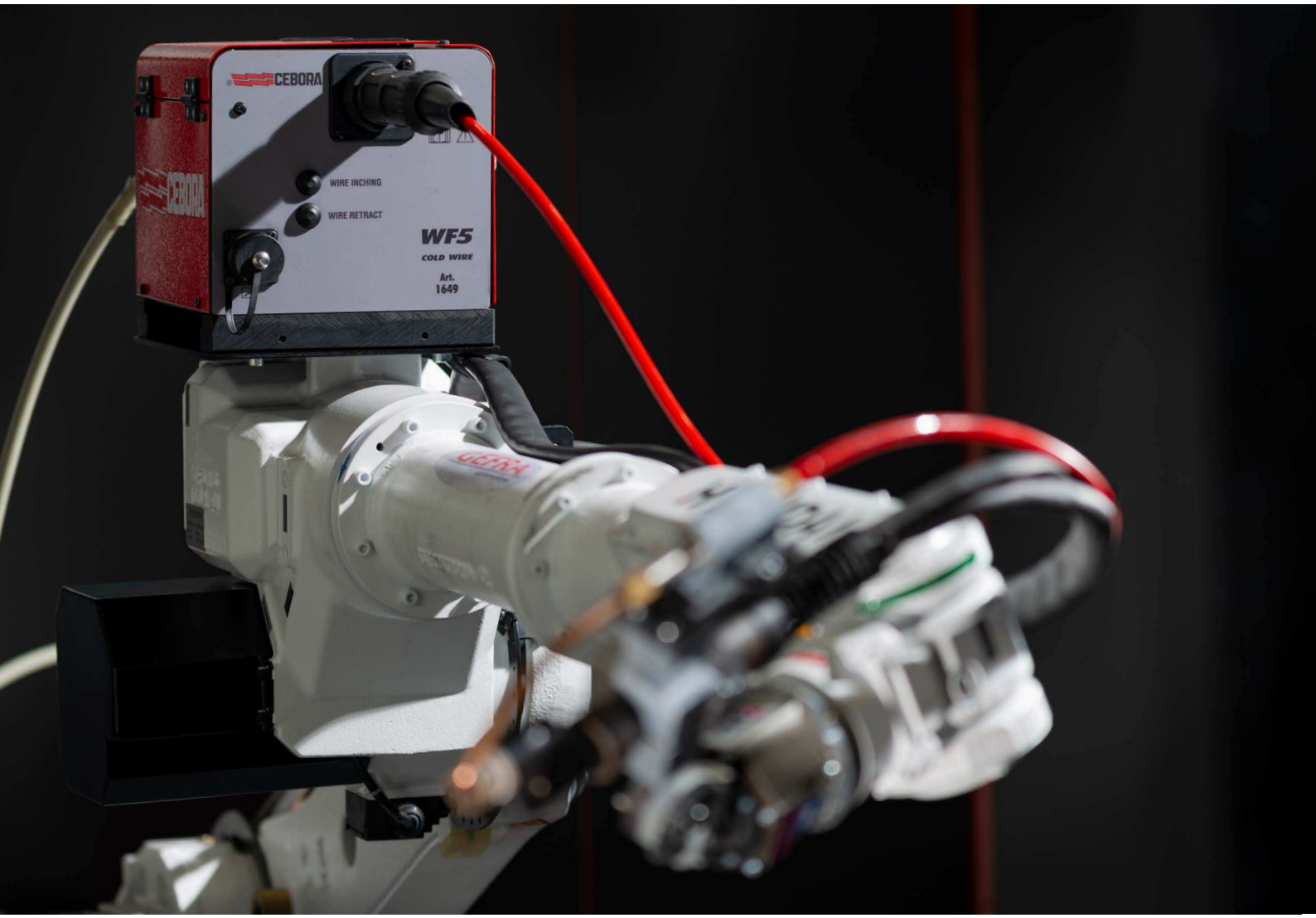
CEBORA
welding&cutting



2020

automation

catalogue

WIN TIG DC/AC-DC ROBOT
Plasma Welding DC/AC-DC ROBOT

CEBORA GROUP MADEINITALY

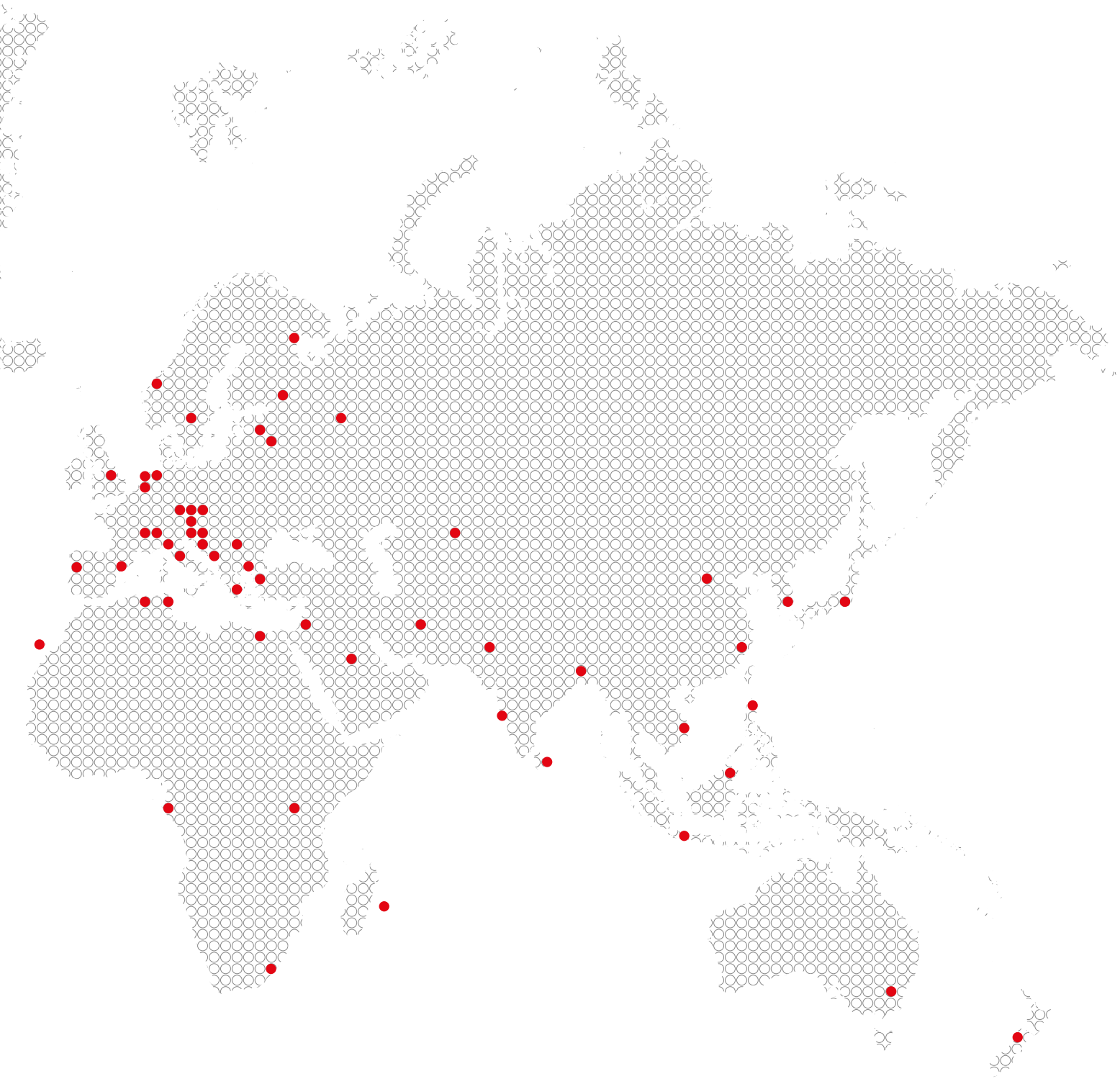
Global partner

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 at the premises by the same engineers who design the machines and thanks to the website which is constantly updated with information related to the latest production news of CEBORA GROUP.

CEBORA wheels&motion

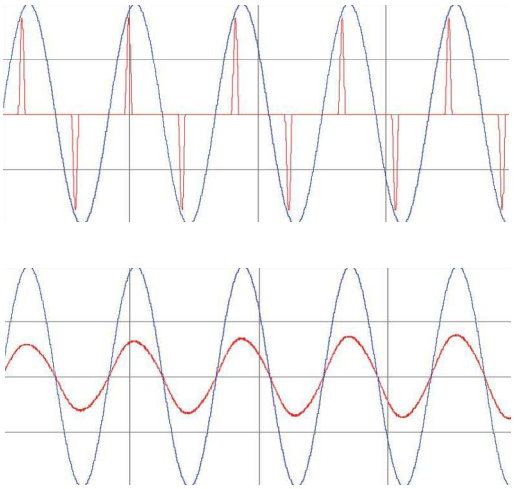


CEBORA welding&cutting

GEFRA automazione

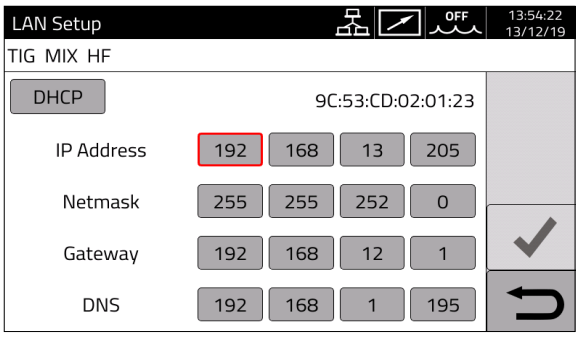
WIN TIG DC/AC-DC ROBOT
PLASMA WELDING DC/AC-DC ROBOT

Latest generation **microprocessor** with unprecedented computing power for a state-of-the-art welding system, designed and manufactured today for tomorrow's needs. Totally new, reliable, open and flexible hardware and software platform, heart and brain