

COMMERCIAL RO SYSTEMS



SEAWATER DESALINATION SYSTEMS (NOMINAL 35,000 TDS DESIGN)

Standard Features

- Energy efficient, high flow membranes
- 5 micron sediment pre-filter
- Allen-Bradley programmable controller
- Liquid level float with auto shut-off
- Auto-flush system
- Pre- and post-filter, feed, concentrate and product water pressure gauges
- Visual inline flow meters
- Low pressure feed water switch
- Victaulic style 304 stainless steel housing connections
- Low pressure alarm capable
- Motor starter with safety disconnect



Optional Features

- 2 m³/d field portable system with gas or diesel powered generator
- Digital permeate TDS meter
- Automatic antiscalant dosing system
- Automatic or manual pH control dosing system
- Ethernet communication upgrade for the controller
- Digital permeate and concentrate flow meters with low level alarms
- Digital supply and concentrate pressure gauges with high level alarms
- Clean-in-place membrane maintenance station
- System shutdown during permeate flush
- Stainless steel wetted parts for liquid end of pump
- Step-down transformer from 3 phase to single phase
- Available in all international voltages



Operating Parameters

Operating Pressure: 1000 psi
Min. Supply Pressure: 15 psi
Max. Temperature: 113°F (45°C)
Nominal TDS: 35,000 ppm
Max. Inlet Free Chlorine: < 0.1 ppm

Specifications

Membrane Housings: High pressure, fiberglass reinforced plastic membrane housings
Frame: Structural fiberglass and aluminum
Controller Power Requirements: 120V/60Hz/1Ph
Motor Power Requirements: 230-460V/60Hz/3Ph
Pumps: Neutating disc design with positive displacement, brass pump head, buna diaphragm, and stainless steel valve and seat

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SEA WATER DESALINATION SYSTEMS

| Model | HTS-2-SEA | HTS-4-SEA | HTS-8-SEA | HTS-12-SEA | HTS-20-SEA | HTS-28-SEA | HTS-38-SEA | HTS-57-SEA | HTS-82-SEA |
|--|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| Actual Permeate (m ³ d / gpd) | 0.38 / 100 | 1.13 / 300 | 1.9 / 500 | 3.8 / 1000 | 11.4 / 3000 | 29 / 7600 | 36 / 10000 | 57 / 15000 | 76 / 20000 |
| Nominal Size (m ³ d / gpd) | 1.9 / 500 | 1.9 / 500 | 1.9 / 500 | 4.5 / 1200 | 13.6 / 3600 | 36.3 / 9600 | 54.5 / 14400 | 82 / 21600 | 114 / 30000 |
| Recovery | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% | 50 - 75% |
| Concentration Rate (gpm) | 0.07 | 0.14 | 0.21 | 3.10 | 3.10 | 6.50 | 6.90 | 9.60 | 12.80 |
| Recycle Rate (gpm) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Supply Rate (gpm) | 1.7 | 1.7 | 1.7 | 3.8 | 5.1 | 11.7 | 13.9 | 20.0 | 26.7 |
| RO Pump Design Flow (gpm) | 1.7 | 1.7 | 1.7 | 3.8 | 5.1 | 11.7 | 13.9 | 20.0 | 26.7 |
| RO Pump Design Pressure (psi) | 450.0 | 679.0 | 807.0 | 950.0 | 1050.0 | 1050.0 | 1050.0 | 1050.0 | 1050.0 |
| RO Motor H.P. (60 Hz) | 2.0 | 2.0 | 5.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 |
| RO Motor KWH @ Flow | 0.58 | 0.88 | 1.04 | 2.75 | 4.08 | 9.35 | 11.11 | 20.00 | 24.80 |
| CIP Pump Design Flow (gpm) | 10 | 10 | 10 | 10 | 20 | 20 | 20 | 30 | 30 |
| CIP Pump Design Pressure (psi) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| CIP Motor H.P. (60 Hz) | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 |
| CIP Motor KWH @ Flow | 0.91 | 0.91 | 0.91 | 0.91 | 1.83 | 1.83 | 1.83 | 2.74 | 2.74 |
| Chemical Pretreatment | Optional | Optional | Optional | Optional | Required | Required | Required | Required | Required |
| Membrane Elements | | | | | | | | | |
| Diameter (in / cm) | 4 / 10.16 | 4 / 10.16 | 4 / 10.16 | 4 / 10.16 | 4 / 10.16 | 4 / 10.16 | 4 / 10.16 | 4 / 20.32 | 8 / 20.32 |
| Number | 1 | 1 | 1 | 2 | 3 | 8 | 12 | 18 | 6 |
| Array | 1-0 | 1-0 | 1-0 | 1-1 | 3-0 | 2*4 | 2*6 | 3*6 | 6-0 |
| Connections NPS & DN | | | | | | | | | |
| Inlet (in / mm) | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 3/4 - 20 | 3/4 - 20 | 1 - 25 | 1 - 25 | 1 - 25 |
| Permeate (in / mm) | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 3/4 - 20 | 1 - 25 | 1 - 25 |
| Concentration (in / mm) | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 1/2 - 15 | 3/4 - 20 | 3/4 - 20 |
| Estimated Footprint | | | | | | | | | |
| Height (in / cm) | 30 / 76 | 30 / 76 | 30 / 76 | 30 / 76 | 36 / 91 | 36 / 91 | 60 / 152 | 60 / 152 | 60 / 152 |
| Width (in / cm) | 48 / 122 | 48 / 122 | 48 / 122 | 48 / 122 | 48 / 122 | 166 / 422 | 246 / 625 | 246 / 625 | 246 / 625 |
| Depth (in / cm) | 24 / 61 | 24 / 61 | 24 / 61 | 24 / 61 | 24 / 61 | 24 / 61 | 30 / 76 | 30 / 76 | 30 / 76 |
| Estimated Weight | | | | | | | | | |
| Shipping (lbs / Kgr) | 245 / 111.2 | 245 / 111.2 | 245 / 111.2 | 270 / 122.5 | 305 / 138.3 | 405 / 184 | 445 / 202 | 525 / 239 | 730 / 330 |
| Installed (lbs / Kgr) | 204 / 92.5 | 204 / 92.5 | 239 / 108.4 | 239 / 108.4 | 297 / 134.7 | 321 / 145.6 | 455 / 206.4 | 526 / 238.6 | 601 / 272.6 |

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