OERLIKON

CITOTIG RANGE
TIG AC/DC

www.oerlikon-welding.com

TIG AC/DC WELDING

WHY AC ?

In TIG AC welding, the welding current alternates between positive and negative polarity. It is ideal for welding aluminum and other materials containing surface refractory oxide. Negative polarity is used to form the weld pool, whereas positive polarity serves to break down the oxide and “clean” the surfaces to be welded.

APPLICATIONS

- Maintenance on site
- Car industry
- Shipbuilding
- Aerospace industry
- Chemical industry

APPLIED MATERIAL

- Aluminium
- Magnesium

EQUIPMENT REQUIREMENTS

- AC Power source
- Excellent arc performance on AC
  - Adjustable AC frequency
  - Adjustable AC balance
- Portability
- Pulse feature
- Stick performance
- Water Cooler

CONSUMABLES

Casting its own aluminlum rod enables OERLIKON to hold extremely tight tolerances in the chemical composition of its alloys. Lincoln Electric ensures the most reliable, highest quality aluminlum TIG welding products.

ALUROD AL MG 4.5 MN

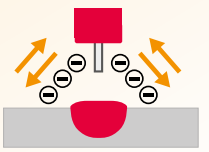
- Designed to meet the tensile strength requirements of magnesium alloys.
- For base materials 5083 and 5654.

ALUROD AL MG 5

- General purpose filler alloy for welding 5XXX series alloys when 276 MPa tensile strength is not required.

Current type	AC
Electrode polarity	AC (+ and -)
Penetration characteristics	
Oxide cleaning action	Yes - Once every half cycle
Heat balance in the arc (approx.)	50% at work end 50% at electrode end
Penetration	Medium
Electrode capacity	Good e.g. 3.18 mm (1/8 in.) - 225 A
Electrode type	Thoriated, ceriated, lanthanated

ELECTRON FLOW



EQUIPMENT RANGE

SINGLE PHASE AC/DC TIG WELDERS

THE LINCOLN ELECTRIC GREEN INITIATIVE
Inverter Technology reduces energy demand
www.lincolnelectric.com/green

CITOTIG 200 AC/DC

Citotig 200 AC/DC has advanced TIG AC & DC Functions (Four wave shapes, Pulse, adjustable Balance and Offset) making it ideal for critical AC or DC TIG welding applications. It offers a simple control panel with bright digital display and an innovative control system, from the torch. It can be simply changed to a water cooled unit by adding the COOL ARC® 24 Water Cooler.

INPUT 1 PHASE 50/60 Hz
OUTPUT CC AC/DC
LIFT TIG
1ph 16A
GENERATOR READY
Cellulosic

- **Superb arc performance**
  Excellent HF ignition, stable & fast arc, minimum current 2A
- **Advanced TIG AC & DC Functions**
  Four wave shapes, Pulse, adjustable Balance and Offset, innovative and simple control panel, AC auto setting
- **Generator compatible**
  ideal for site use
  Cellulosic capability
- **Bright digital display**
  easy set up buttons, 9 memories, new control from the TIG torch
- **Energy efficient**
  1 phase buck-boost circuit for energy saving
- **Robust design**
  Potted PCB's, True HD design (special protection for use in harsh conditions)
- **Best aluminium welding performance**

Item Number	Primary Voltage (50-60Hz)	Current Range (A)	Rated Output	Fuse Size (A) (slow)	Weight (kg)	Dimensions HxWxD (mm)
W000404214	115/ 230V/1Ph	2-200	200A@35% 130A@100%	16	23	419 x 246 x 506

THREE PHASE AC/DC TIG WELDERS

THE LINCOLN ELECTRIC GREEN INITIATIVE
Inverter Technology reduces energy demand
www.lincolnelectric.com/green

CITOTIG 315 AC/DC

This industrial AC/DC TIG welder has been designed and built to perform in the most hazardous environments at high outputs: 300A at 35% duty cycle both in TIG AC and TIG DC application. The controller provides all the features you would expect from industrial AC/DC TIG inverter welders.
It can be simply changed to water-cooled by adding the COOLERTIG® 4 Water Cooler.
A robust, stable and well equipped cart is available for easy movement of the unit.

- **Advanced inverter technology**
  for superior TIG performance
- **Superb welding characteristics**
  with TIG DC, TIG AC and Stick welding processes
- **Adjustable cleaning and penetration**
  for perfect aluminium welding
- **Variable AC frequency (40-400Hz)**
  for control of travel speed and penetration
- **Full function user-friendly control panel layout** with graph and a numeric display make it easy to set all welding parameters
- **Cellulosic capability**

INPUT 3 PHASE 50/60 Hz
OUTPUT CC AC/DC
GENERATOR READY
PFC POWER FACTOR CONTROL
Cellulosic

Item Number	Primary Voltage (50-60Hz)	Current Range (A)	Rated Output	Fuse Size (A) (slow)	Weight (kg)	Dimensions HxWxD (mm)
W000403604	230/400V/3Ph	2 - 300	300A/22V/35% 200A/18V/100%	32/20	42	545 x 290 x 660

TIG TORCHES

PREMIUM RANGE

WELDLINE™ by Lincoln Electric www.weldline.eu

PROTIG NG S

The ergonomic handle with button (EB).

