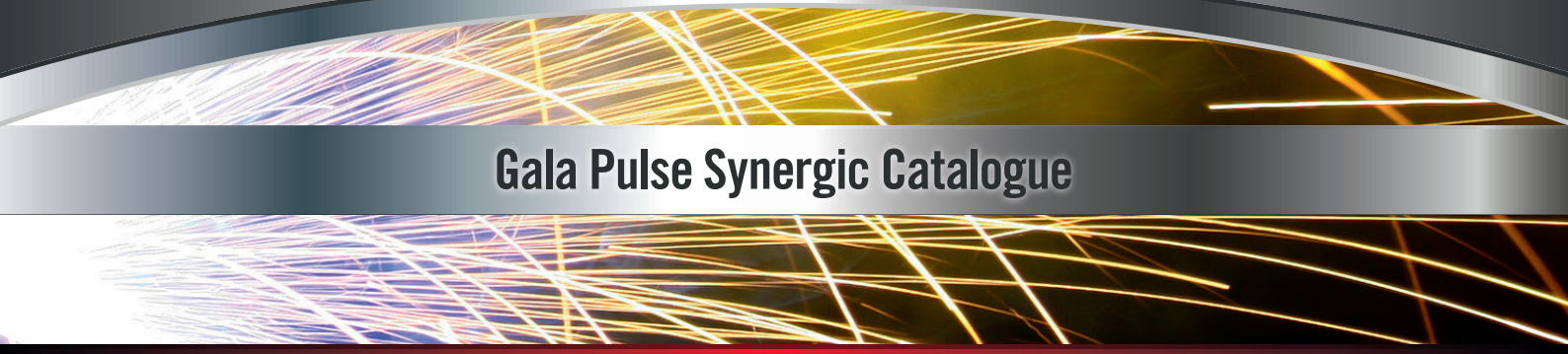
gala gar®
WELDING



Gala Pulse Synergic Catalogue

| GPS 2300 | GPS 3000 C | GPS 4000 C | GPS 4000 DR | GPS 5000 DR |

Takes control

Control, control and more control, the Gala Pulse Synergic affords total control aiming at maximum efficiency and productivity. The term, control, covers everything related to the programming, welding process and equipment management, from the machine itself, from the wire feeder or from the remote control. Furthermore, the aesthetic aspect of the bead can be controlled, as a frequency control in the Bi-Pulse mode affords high-quality surface finishes.

Its multi-process configuration, **MIG-MAG**, **TIG** and **MMA**, makes it an ideal machine for endless applications and sectors. What´s more two models from the gamma are manufactured for use in robotic applications.

Ref.: 42385000

Ref.: 42600000

Synergic control

The synergic control system developed by Gala Gar, for the MIG-MAG and Electrode welding processes, makes equipment handling easier and increases its precision.

Stability-auto-regulation

Thanks to the internal configuration of the stability control parameters, Gala Pulse Synergic automatically modifies the values required to maintain a constant arc height, regardless of the height variations generated by torch movements.

Thus, we will obtain greater control over the molten pool and more even penetration.

Arc height control

Regardless of the synergic regulation configured in the equipment, each user can correct the arc height depending on the welding criteria: position, preparation of the joint or type of torch used. Thus, we will modify the geometry of the bead obtaining higher quality and thermally more controlled beads.

Speed and drop size - Thermal control

The dynamic control will adjust the size of each drop in pulsed current.A reduction in the drop size will reduce the energy required for the detachment of each drop; it will increase the displacement speed and will moderate the total thermal input.

Tubular wire mode without gas

The need to work in Offshore applications, without the need for shielding gas, to replace applications welded by coated electrode, due to its low production capacity. They generate the inclusion of synergic programs that permit FCAW welding with self-protected wires.

2S/4S mode

Ideal cycle control system for welding aluminium. This method is recommended to minimise the problems caused during arc-striking due to low energy input at that time.

