondary (WMS®) For Non-Ferrous Materials

WMS delivers excellent non-ferrous cut quality and 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. The reducing atmosphere decreases oxidation on the cut face surface. WMS is recommended for materials up to 1½" (25 mm) thick.

Cutting Aluminum with the Ultra-Cut® 200

Effect of N_2/H_2O Plasma on Non-Ferrous



The WMS process uses nitrogen as the plasma gas while water is used as the secondary gas (shield gas). The water in the torch is divided into its principal components (hydrogen and oxygen) during the cutting process. The majority of the water used during the process (from 4 to 8 GPH (0.25 to 0.5 l/min)) is converted to principal components (gas) and thereby does not require disposal.

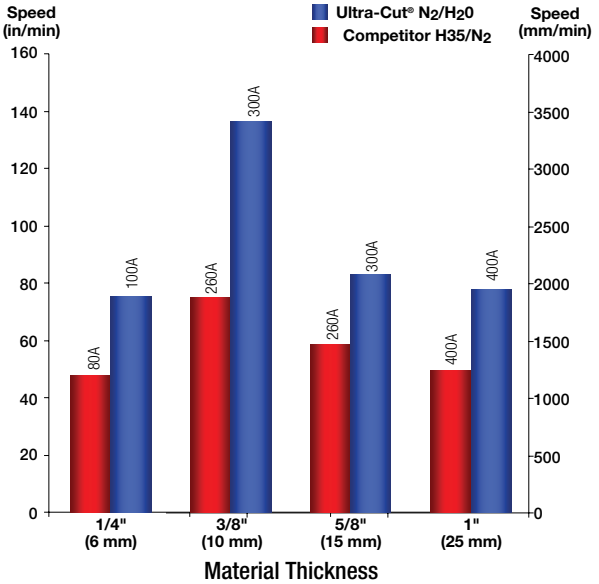
WMS Benefits

- Lowest operating cost
- Up to 3 times faster cutting speeds than H35
- Dross-free cutting
- Oxide-free cut surface
- Wide parameter window
- Easy to use
- Laser-like cut quality on Aluminum
- Small heat effected zone
- Less distortion
- Same weldability as H35

Example for 3/4" (20 mm) with WMS

Example for 1/4" (6 mm) Aluminum cut with WMS

Stainless Steel - Cutting Speed Comparison



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How To Select The Right System

	Ultra-Cut® 100	Ultra-Cut 200
Production Pierce	1/2" (12 mm)	1" (25 mm)
1/4" (6 mm)	150 ipm (3.21m/min)	200 ipm (5.08 m/min)
1/2" (12 mm)	64 ipm (1.63 m/min)	115 ipm (2.92 m/min)
3/4" (20 mm)	25 ipm (0.64 m/min)	65 ipm (1.65 m/min)
1" (25 mm)	————	48 ipm (1.22m/min)

	Ultra-Cut 300	Ultra-Cut 400
Production Pierce	1½" (40 mm)	2" (50 mm)
1/4" (6 mm)	————	————
1/2" (12 mm)	140 ipm (3.55 m/min)	150 ipm (3.21 m/min)
3/4" (20 mm)	100 ipm (2.54 m/min)	115 ipm (2.92 m/min)
1" (25 mm)	70 ipm (1.78 m/min)	80 ipm (2.10 m/min)
1½" (40 mm)	35 ipm (0.9 m/min)	45 ipm (1.10 m/min)
2" (50 mm)	————	30 ipm (0.7 m/min)

*Cut speeds using O_2/Air on Mild Steel at max output current.

Automated Plasma Cutting

Ultra-Cut® 100

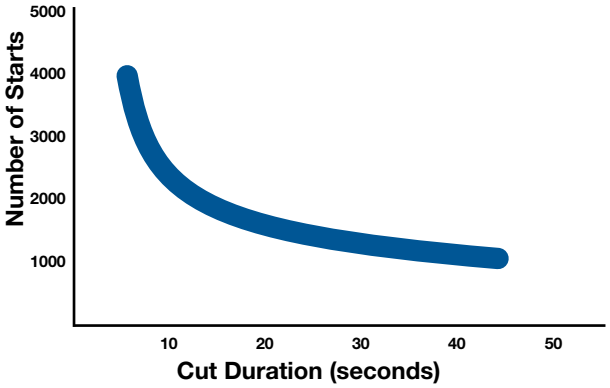
High Precision Plasma Cutting System

- **Production cut: 1/2" (12 mm)**
- **Maximum cut: 3/4" (20 mm)**
- **Ideal for robotic applications**

