

## **LitePure<sup>®</sup> - Sea Water Reverse Osmosis**

**TDS<30000**

*As a result of the world water crisis, countries, global organizations and even individuals are actively seeking solutions for potable water.*

*As world populations require clean water, the demand for water reclamation and purification is a growing need worldwide.*

***LitePure<sup>®</sup>** is a compact skid mounted fully automated Sea Water Reverse Osmosis system, designed to provide pure water, free of all solids, dissolved minerals, impurities, chemicals, bacteria and viruses.*

***LitePure<sup>®</sup>** treated water meets the World Health Organization (WHO) guidelines for drinking water quality.*

**The following are just a few of the applications that benefit from the use of reverse osmosis water:**

- ✚ Small Municipalities
- ✚ Chemical Manufacturing
- ✚ Heavy / Light Industry
- ✚ Mining Industry
- ✚ Emergency Relief
- ✚ Hospitals - Dialysis facilities  
& Boiler Feed water
- ✚ Electronics Manufacturing
- ✚ Food / Beverage Production
- ✚ Bottled Water
- ✚ Ice-Making
- ✚ Pharmacy Industry
- ✚ Agriculture & Irrigation

## Technical Data

- *Operating pressure (3 years membrane age):* 50-70 bar (725-1015 psi)
- *Minimum feed pressure :* 2 bar (29 psi)
- *Operating Temperature:* 15 to 25°C (59 to 77°F)
- *Maximum inlet free chlorine:* <0.1 mg/l
- *Maximum inlet Silt Density Index:* 3 SDI
- *Turbidity:* <1 NTU
- *Nominal TDS reduction:* 98%-99%
- *Nominal Recovery Rate Product/Feed:* 40%
- *Performance and operation based on inlet feed of:* 30000 ppm TDS
- *Standard Electrical Power:* 3 Phase / 400-460VAC/50-60Hz

## Metric Units

| Catalog No. | Design Capacity   |                   | Element Quantity | RO Feed | RO Reject | Operating Pressure | Pump Power | System Piping Connections |          |        |
|-------------|-------------------|-------------------|------------------|---------|-----------|--------------------|------------|---------------------------|----------|--------|
|             | m <sup>3</sup> /h | m <sup>3</sup> /d |                  |         |           |                    |            | Inlet Feed                | Permeate | Reject |
|             |                   |                   |                  |         |           |                    |            |                           |          |        |
| LPSW9001    | 1.0               | 24.0              | 9                | 2.5     | 1.5       | 55.5               | 4.5        | 1"                        | 1"       | 1"     |
| LPSW9003    | 3.0               | 72.0              | 5                | 7.5     | 4.5       | 56.8               | 12.6       | 1½"                       | 1"       | 1"     |
| LPSW9005    | 5.0               | 120.0             | 10               | 12.5    | 7.5       | 54.0               | 20.0       | 2"                        | 1½"      | 1½"    |
| LPSW9008    | 8.0               | 192.0             | 15               | 20      | 12        | 55.0               | 30.7       | 2"                        | 1½"      | 1½"    |
| LPSW9010    | 10.0              | 240.0             | 20               | 25      | 15        | 54.0               | 34.5       | 3"                        | 2"       | 2"     |
| LPSW9015    | 15.0              | 360.0             | 30               | 37.5    | 22.5      | 54.0               | 51.7       | 3"                        | 2"       | 2"     |
| LPSW9020    | 20.0              | 480.0             | 40               | 50      | 30        | 54.5               | 69.3       | 4"                        | 3"       | 3"     |

## U.S Units

| Catalog No. | Design Capacity |        | Element Quantity | RO Feed | RO Reject | Operating Pressure | Pump Power | System Piping Connections |          |        |
|-------------|-----------------|--------|------------------|---------|-----------|--------------------|------------|---------------------------|----------|--------|
|             | GPM             | GPD    |                  |         |           |                    |            | Inlet Feed                | Permeate | Reject |
|             |                 |        |                  |         |           |                    |            |                           |          |        |
| LPSW9001    | 4.4             | 6.34K  | 9                | 11      | 6.6       | 805.0              | 6.0        | 1"                        | 1"       | 1"     |
| LPSW9003    | 13.2            | 19.0K  | 5                | 33      | 19.8      | 824.0              | 17         | 1½"                       | 1"       | 1"     |
| LPSW9005    | 22.0            | 31.7K  | 10               | 55      | 33        | 784.0              | 26.8       | 2"                        | 1½"      | 1½"    |
| LPSW9008    | 35.0            | 50.7K  | 15               | 88      | 53        | 798.0              | 41.2       | 2"                        | 1½"      | 1½"    |
| LPSW9010    | 44.0            | 63.4K  | 20               | 110     | 66        | 784.0              | 46.3       | 3"                        | 2"       | 2"     |
| LPSW9015    | 66.0            | 95.1K  | 30               | 165     | 99        | 784.0              | 69.5       | 3"                        | 2"       | 2"     |
| LPSW9020    | 88.0            | 126.8K | 40               | 220     | 132       | 790.5              | 93.0       | 4"                        | 3"       | 3"     |

## Features

### Skid Assembly

The membrane systems are skid mounted, including all elements. This enables fast and easy installation with minimum ground space. Designed to stand corrosion. The skid frame is powder coated.

### Pre-Filtration.

Water prior to membrane entrance will go through a 5 micron filter stored in 316 stainless steel housing.

### Pre-Treatment Systems

- Inlet feed anti scalant chemical addition.

### Pressure Pump

- Multi-stage type, constructed of 316 SST & Duplex SST
- HPB energy recovery device

### Pressure Vessels

FRP pressure vessels.

