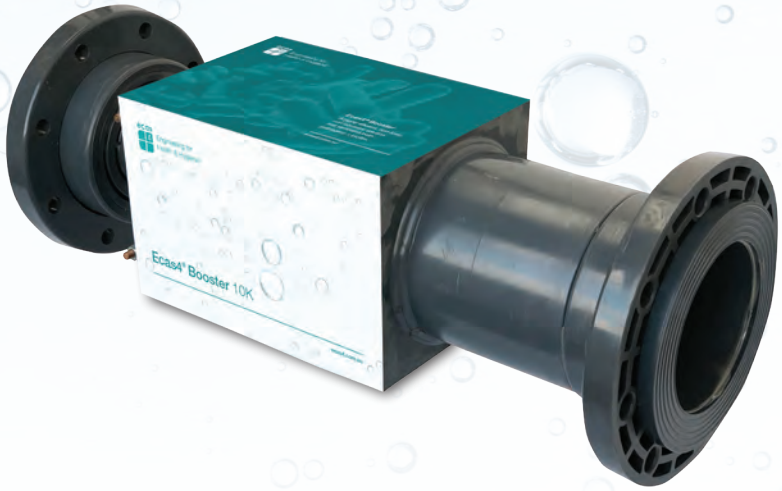
ecas 4 Engineering for Health & Hygiene™



Ecas4® Booster

In line with its mission of continuous improvement within the Health and Hygiene Engineering sector, Ecas4 has recently developed an electrochemical reactor – Ecas4 Booster.

The Ecas4 Booster can be installed in-line within processes of water disinfection and/or processes of food sanitation.

This electrochemical reactor operates by converting the chlorides present in the water to be treated into active chlorine. The chlorides needed may be already present in the incoming water (this is e.g. the case of most groundwater in areas not far from the sea) or they may be properly added, by dosing a small amount of brine obtained from sodium chloride or potassium chloride (the latter is particularly indicated when the water is then used for irrigation, because plants do not normally tolerate elevated levels of sodium).

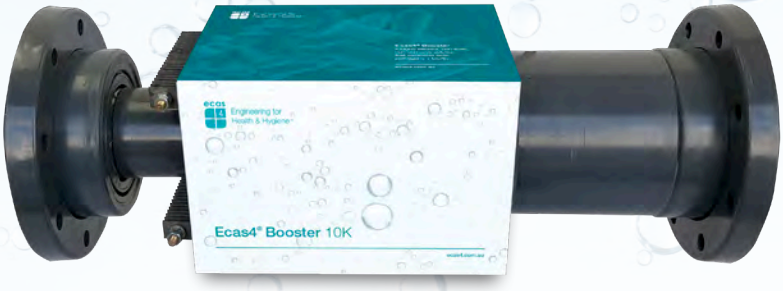
The Ecas4 Booster contains a series of planar electrodes, covered with a special coating that allows for a periodic inversion of the polarity, thus eliminating the request for recurring shut down and cleaning for the removal of calcium and/or magnesium carbonates that otherwise precipitate on the surfaces of cathodes, hindering the correct functioning of the system.

When compared with chemical disinfection methods, the electrochemical water disinfection has the advantage that no transport, storage and dosage of disinfectants are required. In addition, the disinfection effect can be adjusted according to the on-site demand by properly adjusting the current.

Electrochemical water disinfection shows a residual effect and is often more cost-effective and requires less maintenance than other disinfection methods. Moreover, photovoltaic power supply makes it possible to use electrochemical water disinfection far from the electrical supply grid.

The system can be designed to suit customer requirements; at present, three models are available, with electrode surfaces of 0.013 m^2, 0.14 m^2 and 1 m^2, respectively. As a result, the active chlorine production can be adjusted as desired depending on flow rate (up to 200 cubic metre per hour) and the electric current supplied to the reactor.

Ecas4® Booster Specifications



Booster 10K

1 sqm of electrode surface

Flow rates: 0.5 - 3 kL/min

Max pressure: 3 bar

Currents comprised between 50 - 200 A (depending on water salinity/conductivity; please note that the maximum current obtainable with 12 V can be lower than 200 A)

Dimensions: 190 x 200 x 700 mm (approx)

Booster 1400

0.14 sqm of electrode surface

Flow rates between 80 - 500 L/min

Max pressure: 3 bar

Currents comprised between 5 - 40 A (depending on water salinity/conductivity; please note that the maximum current obtainable with 12 V can be lower than 40 A)

Dimensions: 90 x 90 x 360 mm (approx)

Booster 130

0.013 sqm (130 cm^2) of electrode surface

Flow rates between 2 - 40 L/min

Max pressure: 3 bar

Currents comprised between 1 - 10 A (depending on water salinity/conductivity, the maximum current obtainable with 12 V can be lower than 10 A)

Dimensions: 60 x 70 x 300 mm (approx)

NOTE: The above numbers are not strict: for example, it would be possible to feed the Booster 10K with more than 200 A, or the medium reactor with more than 40 A. However, their service life (SL) will be reduced accordingly; working at 200 A/m^2 with the Booster 10K, the estimated SL amounts to 10,000 h; by feeding 200 A to the Booster 1400, the SL reduces to about 1,400 h.

ecas 4 Engineering for Health & Hygiene™

ECAS4 Australia
Unit 8, 1 London Road, Mile End South
South Australia 5031

T + 618 8122 7165
F + 618 8152 0321
E info@ecas4.com.au

ecas4.com.au

WDS-FLP-001_1.0