# NORIA
## WATER TECHNOLOGIES



# Introducing the RO-Spotlight™

Optimizing RO desalination by shining a "spotlight" on critical RO membranes.

Reverse osmosis (RO) and nanofiltration (NF) are the most predominant forms of desalination – making up 67% of worldwide desalination capacity. Yet, up until now, **RO plant operators have been forced to rely on indirect methods** (pressure differential and permeate flux) and retrospective techniques (membrane autopsy) to assess the condition of their filtration membranes.

**Fouling and mineral scaling** place inherent limitations on the membranes' useful service lifetimes. But without being able to see and directly monitor membrane health, operators must act conservatively – often discarding viable membranes years before they need to be replaced. The result: lower recovery and production, increased plant downtime, operating costs, and energy use, and an over-reliance on chemicals for pretreatment and cleaning.

**Noria's RO-Spotlight™ is the only real-time membrane monitor** and operator decision-support system that directly visualizes the membrane surface under operating conditions and can identify the type and rate of fouling and scaling buildup. The RO-Spotlight™ is a software and hardware system that acts as an extension of the feed and/or tail end of any RO element, mimicking plant conditions and providing operators with the real-time information they need to make smarter operational decisions.

RO-Spotlight™ identifies and flags the very first indications of fouling – allowing operators to take immediate remedial action and run RO systems continuously at optimal conditions. This extends membrane lifetime and can realize **annual operational cost savings of up to 30%.**

# Benefits

- **Early fouling and scaling detection**
- **Operate at maximum recovery**
- **Optimize chemical use and cleaning procedures**
- **Reduce plant downtime and energy use**
- **Pilot RO for feasibility studies, diagnostics, and stress tests**

# Features

- **Real-Time Monitoring**
- **Data Normalization**
- **Operator Decision Support System**
- **Surface Coverage and Plant State Analysis**
- **Dynamic Alerting and Reporting**
- **Historical Performance Data**
- **SCADA Integration**

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Noria Water Technologies Inc is optimizing industrial processes through shining a "spotlight" on critical and hard-to-access industrial surfaces via real-time monitoring, spectral analysis and machine learning. Our team of industry experts with over 80 years of research and RO plant design experience also provides application-specific engineering services and consulting.

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