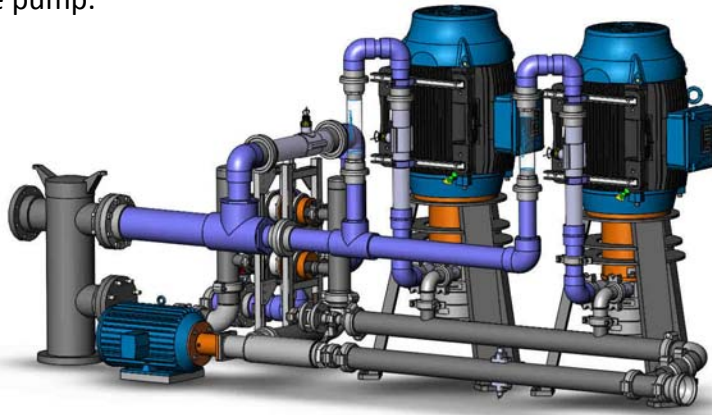


Ocean Pressure Center (OPC)

Ocean Pacific Technologies (OPT) manufactures axial piston pump and energy recovery products **specifically designed for the desalination industry**. Water lubricated axial piston pump technology has been growing in popularity and by unit size in the seawater reverse osmosis (SWRO) industry for more than ten years. A “tipping point” exists for this technology to replace the less efficient centrifugal high pressure pumps that have dominated in large scale SWRO systems for more than 30 years and when combined with an isobaric energy recovery device (ERD) the savings are tremendous. **Compared to centrifugal pump and ERD (Pelton or Turbo) systems, the OPC reduces the energy consumption by as much as 40%**. And our modular pumping solution allows **all size municipal-scale plants** to utilize the same 90% efficient high pressure pump.



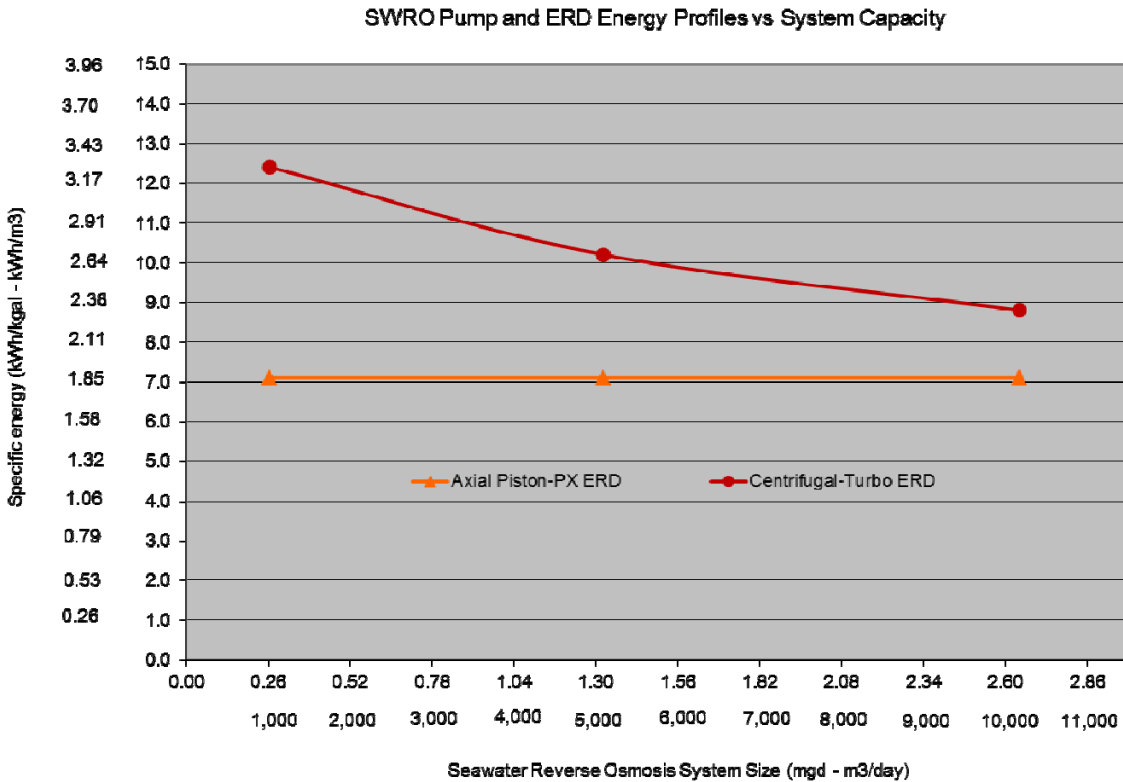
OPC-2000 Modular Pumping and ERD System -- Up to 2000 m³/day (0.5 mgd) SWRO Capacity

