

iSeries Systems

The next generation of high precision plasma cutting.



600 A and 800 A are achieved by paralleling two 300 A units or two 400A respectively.

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 for your current and future applications. Now up to 800 A for stainless steel and aluminium.

- HeavyCut™ provides the best cut quality, precision and parts life with XTremeLife™ Wear Parts
- Unmatched cut quality on non-ferrous metals using unique Water Mist Secondary (WMS®) process up to 800 A
- Highest cut speed in its class on stainless steel – up to 3 times faster than similar cutting systems
- Work pieces can go directly from the cutting table to welding, painting or assembly without expensive secondary operations
- Excellent dross-free cuts using oxygen (O₂) plasma on mild steel
- Production cutting on stainless steel and aluminium up to 160 mm, now up to 800 A

Visit esab.com for more information.

Industry

- General Manufacturing
- Heavy Fabrication
- Marine and Offshore
- Railcars
- Steel Cutting Centres (Cutting Only)



iSeries Systems

Technical Data						
	100i	200i	300i	400i	600i	800i
Max Output	100 A	200 A	300 A	400 A	600 A	800 A
Output Range	5 – 100 A	5 – 200 A	5 – 300 A	5 – 400 A	5 – 600 A	5 – 800 A
Output Power	180 V	180 V	180 V	200 V	200 V	200 V
Output at 100% Duty Cycle	20 kW	40 kW	60 kW	80 kW	120 kW	160 kW
Input Volts	230, 380, 400, 480, 600 V	230, 380, 400, 480, 600 V	230, 380, 400, 480, 600 V	380, 400, 480, 600 V	230, 380, 400, 480, 600 V	380, 400, 480, 600 V
Input Phases	3 ph					
Input Frequency	50/60 Hz					
Input Amps	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
Max OCV	425 V					
Plasma Gas	Air, O ₂ , Ar-H ₂ , N ₂ at 8.3 bar (120 psi) and Ar for marking with DFC 3000					
Shielding Gas	Air, N ₂ , O ₂ at 8.3 bar (120 psi) , H ₂ O at 0.6 l/min (10 gph) max					
Weight, 230 V	336 kg (740 lbs)	455 kg (1001 lbs)	555 kg (1220 lbs)	-	555 kg (1220 lbs) x2	-
Weight, 380-480 V	186 kg (410 lbs)	204 kg (451 lbs)	224 kg (537 lbs)	252 kg (555 lbs)	224 kg (537 lbs) x2	252 kg (555 lbs) x2
Weight, 600 V	296 kg (652 lbs)	326 kg (718 lbs)	356 kg (783 lbs)	386 kg (849 lbs)	356 kg (783 lbs) x2	386 kg (849 lbs) x2
Dimensions * L x W x H	1219 x 698 x 1031 mm (48.0 x 27.5 x 40.6 in.)					
Enclosure class	CSA, CE, CCC					

* Plus 445 mm (17.5 in.) additional height on 230 V/600 V units

Cutting Specifications						
	100i	200i	300i	400i	600i	800i
Mild Steel						
Recommended Cut	12 mm (1/2 in.)	25 mm (1 in.)	40 mm (1 1/2 in.)	50 mm (2 in.)	50 mm (2 in.)	50 mm (2 in.)
Maximum Cut	15 mm (5/8 in.)	40 mm (1 1/2 in.)	45 mm (1 3/4 in.)	50 mm (2 in.)	50 mm (2 in.)	50 mm (2 in.)
Maximum Edge Start	20 mm (3/4 in.)	65 mm (2 1/2 in.)	75 mm (3 in.)	90 mm (3 1/2 in.)	90 mm (3 1/2 in.)	90 mm (3 1/2 in.)
Stainless Steel						
Recommended Cut	12 mm (1/2 in.)	25 mm (1 in.)	30 mm (1 1/4 in.)	50 mm (2 in.)	75 mm (3 in.)	90 mm (3 1/2 in.)
Maximum Cut	15 mm (5/8 in.)	25 mm (1 in.)	30 mm (1 1/4 in.)	50 mm (2 in.)	75 mm (3 in.)	90 mm (3 1/2 in.)
Maximum Edge Start	20 mm (3/4 in.)	50 mm (2 in.)	50 mm (2 in.)	100 mm (4 in.)	100 mm (4 in.)	160 mm (6 1/4 in.)
Aluminium						
Recommended Cut	12 mm (1/2 in.)	20 mm (3/4 in.)	25 mm (1 in.)	50 mm (2 in.)	75 mm (3 in.)	90 mm (3 1/2 in.)
Maximum Cut	15 mm (5/8 in.)	25 mm (1 in.)	30 mm (1 1/4 in.)	60 mm (2 1/2 in.)	75 mm (3 in.)	90 mm (3 1/2 in.)
Maximum Edge Start	20 mm (3/4 in.)	50 mm (2 in.)	50 mm (2 in.)	90 mm (3 1/2 in.)	100 mm (4 in.)	160 mm (6 1/4 in.)

