CEBORA
welding&cutting

2024
catalogue


CEBORA

Index

Emiliano Generali,
C.E.B (Costruzioni Elettromeccaniche Bolognesi), 1954

CEBORA since 1954

History

70 years have already passed since 1954, when Emiliano Generali, whose memory remains indelible in all who have known, founded the C.E.B. (Costruzioni Elettromeccaniche Bolognesi), a manufacturer of battery chargers and welding power sources, which in the years '60, merging with his other creation,the O.R.A (Officina Ruote & Affini) gave birth to one of the most solid enterprises in Italian industry: CEBORA.

> Since the Eighties the creation of two distinct division leads to a further increase inmarket, the Welding Division is in fact flanked by the Industrial Wheels Division, for the expansion and qualification of its range of wheels and furniture supports.

Seventy years marked by a succession of expansions, expansion of plants and organic, in a succession of generations between employees and management plans, to keep the thrust intact to the success left as a tangible imprint by the founder Emiliano Generali

A cutting-edge group

A continuous evolution that looks to the future

1954

Emiliano Generali founded the company C.E.B. (COSTRUZIONI ELETTROMECCANICHE BOLOGNESI), a manufacturerof battery chargers and MMA electrode welding power sources

1958

Emiliano Generali set up a second company, O.R.A. (Officina Ruote e Affini), for the production of internal handling wheels for industrial use and to be fitted to with furniture

1963

The two companies are merged into CEBORA that during 1963 employs a total of 40 personnel generating a turnover of 2 billion lire.

1980

The first Production of wheels and housings designed for commercial transport industrial applications with a higher load capacity compared to the existing competition is launched.

1984

CEBORA R&D dept., made up by a strong team of highly specialized and motivated technicians, creates the first highly portable MIG/MAG welder (Pocket MIG) that achieves an immediate and extraordinary sales success both in Europe and the United States.

CEBORA DIVISIONE RUOTE

# of made in Italy

CEBORA GROUP MADE IN ITALY

1986

CEBORA presents the revolutionary Plasma Pocket, a highly portable power source offering a 5 mm cutting capacity on a wide range of materials becomes another worldwide commercial success

2000

CEBORA focus its research and development efforts to high technology market sectors, such as the automation industry, launching a comprehensive range of robotic MIG, TIG and Plasma Welding equipment that quickly gained the confidenceof system integrators and robot manufacturers around the world.

2005

The new heavy-duty line of castors is born, and rapidly becomes a major contender within Europe's top markets, including Germany, specifically with the launch of the stainless steel heavy-duty housings.

The CEBORA industrial plasma cutting range is further enhanced with the addition of the HQC Plasma line devoted to high-definition cutting for automated solutions with pantographs and robots.

2010

CEBORA Welding & Cutting Division and CEBORA Wheels & Motion Division are created.

2014

In order to further strengthen its position within the automation and robotics markets, CEBORA achieves group status with the acquisition of Gefra Automation s.r.l., a respected and experienced system integrator with highly qualified staff specializing in the in automation and robotization of the production processes.

2021

ELETTRO CF, welding and plasma cutting company in Bologna, joins CEBORA GROUP

GEFRA automazione

elettro CF

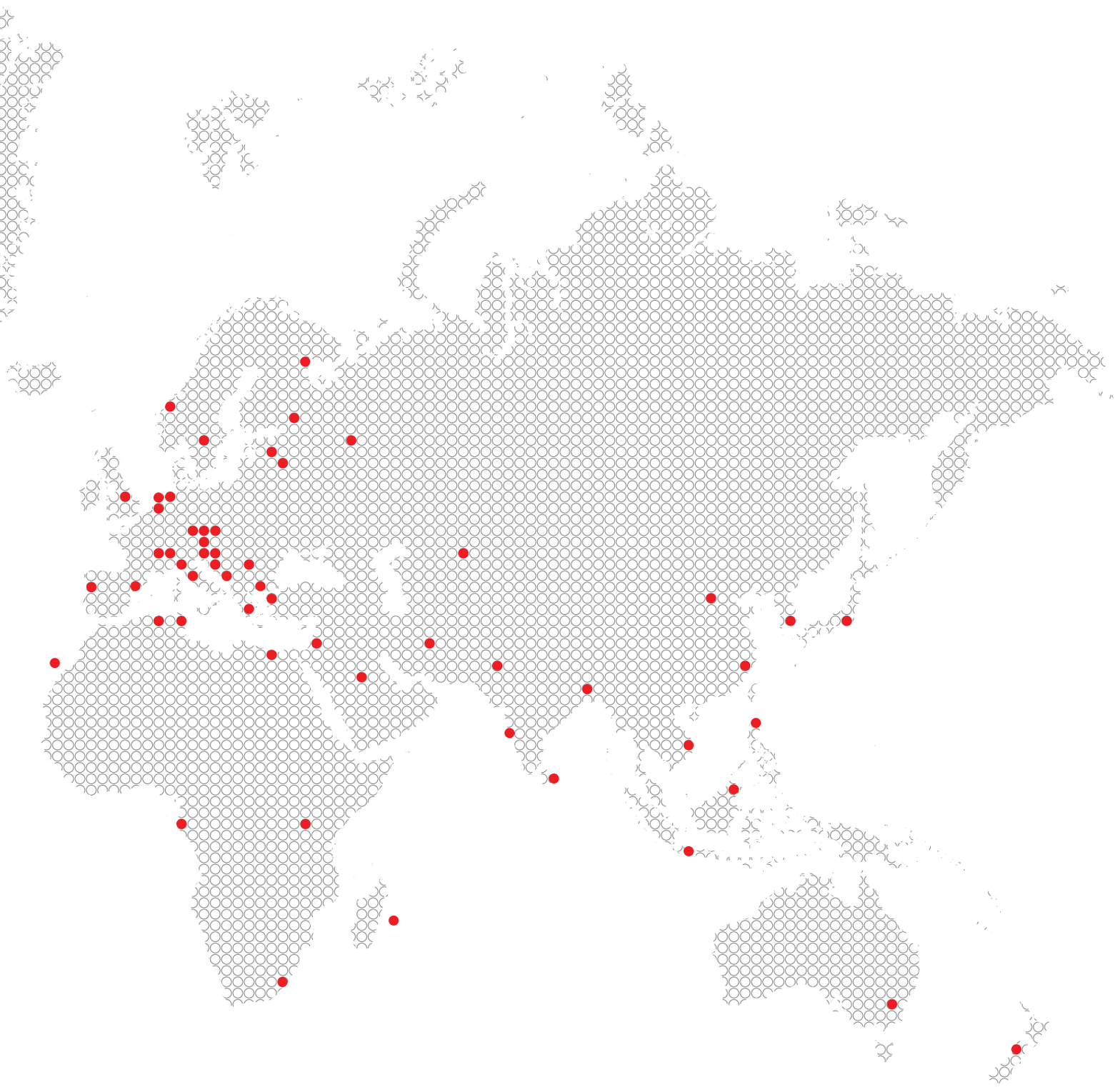
CEBORA GROUP MADEINITALY

A global partner

Production efficiency, excellent value for money, prompt deliveries and minimum product risk, are at the basis of CEBORA's philosophy.
A dynamic and highly efficient sales force works together with the marketing department and technical assistance service, to meet the needs of customers around the world.

Thanks to the selection and continuous implementation of specific services provided to importers and distributors, CEBORA is able to rapidly and successfully deliver its products to every corner of the world.

Maximum support to customers and the sales network is also ensured thanks to regular training courses held directly on the premises by the same engineers who design the power sources and to the website which is constantly updated with information relating to the latest production news of CEBORA GROUP.



Certifications

The quality of CEBORA is worldwide recognized, also by specific certifications, such as the EAC certificate (Russian board), the CCC certificate (Chinese board), CSA (Canada) etc.

All power sources are marked “CE” for their compliance with the European and international standards relevant to welding and plasma cutting equipment.

Approvals


BMW
Mercedes-Benz
NISSAN
DODGE
TESLA
VOLVO
CHRYSLER
LINCOLN
MASERATI
Ferrari
TOYOTA
VAS 6771
GM
LAND ROVER
Ford

Products

MIG, TIG, MMA, Plasma


CEBORA
CEBORA
CEBORA
CEBORA
CEBORA
POWER PLASMA 3035 M
STAR DOUBLE PULSE
JAGUAR

MIG

MONO STAR MIG 1620/M SYNERGIC
POCKET PULSE

SYNSTAR 200 M
SYNSTAR 250 M
SYNSTAR 270 T

SYNSTAR 270 T SRS *EDITION*
SYNSTAR 330 TC
SYNSTAR 330 TS

SYNSTAR 350 TS
SYNSTAR 400 TS
SYNSTAR 500 TS
SHIPYARD

KINGSTAR 400 TS
KINGSTAR 520 TS

MIG - Art. 304

MONO STAR MIG 1620/M SYNERGIC

Single phase input	**230 V +15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**4,5 kVA 20% 2,8 kVA 60% 2,5 kVA 100%**
min - max current obtainable in welding	**20 ÷ 160 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**160 A 20% 110 A 60% 100 A 100%**
Stepless regulation	**Electronic**
Max. wire spool size	**Ø 200 mm / 5 kg**
Protection class	**IP 23 S**
Weight	**11 kg**
Dimensions (WxLxH)	**196 x 420 x 380 mm**

MIG - Art. 305

POCKET PULSE

Single phase input	**230 V +15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**5,5 kVA 20% 3,7 kVA 60% 2,7 kVA 100%**
min - max current obtainable in welding	**20 ÷ 185 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**185 A 20% 140 A 60% 110 A 100%**
Stepless regulation	**Electronic**
Max. wire spool size	**Ø 200 mm / 5 kg**
Protection class	**IP 23 S**
Weight	**13,5 kg**
Dimensions (WxLxH)	**196 x 458 x 380 mm**

MONO STAR MIG 1620/M SYNERGIC

Single-phase synergic inverter power source for MIG/MAG welding with an innovative design, particularly versatile and suitable for various applications, especially repairs, maintenance and basic car body repairs.

› **SHORT** process
› **Synergic curves** for mild steel wire (ø 0.6 / 0.8 / 0.9 / 1.0 mm) and flux cored wire (ø 0.9 mm)
› **Optional package of curves** for aluminium, stainless steel and CuSi3 (Art. 266)
› **LCD display** to view and adjust the key functions:
Type of wire or gas, current and thickness, voltage and wire speed
› **EURO connection**: either the standard MIG torch (Art. 1246) or the "professional" torch for flux cored wires (Art. 1638) can be used
› **2-roller-wire feed motor**
› **Easily transportable** thanks to its lightweight body (11 kg only)

A dedicated trolley for transportation of the power source, (Art. 1653) particularly compact and handy, is available as optional.

Power source characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard

POCKET PULSE

Single-phase **pulsed arc** synergic inverter power source for MIG/MAG welding with an innovative design, particularly versatile and suitable for various applications, especially repairs, maintenance and basic car body repairs.

› **SHORT** and **PULSE** processes
› **Synergic curves** for mild steel wire (ø 0.6 / 0.8 / 0.9 / 1.0 mm), stainless steel (ø 0.8 / 0.9 mm), Al/Mg (ø 0.8 / 0.9 / 1.0 mm), CuSi3 (ø 0.8/ 0.9 mm) and flux cored wire (ø 0.9 mm)
› **LCD display** to view and adjust the key functions:
Type of wire or gas, current and thickness, voltage and wire speed
› **EURO connection**: either the standard MIG torch (Art. 1246) or the "professional" torch for flux cored wires (Art. 1638) can be used
› **2-roller-wire feed motor**
› **Easily transportable** thanks to its lightweight body (13,5 kg only)

A dedicated trolley for transportation of the power source, (Art. 1653) particularly compact and handy, is available as optional.