Specifications (subject to change without notice)

Rated Output	100 Amps
Output Range (A)	10 - 100 Amps
Output (V)	80 - 180V
Input Volts	208-230/460V, 3ph, 50-60 Hz, 400V, 3ph, 50-60 Hz, 600V, 3ph, 50-60 Hz
Input Amps @ Rated Output	60A @ 208V, 50A @ 230V, 35A @ 400V, 33A @ 460V, 26A @ 600V
Duty Cycle (@104˚F / 40˚C)	100% @ 100A @ 180V (18kW)
MAX OCV	380 VDC
Pre-Flow Gas	Air @ 120 psi (8.3bar)
Plasma Gas	O_2, H35, N_2, Air @ 120 psi (8.3bar)
Shield Gas	O_2, N_2, Air @ 120 psi (8.3bar) H_20 @ 10 GPH (0.6 l/min)
Weight	Power Supply - 343 lbs. (156kg)
Dimensions	H 41.5" (1054 mm) x W 27.5" (700 mm) x D 38.5" (978 mm) (Fully Assembled Power Supply)
Warranty	Two Years Power Supply & One Year Torch
Certifications	CE, CCC, CSA

Longer Parts Life with *XTremeLife*™ Consumables



Data obtained by cutting 3/8" (10 mm) with O_2 @ 100 Amps

Cutting Speed Chart

Torch Model	XT™-Torch
Production Piercing & Cutting Capacity (Mild Steel)	**1/2" (12 mm)**
Maximum Piercing & Cutting Capacity (Mild Steel)	**5/8" (15 mm)**
Maximum Edge Start (Mild Steel)	**3/4" (20 mm)**

Material	Thickness Inch	Speed IPM	Amps	Plasma/ Shield	Thickness mm	Speed mm/min.
Mild Steel						
	20 ga.	130	30	O_2/O_2	1	3050
	10 ga.	30			3	910
	10 ga.	210	70	O_2/Air	3	6620
	1/4	120			6	3100
	3/16	190	100	O_2/Air	5	4670
	1/4	150			6	4030
	3/8	95			10	2300
	1/2	64			12	1800
	5/8	50			15	1370
Stainless Steel						
	26 ga.	350	30	Air/Air	0.6	8300
	20 ga.	300			1	7190
	16 ga.	110			1.5	3100
	14 ga.	170	50	N_2/H_20	2	4310
	12 ga.	150			3	3660
	3/16	70			5	1523
	10 ga.	120	70	N_2/H_20	3	3040
	3/16	90			5	2140
	1/4	50			6	1495
	1/4	72	100	N_2/H_20	6	1880
	3/8	55			10	1350
	1/2	42			12	1140
	1/4	70	100	H35/N_2	6	1810
Aluminum						
	16 ga.	140	50	N_2/H_20	2	2990
	11 ga.	60			3	1520
	3/16	40			5	950
	3/8	70	100	N_2/H_20	10	1665
	1/2	40			12	1190
	5/8	35			15	925
	1/2	50	100	H35/N_2	12	1330

Note: This 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 Ultra-Cut 100. Please contact Thermal Dynamics® for more information.

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Ultra-Cut® 200

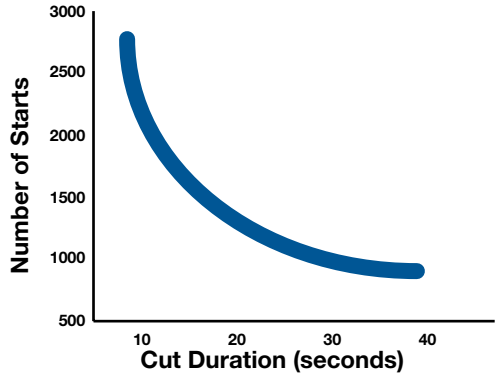
High Precision Plasma Cutting System

- **Production cut: 1" (25 mm)**
- **Maximum cut: 1½" (40 mm)**
- **Handles 85% of applications**
- **Highest cut speeds in the 200A range**

Specifications (subject to change without notice)