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Cutting Speed			
Thickness	Speed	Amps	Plasma / Shield
Mild Steel			
3 mm (10 ga.)	1340 mm/min (50 ipm)	30 A	O ₂ /O ₂
6 mm (1/4 in.)	2710 mm/min (100 ipm)	70 A	O ₂ /Air
6 mm (1/4 in.)	3940 mm/min (145 ipm)	100 A	O ₂ /Air
10 mm (3/8 in.)	2170 mm/min (90 ipm)	100 A	O ₂ /Air
12 mm (1/2 in.)	1690 mm/min (60 ipm)	100 A	O ₂ /Air
20 mm (3/4 in.)	1590 mm/min (65 ipm)	200 A	O ₂ /Air
25 mm (1 in.)	1250 mm/min (48 ipm)	200 A	O ₂ /Air
20 mm (3/4 in.)	2430 mm/min (100 ipm)	300 A	O ₂ /Air
25 mm (1 in.)	1830 mm/min (70 ipm)	300 A	O ₂ /Air
35 mm (1 1/4 in.)	1080 mm/min (50 ipm)	300 A	O ₂ /Air
25 mm (1 in.)	2100 mm/min (80 ipm)	400 A	O ₂ /Air
40 mm (1 1/2 in.)	1110 mm/min (45 ipm)	400 A	O ₂ /Air
50 mm (2 in.)	790 mm/min (30 ipm)	400 A	O ₂ /Air
Stainless Steel			
1.5 mm (16 ga.)	5500 mm/min (205 ipm)	30 A	N ₂ /H ₂ O
2 mm (14 ga.)	4310 mm/min (170 ipm)	50 A	N ₂ /H ₂ O
4 mm (3/16 in.)	2410 mm/min (50 ipm)	50 A	N ₂ /H ₂ O
6 mm (1/4 in.)	1490 mm/min (50 ipm)	70 A	N ₂ /H ₂ O
6 mm (1/4 in.)	2670 mm/min (95 ipm)	100 A	N ₂ /H ₂ O
12 mm (1/2 in.)	1350 mm/min (50 ipm)	100 A	N ₂ /H ₂ O
20 mm (3/4 in.)	1190 mm/min (50 ipm)	200 A	N ₂ /H ₂ O
25 mm (1 in.)	910 mm/min (35 ipm)	200 A	N ₂ /H ₂ O
25 mm (1 in.)	1030 mm/min (40 ipm)	300 A	N ₂ /H ₂ O
35 mm (1 1/4 in.)	720 mm/min (30 ipm)	300 A	N ₂ /H ₂ O
25 mm (1 in.)	920 mm/min (35 ipm)	300 A	H35/N ₂
40 mm (1 1/2 in.)	600 mm/min (25 ipm)	300 A	H35/N ₂
20 mm (3/4 in.)	2286 mm/min (90 ipm)	400 A	N ₂ /H ₂ O
40 mm (1 1/2 in.)	760 mm/min (30 ipm)	400 A	N ₂ /H ₂ O
25 mm (1 in.)	1170 mm/min (45 ipm)	400 A	H35/N ₂
50 mm (2 in.)	440 mm/min (17 ipm)	400 A	H35/N ₂
100 mm (4 in.)	90 mm/min (3.5 ipm)	400 A	H35/H35
50 mm (2 in.)	710 mm/min (28 ipm)	600 A	N ₂ /H ₂ O
75 mm (3 in.)	330 mm/min (13 ipm)	600 A	H35/N ₂
75 mm (3 in.)	300 mm/min (12 ipm)	600 A	N ₂ /H ₂ O
160 mm (6 1/4 in.)	110 mm/min (4.5 ipm)	800 A	H35/N ₂

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Cutting Speed			
Thickness	Speed	Amps	Plasma / Shield
Aluminium			
1.5 mm (0.052 in.)	3210 mm/min (150 ipm)	30 A	N ₂ /H ₂ O
6 mm (1/4 in.)	2060 mm/min (70 ipm)	70 A	N ₂ /H ₂ O
10 mm (3/8 in.)	1660 mm/min (70 ipm)	100 A	N ₂ /H ₂ O
12 mm (1/2 in.)	1180 mm/min (40 ipm)	100 A	N ₂ /H ₂ O
20 mm (3/4 in.)	2170 mm/min (90 ipm)	200 A	N ₂ /H ₂ O
25 mm (1 in.)	1350 mm/min (50 ipm)	200 A	N ₂ /H ₂ O
25 mm (1 in.)	1560 mm/min (60 ipm)	300 A	N ₂ /H ₂ O
35 mm (1 1/4 in.)	760 mm/min (40 ipm)	300 A	N ₂ /H ₂ O
25 mm (1 in.)	2190 mm/min (85 ipm)	300 A	H35/N ₂
20 mm (3/4 in.)	2170 mm/min (90 ipm)	400 A	N ₂ /H ₂ O
40 mm (1 1/2 in.)	1280 mm/min (55 ipm)	400 A	N ₂ /H ₂ O
25 mm (1 in.)	2330 mm/min (90 ipm)	400 A	H35/N ₂
50 mm (2 in.)	810 mm/min (30 ipm)	400 A	H35/N ₂
100 mm (4 in.)	530 mm/min (21 ipm)	800 A	H35/N ₂



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