

# BRACKISH WATER REVERSE OSMOSIS SYSTEM

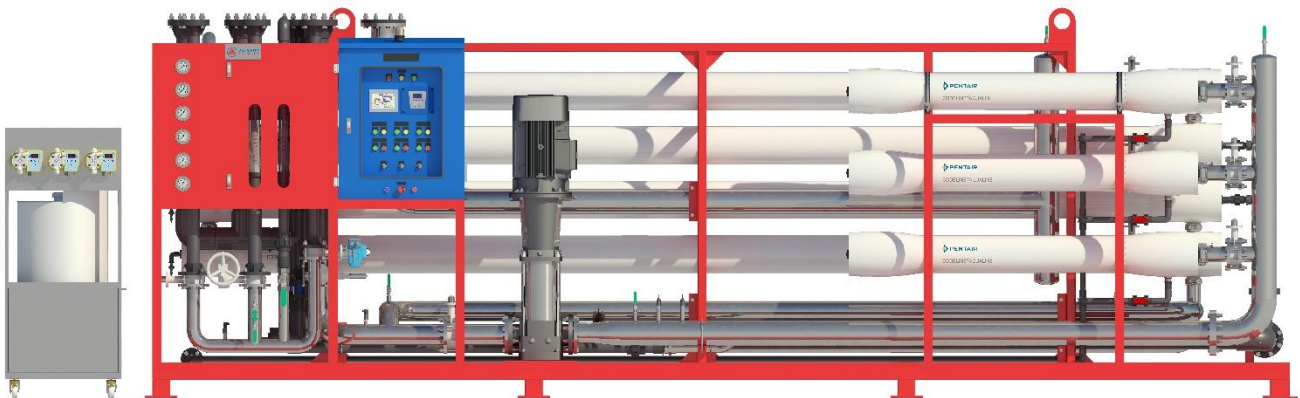
## ADES-BRO8 Series

**Model**  
**ADES-BRO8-020**

### 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-BRO8-020 is for illustration purpose only.

### ADES-BRO8-020 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 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.

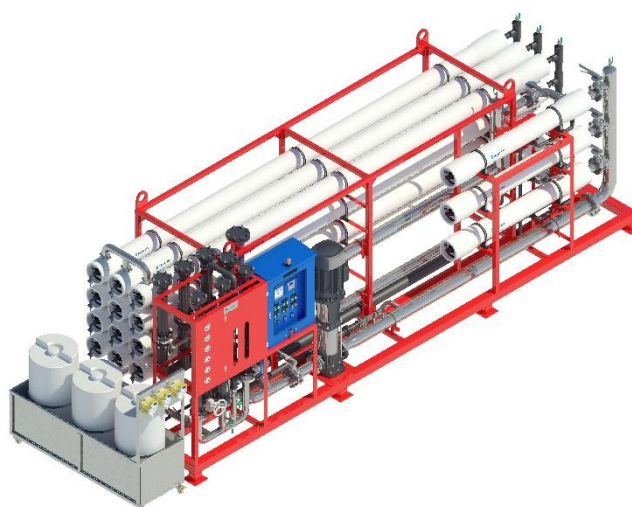
## System and Operating Configuration

Model	ADES-BRO8-020
No. of Membranes	24
No. of Pressure Vessel	6
Dimension <sup>2</sup> L x W x H (mm)	6100 x 1600 x 2500
Approx. Weight (kg)	2470
Permeate Flow (m <sup>3</sup> /h)	16 - 20
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	DN80 (3")
Off-spec Port	DN65 (2½")
Permeate Port	DN65 (2½")
Concentrate Port	DN40 (1½")
Drain Port	DN25 (1")
Pressure Vessel Type	Multi-port™



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