

# ***CITOWAVE II***



# CITOWAVE II



“More than a welding machine,  
a welding solution”

The **CITOWAVE II** embodies a new generation of welding machines ultra modern design and , entirely adaptable to your needs. Through its smart design, its color screen and its innovative communication interfaces, using the most recent technologic breakthroughs and positions itself at the cutting edge of the welding techniques. Integrating sophisticated functionalities of tuning and control, the **CITOWAVE II** is much more than a simple machine, it is a welding solution.

With our researchers and engineers, the customer interest remains at the core of the conception and the development in order to achieve a very well thought-out machine, with reliability quality and performance been paramount. Without any doubt, it is the result of an expert team who has a strong knowledge within the field of welding.

Present in the welding sector since 1909, our experience and expertise allow us to be one of the leaders and propose solutions always more innovating for the customer satisfaction. With the **CITOWAVE II**, opt for the know-how, opt for the performance.

Miguel Angel Sisamon  
Equipment & Automation  
BU Director



## MAIN ADVANTAGES

- Outstanding welding performances
- Large colour screen for easy and precise setting
- Traceability of the welding parameters
- Customization of the synergic curves
- User Management and locking mode
- Monitoring with USB, Ethernet
- Simple automation

# CITOWAVE

## APPLICATIONS

- MIG/MAG
  - Flux Cored Wire
  - Solid Wire
  - Carbon Steel, Stainless Steel
  - Aluminium and special wire
  - Ø : from 0.6 to 1.6 mm
- MMA
- TIG Lift (by trigger)
- Gouging: up to 8 mm



**VE II**

OERLIKON  
**CITOWAVE II**  
**420**

# CITOWAVE II

On the current economic context, companies must have resources to adapt themselves quickly and remain competitive. The **CITOWAVE II** is one of those resources: reliable, performing and versatile, it will ensure the success that your company deserves.

## HIGH QUALITY WELDING

### Digital precision

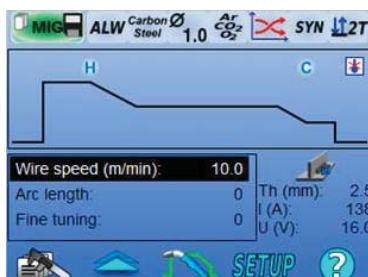
Entirely digitalized, the **CITOWAVE II** provides more than 200 synergic curves developed by our engineers that ensure you an outstanding welding for a wide range of combinations of material, diameter, gas.

### Want more freedom ?

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

### Entirely customizable

The **CITOWAVE II** offers the possibility to realize yourselves up to 50 customizable synergic curves. At least a machine which completely suits to your needs!



### Norms respect

The respect of norms and qualifications are increasingly present in the welding sector. Aware of this constraints, our products are evolving and give you the best tools to tackle these. With the automatic or manual setting of the torch calibration, the respect of the norms are within your reach.

### Optimal quality

Latest innovation of our pole of expertise, ensuring the Control Process giving you optimal welding quality:

Setting yourselves the control thresholds of the welding parameters not to be exceeded, and you are warned in real time as soon as a fault is detected.

Thus, you avoid the destruction of pieces and assure a total respect of your WPQR.



## CERTIFIED WPQR EN 1090 PACKAGE



**CITOWAVE II** comes with EN 1090 certified welding programs for various types of applications.

Respecting them: you get directly the certification and saving the cost of WPQR.

	CITOWAVE II		
Power source	420	520	
Main primary power supply 50/60 Hz	400 V (-20% / +15%)		
Max primary consumption	28,1 A	36,3 A	
Power factor at max current	0,89	0,91	
Efficiency at max current	0,89	0,88	
Duty Cycle	(10 min cycle at 40 °C)		
	60%	420 A	500 A
	100%	350 A	450 A
Duty Cycle	(10 min cycle at 25 °C)		
	100%	420 A	500 A
Current range MIG/MAG	20 A - 420 A	20 A - 500 A	
Weight	37 kg		
Dimensions (Lxhxh)	738 x 273 x 521 mm		

The new power sources **CITOWAVE II**, provide a perfect mastery of the current delivery - up to 500 A - whilst maintaining a very high duty cycle.

# Experience the future

**CITOWAVE II** is equipped with a large colour screen that allows 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

Sequencing the two welding steps of the heating and cooling regime in order to limit the temperature of the molten pool to ensure 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.