Rated Output	200 Amps
Output Range (A)	10 - 200 Amps
Output (V)	80 - 180V
Input Volts	208-230/460V, 3ph, 50-60 Hz, 400V, 3ph, 50-60 Hz, 600V, 3ph, 50-60 Hz
Input Amps @ Rated Output	130A @ 208V, 125A @ 230V, 77A @ 400V, 75A @ 460V, 78A @ 600V
Duty Cycle (@104˚F / 40˚C)	100% @ 200A @ 180V (36kW)
MAX OCV	380 VDC
Pre-Flow Gas	Air @ 120 psi (8.3bar)
Plasma Gas	O_2, H35, N_2, Air @ 120 psi (8.3bar)
Shield Gas	O_2, N_2, Air @ 120 psi (8.3bar) H_20 @ 10 GPH (0.6 l/min)
Weight	Power Supply - 433 lbs. (197kg)
Dimensions	H 41.5" (1054 mm) x W 27.5" (700 mm) x D 38.5" (978 mm) (Fully Assembled Power Supply)
Warranty	Two Years Power Supply & One Year Torch
Certifications	CE, CCC, CSA

Longer Parts Life with *XTremeLife*™ Consumables



Data obtained by cutting 5/8" (15 mm) with O_2 @ 200 Amps

Cutting Speed Chart

Torch Model	XT™-Torch
Production Piercing & Cutting Capacity (Mild Steel)	**1" (25 mm)**
Maximum Piercing & Cutting Capacity (Mild Steel)	**1½" (40 mm)**
Maximum Edge Start (Mild Steel)	**2½" (65 mm)**

Material	Thickness Inch	Speed IPM	Amps	Plasma/ Shield	Thickness mm	Speed mm/min.
Mild Steel						
	20 ga.	130	30	O_2/O_2	1	3050
	10 ga.	30			3	910
	10 ga.	210	70	O_2/Air	3	6620
	1/4	120			6	3100
	1/4	150	100	O_2/Air	6	4030
	3/8	95			10	2300
	1/2	64			12	1800
	5/8	50			15	1370
	1/2	100	150	O_2/Air	12	2650
	3/4	50			20	1120
	1	25			25	650
	3/4	65	200	O_2/Air	20	1590
	1	48			25	1250
Stainless Steel						
	20 ga.	300	30	N_2/H_20	1	7190
	16 ga.	110			1.5	3100
	14 ga.	170	50	N_2/H_20	2	4310
	12 ga.	150			3	3660
	3/16	70			5	1523
	3/16	90	70	N_2/H_20	5	2140
	1/4	50			6	1495
	1/4	72	100	$H35/N_2$	6	1880
	3/8	55			10	1350
	1/2	42			12	1140
	1/4	70	100	N_2/H_20	6	1810
	3/8	70	150	N_2/H_20	10	1740
	1/2	60			12	1580
	5/8	50			15	1250
	3/4	45			20	1140
	3/4	50	200	N_2/H_20	20	1100
	1	35			25	900
	3/4	40	200	$H35/N_2$	20	950
	1	30			25	770
Aluminum						
	11 ga.	60	50	Air/Air	3	1520
	3/16	40			5	950
	1/4	100	100	N_2/H_20	6	2760
	1/2	75	150	$H35/N_2$	12	2100
	5/8	40			15	1260
	3/4	40	150	N_2/H_20	20	960
	3/4	90	200	N_2/H_20	20	2200
	1	50			25	1300
	3/4	70	200	$H35/N_2$	20	1600
	1	40			25	1050

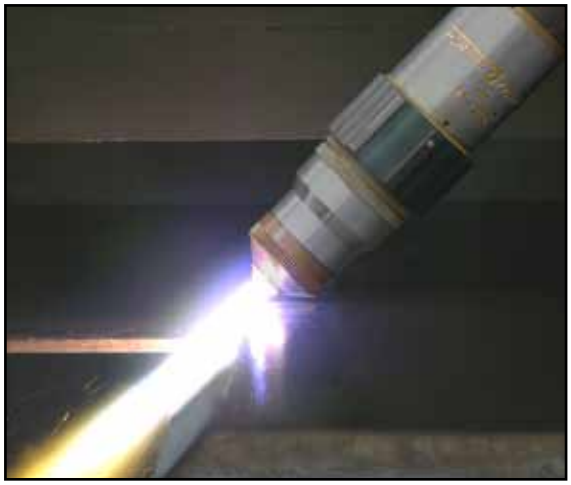
Note: This cutting speed chart includes preliminary data and is subject to change without notice. Take care in comparison. The speeds noted above are best cut speeds. Often, competitors show maximum cutting speeds. Although much higher speeds can be achieved, edge quality and bevel angle may be compromised. 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 Ultra-Cut 200. Please contact Thermal Dynamics® for more information.