of the whole new family of WIN TIG power sources. Extremly fast and accurate control of the welding parameters for a further improvement in **quality** and **performance** of our TIG/PLASMA WELDING Robot system on all metal types



All the power sources of the WIN TIG line are designed and manufactured according to the **IEC 61000-3-12** standard, which specifies the maximum permissible limits for harmonic distortion induced by the power source to the power supply net. The compliance with this standard (usually referred to as **PFC**) has the direct advantage of optimizing the absorption of electricity and thus saving the operating costs of the plant.

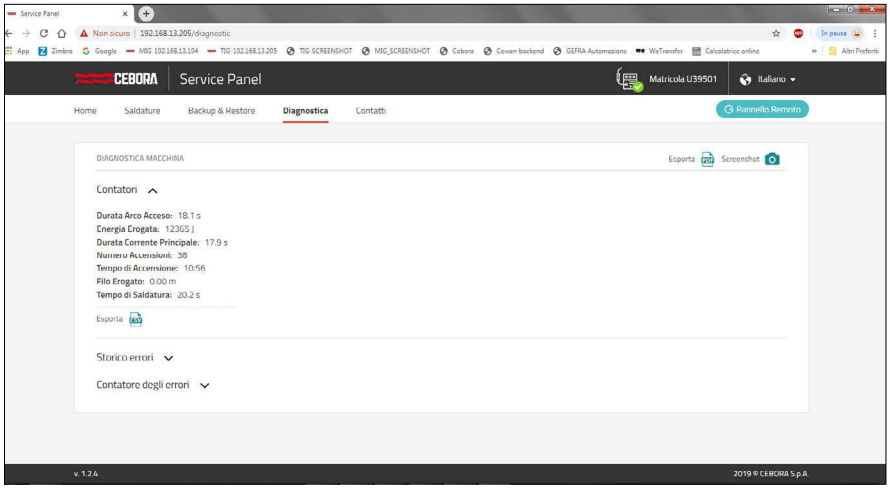
One **Ethernet** port with built-in **webserver** is available, to communicate with personal computers and other devices in a standard and fast way, compatible with the networking specifications required by **4.0 Industry.**



