

2020
catalogue
automation

KINGSTAR MIG/MAG ROBOT

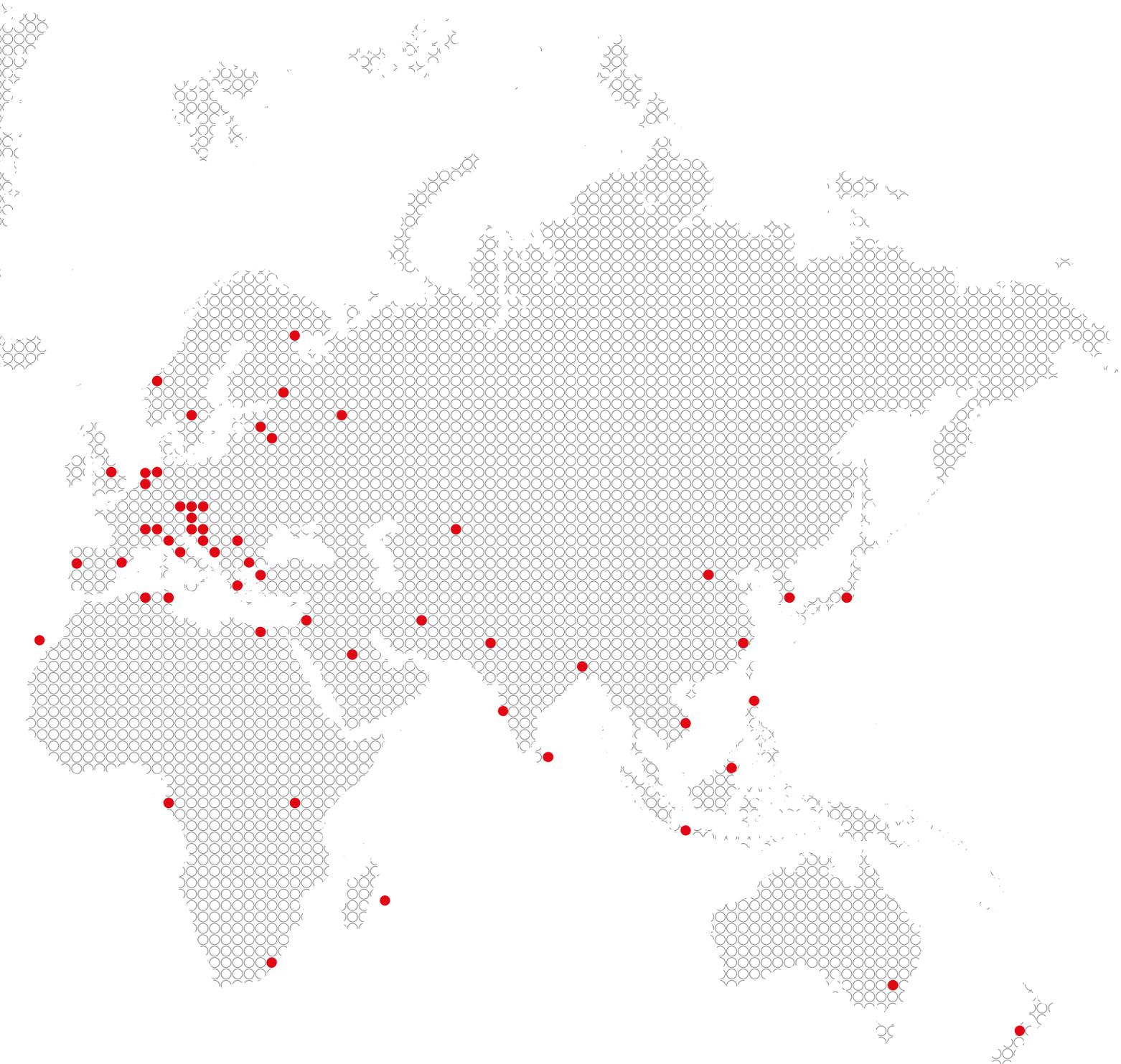
Global partner

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.

