

# BRACKISH WATER REVERSE OSMOSIS SYSTEM

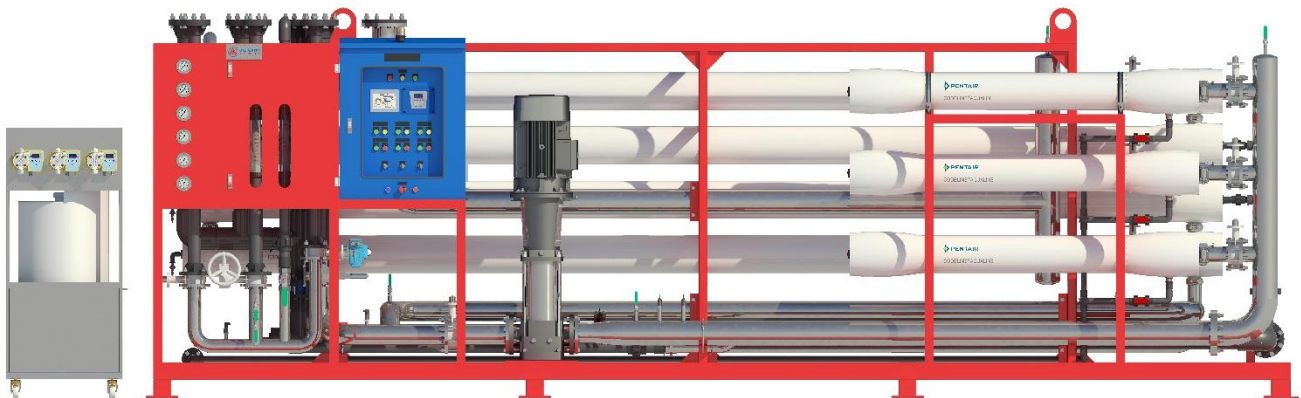
## ADES-BRO8 Series

**Model**  
**ADES-BRO8-070**

### GENERAL INFORMATION

With the state of art technology, ATS has always in place decades of expertise to build a robust and reliable Reverse Osmosis system for the challenging markets. Using RO membrane from LG Chem NanoH<sub>2</sub>O with Core technology.

Thin-film-Nano-Composite (TFN) instead of conventional technology Thin-Film-Composite (TFC). TFN gives higher performance compared to TFC regards to Flow rate, salt rejection and operating pressure.



\*The above photo of ADES-BRO8-070 is for illustration purpose only.

### ADES-BRO8-070 system includes:

- ✓ Vertical multistage pump with IE3 motor & VFD.
- ✓ 8" TFN spiral wound RO membrane (LG Chem NanoH<sub>2</sub>O).
- ✓ 5µm cartridge pre-filter (Aqualine – Pentair).
- ✓ Low pressure piping: uPVC, Sch80 with NSF / ANSI certificate.
- ✓ High pressure piping: SUS316, Sch5.
- ✓ PLC & HMI 7" control panel.
- ✓ SS400 with 3 layers epoxy coated steel skid frame.
- ✓ FRP membrane housing (Codeline – Pentair).
- ✓ Automatic control with electric valves.
- ✓ Permeate, Concentrate & Recirculation flow indicators.
- ✓ Pressure sensors & pressure gauges.
- ✓ ORP, EC meters & controllers.
- ✓ Connection with JIS10K Flange.
- ✓ 380 – 415V / 3Phase / 50Hz power supply.
- ✓ Anti-scalant dosing pre-filled with 1 pail (SpectraGuard 360 – PWT chemical).

### Available Options

- Membrane cleaning skid (CIP).
- pH sensors added.
- High rejection membrane elements.
- Feed / Permeate blending.
- DIN / ANSI flange connection.
- SUS304 / SUS316 skid frame.

### System Features / Benefits

- Easy to operate, plug and play system.
- Fully automated system.
- Optimized footprint.
- Designed to fit in a high cube container.
- High permeability at low feed pressure.
- Significantly reducing operating costs.

## Cartridge Filter

|                          |                            |
|--------------------------|----------------------------|
| Housing Model            | AQUALINE<br>80AQ15-60 (NC) |
| Operating Pressure (bar) | 10.3                       |
| Material                 | FRP                        |
| Filter Element Model     | AL05-60B                   |
| Length (inch)            | 60                         |
| Media Efficiency (µm)    | 5 (Nominal)                |
| Material                 | PP                         |

## RO Membrane Specifications

|   |              |
|---|--------------|
| Membrane Model                            | LG BW 400 ES |
| Effective Membrane Area (m <sup>2</sup> ) | 37           |
| Diameter x Length (inch)                  | 8 x 40       |
| Stabilized Salt Rejection (%)             | 99.6         |
| Feed Spacer (mil)                         | 34           |
| Filtration Flux (LMH)                     | Up to 27     |

## Feed water quality<sup>1</sup>

|                                  |        |
|----------------------------------|--------|
| SDI                              | ≤ 5    |
| Oil & Grease (mg/L)              | ≤ 0.1  |
| TOC (mg/L)                       | ≤ 3    |
| COD (mg/L)                       | ≤ 10   |
| Free Chlorine (mg/L)             | ≤ 0.1  |
| Fe <sup>2+</sup> (mg/L)          | ≤ 4    |
| Fe <sup>3+</sup> , Mn, Al (mg/L) | ≤ 0.05 |

<sup>1</sup>Please contact us if the feed water source is worse than the above standard.

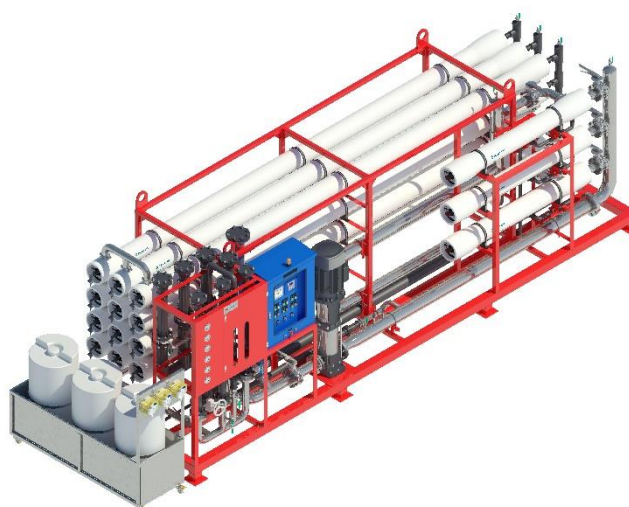
## System and Operating Configuration

|  |                    |
|--|--------------------|
| Model                                    | ADES-BRO8-070      |
| No. of Membranes                         | 90                 |
| No. of Pressure Vessel                   | 18                 |
| Dimension <sup>2</sup><br>L x W x H (mm) | 7700 x 2400 x 3000 |
| Approx. Weight (kg)                      | 6610               |
| Permeate Flow (m <sup>3</sup> /h)        | 70 - 80            |
| Recovery (%)                             | 75 (±5)            |

<sup>2</sup>The dimensions of the system may vary and subject to change without prior notice.

## Mechanical Connections (Flange)<sup>2</sup>

|                      |               |
|----------------------|---------------|
| Feed Port            | DN150<br>(6") |
| Off-spec Port        | DN125<br>(5") |
| Permeate Port        | DN125<br>(5") |
| Concentrate Port     | DN65<br>(2½") |
| Drain Port           | DN25<br>(1")  |
| Pressure Vessel Type | Multi-port™   |



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