



# wasserlab

## AUTWOMATIC PLUS / UV - EDI

from 3 to 40 l/h **TYPE II WATER WITH EDI TECHNOLOGY**



# Maximum savings and minimum consumption of energy and water

Autwomatic Plus / UV - EDI produces and dispenses Type II Water (ASTM D1193) with production versions of 3, 5, 10, 20 and 40 liters per hour with the following quality:

|                                    |                          |
|------------------------------------|--------------------------|
| Resistivity at 25°C <sup>1</sup>   | 10-15 MΩ-cm              |
| TOC <sup>2</sup>                   | <30 ppb                  |
| Bacterial count <sup>2</sup>       | <0.01 cfu/ml             |
| Particles >0.22 µm/ml <sup>2</sup> | <1                       |
| Production flow rate               | 3 - 5 - 10 - 20 - 40 l/h |

1. Equipment measurement in µS/cm.

UV version: These values are typical and may vary depending on the nature and concentration of contaminants in the feed water.



## Type II Water Applications

- Preparation of culture media
- Preparation of reagents and buffers
- RIA/ELISA
- Flame-AA
- Spectrophotometry

## Versions

| MODEL                       | REFERENCE    | FLOW RATE PRODUCTION | RECOMMENDED CONSUMPTION |
|-----------------------------|--------------|----------------------|-------------------------|
| Autwomatic Plus EDI - 03    | QA03DP-EDI   | 3 l/h                | 30 l/day                |
| Autwomatic Plus EDI - 05    | QA05DP-EDI   | 5 l/h                | 50 l/day                |
| Autwomatic Plus EDI - 10    | QA10DP-EDI   | 10 l/h               | 100 l/day               |
| Autwomatic Plus EDI - 20    | QA20DP-EDI   | 20 l/h               | 200 l/day               |
| Autwomatic Plus EDI - 40    | QA40DP-EDI   | 40 l/h               | 400 l/day               |
| Autwomatic Plus UV EDI - 03 | QA03DPUV-EDI | 3 l/h                | 30 l/day                |
| Autwomatic Plus UV EDI - 05 | QA05DPUV-EDI | 5 l/h                | 50 l/day                |
| Autwomatic Plus UV EDI - 10 | QA10DPUV-EDI | 10 l/h               | 100 l/day               |
| Autwomatic Plus UV EDI - 10 | QA20DPUV-EDI | 20 l/h               | 200 l/day               |
| Autwomatic Plus UV EDI - 40 | QA40DPUV-EDI | 40 l/h               | 400 l/day               |

| TANK OPTIONS <sup>3</sup> | REFERENCE |
|---------------------------|-----------|
| Pressurized 30 L          | 70220     |
| Pressurized 50 L          | 70230     |

3. The system allows the combination of several tanks.

# Water purification process



The equipment integrates various technologies to optimise the water purification process, through the following stages:

## Pre-treatment

The equipment is designed with a pre-treatment system to guarantee the protection of the osmosis membrane, eliminating particles smaller than 1 micron, which contributes to the reduction of mineral incrustation, organic matter and the elimination of chlorine.

The depth filter presents a high filtration capacity, with an optimised retention of the colloids present in the water.

The granular bacteriostatic activated carbon, impregnated with silver, acts effectively in the elimination of free chlorine and in the minimisation of bacterial growth.

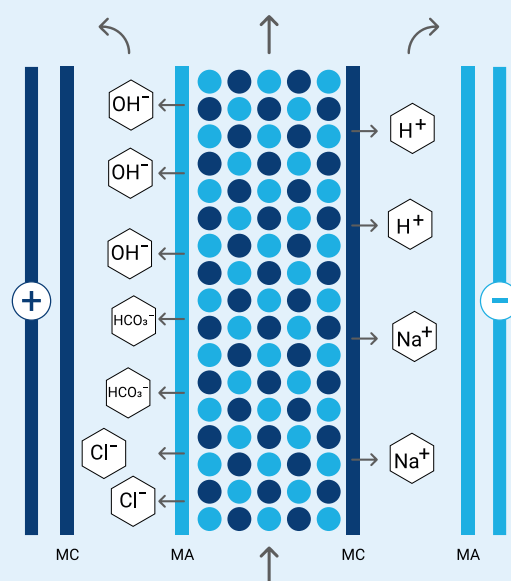
Meanwhile, the anti-scale agent, based on polyphosphates, protects against incrustations, preventing the precipitation of calcium and magnesium salts inside the equipment, without releasing ions.

