



THE NEXT GENERATION  
**OF HIGH PRECISION  
PLASMA CUTTING.**



**ESAB iSERIES 100/200/300/400i  
PLASMA CUTTING SYSTEMS**

# iSERIES - THE NEXT GENERATION OF HIGH PRECISION PLASMA CUTTING.

The new iSeries 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 iSeries systems utilize StepUp™ modular power technology, allowing units to be easily upgraded - ensuring you always have the right amount of power today - and tomorrow.

## HIGHER PRODUCTIVITY DELIVERS GREATER PROFITS

iSeries high precision systems deliver superior cut quality, at superior cutting speeds.

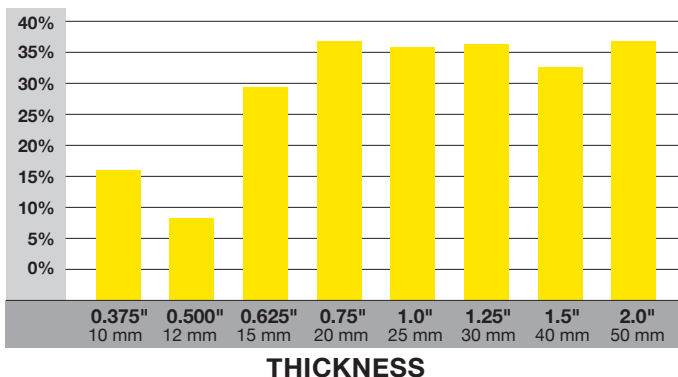
- Outstanding parts life to reduce down time and lower the overall cost of ownership.
- Highest kW output for maximized duty cycle and cut speed.
- Reduced downtime during parts changes with the SpeedLok™ cartridge design.
- Lower current draw to reduce cutting cost.
- Shorter switching time between marking and cutting process for higher daily throughput.
- Highest cut speed in its class on stainless steel – up to 3 times faster than similar cutting systems.

## HEAVYCUT™ TECHNOLOGY

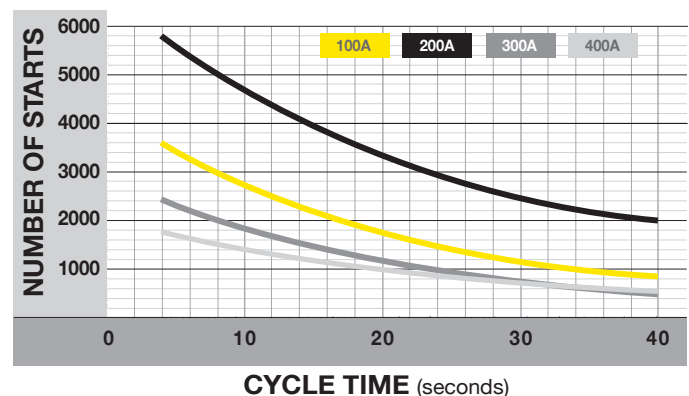
When cutting parts thicker than 3/4" (20 mm), HeavyCut Technology delivers the best cut quality, precision and parts life with XTremeLife™ Consumables. Heavy-Cut 200A, 300A and 400A electrodes with multiple Hafnium inserts increase parts life at high current applications.



## Average Cost Savings on Mild Steel Compared to Competition



## Consumables – Longer Parts Life





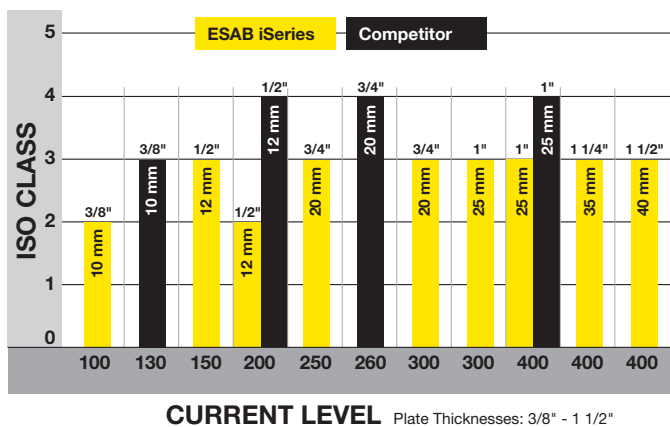
## SUPERIOR CUT QUALITY MEANS GREATER EFFICIENCY

Eliminate expensive secondary operations and take parts directly from the cutting table to welding, painting or assembly.