Statistical process control

4000 DR AND 50000 DR . A smart analysis system permits measuring and assessing the costs of our welding process.

It efficiently and simply provides a reading of the following consumption parameters:

- Welding time (Hours). Available on the GPS 2300
- Gas (m^3).
- MIG/MAG welding base metal (kg).
- Estimated electrical consumption (kW).

Access control to safety levels

Available on the 4000 DR and 5000 DR models .To efficiently manage the control over welding procedures defined in each company, GPS permits selecting different safety levels, which will make it possible to access and modify different regulation parameters depending on the level assigned by the company to each one of its welding technicians.

Configure YOUR GPS

Now, the Gala Pulse Synergic 3000 C- 4000 C-4000DR and 5000 DR are totally configurable; they both leave factory with high standard features and if users wish, they can complete the configuration of these equipment with different optional features, such as:

Robotics

GPS 4000 DR y 5000 DR.

Preinstallation for robotised applications.

Pulsed TIG mode

It permits better control of the welding bath and total adjustment over the arc parameters.

Dual STD/PULSED arc mode

The dual arc welding system is recommended to execute welding beads that need to have a better aesthetic aspect and more controlled heat input, thus obtaining more even beads. With the dual arc in standard, we achieve a more controlled arc, facilitating the root passes, especially in pipes.

Automatic Wire Feeding in TIG Mode

The installation of the TIG software package with cold wire feeding (TIG COLD WIRE) in the GPS equipment allows to realise the automatic wire feeding, increasing this way the bead uniformity and the welding speed.

Pulsed arc mode

The application of the pulsed current permits adapting the heat input to the welding demands, marked the position, type of joint and thickness.

Advantages of this process:

1. Reduction in the number of splashes.
2. Possibility of working with larger-diameter wires in lower intensity ranges, reducing production costs.
3. Greater thermal control for applications on fine thicknesses and welding in position.
4. More even surface aspect and penetration.

Simple control from start to finish

Gala Pulse Synergic 2300 - 3000 C - 4000 C

Process selection

Program selection

Wire diameter selection

Gala Pulse Synergic 4000 DR - 5000 DR

From the programming area we will select the process, material and program to be used and from the adjustment area the welding parameters.

This system will be used in remote controls and wire feeders.

Process selection

Program selection

Wire diameter selection

Welding thickness selection

Working with the GPS4000 is always EQUALLY easy and the SAME result is achieved thanks to its more than 100 synergic programs and the possibility of recording 10 jobs for each one of the welding processes. In this way, we reduce the programming times, obtaining a direct increase in productivity.

Increase your capacity

Wire feeder

The industrial wire feeder for semiautomatic MIG / MAG of a normal steel, stainless and aluminum.

D-21 A (Ref.: 66082100)
Industrial use. Open wire feeder.

D-GPS 5K (Ref.: 66081100)
Industrial use in assembly activities where a great transportability and low weight wire feeder is desired or required. Closed Wire Feeder for 5 kg.

D-21A BLIND (Ref.: 66083000)
Easy to operate Blind Wire Feeder both from the power source as well as the remote control.

DUAL system

Based on a basic initial configuration and with the addition of another wire feeder, we will convert our system into a DUAL system. Two work centres that can be used alternately via two totally independent work programs.

The equipment has two GAS inputs so that different gases can even be supplied, if we prefer, when the processes require this

GPS 4000 (Ref.: 42300000)
D-GPS cerrada (Ref.: 66000000)

Cooling module

This optional device, whose installation is recommended in all configurations, will permit an increase in working capacity of the equipment, an increase in life of consumables and torches, and a reduction of non-productive times.

WCS 510:
Gala Pulse Synergic 2300

WCS 520:
Gala Pulse Synergic 3000 C - 4000 C - 4000 DR - 5000 DR

Remote control

The remote control systems permit making regulation adjustments during the execution of the welded joint without having to interrupt the welding bead.

It has a Universal Welding Control, so its handling is identical to the front panel of the equipment. The Remote control is only available for operating with 4000DR and 5000DR models.

What do you want to do?