## Reverse Osmosis

The high performance reverse osmosis system removes up to 99.95% of the organic matter present in the water and up to 98% of the Total Dissolved Solids (TDS). In addition, the equipment has an automatic flushing system, designed to prolong the life of the equipment.

## Electrodeionization (EDI)

The Electrodeionization System (EDI) uses automatic electrochemical regeneration by means of an electric field, which makes it possible to obtain water with a resistivity of 10 - 15 MΩ-cm in a single step. This system provides purified water of constant quality, regardless of the temperature and quality of the feed water. In addition, the EDI module incorporates activated carbon spheres in the cathode, which prevents calcification.







## **Commitment to the environment:** **EFFICIENT SOLUTIONS THAT SAVE** **WATER AND ENERGY**

### **Storage**

#### **– Pressurized tank**

The Type II water produced is stored in 30 or 50 litre pressurized tanks, which protects the stored water from contact with air and contamination, ensuring that it is kept in optimum conditions. The use of this technology eliminates the need for water recirculation and the use of UV lamps in the tank, ensuring that the quality of the purified water is maintained in optimal conditions and minimising the consumption of consumables.

#### **– Atmospheric tank**

The system also offers the ability to operate with atmospheric tanks equipped with an automatic fill control float, which ensures continuous and accurate monitoring of the water level.



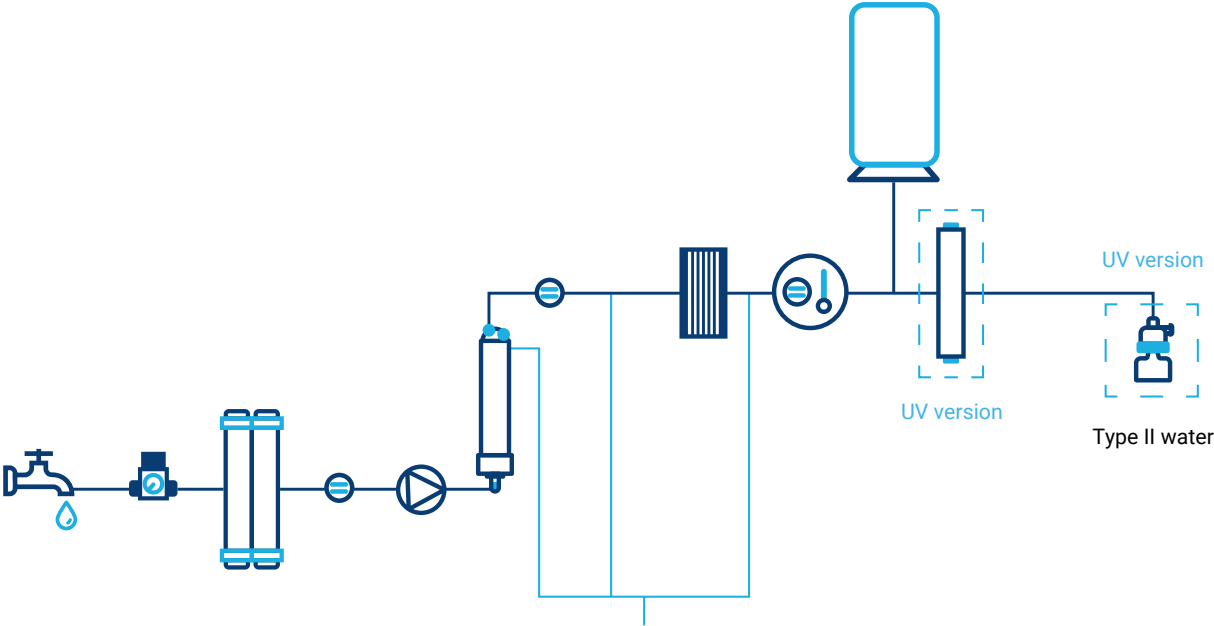
### **Bactericidal LED lamp and 0.22 µm final filter** **(Autwomatic PLUS UV-EDI version)**

