



wasserLAB

AUTWOMATIC PLUS CLINICAL – EDI

from 10 to 40 l/h

TYPE II WATER (CLRW)

with EDI technology for clinical analyzers feed





Maximum savings and minimum consumption of energy and water

The Autwomatic Plus Clinical EDI range offers Clinical Laboratory Reagent Water (CLRW), a water that complies with Clinical and Laboratory Standards Institute (CLSI) standards and guarantees quality according to the parameters of the table:

Resistivity ¹	10 - 15 MΩ-cm
Conductivity at 25°C	<1 μS/cm
TOC ²	<30 ppb
Bacterial count ²	≤0.01 cfu/ml
Dissolved silica	<0.05 mg/l
Production flow rate ³	10 - 20 - 40 l/h
Supply flow rate	Up to 2,5 l/min

1. Equipment measurement in μS/cm.

2. These values are typical and may vary depending on the nature and concentration of the contaminants in the Tap water.

3. Nominal flow rates +10% between 10 and 35°C. Deviation added -3% per °C from 10°C to 5°C

Versions

MODEL	REFERENCE	FLOW RATE OUTPUT	CONSUMPTION RECOMMENDED	DEPOSIT STORAGE
Autwomatic Plus Clinical EDI 10	QAC10DA25-EDI	10 l/h	100 l/day	25 L Atmospheric
Autwomatic Plus Clinical EDI 20	QAC20DA25-EDI	20 l/h	200 l/day	25 L Atmospheric
Autwomatic Plus Clinical EDI 40	QAC40DA50-EDI	40 l/h	400 l/day	50 L Atmospheric

Water purification process



The equipment integrates various technologies to optimize 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 has a high filtration capacity, with 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.

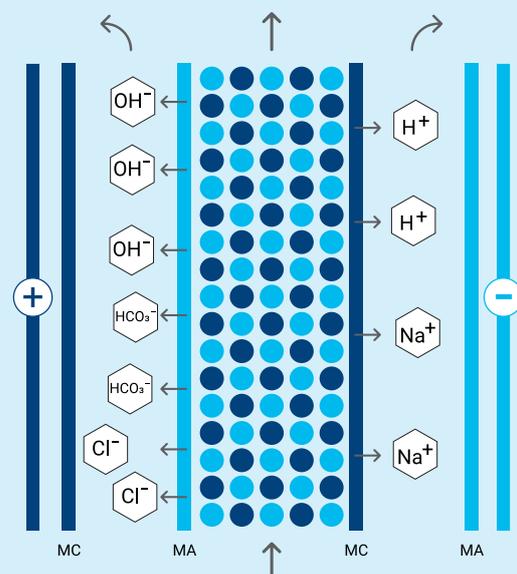
Meanwhile, the anti-limescale agent, based on polyphosphates, protects against incrustations, preventing the precipitation of calcium and magnesium salts inside the equipment, without releasing ions.

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 backwash system, designed to prolong the life of the equipment.

Electrodeionization

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 Tap water. In addition, the EDI module incorporates activated carbon spheres in the cathode, which prevents calcification.





**Committed to
the environment:
EFFICIENT SOLUTIONS
WHICH SAVES
WATER AND ENERGY**

Storage in Atmospheric Tank

The water produced is stored in a 25/ 50 liters Polyethylene tank (depending on the version), equipped with a level float with automatic filling control.

Bactericidal LED lamp

To guarantee the microbiological control of the purified water, the equipment is equipped with a LED lamp that performs bacteriostatic and germicidal functions. This mercury-free, small-sized lamp emits a wavelength of between 260 and 280 nm, which makes it effective in eliminating microorganisms without compromising the quality of the water. Its compact design allows for easy replacement, and its operation ensures that the water does not experience heating during the sanitisation process, which helps to maintain its quality.

Dispensing pump

The system includes a dispensing pump with pressure regulator, to drive the accumulated Type II Water to the clinical analyser.

The equipment includes 3 connections to the analyser, if more units are required, please consult Wasserlab.

