

2020

catalogue  
automation

KINGSTAR MIG/MAG ROBOT

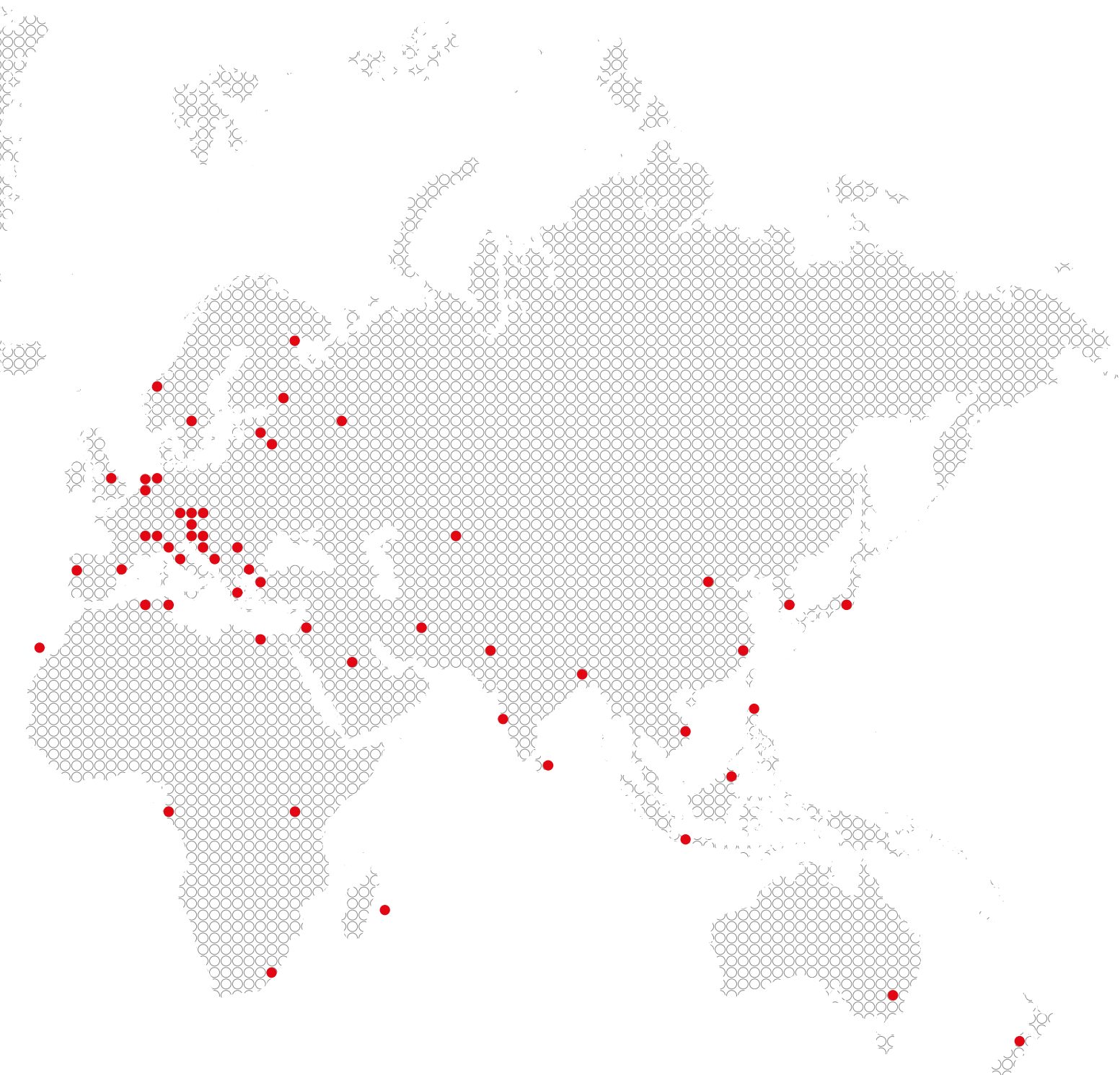
# Global partner

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.