Power source characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard

MIG - Art. 322

SYNSTAR 200 M

PFC EN 61000-3-12

Single phase input	**230 V + 15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**6,3 kVA 20% 3,8 kVA 60% 3,1 kVA 100%**
min - max current obtainable in welding	**20 ÷ 200 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**200 A 20% 140 A 60% 120 A 100%**
Stepless regulation	**Electronic**
Max. wire spool size	**Ø 300 mm / 15 kg**
Protection class	**IP 23 S**
Weight	**45 kg**
Dimensions (WxLxH)	**480 x 830 x 825 mm**

MIG - Art. 358

SYNSTAR 250 M

PFC EN 61000-3-12

Single phase input	**230 V + 15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**25 A**
Input power	**8,6 kVA 20% 6,2 kVA 60% 5,4 kVA 100%**
min - max current obtainable in welding	**20 ÷ 250 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**250 A 20% 200 A 60% 180 A 100%**
Stepless regulation	**Electronic**
Max. wire spool size	**Ø 300 mm / 5 kg**
Protection class	**IP 23 S**
Weight	**45 kg**
Dimensions (WxLxH)	**480x830x825 mm**

MIG - Art. 324

SYNSTAR 270 T

PFC
EN 61000-3-12

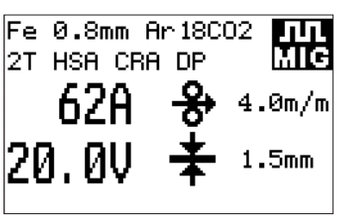
Three phase input	**400V + 15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**9,3 kVA 20% 6,9 kVA 60% 5,3 kVA 100%**
min - max current obtainable in welding	**20 ÷ 270 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**270 A 20% 220 A 60% 180 A 100%**
Stepless regulation	**Electronic**
Max. wire spool size	**Ø 300 mm / 15 kg**
Protection class	**IP 23 S**
Weight	**50 kg**
Dimensions (WxLxH)	**480 x 830 x 825 mm**

SYNSTAR 200 M– 250 M – 270 T

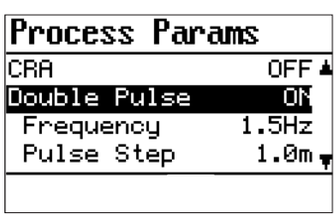
SYNSTAR 200 M, 250 M and 270 T are synergic inverter power sources for MIG/MAG welding with an innovative design, particularly versatile and suitable for various applications, especially for light – medium metal works.

› **SHORT** process (double current level)
› **PULSE** and **DOUBLE PULSE** processes (optional)
› **Synergic curves** for solid wire and aluminium from ø 0.6 to 1.2 mm, (depending on the model) flux cored wire (ø 0.9* mm) and CuSi3 (ø 0.8 / 0.9 / 1.0 mm)
› **LCD display** to view and adjust the key functions:
Type of wire or gas, current and thickness, voltage and wire speed
› **EURO connection**: the standard MIG torch (Art. 1242), the water-cooled MIG torch (Art. 1241 only for Art. 324) and CEBORA Push-Pull (Art. 2003) can be used
› **2-roller-wire feed unit** (Art. 322) and **4-roller-wire feed** (Art. 358, 324)

Power sources characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard



LCD panel



Optional pulse and double pulse function

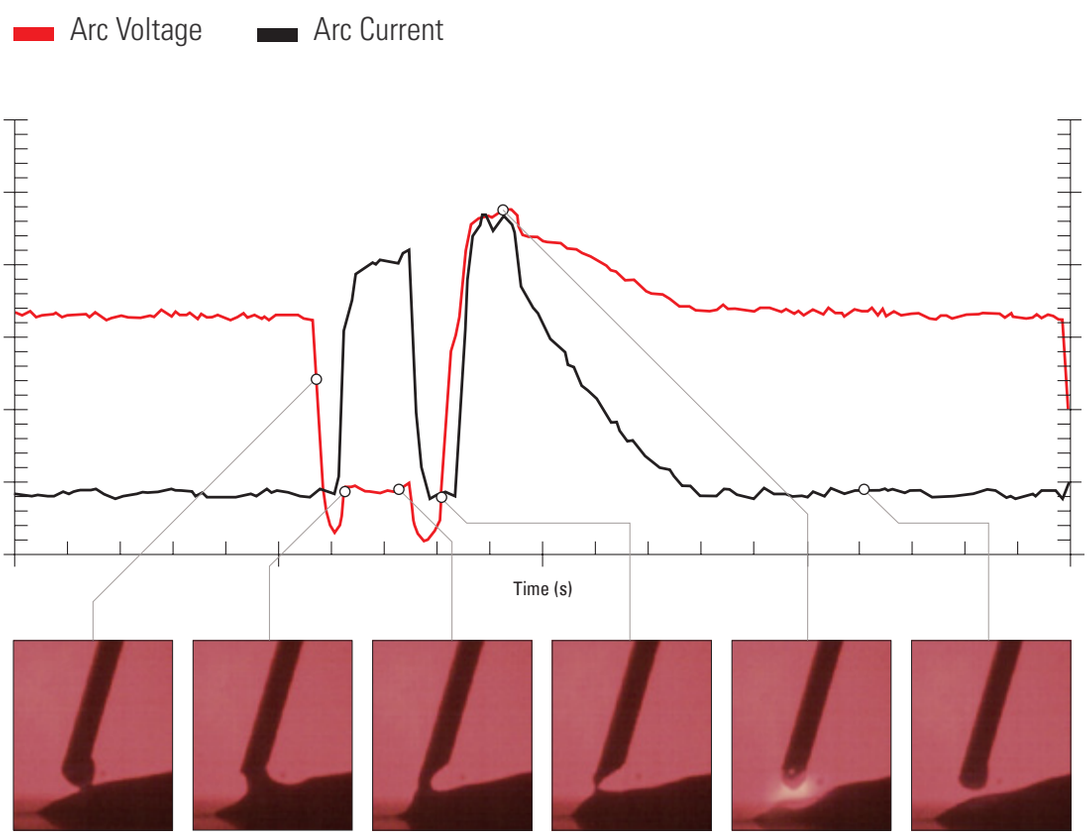
*not for Art. 324

MIG - Art. 564

SYNSTAR 270 T SRS *edition*

PFC EN 61000-3-12

	MIG-TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	9,3 kVA 20% 6,9 kVA 60% 5,3 kVA 100%	9,5 kVA 20% 7,3 kVA 60% 5,4 kVA 100%
min - max current obtainable in welding	10 ÷ 270 A	10 ÷ 250 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	270 A 20% 220 A 60% 180 A 100%	250 A 20% 200 A 60% 160 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1,5 ÷ 5,0 mm
Protection class	IP 23 S	
Weight	68 kg	
Dimensions (WxLxH)	510 x 1020 x 865 mm	



SRS MIG process dynamics

SYNSTAR 270 T SRS *edition*

The new SYNSTAR 270 T SRS edition is a three-phase **multi-process** inverter power source for MIG – TIG - MMA welding, particularly versatile and suitable for various applications.

› **MIG SHORT** process (double current level)
› **PULSE MIG** and **DOUBLE PULSE MIG** processes
› **SRS MIG** process (Spatter Reduction System) to thoroughly achieve spatters-free welds with reduced heat input
› **System calibration** procedure to adjust all welding parameters and process variables (possibility of setting the features of the welding torch) – only available with SRS MIG
› **LIFT TIG** process (easy polarity reverse)
› **PULSE TIG** process (optional)
› **Synergic curves** for wires of ø 0.6 / 0.8 / 0.9 / 1.0 / 1.2 mm, including stainless steel pulse synergic programs optimized for small thickness welds
› **LCD touch-screen display** to view and adjust the key functions:
Type of process, type of wire or gas and arc length, current and thickness, voltage and wire speed
› **Dust filter** to protect the power source against iron powders
› **USB** and **RS232 ports** to easily update the software
› **CEBORA 4-roller-wire feed unit** (ø 30 mm)

SYNSTAR 270 T SRS edition can be equipped with several different types of torches:
› **CEBORA MIG Push-Pull torch, air-cooled**, - cable length 4 m (Art. 2003), self-limited to 200 A
› **CEBORA MIG torch, air-cooled**, 280 A 60% - cable length 3,5 m (Art. 1242)
› **CEBORA MIG torch, water-cooled**, 380 A 60% - cable length 3,5 m (Art. 1241)
› **BINZEL TIG "ABITIG 450 W" torch**, - cable length 4 m (Art. 1256) combined with extension lead (Art. 2068)

› On request, the cooling unit (Art. 1681) is also available

Power sources characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard

MIG SRS - First pass on tube with bevelling

SRS (Spatter Reduction System)

Short circuit welding process that offers several advantages:

› No spatters in welding
› Low heat input in welding
› Suitable for thin thicknesses and for reduced distortions
› Excellent root pass also on root sides
› Easy achievement of the first pass on especially open edges
› Precise and stable arc with excellent control of the welding pool
› Optimal weld bead, even aesthetically

MIG - Art. 386

SYNSTAR 330 TC

	MIG-TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	12,4 kVA 40% 10,8 kVA 60% 9,2 kVA 100%	11,6 kVA 40% 10,2 kVA 60% 9,3 kVA 100%
min - max current obtainable in welding	10 ÷ 330 A	
Duty Cycle (10 min.40°C) According to IEC 60974-1	330 A 40% 300 A 60% 270 A 100%	300 A 40% 270 A 60% 250 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1,5 ÷ 5,0 mm
Protection class	IP 23 S	
Weight	72 kg	
Dimensions (WxLxH)	510 x 1020 x 960 mm	

MIG - Art. 388

SYNSTAR 330 TS

	MIG-TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	12,4 kVA 40% 10,8 kVA 60% 9,2 kVA 100%	11,6 kVA 40% 10,2 kVA 60% 9,3 kVA 100%
min - max current obtainable in welding	10 ÷ 330 A	
Duty Cycle (10 min.40°C) According to IEC 60974-1	330 A 40% 300 A 60% 270 A 100%	300 A 40% 270 A 60% 250 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1,5 ÷ 5,0 mm
Protection class	IP 23 S	
Weight	82 kg	
Dimensions (WxLxH)	510 x 1022 x 1330 mm	

SYNSTAR 330 TC – 330 TS

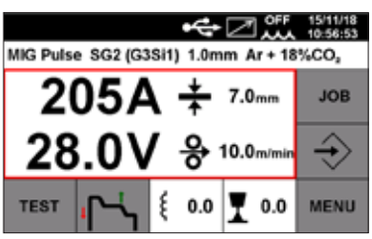
SYNSTAR 330 TC AND 330 TS are three-phase **multi-process** inverter power sources for MIG/MAG, TIG and MMA welding, particularly versatile and suitable for various applications, especially for metal works

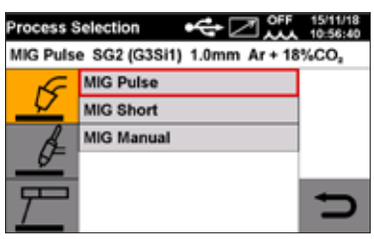
› **MIG SHORT** process (double current level)
› **PULSE MIG** and **DOUBLE PULSE MIG** processes
› **LIFT TIG** process (easy polarity reverse)
› **PULSE TIG** process (optional)
› **Synergic curves** for wires of ø 0.6 / 0.8 / 0.9 / 1.0 / 1.2 mm, including stainless steel pulse synergic programs optimized for small thickness welds
› 5" **LCD touch-screen display** to view and adjust the key functions:
Type of process, type of wire or gas and arc length, current and thickness, voltage and wire speed
› **USB** and **RS232 ports** to easily update the software
› **CEBORA 4-roller-wire feed unit** (ø 30 mm)

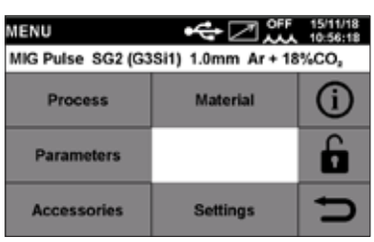
SYNSTAR 330 TC and TS can be equipped with several different types of torches:
› **MIG CEBORA Push-Pull torch, air-cooled**, - cable length 4 m (Art. 2003), self-limited to 200 A
› **CEBORA MIG torch, air-cooled**, **380 A 60%** - cable length 3,5 m (Art. 1239)
› **CEBORA MIG torch, water-cooled**, **380 A 60%** - cable length 3,5 m (Art. 1241)
› **CEBORA MIG UP/DOWN torch, water-cooled**, **500 A** - cable length 3,5 m (Art. 1245)
To be compulsorily combined with digital – analogic UP/DOWN adapter kit (Art. 2053)
› **BINZEL TIG "ABITIG 450 W" torch**, - cable length 4 m (Art. 1256) combined with extension lead (Art. 2068)