The **GPS equipment** are **MIG-MAG** (Std / Pulsed / Bi-Pulsed), **TIG** (Std / Pulsed) and **MMA** (Std / Synergic) **multi-process inverter devices**, with **200 A** (GPS 2300), **300 A** (GPS 3000) **400 A** (for the GPS4000) and **500 A** (in case of the GPS 5000).

The application versatility of this equipment is shown by its **more than 100 pre-determined programs**, covering practically all of the welder's potential needs.

This versatility when welding and power make them **ideal for industrial applications**.

MIG-MAG

STD

- Electronic control to reduce splashes as much as possible, even with CO_2 gas.
- Greater stability in tubular wires, even self-protected.
- Greater welding capacity.

PULSE *OPTIONAL*

- Greater stability.
- It permits welding finer thicknesses with greater wire Ø.
- Less splashes.
- Greater control of closed angles.
- More even penetration.

BIPULSE STD/PULSE *OPTIONAL*

- Greater aesthetic control.
- Greater thermal control.
- Less distortion.
- Greater versatility.
- Greater penetration.

MMA

STD

- Greater stability.
- Greater arc quality.
- Less weight.

SYN *AVAILABLE ON THE 4000 DR AND 5000 DR MODELS*

- Welding mode through synergic program, simplifying the regulation of the equipment, making it easier to obtain quality arcs.
- Selecting Ø and electrode type, the equipment will automatically adjust the intensity values, Arc Force and Hot Start.

TIG

Its used is recommended in thicknesses of less than 8 mm or in combined welding processes (root + filling or combing).

STD

- More resistant and ductile beads.
- Clean and even welds.
- Reduction of fumes and splashes.
- Good surface finish = less finish operations = less production costs.

PULSE *OPTIONAL*

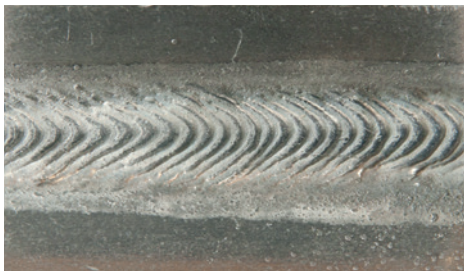
- Greater control (comprehensive welding sequence adjustment).
- Less thermal input (1000 Hz).
- Less distortion.
- Greater arc stability.
- More even penetration.

AUTOMATIC WIRE FEEDING IN TIG MODE *OPTIONAL*

- Higher productive speed.
- Easier.
- Less downtimes and weld bead splices as well.

What do you want to do?

It is especially indicated for welding aluminium stainless steel and all those applications where distortion and thermal input must be reduced.



SECTORS	PROCESS / PROGRAM																		
	MIG - MAG																TIG		MMA	
	ALMg	ALSi	308LSi	316LSi	CuSi	CuAL	Fe	Fe No Cu	Fe Low CO_2	Fe 100% CO_2	FCAW No Gas	FCAW Fe	FCAW SS	309	Duplex	700MC	STD	PULSE	STD	SYN
Metal carpentry	o		o				o	o	o		o			o			o		o	o
Automotive Industry	o		o		o	o	o	o						o				o		
Solar and Wind					o														o	
Naval Manufacturing	o	o			o		o	o				o	o							
Railway Industry	o						o	o							o	o				
Chemicals and Paper Industry				o	o										o			o	o	
Manufacture of bodywork	o				o															
Iron and steel Industry			o				o					o	o	o					o	o
Oil Industry			o	o										o	o			o	o	
Boilermaking shop			o				o					o	o	o			o			
Tubes and Pipes			o											o			o	o	o	o
Steel fixing							o			o										
Agricultural machinery							o	o		o		o	o			o				o
Metal structures			o				o				o			o					o	o
Urban furniture			o		o		o							o			o	o		
Cisterns	o						o										o	o		
Tanks	o		o				o							o	o		o	o		
Turbines and Engines		o																		
Thermal Industry		o										o	o							
Mining Industry							o			o		o	o			o				o
Stock breeding Facilities					o					o										o
Sporting Facilities	o				o		o	o												

Technical characteristics GPS 2300 / GPS 3000 C / GPS 4000 C

Inverter technology compact equipments for multi-process electric welding (semi-automatic MIG / MAG, coated electrode MMA and TIG Welding Processes).