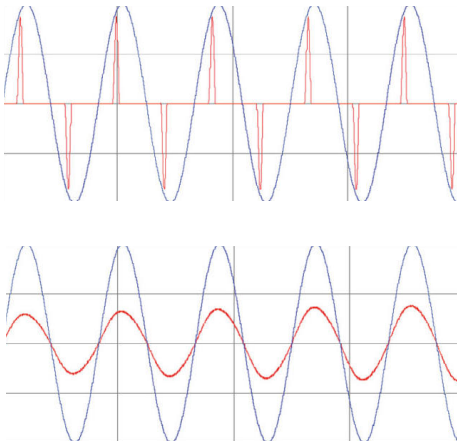
Thanks to the selection and continuous implementation of specific services provided to importers and distributors, CEBORA is able to rapidly and successfully deliver its products to every corner of the world.

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**.

ABOUT

OFF

12:00:30  
12/11/19

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

LAN Setup

OFF

11:21:13  
12/11/19

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

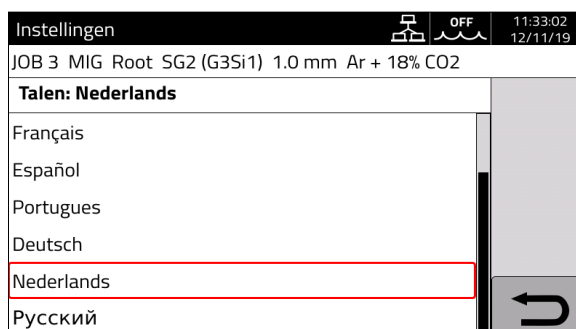
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✓

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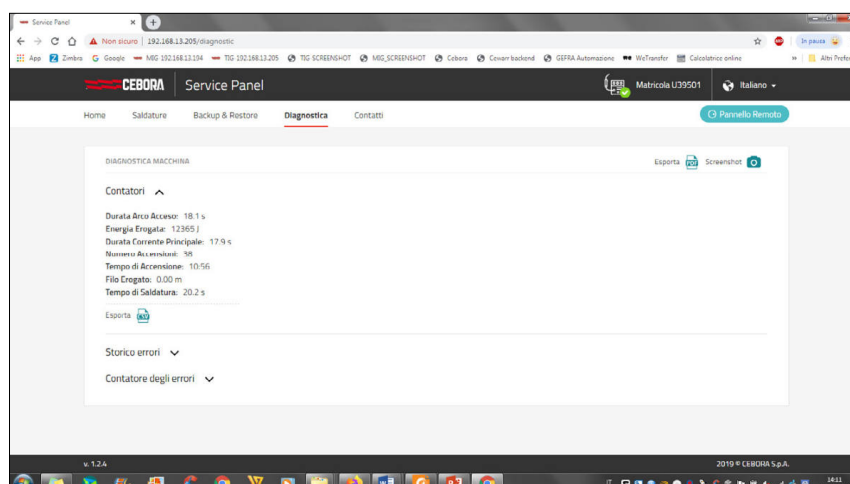
**Modern colour touch screen 7"** panel integrated in the power source, to allow an easy and intuitive configuration of the process parameters, thanks also to the possibility of choosing among **8 different languages** for the user menu



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

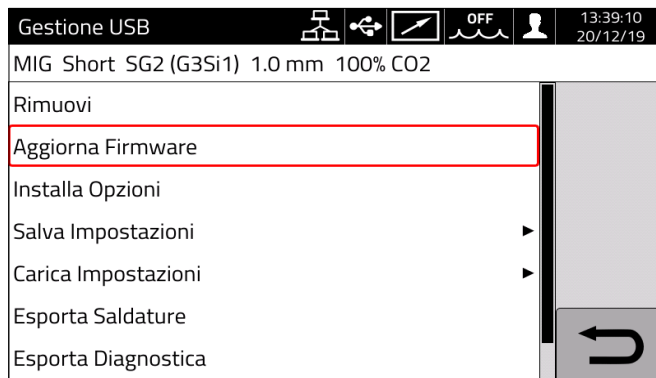
- > compact wired panel by Cebora (art.452), with the possibility of adjusting the main welding parameters,
- > generic Android tablet or Windows PC connected to the welding power source through its Ethernet port, either wired or **wireless** through any Wifi router (24Vdc power supply available from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