To guarantee the microbiological control of purified water, the unit is equipped with an LED lamp that performs bacteriostatic and germicidal functions. This mercury-free, small-sized lamp emits a wavelength between 260 and 280 nm, which makes it effective in eliminating micro-organisms without compromising water quality. Its compact design makes replacement easy, and its operation ensures that the water does not heat up during the sanitization processes, helping to maintain water quality.

To meet even stringency of microbiological criteria (<0.01 cfu/ml), the unit incorporates a 0.22 µm in-line final filter. This additional filter ensures the retention of possible microorganisms that may be present in the final water, ensuring that the purified water meets high microbiological quality standards.

Hydraulic system diagram

**Autwomatic Plus / UV - EDI**



Tap water



Pressure regulator



Module of pre-treatment



Probe conductivity



Pump



Reverse osmosis membrane



EDI Module



Conductivity and temperature probe



Pressurized tank



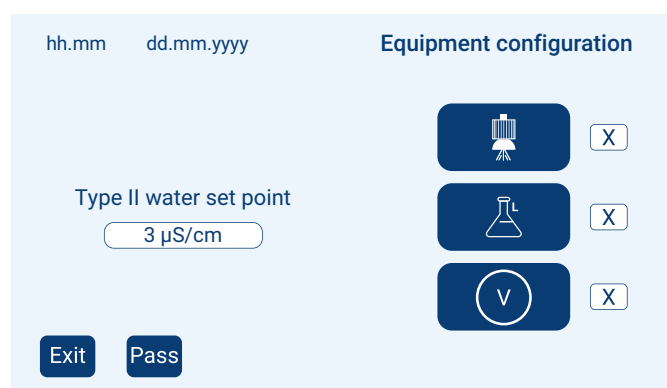
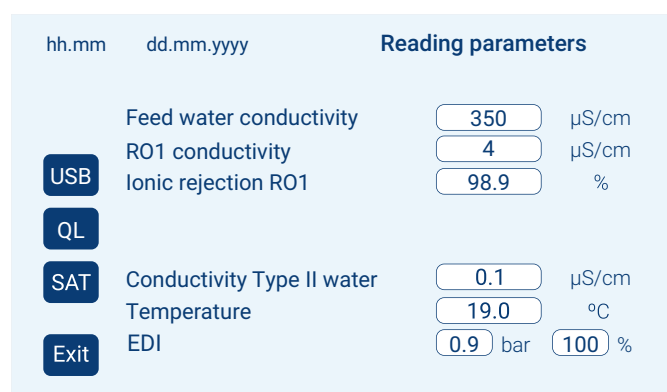
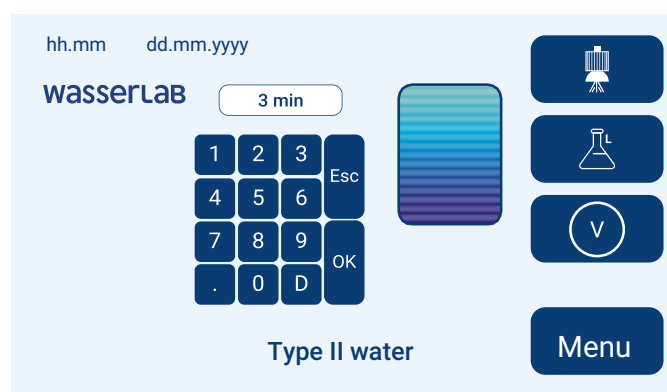
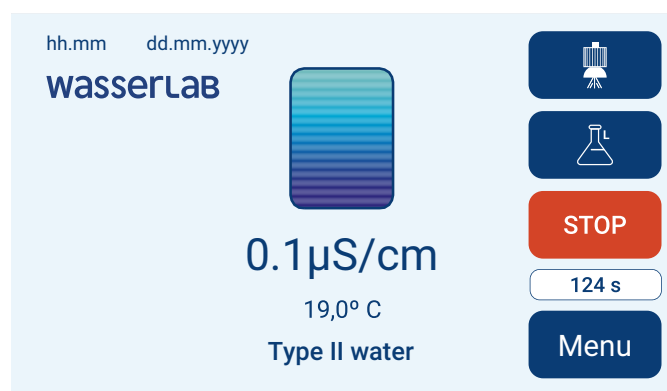
UV lamp (UV version)