# AWESOME PERFORMANCES

**CITOWAVE II** provides a full range of processes for all your applications :

	<b>Speed Short Arc</b>	<b>Pulse</b>	<b>Soft Silence Pulse</b>	<b>Spray Modal</b>
<b>Applications</b>	Carbon Steel. Stainless Steel.	All material.	All material.	Aluminium.
<b>Main strength</b>	Root pass.	Thin material.	Stainless Steel.	Alu not prepared.
<b>Advantages</b>	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.	Porosity reduction. Improvement of penetration.



<b>High Penetration Speed</b>	<b>Advanced SeQuencer</b>
Carbon Steel.	All material.
Filing passes.	Vertically up position. Thin material.
High penetration. Long stick out. Less preparation.	Low energy. Nice TIG aspect. Vertically up position in direct tracing.

The language remains critical to understand and use the full potential of welding equipments. This is why the **CITOWAVE II** is settable in more than 20 languages, including Russian and Chinese.





Warranty your product

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

# YOUR BEST WARRANTY

# 3 years

### Productivity above all

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

In addition, **CITOWAVE II** memorises and gives you access to the log of your production so you can constantly assess and improve your procedures where relevant.

And for even more productivity, **CITOWAVE II** is equipped in serial with a standard communication interface for simple automation.

### Discover the cloning...

This new feature “the cloning” allows you to keep and duplicate an exact backup of your installations. Ensuring those unforeseen circumstances can be dealt with maintaining your production.



Exclusive to the market

Up to 50 m air harnesses



This is why we are striving in designing and building a reliable and quality welding installation. Our commitment of this ethos is a three year guarantee on the **CITOWAVE II** installations and make every effort to facilitate ease of maintenance.

T  
Y

**Extended service life**

An extended service life comes above all from the quality of the components and innovative technologies. This is why the **CITOWAVE II**'s inverter has the new soft switching technology that causes a quasi zero constraint on the components.

**For all the conditions**

Robust, **CITOWAVE II** fits particularly well in any environment in which you use it, thanks to its wide mains input tolerance (-20% / +15%) and temperature (-10 °C / +55 °C) and its optimal protection against metallic dust.

Designed to ensure the best performance even with a power generator. The **CITOWAVE II** meets industry standards IP 23S for uses indoors or outdoors.

**of full  
warranty**

*Because we are  
sure of our  
product quality.*



# Technology at your Service

Analyzing the characteristics of your welds from your computer, transferring welding programs from one machine to another, managing user profiles raise your interest? Thanks to its advanced connectivity, **CITOWAVE II** offers a impressive number of applications, enhancing service and performance.

## CONNECT TO THE WORLD

### User Management

Proof of a true knowledge of your business, the **CITOWAVE II** was designed to allow managing users with 3 distinct profiles. The objective:

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

Many possibilities are available to you:

- 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

OERLIKON intends to be a major player in the digital revolution that is currently encountered in industry. With **CITOWAVE II** a new step has been reached:

#### Maximum connectivity

- Compatibility USB 2.0 / Ethernet
- Import/Export of welding programs and customised synergic curves from one machine to another.

#### A successful monitoring

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

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

## CITOWAVE

### Simple and useful archiving of welding

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

- Ongoing program
- Wire speed
- Welding voltage and current
- Welding duration
- Wire feeder motor current



## Program management

**CITOWAVE II** can memorize up to 100 welding programs to ensure a perfect reproducibility of your welds. And for complex parts, the necessary programs can be grouped into a list and be chained with the trigger during welding for quick and easy access.

## Energy efficiency

The importance of energy savings have 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

<b>CITOWAVE II 420</b>	35 W
<b>CITOWAVE II 520</b>	38 W

## parameters

Directly exportable on USB, these reports indicate the date, time and connected user during the welding.

It has never been easier to monitor and assess the quality of the welding in respect of WPQR's.