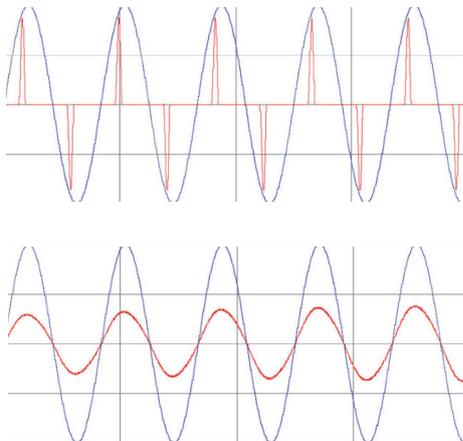
Thanks to the selection and continuous implementation of specific services provided to importers and distributors, CEBORA is able to rapidly and successfully deliver its products to every corner of the world.

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 machines and to the website which is constantly updated with information relating to the latest production news of CEBORA GROUP.



KINGSTAR MIG/MAG 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 MIG/MAG KINGSTAR power sources. Extremely fast and accurate control of the welding parameters for a further improvement in **quality** and **performance** of our MIG/MAG Robot system on all metal types



All the power sources of the KINGSTAR line are designed and manufactured according to the standard **IEC 61000-3-12**, 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 integrated **webserver** is available, to communicate with personal computers and other devices in a standard and fast way, compatible with the networking specifications required by **Industry 4.0**.

12:00:30
12/11/19

OFF

Website

Article 372 (KINGSTAR 400 TS)

Serial Number P2631A

Software Release 1.3.1 (Oct 29 2019) DEBUG

Options DL MP TF ROB

Synergic Tables 004

IP Address 192.168.13.194

Webapp

11:21:13
12/11/19

OFF

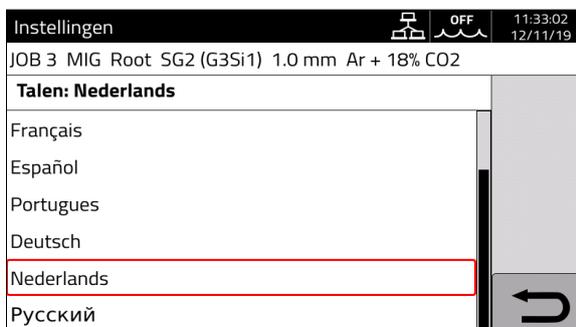
LAN Setup

JOB 3 MIG Root SG2 (G3Si1) 1.0 mm Ar + 18% CO2

DHCP 9C:53:CD:01:C7:29

IP Address	192	168	13	194	
Netmask	255	255	252	0	
Gateway	0	0	0	0	✓
DNS	0	0	0	0	↶

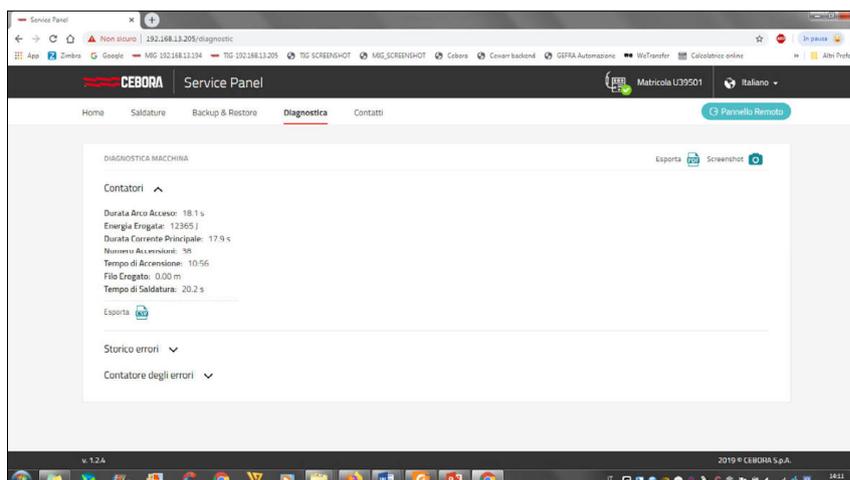
Modern colour touch screen 7" panel integrated in the power source, to allow an easy and intuitive configuration of the process parameters, thanks also to the possibility of choosing among **8 different languages** for the user menu