› On request, the cooling unit (Art. 1681) is also available

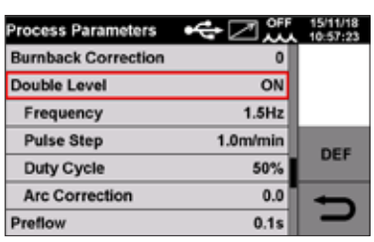
Power sources characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard







Possibility to choose
any process from the menu



Pulse and double pulse included

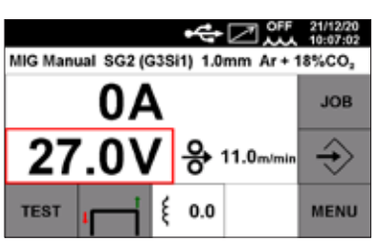
MIG - Art. 379

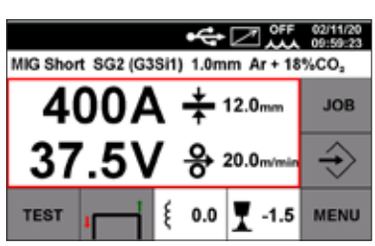
SYNSTAR 350 TS

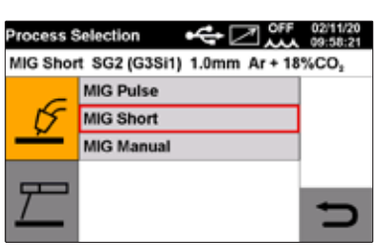
ECO Power
DUAL-VOLTAGE

PFC
EN 61000-3-12

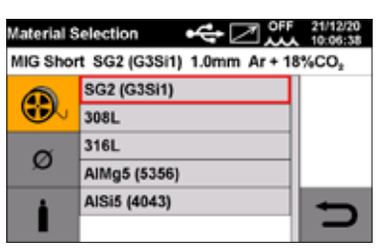
	MIG/MAG		MMA	
Three phase input	230 V +15% / -20% 50/60 Hz	400 V +15% / -20% 50/60 Hz	230 V +15% / -20% 50/60 Hz	400 V +15% / -20% 50/60 Hz
Fuse rating (slow blow)	28 A	16 A	28 A	16 A
Input power	13,3 kVA 40% 12,2 kVA 60% 11 kVA 100%	14,2 kVA 60% 10,8 kVA 100%	13,6 kVA 40% 12,3 kVA 60% 11 kVA 100%	14,2 kVA 60% 10,6 kVA 100%
min - max current obtainable in welding	10 ÷ 340 A	10 ÷ 350 A	10 ÷ 320 A	10 ÷ 330 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	340 A 40% 320 A 60% 300 A 100%	350 A 60% 300 A 100%	320 A 40% 300 A 60% 280 A 100%	330 A 60% 280 A 100%
Stepless regulation	Electronic			
Max. wire spool size	Ø 300 mm / 15 kg			
Electrodes that can be used			Ø 1.5 ÷ 6.0 mm	
Protection class	IP 23 S			
Weight	95 kg			
Dimensions (WxLxH)	527x1078x1398 mm			







Possibility to choose
any process from the menu



Possibility to choose type of wire,
diameter and gas

SYNSTAR 350 TS

The new SYNSTAR 350 TS is an extremely efficient **dual-voltage** 230 - 400 Vac inverter three-phase synergic power source for MIG/MAG - MMA welding, consisting of a new hardware architecture that fully meets the most stringent requirementsin terms of performance and consumption, placed within a robust structure, entirely made of pre-galvanised steel.
Is therefore particularly versatile and suitable for various applications, especially in heavy metal works.

Power electronics are cooled separately: an airflow is forced by fans inside the cooling tunnel, ensuring a perfect separation between the exterior and the interior of the generator, avoiding contamination from metal dust.

The **yield** of this power source is the highest among comparable ones, allowing to obtain a maximum current of 350 A at 60% duty cycle (10 min. 40°C), according to IEC60974-1 standards. Furthermore, the power source complies with Directive 2009/125/EC, which regulates Energy-related Products (ErP), better known as the Ecodesign Directive.

› Included processes:
MIG SHORT and **MIG SHORT HD** (high deposit)

› On-demand processes:
MIG SHORT (double current level) processes
MIG PULSE, **MIG PULSE HD** (high-deposit) and **MIG DOUBLE PULSE** processes

› **Synergic programs** available for ø 0.8/1,0/1,2 mm solid wires, as well as of stainless steel and aluminium
› Wire feed roll kit for aluminium and flux-cored wires

› 5" **LCD touch-screen display** to view and adjust the key functions:
type of process, type of wire or gas and arc length, current and thickness, voltage and wire speed
› Pre-arranged for integration in automation via optional analog interface Kit (Art. 456)
› **Easily removable cooling grid,** to facilitate and reduce the maintenance time
› Internal **USB port** and **RS232** for firmware updates.
› **4-roller-wire feed unit** (ø 30 mm) in aluminium
› On request, the cooling unit (Art. 1686) **is also available**

SYNSTAR 350 TS can be equipped with 4 different types of torch:
› **Push-Pull** torch (24 Vdc)
It is possible to be combined with PUSH-PULL adapter Kit (Art. 447)
› **CEBORA MIG torch, air-cooled**, **380 A** - cable length 3,5 m (Art. 1239)
› **CEBORA MIG torch, water-cooled**, **380 A** - cable length 3,5 m (Art. 1241)
› **CEBORA MIG UP/DOWN torch, water-cooled**, **500 A** - cable length 3,5 m (Art. 1245)
To be compulsorily combined with digital – analogic UP/DOWN adapter Kit (Art. 2053)

Power source characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard

MIG - Art. 382

SYNSTAR 400 TS

	MIG/MAG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	400 V +15% / -20% 50/60 Hz
Fuse rating (slow blow)	25 A	25 A
Input power	17,5 kVA	17,5 kVA
min - max current obtainable in welding	10 ÷ 400 A	10 ÷ 380 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	400 A 100%	380 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1.5 ÷ 6.0 mm
Protection class	IP 23 S	
Weight	111 kg	
Dimensions (WxLxH)	527 x 1078x 1398 mm	

ECO Power
High-yield power sources

MIG - Art. 383

SYNSTAR 500 TS

	MIG/MAG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	400 V +15% /-20% 50/60 Hz
Fuse rating (slow blow)	25 A	25 A
Input power	25 kVA 40% 22 kVA 60% 16,5 kVA 100%	25 kVA 40% 22 kVA 60% 16,5 kVA 100%
min - max current obtainable in welding	10 ÷ 500 A	10 ÷ 500 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	500 A 40% 450 A 60% 400 A 100%	500 A 40% 440 A 60% 380 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 18 kg	
Electrodes that can be used		Ø 1.5 ÷ 6.0 mm
Protection class	IP 23 S	
Weight	115 kg	
Dimensions (WxLxH)	527x1078x1398 mm	

SYNSTAR 400 TS – 500 TS

The SYNSTAR 400 TS and 500 TS are three-phase inverter power sources for MIG-MMA welding with extremely high efficiency. They consist of a new hardware architecture that fully meets the most stringent requirements in terms of performance and consumption, placed within a robust structure entirely made of pre-galvanized steel. As a result, they are particularly versatile and suitable for various applications,especially in heavy metal works.

The power electronics are separately cooled: an airflow forced by fans circulates inside the cooling tunnel, ensuring perfect separation between the outside and inside of the power source, thus avoiding contamination from metal dust.

The **yield** of these power sources is among the **highest when compared to others**.
They allow obtaining a maximum current of **400 A at 100%** and **500 A at 40%** of the duty cycle (10 min. at 40°C), following IEC60974-1 standards, with a power consumption from the electrical grid of about 25 A.
Furthermore, the power sources comply with Directive 2009/125/EC, which regulates Energy-related Products (ErP), better known as the Ecodesign Directive.

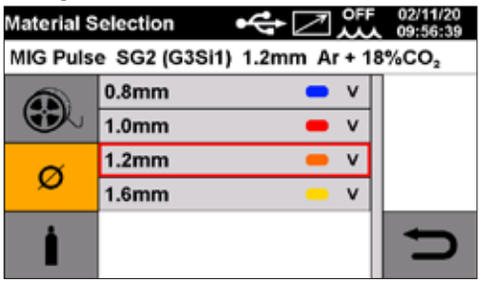
› Included processes:
MIG SHORT and **MIG SHORT HD** (high deposit)

› On-demand processes:
MIG SHORT (double current level) processes
MIG PULSE, **MIG PULSE HD** (high-deposit) and **MIG DOUBLE PULSE** processes

› **Synergic programs** available for ø 0.8/1,0/1,2/1,6 mm solid wires, as well as of stainless steel and aluminium
› Wire feed rolls kit for Aluminium and flux-cored wire (optional)
› 5" **LCD touch-screen display** to view and adjust the key functions:
type of process, type of wire or gas and arc length, current and thickness, voltage and wire speed
› Pre-arranged for automation integration with optional analog interface kit (Art. 456).
› Easily removable cooling grid to reduce maintenance times.
› Internal **USB port** and **RS232** for firmware updates.
› **4-roller wire feed unit** (ø 37 mm) in aluminium
› 4-roller wire feed unit **SHIPYARD** (ø 37 mm) (Art. 1665)
› **Cooling unit integrated in the power sources**

The two SYNSTAR can be equipped with 4 different types of torches:
› Push-Pull Torch (42 Vdc)
It is possible to be combined with PUSH-PULL adapter Kit (Art. 447)
› **CEBORA MIG torch, water-cooled**, **350 A** - cable length 3,5 m (Art. 1243)
› **CEBORA MIG UP/DOWN torch, water-cooled**, **500 A** - cable length 3,5 m (Art. 1245)
To be compulsorily combined with digital – analogic UP/DOWN adapter Kit (Art. 2053)

Power source characterized by low electrical input **(PFC)**
Compliant with EN 61000-3-12 standard



Possibility to choose type of wire, diameter and gas

MIG - Art. 382.88 - 383.88

SHIPYARD 400 - 500

Compact 4-roller wire feed unit
(ø 37 mm) with flow meter

Art. 1665

SHIPYARD 400 and 500 with 4-roller wire fee unit SHIPYARD (Art. 1665) are three-phase inverter power sources for highly efficient MIG - MMA welding, suitable for **shipbuilding**

The SHIPYARD wire feed unit features the following characteristics:
› 5" **LCD touch-screen display**
› Internal **USB port** and **RS232** for firmware updates
› External signal connector:
Up/down torch kit (voltage - current)
Push-pull torch kit
› Quick coupling for cooling tubes
› Gas flow meter with regulation
› Foldable lifting handle
› Concealed lifting points
› Lower insertion rollers with ø 37 mm are easily identifiable by the stamped values on the edge

Included processes:
MIG SHORT and **MIG SHORT HD** (high deposition)

› Processes available on request:
MIG SHORT (dual current level)
MIG PULSE, **PULSE HD**, and **DOUBLE PULSE**

› **Synergic curves** for ø 0.8/1.0/1.2/1.6 mm wires, as well as stainless steel and aluminium programs
› Wire feed unit kit for Aluminum and cored wire (optional)
› **Pre-arranged for cooling unit**

Extension lead between power souce and wire feeder up to 25 meters (Art. 2069)

MIG - Art. 372

KINGSTAR 400 TS

	MIG-TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	20 A	
Input power	18,8 kVA 40% 16,4 kVA 60% 14,2 kVA 100%	17,7 kVA 40% 15,8 kVA 60% 15,3 kVA 100%
min - max current obtainable in welding	10 ÷ 400 A	
Duty Cycle (10 min.40°C) According to IEC 60974-1	400 A 40% 370 A 60% 340 A 100%	380 A 40% 350 A 60% 300 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1,5 ÷ 6,0 mm
Protection class	IP 23 S	
Weight	120 kg	
Dimensions (WxLxH)	588 x 1120 x 1380 mm	

MIG - Art. 374

KINGSTAR 520 TS

	MIG-TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	32 A	
Input power	25,8 kVA 40% 23,7 kVA 60% 20,7 kVA 100%	26,1 kVA 40% 23,2 kVA 60% 22,1 kVA 100%
min - max current obtainable in welding	10 ÷ 520 A	
Duty Cycle (10 min.40°C) According to IEC 60974-1	500 A 40% 470 A 60% 440 A 100%	500 A 40% 460 A 60% 440 A 100%
Stepless regulation	Electronic	
Max. wire spool size	Ø 300 mm / 15 kg	
Electrodes that can be used		Ø 1,5 ÷ 6,0 mm
Protection class	IP 23 S	
Weight	130 kg	
Dimensions (WxLxH)	588 x 1120 x 1380 mm	

KINGSTAR 400 TS – 520 TS

KINGSTAR 400 TS and 520 TS are two **multi-process** power sources for MIG/ MAG – TIG – MMA welding with high performance, particularly suitable for high production applications.