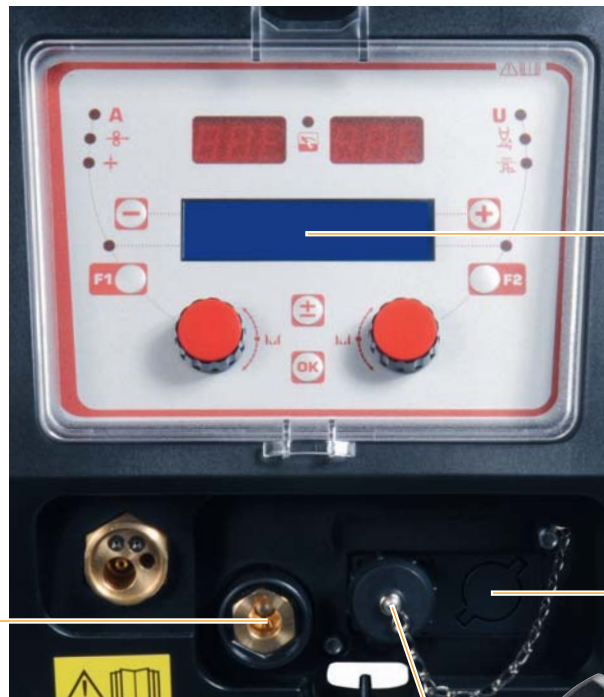


# Opt for the high-end range

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

At OERLIKON, comfort and safety of the welder are key components: extra flexible torches, light and portable wire feeder, fume extraction...

## All new Expert wire feeder DMU W500, improved features:



### MMA & Gouging

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

### High visibility display

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

### Push-Pull torch

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

### Remote control

To give more flexibility, the remote control RCJOB II, allows remotely adjustment of the same parameters in the same way as the wirefeeder.



### Flexibility

Ground



Big wheels trolley

Suspension



180°

90°



### Double wire feeder

The CITOWAVE II can handle two wire feeders for heterogeneous applications:

- Flux Cored Wires.
- Solid Wires.
- Steels.

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

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

	<b>DMU W500</b>
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



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

# REALLY POWERFUL



**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 with good comfortable grip for decreasing strain increasing productivity.



OERLIKON provides integral solutions for fume extraction:

- suction torches and stems,
- capture units,
- high depression plants,
- adapted trolleys.

More information on: [www.oerlikon-welding.com](http://www.oerlikon-welding.com)

# Highly versatile machine

The modular concept of **CITOWAVE II** allows you to build the perfect configuration for your most demanding requirements.

From offshore & shipbuilding to boiler makers, train production and small workshop.



Highly versatile, the wide possibilities of the **CITOWAVE II** uses and applications to fit exactly your needs.

### Examples of configuration

**CITOWAVE II 420 air**  
**DMU W500**  
 10 m long harness  
 + Trolley wire feeder



**CITOWAVE II 520 water**  
**DMU W500**  
 15 m long harness  
 + Trolley  
 + Swivel



# WIDE POSSIBILITIES



Light and powerful, the **COOLER II** has been particularly designed to be powerful and energy efficient.

	<b>COOLER II</b>
Weight	21 kg
Dimensions (l x b x h)	700 x 279 x 268 mm
Rate of flow	3.5 l/min
Cooling power	1.32 kW
Max output pressure	4.5 bar

### Customer testimony: COMELF



COMELF aims to get the permanent status of approved supplier both for major companies producing equipment/tools for power engineering industry, as well as for the main companies producing earth-moving machines, which are active on the European and world market.

COMELF has tested the **CITOWAVE II** and they said:  
*“ We did not have any problems while using the equipment in our welding operations and the welder that used the **CITOWAVE II** is very satisfied by parameters adjustment capabilities, possibility to fine tune the welding parameters and in particular by crater filler function. In conclusion: **CITOWAVE II** is a robust equipment, easy to understand by young generation of welders. ”*





# CITOWAVE II

## To order

The modular concept of CITOWAVE II allows you to build the perfect configuration for your requirement. From offshore & shipbuilding to boiler makers, train production and small workshops.

### 1 Power sources



### 2 Wire feeders



### 3 Cooling unit



### 4<sub>1</sub> Trolley for installation



### 4<sub>2</sub> Trolley extension



### 5 Trolley On site



### 6 Trolley for wire feeder



### 7 Support for wire feeder in vertical suspension



### 8 Swivel



### 9 Harnesses

Length	Water		
	Air	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	-	-

### 10 Push-pull Puls II electronic circuit



Allowing to connect a push-pull torch or gun.



### 11 Adaptator for exhaust fume arm



### 12 Flowmeter to measure gas flowrate

Flowmeter | W000275905



### 13 Remote control



### 14 Anti-dust filter for power source protection



### 15 Aluminium welding kit

ALUKIT DVU 1.0 -1.2	W000277622
ALUKIT DVU 1.2-1.6	W000277623
ALUKIT DVU 1.6-2.4	W000277624

A composition of wire guides and rollers for perfect aluminium welding