GPS 2300

Main advantages:
- Syner BI-PULSE Mode (Dual pulsed-arc feature improves the welding bead aesthetic).
- Drive system of 4 rollers - 50 W and direct traction.
- Wire reel Ø 300 mm (15 kg.)
- MMA welding process with specific MMA CEL mode for special electrode welding.
- TIG DC / TIG PULSE welding process with general control of cycle parameters. Lift-Arc striking
- Suitable for connection to a generating set.
- It supports connection at 400 V without breakage.

GPS 3000 C / GPS 4000 C

Main advantages:
- Synergic programming MIG/MAG process by welding thickness.
- Full listing of standard MIG / MAG synergic programs.
- Driving system with 4 rollers. Speed control through encoder.
- Wire reel Ø 300 mm (15 kg).

Optional elements and functions:
- Pulsed Arc control. Extensive map of synergistic programmes.
- Syner BI-PULSE: The dual pulsed-arc control improves the welding bead aesthetic.
- TIG PULSE Arc with full control of cycle (F= 0.1÷1000Hz)
- Polarity change system, MIG welding with tubular wire and TIG process with gas control and Euro-connector torch.
- Water-cooling module for welding torch

	2300	3000 C	4000 C
Reference	53200000	42385000	42384000
Input voltage	1 Ph 230V – 50/60 Hz. ±15 %	3 PH 400V - 50/60 HZ. +-15%	3 PH 400V - 50/60 HZ. +-15%
Maximum input intensity	43 A	25 A	35 A
Maximum effective intensity	25 A	15 A	22 A
Maximum absorbed power	10 KVA	17 KVA	24 KVA
MIG/MAG adjustment margin	10 ÷ 200 A	30 ÷ 300	30 ÷ 400 A
Welding voltage adjustment	12 ÷ 30 V	12 ÷ 32 V	12 ÷ 34 V
MIG-MAG welding intensity	60 % 165 A	60 % 275 A	60 % 350 A
MIG-MAG welding intensity	100 % 125 A	100 % 250 A	100 % 270 A
Applicable wire diameters (mm)	0.6 ÷ 1.0 (1.2 mm Al)	0.8 ÷ 1.2 mm	0.8 ÷ 1.2 mm
Wire reels	Ø300 mm - 15 kg	Ø300 mm - 15 kg	Ø300 mm - 15 kg
Wire speed (m/min.)	1 ÷ 15 m/mín	1 ÷ 24 m/min	1 ÷ 24 m/min
Drive system	4R – 50 W	4R – 100 W-Enc	4R – 100 W-Enc
MMA continuous adjustment margin	30 ÷ 200 A (35%)	30 ÷ 300 A	30 ÷ 400 A
TIG continuous adjustment margin	5 ÷ 200 A (35%)	5 ÷ 300 A	5 ÷ 400 A
Mechanical Protection Index	IP 23 S	IP 23 S	IP 23 S
Dimensions: W x H x L (mm)	295 x 475 x 530	345 x 510 x 660	345 x 510 x 660
Weight	25 kg	42 kg	42 kg

Technical characteristics GPS 4000 DR / GPS 5000 DR

Industrial multi-process modular package, with Inverter technology, for semi-automatic MIG/MAG, coated electrode MMA and TIG welding processes. Industrial use, ideal for MIG/MAG welding of carbon steel, stainless steel and aluminium with an excellent welding dynamic.

GPS 4000 DR / GPS 5000 DR

Standard elements and functions:
- GALA SYNERGIC Module with an extensive map of MIG Arc Std programmes
- IWC Module (Interval Welding Control)
- 2SS/4SS Cycle Control Mode (2/4 Special Strokes).
- SPC Module (Statistical Process Control).
- TCS Module (Torch Control System).
- Synergic JOB Module.
- ULS Module (User Security Levels).
- Modular system with a large number of optional possibilities.

