



## ReFlex™ Reverse Osmosis

### Why ReFlex Reverse Osmosis?

Desalitech is committed to addressing the daunting global challenge of water scarcity. Industry accounts for nearly 60% of fresh water withdrawals in the developed world, putting water resources under tremendous stress which will only increase over time. This situation is driving the need for water conservation and wastewater reuse. Reverse osmosis is an effective and widely-applied technology for water treatment and desalination, yet current systems waste both water and energy. Industry cannot afford to waste water or incur the costs of expensive water treatment methods.

**Guaranteed Maximum Recovery:** ReFlex systems achieve up to 98% recovery thanks to the patented Closed Circuit Desalination (CCD™) technology, a smart yet simple optimal configuration of standard reverse osmosis components. ReFlex Reverse Osmosis is ideal for many applications including supply water purification, water reuse and wastewater treatment.

**Dramatic Reduction in Energy Consumption:** ReFlex systems consume up to 35% less energy than traditional reverse osmosis systems.

**Unmatched Flexibility:** Superior ability in treating problematic and varying feed water with every standard ReFlex system.

**Greater Reliability:** Robust standard reverse osmosis equipment in an innovative single-stage configuration that enables 99% uptime and a substantial reduction of the scaling and fouling issues associated with traditional reverse osmosis systems.

**Improved ROI:** Wastewater disposal, the largest cost associated with reverse osmosis system operation, which in some cases approaches 80% of the total cost of ownership, is reduced by 50% to 75%, providing a significant and demonstrable return on investment.

### Process Comparison Matrix

Per 1,000 Gallons of Permeate	Two Stage	Three Stage	ReFlex RO
Maximum Recovery	75%	85%	<b>Up to 98%</b>
Brine Waste Flow (gallons)	333	176	<b>75</b>
Excess Feed Flow (gallons)	333	176	<b>75</b>
5 Year Cost of Ownership	\$3.81	\$2.53	<b>\$1.61</b>
Annual Savings with ReFlex RO	\$337,392	\$141,091	<b>X</b>
Standard, Off Shelf Components	Yes	Yes	<b>Yes</b>
Recovery Guarantee	No	No	<b>Yes</b>

\*Based on U.S. average power, water supply and sewage costs for a 300 gpm system with a feedwater TDS of 1,500 ppm.

\*ReFlex projections based on typical reported recovery rates of 93%.

ReFlex Reverse Osmosis systems are highly flexible and adaptable to changes in feed water conditions, product water requirements, brine discharge limits, membrane advancements and chemical treatment improvements. Flexible operation and resistance to scaling and fouling greatly improve reliability and reduce operating and maintenance costs. Energy savings further reduce the overall cost of ownership, making ReFlex Reverse Osmosis a sound long term investment. ReFlex systems are already being used by many fortune 500 companies and are being integrated by leading water treatment companies worldwide.