In case a **remote control** is needed, the KINGSTAR offer two options:

- > compact wired panel by Cebora (art.452), with the possibility of adjusting the main welding parameters,
- > generic Android tablet or Windows PC connected to the welding power source through its Ethernet port, either wired or **wireless** through any Wifi router (24Vdc power supply available from the power source by the kit art.451).

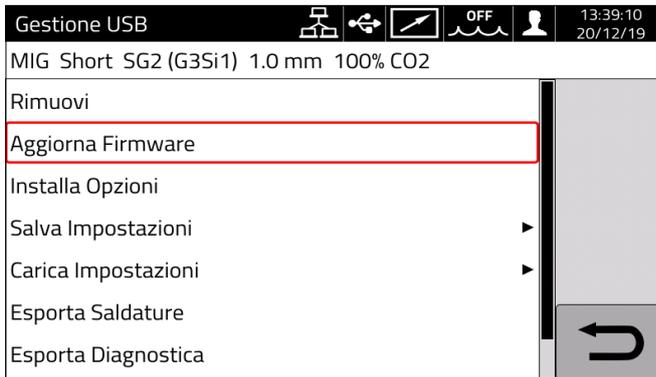
So it's also available a proprietary web-app with a **Service Panel** that provides **free of charge** some useful tools, including **Backup&Restore** and **Diagnostics**



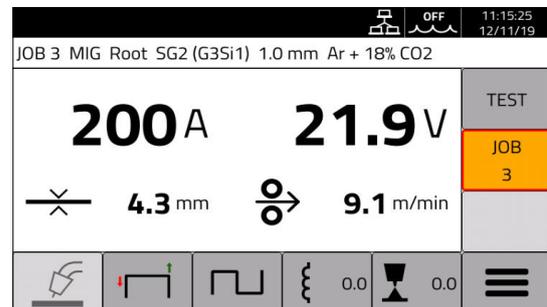
Two USB ports for a welding system always updated, quickly and easily, and a long-lasting investment able to grow over time together with your production activity.



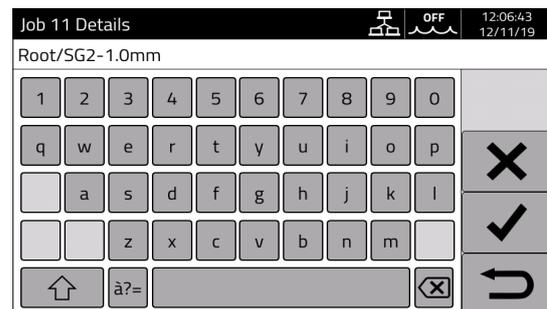
A **software updating** system developed by Cebora that requires just a memory-stick and a few seconds to download from Cebora website the latest firmware version available and install it on your system, **free of charge**.



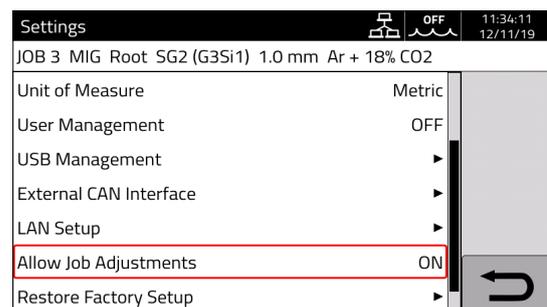
100 Jobs are available, where you can store the complete set of welding parameters for the different weldments to be performed.