› Included processes:
MIG SHORT HD (high deposit) and **MIG ROOT** processes (first pass)
LIFT TIG process (easy polarity reverse)

› On-demand processes:
MIG PULSE and **PULSE HD** processes
MIG SHORT (double current level) and **DOUBLE PULSE** processes
MIG SRS process (Spatter Reduction System) to thoroughly achieve spatters-free welds with reduced heat input
MIG 3DPULSE process
SWPS package (Standard Welding Procedure Specifications) according to ISO 151612, which meets the qualification requirements of the procedures in compliance with EN 1090-1
FULL TIG process (PULSE TIG, XP/APC/EVO START)

› **System calibration procedure**, to complete the adjustment of all welding parameters and process variables (possibility of adjusting the system by taking into account the characteristics of the welding torch and the extension lead used between the trolley and the power source).
Available only with SRS MIG
› **Industry 4.0 compliant power sources:** the new hardware architecture allows the implementation of a web server (through the Ethernet LAN port or by means of an external kit, through Wi-Fi connection), that enables the operator to take advantage of all those tasks requiring data collection and processing, welding parameter setup, diagnostics and remote assistance
› **User interface** remotely controlled can be handled through personal computer, **tablet and smartphone**
› **Easily removable cooling grid,** to facilitate and reduce the maintenance time
› **Bayonet connection** in accordance with MIL-C-SS 116 standard for a simple introduction andfixing of the connection cables between power source and trolley
› **2 USB ports** for saving data and updating software
› 7" colour **LCD touch-screen** display
› **4-roller-wire feed unit in aluminium** (ø 37 mm)
› On request, it is possible to order the double wire feed unit kit (Art. 458)

Double wire feed unit kit (Art. 458)

› On request, the cooling unit for KINGSTAR 400 TS (Art. 1683) is also available

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

SRS MIG process

KINGSTAR

3DPulse welding process

PFC
EN 61000-3-12

Innovation in the context of MIG/MAG welding signed by CEBORA

3DPulse is a **pulse welding process** designed, realized and developed to provide a viable solution not only for more demanding applications - such as solving particularly demanding welding problems - but at the same time to offer real advantages and benefits in the simplest and common applications.

Comparison between 3D Pulse and standard pulse:

+30%

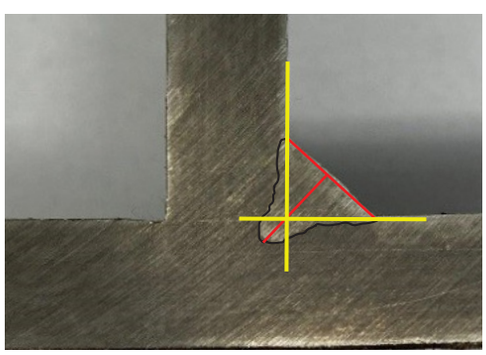
Execution speed

+20%

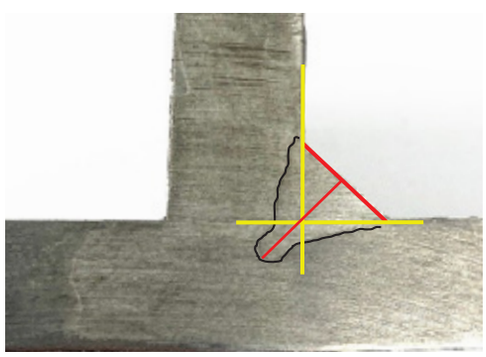
Penetration in corner joints

+15%

Saving on manufacturing costs



Standard Pulse – Stainless 8 mm



3DPulse – Stainless 8 mm

3DPulse (Art. 814)

The 3DPulse, available by activating the pulse (Art. 231) welding process, uses a complex algorithms as code, which involves the combination of three mathematical models that exploit the computational capabilities of the microprocessor by adapting the system's responses to changes in key process variables.

ADVANTAGES:

› Minimized or null joint processing and recovery times
› Mild welding noise
› Decreased welding smokes
› Short and stable arc, easy to drive and to handle
› Excellent bead workability
› Excellent ability to spread austenitic or low-moisturizing filler material
› Welding pass on top - strong and symmetrical penetration
› Excellent final quality of the welding seam

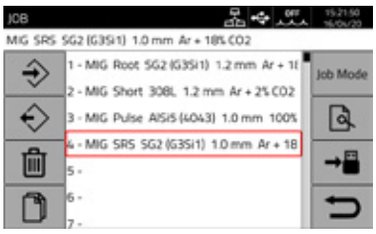
Display

KINGSTAR

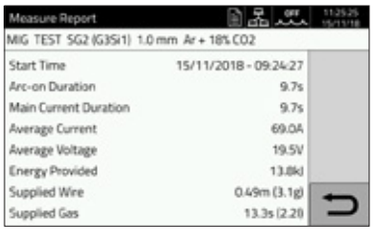
Primary screen

Direct access to all functions

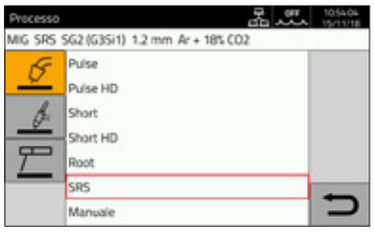
Set-up of the filler wire with indication of the roller type



Save JOB with customizable name



Measurements report after each welding bead



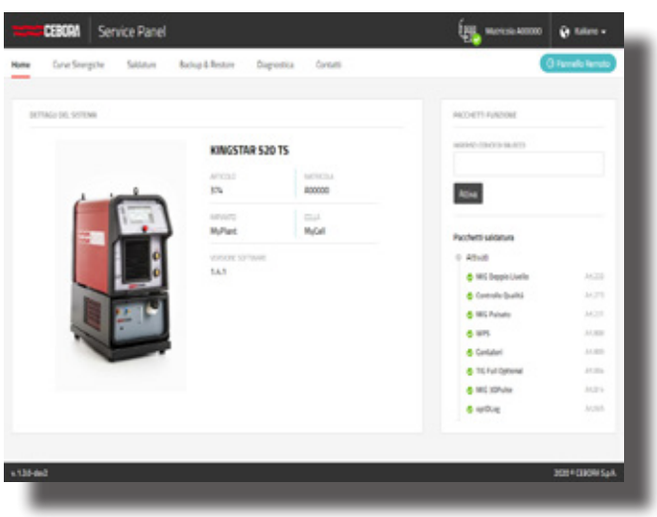
Wide selection of welding processes

Remote control kit of the wire feed unit (Art. 437)

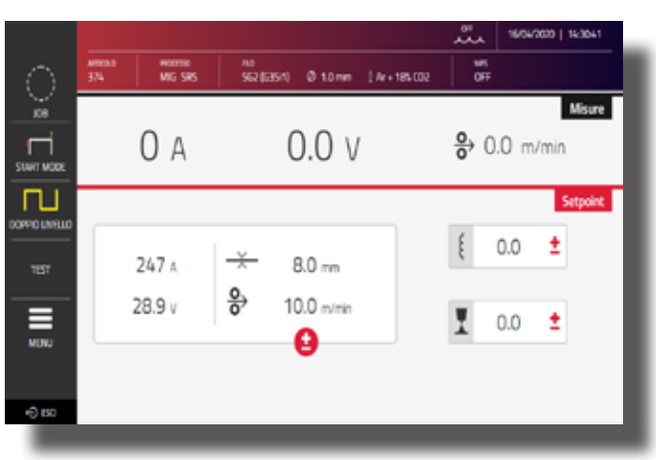
LCD 7" colour touch-screen display positioned in the center of the power source

Compact 4-roller quick-release wire feed unit with insertion rollers (ø 37 mm), easily identifiable thanks to color-coding system through diameters

Webapp



Service panel



Remote panel

Industry 4.0

The KINGSTAR line is based on a dual-core microprocessor control board equipped with an Ethernet network interface and an open-source software platform.
Through the integrated web server it is possible to interconnect - directly via cable or via Wi-Fi with an external kit - to the company network using standard TCP/IP and HTTPS protocols that make it compliant with Industry 4.0 requirements.
In fact, KINGSTAR power sources offer a REST API programming interface that allows a flexible bidirectional data exchange with management systems and company MES, allowing both the configuration of process parameters and the consultation of production data.
It is also possible to remotely monitor the status of the generator and the welding process in real time, and to access the generator internal logs for remote diagnostics and service.
The KINGSTAR power sources also feature an integrated web app that allows complete remote management using a simple browser from a personal computer or tablet, without the need to install additional software. You can therefore monitor the general status of the power source, the status of the welding process and the trend of the most significant measurements.

Webapp - The user interface can be used via pc, tablets and smartphones

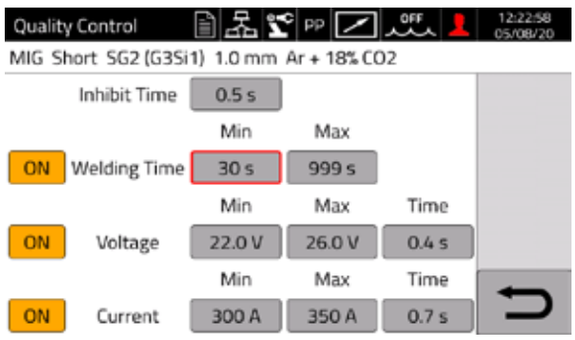
The manual version with CANopen interface for mechanized and automated system is also available

Additional functions

KINGSTAR power sources offer new software packages aimed at improving production control and digitizing business processes and activities. These power sources are also pre-arranged for the use of optical scanners to automate the processes with barcodes and QR code scanning.

Quality Control (Art. 273)

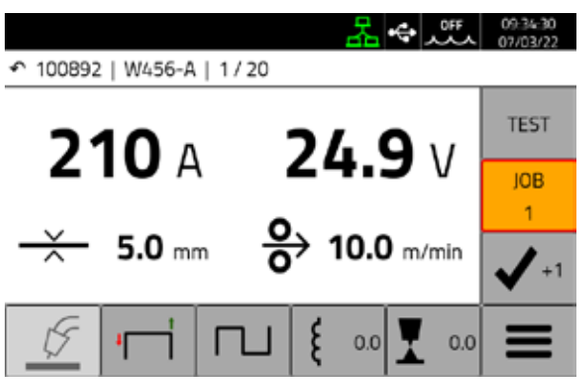
Software package dedicated to the software package for managing and repeating the welding seams.
It allows to define minimal and maximum thresholds of arc current, arc tension and welding time.
If the threshold is exceeded it is marked on the panel and in the welding reports.