Modern colour 7″ touch screen panel embedded in the power source, to allow an easy and intuitive configuration of the process parameters, thanks also to the possibility of choosing among 8 **different languages** for the user menu

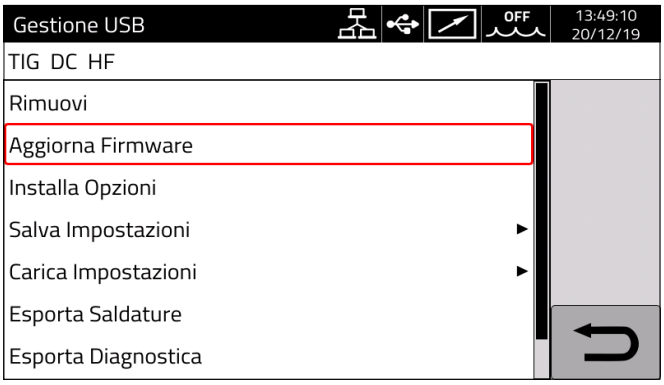
In case a **remote control** is needed, the WIN TIG let to use a generic Android tablet or Windows PC connected to the welding power source through its Ethernet port, either wired or **wireless** via any wifi router, whose 24Vdc power supply can be provided directly from the power source by the optional kit art.451.

So it's also available a proprietary web-app with a **Service Panel** that provides **free of charge** some useful tools, including **Backup&Restore** and **Diagnostics**.

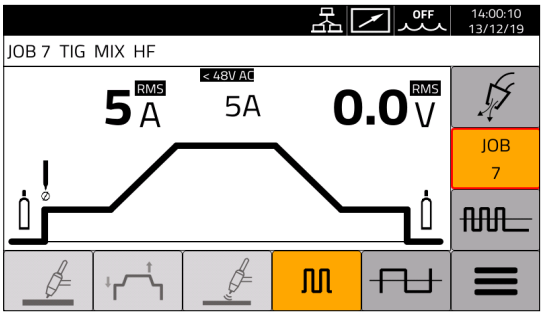


Two USB ports for a welding system always updated, quickly and easily, and a long-lasting investment able to grow over time together with your production activity.

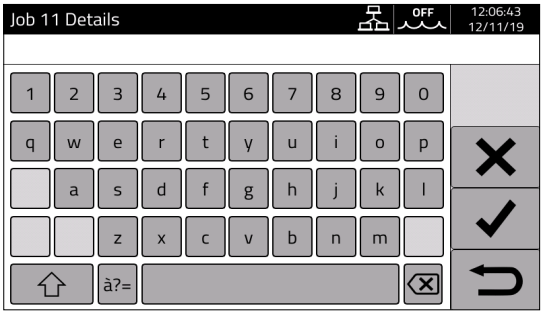
A **software updating** system developed by Cebora that requires just a memory-stick and a few seconds to download from Cebora website the latest firmware version available and install it on your system, **free of charge.**



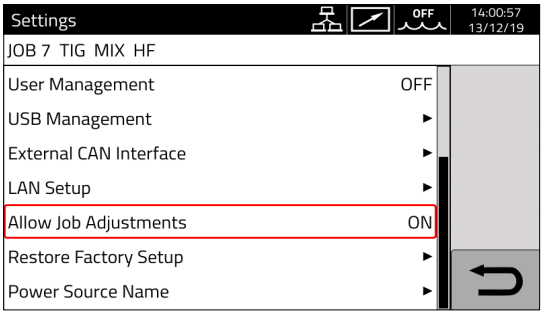
100 Jobs are available, where you can store the complete set of welding parameters for the different weldments to be performed.



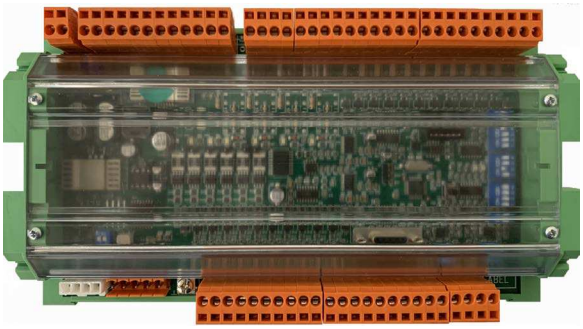
Each Job is individually **renamable**, for a faster identification and correlation with the relevant work.



Moreover, working in **JOB Mode**, it is possible to enable the **run-time modification** from the PLC/Robot Controller of the main welding parameters stored in the jobs.

