

ACX2-SERIES

REVERSE OSMOSIS SYSTEMS

ACX2-Series systems are engineered to treat demanding feed water conditions like low temperature or a high content of dissolved solids, and robust applications requiring a high pressure pump (up to 400 psi). The ACX2-Series is ideally suited for brackish water with total dissolved solids (TDS) in the range of 5,000 to 10,000 ppm.



STANDARD FEATURES

- Low Energy or High Rejection Brackish Membranes (depending on the application)
- Fiberglass Membrane Housings with Stainless Steel Ports
- 5 Micron Sediment Pre-Filter
- Multi-Cartridge Stainless Steel Cartridge Housing
- Permeate and Concentrate Digital Paddle Wheels
- Pre-and Post-Filter Pressure Gauges
- Pump Pressure and Concentrate Pressure Gauges
- Feed and Permeate TDS Meters and Standard Features
- Low and High Pressure Shut-Off Switch
- Auto Feed Shut-Off
- Stainless Steel Globe Valves
- Motor Feed Valve
- Vertical Stainless Steel Multistage Pump
- Powder Coated Carbon Steel Frame
- Stainless Steel (High Pressure Side) Piping Components
- Sch80 PVC Piping (Low Pressure Side)
- Chemical Feed Power Outlet
- Chemical Feed Port
- Clean-In-Place (CIP) Ports
- Permeate Sample Ports

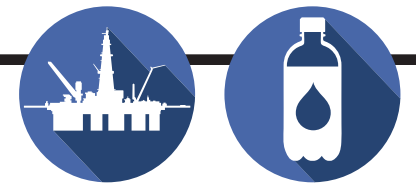
OPTIONS & UPGRADES

- S-200 Computer Controller³
- VFD³
- Programmable Logic Controller w/ Touch Screen
- Permeate and Concentrate Digital Paddle Wheels³
- Motorized Feed Valve³
- Concentrate Recycle Loop w/ Flow Meter
- Permeate Divert
- Permeate Flush
- pH and/or ORP Sensor
- Chemical Feed System
- Clean-In-Place Skid-Mounted System
- Clean-in-Place (CIP) Valves

¹Standard on Models ACX2-28800, ACX2-43200, ACX2-57600, ACX2-75000

²Standard on Models ACX2-90000, ACX2-120200, ACX2-150000, ACX2-180000

³Option available for Models ACX2-28800, ACX2-43200, ACX2-57600, ACX2-75000. Standard on larger models.