Control panel screenshot

Production Mode (Art. 817)

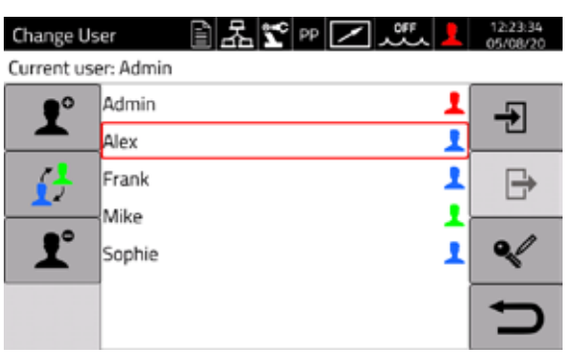
Software package dedicated to the management and tracking of welding processes in mass production of parts, batches and job orders: it allows to export to file the welding processes complete with processing name, job order name and part number.
It allows a better intergration with MES systems for Industry 4.0



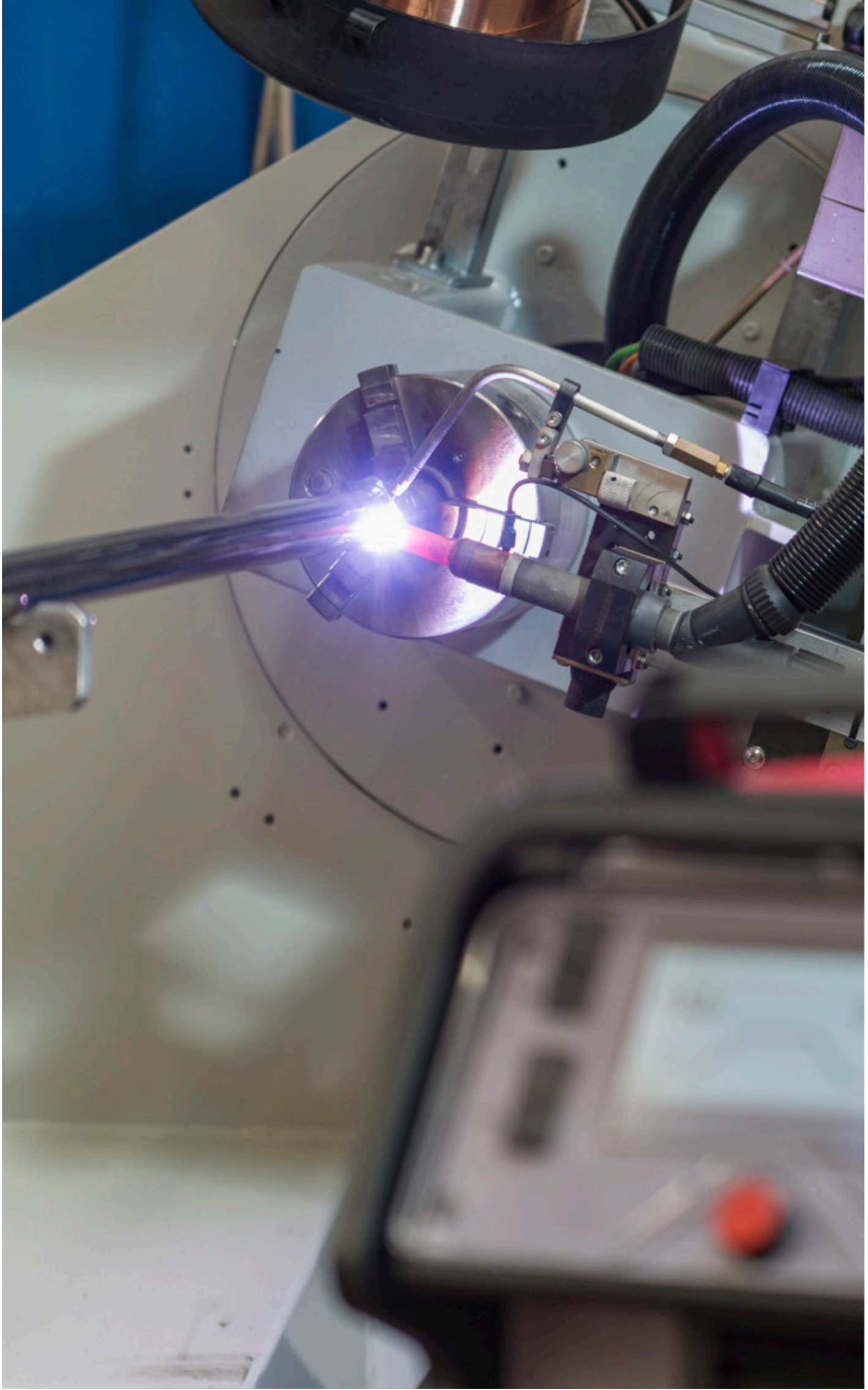
Control panel screenshot

Advanced Users (Art. 809)

Software package that allows the configuration of a list of operators, with the assignment of an identification name, a unique code (PIN) and the level of access credentials. It is possible to import and export the usage data as CSV files on a USB memory stick.



Control panel screenshot



TIG

WIN TIG DC 180 M
WIN TIG DC 220 M
WIN TIG DC 250 T
WIN TIG DC 320 T
WIN TIG DC 340 T
WIN TIG DC 500 T

WIN TIG AC-DC 180 M
WIN TIG AC-DC 230 M
WIN TIG AC-DC 270 T
WIN TIG AC-DC 340 T
WIN TIG AC-DC 450 T

TIG - Art. 551

WIN TIG DC 180 M

	TIG	MMA
Single phase input	230 V + 15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	4 kVA 35% 2,7 kVA 60% 2,2 kVA 100%	4,6 kVA 30% 3,5 kVA 60% 2,8 kVA 100%
min - max current obtainable in welding	5 ÷ 180 A	10 ÷ 140 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	180 A 35% 135 A 60% 110 A 100%	140 A 30% 115 A 60% 95 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	10,3 kg	
Dimensions (WxLxH)	171 x 420 x 340 mm	

TIG - Art. 553

WIN TIG DC 220 M

	TIG		MMA	
Single phase input	115 V +15% /-20% 50/60 Hz	230 V +15% / -20% 50/60 Hz	115 V +15% / -20% 50/60 Hz	230 V +15% / -20% 50/60 Hz
Fuse rating (slow blow)	25 A	16 A	25 A	16 A
Input power	3,8 kVA 40% 3,1 kVA 60% 2,2 kVA 100%	5,3 kVA 30% 3,2 kVA 60% 2,7 kVA 100%	3,6 kVA 35% 2,8 kVA 60% 2,3 kVA 100%	4,5 kVA 35% 3,8 kVA 60% 3,4 kVA 100%
min - max current obtainable in welding	5 ÷ 160 A	5 ÷ 220 A	10 ÷ 110 A	10 ÷ 140 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	160 A 40% 140 A 60% 110 A 100%	220 A 30% 160 A 60% 140 A 100%	110 A 35% 90 A 60% 75 A 100%	140 A 35% 125 A 60% 115 A 100%
Stepless regulation	Electronic			
Protection class	IP 23 S			
Weight	16 kg			
Dimensions (WxLxH)	207 x 500 x 411 mm			

WIN TIG DC 250 T

	TIG		MMA	
Three phase input	208/220/230 V ±10% 50/60 Hz	400/440 V ±10% 50/60 Hz	208/220/230 V ±10% 50/60 Hz	400/440 V ±10% 50/60 Hz
Fuse rating (slow blow)	16 A	10 A	16 A	10 A
Input power	5,7 kVA 25% 4,0 kVA 60% 2,8 kVA 100%	6,2 kVA 35% 5,0 kVA 60% 4,0 kVA 100%	7,5 kVA 30% 4,9 kVA 60% 3,7 kVA 100%	7,0 kVA 60% 4,5 kVA 100%
min - max current obtainable in welding	5 ÷ 230 A	5 ÷ 250 A	10 ÷ 210 A	10 ÷ 210 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	230 A 25% 180 A 60% 140 A 100%	250 A 35% 210 A 60% 180 A 100%	210 A 30% 150 A 60% 120 A 100%	210 A 60% 150 A 100%
Stepless regulation	Electronic			
Protection class	IP 23 S			
Weight	22,7 kg			
Dimensions (WxLxH)	207 x 437 x 411 mm			

WIN TIG AC-DC 180 M - 220 M - 250 T

The functions that characterize these power souces are:

› **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
› **EVO LIFT** function (contact ignition + HF). The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
› **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
› **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
› **Minimized maintenance times** thanks to the easily removable cooling grid
› **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
› **TIG DC XP** (extra Pulse) process allows welding current pulse up to 15 kHz frequencies (high acoustic comfort), getting an extremely focused and penetrating welding arc, for a high feed rate and maximized productivity. It is possible to overlay an additional low frequency pulse (double pulse) onto the XP process. Perfect for thin thicknesses and automated processes such as PLASMA ARC WELDING (PAW) to increase welding speed and quality.
› **TIG DC APC** process (Active Power Control) allows to take control of the welding current as the torch distance varies, thus without using the pedal for the current adjustment. This process keeps the heat input on the workpiece steady as the welding position changes, especially in the corners.

› WIN TIG DC 250 T (Art. 555) is pre-arranged with cooling unit (Art. 1341)

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

TIG - Art. 560

WIN TIG DC 320 T

PFC EN 61000-3-12	TIG	MMA
Three phase input	400 V + 15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	9 kVA 40% 6,6 kVA 60% 4,8 kVA 100%	9,8 kVA 40% 8,4 kVA 60% 6,5 kVA 100%
min - max current obtainable in welding	3 ÷ 320 A	10 ÷ 260 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	320 A 40% 260 A 60% 210 A 100%	260 A 30% 230 A 60% 190 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	24 kg	
Dimensions (WxLxH)	232 x 530 x 467 mm	

WIN TIG DC 320 T

The new WIN TIG DC 320 T is a three-phase inverter power sourcer for TIG and electrode (MMA) welding in direct current with HF ignition. It features a modular design that facilitates the integration of the new optional cooling unit (Art. 1685). An optional trolley (Art. 1676) for trasportation of the power source is also available.

Features:

› **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
› **EVO LIFT** function (contact ignition + HF)
The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
› **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
› **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
› **Minimized maintenance times** thanks to the easily removable cooling grid
› **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
› **DC** PULSE TIG process as standard
› **DC XP** (eXtra Pulse) TIG process allows the welding current to pulse up to 15 kHz frequencies, generating an extremely focused and penetrating welding arc, for a high feed rate (+ 30%) and maximized productivity
› **DC APC** TIG process allows the welding current to be automatically adjusted, keeping a steady voltage, regardless of the distance changed from the workpiece. Such adjustment is generally controlled by the foot control unit.

› **VRD** (Voltage Reduction Device) function: in MMA mode, enhances safety in dangerous environments
› Internal **USB** port for software update
› **Pre-arranged for integration into simple automation** via optional analog interface kit (Art. 456)
› Possibility of remote control panel unit (Art. 457)
› An optional trolley for trasportation (Art. 1676) of the power source and the cooling unit is also available
› 5" **LCD colour touch** screen panel
› Internal **USB** port for software update

Generatore caratterizzato da assorbimenti contenuti (**PFC**)
Conforme alla norma EN 61000-3-12

New trolley for transportation (Art. 1676)

WIN TIG DC 320 T with trolley for transportation and cooling unit

TIG - Art. 380

WIN TIG DC 340 T

	TIG	MMA
Three phase input	400 V ± 15% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	10 kVA 40% 8,3 kVA 60% 7,1 kVA 100%	9,8 kVA 40% 9,5 kVA 60% 8,7 kVA 100%
min - max current obtainable in welding	3 ÷ 340 A	10 ÷ 270 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	340 A 40% 300 A 60% 270 A 100%	270 A 40% 250 A 60% 240 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	108 kg	
Dimensions (WxLxH)	410 x 610 x 810 mm	

