microlene

RO

Reverse Osmosis
Drinking Water Purifier

Model Number: RO K2

Applications

Ideal for reducing Total Dissolved Solids (TDS) from drinking water. RO is a filtering process where water is pushed through a semi-permeable membrane to trap contaminants for glass after glass of the safest, best tasting drinking water.

Benefits of Microlene's Reverse Osmosis Drinking Water Purifiers

Microlene RO K2 drinking water systems significantly reduce heavy metals such as lead, chemicals, minerals and unpleasant tastes and odours in your water.

RO K2 systems offer 5 stages of protection to ensure you're always getting clean clear water.

Stage 1

Pre filtration – prepares the water for the reverse osmosis process by passing the water through a 5 micron filter to capture sediment and small particulate matter. The high capacity carbon also reduces chlorine, protecting the RO membrane and enhancing its performance.

Stage 2

Reverse Osmosis - after pre-filtration, the water travels to the reverse osmosis membrane cartridge where the primary cleaning is done. Here, water is forced through a semipermeable membrane under pressure. Many or most minerals, chemicals, cysts or objectionable matter that may have been in your water are then flushed to drain.

Stage 3

Storage – treated water is stored under pressure until needed. The RO K2 features a turnover feature that keeps stored water from becoming stale.

Stage 4

Post filter – when the drinking water tap is opened water travels to the post filter which contains Activated Carbon, providing a final polish to your water, eliminating unpleasant odours and tastes.

Stage 5

The final stage of protection is a special lead free drinking water tap, which is mounted to your sink. With this tap you can be sure that lead won't be added back into your drinking water.

RO K2 systems are non – electric and demand operated, which means they operate according to your usage. The systems produce high quality drinking water, while they maximize water efficiency and performance.

When the storage tank is full, your system shuts down until water is drawn from the tank. A storage turnover feature ensures fresher, better tasting water and prevents unnecessary continuous water production and waste water constantly being sent to the drain.

Quick connect filter cartridges make maintenance easy.

Technical data on following page >

Microlene Reverse Osmosis Purifier

SPECIFICATIONS	
INLET WATER QUALITY	
Pressure Range	2-7 Bar
Operating Pressure	4 Bar / 400kPa
Temperature Range	2 - 38°C
pH Range	3 – 11 SU
Chlorine Cl_2 (Max.)	4.0mg/l
Hardness as $CaCO_3$ (Max.)	170mg/l
Iron (Max.)	<0.01mg/l
Silica (Max.)	10.0mg/l
TDS (Max.)	<3,000mg/l
OPERATING SPECIFICATIONS	
Flow Range	1 - 4 lpm
Daily Production	41 litres per day
Recovery	25%
Reject Rate (Na Cl / $CaCO_3$)	95% / 98%
Dimensions (w x d x h)	330 x 127 x 406mm
Weight (Operating / Shipping)	2 / 2kg
SYSTEM COMPONENTS	
Pre-filter Stage 1 (qty)	Granular Activated Carbon (1)
Post-filter Stage 3 (qty)	Granular Activated Carbon (1)
Membrane Housing Stage 2 (qty)	Quick Connect Engineered Plastic (1)
Primary Membrane (qty)	Thin Film Composite (1)
Primary Membrane Size	43mm x 254mm (8 ft^2)
Array Configuration	Single
Drain Control	0.66mm Capillary Tube
System Shut-off Control	Hydraulic Controller
System Controller	Hydraulic Controller
CONNECTIONS	
Inlet / Outlet Connections	9.5mm Polyethylene Tube
Drain Connection	6mm Tube
Power	None
STORAGE TANK	
Tank Description	3 gallon
Tank Height	457mm
Tank Footprint	306mm diameter
Material	HDPE

OPERATING PROFILE

The system shall use reverse osmosis technology to reduce the total dissolved solids (TDS) level in water by a minimum of 95.0%. The system shall use line pressure for energy required to separate TDS form water. Normal system operating pressure shall be 400kPa. The system uses an internal valve that closes and depressurizes the system when the unit goes into shut-down. System shutdown is achieved when permeate pressure increases to 2/3 inlet pressure.

MEMBRANES AND HOUSINGS

The system shall use thin film composite membranes in a spiral wound configuration with dimensions of 43 x 254mm. One membrane will be used to permeate 41 litres per day of water, based on a 25° C operating temperature. Membrane construction will provide for low energy requirements by operating at a minimal working pressure. Housings shall be of engineered plastic rated to 690 kPa. One housing shall be used, designed to contain one 43 x 254mm membrane element.

PLUMBING CONFIGURATION

The system shall be rated for a maximum working pressure of 690 kPa. Primary plumbing components shall be of polypropylene and engineered plastic. A capillary tube shall control reject flow. Membrane shall be configured in a single stage orientation.

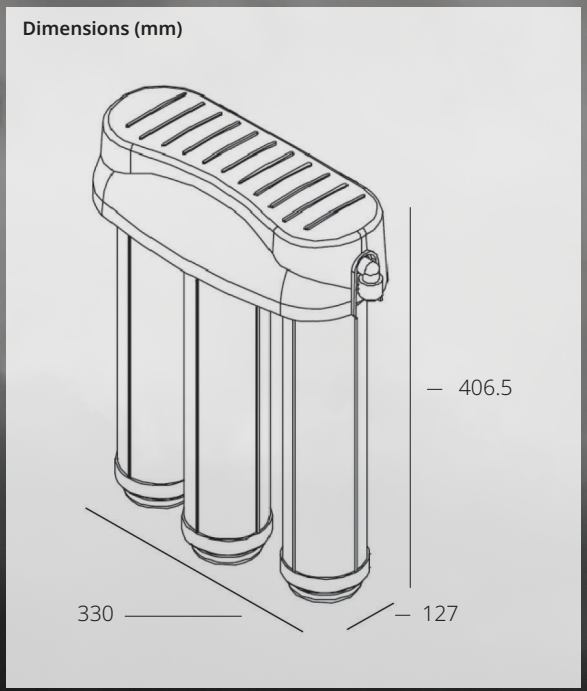
SYSTEM CONTROLS

System function is completely automatic. The operational sequence is controlled by hydraulic signals within the RO system. These signals control the pressurization and depressurization of the membrane.

FRAME

System dimensions shall not exceed 330 x 127 x 406mm. Units shall use an anodized coated aluminum frame.

Dimensions (mm)



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