

# Heliarc™ 283i 353i AC/DC

## For demanding TIG welding applications

### High quality AC/DC TIG & MMA welding

The new Heliarc power sources have everything you need for advanced AC/DC TIG welding of aluminum, aluminum alloys, magnesium alloys, stainless steel, mild steel and copper alloys. Heliarc weld stick electrodes, even difficult to start 'Cellulosic' AWS 60XX.

### Settings to optimize your results

Heliarc has the functionality to achieve excellent results. AC & DC pulse, extended AC frequency & balance controls, Ability to store 60 programs and the ability to switch between two amperage levels while welding are just a few of the features.

**AC & DC Pulse** - Used to regulate heat input, particularly advantageous on thin materials. Using pulse, increases arc stability & puddle control for faster welding speeds with less plate deformation. Varying the pulse frequency effects heat input creating a rippling effect in the weld bead. Pulse frequency, together with weld speed, determines size & distance between surface ripples desired for a high quality aesthetic appearance. Using more than 100hz gives a smooth weld (no ripples) and improves arc stability at low amps.

**Extended AC Balance (EN)** Reduces tungsten erosion and provides operators with improved penetration or cleaning effect essential for high quality welds..

**Extended AC Frequency** Permits the use of smaller tungsten electrodes, maintains tungsten shape. provides a focused, narrow and more efficient arc cone resulting in improved penetration, narrow weld bead (requiring less filler material) lower heat input and increased travel speed improve efficiency helping reduce costs.

**AC hot-start** at low amp AC TIG gives accurate starts when welding thin plates.

### Applications

- Precision fabrication
- Pipe and tube manufacturing
- General fabrication and civil construction
- Automotive
- Aerospace
- Process industry
- Shipbuilding and offshore
- Transport and mobile machinery



### Features

- Inverter technology: Fast, responsive arc with high power output coupled with small size and low weight.
- Efficient - low power requirement, smaller electrical service ( breaker/fuses) smaller power cord and smaller generator size
- Digital controls for high accuracy and repeatability

### TIG torches and Accessories

ESAB offers a complete range of TXH™ TIG torches, foot control control and TXH™ with integrated remote for these units.

- High quality TIG-welding - Exceptional performance across a wide variety of materials.
- Excellent Arc control - Stable arc characteristics and settings provide excellent arc control and fast welding speed
- Hot start AC - Excellent arc starts at low Amp AC TIG welding
- AC or DC Pulsed TIG welding - Easy control of heat input and the weld pool. enhanced aesthetic weld bead appearance.
- Dual TIG function - Switch between two weld current levels while welding via torch switch. Allows operator to manually control weld puddle fluidity.
- Superior Stick (SMAW) performance - Even with 60XX electrodes
- Liftarc Mode even on AC - Ideal for applications where HF (High Frequency) is not permitted.
- Inverter / microprocessor technology - Highly efficient with low input power requirements. Precise arc control coupled with low weight & size
- AC Pulsing 0.2-2Hz - Ideal for thin gauge aluminum



Water cooler fits into trolley compartment

### Ordering information

Heliarc™ 283i AC/DC 400V CE	0700 300 701
Heliarc™ 353i AC/DC 400V CE	0700 300 702
Trolley / Cart Kit	0558 101 702
Water Cooler	0700 300 703
Cooling liquid 10 l	0465 720 002
Foot Control FC5	0558 004 234
TXH™ 401w, 4 m, OKC 50	0700 300 565
TXH™ 401w, 8 m, OKC 50	0700 300 567
TXH™ 401w HD, 8 m, OKC 50	0700 300 568
TXH™ 251w 4 m	0700 300 561
TXH™ 251w 8 m	0700 300 563
TXH™ 251w 4 m flex. Brennerkopf	0700 300 562
TXH™ 251w 8 m flex. Brennerkopf	0700 300 564
TXH™ 251w 8 m Wheel Remote	0700 300 659
TXH™ 401w 8 m Wheel Remote	0700 300 660
TXH™ 251w Flex 8 m Wheel Remote	0700 300 663

For additional torches, see separate fact sheet.

[www.esab.com](http://www.esab.com)

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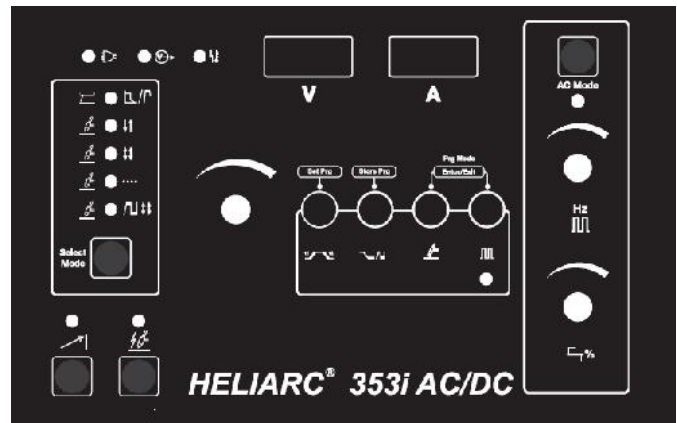
### Technical data Heliarc™ 283i AC/DC 353i AC/DC

Setting range TIG AC/DC, A	4 – 280	4 - 350
Mains supply, V/Ph/Hz	400/3/50,60	400/3/50,60
Fuse type, A	20	25
Maximum output TIG DC/AC		
at 45% duty cycle, TIG, A	-	350
at 60% duty cycle, TIG, A	-	300
at 100% duty cycle, TIG, A	280	-
Gas pre-flow, sec	0,5 - 30	0,5 – 30
Slope up time, sec	0.1-10	0.1-10
Gas post-flow, sec	0,5 - 30	0,5 - 30
Frequency AC, Hz	20-200	20-200
AC balance, %	10-90	10-90
DC Pulse mode frequency, Hz	0.4-300	0.4-300
AC Pulse mode frequency, Hz	0.4-2	0.4-2
Pulse duty (pulse time/background time) %	30-65	30-65
Background current % of main A	10-90	10-90
Slope down time, sec	0.1-10	0.1-10
Start/crater current (4stroke) % of main A	10-90	10-90
Post purge time, sec	0.5-30	0.5-30
Open circuit voltage, max	68	68
Power factor at 100%, TIG mode	0,75	0,8
Setting range MMA	4–280	4-350
Maximum output MMA, DC/AC		
At 20% duty cycle, MMA, A	-	350
At 40% duty cycle, MMA, A	280	-
KVA Tig, max	11	14,5
KVA MMA Max	14,2	19
Enclosure class	IP 21S	IP 21S
External dimensions mm, HxWxL	620x300x600	620x300x600
Weight, kg without Power source	50	50
Cooling unit without fluid	15	15
Trolley	35	35

Standards: IEC 60974-1, 3, 10

### Delivery content

3 m mains cable, 5 m return cable with clamp and OKC50 quick connector, 1,5 m gas hose with fittings



Front panel controls

### Promotional kits

Heliarc™ 283i AC/DC 400V CE gas cooled	0479 000 006
Heliarc™ 283i AC/DC 400V CE water cooled	0479 000 005
Heliarc™ 353i AC/DC 400V CE water cooled	0479 000 004

**COMPANY WITH  
MANAGEMENT SYSTEM  
CERTIFIED BY DNV**  
= ISO 9001 =  
= ISO 14001 =  
= OHSAS 18001 =