

THE NEXT GENERATION OF HIGH PRECISION PLASMA CUTTING

ULTRA-CUT[®] XT INTEGRATED SYSTEMS



Our next generation of high precision plasma cutters work the way you do – intelligently. Ultra-Cut XT systems give you the flexibility to increase cutting power and the assurance of superior quality, higher productivity and lower cutting costs. Ultra-Cut XT systems are available in 130A to 400A outputs for cutting plate up to 2" (50 mm) thick. And because its Modular Power Technology allows adding 100 Amp modules, the system grows with your business.



We Bring Intelligence to the Table."

Thermal Dynamics® ULTRA-CUT® XT SYSTEMS

The new Ultra-Cut XT technology provides the next generation of higher productivity, increased flexibility and confidence in high precision plasma cutting. This performance on mild steel will meet or beat anyone and is superior on non-ferrous metals. With the ability to grow with your business, you can expand from one system to the next higher in minutes. The Ultra-Cut XT systems utilize StepUp[™] modular power technology, allowing units to be easily upgraded - ensuring you always have the right amount of power today - and tomorrow.

Superior Cut Quality Means Greater Efficiency

The Ultra-Cut XT systems' superior cut quality means that parts can go directly from the cutting table to welding, painting or assembly without expensive secondary operations.

Ultra-Cut XT high precision plasma systems cut with:

- Excellent dross-free cuts using oxygen (O₂) plasma on mild steel.
- Unmatched cut quality on non-ferrous metals using outstanding Water Mist Secondary (WMS[®]) process.



Ultra-Cut Cut Bevel

- ISO 9013:2002 (E). Class 2 and 3 (depending on cut thickness angles below 3 deg) or better cut angles for true High Precision cuts.
- Minimal heat affected zone (HAZ) to improve welding quality.
- 3DPro technology sets the new standard in robotic cutting thin gauge material.



Higher Productivity Delivers Greater Profits

Ultra-Cut XT high precision systems deliver superior cut quality, at superior cutting speeds.

- Outstanding parts life to reduce down time and lower the overall cost of ownership.
- Highest kW output for maximized duty cycle and cut speed.
- Reduced downtime during parts changes with the Speedlok cartridge design.
- Lower current draw to reduce cutting cost.
- Shorter switching time between marking and cutting process for higher daily throughput.
- High cutting speeds on stainless steel due to WMS (water mist secondary) technology



Relative Cutting Speed

ScrapCutter Option

There's no longer a need for an external manual plasma cutter or oxyfuel torch to cut the leftover metal skeleton into manageable pieces. Just connect the manual TD 1Torch[®].



- Consistant 100A output
- Torch length up to 100 ft (30 m) including extensions
- Fold back circuit (45A) if tip touches the plate (improves parts life)
- Rapid restart for constant arc on to improve cut times
- Activated by torch trigger only. No need to go back to XT power supply to switch the function on or off

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Now More Energy Efficient

Compared to previous systems, Ultra-Cut XT systems draw about 20% less current and have an average electrical efficiency of more than 92%. They meet European Union Level V Efficiency Standards, and they will help companies everywhere lower utility bills.

Intelligent Solutions Set Us Apart

From superior technology for cutting heavy metal to better plasma marking, the Thermal Dynamics[®] XT Series offers powerful cutting performance and intelligent solutions for high precision automated plasma cutting applications.

HeavyCut[™] Technology

When cutting parts thicker than 3/4" (20 mm), rely on HeavyCut Technology to provide the best cut quality, precision and parts life with XTremeLife[™] Consumables. Heavy-Cut 200A, 300A and 400A electrodes with multiple Hafnium inserts increase parts life at high current applications and now even faster piercing above 1-1/4 (30mm) with QuickPierce consumables.



Longer Parts Life with *XTremeLife*TM Consumables



Note: 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. Parts life shown for 130A and 200A are non bevel parts. Please contact Thermal Dynamics for more information.

"Bolt Ready" Holes with Diameter PRO™

Diameter PRO produces the industry's most precise holes optimized for a diameter-to-thickness ratio of 1:1 or greater.

It is the ideal process for a precision hole or radius with minimal-to-no taper on mild steel from 10 gauge (3 mm) to 1" (25 mm).



Water Mist Secondary (WMS) optimizes non-ferrous metal cutting

- Excellent non-ferrous metal cut quality using $N_{\rm 2}$ as plasma gas and ordinary tap water as the secondary.
- Low operating cost.
- Dross-free cutting from gauge (1.0 mm) to 1 1/2" (40 mm).
- Oxide-free cut face surface.
- Wide parameter window.
- Higher cut speeds compared to H35 cutting.



