



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



**ESAB iSERIES**  
**100i/200i/300i/400i/600i/800i**  
**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 utilise 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

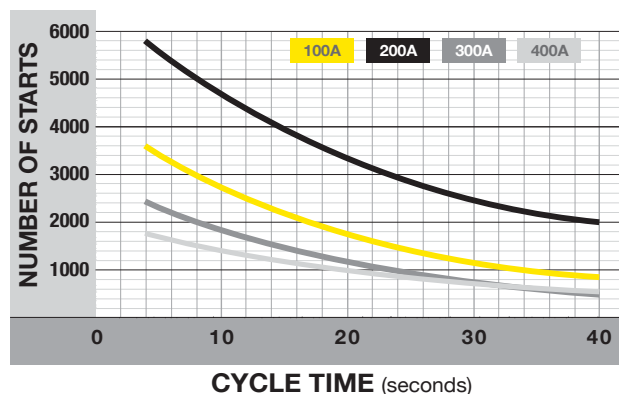
iSeries high precision systems deliver superior cut quality, at superior cutting speeds.

- Outstanding parts life to reduce down time and lower the overall cost of ownership
- High kW output for maximised duty cycle and cut speed
- Reduced downtime during parts changes with the SpeedLok™ cartridge design
- Low 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

## HEAVYCUT™ TECHNOLOGY

When cutting parts thicker than 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.

### Consumables – Longer Parts Life



The capabilities shown in this table were obtained by using new consumables, correct gas and current settings, accurate torch height control, non bevel parts at 100/200A, and with the torch perpendicular to the workpiece. Please contact ESAB for more information.





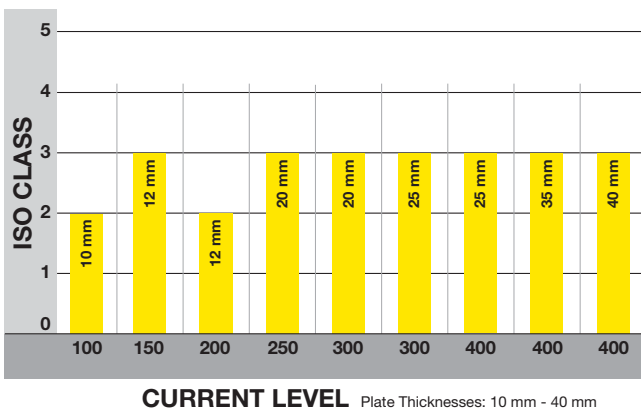
## SUPERIOR CUT QUALITY MEANS GREATER EFFICIENCY

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 outstanding Water Mist Secondary (WMS®) 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

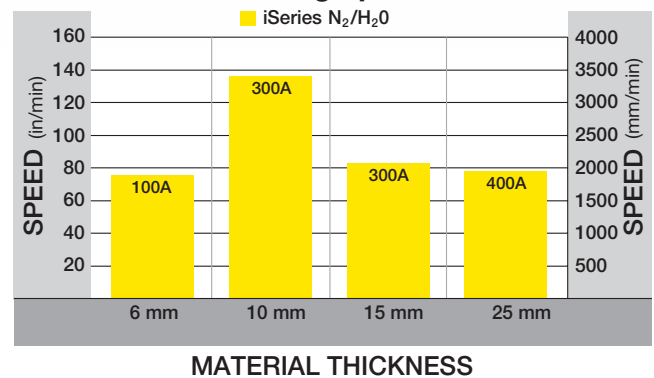
### iSeries Cut Angle



## WATER MIST SECONDARY (WMS) OPTIMISES 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
- Low operating cost
- Dross-free cutting from gauge 1.0 mm to 75 mm
- Oxide-free cut face surface
- Wide parameter window
- Higher cut speeds compared to H35 cutting

### Stainless Steel Cutting Speed





# 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, 400 Amp system or add an additional power supply to get up to 800A for SS and aluminium cutting. 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 minimise 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 minimises the purge cycle between marking and cutting, as well as the change over time associated with manual controls. Change seamlessly between cutting and marking to:

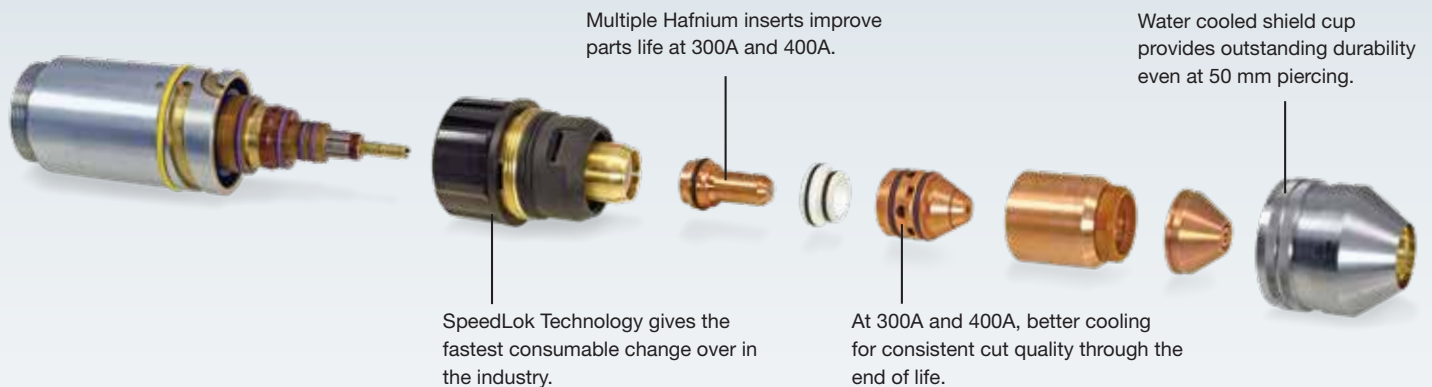
- Indicate part numbers
- Drill or hole points
- Weld locations
- Lot numbers
- Bend or cut lines



## 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 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, aluminium 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 will 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 optimised 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 optimised cut quality and parts life
- Power upgrade. Inverter blocks can be easily added for higher cutting capacity



**Remote Arc Starter**  
For reduced HF emission.

**iSeries Torch**  
Fastest consumable changes with SpeedLok technology.

## SYSTEM CAPABILITIES

		100i	200i	300i	400i	600i	800i
MILD STEEL	PRODUCTION PIERCE	12 mm	25 mm	40 mm	50 mm	–	–
	MAXIMUM PIERCE	15 mm	40 mm	45 mm	50 mm	–	–
	EDGE START	20 mm	65 mm	75 mm	90 mm	–	–
STAINLESS STEEL	PRODUCTION PIERCE	12 mm	25 mm	30 mm	50 mm	75 mm	90 mm
	MAXIMUM PIERCE	15 mm	25 mm	30 mm	50 mm	75 mm	90 mm
	EDGE START	20 mm	50 mm	50 mm	100 mm	100 mm	160 mm
ALUMINIUM	PRODUCTION PIERCE	12 mm	20 mm	25 mm	50 mm	75 mm	90 mm
	MAXIMUM PIERCE	15 mm	25 mm	30 mm	60 mm	75 mm	90 mm
	EDGE START	20 mm	50 mm	50 mm	90 mm	100 mm	160 mm

# SPECIFICATIONS.

	100i	200i	300i	400i	600i	800i
<b>Rated Output (Amps)</b>	100 A	200 A	300 A	400 A	600 A	800 A
<b>Output Range (Amps)</b>	5-100 A	5-200 A	5-300 A	5-400 A	5-600 A	5-800 A
<b>Output (Volts)</b>	180 V	180 V	180 V	200 V	200 V	200 V
<b>Input Volts (Volts, Phase, Hertz)</b>	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	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	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	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
<b>Input Amps (Amps, Volts)</b>	61 A @ 230 V 43 A @ 380 V 41 A @ 400 V 34 A @ 480 V 23 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	388 A @ 230 V 194 A @ 380 V 186 A @ 400 V 154 A @ 480 V 146 A @ 600 V	288 A @ 380 V 274 A @ 400 V 228 A @ 480 V 192 A @ 600 V
<b>Duty Cycle (@104°F/40°C)</b>	100% (20 kW)	100% (40 kW)	100% (60 kW)	100% (80 kW)	100% (120 kW)	100% (160 kW)
<b>Max OCV</b>	425 V	425 V	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	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	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	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	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	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
<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)	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>	740 lbs (336 kg) 230V 410 lbs (186 kg) 380, 400, 480V 652 lbs (296 kg) 600V	1001 lbs (455 kg) 230V 451 lbs (205 kg) 380, 400, 480V 718 lbs (326 kg) 600V	1220 lbs (555 kg) 230V 537 lbs (224 kg) 380, 400, 480V 783 lbs (356 kg) 600V	555 lbs (252 kg) 380, 400, 480V 849 lbs (386 kg) 600V	1220 lbs (555 kg) 230V 537 lbs (224 kg) 380, 400, 480V 783 lbs (356 kg) 600V	555 lbs (252 kg) 380, 400, 480V 849 lbs (386 kg) 600V
<b>Dimensions</b>	1219 x 698 x 1031 mm H: + 445 mm 230V/ 600V units	1219 x 698 x 1031 mm H: + 445 mm 230V/ 600V units	1219 x 698 x 1031 mm H: + 445 mm 230V/ 600V units	1219 x 698 x 1031 mm H: + 445 mm 600V units	2 x [1,219 x 698 x 1,031 mm] H: 2 x [445 mm] for 600 V units	2 x [1,219 x 698 x 1,031 mm] H: 2 x [445 mm] for 600 V units
<b>Certifications</b>	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC	CSA, CE, CCC