Automated Plasma Cutting

Ultra-Cut® 300

***High Precision* Plasma Cutting System**

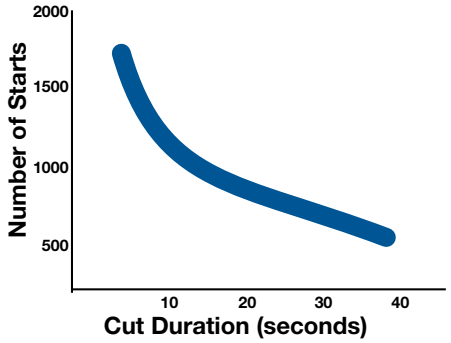
- **Production cut: 1½" (40 mm)**
- **Maximum cut: 1¾" (45 mm)**
- **Ideal for bevel cutting up to 45° on 1½" (40 mm)**
- **Up to 3x faster than a single oxyfuel torch**



Specifications (subject to change without notice)

Rated Output	300 Amps
Output Range (A)	10 - 300 Amps
Output (V)	80 - 180VDC
Input Volts	208-230/460V, 3ph, 50-60 Hz, 400V, 3ph, 50-60 Hz, 600V, 3ph, 50-60 Hz
Input Amps @ Rated Output	208A @ 208V, 188A @ 230V, 109A @ 400V, 112A @ 460V, 81A @ 600V
Duty Cycle (@104˚F / 40˚C)	100% @ 300A @ 180V (54kW)
MAX OCV	380 VDC
Pre-Flow Gas	Air @ 120 psi (8.3bar)
Plasma Gas	O_2, H35, N_2, Air @ 120 psi (8.3bar)
Shield Gas	O_2, N_2, Air @ 120 psi (8.3bar) H_20 @ 10 GPH (0.6 l/min).
Weight	Power Supply - 535 lbs. (243kg)
Dimensions	H 53.1" (1298 mm) x W 27.5" (700 mm) x D 38.5" (978 mm) (Fully Assembled Power Supply)
Warranty	Two Years Power Supply & One Year Torch
Certifications	CE, CCC, CSA

Longer Parts Life with *XTremeLife*™ Consumables



Data obtained by cutting 3/4" (20 mm) with O_2 @ 250 Amps

Cutting Speed Chart

Torch Model	XT™-Torch
Production Piercing & Cutting Capacity (Mild Steel)	1½" (40 mm)
Maximum Piercing & Cutting Capacity (Mild Steel)	1¾" (45 mm)
Maximum Edge Start (Mild Steel)	3" (75 mm)

Material	Thickness Inch	Speed IPM	Amps	Plasma/ Shield	Thickness mm	Speed mm/min.
Mild Steel Precision						
	20 ga.	130	30	O_2/O_2	1	3050
	10 ga.	30			3	910
	1/4	120	70	O_2/Air	6	3100
	1/4	150	100	O_2/Air	6	4030
	3/8	95			10	2300
	1	48	200	O_2/Air	25	1250
	1-1/4	30			35	750
	1-1/2	20			40	510
	3/4	100	300	O_2/Air	20	2540
	1	70			25	1780
	1-1/4	50			35	900
	3	7			70	285
Stainless Steel						
	20 ga.	300	30	N_2/H_20	1	7190
	16 ga.	110			1.5	3100
	14 ga.	170	50	N_2/H_20	2	4310
	12 ga.	150			3	3660
	3/16	70			5	1523
	3/16	90	70	N_2/H_20	5	2140
	1/4	50			6	1495
	1/4	72	100	$H35/N_2$	6	1880
	3/8	55			10	1350
	1/4	70	100	N_2/H_20	6	1810
	3/4	50	200	N_2/H_20	20	1100
	1	35			25	900
	1	40	300	N_2/H_20	25	1030
	1-1/4	30			35	760
	1	35	300	$H35/N_2$	25	920
	1-1/4	30			35	760
Aluminum						
	11 ga.	60	50	Air/Air	3	1520
	3/16	40			5	950
	1/4	100	100	N_2/H_20	6	2760
	3/8	70			10	1700
	3/4	90	200	N_2/H_20	20	2200
	1	50			25	1300
	1	60	300	N_2/H_20	25	1560
	1-1/4	40			35	1000
	1	85	300	$H35/N_2$	25	2190

Note: This 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 Ultra-Cut 300. Please contact Thermal Dynamics® for more information.