TIG - Art. 381

WIN TIG DC 500 T

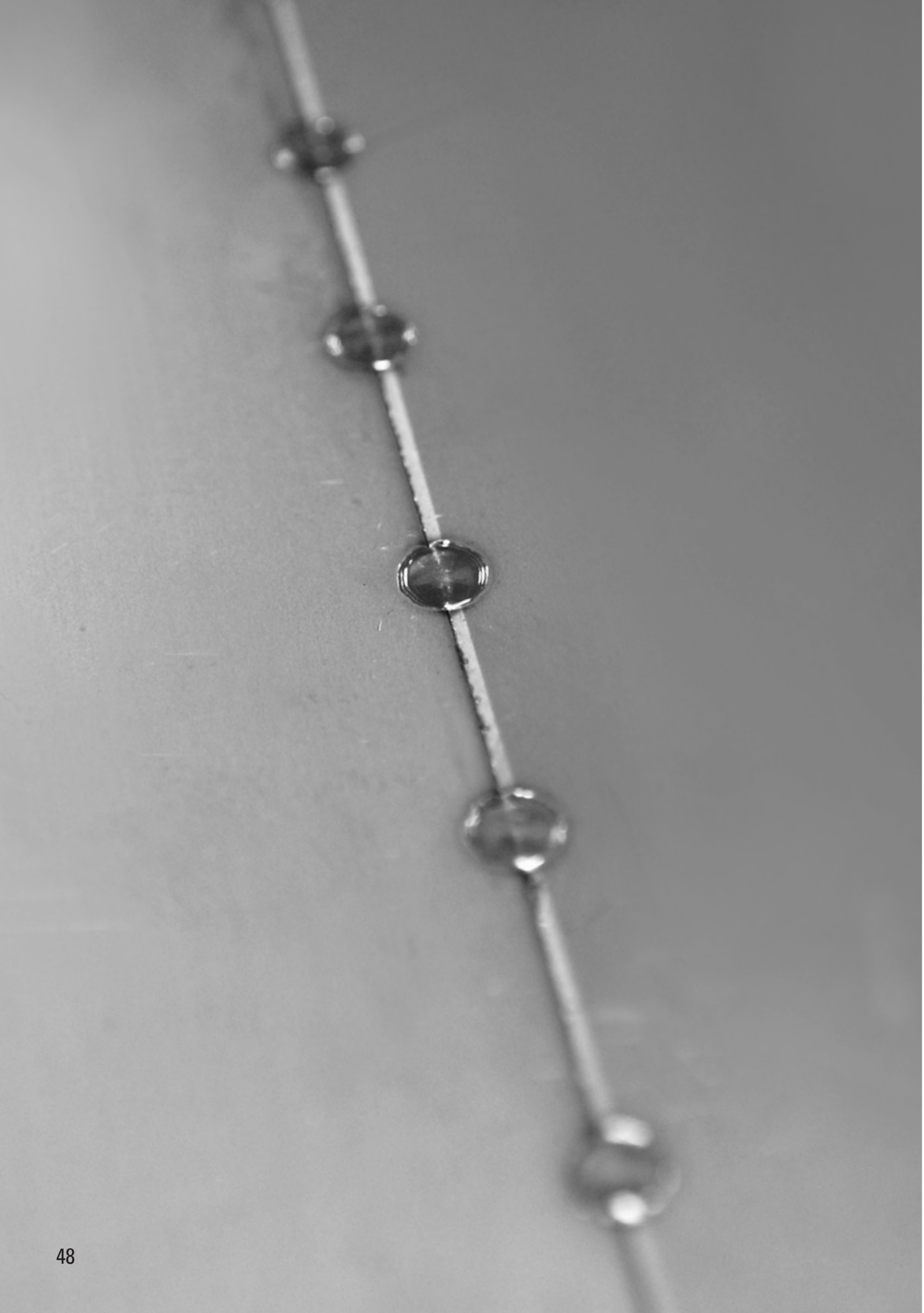
	TIG	MMA
Three phase input	400 V ±15% 50/60 Hz	
Fuse rating (slow blow)	25 A	32 A
Input power	20,4 kVA 60% 16,5 kVA 100%	17,6 kVA 100%
min - max current obtainable in welding	3 ÷ 500 A	10 ÷ 380 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	500 A 60% 440 A 100%	380 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	108 kg	
Dimensions (WxLxH)	588 x 1120 x 1010 mm	

WIN TIG DC 340 - 500 T

The functions featuring DC WIN TIG welding power sources are as follows:

- **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
- **EVO LIFT** function (contact ignition + HF)
  The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
- **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
- **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
- **Minimized maintenance times** thanks to the easily removable cooling grid
- **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
- **TIG DC XP** (extra Pulse) process allows welding current pulse up to 15 kHz frequencies (high acoustic comfort), getting an extremely focused and penetrating welding arc, for a high feed rate and maximized productivity.
  It is possible to overlay an additional low frequency pulse (double pulse) onto the XP process.
- Perfect for thin thicknesses and automated processes such as PLASMA ARC WELDING (PAW) to increase welding speed and quality.
- **APC** process (Active Power Control) allows to take control of the welding current as the torch distance varies, thus without using the pedal for the current adjustment.
  This process keeps the heat input on the workpiece steady as the welding position changes, especially in the corners.
- **Industry 4.0 compliant power sources:** The new hardware architecture allows the implementation of a web server (through the Ethernet LAN port or by means of an external kit, through Wi-Fi connection), that enables the operator to take advantage of all those tasks requiring data collection and processing, welding parameter setup, diagnostics and remote assistance
- **User Interface** remotely controlled can be handled through personal computer, tablet and smartphone
- **2 USB ports** for saving data and updating software
- 7”colour **LCD touch-screen** display

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard



TIG - Art. 558

WIN TIG AC-DC 180 M

	TIG	MMA
Single phase input	230 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	4,4 kVA 25% 2,5 kVA 60% 2,2 kVA 100%	4,4 kVA 30% 3,3 kVA 60% 3,0 kVA 100%
min - max current obtainable in welding	5 ÷ 180 A	10 ÷ 130 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	180 A 25% 110 A 60% 100 A 100%	130 A 30% 100 A 60% 90 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	17,5 kg	
Dimensions (WxLxH)	207 x 500 x 411 mm	

WIN TIG AC-DC 180 M

WIN TIG AC-DC 180 M is a full-featured, compact, single-phase inverter power source extremely compact but full o functionality:

- **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
- **EVO LIFT** function (contact ignition + HF). The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
- **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
- **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
- **Minimized maintenance times** thanks to the easily removable cooling grid
- **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
- **AC frequency adjustable from 50 to 200 Hz**
- **TIG DC XP** (extra Pulse) process allows welding current pulse up to 15 kHz frequencies (high acoustic comfort), getting an extremely focused and penetrating welding arc, for a high feed rate and maximized productivity.
  It is possible to overlay an additional low frequency pulse (double pulse) onto the XP process.
  Perfect for thin thicknesses and automated processes such as PLASMA ARC WELDING (PAW) to increase welding speed and quality.
- **TIG DC APC** process (Active Power Control) allows to take control of the welding current as the torch distance varies, thus without using the pedal for the current adjustment.
  This process keeps the heat input on the workpiece steady as the welding position changes, especially in the corners.

TIG - Art. 559

WIN TIG AC-DC 230 M

	TIG	MMA
Single phase input	230 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	16 A	
Input power	5,7 kVA 30% 4,8 kVA 60% 3,7 kVA 100%	6,2 kVA 40% 4,4 kVA 60% 3,6 kVA 100%
min - max current obtainable in welding	3 ÷ 230 A	10 ÷ 180 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	230 A 40% 200 A 60% 170 A 100%	180 A 30% 140 A 60% 120 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	21,5 kg	
Dimensions (WxLxH)	232 x 530 x 467 mm	

WIN TIG AC-DC 230 M

The new WIN TIG AC-DC 230 M is a single-phase direct and alternated current inverter power source with HF ignition for TIG and MMA welding, with a modular design that facilitates the integration of the new optional cooling unit (Art. 1685).

Features:

› **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
› **EVO LIFT** function (contact ignition + HF)
The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
› **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
› **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
› **Minimized maintenance times** thanks to the easily removable cooling grid
› **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
› **AC frequency adjustable from 50 to 200 Hz**
› **Quick setting and adjustment** of the AC waveform function
› In **AC TIG** mode, it is possible to independently adjust the amplitude and the duty-cycle of the half-waves to get the desired penetration/cleaning and a lower rounding of the electrode tip

› **AC "MIX"** function that allows to weld aluminium joints with different thicknesses
› **DC PULSE** process as standard
› **TIG DC XP** (extra Pulse) process allows welding current pulse up to 15 kHz frequencies (high acoustic comfort), getting an extremely focused and penetrating welding arc, for a high feed rate and maximized productivity.
› **DC APC TIG** process allows the welding current to be automatically adjusted, keeping a steady voltage, regardless of the distance changed from the workpiece. Such adjustment is generally controlled by the foot pedal switch.
› **VRD** (Voltage Reduction Device) function: in MMA mode, enhances safety in dangerous environments
› **Pre-arranged for integration into simple automation** via optional analog interface kit (Art. 456)
› Possibility of remote control panel (Art. 457)
› An optional trolley for trasportation (Art. 1676) of the power source and the cooling unit is also available
› 5" **LCD colour touch** screen panel
› Internal **USB** port for software update

Power source characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

WIN TIG AC-DC 230 M with trolley for transportation and cooling unit

New trolley for transportation (Art. 1676)

TIG - Art. 394

WIN TIG AC-DC 270 T

	TIG	MMA
Three phase input	400 V +15% / -20% 50/60 Hz	
Fuse rating (slow blow)	10 A	10 A
Input power	7,6 kVA 40% 7,1 kVA 60% 6,3 kVA 100%	8 kVA 40% 7,4 kVA 60% 7 kVA 100%
min - max current obtainable in welding	3 ÷ 270 A	10 ÷ 210 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	270 A 40% 250 A 60% 230 A 100%	210 A 40% 200 A 60% 190 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	69 kg	
Dimensions (WxLxH)	560 x 950 x 1010 mm	

TIG - Art. 395

WIN TIG AC-DC 340 T

	TIG	MMA
Three phase input	400 V ±15% 50/60 Hz	
Fuse rating (slow blow)	16 A	20 A
Input power	11,3 kVA 40% 10,3 kVA 60% 9,7 kVA 100%	13,1 kVA 40% 12,1 kVA 60% 11,5 kVA 100%
min - max current obtainable in welding	3 ÷ 340 A	10 ÷ 310 A
Duty Cycle (10 min.40°C) According to IEC 60974-1	340 A 40% 320 A 60% 310 A 100%	310 A 40% 290 A 60% 280 A 100%
Stepless regulation	Electronic	
Protection class	IP 23 S	
Weight	109 kg	
Dimensions (WxLxH)	588 x 1120 x 1010 mm	

TIG - Art. 396

WIN TIG AC-DC 450 T

	TIG	MMA
Three phase input	**400 V ±15% 50/60 Hz**	
Fuse rating (slow blow)	**20 A**	
Input power	**18,2 kVA 50% 15,9 kVA 60% 13,8 kVA 100%**	**17,8 kVA 45% 15,2 kVA 60% 13,9 kVA 100%**
min - max current obtainable in welding	**3 ÷ 450 A**	**10 ÷ 360 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**450 A 50% 400 A 60% 380 A 100%**	**360 A 45% 340 A 60% 320 A 100%**
Stepless regulation	**Electronic**	
Protection class	**IP 23 S**	
Weight	**112 kg**	
Dimensions (WxLxH)	**588 x 1120 x 1010 mm**	

EVO LIFT Spot

MIX AC-DC

XP Function

APC Function

AC-DC WIN TIG

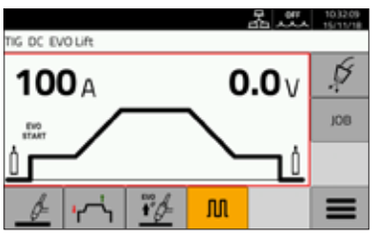
The features that have always characterized WIN TIG AC-DC 270 T, 340 T and 450 T are as follows:

› **EVO START** function (pulse current ignition, to be adjusted in hundredths of a second)
› **EVO LIFT** function (contact ignition + HF). The combination of the two functions allows precise ignitions on the workpiece as well as a better joining of poorly prepared sheets
› **Quick spot function with minimal heat input** thanks to a specific program that allows the accurate adjustment of the welding time parameter; usable in 2/4 strokes
› **Extremely accurate welds** thanks to a digital controller that ensures an excellent current stability and precision. This also allows an accurate adjustment of the minimum current (3 A) useful to carry-over operations on metal mould edges
› **Minimized maintenance times** thanks to the easily removable cooling grid
› **JOB function** that allows to easily save from 10 to 99 JOB (depending on the model), the settings preferred by the operator in dedicated programs
› **AC frequency adjustable from 50 to 200 Hz**
› **Quick setting and adjustment** of the AC waveform function
› In **AC TIG** mode, it is possible to independently adjust the amplitude and the duty-cycle of the half-waves to get the desired penetration/cleaning and a lower rounding of the electrode tip
› **AC "MIX"** function that allows to weld aluminium joints with different thicknesses
› **TIG DC XP** (extra Pulse) process allows welding current pulse up to 15 kHz frequencies (high acoustic comfort), getting an extremely focused and penetrating welding arc, for a high feed rate and maximized productivity.
It is possible to overlay an additional low frequency pulse (double pulse) onto the XP process.
Perfect for thin thicknesses and automated processes such as PLASMA ARC WELDING (PAW) to increase welding speed and quality.
› **TIG DC APC** process (Active Power Control) allows to take control of the welding current as the torch distance varies, thus without using the pedal for the current adjustment.
This process keeps the heat input on the workpiece steady as the welding position changes, especially in the corners.
› **Industry 4.0 compliant power sources:** the new hardware architecture allows the implementation of a web server (through the Ethernet LAN port or by means of an external kit, through Wi-Fi connection), that enables the operator to take advantage of all those tasks requiring data collection and processing, welding parameter setup, diagnostics and remote assistance
› **User interface** remotely controlled can be handled through **personal computer, tablet and smartphone**
› 7" colour **LCD touch-screen** display
› **2 USB ports** for saving data and updating software

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

Display

WIN TIG

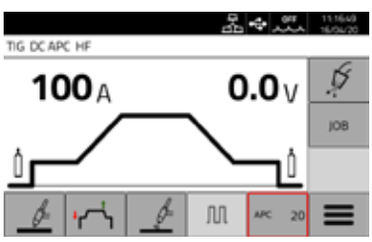


Primary screen

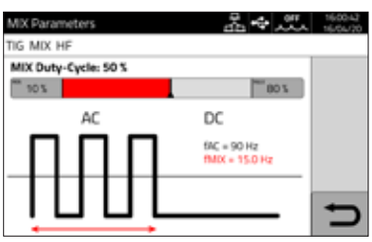
Quick adjustment of pulse parameters

Quick adjustment of AC frequency parameters (only for AC-DC TIG)

Selection of the processes



APC Function



HF MIX Function

LCD panel with an user-friendly encoder

USB device for software update

Industry 4.0

The three-phase-power WIN-TIG range is based on a dual-core microprocessor control board equipped with an Ethernet network interface and an open-source software platform.
Through the integrated web server it is possible to interconnect - directly via cable or via Wi-Fi to an external kit - to the company network using standard TCP/IP and HTTPS protocols that make it compliant with Industry 4.0 requirements.
In fact, these power sources have got a REST API programming interface allowing a flexible bidirectional data exchange with management systems and company MES, allowing both the configuration of process parameters and the consultation of production data.
It is also possible to remotely monitor the status of the source and the welding process in real time, and to access the generator internal logs for remote diagnostics and service.
These power sources also feature an integrated web app that allows complete remote management using a simple browser from a personal computer or tablet, without the need to install additional software.
You can therefore monitor the general status of the power source, the status of the welding process and the trend of the most significant measurements.

Webapp - The user interface can be used via pc, tablets and smartphones

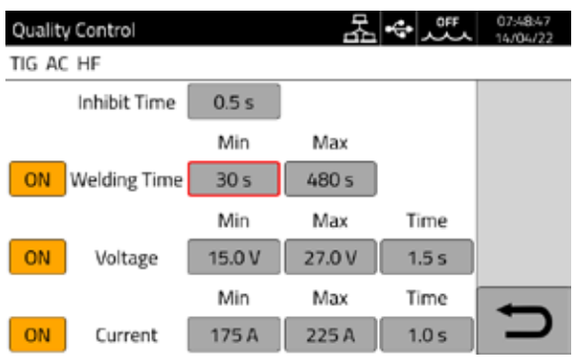
Pre-arranged for barcode scanner

Additional functions

Our WIN TIG line offers new software packages aimed at improving production control and digitizing business processes and activities. These power sources are also pre-arranged for the use of optical scanners to automate the processes with barcodes and QR code scanning.

Quality Control (Art. 273)

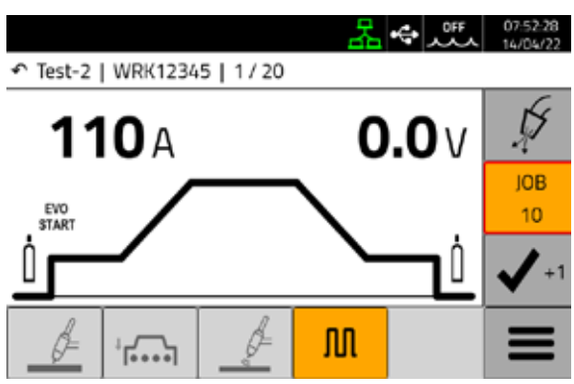
Software package dedicated to the software package for managing and repeating the welding seams.
It allows to define minimal and maximum thresholds of arc current, arc tension and welding time.
If the threshold is exceeded it is marked on the panel and in the welding reports.



Control panel screenshot

Production Mode (Art. 817)

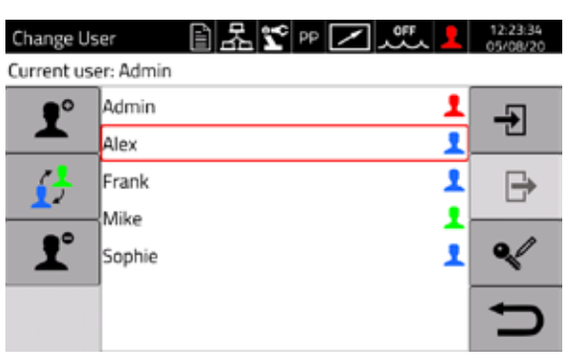
Software package dedicated to the management and tracking of welding processes in mass production of parts, batches and job orders: it allows to export to file the welding processes complete with processing name, job order name and part number.
It allows a better intergration with MES systems for Industry 4.0



Control panel screenshot

Advanced Users (Art. 809)

Software package that allows the configuration of a list of operators, with the assignment of an identification name, a unique code (PIN) and the level of access credentials. It is possible to import and export the usage data as CSV files on a USB memory stick.



Control panel screenshot

MMA

POWER ROD 200 M-Cell
POWER ROD 250 T-Cell
POWER ROD 380 T-Cell

MMA - Art. 520

POWER ROD 200 M-Cell

PFC EN 61000-3-12

Single phase input	**230 V + 15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**6,7 kVA 30% 4,7 kVA 60% 3,6 kVA 100%**
min - max current obtainable in welding	**10 ÷ 200 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**200 A 30% 150 A 60% 120 A 100%**
Stepless regulation	**Electronic**
Electrodes that can be used	**Ø 1,5 ÷ 4,0 mm**
Protection class	**IP 23 S**
Weight	**9,6 kg**
Dimensions (WxLxH)	**172 x 420 x 340 mm**

MMA - Art. 514

POWER ROD 250 T-Cell

PFC EN 61000-3-12

Three phase input	**400 V ±10% 50/60 Hz**
Fuse rating (slow blow)	**10 A**
Input power	**9,2 kVA 30% 7,3 kVA 60% 6,5 kVA 100%**
min - max current obtainable in welding	**10 ÷ 250 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**250 A 30% 210 A 60% 190 A 100%**
Stepless regulation	**Electronic**
Electrodes that can be used	**Ø 1,5 ÷ 5,0 mm**
Protection class	**IP 23 S**
Weight	**15,7 kg**
Dimensions (WxLxH)	**207 x 437 x 411 mm**

MMA - Art. 519

POWER ROD 380 T-Cell

PFC
EN 61000-3-12

Three phase input	**400 V ±10 50/60 Hz**
Fuse rating (slow blow)	**16 A**
Input power	**16,6 kVA 30% 10,0 kVA 60% 8,0 kVA 100%**
min - max current obtainable in welding	**10 ÷ 380 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**380 A 30% 270 A 60% 230 A 100%**
Stepless regulation	**Electronic**
Electrodes that can be used	**Ø 1,5 ÷ 6,0 mm**
Protection class	**IP 23 S**
Weight	**26,3 kg**
Dimensions (WxLxH)	**297 x 463 x 588 mm**

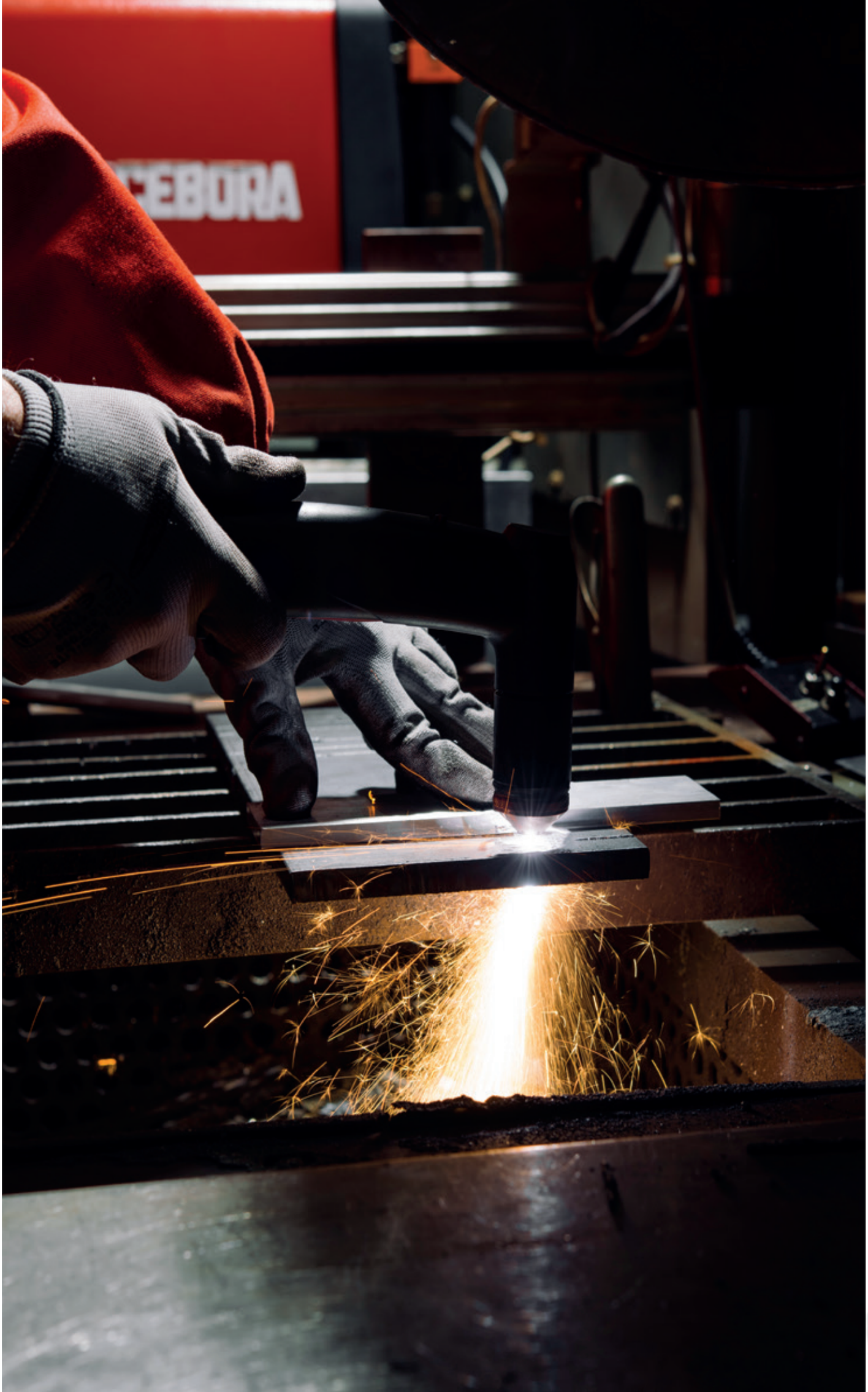
POWER ROD 200 M-Cell – 250 T-Cell – 380 T-Cell

POWER ROD 200 M-Cell 250 T-Cell and 380 T-Cell are inverter power sources recommended for professional welding of **cellulosic electrodes.**
Suitable for shipbuilding, welding professionals, pipe welding and in maintenance for what concerns the available voltage and the high quantity of electrodes that can be melted.