Final filter 0.22 µm¹ (UV version)

1. Final Filter option in the Autwomatic Plus - EDI.

# Operation and monitoring



## 1. Dispensing

The equipment is designed to operate automatically, ensuring that the tank is always kept full, thanks to its automatic stop system. In addition, its design ensures simple and accessible operation for the user.

It incorporates a 4.3 inch touch screen, which facilitates the dispensing of purified water in various ways, adapting to the user's needs.

The available options are:

- Continuous dispensing.
- Dispensing by volume<sup>1</sup>.
- Dispensing by time.

1. Accuracy not suitable for flushing volumes.

## 2. Monitoring

This comprehensive monitoring system allows detailed tracking of key aspects of the process, ensuring that the equipment operates within ideal parameters and guaranteeing the quality of the water produced.

Conductivity measurements (at 25°C):

- Equipment feed water.
- Permeate water from the reverse osmosis module.
- Type II water produced.

It also measures the percentage of performance of the reverse osmosis module and other operating parameters such as the working hours of the different components of the system or the liters produced during the purification process.

## 3. Customization and security

The system offers customization options, allowing the type of dispensing and conductivity settings to be adjusted according to the user's needs. In addition, to ensure security and access control, the equipment has a custom password that allows the user to access specific menus and functions, ensuring that only authorised persons can make adjustments or modifications to the system.

| hh.mm           | dd.mm.yyyy | Resetting counters |       |              |              |
|-----------------|------------|--------------------|-------|--------------|--------------|
|                 | Time (h)   | Working            | Reset | Pumps        |              |
| Pretreatment    | 500        | 500                | Stop  | P61          | 350          |
| UV/Photooxid    | 500        | 500                |       | P21          | 60           |
|                 |            |                    |       | P24          | 0            |
| Final filter II | 350        | 350                |       | P46          | 0            |
|                 |            |                    |       | Total hours  | 0            |
|                 |            |                    |       | Check equip. | 0            |
| Osmosis 1       | 90         |                    |       | L. Tot II    | 0 L. Tot I 0 |
|                 |            |                    |       | Pass         | Exit         |

4. Automatisms

The system is equipped with a microprocessor that manages the automatic start and stop of the equipment, depending on the volume of water accumulated in the tank. In addition, it has several automated systems to guarantee optimum performance and prolong the useful life of the equipment, such as:

- Automatic shutdown due to water cut-off, to avoid operation without supply.
- Cleaning of the osmosis membrane by flushing, which helps to maintain the efficiency of the filtration process.
- Cleaning of the osmosis membrane with Osmosis Water, in order to prolong its useful life and ensure its maximum performance.

These automatisms contribute to an efficient and low maintenance operation, ensuring the constant quality of the purified water.

5. Data Output

The equipment is designed to allow the extraction of operating data to an external memory (USB). The report generated includes detailed records on the quality and quantity of water dispensed, as well as maintenance notifications and changes made to consumables, providing a useful tool for monitoring and controlling system performance.



6. Mobile phone notification (optional)

The system can send alarm notifications directly to mobile phones, allowing real-time alerts on various problems or irregularities in the operation of the equipment.



