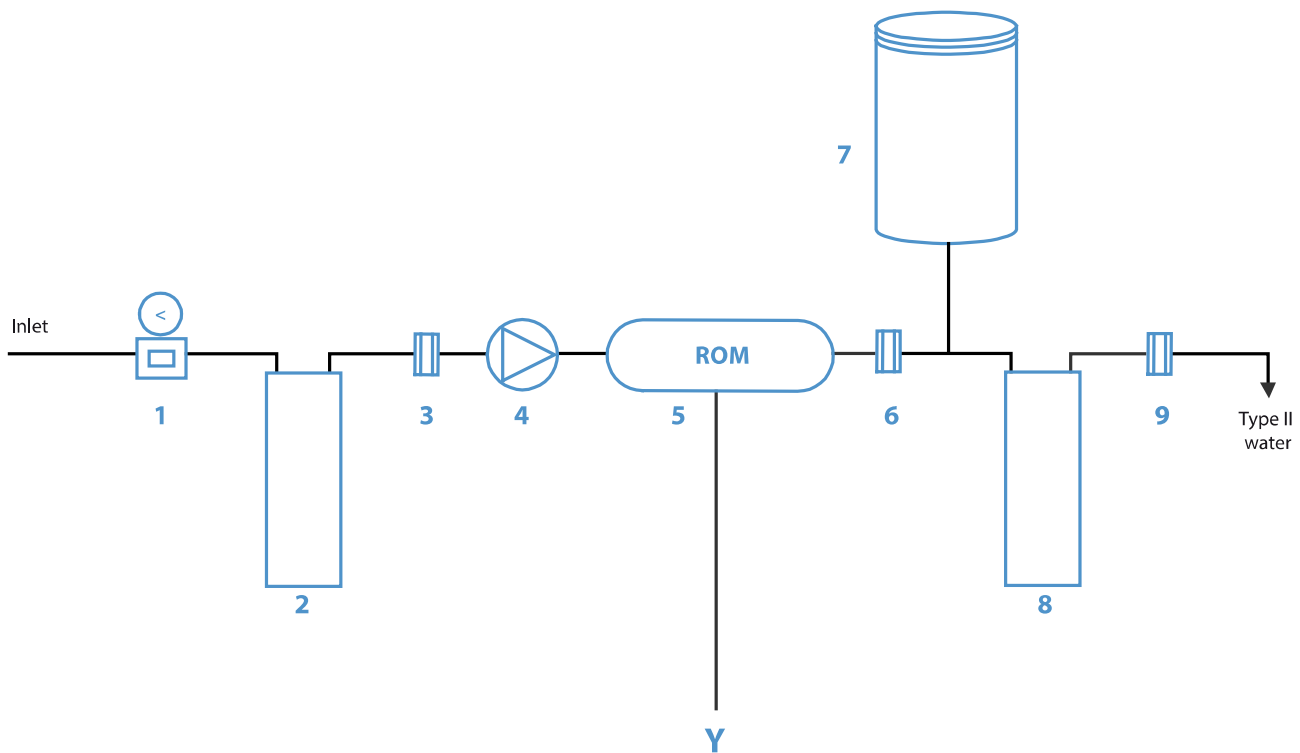


AUTWOMATIC

PURIFIED WATER (TYPE II)

OSMOTIZED WATER (TYPE III)

“Always freshly produced water, with controlled, monitored quality”



Autwomatic equipment:
Maximum tranquility for users

- 1 Pressure regulator. 2 Pretreatment module. 3 Inlet water conductivity sensor. 4 Pump. 5 Reverse osmosis membrane.
6 Osmotized water conductivity sensor. 7 Pressure tank. 8 DI module. 9 Type II water conductivity/temp sensor.

Pretreatment

The pretreatment module protects the reverse osmosis membrane by removing:

- | Particles (≥ 5 micron)
- | Chloride and colloids
- | Organic material

Reverse osmosis

The high efficiency and performance reverse osmosis module provides with a flow rate of 3, 5 and 10 liters per hour of Osmotized water, removing:

- | 95-98% of dissolved inorganic salts.
- | >99% of dissolved organic matter (PM > 100 dalton).
- | >99,95% of microorganisms and particles.

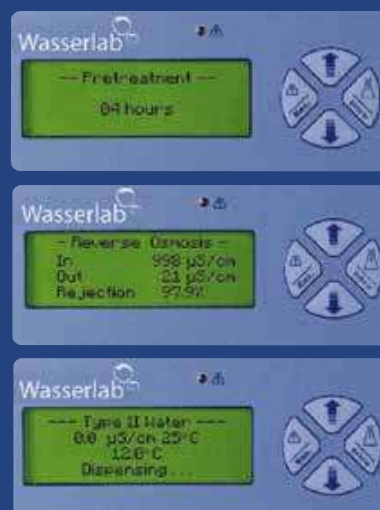
Deionization

A highly effective mixed bed of anion/cation ionic exchange resins removes any ions from the permeate water from the inverse osmosis module. The resulting water has a conductivity value $\leq 1 \mu\text{S/cm}$.