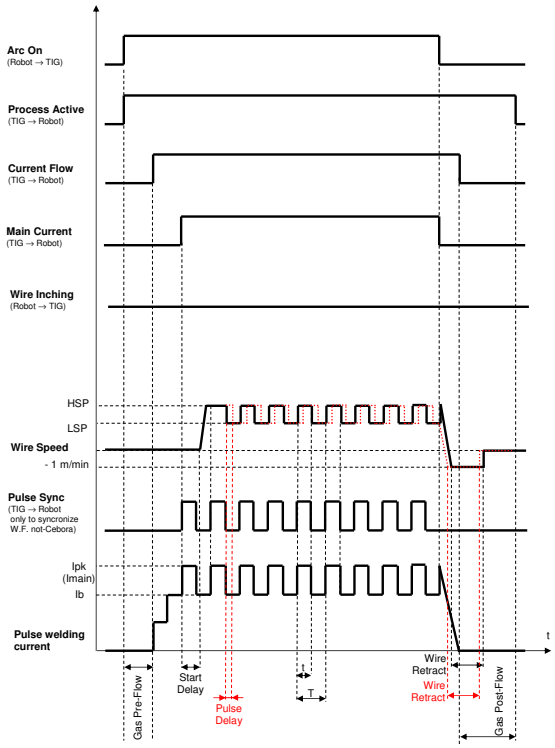


Multiple **choice of interfacing** to the CNC/Robot Controller.
Both the conventional RAI **Analogic** interface (Art. 448) and the RDI **Digital** interface (Art. 428.xx) are available with the most known and used industrial fieldbus: DeviceNet, PROFIBUS, EtherCAT, Ethernet/IP.
If you rather prefer the CANopen, it is not needed an external Gateway because the WIN TIG power source has such fieldbus directly embedded in it.



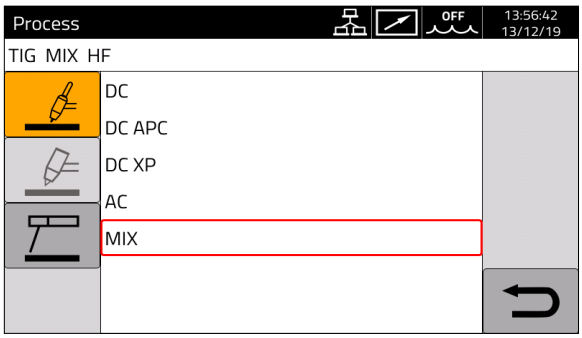
The **WF5 COLD WIRE robot wire feeder** (art.1649) has been completely redesigned and engineered: extremely **compact** and **lightweight**, equipped with 4-roller aluminium wire feeder offering a practical coding of the rollers by coloured inserts.
The new opening system for the access to the wire feeder allows the installation of this unit on any brand and model of robots, **conventional** or **hollow-wrist**, with **no mechanical interference.**

The control software for the Cold Wire process allows to manage the welding wire feeding either **independent or synchronized** with the welding current, even in pulse mode.



TIG DC: main features

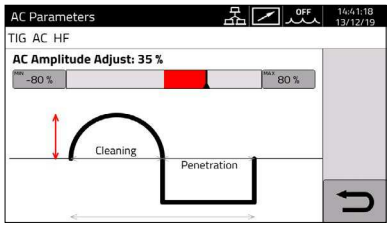
> **Pulse** process featuring welding current frequency **0,1÷2500 Hz** and fully configurable by the user.
> **XP** -e**X**tra **P**ulse- process, characterized by an extremely concentrated and penetrating arc, the ideal solution to **increase the productivity.**
> The contemporary activation of **Pulse + XP** further increases the concentration of the arc compared to XP only and keeps the same penetration: therefore the overall result is **maximum productivity** and **minimum heat affected zone** of the joint.

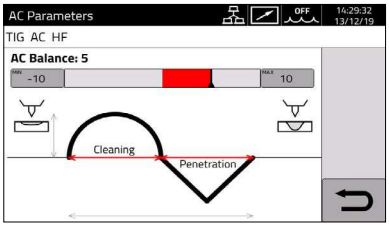


TIG AC: main features

> Welding current **AC** frequency range: **50÷200hz**.
> **Hot Start AC** to get the best ignition of the arc according to the diameter of the electrode;
> Different welding current profiles are available (**Square, Triangular, Sinusoidal**) with the possibility to set Independent profiles for the penetration and cleaning half-waves, thus optimizing the characteristics of the joint according to the specific needs;

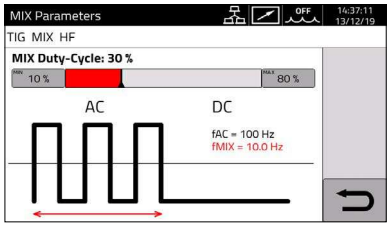
> The **Amplitude of the cleaning half-wave** can be configured so as to give priority to the cleaning or to the penetration of the welding seam;

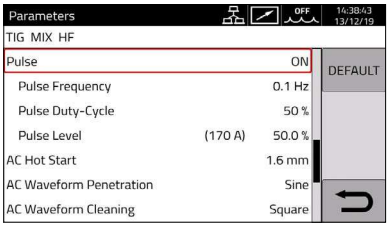




> The **AC balance** adjusts the time duration of the two single AC half-waves, still in order to adjust the penetration and cleaning features for the welding of aluminum.

> **AC MIX** process: to supply AC current cycles followed by DC current periods, with total frequency configurable by the user according to the required increase in **penetration** compared to the conventional AC welding.



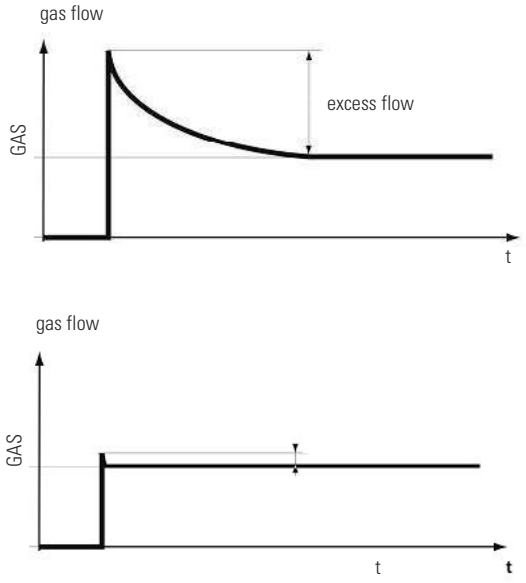


> **Pulse** process featuring welding current frequency **0,1÷2500 Hz** and fully configurable by the user.