# CUTTING SPEED.

Thickness		Quality Speed		Production speed		Amps	Plasma/ Shield	Thickness		Quality Speed		Amps	Plasma/ Shield	Thickness		Quality Speed		Amps	Plasma/ Shield
in.	mm	IPM	mm/min	IPM	mm/min			in.	mm	IPM	mm/min			in.	mm	IPM	mm/min		
MILD STEEL						ALUMINUM						STAINLESS STEEL							
1/4	6	145	3940	155	4200	100	O <sub>2</sub> /Air	0.052	1.5	150	3210	30	N <sub>2</sub> /H <sub>2</sub> O	16 ga.	1.5	205	5500	30	N <sub>2</sub> /H <sub>2</sub> O
3/8	10	90	2170	116	2800			1/4	6	70	2060	70	N <sub>2</sub> /H <sub>2</sub> O	14 ga.	2	170	4310	50	N <sub>2</sub> /H <sub>2</sub> O
1/2	12	60	1690	75	2100			3/8	10	70	1660	100	N <sub>2</sub> /H <sub>2</sub> O	3/16	4	50	2410		
3/4	20	65	1590	78	1900	200	O <sub>2</sub> /Air	1/2	12	40	1180			1/4	6	50	1490	70	N <sub>2</sub> /H <sub>2</sub> O
1	25	48	1250	50	1300			3/4	20	90	2170	200	N <sub>2</sub> /H <sub>2</sub> O	1/4	6	95	2670	100	N <sub>2</sub> /H <sub>2</sub> O
3/4	20	100	2430	123	3000	300	O <sub>2</sub> /Air	1	25	50	1350			1/2	12	50	1350		
1	25	70	1830	84	2000			1	25	60	1560	300	N <sub>2</sub> /H <sub>2</sub> O	3/4	20	50	1190	200	N <sub>2</sub> /H <sub>2</sub> O
1 1/4	35	50	1080	65	1400			1 1/4	35	40	760			1	25	35	910		
1	25	80	2100	99	2600	400	O <sub>2</sub> /Air	1	25	85	2190		H35/N <sub>2</sub>	1	25	40	1030	300	N <sub>2</sub> /H <sub>2</sub> O
1 1/2	40	45	1110	51	1200			3/4	20	90	2170	400	N <sub>2</sub> /H <sub>2</sub> O	1 1/4	35	30	720		
2	50	30	790	33	810			1 1/2	40	55	1280			1	25	35	920	300	H35/N <sub>2</sub>
								1	25	90	2330	400	H35/N <sub>2</sub>	1 1/2	40	25	600		
								2	50	30	810			3/4	20	90	2286	400	N <sub>2</sub> /H <sub>2</sub> O
								4	100	21	530	800	H35/N <sub>2</sub>	1 1/2	40	30	760		
														1	25	45	1170	400	H35/N <sub>2</sub>
														2	50	17	440		
														2	50	28	710	600	N <sub>2</sub> /H <sub>2</sub> O
														3	75	13	330	600	H35/N <sub>2</sub>
														3	75	12	300	600	N <sub>2</sub> /H <sub>2</sub> O
														6 1/4	160	4.5	110	800	H35/N <sub>2</sub>

**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 will be protected by the most comprehensive warranty in the business.



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