THERMAL DYNAMICS®

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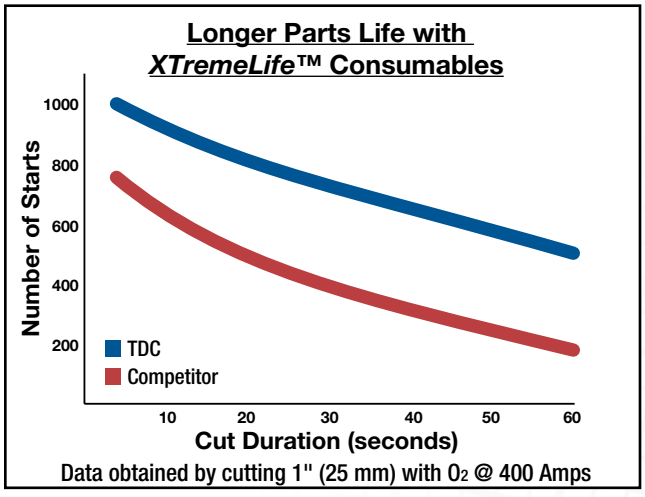
Ultra-Cut® 400

High Precision Plasma Cutting System

- **Production cut: 2" (50 mm)**
- **Maximum cut: 2¼" (60 mm)**
- **Ideal for bevel cutting up to 45° and up to 2" (50 mm)**

Specifications (subject to change without notice)

Rated Output	400 Amps
Output Range (A)	10 - 400 Amps
Output (V)	80 - 200VDC
Input Volts	208-230/460V, 3ph, 50-60 Hz, 400V, 3ph, 50-60 Hz, 460V, 3ph, 50-60 Hz
Input Amps @ Rated Output	336A @ 208V, 304A @ 230V, 174A @ 400V, 148A @ 460V
Duty Cycle (@104˚F / 40˚C)	100% @ 400A @ 200V (80kW)
MAX OCV	380 VDC
Pre-Flow Gas	Air @ 120 psi (8.3bar)
Plasma Gas	O_2, H35, N_2, Air @ 120 psi (8.3bar)
Shield Gas	O_2, N_2, Air, H35 @ 120 psi (8.3bar) H_20 @ 10 GPH (0.6 l/min).
Weight	Power Supply - 636 lbs. (289kg)
Dimensions	H 53.1" (1298 mm) x W 27.5" (700 mm) x D 38.5" (978 mm) (Fully Assembled Power Supply)
Warranty	Two Years Power Supply & One Year Torch
Certifications	CE, CCC, CSA



* Parts life Ultra-Cut 400 with DFC-3000 Automatic Gas Console

Cutting Speed Chart

Torch Model	XT™-Torch
Production Piercing & Cutting Capacity	**2"** (50 mm)
Maximum Piercing & Cutting Capacity (Aluminum)	**2¼"** (60 mm)
Maximum Edge Start	**4"** (100 mm) (SS) **3½"** (90 mm) (MS)

