

DIGIWAVE III

The Wave evolution



“The Wave evolution”

DIGIWA

DIGIWA III embodies a third generation of welding generators with modern design and entirely adaptable to your needs.

This new generation of MIG/MAG three phase inverters is mainly focused on saving money on energy consumption for a better environment. These power sources are able to perform the same performances than the previous range at the same welding parameters, with 30% less energy requirements.

Additional sophisticated new features on tuning, innovative communication interfaces, tools for production traceability along with smart design and a friendly color screen makes us say that **DIGIWA III** combined with our wide offer on MIG/MAG wires is a complete solution for the most critical segments of industry:

- Construction, infrastructure, shipbuilding and heavy machinery, thanks to our special programs for steel, high deposition rate synergic laws and SWAN traceability software.
- Rolling stock, trucks, light ships through our special arc transfer modes for aluminum welding, especially Spraymodal.
- Automotive industry considering an enhanced welding behavior on thin plates.
- Petrochemical and thermal energy, by our ability to combine Cr-Mo wires with synergic laws specifically designed to match your Welding Procedure Specifications (WPS).

Since we are present on the welding business since 1909, our main strength is the combination of our experience on research and development (consumables and equipment) together with the expertise of our field representatives and engineers permanently working with the customers. With **DIGIWA III**, opt for performance, opt for environmental responsibility.

Key takeaways

- Outstanding welding performances
- Technology at your service
- Warranty your productivity
- Experience the future
- Opt for the high-end range
- High level automation

Miguel Angel Sisamon
Equipment & Automation
BU Director



VE III



Discover
our factory



Low energy efficiency

Green side

DIGIWAVE III is compliant with EN 60000-3-12
(the machine can be connected to a public network).

Energy efficiency

The importance of energy savings has been thought down to the smallest details:

- Automatic start up of the water cooler and ventilation
- Adjustable standby delay of the colour screen
- You consume only what you really need.

IDLE power consumption

DIGIWAVE III 420	35 W
DIGIWAVE III 520	38 W



With the low consumption function,
you can save up to **30%** on your energy bill.

DIGIWAVE III

With the actual economic context, companies must have resources to adapt themselves quickly and remain competitive.

DIGIWAVE III is one of those resources: reliable, efficient and versatile, it will ensure the success that your company deserves.

Digital precision

Entirely digitalized, **DIGIWAVE III** provides more than 200 synergic curves developed by our engineers. It ensures an outstanding welding for a wide range of combinations of materials, diameters, gas.

Want more freedom?

For really specific application cases, you can exit the synergic mode for a total freedom in the setup of your welding parameters. Wire speed, arc voltage, dynamism, striking parameters: you control in detail to obtain a perfect weld.

OUTSTANDING WELDING PERFORMANCES



Entirely customizable

DIGIWAVE III offers the possibility to create up to **50** customizable synergic curves. Finally a machine which completely suits your needs!

Processes

- MIG/MAG
 - Solid & Flux Cored Wire
 - Carbon steel, stainless steel
 - Aluminum
 - Inconel, Duplex & special wire
 - Ø: from 0.6 to 1.6 mm
- MMA
- TIG Lift (by trigger)
- Gouging: up to 8 mm

Norms respect

The respect of norms and qualifications are increasingly present in the welding sector. Because we are aware of these constraints, our products are evolving and following all the directives in order to become your best allies. With the automatic or manual setting of the torch calibration, the respect of the norms is within your reach.

Optimal quality

Latest innovation of our pole of excellence, DIGIWAVE III ensures the control process, giving you an optimal welding quality: set the control thresholds of the welding parameters by yourself and you are warned in real time as soon as a defect is detected. Thus, you avoid the destruction of pieces and ensure a total respect of your WPQR.

Power source	DIGIWAVE III	
	420	520
Main primary power supply 50/60 Hz	400 V (+20% / -20%)	
Max primary consumption	25 A	28.5 A
Power factor at max current	0.96	0.93
Efficiency at max current	0.89	0.89
Duty Cycle (at 40 °C)		
60%	420 A	500 A
100%	350 A	450 A
Duty Cycle (at 25 °C)		
100%	420 A	500 A
Current range MIG/MAG	15 A - 420 A	15 A - 500 A
Weight	34 kg	40 kg
Dimensions (LxIxh)	738 x 273 x 521 mm	

Technology at your service

DIGIWAVE III is equipped with a large colour screen that allows a very simple setting with extremely precise control of the welding cycle: 2T/4T, Pregas, Hot/Soft Start, downslope, crater filler, burn back, post retract spray to ease the striking... Everything is under control, and if you have any doubt, the embedded help is there to assist you!