iSeries high precision plasma systems deliver:

- Excellent dross-free cuts using oxygen (O<sub>2</sub>) plasma on mild steel.
- Unmatched cut quality on non-ferrous metals using unique Water Mist Secondary (WMS<sup>®</sup>) process.
- ISO 9013:2002 (E). Class 3 (depending on cut thickness angles below 3 degrees) or better cut angles for true High Precision cuts.
- Minimal heat affected zone (HAZ) to improve welding quality.

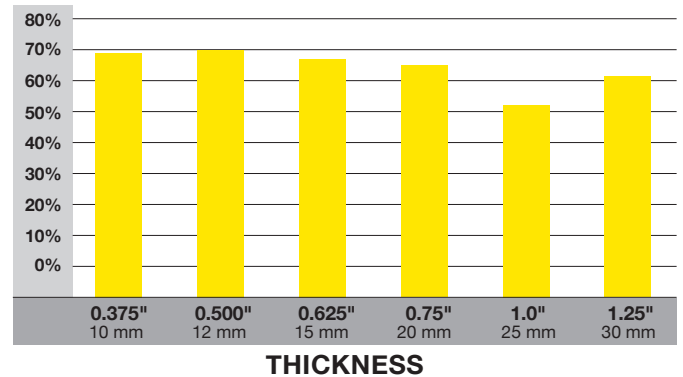
### iSeries Cut Angle Comparison



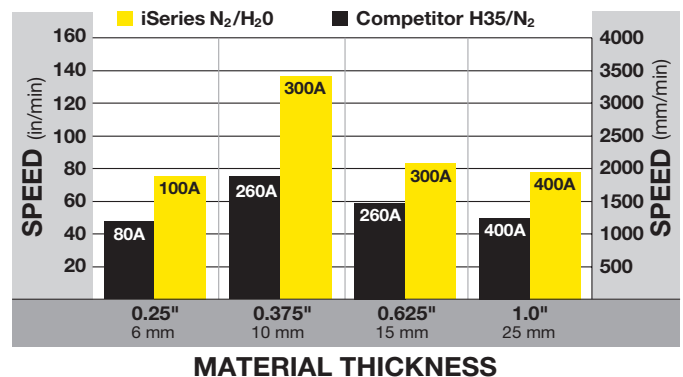
## WATER MIST SECONDARY (WMS) OPTIMIZES NON-FERROUS METAL CUTTING

- 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 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.

### Average Cost Savings on Stainless Steel Compared to Competition



### Stainless Steel Cutting Speed Comparison



# iSERIES - THE FLEXIBILITY TO GROW WITH YOUR BUSINESS.



With StepUp™ Modular Power Technology, your system has the flexibility to grow with your business. You can start with an iSeries 100i, and when you are ready, expand to a 200, 300 or 400 Amp system. With the iSeries, you never have to worry about choosing the right system.

## EXPAND AS YOUR CUTTING NEEDS GROW

ESAB designed the iSeries with the flexibility to grow with your business. It features modular “inverter blocks” and a common cabinet for all amperages. To expand a 100A 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 ESAB intelligent approach means never “under-buying” again. With iSeries 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 iSeries high precision system’s modular design is not only easier to upgrade, but also easier to maintain.

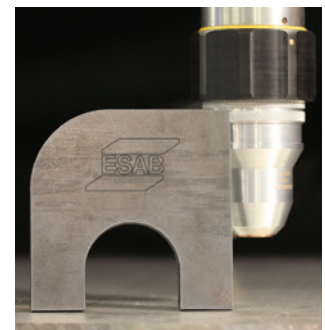
- The Amperage/Error display indicates the status of the iSeries system to accelerate trouble shooting.
- Common components in the iSeries system minimize inventory.