Stainless Steel Cutting Speed Comparison

Thermal Dynamics[®] ULTRA-CUT[®] XT SYSTEMS



With StepUp[™] Modular Power Technology, your system has the flexibility to grow with your business. You can start with an Ultra-Cut 130 XT, and when you are ready, expand to a 200, 300 or 400 Amp system. With the Ultra-Cut XT, you never have to worry about choosing the right system.

StepUp[™] Modular Power Technology -Expand As Your Cutting Needs Grow

Thermal Dynamics designed the Ultra-Cut[®] XT with the flexibility to grow with your business. It features modular "inverter blocks" and a common cabinet for all amperages. To expand a 130A system into a 200A, 300A or 400A system, additional blocks can be easily installed. *A field technician can install a new inverter block in less than 30 minutes.



The Thermal Dynamics intelligent approach means never "under-buying" again. With Ultra-Cut XT systems, you'll always have the right amount of power today and tomorrow.

* Any existing system can be upgraded up to 400A.

Easy-to-Service

The Ultra-Cut XT high precision system's modular design is not only easier to upgrade, but also easier to maintain.

- The Amperage/Error display indicates the status of the XT system to accelerate trouble shooting.
- Common components in the XT system minimize inventory.

Better Flow Control and Plasma Marking with the DFC-3000 Automatic Gas Control

Good gas flow control enhances cut quality and extends consumables life. Digital flow control with the DFC-3000 when paired with the iCNC[®] XT controller — provides a better level of quality control. Together, they instantly set and control gas pressure, leading to faster cycle times and more productive cutting.

And for plasma marking with argon, the DFC-3000 and Ultra-Cut XT minimizes the purge cycle between marking and cutting, as well as the changeover time associated with manual controls. Change seamlessly between cutting and marking to:

- Indicate part numbers
- Drill or hole points
- Weld locations Lot numbers Bend or cut lines

Reliability – Performance You Can Rely On

Thermal Dynamics rigorously tests its plasma cutters to ensure flawless performance. Should your Ultra-Cut XT need service, our modular approach minimizes parts inventory and repair time. Even when one inverter block malfunctions, cutting is still possible with the remaining blocks.



We Bring Intelligence to the Table."

XT[™] Torch Technology – The New Standard for High Precision Plasma Cutting Systems



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.

The design prevents air from entering the system and becoming trapped in the leads.

Precision Cuts on All Metals

The XT-Torch dual gas technology provides one of the highest arc density plasma streams in the industry for precision cuts on mild steel, stainless steel, aluminum and other non-ferrous materials, and Ar for marking with the DFC 3000. Choices for plasma gas include - Air, N₂, O₂, Ar-H₂ and Ar for marking with the DFC 3000. Shield gas choices include - Air, N₂, O₂, or Ar-H₂ and H₂O.

Relaxed Cutting Parameters

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

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

The Ultra-Cut XT is the latest addition to Thermal Dynamics integrated automated plasma system solution. The next generation Ultra-Cut XT combines high precision cutting with exceptional cost-performance benefits to deliver a more profitable plasma cutting operation.

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 time and again.

Superior Warranty

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

Thermal Dynamics[®] ULTRA-CUT[®] XT SYSTEMS

Edge Start

1-1/2"

(40 mm)

2"

(50 mm)

2"

(50 mm)

3-1/2"

(90 mm)