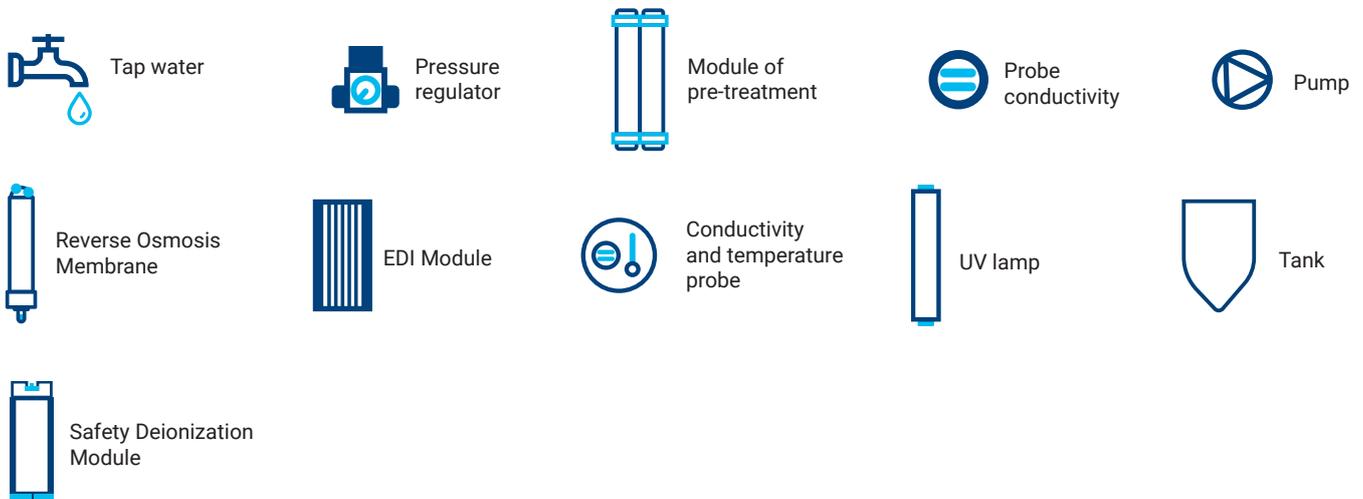
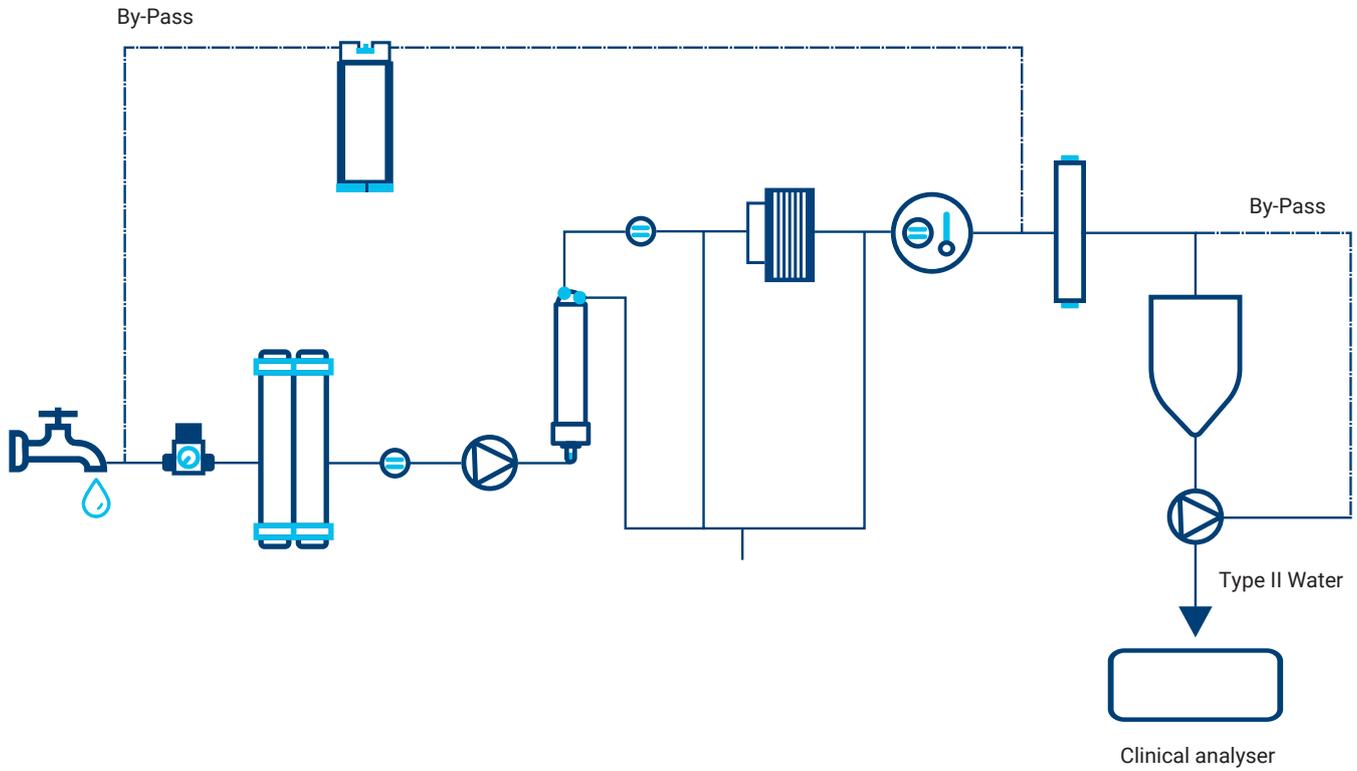
Safety system

To guarantee the supply of purified water in case of equipment failure, the system includes a Module of deionization composed of a 18 liters ion exchange resin bottle, guaranteeing the supply of purified water to the clinical analyser in case of equipment failure.