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

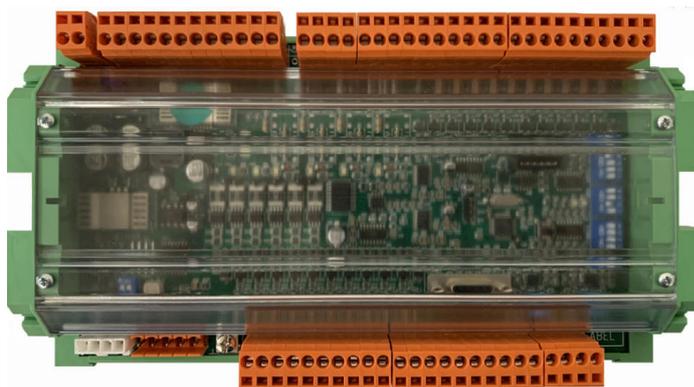


Moreover, working in **JOB Mode**, it is possible to enable the **run-time modification** from the PLC/Robot Controller of the main welding parameters stored into the jobs.



Multiple **choice of interfacing** to the CNC/Robot Controller. There are available both the conventional **Analogic** Interface RAI (art.448) and the **Digital** RDI ones (art.428.xx) 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 KINGSTAR power source has such fieldbus directly integrated into it.

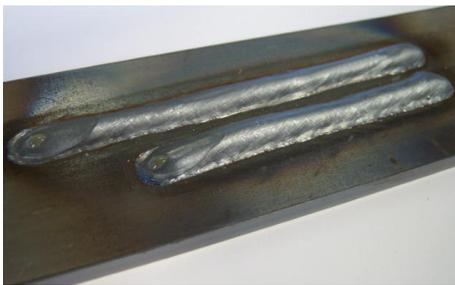


The **robotic wire feeder unit WF5** (art.1648) has been completely redesigned and engineered: extremely **compact** and **lightweight**, equipped with 4-roller aluminium wire feeder offering a practical coding of the rollers by coloured inserts. The new opening system for the access to the wire feeder allows the installation of this unit on any brand and model of robots, **conventional** or **hollow-wrist**, with **no mechanical interference**.



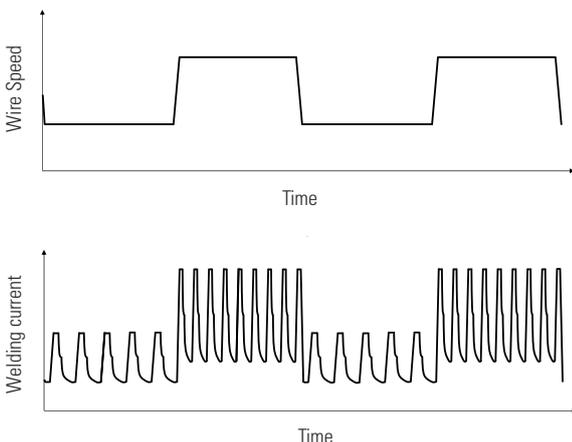
STATUS	MATERIAL	Ø WIRE	GAS	PULSE N°	PULSE HD	PULSE	ROOT	SHORT HD	SHORT	SRS
●	1055 Ti	1.2 mm	Ar + 18% CO2	22						
●	309L	0.8 mm	Ar + 2% CO2	32	●					●
●	309L	0.8 mm	Ar + 2% CO2	33		●				
●	309L	1.0 mm	Ar + 2% CO2	34	●					●
●	309L	1.2 mm	Ar + 2% CO2	35	●					●
●	309L	1.6 mm	Ar + 2% CO2	36	●					●
●	309L	0.8 mm	Ar + 2% CO2	38		●				
●	309L	1.0 mm	Ar + 2% CO2	39	●					●
●	309L	1.2 mm	Ar + 2% CO2	40		●				
●	316L	0.8 mm	Ar + 2% CO2	42		●				
●	316L	1.0 mm	Ar + 2% CO2	43		●				
●	316L	1.2 mm	Ar + 2% CO2	44		●				

More than 150 synergic programs is the standard data-base of all the KINGSTAR power sources, also including curves for processes specifically developed to optimize the performance in automatic applications



> The **HD -High Deposit-** process, available both in short (standard) and pulsed (optional), allows to execute weldments at very high **speed** to offer higher and higher **yields** of the welding plants. It is also suitable to perform special weldments, where you must operate with long stick-out due to the available space.