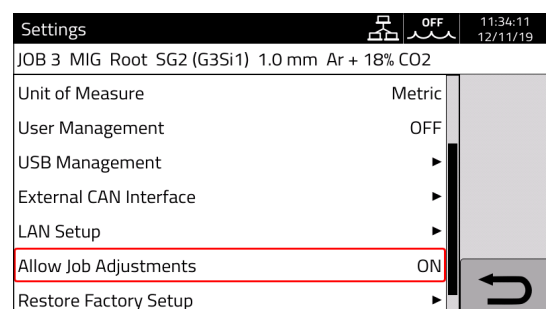
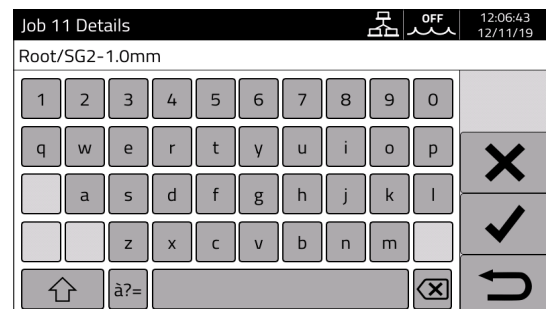
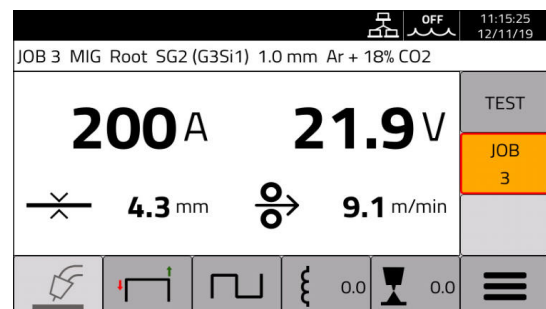
A **software updating** system developed by Cebora that requires just a memory-stick and a few seconds to download from Cebora website the latest firmware version available and install it on your system, **free of charge**.



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

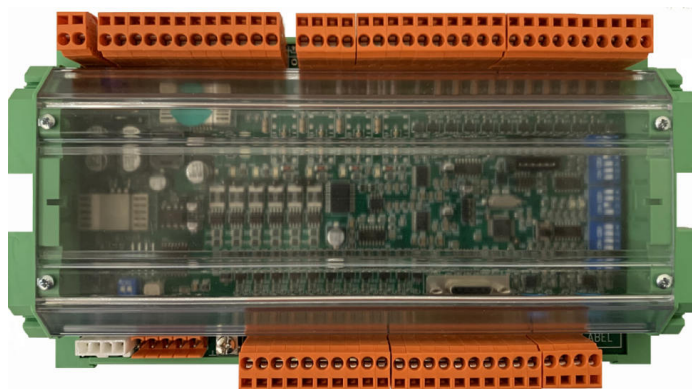
Each Job is individually **renamable**, for a faster identification and correlation with the relevant work.

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**.



