



## ATS WATER TECHNOLOGY

ADVANCED TECHNOLOGY SOLUTIONS  
EXPERT IN WATER TREATMENT

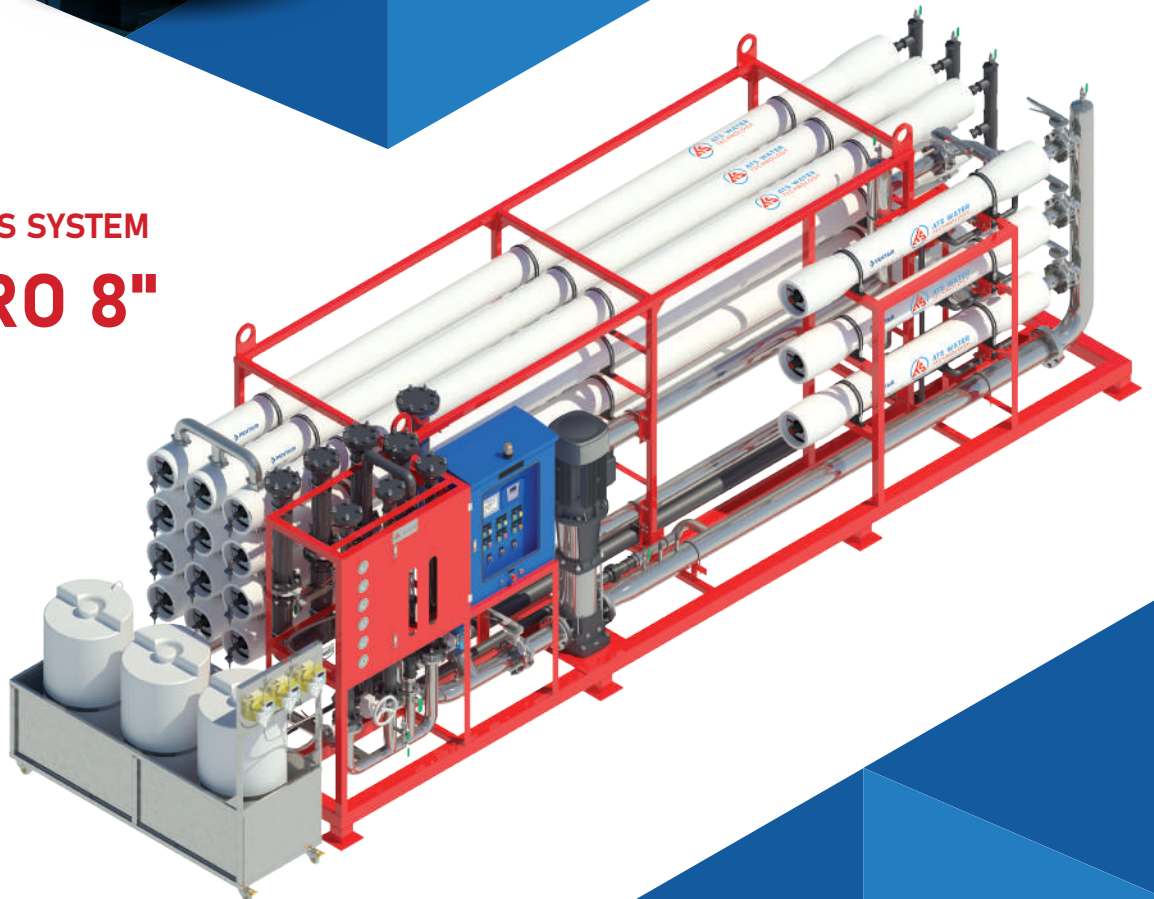


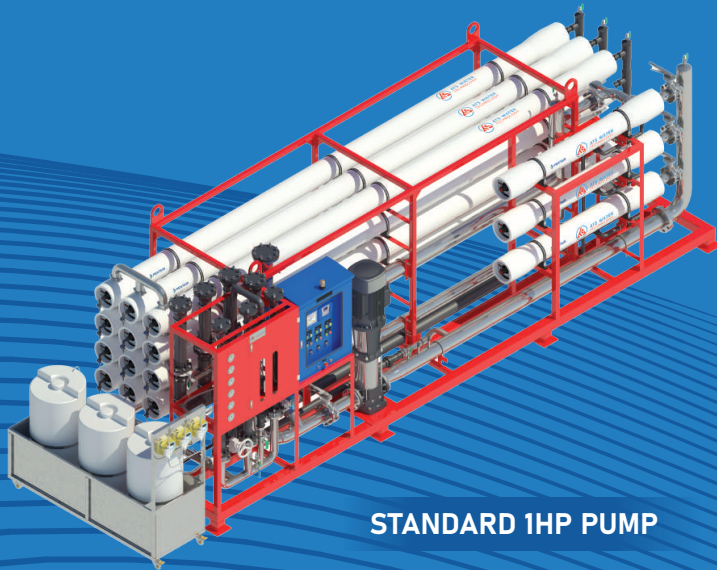
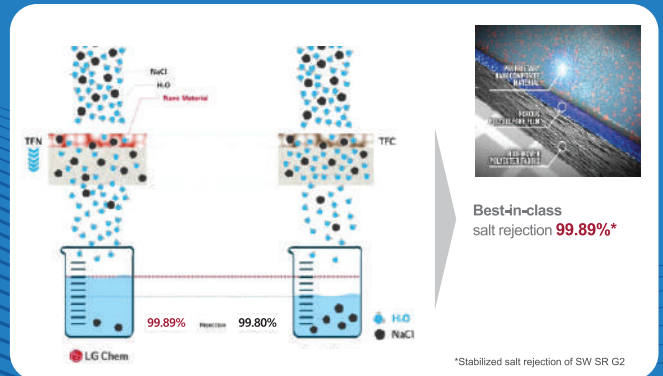
HI-END PRODUCTS - MODERN TECHNOLOGIES - PROFESIONAL SERVICES