**Easy and efficient  
maintenance:**  
**A SIMPLE AND  
FAST PROCESS**

## Preventive maintenance, sanitization and calibration

### Ease of maintenance and control of the system

The system has been carefully designed for ease of maintenance, allowing the user to perform tasks easily and efficiently. The replacement of consumables is carried out quickly, thanks to a quick-connect system with anti-drip technology built into the cartridges.

The service life of the consumables depends on several factors, such as the quality of the incoming water, including its turbidity, hardness and conductivity, as well as the amount of water dispensed over time.

The integrated software is configured to perform scheduled self-checks, ensuring constant and effective monitoring of the system's operation. This control ensures continuous monitoring of the equipment components and the values related to the quality of the water produced.

In addition, the system issues warnings to notify the user about the need to change consumables, water cuts or possible malfunctions of the measuring probes, allowing an early intervention in case of incidents.

### System Sanitization

The system is designed to facilitate the sanitization of the equipment through a semi-automatic process, which ensures a thorough and effective cleaning of all its components. During sanitization, the equipment performs a series of automated steps that include the circulation of disinfectant solutions through critical parts of the system, such as membranes and filters. User intervention is limited to initiating and monitoring the process, following clear instructions provided by the system. This sanitization process is designed to remove microorganisms, bacteria and other contaminants that may have accumulated in the equipment, ensuring that the system continues to operate at maximum efficiency and that the water produced always maintains the highest quality standards. The function also helps to extend the life of the equipment by preventing the build-up of impurities that can affect its performance.



# Additional system functionalities

## Optional Remote Dispensers

Digitally controlled remote dispensers designed to allow additional Type II water outlets at a distance from the main equipment, optimising space and improving operational efficiency.

**Pedestal support option (Ref. W-DIS100-A03)**      **Wall option (Ref. W-DIS102-A03)**



## Equipment can be integrated into furniture

The equipment is designed to be fully integrated into laboratory furniture, optimising the available space and leaving the laboratory work bench free for other tasks. Its minimalist design adapts perfectly to laboratory work environments, offering an aesthetic and functional solution that maximises efficiency without compromising system performance. We work with leading furniture brands.

# Flexibility to offer solutions that ARE ADAPTED TO EACH LABORATORY

## Accommodating the needs of the space available

### Wall bracket (Ref. 10261)

Base designed to allow safe and stable installation of the equipment directly on the wall. Its robust structure guarantees a firm mounting, optimising the use of space and ensuring that the equipment is well fixed and accessible. Ideal for environments where space in the work area needs to be freed up.

### Compact Module (Ref. 10092)

A functional and compact design cabinet, it offers a solution for housing the equipment and its components in an orderly and efficient manner. Perfect for environments where equipment needs to be kept protected and in place, while ensuring accessibility and ease of use.



## Design and Installation of Distribution Loops

We design and install distribution loops, interconnected systems that guarantee an efficient distribution of purified water between different points, adapted to the specific needs of each project.

## IQOQ Qualifiable Equipment for the Pharmaceutical Sector

The equipment is designed to be qualified in the processes of **IQOQ (Installation and Operational Qualification)** required in the pharmaceutical sector. It complies with industry specific regulatory standards, ensuring its suitability for use in regulated environments, where traceability, quality and process validation are critical to ensure compliance with current regulations.

## Declaration of Product Use: WEEE Directive

In accordance with European Union legislation, this product will be considered **Waste Electrical and Electronic Equipment (WEEE)** once it reaches the end of its useful life.

For detailed information on the recycling and proper disposal of this product, please contact our website.

## Quality Assurance to Facilitate GLP and cGMP Compliance

The system has been designed and manufactured to facilitate its integration into regulated working environments such as GLP (Good Laboratory Practices) and cGMP (current Good Manufacturing Practices). Some of its outstanding features include:

- **Manufactured under the standards ISO 9001:2015 and ISO 14001**, ensuring that the product meets the highest standards of quality and environmental management.
- **CE marking:** The equipment has passed rigorous safety and electromagnetic compatibility tests (emission and immunity), carried out by an external accredited centre, which certifies its compliance with European safety and performance standards.
- **Calibration certificate:** The equipment is delivered factory calibrated, guaranteeing its accuracy from the first moment of use. It also allows the adjustment and recalibration of the conductivity meter by means of a certified standard, traceable to the national standards of the Deutscher Kalibrierdienst (DKD) of Germany, ensuring the reliability and accuracy of the measurements over time.



