

The Smart RO



ImpactRO™

3x INCREASE IN MEMBRANE LIFE

4x REDUCTION IN MEMBRANE FOULING

4x REDUCTION IN SYSTEM DOWNTIME

25% OPEX REDUCTION

Prepare for Impact

Six Integrated Innovations that Revolutionize RO Operations

NanoStack™ Membranes

Engineered with a bio-inspired polymer whose hydrophilic properties reduce particle and scale adhesion, repelling foulants to drain.

Feed-Forward Design

Evenly balances flux across every RO stage, protecting the first stage from fouling and the third from scaling.

Microdisruptions

Intermittent bursts of water that clean membranes without downtime by disrupting the concentration polarization layer, sending foulants to drain.

NanoScope

ImpactRO's monitoring system not only tracks RO performance at previously imperceptible levels, but also uses predictive analytics to automatically prevent fouling.

Intermittent Variable Recovery

Automated system recovery rebalancing to avoid fouling due to changes in feedwater conditions.

Single-Point CIP

ImpactRO reduces offline cleaning time by 70%, requiring only a single CIP connection point, allowing easy, independent cleaning of each stage.

*Compared to a conventional multi-stage RO. Based on testing performed with the U.S. Bureau of Reclamation.



— BUREAU OF —
RECLAMATION

Full Flux Recovery



MEMBRANE FEATURES

BIO-INSPIRED HYDROPHILICITY

20° CONTACT ANGLE

FOULING RESISTANT & RESILIENT

UNPRECEDENTED CLEANABILITY

ULTRA LOW ENERGY

100%

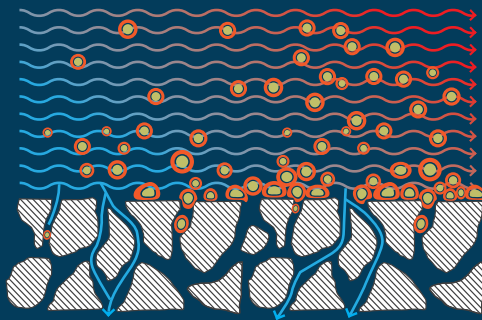
INCREASE
MEMBRANE
LIFE

2X

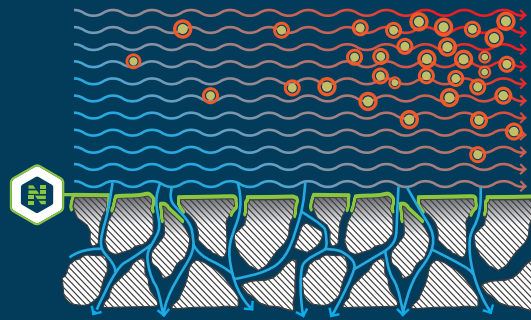
OFFLINE
CLEANING
REDUCTION

25%

OVERALL
OPEX
REDUCTION



UNCOATED MEMBRANE



NANOSTACK COATED MEMBRANE

Predict, Prevent, and Reverse Fouling



MONITOR FEATURES

PREDICTIVE ANALYSIS

INTELLIGENT INTERVENTION

MACHINE LEARNING

FASTEST FLUX RECOVERY

FLUX RECOVERY DURING OPERATION

HIGHEST EFFICIENCY RO OPERATION

10X

INCREASED
FOULING
DETECTION

4X

OFFLINE
CLEANING
REDUCTION

20%

ENERGY
CONSUMPTION
REDUCTION