### Membrane Elements

Spiral-wound configuration. Minimum salt rejection 99.6%. Maximum operation temperature 45°C.

### Instrumentation

Optimal monitoring instrumentation, panel mounted.

- Pressure gauges on micron filter and RO vessels
- Pump discharge pressure switch
- Inlet magnetic water meter (optional)
- Concentrate flow meter
- Permeate conductivity controller
- VFD (variable frequency driver)

### System Control

The system is fully automated, controlled by GE programmable logic controller (PLC) and operating display. The control board also includes operator switches, push buttons, and status and alarm indication lights.

The system will indicate:

- Low inlet pressure.
- High pump discharge pressure.
- High permeate conductivity.
- Feed water flush at shutdown.

### System piping and valves

Low pressure piping and valves are schedule 40 PVC material.

High pressure piping and valves are 316 stainless steel (alternative material of construction is available upon request).

For pressure and flow control the following valves are standard:

- Solenoid controlled inlet valve for shutdown.
- Sampling valves on every pipe.
- Pre/post micron cartridge filter and membrane, isolation valve for maintenance operation.

## Optional Equipment

### Machine Hardware

- 316 SST micron cartridge filter housing.
- Compressed air unit.

### Instrumentation

- pH indicator , digital display
- turbidity indicator , digital display
- Silt Density Index (SDI) indicator , digital display

### Pre-Treatment Systems

- Multi media filters.
- Activated carbon filters.
- Water softening systems.
- Inlet feed dechlorination chemical addition.
- Turbidity monitoring and management.

### Post-Treatment Systems

- Hardening – mineral recovery.
- UV sterilization / chlorination.
- Degasser for pH correction.

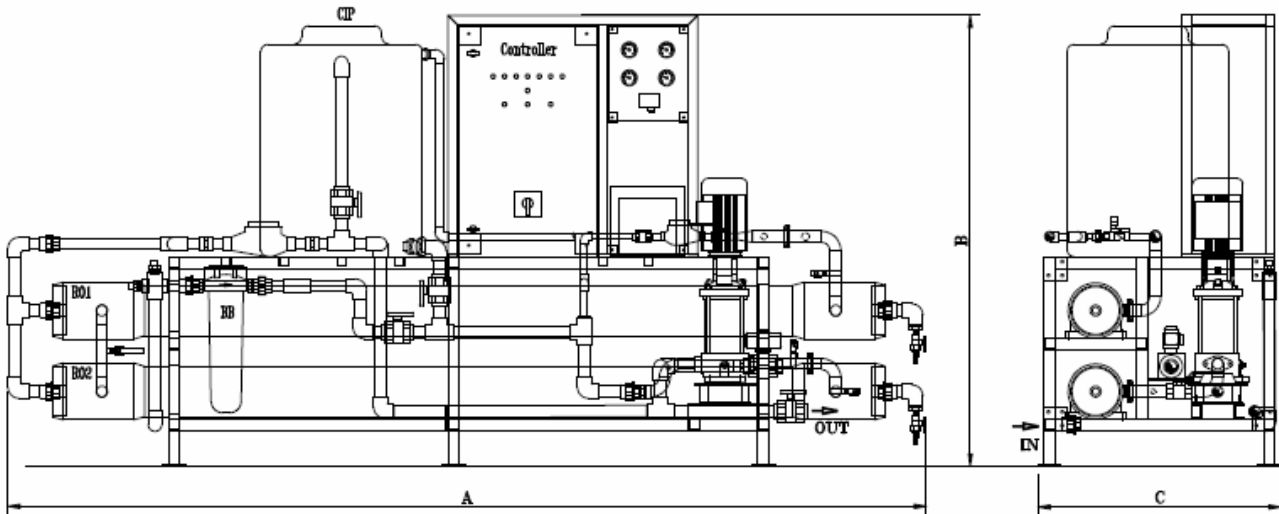
### CIP System

A separate CIP system is supplied and is used when required to remove fouling on membranes.

## **Benefits**

- Complete efficient reverse osmosis system available in one compact package.
- Fast and easy installation.
- Recovery rate of 45%.
- 24/7 fully automated system.
- High quality components ensure reliability and low operating costs.
- All components are weather-proof.

## **LITEPURE® Dimensions and Weights**



## **Metric Units / US Units**

| Model No. | Dimensions |      |            |      |           |      |                |      |
|-----------|------------|------|------------|------|-----------|------|----------------|------|
|           | Length (A) |      | Height (B) |      | Width (C) |      | Approx. Weight |      |
|           | Meter      | Feet | Meter      | Feet | Meter     | Feet | kg             | lb   |
| LPSW9001  | 5          | 16.5 | 2          | 6.6  | 1         | 3.3  | 795            | 1753 |
| LPSW9003  | 5          | 16.5 | 2          | 6.6  | 1         | 3.3  | 590            | 1300 |
| LPSW9005  | 5          | 16.5 | 2          | 6.6  | 1         | 3.3  | 965            | 2128 |
| LPSW9008  | 5          | 16.5 | 2          | 6.6  | 1         | 3.3  | 1650           | 3638 |
| LPSW9010  | 5          | 16.5 | 2          | 6.6  | 1         | 3.3  | 2150           | 4740 |
| LPSW9015  | 6          | 19.7 | 2          | 6.6  | 1.5       | 5.0  | 2570           | 5666 |
| LPSW9020  | 8          | 26.3 | 2          | 6.6  | 1.5       | 5.0  | 3300           | 7275 |

**8 Martin Gehl St., POB 3137, Kiryat-Arye, Petach-Tikva 49130, Israel,  
Tel. 972-3-9258503, Fax. 972-3-9214515, E-mail: [odis@odisfiltering.com](mailto:odis@odisfiltering.com)**