> **Root** process, to use the MIG only both for **root** and **filling** pass or in case of operating conditions with distance between the edges to be welded up to 5mm.

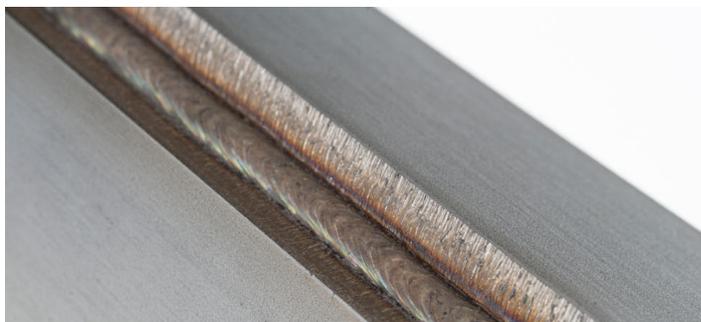
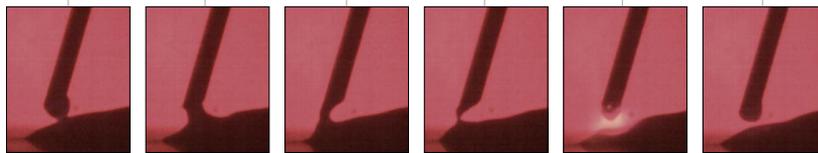
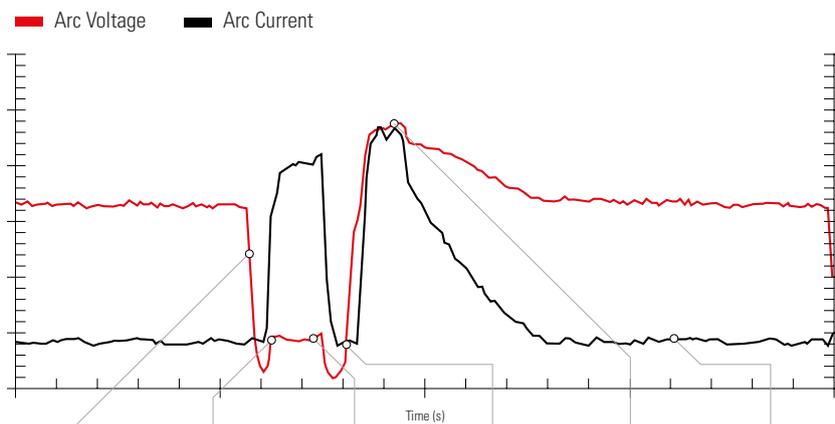


These highly productive processes are accompanied, of course, by the **Pulse** and **Double Pulsed** ones (optional).

Kit SRS - Spatter Reduction System- (art.443): the perfect solution for short welding however ensuring the **total absence of spatters** and the **minimal amount of heat** in the welding pattern, even on stainless steel, greatly useful in case of thin plates.

Such low amount of heat is also essential in case of distance between the edges usually impossible to manage with other welding processes.

Always the best performance, **whatever is the welding torch** used and its length.