Advanced SeQuencer - ASQ

By sequencing the two welding steps of the heating and cooling regime, in order to limit the temperature of the molten pool, this process ensures a perfect weld with very little finishing and reduced distortion.



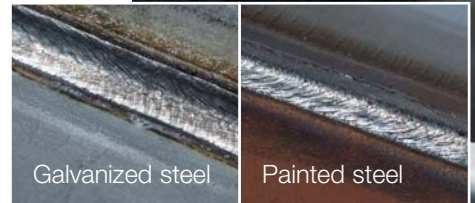
High Penetration Speed - HPS

HPS is a spray arc transfer type with low energy input. The principle of electronic regulation allows focusing the arc to achieve a high penetration whilst ensuring a high deposit.



Pure Controlled Metal - PCM

With the Pure Controlled Metal arc transfer, you will be able to weld with a low quantity of spatters as well as non constant gaps. This process has a very good behavior to keep the compactness of the weld bead on galvanized steel.



HIGH QUALITY WELDING

DIGIWAVE III provides a full range of processes for all your applications:

	Speed Short Arc	Pulse	Soft Silence Pulse
Applications	Carbon Steel & Stainless Steel.	All materials.	All materials.
Main strength	Root pass.	Thin materials.	Stainless Steel.
Advantages	Avoids the globular zone extending the Short Arc functioning zone. Fast speed. Reduced distortions.	Universal for all positions. No spatter.	Better wetting than Pulse. 50% reduction of the arc noise.



NEW

<i>Spray Modal</i>	<i>High Penetration Speed</i>	<i>Advanced SeQuencer</i>	<i>Pure Controlled Metal</i>
Aluminum.	Carbon Steel.	All materials.	Steel.
Alu not prepared.	Filing passes.	Vertically up position. Thin materials.	Root pass, thin materials, gap filling.
Porosity reduction. Improvement of penetration.	High penetration. Long stick out. Less preparation.	Low energy. Nice TIG aspect. Vertically up position in direct tracing.	Welding with low spatters, bridgeability.

Your best warranty

WARRANTY YOUR PRODUCTIVITY

Your productivity and your efficiency are at the core of our concerns.

Discover the cloning...

The “cloning” feature allows you to keep and duplicate an exact backup of your installations.

Thanks to this function, unforeseen circumstances can be dealt by ensuring your production.

WARRANTY

2⁺
YEARS

1 YEAR
FREE
WITH YOUR
REGISTRATION

Productivity above all

The features of counters and thresholds alert you directly as soon as the spool runs out or as a replacement of wear parts is required, so you can track the using time of your installations.

In addition, **DIGIWAVE III** memorizes and gives you access to the log of your production so that you can constantly assess and improve your procedures in a relevant way.

And for even more productivity, **DIGIWAVE III** is equipped in serial with a standard communication interface for all levels of automation.



Up to 50 m water harnesses

This is why we are striving in designing and building a reliable and high-standard welding installation. The proof of our commitment to this ethos is a three year warranty period on **DIGIWAVE III** installations and an ease of access to maintenance if needed.



Extended service life

An extended service life comes above all from the quality of the components and innovative technologies. Therefore, **DIGIWAVE III** is a soft switching technology equipped inverter, which gets you low consumption and high reliability.

For all conditions

Robust, **DIGIWAVE III** fits particularly well in any environment, thanks to its wide main input tolerance (-20% / +20%) and operating temperatures (-10°C / +55°C).

Moreover, it has an optimal protection against metallic dust.

It is designed to ensure the best performance even with a power generator.

Not only uses indoor or outdoor are possible since **DIGIWAVE III** meets industry standards IP 23, but you increase also your level of protection with the safety measures procured by the machine.

