

FACT SHEET

MSWRO 50000 GPD ÔÛP VÔË ÒÛZ ÒÖÁ SOLAR LOW ENERGY CONSUMPTION

REF: MSWRO-0050CS

LOW PWR CONSUMPTION

We use the most efficient energy recovery unit with average power consumption of 0 Kwh/1000 gallons during daytime and 7 KwHr/1000 gallons at night.

NETWORK READY

We provide an Ethernet port in our PLC so you can connect and pull all the information you need. Remote monitoring is also available through router connection.

LOW NOISE

We use low rpm motor for the RO pump. This substantially reduces the noise level making the systems surroundings a much better place to work.

CONTAINERIZED:

The system is built inside the standard ISO 20 feet acoustic and thermal isolated container proving a robust and reliable housing for the delicate equipment inside and expediting the deployment and commissioning of the system substantially.

SOLAR:

System is able to operate 100% with solar energy during daytime, and if require to run with AC power during night time automatically. No large battery rack is required



DESCRIPTION:

Single pass, single stage, three pressure vessels total. Each pressure vessel contains 4 thin-film composite elements in series for a total of 12. The system produces 190 m3/day (50000 GPD or 34.7 gpm) of product water at 45% recovery.

OPERATING PARAMETERS:

- TDS..... 37,000-45,000 mg/l (as NaCl)
- SDI15..... < 3.0
- Temperature..... 25 to 35°C (77 to 95°F)
- Recovery 40 to 45%
- Nominal Rejection >98%
- Incoming Power..... 480/380Hz 60/50Hz
- Power Consumption..... 4-7 KwHr/KGal

Note: Required 3bar (45psi) minimum customer supplied pressure to high pressure RO Feed Pump. Temperatures and high salinities will reduce system productivity

- This specification defines the integrated design requirements for the Solar Seawater line containerized systems for the industrial, power and municipal markets.
- All necessary equipment required for independent operation is provided given the necessary pretreatment precautions are taken.
- Design basis includes containerized systems with a duplex centrifugal pump as well as a containerized media filter and cartridge filter system.
- Optional configurations are available based on market needs.

COMPONENTS:

- Container designed for overseas transportation
- High Pressure Centrifugal RO Feed Pump w/ 400/460V 3 phase 50/60 Hz TEFC motor
- Energy Recovery Device
- VFD for RO Pump & RO Feed Pump
- Digital flowmeters
- PLC
- Pressure switches: High and low
- Isolation butterfly valves
- Integral permeate flush and CIP system

CONTROL AND POWER:

- PLC with Ethernet card and spare cards
- 6-inch HMI
- Remote start/stop & alarm capabilities
- Zero recovery flush on shutdown
- Power: 400/460V, 3 phase, 50/60Hz

Service Features and Benefits

TECHNICAL SUPPORT

Commissioning, Start-up, operators training, maintenance training, retrofits and modernization are available.

ZERO DOWNTIME

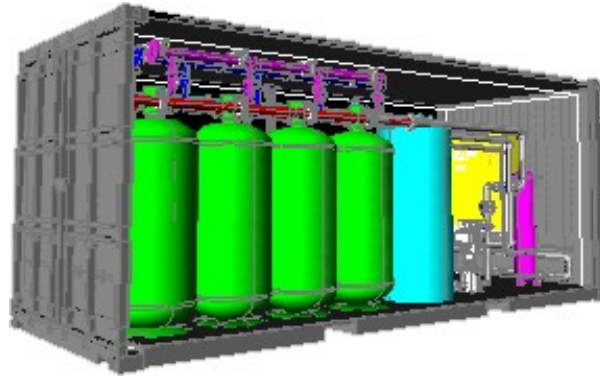
We supply all the basic two-year critical spare parts with our units. Also, we use very well-known and proven components in all of our systems.

TURNKEY SOLUTIONS

We can provide the basic RO systems plus all pretreatment and post treatment such us:

- Chemical injection systems
- Multimedia systems.
- Calcite contact tanks
- Ozono generators
- UV disinfection
- H2S removal

For more information on any of our products or services please visit us on the Web at:
www.advances.com



MEMBRANE AND HOUSINGS

- Multi Ported FRP pressure vessel design, 1000psi rated
- Spiral wound thin film composite membranes 99.5% nominal salt rejection.

MATERIALS OF CONSTRUCTION

- Power Distribution PanelsNEMA 12
- Control Enclosure NEMA 12
- High pressure pipingSuper Duplex SS
- Low pressure pipingPVC Sch 80
- Low Pressure Tubing..... Polyethylene
- High Pressure Tubing.....Parflex
- Pressure vessel rack.....Marine- anodize- Aluminum
- PVC Sample Valves on each vessel, feed, permeate and reject
- Multimedia FiltersFRP

OPTIONALS

- ASME Code stamped pressure vessels
- Post-treatment degasified
- 400 V, 3 Ph, 50 Hz fuse, A/C, Lighting kit
- pH meter and H2SO4 chemical feed
- NaOCl pretreatment chemical feed
- SBS chemical feed
- Installation and commissioning
- Supervision/services are available

INSTRUMENTS:

- Conductivity..... Permeate, Final product.
- Flow meters digital..... Feed and Permeate.
- Pressure switch.....RO Feed and discharge pump
- Pressure gauges.....Liquid filled for high and low pressures

ALARMS:

- Low pump suction pressure
- High pump pressure discharge
- Permeate water quality
- Low permeate flow
- High permeate flow
- Low reject flow
- Low/high voltage
- Phase protection
- Pump motor overload
- High membrane feed pressure
- Chemical tank protection level
- Flush storage tank level protection

PHYSICAL DATA & DIMENSIONS:

- Dry Weight: 18500 lbs (8392Kg)
- Dimensions Container 240" x 96" x 96".
- Piping Connections:
Feed 2-1/2"
Permeate 1 -1/2"
Reject 2"
- Power consumption:
0 Kwh/1000 Gallons. – Daytime
7.1 Kwh/1000 Gallons. – Nighttime