REVERSE OSMOSIS

| MODELS | ACX2-28800 | ACX2-43200 | ACX2-57600 | ACX2-75000 | ACX2-90000 | ACX2-120200 | ACX2-150000 | ACX2-180000 |
|--|---------------------------------------|--------------|--------------|--------------------------------------|---------------------------------|---------------|---------------|---------------|
| DESIGN | | | | | | | | |
| System Capacity ¹ gpd (m ³ /day) | 28,800 (109) | 43,200 (163) | 57,600 (218) | 75,000 (284) | 90,000 (341) | 120,200 (454) | 150,000 (568) | 180,000 (681) |
| Configuration ¹ | Single Pass | | | | | | | |
| Feed Water Source ² (ppm) | TDS < 10,000 | | | | | | | |
| Standard Recovery ² | 54% | 65% | 60% | 67% | 75% | | | |
| Recovery w/ Concentrate Recycle gpm ² | 75% | | | | N/A | | | |
| REJECTION AND FLOW RATES | | | | | | | | |
| Nominal TDS Rejection | | | | | 97 - 99% | | | 99.3% |
| Permeate Flow ¹ gpm (Lpm) | 20 (75.6) | 30 (113.4) | 40 (151.2) | 50 (189.0) | 60 (226.8) | 80 (302.4) | 100 (378.0) | 125 (472.5) |
| Minimum Concentrate Flow gpm (Lpm) | 14 (53) | | | | | | | |
| CONNECTIONS | | | | | | | | |
| Feed (in) | 2 FNPT | | | | 3 FNPT | | | |
| Permeate (in) | 1.5 FNPT | 2 FNPT | | | 2.5 FNPT | 3 FNPT | | |
| Concentrate (in) | 1.5 FNPT | | | | | 1.5 FNPT | 2 FNPT | |
| Clean-In-Place Port (in) | 1.5 FNPT | | | | 2 FNPT | | | |
| Chemical Feed Port (in) | 0.5 NPT | | | | | | | |
| MEMBRANES | | | | | | | | |
| Membranes Per Vessel | 2 | | | | 4 | | | |
| Membrane Quantity | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 |
| Membrane Size | 8040 | | | | | | | |
| VESSELS | | | | | | | | |
| Vessel Array | 1:1 | 1:1:1 | 1:1:1:1 | 2:1:1:1 | 2:1 | 2:1:1 | 3:1:1 | 3:2:1 |
| Vessel Quantity | 2 | 3 | 4 | 5 | 3 | 4 | 5 | 6 |
| PUMPS | | | | | | | | |
| Pump Type | Vertical Multi-Stage Centrifugal Pump | | | | | | | |
| Motor HP (kW) | 15 (11) | 15 (11) | 25 (19) | 25 (19) | 25 (19) | 40 (30) | 40 (30) | 50 |
| ELECTRICAL | | | | | | | | |
| Standard Voltage ³ | 460V 60Hz 3Ph | | | | | | | |
| SYSTEM DIMENSIONS | | | | | | | | |
| L x W x H (in/cm) | 112 x 35 x 85 (284 x 89 x 216) | | | | 194 x 41 x 85 (493 x 104 x 216) | | | |
| Weight (lb/kg) | 2130 (970) | 2450 (1,110) | 3040 (1,380) | 3340 (1,520) | 4100 (1,860) | 4490 (2,040) | 5280 (2,400) | 5640 (2,560) |
| OPERATING LIMITS | | | | | | | | |
| Design Temperature (°F/°C) ² | 77 (25) | | | Maximum Turbidity (NTU) ² | | | 0 | |
| Maximum Feed Temperature (°F/°C) ² | 85 (29) | | | Maximum Free Chlorine (ppm) | | | 0 | |
| Minimum Feed Temperature (°F/°C) ² | 41 (5) | | | Maximum TDS (ppm) ³ | | | 10,000 | |
| Maximum Ambient Temperature (°F/°C) | 120 (48.9) | | | Maximum Hardness (gpg) ³ | | | 0 | |
| Minimum Ambient Temperature (°F/°C) | 40 (4.4) | | | Maximum pH (Continuous) | | | 11 | |
| Maximum Feed Pressure (psi/bar) | 85 (5.9) | | | Minimum pH (Continuous) | | | 3 | |
| Minimum Feed Pressure (psi/bar) | 45 (3.1) | | | Maximum pH (Cleaning 30 Min.) | | | 12 | |
| Maximum Piping Pressure (psi/bar) | 350 (16) | | | Minimum pH (Cleaning 30 Min.) | | | 2 | |
| Maximum SDI Rating (SDI) | < 3 | | | Maximum Turbidity (NTU) ³ | | | Up to 1 | |

¹Product flow is based on feedwater conditions of 5,000 ppm TDS at 50°F. Treatment ability of the RO system is dependent on feed water quality. Higher TDS and/or lower temperature will affect product flow. ²Product flow and recovery rates are based on feedwater conditions of 7000 ppm TDS at 65°F. Treatment ability of the RO system is dependent on feed water quality. Higher TDS and/or lower temperatures will reduce product flow. An Aqua-Chem Applications Engineer can rate the units for these other feed water conditions. ³Appropriate filtration must be installed in order to prevent premature membrane fouling. Scale prevention measures must be taken to prolong membrane life.