Experience the future

Analyzing the characteristics of your welds from your computer, transferring welding programs from a machine to another, managing user profiles: are these options drawing your attention? Thanks to its advanced connectivity, **DIGIWAVE III** offers an impressive number of applications, enhancing service and performance.



CONNECT TO THE WORLD

Users Management

To help you organize your business, **DIGIWAVE III** was designed to allow managing users with 3 distinct profiles. Our objectives:

- To give a full access to the **administrator** to the most elaborated functions of the installation.
- To allow the **technician** selecting the best parameters for each weld and assigning tasks to his/her team.
- To ease the **welder's** tasks with quick and easy access to his/her usual welding programs.

Many possibilities are available:

- Up to 20 different users per power source.
- Password protection.
- Limitations on setting ranges.
- Assignment of program lists.
- Management of access rights.
- Profile recognition by USB key.

Connectivity & Monitoring

SAF-FRO intends to be a major player in the digital revolution that is currently encountered in the industry. With **DIGIWAVE III**, a new step has been reached.

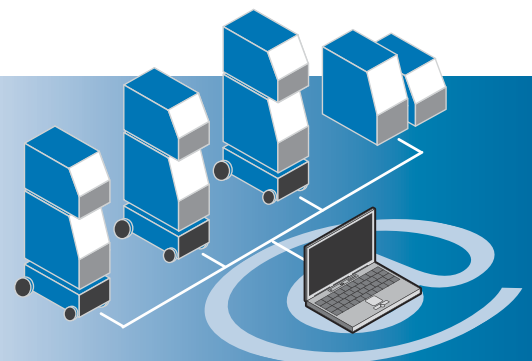
Maximum connectivity

- Compatibility USB 2.0 / Ethernet
- Wi-Fi communication - optional
- Import/Export of welding programs and customized synergic curves from a machine to another

A successful monitoring

- IP address assignment
- Remote monitoring of networked machines
- Centralized software to update the installation

Even at the other end of the world, you keep the control of your installations and you are never caught off guard.





SWAN

Supervising Welding Administrator Network

A laptop software to manage welding parameters:

- Welding current
- Welding voltage
- Wire speed
- Motor consumption
- Heat input
- Programs



Directly exportable through the network and on USB, these reports indicate the date, time and connected user during welding. It has never been so easy to monitor and assess the quality of welding in respect of WPQR.



Program management

DIGIWAVE III can memorize up to 99 welding programs to ensure a perfect reproducibility of your welds. And for complex parts, the necessary programs can be gathered into a list and chained with the trigger during welding for an easy and quick access.

Simple and useful archiving of welding parameters

In order to control precisely the quality of your welds, you have access to traceability reports containing relevant and useful welding parameters:

- | | | |
|-------------------------------|--------------------|-----------------------------|
| ■ Ongoing program | ■ Wire speed | ■ Wire feeder motor current |
| ■ Welding voltage and current | ■ Welding duration | ■ Heat input |

Opt for the high-end range

Successful welding is obtained thanks to an efficient power source, but above all thanks to an ergonomic installation that ensures the welder good operating conditions.

For SAF-FRO, comfort and safety of the welder are key components: extra flexible torches, light and portable wire feeder, fume extraction...

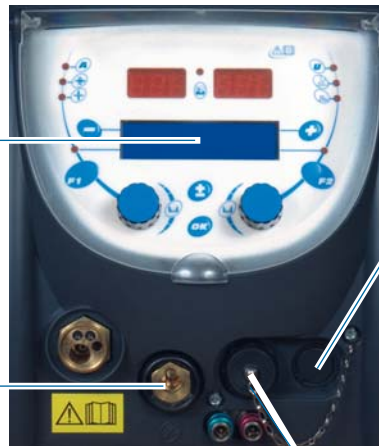
Expert wire feeder DVU W500, with improved features:

High visibility display

The brightness and contrast of the screen have been highlighted for a better readability in any light and from all angles.

MMA & Gouging

With the fast connection for the MMA process or gouging, you get outstanding results.



PROMIG Push-Pull torch

With the universal plug, the connection of the push-pull system is simple and fast to obtain excellent results for aluminum applications and small diameters wires.