CEBORA
welding&cutting

SWPS
EN 1090

kiwa
CERTIFICAZIONE
PER
SALDATURA

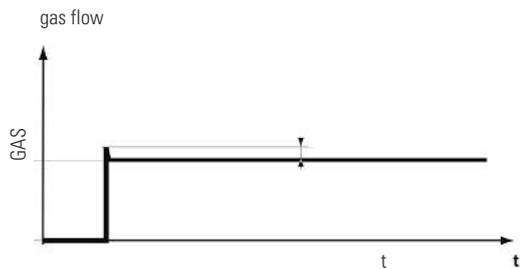
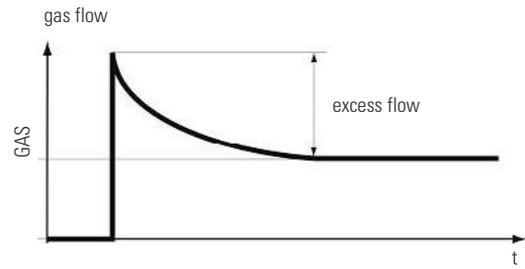
IT/EN Dichiarazione/Declaration/Procedure di saldatura standard secondo UNI EN ISO 15612/Standard Welding Procedures according to UNI EN ISO 15612 Pag./Page 2
IT/EN WPQR - Certificato di Qualifica Processo di Saldatura Pag./Page 4
IT/EN SWPS - Procedura di Saldatura Standard/Standard Welding Procedure Specification Pag./Page 34

It is available on request a package of **SWPS -Standard Welding Procedures Specifications-** (art.808) made in accordance with the requirements of the standard UNI EN ISO 151612

Kit Gas Flow Regulator (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 KINGSTAR 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.



Kit Gas Sensor (art.102)

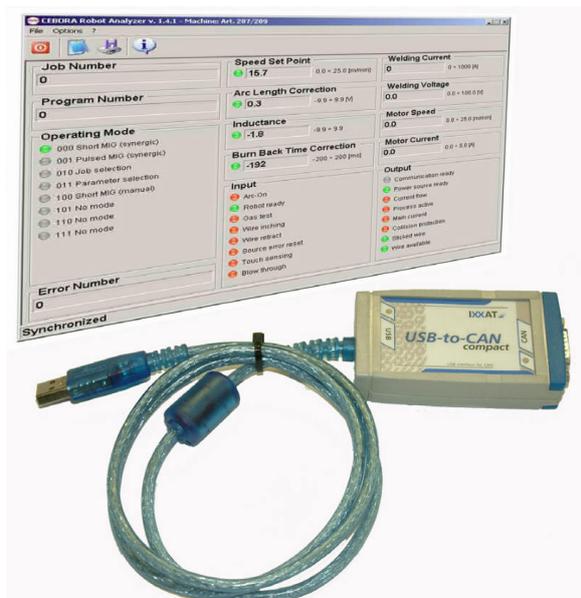
useful when it is not necessary to guarantee the constant regulation of the gas flow but you simply want to **monitor** its presence and **stop** the welding process in case of interruption or reduction of the gas supply below a user configurable pressure value

Kit Driver Push-Pull (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 unit, for any torch and for any welding process, even Double Pulse

Kit Emergency + Varc (art.449):

it manages the input signal coming from the **Emergency Stop** button according to the international standard EN954-1 category 3.



Kit Robot Analyzer (art.125.01):

when the **real-time monitoring of the communication** between the welding power source and the CNC/Robot Controller is necessary, during either the integration of the welding system or its normal operation, Cebora offers a “sniffer” which lets you to achieve that in an extremely intuitive and complete way.

It’s 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 KINGSTAR line and the powerful software for the welding process management, it is possible to save automatically the main welding parameters of **thousands of welding seams** into the power source memory (... **free of charge**). These data can be periodically downloaded to a memory stick through the USB port and then analyzed or simply stored as support documentation for the Quality Control process of the production.

Weldments												
idjob	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 **Instrument Calibration Certificate** (art.803) for the welding power source when ordering the KINGSTAR welding system, It guarantees, according to the standard EN 50504-2008, the correspondence to the nominal data of the welding parameters values measured by the instruments of the power source, mandatory prerequisite to ensure a reliable Quality Control of the production

art. 372.80

KINGSTAR 400 TS ROBOT



Three phase input	400V - 50/60 Hz +15% / -20%
Fuse rating (slow blow)	20 A
Input power	18,8 kVA 40% 16,4 kVA 60% 14,2 kVA 100%
Current adjustment range	10 A - 400 A
Duty Cycle (10 min. 40°C) According to IEC 60974-1	400 A 40% 370 A 60% 340 A 100%
Stepless regulation	Electronic
Protection class	IP 23 S
Weight	74 Kg
Dimensions (WxLxH)	410 x 860 x 820