Service Panel

Home Synergic Curves Weldings Backup & Restore Diagnostic Contacts

SYNERGIC PROGRAMS AVAILABLE IN THE POWER SOURCE

Filter data

STATUS	MATERIAL	Ø WIRE	GAS	PRG. N°	PULSE HD	PULSE	ROOT	SHORT HD	SHORT	SRS
●	100S T1	1.2 mm	Ar + 18% CO <sub>2</sub>	22						
●	309L	0.8 mm	Ar + 2% CO <sub>2</sub>	32		●				
●	309L	0.9 mm	Ar + 2% CO <sub>2</sub>	33		●				
●	109L	1.0 mm	Ar + 2% CO <sub>2</sub>	34	●					
●	309L	1.2 mm	Ar + 2% CO <sub>2</sub>	35	●					
●	309L	1.6 mm	Ar + 2% CO <sub>2</sub>	36	●					
●	309L	0.8 mm	Ar + 2% CO <sub>2</sub>	38		●				
●	309L	1.0 mm	Ar + 2% CO <sub>2</sub>	39	●					
●	309L	1.2 mm	Ar + 2% CO <sub>2</sub>	40		●				
●	316L	0.8 mm	Ar + 2% CO <sub>2</sub>	42		●				
●	316L	1.0 mm	Ar + 2% CO <sub>2</sub>	43		●				
●	316L	1.2 mm	Ar + 2% CO <sub>2</sub>	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

Processo

MIG Short HD SG2 (G3Si1) 1.0 mm Ar + 18% CO<sub>2</sub>

Pulse

Pulse HD

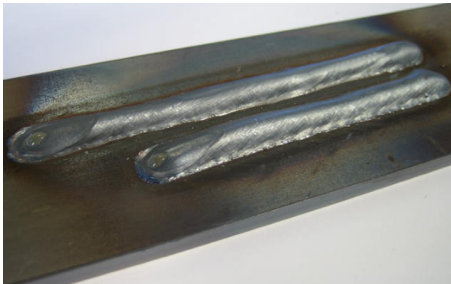
Short

Short HD

Root

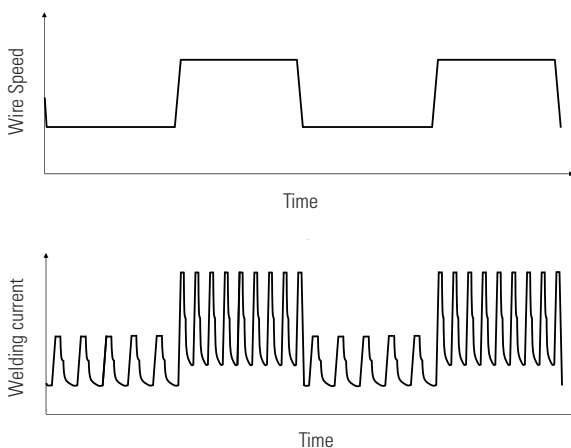
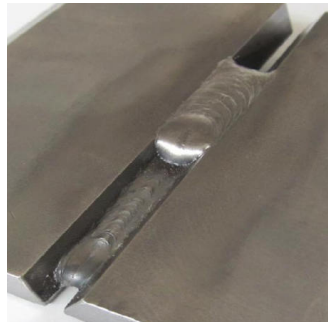
SRS

TEST



> 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.