### Installation Requirements

- **Alternating current socket** 110 / 120 / 230 V - 50 - 60 Hz. with earth connection at a maximum of 2 metres from the unit.
- **Tap water connection** (maximum 3 metres).
- **Connection:** 3/8" male gas thread.
- **Drainage** (maximum 3 metres).
- **Feed water quality:**
  - Conductivity: <2.000  $\mu\text{S} / \text{cm}$
  - pH: 4 - 10
  - Hardness: <300 ppm  $\text{CaCO}_3$
  - Turbidity: <1 NTU
  - $\text{CO}_2$ : <30 ppm
  - Silica: <30 ppm
  - TOC: <50 ppb
  - Free chlorine: <1.5 ppm
  - SDI: <7
  - Temperature: 5 - 35 °C
- **Pressure:** 2 - 6 bar.
- **Installation space** for the equipment and its elements, guaranteeing an accessible work area for handling.

### Specifications:

#### Dimensions:

- Autwomatic Plus / UV - EDI unit: 60 x 36 x 49 cm (height / width / depth).
- 30 liters tank: 60 cm height x 40 cm diameter.
- 50 liters tank: 80 cm height x 40 cm diameter.
- Compact module: 96 x 46 x 60 (height / width / depth).

**Weight:** 35 Kg.

**Power consumption:** 0.6 A (230 VAC) - 1.2 A (110 VAC).

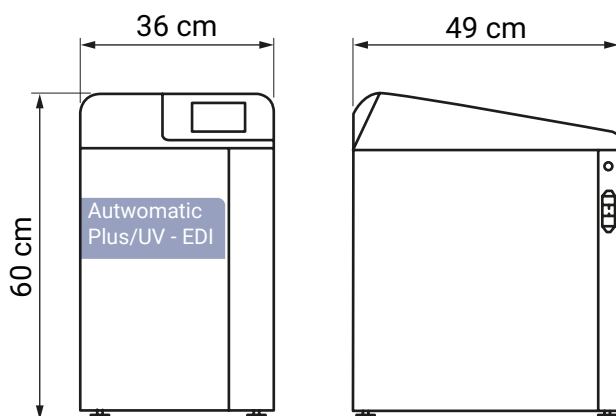
**Power:** 136 VA (230 VAC) - 136 VA (110 VAC).

**Noise level:** <50 dB.

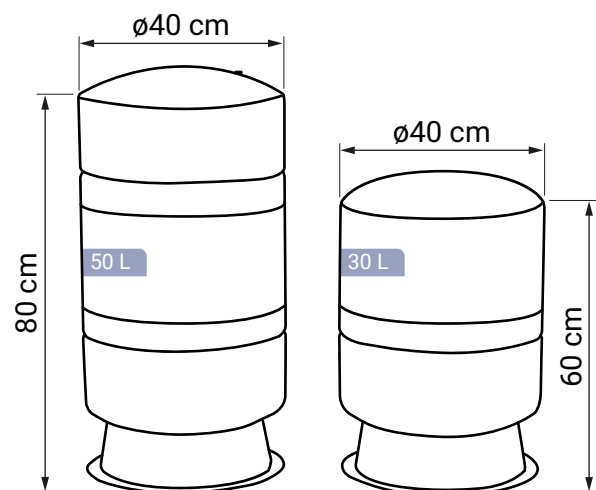
**Communication port:** USB.

**Language Software:** Spanish, English, French, Portuguese and Italian.

### Equipment



### Tanks







# Wasserlab

Water Purification Systems

Wasserlab®

We are manufacturers of **water purification equipment** with an extensive track record in the installation of solutions in **multiple sectors**.

We offer **personalised advice** in the selection of equipment and we provide **comprehensive technical support** to guarantee optimum operation.

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