art. 374.80

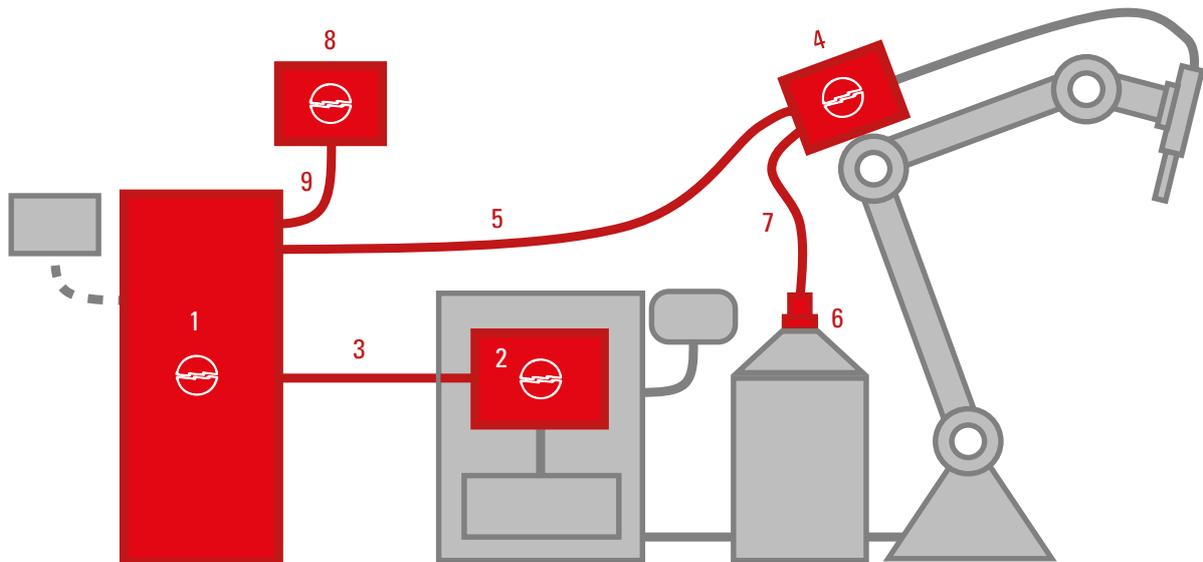
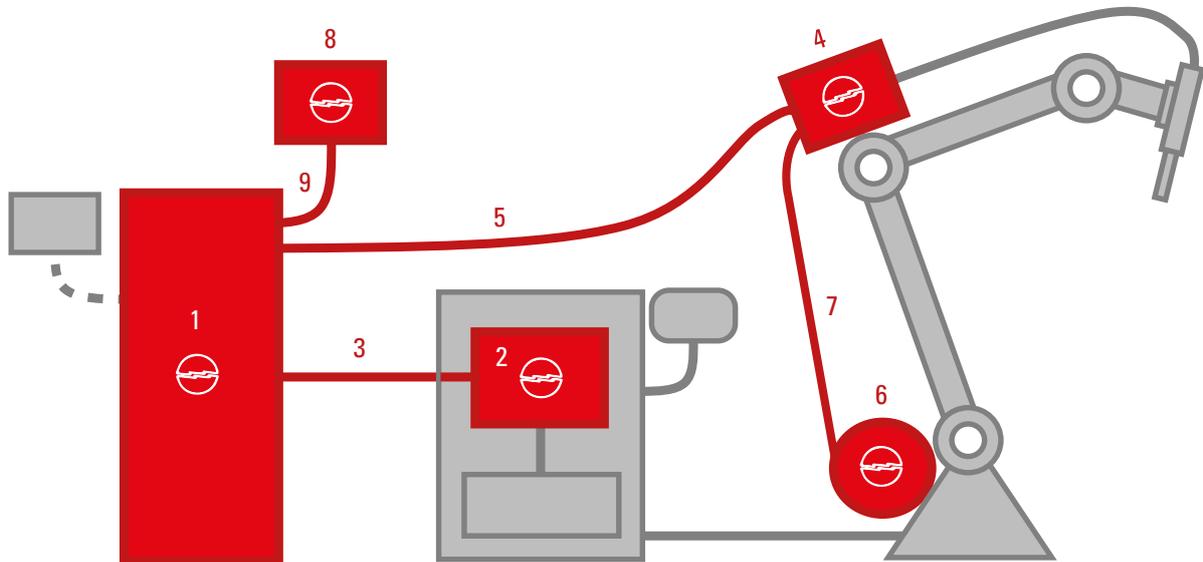
KINGSTAR 520 TS ROBOT