Material	Thickness Inch	Speed IPM	Amps	Plasma/ Shield	Thickness mm	Speed mm/min.
Mild Steel Precision						
	10 ga.	30	30	O_2/O_2	3	910
	1/4	120	70	O_2/Air	6	3100
	1/4	150	100	O_2/Air	6	4030
	3/8	95			10	2300
	1	48	200	O_2/Air	25	1250
	1-1/4	30			35	750
	3/4	100	300	O_2/Air	20	2540
	1	70			25	1780
	1-1/4	50			35	900
	1	80	400	O_2/Air	25	2100
	1-1/2	45			40	1330
	2	30			50	790
Stainless Steel						
	16 ga.	110	30	N_2/H_20	1.5	3100
	14 ga.	170	50	N_2/H_20	2	4310
	3/16	70			5	1523
	1/4	50	70	N_2/H_20	6	1495
	1/4	72	100	H35/N_2	6	1880
	3/8	55			10	1350
	1/4	70	100	N_2/H_20	6	1810
	3/4	50	200	N_2/H_20	20	1100
	1	35			25	900
	1	40	300	N_2/H_20	25	1030
	1-1/4	30			35	760
	1	35	300	H35/N_2	25	920
	1-1/2	30			40	760
	3/4	90	400	N_2/H_20	20	2286
	1-1/2	30			40	760
	1	45	400	H35/N_2	25	1170
	2	17			50	440
	4	3.5	400	H35/H35	100	90
Aluminum						
	11 ga.	60	50	Air/Air	3	1520
	1/4	100	100	N_2/H_20	6	2760
	3/8	70			10	1700
	3/4	90	200	N_2/H_20	20	2200
	1	50			25	1300
	1	60	300	N_2/H_20	25	1560
	1-1/4	40			32	1000
	1	85		H35/N_2	25	2190
	3/4	90	400	N_2/H_20	20	2200
	1-1/2	55			40	1350
	1	90	400	H35/N_2	25	2330
	2	30			50	810

Note: This 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 Ultra-Cut 400. Please contact Thermal Dynamics® for more information.

Automated Plasma Cutting

Height Control: SC-3100 and SC-3200

Features

Torch Height Adjustable in Distance or Voltage

Distance mode:

- Change speed without changing stand-off height
- Automatically adjusts for electrode wear
- Cut continuously at peak performance

Voltage mode:

- Ideal for contoured materials

Built-in Collision Sensor

- No costly sensor to replace
- No air source required at lifter station
- Works in X-Y-Z planes; works in all directions

Arc Voltage Range

- Ready for most applications, from plasma marking to cutting the thickest materials

Easy to Operate

- High contrast display for maximum visibility
- Operating parameters accessed using two drop-down menus

Fast Installation

- Easily connects to most CNC and plasma systems on the market today

Pierce Retract

- Lifts torch after initial piercing to increase pierce capacity

Direct Control

- Lifter can be controlled directly from CNC interface; no separate terminal necessary

Instant Pierce Height

- Adjustable torch height for better initial pierce height finding on gauge materials

Remote Terminal SC-3100 SC-3200

Specifications (subject to change without notice)

Lifter Station	SC-3100	SC-3200
Height:	18.70" (475 mm)	19.76" (502 mm)
Width:	3.93" (100 mm)	4.92" (125 mm)
Depth:	6.73" (171 mm)	8.97" (228 mm)
Weight:	22 lbs. (10 kg)	26.4 lbs (12 kg)
Position Speed:	283.5 ipm (120 mm/sec.)	190 ipm (80 mm/sec.)
Stroke:	4.72" (120 mm)	8.66" (220 mm)
Lifting Capacity:	15.4 lbs. (7 kg)	26.4 lbs (12 kg)

THERMAL DYNAMICS®

AUTOMATION

Ultra-Cut® Systems Include

- Power supply
- Supply leads to remote arc starter
- Manual Gas console (GCM-2010) or Automated Digital Flow Controller (DFC-3000)
- Torch installation starter kit
- Remote arc starter (RAS-1000)
- Torch leads

DFC-3000

Manual Gas Box

Power Supply

RAS-1000

Options And Accessories

- Spare parts kit
- Wheel kit
  Cat. No. 9-9379
- TSC-3000 (Touch Screen Controller)
- Ohmic clip
  Cat. No. 9-9414
- Water filter
  Cat. No. 9-1068
- Water filter cartridge
  Cat. No. 9-1069
- Water pressure regulator
  Cat. No. 8-6118
- RAS shelf kit and hardware
  Cat. No. 9-9484

Torch Coolant

Extra Cool Coolant
Cat No. 7-3580
Resists freezing down to +10˚ (-12˚C)

Ultra Cool Coolant
Cat. No. 7-3581
Resists freezing down to -27˚ (-33˚C)

Extreme Cool Coolant
Cat. No. 7-3582
Resists freezing down to -65˚F (-51˚C)

De-I Cool Coolant
Cat. No. 7-3583
De-ionized water mixture for use where freezing protection is not required

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

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