Gas Flow Regulator kit (art.436):
it controls the flow of the welding gas keeping it constantly equal to the reference value set by the welder.

This provides an optimal welding result and a considerable **reduction of gas consumption**, avoiding unnecessary waste coming from the use of conventional solenoid valves.

In addition, the WIN TIG system equipped with this kit let you store different gas setting for each individual JOB, thus allowing to characterize every welding bead also regarding the relevant value of the gas flow.



Push-Pull driver kit (art.447):
a completely new kit for push-pull torches, based on a full-bridge switching driver equipped with a **self-calibration** system that ensures its perfect synchronization with the main wire feeder, for any torch and for any welding process.

Emergency + Varc kit (art.449):
It provides two useful features:
> The real-time filtered value of the direct **Arc Voltage** (Varc), suitable for any conventional external torch height control unit (AVC).
> Handling of the signal coming from the **Emergency Stop** button according to the EN954-1 category 3 international standard.

External HF (art.450):
let you always work with **short welding torch**, for safe and repetitive arc ignitions, without compromise.

Robot Analyzer kit (art.125.01):
when the **real-time monitoring of the communication** between the welding power source and the CNC/Robot Controller is required, during either the integration of the welding system or its normal operation, Cebora offers a "sniffer" allowing to achieve that in an extremely intuitive and comrehensive way.

It is a kit developed by Cebora that allows to intercept the complete flow of signals and data in both directions and makes it available both graphically and analytically on a Windows PC.

Welding Data: thanks to the new hardware platform of the WIN TIG line and the powerful software for the welding process management, it is possible to automatically save in the welding power source memory (**free of charge**…) the main welding parameters of **thousands of welding seams.**

These data can be periodically downloaded to a memory stick through the USB port and then analyzed or simply stored as documentation for a process of Quality Control of the production.

Weldments

id	jobId	Orario di Inizio	Tempo di Saldatura [s]	Durata Arco Acceso [s]	Corrente Media [A]	Tensione Media [V]	Energia Erogata [J]	Velocità Filo [m/min]	Corrente Motore [A]	Filo Erogato [m]	Filo Erogato [g]	Gas Erogato [s]	Gas Erogato [l]
9		11-10-19 13:52:54	3.9	0.7	178	11.0	1883	4.2	0.1	0.05	0	3.9	0.7
8		11-10-19 13:46:09	4.1	1.0	304	18.9	6954	10.8	0.2	0.19	1	4.1	0.7
7		11-10-19 13:46:06	2.8	1.0	312	19.3	7331	11.3	0.2	0.20	1	2.7	0.5
6		11-10-19 13:46:01	4.1	1.0	303	18.8	6976	10.7	0.2	0.19	1	4.1	0.7
5		11-10-19 13:45:58	2.7	1.0	295	18.2	6559	10.1	0.2	0.18	1	2.7	0.5
4		11-10-19 13:45:45	4.1	1.0	177	10.9	2454	3.5	0.1	0.06	0	4.1	0.7
3		11-10-19 13:45:43	2.5	1.0	177	10.9	2453	3.5	0.1	0.06	0	2.5	0.4
2		11-10-19 13:45:40	2.2	1.0	177	10.8	2456	3.5	0.2	0.06	0	2.1	0.3
1		11-10-19 13:38:42	3.9	0.7	270	16.7	3974	9.9	0.3	0.12	0	3.9	0.6

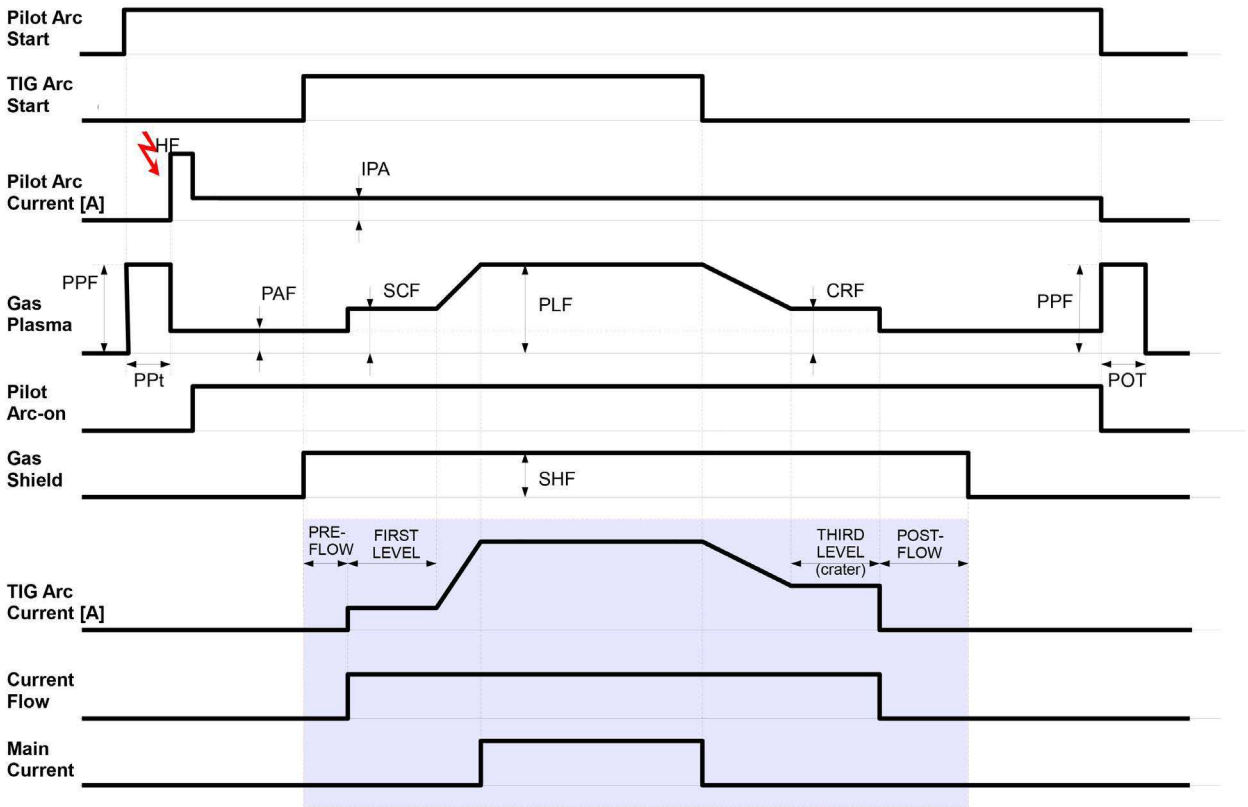
It is possible to request the **Instument Calibration Certificate** (art.803) for the welding power source when ordering the WIN TIG welding system.
According to the EN 50504-2008 standard, this certificate ensures the correspondence to the nominal data of the welding parameters values measured by the instruments of the power source, mandatory prerequisite to secure a reliable Quality Control of the production