Remote control

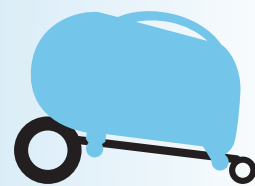
To give more flexibility, the remote control RC JOB II allows remotely adjustment exactly as the wirefeeder does.



Light and easy to carry, the Expert wire feeder helps you in the most difficult tasks.

Particularly robust, the Expert wire feeder is protected by a fully metallic body for a lasting durability.

Flexibility



Big wheels trolley

	DVU W500
Weight	16 kg
Dimensions (l x b x h)	603 x 262 x 446 mm
Motor rollers	4
Wire diameter range	0.6 to 1.6 mm
Wire speed range	0-25 m/min
Spool diameter	300 mm

Really powerful

WANT MORE?



The whole installation has been designed to make work more comfortable while maintaining productivity and safety.

DIGIWAVE III can provide double wire feeders management:

- Power source standard (420 or 520)
- Wire feeder standard (W500)
- Harness standard
- Trolley on demand



SAF-FRO provides integral solutions for fume extraction:

- fume extraction torches,
- capture units,
- high depression plants,
- adapted trolleys.



See our online Fume extraction catalogue

DIGITORCH 2, ergonomics specifically developed for high-end applications:

- The screen displays and allows adjustments in real time of the current, wire speed and program number giving precise control of the weld.
- With a ball knuckle and the ultra flexible harnesses, providing you a comfortable grip for decreasing strain and increasing productivity.

WST2 torches are above all a range of welding torches that efficiently extract welding fumes. Extraction is obtained at a high extraction rate with low load loss due to the advanced air flow design of the torches.

Know more about WST2 torches



GOLDENARK is a high range welding helmet that provides one of the largest viewing area in the industry.

Equipped with 4 optical sensors, it suits all your applications and is warranted 2 years.

See the video



Plug & Play integration for robotic application

WITH ROBOTICS, A SUCCESSFUL WEDDING



DIGIWAVE III can be declined for a robotic application under a plug & play package ready to weld.

The communication through digital bus brings a complete flexibility to your process and your productivity.

All robot brand compatibility

Standard interface for protocols communication



To order

The modular concept of **DIGIWAVE III** allows you to build the perfect configuration for your requirements, from offshore & shipbuilding to boiler makers, train production and small workshops.

Power sources



420 A @ 60 %	DIGIWAVE III 420	W000384989
500 A @ 60 %	DIGIWAVE III 520	W000384990

Robotic versions

DIGIWAVE III 520-R (Ethernet IP Rj45)	W000387283
DIGIWAVE III 520-R Devicenet	W000400731
DIGIWAVE III 520-R Profinet	W000401236

Wire feeders

- 99 programs
- possibility to lock welding parameters
- LCD display



DVU W500	W000372327
Robotic version	
DVU-R500	W000400168

Cooling unit



COOLER III	W000273516
Safety device for COOLER II	W000376539

Trolley On site

Trolley On site	W000372274
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Trolley for installation

TROLLEY III	W000383000
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Support for wire feeder in vertical suspension



W000377985

Harnesses

Length	Air	Water	
		Standard	Aluminium
2 m	W000275894	W000275898	W000371044
5 m	W000275895	W000275899	W000371045
10 m	W000275896	W000275900	W000371175
15 m	W000275897	W000275901	W000371174
25 m	W000276901	W000276902	W000371239
30 m	W000371246	-	-
40 m	W000371245	-	-
50 m	W000371244	-	-

Robotic version

10 m	-	W000400818	-
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Trolley for wire feeder



TROLLEY WF II	W000275908
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Option Push-pull II electronic circuit

Push-pull II	W000275907
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Allowing to connect a push-pull torch or gun.

Remote control

RC JOB II (10 m)	W000371925
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RC SIMPLE (10 m)	W000275904
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Flowmeter to measure gas flowrate



Flowmeter	W000275905
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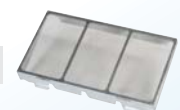
Aluminium welding kit

ALUKIT DVU 1.0 -1.2	W000277622
ALUKIT DVU 1.2-1.6	W000277623

A composition of wire guides and rollers for perfect aluminium welding.

Anti-dust filter for power source protection

W000373703



TIG torch connector

W000379466





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The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 68,000 employees and serves more than 3 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.