## Better Flow Control and Plasma Marking with Automatic Gas Control

Good gas flow control enhances cut quality and extends consumables life. Digital flow control with the automatic gas control — when paired with the Vision T5 CNC system — 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, automatic gas control and iSeries 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:

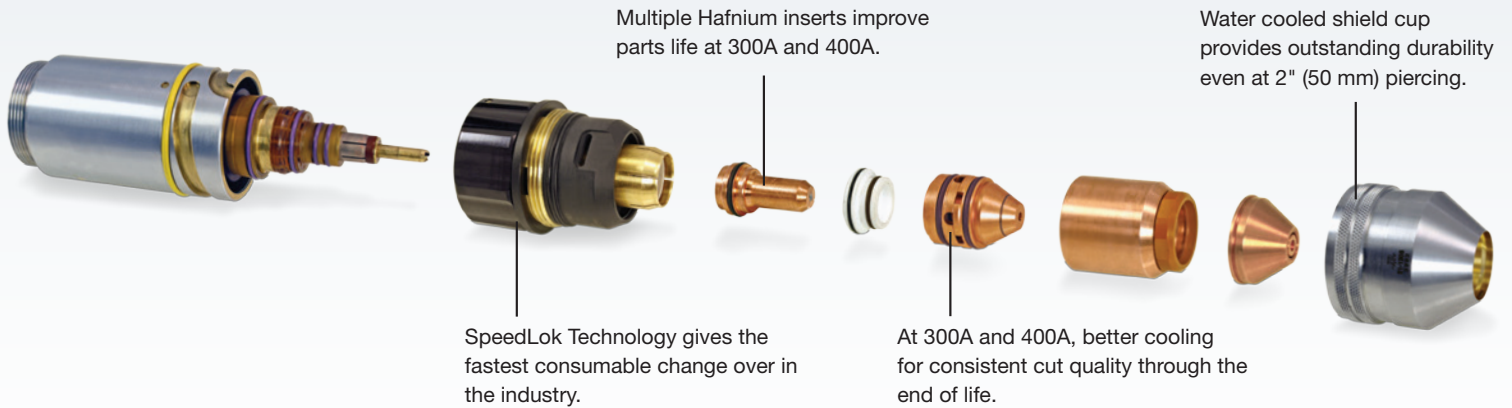
- Indicate part numbers
- Drill or hole points
- Weld locations
- Lot numbers
- Bend or cut lines



## RELIABILITY – PERFORMANCE YOU CAN RELY ON.

ESAB rigorously tests its plasma cutters to ensure flawless performance. Should your iSeries need service, our modular approach minimizes parts inventory and repair time. Even if one inverter block malfunctions, cutting is still possible with the remaining blocks.

## iSERIES TORCH TECHNOLOGY – THE NEW STANDARD FOR HIGH PRECISION PLASMA CUTTING SYSTEMS.



### 'Leakless' Torch Head Design

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

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



### No Tools Required

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

### 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.

### Precision Cuts on All Metals

The iSeries 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 automatic gas control. Choices for plasma gas include - Air, N<sub>2</sub>, O<sub>2</sub>, Ar-H<sub>2</sub> and Ar for marking. Shield gas choices include - Air, N<sub>2</sub>, O<sub>2</sub>, or Ar-H<sub>2</sub> and H<sub>2</sub>O.

### Superior Warranty

ESAB's iSeries Torch warranty covers components and service for a full 1-year period.

### Relaxed Cutting Parameters

With the iSeries 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 iSeries is the latest addition to ESAB integrated automated plasma system solution. The next generation iSeries combines high precision cutting with exceptional cost-performance benefits to deliver a more profitable plasma cutting operation.

# TECHNOLOGY.

## Automatic Gas Control

Digital Flow Control for optimized and easy set up for frequent changes between materials and thicknesses. A must for marking with Argon and fast switching between cutting and marking.