Plasma Welding DC/AC-DC

Combining the **DIGITAL CONSOLE PW30** (art.465.01) with any WIN TIG power source of the Automation line, the TIG welding system changes into a **Plasma Welding** system, suitable for **robotic** and **automatic** systems, as well as for **manual** welding.
You just need to enable the Plasma Welding mode through the control panel of the WIN TIG power source.
All the processes for TIG welding are still available when operating as Plasma Welding system: **DC, AC** and **COLD WIRE.**

The DIGITAL CONSOLE PW30 has standard all the features that you can imagine for a Plasma Welding system:

> programming, igntition and real-time full control of the **Pilot Arc.**
> functional interaction with the WIN TIG power source for a perfect integration of the resulting Plasma Welding process.
> **Cooling Manager**: controls two fully independent circuits for cooling down the welding torch.
> **Gas Profile Manager**: provides accurate programming of the plasma gas flow synchronous with the main welding current, for **Key Hole** applications without compromise and a constant **gas consumption,** controlled and without unnecessary waste.



art. 381.80

WIN TIG DC 500 T ROBOT

	TIG	PLASMA WELDING
Three phase input	**400 V 50/60 Hz ± 15%**	**400 V 50/60 Hz ± 15%**
Fuse rating (slow blow)	**25 A**	**25 A**
Input power	**20,4 kVA 60% 16,5 kVA 100%**	**20,4 kVA 60% 16,5 kVA 100%**
Current adjustment range	**3 A - 500 A**	**3 A - 420 A**
Duty Cycle (10 min. 40°C) According to IEC 60974-1	**500 A 60% 440 A 100%**	**420 A 60% 380 A 100%**
Stepless regulation	**Electronic**	**Electronic**
Protection class	**IP 23 S**	**IP 23 S**
Weight	**87 Kg**	**87 Kg**
Dimensions (WxLxH)	**410 x 790 x810**	**410 x 790 x810**

art. 394.80

WIN TIG AC-DC 270 T ROBOT

	TIG	PLASMA WELDING
Three phase input	400 V 50/60Hz ± 15%	400 V 50/60Hz ± 15%
Fuse rating (slow blow)	10 A	10 A
Input power	7,6 kVA 40% 7,1 kVA 60% 6,3 kVA 100%	7,6 kVA 40% 7,1 kVA 60% 6,3 kVA 100%
Current adjustment range	3 A - 270 A	3 A - 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% 175 A 60% 165 A 100%
Stepless regulation	Electronic	Electronic
Protection class	IP 23 S	IP 23 S
Weight	53 Kg	53 Kg
Dimensions (WxLxH)	410 x 610 x 810	410 x 610 x 810

art. 395.80

WIN TIG AC-DC 340 T ROBOT

	TIG	PLASMA WELDING
Three phase input	400 V 50/60 Hz ± 15%	400 V 50/60 Hz ± 15%
Fuse rating (slow blow)	16 A	16 A
Input power	11,3 kVA 40% 10,3 kVA 60% 9,7 kVA 100	11,3 kVA 40% 10,3 kVA 60% 9,7 kVA 100
Current adjustment range	3 A - 340 A	3 A - 270 A
Duty Cycle (10 min. 40°C) According to IEC 60974-1	340 A 60% 320 A 100% 310 A 100%	270 A 60% 250 A 100% 240 A 100%
Stepless regulation	Electronic	Electronic
Protection class	IP 23 S	IP 23 S
Weight	80 Kg	80 Kg
Dimensions (WxLxH)	410 x 790 x810	410 x 790 x810