Features:

› Power sources also suitable for **DC TIG / Pulse TIG** welding with "CEBORA lift ignition"
› **"Hot Start"** and **"Arc Force"** functions ensure sophisticated control of short circuit conditions, i.e. electrode transfer, which is the parameter that most affects the quality of the weld
› **"Anti-stick"** function that automatically switches off the electrical arc to allow the detachment from the basic material

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard


CEBORA

Plasma

POWER PLASMA 3035/M
PLASMA SOUND PC 50/M

PLASMA iQC 70 T
PLASMA iQC 110 T
PLASMA iQC 130 T

Plasma - Art. 279

POWER PLASMA 3035/M

PFC EN 61000-3-12

Single phase input	**115 V +15% / -20% 50/60 Hz**	**230 V +15% / -20% 50/60 Hz**
Fuse rating (slow blow)	**32 A**	**16 A**
Input power	**3,5 kVA 35% 2,8 kVA 60% 2,4 kVA 100%**	
Current adjustment range	**5 ÷ 30 A**	
Duty Cycle (10 min.40°C) According to IEC 60974-1	**30 A 35% 25 A 60% 22 A 100%**	
Stepless regulation	**Electronic**	
Protection class	**IP 23 S**	
Weight	**13 kg**	
Dimensions (WxLxH)	**175 x 503 x 400 mm**	
THICKNESS ON MILD STEEL:		
Quality & productivity cutting Maximum thickness Severance	**8 mm 12 mm 15 mm**	

Plasma - Art. 326

PLASMA SOUND PC 50/M

PFC EN 61000-3-12

Single phase input	**230 V ± 10% 50/60 Hz**
Fuse rating (slow blow)	**32 A**
Input power	**7,8 kVA 40% 5,8 kVA 60% 5,3 kVA 100%**
Current adjustment range	**20 ÷ 50 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**50 A 40% 42 A 60% 33 A 100%**
Stepless regulation	**Electronic**
Protection class	**IP 23 S**
Weight	**23 kg**
Dimensions (WxLxH)	**286 x 590 x 406 mm**
THICKNESS ON MILD STEEL:	
Quality & productivity cutting Maximum thickness Severance	**15 mm 20 mm 25 mm**

POWER PLASMA 3035/M

POWER PLASMA 3035/M is a single-phase multi-voltage inverter plasma cutting power source with high-frequency (HF) ignition, very easy to use thanks to its lightweight body (13 kg only) equipped with CP 40 MAR torch with cable 4 m long.
Despite its small size, it ensures an excellent cutting quality on all metals, including new high-strength steels.

POWER PLASMA 3035/M works with compressed air or nitrogen for high quality cuts with air consumption of only 60 lt/min, input pressure by 3.5 bar.

Features:

- **Automatic voltage change** (115V-230V +15% / - 20%)
- **Pilot Arc operating mode with HF**
- **"Pilot Self-Restart"** function, which automatically stops and restarts the arc, thereby increasing the operator productivity
- **Nozzle holder protection**
- CP40 MAR manual torch with cable 4 m lenght with direct connection (Art. 1206)
- CP40 DAR torch for profile machine with direct connection (Art. 1207) with cable 4 m lenght
- Analog CNC interface kit (Art. 441)

Power source characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

PLASMA SOUND PC 50/M

PLASMA SOUND PC 50/M is a single-phase inverter plasma cutting power source with "ON AIR" ignition and with electronic and mechanical protection system.
The power source automatically recognizes the manual (MAR)and straight (DAR) CEBORA CP 70C torches, both 6 m and 15 m length models.

Features:

- Automatic detection of worn-out consumables
- **Gouging** and **Pilot Self-Restart** functions
- **Nozzle holder protection**
- Analog CNC interface kit (Art. 441)

Power source characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

CP70C MAR torch (Art. 1626)

CP70C DAR torch (Art. 1627)

PLASMA iQC 70 T

Three phase input	**208/220/230 V±10% 50/60 Hz**	**400/440 V ±10% 50/60 Hz**
Fuse rating (slow blow)	**20 A**	**12 A**
Input power	**12 kVA 35% 10,5 kVA 60% 8,5 kVA 100%**	**12 kVA 60% 10,5 kVA 100%**
Current adjustment range	**20 ÷ 70 A**	
Duty Cycle (10 min.40°C) According to IEC 60974-1	**70 A 35% 60 A 60% 50 A 100%**	**70 A 60% 60 A 100%**
Stepless regulation	**Electronic**	
Protection class	**IP 23 S**	
Weight	**26 kg**	
Dimensions (WxLxH)	**232 x 680 x 477 mm**	

CUTTING CAPACITY ON MILD STEEL:

Recommended:	**25 mm**
Maximum:	**30 mm**
Severance:	**35 mm**
Pierce:	**15 mm**

GOUGE CAPACITY:

Metal removal rate:	**5,8 kg/h**

PLASMA iQC 110 T

Three phase input	**208/220/230V ±10% 50/60 Hz**	**400/440 V ±10% 50/60 Hz**
Fuse rating (slow blow)	**32 A**	**25 A**
Input power	**15 kVA 35% 11,9 kVA 60% 11 kVA 100%**	**20,5 kVA 50% 16,5 kVA 60% 15,5 kVA 100%**
Current adjustment range	**20 ÷ 80 A**	**20 ÷ 110 A**
Duty Cycle (10 min.40°C) According to IEC 60974-1	**80 A 35% 65 A 60% 60 A 100%**	**110 A 50% 95 A 60% 90 A 100%**
Stepless regulation	**Electronic**	
Protection class	**IP 23 S**	
Weight	**34 kg**	
Dimensions (WxLxH)	**232 x 680 x 477 mm**	

CUTTING CAPACITY ON MILD STEEL:

Recommended:	**35 mm**
Maximum:	**40 mm**
Severance:	**50 mm**
Pierce:	**25 mm**

GOUGE CAPACITY:

Metal removal rate:	**10,1 kg/h**

Plasma - Art. 603

PLASMA iQC 130 T

Three phase input	**208/220/230V ±10% 50/60 Hz**	**400/440 V ±10% 50/60 Hz**
Fuse rating (slow blow)	**50 A**	**32 A**
Input power	**22 kVA 50% 21 kVA 60% 16,6 kVA 100%**	**22 kVA 80% 21 kVA 100%**
Current adjustment range	**20 ÷ 130 A**	
Duty Cycle (10 min.40°C) According to IEC 60974-1	**130 A 50% 125 A 60% 105 A 100%**	**130 A 80% 125 A 100%**
Stepless regulation	**Electronic**	
Protection class	**IP 23 S**	
Weight	**40 kg**	
Dimensions (WxLxH)	**318 x 700 x 555 mm**	

CUTTING CAPACITY ON MILD STEEL:

Recommended:	**40 mm**
Maximum:	**50 mm**
Severance:	**60 mm**
Pierce:	**30 mm**

GOUGE CAPACITY:

Metal removal rate:	**12,2 kg/h**

iQC PLASMA iQC 70 T - 110 T - 130 T line

The new iQC plasma cutting line consists of three-phase multitension inverters (208-220-230 V / 400-440 V / 50-60 Hz) with “ON AIR” ignition and torch recognition system through hardware key.

Features:

› Next-generation plasma with fully digital and flexible architecture for new cutting processes.
› New **4.3” high-resolution color LCD display** with synergic cutting parameter settings.
› Automatic recognition of torch type - manual and straight (MAR - DAR) - and its respective length
› Possibility to view on display the set of consumables in use

› **Fast Restart**, **Spot Mark**, and **Fast Mark** functions
› **Gouging** function
› Software update via USB drive
› Operating modes:
- Gas cutting: Air, N2, and F5
- Gas marking: Air and Argon
- Gouging

› New *ESAFast ®* torch type connection
› New **CP71C Torch** (Art. 1629-1630) with lengths of 6 and 15 meters (MAR and DAR) with *ESAFast ®* type connection (for Art. 601)
› New **CP180C Torch** (Art. 2020-2021) with lengths of 6 and 15 meters (MAR and DAR) with *ESAFast ®* type connection (for Art. 602-603)
› Power sources can be powered by motor generator of 1.5x capacity even if they are not equipped with an AVR (Automatic Voltage Regulator).

› Analog and digital Modbus CNC interface kit (Art. 502)
› Plasma synergy kit with automatic pressure regulation (Art. 503). An ideal solution for a fully automated plasma cutting system, suitable for every material and working condition, wich allows:
- Real-time gas regulation and control;
- Automatic management of cutting, marking, spot-marking and gouging processes;
- Automatic setting of cutting parameters starting only from material and thickness

Power sources characterized by low electrical input (**PFC**)
Compliant with EN 61000-3-12 standard

The

central connection registered trademark® and protected by Community Design published on the official website of EUIPO (European Union Intellectual Property Office)

The new central 11-pin *ESAFast ®* connection, with a pleasant and compact *hexagonal* design - from which it takes inspiration - comes as standard on all new CEBORA GROUP torches and can be used for currents up to 180 A with a 50% duty cycle.”

Torch - Art. 1629 - 1630

CEBORA CP71C MAR - DAR

DAR - CP71C torch
(Art. 1630)

MAR - CP71C torch
(Art. 1629)

New **CP71C** torch with 'ON AIR' ignition
› Recognition through hardware key
› Centralized attachment *ESAFast ®* protected by Community Design.
› Lengths of 6 or 15 meters

Torch - Art. 2020 - 2021

CEBORA CP180C MAR - DAR

MAR - CP180C torch
(Art. 2020)

Maximum bevel cutting capacity, with a torch inclination angle of **66°**

DAR - CP180C torch
(Art. 2021)

New **CP180C** torch with 'ON AIR' ignition

› Recognition through hardware key
› Consumables and 'patent pending' process
› Centralized attachment ESAFast® protected by Community Design
› Lengths of 6 or 15 meters

CEBORA GROUP MADEINITALY

SYNERGIC PLASMA®

The patent claims a new Synergic Plasma cutting system in which the power source, having acquired at least one processing parameter, is able to recall and automatically set all the others. Moreover, it suggests to the operator the optimal processing speeds according to the type of processing, the inserted nozzle and the geometric characteristics of the path to be created.

The operator can modify all the parameters at his discretion, depending on the production to carry out, and when even one of these parameters changes, the synergic controller automatically modifies all the others, furthermore, it sets correctly the current sensors as well as the pressure regulator to optimize the new parameter entered.

The three fundamental values of plasma cutting (thickness of the material/cutting current/cutting speed) are thus bound together in a synergistic way, to always guarantee the correct self-regulation of the power source at each variation of one of them.

The CP registered trademark identifies the CEBORA original consumable parts for plasma power sources.
We strongly recommends the use of original CP consumables, as they are the only parts ensuring the expected power source-torch combination performance.

The registered CP trademark identifies the original Cebora consumable parts for plasma power sources.
Cebora strongly recommends using original CP consumable parts, since they are the only ones capable of ensuring the stated performance for the power source-torch combination.
The shape and choice of the materials used in CP consumables are decided when engineering the power source and torch, and represent the best compromise between performance, reliability and life-span of the part, all in full observance of the standard IEC 60974-7.
Special care is dedicated to observing working tolerances of the consumable; working beyond tolerance (especially alignment, coaxial, and surface finish tolerances):

› reduces the life-span of the consumable
› may produce overheating inside the torch, causing permanent damage.
› worsens the cutting quality and increases the cost of restoring tooled parts.

The use of non-original parts may also cause:

› overheating of the power source
› electronic circuit breakage
› short-circuits in a process that uses voltages higher than 250 V D.C.

Cebora shall therefore not be liable in case of accident, and all warranties on machine and torch shall become void.
Thus any savings in purchasing non-original consumable materials is merely apparent, since it leads to inefficiencies in the production process as well as voiding all warranties and relieving Cebora of any liability regarding the power source and torch:
demand original Cebora consumables with CP trademark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