The OPC is a pre-engineered, packaged, turn-key system designed to replace less efficient centrifugal pump and energy recovery systems. Our system employs “off the shelf” proven equipment from the leading pump and energy recovery manufacturers. Our pre-packaged systems can be purchased out right or on a lease to own basis.

Some features and benefits include:

- Up to 40% energy savings over existing high pressure centrifugal pumps and ERD’s
- Easy to install requiring only supply power and four connections
- Space and maintenance efficient vertical design
- Fail-safe monitoring and control system for easy and safe operation
- Integrated control of SWRO process (flux and recovery)
- Proprietary monitoring scheme maximizes performance and simplifies troubleshooting
- Elimination of hose connections reduces risk and maintenance
- Online factory monitoring safe-guards equipment and maximizes performance (optional)
- Lower NPSH requirements can help reduce supply energy costs
- Modular design makes it easy to add capacity and/or turn down production rate as desired
- OPT maintains equipment including spare parts and consumables (optional)
- Guaranteed energy savings reduces risk (optional)

The graph below compares the RO process power of the axial piston pump – PX combination to traditional centrifugal pumps and energy recovery systems at 800 psi (55 bar) and 45% recovery. The axial piston pump – PX system represents a new energy bench mark.



Comparing the Centrifugal-Turbo line (red) to the Axial Piston-PX system (orange) shows how one can save as much as 40% on energy by converting from a centrifugal pump - turbo/Pelton system to an axial piston pump and PX package.

Standard System Specifications

Model #	60 Hz		50 Hz		Interface Connections		Length x Width x Height	Weight
	cmd mgd	kW service	cmd mgd	kW service	LP in - HP out inches	HP in - LP out inches	inches mm	lbs kg
OPC-1000	720	90	910	110	6	3	9.25' x 5' x 6.25'	3,000
	0.19		0.24				2820 x 1530 x 1910	1,364
OPC-2000	1450	170	1820	210	6	6	12.25' x 5' x 6.25'	5,400
	0.38		0.48				3740 x 1530 x 1910	2,455
OPC-3000	2180	260	2730	310	8	6	15.25' x 6' x 6.25'	8,140
	0.58		0.72				4650 x 1830 x 1910	3,700
OPC-4000	2910	340	3640	420	10	8	18.25' x 7' x 6.25'	10,520
	0.77		0.96				5570 x 2140 x 1910	4,782
OPC-5000	3640	420	4550	520	10	8	21.25' x 7' x 7'	13,300
	0.96		1.20				6480 x 2140 x 2140	6,045

*Cubic meters per day (cmd) / million gallons per day (mgd) permeate production rate. Optional Vari-Flow configuration provides plus or minus 330/140 mcd control at 60/50 Hz respectively.

Notes:

1. Maximum operating pressure is 69 bar / 1000 psi.
2. Pre-filtration requirement is 10 micron absolute (2 micron nominal).
3. Standard system flows are designed around 45% reverse osmosis recovery.
4. Units are manufactured in duplex stainless steel as standard.
5. Contact OPT for performance and operating parameters outside specified limits.
6. Manufacturer reserves the right to make changes to specifications at any time.