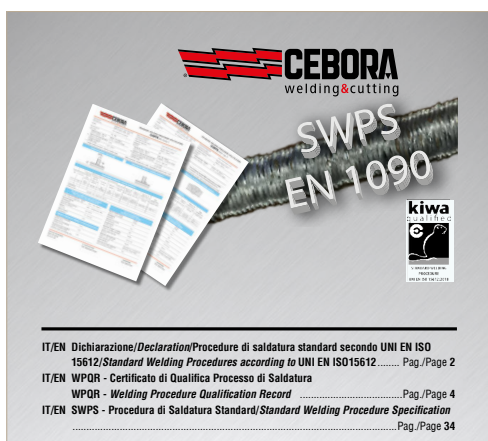
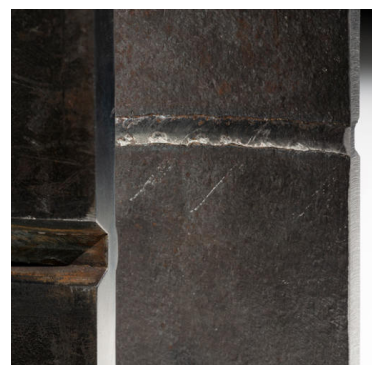
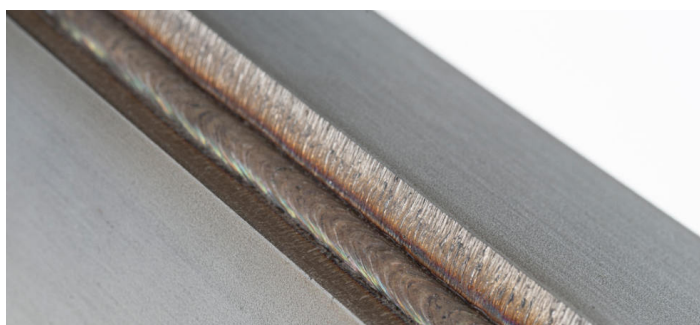
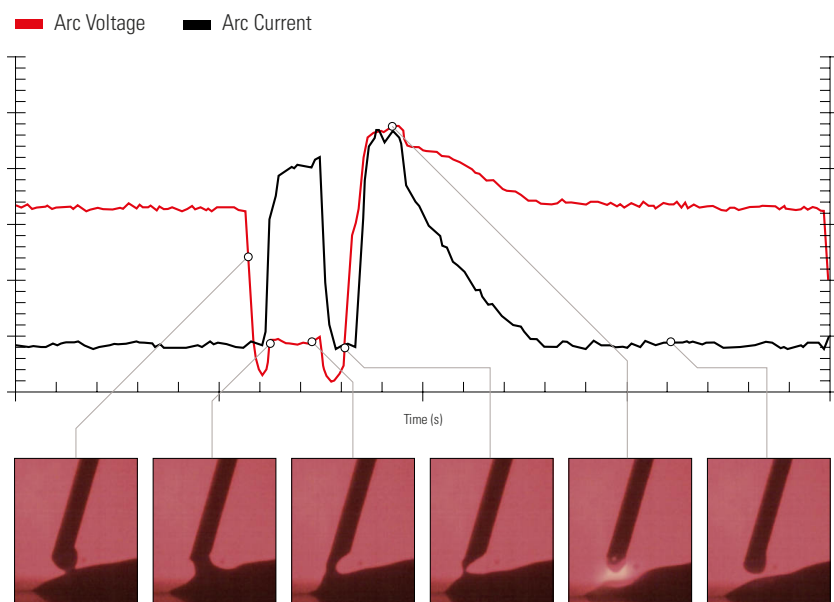
These highly productive processes are accompanied, of course, by the **Pulse** and **Double Pulsed** ones (optional).



**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.

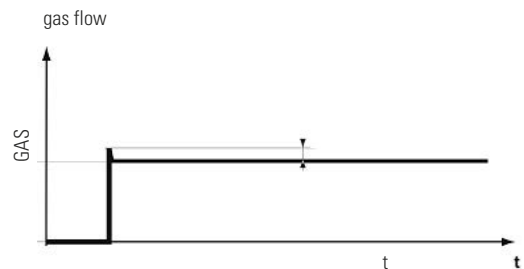
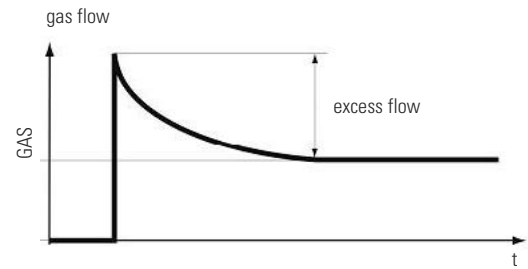


It is available on request a package of **SWPS** -Standard **W**elding **P**rocedures **S**pecifications- (art.808) made in accordance with the requirements of the standard UNI EN ISO 15162