The XT[®] System Technology



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Unit Specifications*									
	Ultra-Cut [®] 130 XT	Ultra-Cut 200 XT	Ultra-Cut 300 XT	Ultra-Cut 400 XT					
Rated Output (Amps)	130 A	200 A	300 A	400 A					
Output Range (Amps)	5-130 A	5-200 A	5-300 A	5-400 A					
Output (Volts)	180 V	180 V	180 V	200 V					
Input Volts (Volts, Phase, Hertz)	230 V, 3 ph, 50-60 Hz, 380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz 480 V, 3 ph, 50-60 Hz 600 V, 3 ph, 50-60 Hz	230V, 3 ph, 50-60Hz 380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz, 480 V, 3 ph, 50-60 Hz 600V, 3ph, 50-60Hz	230 V, 3 ph, 50-60 Hz, 380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz 480 V, 3 ph, 50-60 Hz 600 V, 3 ph, 50-60 Hz	380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz 480 V, 3 ph, 50-60 Hz 600 V, 3 ph, 50-60 Hz					
Input Amps (Amps, Volts)	78 A @ 230V 43 A @ 380 V 41 A @ 400 V 34 A @ 480 V 30 A @ 600 V	121 A @ 230 V 65 A @ 380 V 62 A @ 400 V 52 A @ 480 V 45 A @ 600 V	194 A @ 230 V 97 A @ 380 V 93 A @ 400 V 77 A @ 480 V 73 A @ 600 V	144 A @ 380 V 137 A @ 400 V 114 A @ 480 V 96 A @ 600 V					
Duty Cycle (@ 104°F / 40° C)	100% (23.4 kW)	100% (40 kW)	100% (60 kW)	100% (80 kW)					
Max OCV	425 V	425 V	425 V	425 V					
Plasma Gas	Air, O ₂ , Ar-H ₂ , N ₂ @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O ₂ , Ar-H ₂ , N ₂ @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O ₂ , Ar-H ₂ , N ₂ @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O ₂ , Ar-H ₂ , N ₂ @ 120 psi (8.3 bar) and Ar for marking with DFC 3000					
Shield Gas	Air, N₂, O₂ @ 120 psi (8.3 bar), H₂O @ 10 GPH (0.6 l/min)	Air, N₂, O₂ @ 120 psi (8.3 bar), H₂O @ 10 GPH (0.6 l/min)	Air, N₂, O₂ @ 120 psi (8.3 bar), H₂O @ 10 GPH (0.6 l/min)	Air, N2, O2, Ar-H2 @ 120 psi (8.3 bar), H20 @ 10 GPH (0.6 l/min)					
Power Supply Weight	740 lbs (336 kg) for 230V 410 lbs (186 kg) for 380, 400, 480V 652 lbs (296 kg) for 600V	1001 lbs (455 kg) for 230V 410 lbs (186 kg) for 380, 400, 480V 718 lbs (326 kg) for 600V	1220 lbs (555 kg) for 230V 410 lbs (186 kg) for 380, 400, 480V 783 lbs (356 kg) for 600V	410 lbs (186 kg) for 380, 400, 480V 849 lbs (386 kg) for 600V					
Dimensions (H x W x D)	48.0" x 27.5" x 40.6" (1219 mm x 698 mm x 1031 mm) H:+ 17.5" (445 mm) for 230V / 600V units	48.0" x 27.5" x 40.6" (1219 mm x 698 mm x 1031 mm) H:+ 17.5" (445 mm) for 230V / 600V units	48.0" x 27.5" x 40.6" (1219 mm x 698 mm x 1031 mm) H:+ 17.5" (445 mm) for 230V / 600V units	48.0" x 27.5" x 40.6" (1219 mm x 698 mm x 1031 mm) H:+ 17.5" (445 mm) for 600V units					
Certifications	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC					

* Subject to change without notice

Thermal Dynamics[®] ULTRA-CUT[®] XT SYSTEMS

Material	Thickness (in)	Speed (IPM)	Amps	Plasma /Shield	Thickness (mm)	Speed mm/min.
Mild Steel	10 ga.	50	30	02/02	3	1340
	1/4	100	70	0 ₂ /Air	6	2710
	1/4	160	130	0 ₂ /Air	6	4300
	1/2	77			12	2160
	3/4	52			20	1321
	3/4	65	200	0 ₂ /Air	20	1590
	1	48			25	1250
	3/4	100	300	0 ₂ /Air	20	2430
	1	70			25	1830
	1 1/4	50			35	1080
	1	80	400	0 ₂ /Air	25	2100
	1 1/2	45			40	1110
	2	30			50	790
Stainless Steel	16 ga.	205	30	N ₂ /H ₂ 0	1.5	5500
	14 ga.	170	50	N2/H20	2	4310
	3/16	50		112/1120	4	2410
	1/4	50	70	N2/H20	6	1490
	1/4	110	130	N2/H20	6	2896
	1/2	50	100	112/1120	12	1346
	3/4	50	200	N ₂ /H ₂ 0	20	1190
	1	35	200	112/1120	25	910
	1	40	300	N ₂ /H ₂ 0	25	1030
	1 1/4	30	000	112/1120	35	720
	1	35	300	H35/N ₂	25	920
	1 1/2	25		1100/112	40	600
	3/4	90	400	N ₂ /H ₂ 0	20	2286
	1 1/2	30	100	112/1120	40	760
	1	45	400	H35/N2	25	1170
	2	17	100	1100/112	50	440
	4	3.5	400	H35/H35	100	90
	0.052	150	30	No/HoO	1.5	3210
Aluminum	1//	70	70	No/Ho0	6	2060
	1/4	105	130	No/Ho0	6	2896
	1/4	55	130	112/1120	12	1/73
	2//	00	200	Na/Ha0	20	2170
	1	50	200	112/1120	20	1350
	1	60	300	No/Ho0	25	1560
	1 1//	//0	500	NZ/ TIZV	35	760
	1 1/4	<u>40</u> 85		H35/Na	25	2100
	3//	90	/00	No/Ho0	20	2170
	1 1/2	55	400	NZ/ TIZV	10	1280
	1 1/2	90	/00	H35/No	25	2330
	2	30	400	1153/112	50	<u>2330</u> 810
	2	30			50	010

Cutting Speed Chart For Ultra-Cut[®] XT Systems

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 quality 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 XT systems. Please contact Thermal Dynamics[®] for more information.

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