

Reverse osmosis plants

Skid-mounted, containerised or built into your plant room — RO systems engineered for your feedwater, commissioned to a stated product quality, and kept alive with the right pre-treatment and chemistry.

Around 98–99.5% removed

Typically 95% to over 99% rejected

Skid, container or in-building

Level 2 B-BBEE | 300+ sites served nationally | Treating industrial water since 1998



Innovative Water Solutions

01

PROCESS & PRODUCTION YIELD

What a Prosep RO plant comes with

A reverse osmosis plant pushes water through a semi-permeable membrane under pressure. The membrane is a barrier to dissolved salts, organics, pyrogens, sub-micron colloids, viruses and bacteria; water passes through as a purified product stream.

It is the finest level of filtration available — the answer wherever a process needs water that filtration and softening alone cannot deliver. Prosep designs, supplies and commissions RO plants, then keeps them running with the pre-treatment, antiscalant and membrane care they need.

Membrane fouling

An RO plant without correct pre-treatment is a membrane-replacement subscription.

Softening runs out

A softener stops scaling, but the water's dissolved solids do not fall.

Unnoticed decline

Without normalised monitoring, a fouling trend becomes a capital cost before anyone sees it.

The programme, stage by stage

Stage	What it does
Design & supply	Sized to the duty and the feedwater analysis — from skid-mounted plants of a few kilolitres an hour to larger industrial trains.
Pre-treatment	Media filtration, softening or ultrafiltration ahead of the membranes, selected for what the feedwater actually carries.
Antiscalant & membrane care	Antiscalant matched to the feedwater, clean-in-place chemicals, and a biocide regime where biofouling is the risk.
Commissioning & monitoring	Commissioned against a stated product quality and recovery, then monitored so a fouling trend is caught as chemistry before it becomes capital.

1998

Treating industrial water since

300+

Sites served nationally

132 million

Litres treated daily

Level 2

B-BBEE contributor

02 REVERSE OSMOSIS PLANTS

Where RO earns its place

Industries

- Bottling, food and beverage
- Boiler feedwater
- Pharmaceutical and biomedical
- Chemical process water
- Mining and power generation
- Municipal and potable supply

RO or softening?

- A softener removes hardness; RO removes the salts
- Low-conductivity or high-purity duty needs RO
- Saline borehole sources need RO
- On most plants the softener protects the membranes
- We state which your site needs from the water analysis



PROOF – PROCESS WATER, REVERSE OSMOSIS

Food producer, Cosmo City

PROBLEM

Rising municipal water consumption costs.

PROGRAMME

A 4.5 m³/h reverse osmosis system on borehole feed, engineered and installed by Prosep, commissioned October 2020.

RESULT

Operational for over five years. Municipal water cut to a backup role used mainly during planned Rand Water shutdowns. In a reference month, around 1,140 kl of treated water produced against 239 kl of municipal top-up.

NEXT STEP

Book a site assessment

We survey your systems, sample your water and map the risks to uptime, yield and compliance — then state exactly what we would do, and prove it with your own plant's data.

- 01 We assess the site and take the analyses
- 02 You get an engineered programme, costed before you commit
- 03 We implement, monitor and report against the targets

Have this ready and the first visit goes further

- A recent feedwater analysis (conductivity, hardness, silica, iron)
- Water source: municipal, borehole or river
- Product flow needed and hours of operation
- The product quality the process needs
- Where the reject stream can go
- Available space and power supply

Talk to us

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Visit

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