Monitoring

The Automatic microprocessor constantly monitors all the purification process parameters:

- | Real number of equipment operating hours.
- | Measurement in $\mu\text{S/cm}$ ($\pm 1 \mu\text{S/cm}$) of the conductivity of the equipment supply water and the permeate water from the reverse osmosis module.
- | % performance of the reverse osmosis module ($\pm 0.1\%$).



- | Measurement in $\mu\text{S/cm}$ of the conductivity of the Type II Water produced ($\pm 0,1 \mu\text{S/cm}$).
- | Water temperature. All the conductivity measurements are compensated at 25°C.
- | Equipment operating status (Producing/Full Tank/Dispensing).



Accumulation of Osmotized water

The permeate water from the reverse osmosis module accumulates in a pressurized tank (30 or 50 liters), which is opaque and airtight and protects the water from any contact with light and air, thereby preserving it from any possible contamination.

Automatic equipment with multi-parameter monitoring

Type II (Analytical Grade) Water

The Autwomatic equipment stores the Osmotized water, unlike other purification systems which store the Type II Water end product, with the subsequent loss of quality.

Upon user's request, the Autwomatic always dispenses maximum quality, freshly purified Type II water.

Self-checking and preventive maintenance

| The Autwomatic software is configured to conduct a programmed self-check on system operation, constantly and effectively controlling the equipment components and the monitoring values of the quality of the water produced.

Users can program the following as desired:

- | Minimum performance of the reverse osmosis module.
- | Maximum conductivity of the Type II Water produced.

to anticipate any possible problems caused by using water of a non-desired quality.



The microprocessor will provide with a preventive notification, in the form of an audible warning and a written message on the screen, indicating the maintenance tasks required to guarantee the desired water quality.

- | Low performance of the reverse osmosis module.
- | Pretreatment and deionization Module Wear and Tear.
- | Temperature sensor or conductivity sensors not working properly.

Conductivity meter calibration and system check

The Autwomatic software allows adjusting and calibrating the conductivity meter using a certified standard based on the International standards.

The Wasserlab Technical Assistance Service offers, at user's request:

1. Regular equipment calibration service.
2. Full system check over and corresponding certificate.

Purified Type II water Applications

- | Preparing microbiological culture media
- | Spectrophotometry
- | RIA/ELISA
- | AA-Flame
- | Preparing buffer solutions
- | Salt spray chambers
- | Climatic Test Chambers

Osmotized Water (Type III) Applications

- | Feeding Autoclaves and washing machines
- | Glassware cleaning

Ecomatic – Autwomatic Technical Specifications

Equipment	ECOMATIC	AUTWOMATIC
Final Water Quality	Type II	Type II
Conductivity (µS/cm)	<1	<1
Rate and Storage		
Flow Rate LPH	3/5/10 l/h	3/5/10 l/h
Max. Flow rate Recommended LPD	30 - 50 - 100	30 - 50 - 100
RO Pressurized Tank (L)	30/50	30/50
Dispensation		
Manual Dispensing	✓	✓
Continuous Monitorization		
Touch Screen / Keyboard	Keyboard	Keyboard
Visual and audible warning messages	✓	✓
Feed Water Conductivity (µS/cm)		✓
Osmotized water Conductivity (µS/cm)		✓
Ionic Rejection %		✓
Final Water Conductivity (µS/cm)	✓	✓
Work Time counter	✓	✓
Water Temperature (°C)		✓
Temperature compensation	✓	✓
Warning to user messages		
Out of range parameters	✓	✓
Pretreatment cartridge exchange	✓	✓
RO exchange		✓
DI cartridge exchange	✓	✓
Feed water supply failure	✓	
Automatism		
Automatic Start/Stop	✓	✓
Automatic Stop/water supply failure	✓	✓
Other elements		
DI increasable	✓	✓
Dimensions (Height/Widht/Depth) [cm]	45x25x48	52x25x48
Weight [kg]	12	15
Power supply	110-220 VAC / 50-60 Hz	110-220 VAC / 50-60 Hz
Feed Water Requirements		
Min. Inlet Pressure	2 bar	2 bar
Max. Inlet Pressure	6 bar	6 bar
Max. Water Temperature	30 °C	30 °C
Max. Hardness	300 ppm (CaCO ₃)	300 ppm (CaCO ₃)
SDI (Silt Density Index)	< 5	< 5
Max. Feed Water conductivity	1000 µS/cm	1500 µS/cm
Free Chlorine	< 1 ppm	< 1 ppm
Turbidity	< 1 NTU	< 1 NTU