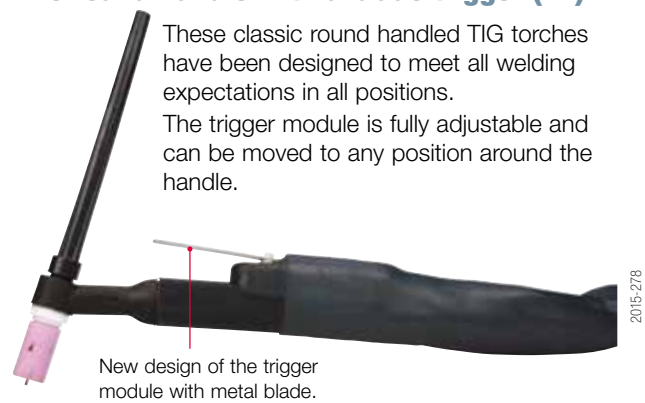
The best WELDLINE torches with an advanced ergo-design, using a colored soft grip for a maximum welder comfort.
These torches will give you an optimum welding quality, and increase the communication between the welder and the machine.

The modular system brings
a increased control over the power source.
Delivered with a single button module.

PROTIG III S

The round handle with a blade trigger (RL).

These classic round handled TIG torches have been designed to meet all welding expectations in all positions.
The trigger module is fully adjustable and can be moved to any position around the handle.



New design of the trigger
module with metal blade.

AIR COOLING

MODEL			PROTIG 10		PROTIG 20		PROTIG 30		PROTIG 40	
Duty cycle 35%			125 A		150 A		200 A		250 A	
Duty cycle 60%			80 A		100 A		130 A		200 A	
Fitted as standard	back cap		long							
	nozzle		Ø 9.6 mm				Ø 12 mm			
	electrode		Ø 1.6 mm		Ø 2.0 mm		Ø 2.4 mm			
Length			5 m	8 m	5 m	8 m	5 m	8 m	5 m	8 m
PROTIG III S	Connection	C5B/S	W000382715-2	W000382716-2	W000382717-2	W000382718-2	W000382719-2	W000382720-2	W000382721-2	W000382722-2
PROTIG NG S			W000278394-2	W000278395-2	W000278396-2	W000278397-2	W000278398-2	W000278399-2	W000278400-2	W000278401-2

WATER COOLING

MODEL			PROTIG 10W		PROTIG 35W		PROTIG 40W	
Duty cycle 100%			220 A		350 A		450 A	
Fitted as standard	back cap		long					
	nozzle		Ø 12.8 mm		Ø 15 mm		Ø 14 mm	
	electrode		Ø 2.4 mm		Ø 3.2 mm		Ø 3.2 mm	
Length			5 m	8 m	5 m	8 m	5 m	8 m
PROTIG III S	Connection	C5B/S	W000382723-2	W000382724-2	W000382725-2	W000382726-2	W000382727-2	-
PROTIG NG S			W000278402-2	W000278403-2	W000278404-2	W000278405-2	W000278406-2	W000278407-2

UP/DOWN MODULES (FOR PROTIG NG S ONLY)

	Designation	Item Number	
①	Horizontal potentiometer	W000279370 (4.7 kΩ)	WP10529-3 (10 kΩ)
②	Vertical potentiometer	W000279246 (4.7 kΩ)	WP10529-4 (10 kΩ)
③	3 buttons module	WP10529-2	
④	Blade	W000279245	

WEAR PART BOX

Designation	Item Number
Torch 10/10W	W000306441
Torch 20	W000306442
Torch 30	W000306443
Torch 40/35W	W000306444
Torch 40W	W000306445

TUNGSTEN ELECTRODES

PRODUCT ADVANTAGES:

- Very high life cycle
- Very stable arc
- Perfect arc ignition
- Tip longevity

Pure tungsten,
Tungsten + cerium,
Tungsten + lanthanum,
Tungsten + rare earths (1).

Designation	Item Number
Kit WTT2 9/9V/20W	W000371535
Kit WTT2 17/26/18W	W000371536

CHOICE CRITERIA

Type	Metal		Arc stability	Striking	Lasting	Thermal resistance
	Aluminium	Steel & Stainless steel				
WP - Pure tungsten	*		**	*	*	*
WC 20 - Cerium 2%		*	**	*	**	**
WL 15 - Lanthanum 1,5%	**	***	**	***	***	***
WL 20 - Lanthanum 2%	*	***	**	***	***	***
WS 20 - Rare earths (1) 2%	*	*	**	***	***	***

*** **Excellent** ** **Good** * **Average**

(1) Rare earths = any of the abundant metallic elements, including scandium (atomic number 21), yttrium (39), and the 15 elements from 57 to 71 (lanthanide series include lanthanum and cerium) in the Mendeleyev classification.

ACCESSORIES

CART 24 FOR CITOTIG 200 AC/DC

- Stable design
- Large wheels
- Low gas cylinder shelf
- Connection of modules without tools
- Special clamps for rod material boxes
- Stability stand on ramp thanks to extra brake brackets

Storage compartment for small sparts and tools

COOL ARC® 24

- Filling level indicator
- Light and modular design
- Powerful pump
- Low noise

COOLERTIG 4

- Filling level indicator
- Light and modular design
- Powerful pump
- Low noise

FREEZCOOL

W000010167

Specially designed for the cooling of welding torches.

- High electrical resistivity
- Anti-freezing protection down to -27 °C
- Anti-corrosion and anti-algae growth

CART 4 FOR CITOTIG 315 AC/DC

- Robust, stable and well equipped
- 4 rolls for easy move

CITOTIG 200 AC/DC
W000404214

COOL ARC® 24
K14190-1

CART 24
K14191-1

CITOTIG 315 AC/DC
W000403604

COOLERTIG 4
W000403941

CART4 FOR CITOTIG 315 AC/DC
W000404146

BUILT FOR THE HEAVIEST INDUSTRIAL CONDITIONS

Developed and tested under the hardest conditions **(TRUE HD)** to grant the reliability you need.

OERLIKON

www.oerlikon-welding.com

CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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OE-E5-19EN-M297