

Heliarc® 281i & 353i AC/DC

For quality TIG/Stick applications.



Heliarc 353i AC/DC

Heliarc® is designed for quality TIG (GTAW) and Stick (SMAW) applications in all types of material. Cost effective inverter technology means increased energy efficiency and more power from a lighter, smaller, and more portable unit. Easy-to-control arc heat input provides high quality welds with an intuitive interface for easy setup and adjustment. Digital controls ensure high accuracy and repeatability. AC or DC Pulsed TIG enables easy control of heat input and weld pool.

- AC Hot Start is available at currents below 130A to boost current at the initial start to improve weld puddle initiation and arc penetration
- Control the arc with remote or foot control - switch between two currents by pressing torch switch
- Live TIG is ideal in places where high-frequency (HF) is not allowed
- AC Pulsing up to 2Hz makes Heliarc ideal for welding thin aluminum material
- Easily store up to 60 parameter sets for quick changes while working

Visit esab.com for more information.



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Specifications	Heliarc 281i	Heliarc 353i
Input voltage	208-230 V, 1 ph, 50/60 Hz	460 V, 3 ph, 50/60 Hz
Open circuit voltage	75 V	75 V
Setting range, GTAW AC/DC	4 – 280 A	4 – 350 A
Amps input at rated load, GTAW	47 A	16.6 A
Amps input at 250A, GTAW	38 A	12.5 A
Permitted load, GTAW AC/DC, at:		
100% duty cycle	250 A	280 A
60% duty cycle	270 A	300 A
50% duty cycle	280 A	–
45% duty cycle	–	350 A
Power factor at maximum current, GTAW	0.80	0.80
kVA max, GTAW	10.5 kVA	14.5 kVA
Gas pre-flow	0.1 – 2.5 sec	0.1 – 2.5 sec
Gas post-flow	0.1 – 30 sec	0.1 – 30 sec
Slope down	0.1 – 10 sec	0.1 – 10 sec
Frequency AC	20 – 200 Hz	20 – 200 Hz
AC balance	10 – 90 %	10 – 90 %
DC pulse mode frequency	0.4 – 300 Hz	0.4 – 300 Hz
AC pulse mode frequency	0.4 – 2 Hz	0.4 – 2 Hz
Pulse duty (pulse time/background time)	30 – 65 %	30 – 65 %
Background current % of main	10 – 90 A	10 – 90 A
Start/crater current (4 stroke) % of main	10 – 90 A	10 – 90 A
Setting range, SMAW AC/DC	4 – 250 A	4 – 350 A
Permitted load, SMAW AC/DC, at:		
100% duty cycle	200A	220A
60% duty cycle	220A	240A
40% duty cycle	250A	–
20% duty cycle	–	350A
kVA max, SMAW	12 kVA	19 kVA
Dimensions, L x W x H	23.6 x 11.8 x 24.4 in. (600 x 300 x 620 mm)	23.6 x 11.8 x 24.4 in. (600 x 300 x 620 mm)
Weight	110 lbs. (50 kg)	110 lbs. (50 kg)
Enclosure class	IP 21S	IP 21S

Ordering Information

Description	Part Number
Heliarc 281i, 208-230V, Power Source Only	0558101696
Heliarc 281i, 230V, Basic Pkg	0558101704
Heliarc 281i, 230V, Air Cooled, TXH 151F, RTW	0558101706
Heliarc 281i, 230V, Air Cooled, TXH 201F, RTW	0558101707
Heliarc 281i, 230V, Water Cooled, TXH 251F, RTW	0558101708
Heliarc 281i, 230V, Water Cooled, TXH 401F, RTW	0558101709
Heliarc 353i, 460V, Power Source Only	0558101697
Heliarc 353i, 460V, Basic Pkg	0558101705
Heliarc 353i, 460V, Water Cooled, TXH 251F, RTW	0558101710
Heliarc 353i, 460V, Water Cooled, TXH 401F, RTW	0558101711

RTW - Ready-to-Weld Packages include power source, 26 ft. (8 m) torch, foot control, work cable, regulator/flowmeter Ar/CO₂, and cart.

Basic Packages include power source, cooler, 2x-cable plugs, and coolant.

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Options & Accessories	
Description	Part Number
TIG Torches	
TXH 151F, 26 ft. (8 m) OKC50	0700300547
TXH 201F, 26 ft. (8 m) OKC50	0700300557
TXH 251wF, 26 ft. (8 m) OKC50	0700300564
TXH 401w, 26 ft. (8 m) OKC50	0700300567
TXH 151, Air-Cooled, OKC50, 26 ft. (8 m), wheel remote	0700300657
TXH 201, Air-Cooled, OKC50, 26 ft. (8 m), wheel remote	0700300658
TXH 251w, 26 ft. (8 m), wheel remote	0700300659
TXH 401w, 26 ft. (8 m), wheel remote	0700300660
TXH 151, Air-Cooled, OKC50, 26 ft. (8 m), flex wheel remote	0700300661
TXH 201, Air-Cooled, OKC50, 26 ft. (8 m), flex wheel remote	0700300662
TXH 251w Flex, 26 ft. (8 m), wheel remote	0700300663
TIG Torch Accessory Kits	
TXH-151/201	999126
TXH-251w	999127
TXH-401w	0558101886
Additional Options & Accessories	
Water cooler module	0558101703
Coolant, 1 gal. (3.8 L)	0560950312
Cart kit (required with water cooler module 0558101703)	0558101702
Foot control FC-5C, 30 ft. (9 m)	0558004234
Electrode Cable T316 15 ft. (5 m) 2/0	0558102319
Quick connect "T", 1 male/2 female fittings	0365557001
Quick lock connector male, 1/0 to 2/0 cable	0160360881
Quick lock connector female, 1/0 to 2/0 cable	13735632
Quick lock connector male, 1/0 to 4/0 cable	0160360882
Quick lock connector female, 1/0 to 4/0 cable	13735631
Work Cable GC-500 15 ft. (4.5 m) 4/0	0558102318



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