### **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)

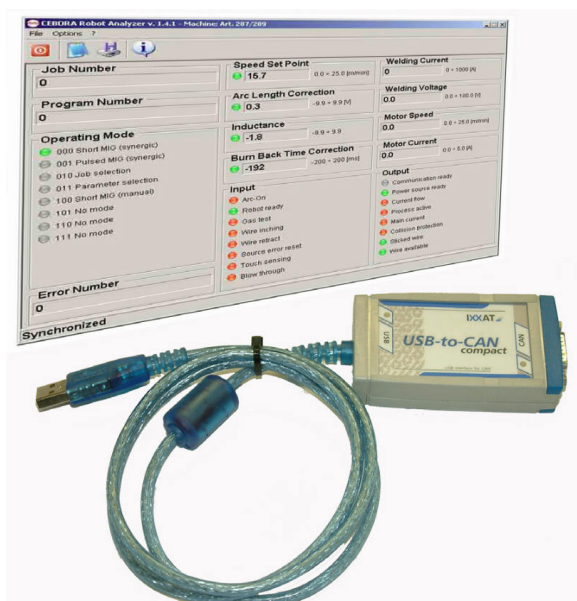
useful when it is not necessary to guarantee the constant regulation of the gas flow but you simply want to **monitor** its presence and **stop** the welding process in case of interruption or reduction of the gas supply below a user configurable pressure value

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





art. 374.80

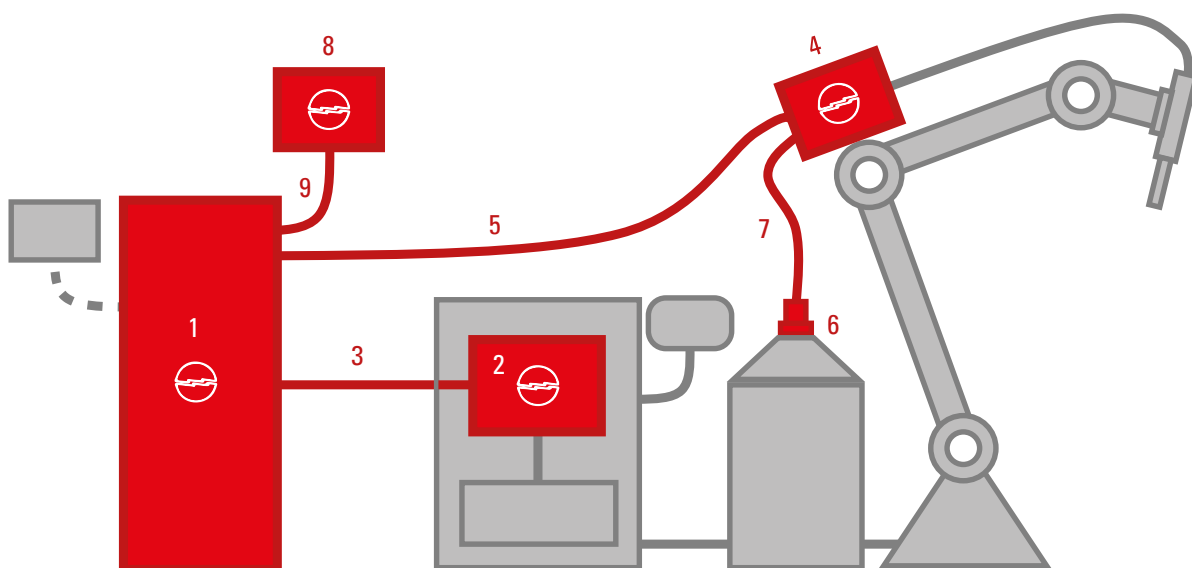
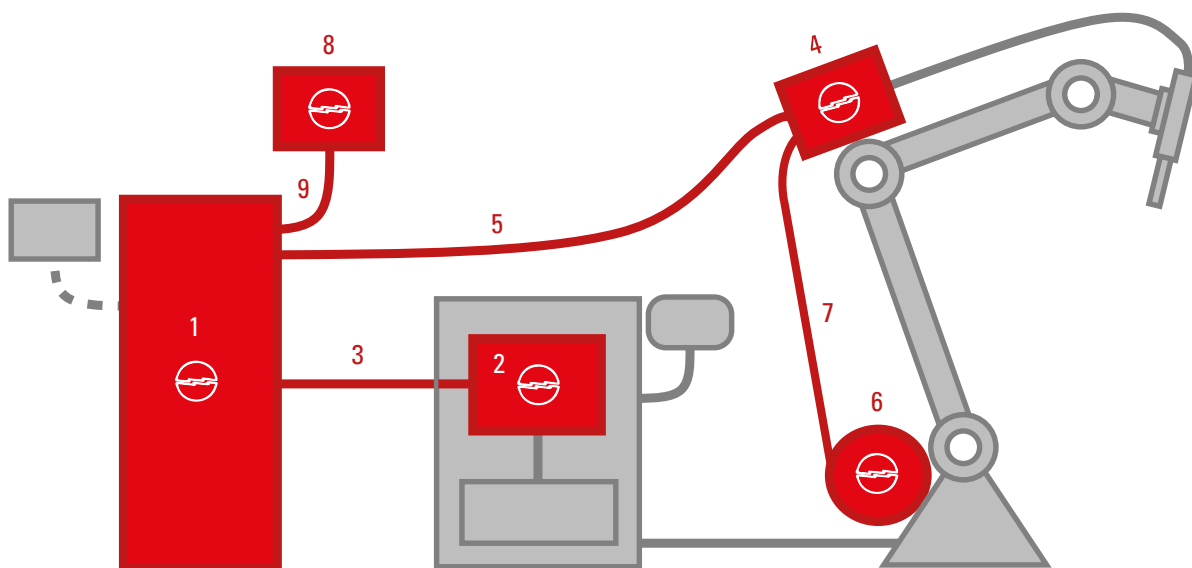
# KINGSTAR 520 TS ROBOT