Three phase input	400V - 50/60 Hz +15% / -20%
Fuse rating (slow blow)	40 A
Input power	25,8 KVA 40% 23,7 KVA 60% 20,7 KVA 100%
Current adjustment range	10 A - 520 A
Duty Cycle (10 min. 40°C) According to IEC 60974-1	500 A 40% 470 A 60% 440 A 100%
Stepless regulation	Electronic
Protection class	IP 23 S
Weight	95 Kg
Dimensions (WxLxH)	410 x 860 x 820



Layout MIG/MAG Robot System



Legenda

- | | | | | | |
|---|-------------------------------------------------|---|--------------------------------------------------------|---|------------------------------------------------------|
| 1 | Welding power source | 4 | Robot wire feeder unit | 7 | Welding wire liner |
| 2 | Robot interface | 5 | Connection Welding power source-Robot wire feeder unit | 8 | Remote control panel |
| 3 | Connection Welding power source-Robot interface | 6 | Welding wire spool holder/quick fitting | 9 | Connection Welding power source-Remote control panel |

MIG/MAG Robot system components

Pos. 1 Welding power source

art. 372.80	KINGSTAR 400 TS ROBOT
art. 374.80	KINGSTAR 520 TS ROBOT

Pos. 2 Robot interface

art. 448	Kit robot interface RAI Analogic
art. 428.01	Kit robot interface RDI PROFIBUS
art. 428.02	Kit robot interface RDI DeviceNet
art. 428.03	Kit robot interface RDI EtherCAT
art. 428.04	Kit robot interface RDI Ethernet/IP

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

Pos. 4 Robot wire feeder unit

art. 1648	WF5 robot wire feeder unit
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Pos. 5 Connection Welding power source-Robot wire feeder unit

art. 2061.00	Connection Welding power source-Robot wire feeder unit-5m
art. 2061.10	Connection Welding power source-Robot wire feeder unit-10m

MIG/MAG Robot system accessories

Pos. 6 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. 7 Welding wire liner

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

Pos. 8 Remote control panel

art. 452	Remote control panel
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Pos. 9 Connection Welding power source-Remote control panel

art. 2065.00	Connection Welding power source-Remote control panel - 5m
art. 2065.10	Connection Welding power source-Remote control panel - 10m

Other accessories & kit

art. 1683	GRV12 cooling unit, optional for welding power source art.372.80
art. 231.89	Upgrade Pulse process *
art. 233.89	Upgrade Double Level process *
art. 102	Kit gas sensor
art. 436	Kit gas flow regulator
art. 443	Kit SRS
art. 447	Kit driver Push-Pull
art. 449	Kit Emergency + Varc
art. 451	Kit 24Vdc power supply for external Wifi router
art. 2054	CAN2 connection for CANopen integrated robot interface
art. 803	Instrument Welding power source calibration certificate
art. 808	SWPS – Standard Welding Procedure Specifications
art. 125.01	Kit Robot Analyzer

* The Double Pulse process is obtained by activating both the Pulse (art. 231) and the Double Level (art 233) optional processes



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