Hydraulic system diagram

Autwomatic Plus Clinical - EDI



Operation and monitoring

hh:mm dd.mm.yyyy

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19,0° C
Type II water

Menu

hh:mm dd.mm.aaaa **Reading parameters**

Feed water conductivity	400	µS/cm
RO1 conductivity	6	µS/cm
Ionic rejection RO1	98.5	%

SAT

Exit Temperature 19.0 °C

hh:mm dd.mm.aaaa **Resetting counters**

	Time (h)	Working	Reset	Pumps
Pretreatment	500	500	Stop	P61 350
UV/Fotooxid	500	500		P21 60
				P24 0
				P46 0
Osmosis 1	90	Total hours	0	
		Check equip.	0	
		L. Tot II	0	L. Tot I 0

Pass Exit

hh:mm dd.mm.yyyy

Model:
Serial N°: XXXXXX

- Equipment configuration
- Reading Parameters
- Resetting counters

Exit

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 easy and user-friendly operation.

The equipment incorporates a 4.3" touch screen colour display, which serves as a user interface and shows the control parameters of the water purification process and the corresponding warnings.

2. Monitoring

This comprehensive monitoring system allows detailed tracking of key aspects of the process, ensuring that the equipment is operating 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.
- Percentage of performance of the reverse osmosis module.
- Control of operating parameters:
- Working hours of the different components of the system.
- Liters produced during the purification process.

3. Customization and Security

The system offers customization options, allowing to adjust the conductivity setpoint according to the user's needs. In addition, to guarantee 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.

4. Automatism

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. It also has various automated systems to guarantee optimum performance and prolong the useful life of the equipment, such as:

- Automatic shutdown in the event of a 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 osmotic water, in order to prolong its life and ensure maximum performance.

These automatism 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 System Control

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 Tap 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 performance. 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 micro-organisms, 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.

Flexibility to offer solutions that ADAPT TO EACH LABORATORY

Additional system functionalities

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.

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.

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.



Compact Module

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.





Installation Requirements

- Alternating current socket 110 / 120 / 230 V - 50 - 60 Hz. with earth connection at a maximum of 2 meters from the equipment.
- Tap water connection (maximum 3 meters).
- Connection: 3/8" male gas thread.
- Drainage (maximum 3 meters).
- Tap water quality:
 - Conductivity: <math><2.000 \mu\text{S}/\text{cm}</math>
 - pH: 4 - 10
 - Hardness: <math><300 \text{ ppm CaCO}_3</math>
 - Turbidity: <math><1 \text{ NTU}</math>
 - CO_2 : <math><30 \text{ ppm}</math>
 - Silica: <math><30 \text{ ppm}</math>
 - TOC: <math><50 \text{ ppb}</math>
 - Free chlorine: <math><1.5 \text{ ppm}</math>
 - SDI: <math><7</math>
 - 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:

- Automatic Plus Clinical - EDI equipment: 60 x 36 x 49 cm (height / width / depth).
- Compact Module: 96 x 46 x 60 (height / width / depth).
- Equipment + Compact Module: 160 x 46 x 60 (height / width / depth).

Weight: 35 Kg.

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

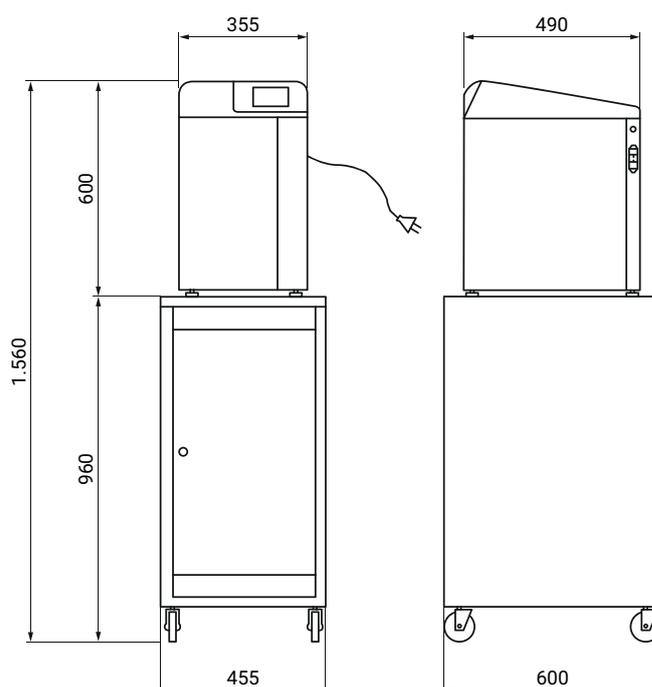
Power: 136 VA (230 VAC) - 136 VA (110 VAC).

Noise level: <math><50 \text{ dB}</math>.

Communication port: USB.

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

Equipment and Compact Module





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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