art. 396.80

WIN TIG AC-DC 450 T ROBOT

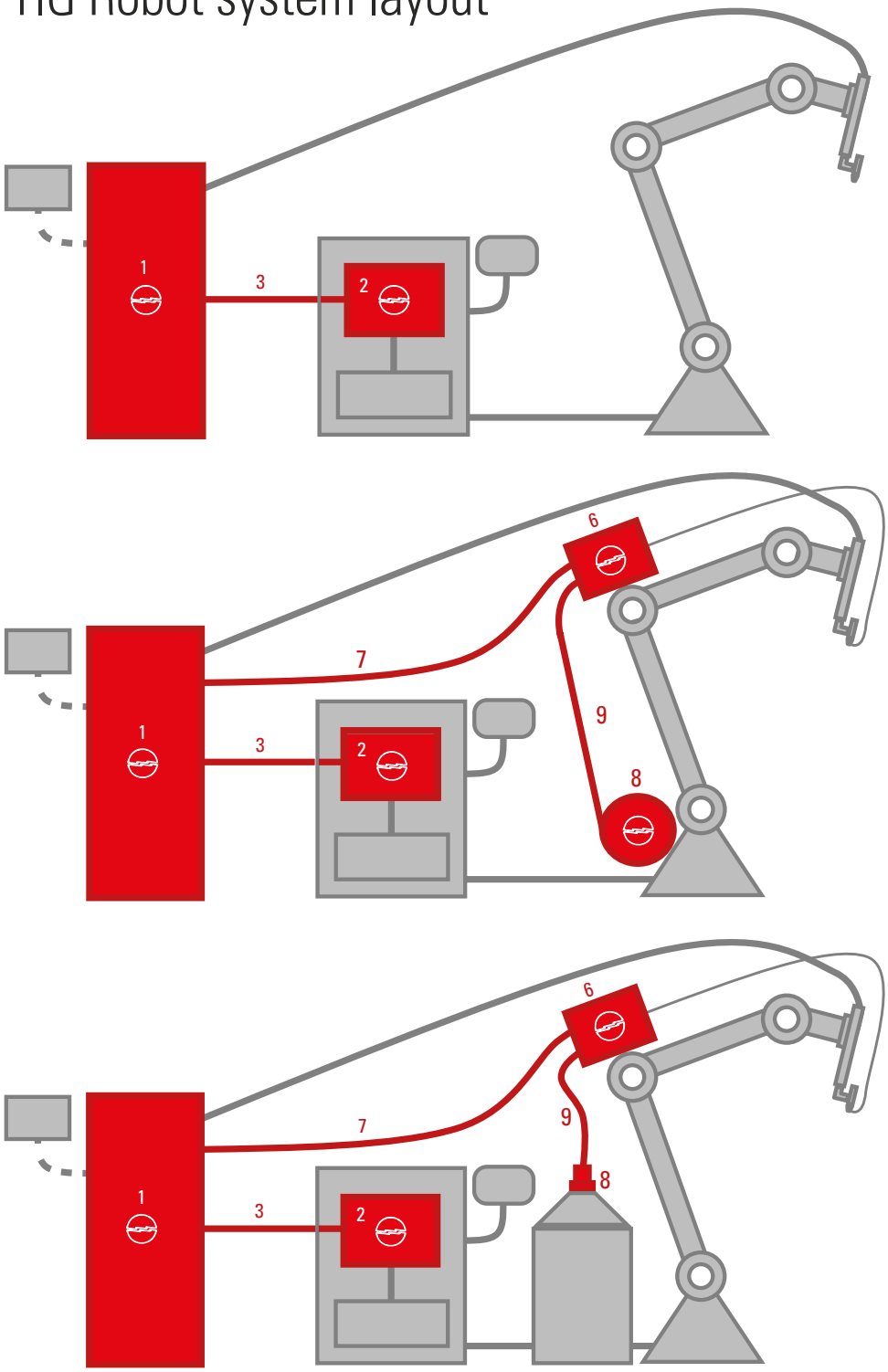
	TIG	PLASMA WELDING
Three phase input	**400 V 50/60Hz ± 15%**	**400 V 50/60Hz ± 15%**
Fuse rating (slow blow)	**20 A**	**20 A**
Input power	**18,2 kVA 50% 15,9 kVA 60% 13,8 kVA 100%**	**18,2 kVA 50% 15,9 kVA 60% 13,8 kVA 100%**
Current adjustment range	**3 A - 450 A**	**3 A - 360 A**
Duty Cycle (10 min. 40°C) According to IEC 60974-1	**450 A 50% 400 A 60% 380 A 100%**	**360 A 50% 330 A 60% 300 A 100%**
Stepless regulation	**Electronic**	**Electronic**
Protection class	**IP 23 S**	**IP 23 S**
Weight	**97 Kg**	**97 Kg**
Dimensions (WxLxH)	**410 x 790 x 810**	**410 x 790 x 810**

art. 465.01

Digital Console PW30

Single phase input	**230 V 50/60 Hz**
Fuse rating (slow blow)	**T 6,3**
Current adjustment range	**3 A - 30 A**
Duty Cycle (10 min. 40°C) According to IEC 60974-1	**30 A 100%**
Stepless regulation	**Electronic**
Protection class	**IP 23 S**
Weight	**21 Kg**
Dimensions (WxLxH)	**345 x 450 x 375**
GAS shield	**5÷30 l/min**
Gas Plasma	**0,2÷10 l/min**