Optional elements and functions:
- Syner Package of Bi-level MIG Arc. Warmed arc of 2 levels
- GPS Package for Pulsed-Arc . Extensive map of synergistic programmes.
- Syner BI-PULSE: The dual pulsed-arc control improves the welding bead aesthetic.
- TIG PULSE Arc with full control of cycle (F= 0.1÷1000Hz)
- TCW Welding Package with TIG cold wire feeding.
- TELNET connection for Peripherals Catalogue
- GPS ROB Module for robotic applications.
- Independent Wire-Feed Units. Several options
- Universal Remote Control
- Water-cooling module for welding torch.

	GPS 4000 DR		GPS 5000 DR	
Reference	42381100	42351100	42600000	42650000
Input voltage U1 (3 Ph ; 50/60hz)	400 V	440 V	400 V	440 V
Maximum input intensity	35 A	32 A	40 A	36 A
Maximum effective intensity	22 A	20 A	27 A	24 A
Maximum / effective power	24/15 KVA		28/19 KVA	
MIG/MAG adjustment margin	30 ÷ 400 A / 45%		30 ÷ 500 A / 45%	
Welding voltage adjustment	12 ÷ 34 V		12 ÷ 42 V	
MIG-MAG welding intensity	270 A / 100%		350 A / 100%	
MMA continuous adjustment margin	30 ÷ 400 A		30 ÷ 500 A	
TIG continuous adjustment margin	5 ÷ 400 A		5 ÷ 500 A	
Mechanical Protection Index	IP 23 S		IP 23 S	
Dimensions: W x H x L (mm)	345 x 541 x 660		345 x 541 x 660	
Weight	45 kg		50 kg	

Configurations

GPS 2300

Reference	Description
53200000	**GPS 2300**
63400000	Cooling Unit WCS 510
51712090	Transport trolley (Workstation)

GPS 3000 C / GPS 4000 C

Reference	Description	Self-cooled Compact	Cooled compact
42385000	**GPS 3000 C** (400 V – 50/60Hz)	o	o
42384000	**GPS 4000 C** (400 V – 50/60Hz)		
64184000	Transport trolley	o	o
65982000	Cooling Unit WCS 520 (400/440 V)		o
42370010	GPS Package for pulsed arc welding	Optional	
42370011	Bi-Pulse Package for dual pulsed arc	Optional	
42370020	Gala TIG Pulse Package Pulsed arc TIG	Optional	
42312080	Polarity change system	Optional	

GPS 4000 DR / GPS 5000 DR

Reference	Description	Self-cooled compact	Cooled compact
42381100	**GPS 4000 DR** (N.M.) (400 V – 50/60Hz	o	o
42600000	**GPS 5000 DR** (400 V – 50/60Hz		
64184000	Transport trolley	o	o
65982000	Cooling Unit WCS 520 (230/400/440V)		o
64185101	Wire feeder support	o	o
64187100	Cable set, not cooled 5 m	o	
64187150	Cooled cable set, 5 m		o
66082100	Wire-Feed Unit D-GPS 21A	o	o
66083000	Wire-Feed Unit D-GPS Blind	Optional	
66081100	Wire-Feed Unit D-GPS 5 K	Optional	
66012080	Transport Wheels Kit for Wire-Feed Unit	Optional	
66012085	Remote Control kit	Optional	
42370012	Bi-Level Package for Dual Standard Arc	Optional	
42370010	GPS Package for Pulsed Arc Welding	Optional	
42370011	Bi-Pulse Package for Dual Pulsed Arc	Optional	
42370015	Package for Welding Program Creation	Optional	
42370020	Gala TIG Pulse Package Pulsed Arc TIG	Optional	
66790000	TIG Welding Package with TCW Cold Wire Feeding	Optional	
42612081	Connector Kit for TELENET connexion	Optional	
42612090	Connexion Kit between PC and TELENET (Backup)	Optional	


SYNERGIC CONTROL
GPS
WCS
520

gala gar®
WELDING

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