

Reverse osmosis membrane cleaning unit  
**Ecosoft CIPSEP616**



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 system must be stopped, and the CIP unit's feed and return ports must be connected to the RO system's CIP in, CIP out, and CIP permeate ports with connection hoses. 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 applying caustic, then acid cleaner.

The cleaning unit is also used to fill membrane vessels with preservative solution when the RO system is shut down for an extended downtime.

**Components**

350 l Poly tank for cleaning solution	1 ea
Grundfos CRN 10-6, 2.3 kW, 3 × 400 V pump	1 ea
Big Blue 20 housing with polypropylene filter	3 ea
Electrical switch box	1 ea
Pressure gauges	1 set
PVC piping and valves	1 set
Powder coated steel frame	1 ea

**Technical specifications**

Electrical requirements	3 × 400 V, 50 Hz
Electrical power	2.3 kW
Pump flow rate @ pressure	8 m <sup>3</sup> /h @ 5 bar 12 m <sup>3</sup> /h @ 3.5 bar
Overall dimensions less tank (Width × Depth × Height)	0.9 × 0.75 × 1.3 m
Tank dimensions (Diameter × Height)	0.75 × 0.9 m

Port size:

- membrane cleaner feed and return ports DN40
- permeate return port DN15