TIG Robot system layout



Legenda

1 Welding power source

2 Robot interface

3 Connection Welding power source-Robot interface

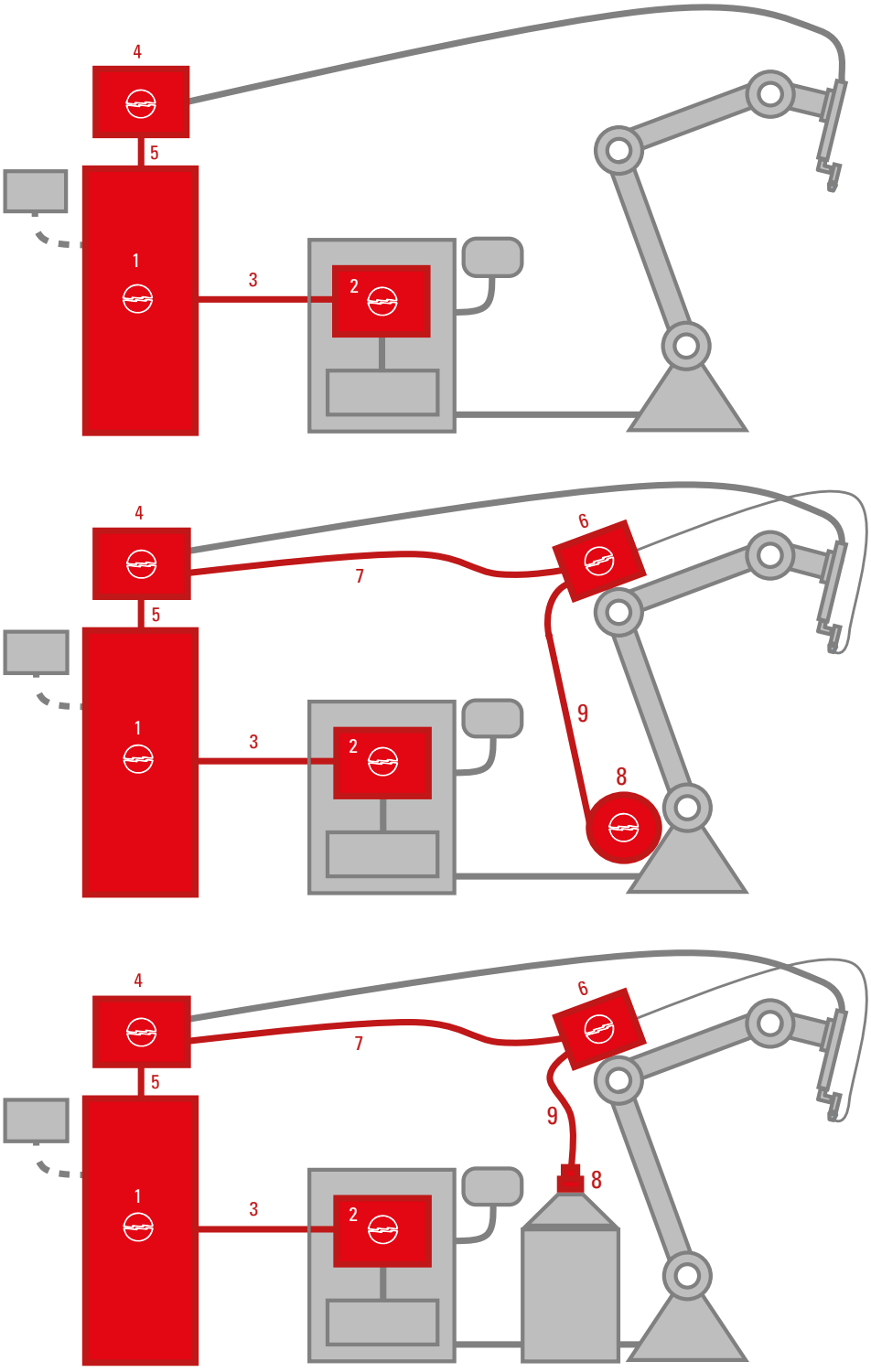
6 Robot wire feeder

7 Connection Welding power source-Robot wire feeder

8 Welding wire spool holder/quick fitting

9 Welding wire liner

PLASMA WELDING Robot system layout



Legenda

1 Welding power source

2 Robot interface

3 Connection Welding power source-Robot interface

4 Console Plasma Welding

5 Connection Welding power source-Console Plasma Welding

6 Robot wire feeder

7 Connection Welding power source-Robot wire feeder

8 Welding wire spool holder/quick fitting

9 Welding wire liner

TIG/Plasma Welding Robot system components

Pos. 1	Welding power source
art. 381.80	WIN TIG DC 500 T ROBOT
art. 394.80	WIN TIG AC-DC 270 T ROBOT
art. 395.80	WIN TIG AC-DC 340 T ROBOT
art. 396.80	WIN TIG AC-DC 450 T ROBOT

Pos. 2	Robot interface
art. 448	RAI Analogic robot interface kit
art. 428.01	RDI PROFIBUS robot interface kit
art. 428.02	RDI DeviceNet robot interface kit
art. 428.03	RDI EtherCAT robot interface kit
art. 428.04	RDI Ethernet/IP robot interface kit

Pos. 3	Connection Welding power source-Robot interface
art. 2063.00	Connection Welding power source-Robot interface - 5m
art. 2063.10	Connection Welding power source-Robot interface -10m

TIG/Plasma Welding Robot system accessories

Pos. 6	Robot wire feeder
art. 1649	WF5 COLD WIRE robot wire feeder (to be compulsorily coupled to art. 435)

Pos. 7	Connection Welding power source-Robot wire feeder
art. 2062.00	Connection Welding power source-Robot wire feeder - 5m
art. 2062.10	Connection Welding power source-Robot wire feeder - 10m

Pos. 8	Welding wire spool holder/quick fitting
art. 121	15 kg spool holder with fixing bracket
art. 173	Quick fitting for welding bulk drum system

Pos. 9	Welding wire liner
art. 1935.00	Welding wire liner for robot wire feeder - 1,6m
art. 1935.01	Welding wire liner for robot wire feeder - 2,2m

Plasma Welding Robot system components

Pos. 4	Console Plasma Welding
art. 465.01	PW30 Digital Console Plasma Welding
art. 229	Fixing kit Plasma welding console-Welding power source

Pos. 5	Connection Welding power source-Console Plasma Welding
art. 2067	Connection Welding power source-Console Plasma Welding - 1,5m

Other accessories & kits (valid both for TIG and PLASMA WELDING when not specified)

art. 1683	GRV12 cooling, optional for welding power source art.394.80
art. 435	WF5 COLD WIRE feeder power supply kit (to be installed inside the welding power source)
art. 436	Gas flow regulator kit (TIG only)
art. 442	Torch connection kit for THERMAL PWM300 (Plasma Welding only)
art. 447	Push-Pull driver kit
art. 449	Emergency + Varc kit
art. 450	External HF unit (TIG only)
art. 451	24Vdc power supply for external Wifi router
art. 2054	CAN2 connection for CANopen embedded robot interface
art. 803	Instrument Welding power source calibration certificate
art. 125.01	Robot Analyzer kit

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