

## Ecosoft RO membrane cleaning unit



### Components

100 l Poly tank for cleaning solution

Grundfos CM3-4 0.5 kW 1×230 V pump

Big Blue 20 housing with polypropylene filter

Electrical switch box

1 Pressure gauge, 1 P+T gauge

PVC piping and valves

Powder coated steel frame

### Technical specifications

Electrical requirements	230 V, 50 Hz
Electrical power	0.5 kW
Pump flow rate @ pressure	2 m <sup>3</sup> /h @ 3.0 bar 3 m <sup>3</sup> /h @ 2.5 bar
Overall dimensions (Width × Depth × Height)	0.5×0.95×1.5 m
Dry weight	45 kg
Curb weight	150 kg

Clean-in-place procedure restores flux and rate of water purification of used reverse osmosis membranes. During operation, RO membranes are clogged with mineral (scaling), organic (fouling) and microbial (biofilm) deposits.

Before CIP, the reverse osmosis plant must be stopped, and the CIP unit's feed and return ports must be connected to the membrane vessel's feed, brine, and permeate ports. Cleaning solution tank is filled with purified water and the required quantity of cleaning chemical. The resulting solution is mixed, then circulated through the membrane vessel, while controlling pH, temperature, and color of the solution carefully.

Most cleaning protocols require first cleaning with alkaline, then acidic cleaning chemicals. The unit is also used to fill the membrane vessel with preservative solution when the RO system is shut down for an extended while.