## Power Supply

- Microprocessor controlled for optimized cut quality and parts life.
- Power upgrade. Inverter blocks can be easily added for higher cutting capacity.

## iSeries Torch

Fastest consumable changes with SpeedLok technology.

## Remote Arc Starter

For reduced HF emission.

## SYSTEM CAPABILITIES

		iSeries 100i	iSeries 200i	iSeries 300i	iSeries 400i
MILD STEEL	Production Pierce	1/2" (12 mm)	1" (25 mm)	1 1/2" (40 mm)	2" (50 mm)
	Maximum Pierce	5/8" (15 mm)	1 1/2" (40 mm)	1 3/4" (45 mm)	2" (50 mm)
	Edge Start	3/4" (20 mm)	2 1/2" (65 mm)	3" (75 mm)	3 1/2" (90 mm)
STAINLESS STEEL	Production Pierce	1/2" (12 mm)	1" (25 mm)	1" (25 mm)	2" (50 mm)
	Maximum Pierce	5/8" (15 mm)	1" (25 mm)	1 1/4" (30 mm)	2" (50 mm)
	Edge Start	3/4" (20 mm)	2" (50 mm)	2" (50 mm)	4" (100 mm)
ALUMINUM	Production Pierce	1/2" (12 mm)	7/8" (20 mm)	1" (25 mm)	2" (50 mm)
	Maximum Pierce	5/8" (15 mm)	1" (25 mm)	1 1/4" (30 mm)	2 1/4" (60 mm)
	Edge Start	3/4" (20 mm)	2" (50 mm)	2" (50 mm)	3 1/2" (90 mm)

# SPECIFICATIONS.

	iSeries 100i	iSeries 200i	iSeries 300i	iSeries 400i
<b>Rated Output (Amps)</b>	100 A	200 A	300 A	400 A
<b>Output Range (Amps)</b>	5-100 A	5-200 A	5-300 A	5-400 A
<b>Output (Volts)</b>	180 V	180 V	180 V	200 V
<b>Input Volts (Volts, Phase, Hertz)</b>	380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz, 480 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	380 V, 3 ph, 50-60 Hz, 400 V, 3 ph, 50-60 Hz, 480 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
<b>Input Amps (Amps, Volts)</b>	33 A @ 380 V 31 A @ 400 V 26 A @ 480 V	65 A @ 380 V 62 A @ 400 V 52 A @ 480 V	97 A @ 380 V 93 A @ 400 V 77 A @ 480 V	144 A @ 380 V 137 A @ 400 V 114 A @ 480 V
<b>Duty Cycle (@ 104°F / 40° C)</b>	100% (20 kW)	100% (40 kW)	100% (60 kW)	100% (80 kW)
<b>Max OCV</b>	425 V	425 V	425 V	425 V
<b>Plasma Gas</b>	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 120 psi (8.3 bar) and Ar for marking with DFC 3000	Air, O <sub>2</sub> , Ar-H <sub>2</sub> , N <sub>2</sub> @ 120 psi (8.3 bar) and Ar for marking with DFC 3000
<b>Shield Gas</b>	Air, N <sub>2</sub> , O <sub>2</sub> @ 120 psi (8.3 bar), H <sub>2</sub> O @ 10 GPH (0.6 l/min)	Air, N <sub>2</sub> , O <sub>2</sub> @ 120 psi (8.3 bar), H <sub>2</sub> O @ 10 GPH (0.6 l/min)	Air, N <sub>2</sub> , O <sub>2</sub> @ 120 psi (8.3 bar), H <sub>2</sub> O @ 10 GPH (0.6 l/min)	Air, N <sub>2</sub> , O <sub>2</sub> , Ar-H <sub>2</sub> @ 120 psi (8.3 bar), H <sub>2</sub> O @ 10 GPH (0.6 l/min)
<b>Power Supply Weight</b>	410 lbs (186 kg)	451 lbs (205 kg)	537 lbs (244 kg)	555 lbs (252 kg)
<b>Dimensions</b>	48.0" x 27.5" x 40.6" (1219 x 698 x 1031 mm)	48.0" x 27.5" x 40.6" (1219 x 698 x 1031 mm)	48.0" x 27.5" x 40.6" (1219 x 698 x 1031 mm)	48.0" x 27.5" x 40.6" (1219 x 698 x 1031 mm)
<b>Certifications</b>	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC

# CUTTING SPEED.

Thickness (in)	Speed (IPM)	Amps	Plasma/ Shield	Thickness (mm)	Speed mm/min.
<b>MILD STEEL</b>					
10 ga.	50	30	O <sub>2</sub> /O <sub>2</sub>	3	1340
1/4	100	70	O <sub>2</sub> /Air	6	2710
1/4	145	100	O <sub>2</sub> /Air	6	3940
3/8	90			10	2170
1/2	60			12	1690
3/4	65	200	O <sub>2</sub> /Air	20	1590
1	48			25	1250
3/4	100	300	O <sub>2</sub> /Air	20	2430
1	70			25	1830
1 1/4	50			35	1080
1	80	400	O <sub>2</sub> /Air	25	2100
1 1/2	45			40	1110
2	30			50	790
<b>ALUMINUM</b>					
0.052	150	30	N <sub>2</sub> /H <sub>2</sub> O	1.5	3210
1/4	70	70	N <sub>2</sub> /H <sub>2</sub> O	6	2060
3/8	70	100	N <sub>2</sub> /H <sub>2</sub> O	10	1660
1/2	40			12	1180
3/4	90	200	N <sub>2</sub> /H <sub>2</sub> O	20	2170
1	50			25	1350
1	60	300	N <sub>2</sub> /H <sub>2</sub> O	25	1560
1 1/4	40			35	760
1	85		H35/N <sub>2</sub>	25	2190
3/4	90	400	N <sub>2</sub> /H <sub>2</sub> O	20	2170
1 1/2	55			40	1280
1	90	400	H35/N <sub>2</sub>	25	2330
2	30			50	810

Thickness (in)	Speed (IPM)	Amps	Plasma/ Shield	Thickness (mm)	Speed mm/min.
<b>STAINLESS STEEL</b>					
16 ga.	205	30	N <sub>2</sub> /H <sub>2</sub> O	1.5	5500
14 ga.	170	50	N <sub>2</sub> /H <sub>2</sub> O	2	4310
3/16	50			4	2410
1/4	50	70	N <sub>2</sub> /H <sub>2</sub> O	6	1490
1/4	95	100	N <sub>2</sub> /H <sub>2</sub> O	6	2670
1/2	50			12	1350
3/4	50	200	N <sub>2</sub> /H <sub>2</sub> O	20	1190
1	35			25	910
1	40	300	N <sub>2</sub> /H <sub>2</sub> O	25	1030
1 1/4	30			35	720
1	35	300	H35/N <sub>2</sub>	25	920
1 1/2	25			40	600
3/4	90	400	N <sub>2</sub> /H <sub>2</sub> O	20	2286
1 1/2	30			40	760
1	45	400	H35/N <sub>2</sub>	25	1170
2	17			50	440
4	3.5	400	H35/H35	100	90

**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 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 iSeries systems. Please contact ESAB® for more information.

# UNRIVALED SERVICE AND SUPPORT.

iSeries, like all ESAB products, is backed by our commitment to superior customer service and support. Our skilled customer service department is prepared to quickly answer any questions, address problems, and help with the maintenance and upgrading of your machines. And our products are backed with the most comprehensive warranty in the business.

With ESAB, you can be sure you purchased a machine that will meet your needs today and in the future. Product and process training is also available. Ask your ESAB sales representative or distributor for a complete ESAB solution.

For more information visit [esab.com](http://esab.com).

## Warranty.

ESAB's industry-leading service and support means that if you do need help, you'll be protected by the most comprehensive warranty in the business.



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