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



## 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

<b>Pos. 1</b>	<b>Welding</b> Welding power source
<b>art. 372.80</b>	KINGSTAR 400 TS ROBOT
<b>art. 374.80</b>	KINGSTAR 520 TS ROBOT
<b>Pos. 2</b>	<b>Robot interface</b>
<b>art. 448</b>	Kit robot interface RAI Analogic
<b>art. 428.01</b>	Kit robot interface RDI PROFIBUS
<b>art. 428.02</b>	Kit robot interface RDI DeviceNet
<b>art. 428.03</b>	Kit robot interface RDI EtherCAT
<b>art. 428.04</b>	Kit robot interface RDI Ethernet/IP
<b>Pos. 3</b>	<b>Connection</b> Welding power source-Robot interface
<b>art. 2063.00</b>	Connection Welding power source-Robot interface-5m
<b>art. 2063.10</b>	Connection Welding power source-Robot interface-10m
<b>Pos. 4</b>	<b>Robot wire feeder unit</b>
<b>art. 1648</b>	WF5 robot wire feeder unit
<b>Pos. 5</b>	<b>Connection</b> Welding power source-Robot wire feeder unit
<b>art. 2061.00</b>	Connection Welding power source-Robot wire feeder unit-5m
<b>art. 2061.10</b>	Connection Welding power source-Robot wire feeder unit-10m

## MIG/MAG Robot system accessories

<b>Pos. 6</b>	<b>Welding wire spool holder/quick fitting</b>
<b>art. 121</b>	15 kg spool holder with fixing bracket
<b>art. 173</b>	Quick fitting for welding bulk drum system
<b>Pos. 7</b>	<b>Welding wire liner</b>
<b>art. 1935.00</b>	Welding wire liner for robot wire feeder unit-1,6m
<b>art. 1935.01</b>	Welding wire liner for robot wire feeder unit-2,2m
<b>Pos. 8</b>	<b>Remote control panel</b>
<b>art. 452</b>	Remote control panel
<b>Pos. 9</b>	<b>Connection</b> Welding power source-Remote control panel
<b>art. 2065.00</b>	Connection Welding power source-Remote control panel - 5m
<b>art. 2065.10</b>	Connection Welding power source-Remote control panel - 10m

## Other accessories & kit

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