REVERSE OSMOSIS SYSTEM

## ADES BRO 8" Series



**Core Technology: Thin Film Nanocomposite (TFN)**  
 Performance comparison between TFN vs. TFC (Thin-Film Composite)

**STANDARD 1HP PUMP**


## COMMERCIAL REVERSE OSMOSIS SYSTEMS

### Capacity: 5 - 100 m<sup>3</sup>/h and above

With the state of art technology, ATS has always in pursuit, we put in place decades of expertise and experiences to build a robust and reliable Reverse Osmosis (RO) 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.

### Standard Features

- » Multistage High pressure pump with VFD
- » 8" TFN spiral wound RO membrane - LG Chem NanoH<sub>2</sub>O
- » 5 micron cartridge filter - AQUALINE Pentair
- » Piping: Low pressure - uPVC Sch80 NSF Certification, High pressure: SUS316 Sch5
- » PLC & HMI 7" control panel with SS400 powder coated IP54 enclosure
- » Automatic hourly flushing with auto-valve
- » Liquid filled pressure gauges (panel mount)
- » FRP RO Pressure Vessel - CODELINE Pentair
- » Manual valves & accessories
- » Permeate, Concentrate & Recirculation flow indicators
- » High & Low pressure sensors
- » ORP meter & controller
- » Permeate conductivity monitor
- » SS400 with 3 layers epoxy coated steel skid frame
- » Connection with JIS-10K Flange
- » 380-415V/3Ph/50Hz power supply
- » Anti-scalant dosing pre-filled with 1 pail of PWT Chemical-USA

### Available Options

- » CIP skid
- » pH adjustment (can be for feed or permeate)
- » Online feed water conductivity monitor
- » Feed pump
- » Feed/Permeate blending
- » Water meter/Pulse water meter for dosing pump control
- » DIN/ANSI Flange Connection
- » SUS304/SUS316 Skid frame, SUS304/SUS316 Sch10 piping

### Operation

- » Operating pressure: 100-250psi (6.8-17bar)
- » Feed pressure for AQUALINE pretreatment >2 bar
- » Design recovery rate: 75% (+5%)
- » Design pH: 7 at 25°C
- » Max. feed water temperature: 45°C
- » Operating | cleaning pH range: 2-11 | 2-12
- » The higher feed TDS, the lower recovery rate
- » Design feed water TDS: <1000ppm
- » For higher TDS, system should be upgraded

### Feed Water Quality Recommendation

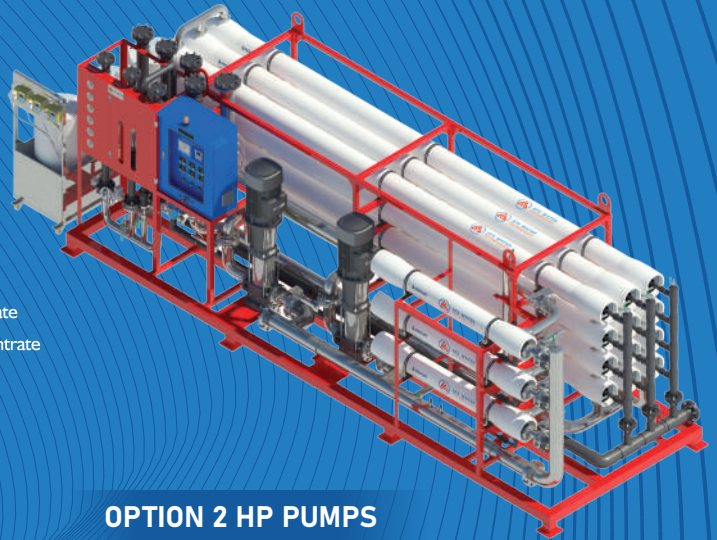
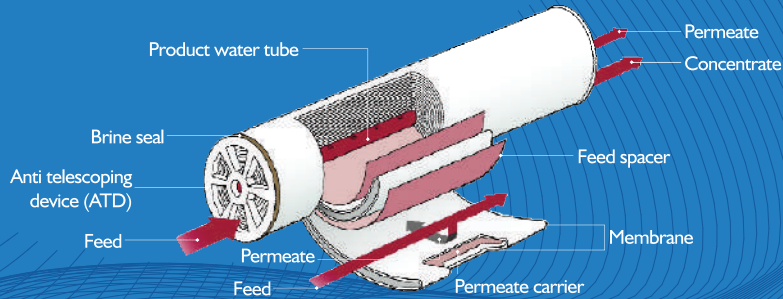
Component	Unit	Max Level
SDI	1	5
Oil & Grease	mg/L	0.1
TOC	mg/L	3
COD	mg/L	10
AOC	ug/l Ac-C	10
Free Chlorine	mg/L	0.1
Ferrous Iron	mg/L	4 (pH < 6, O <sub>2</sub> < 0.5ppm)
Ferric Iron	mg/L	0.05
Manganese	mg/L	0.05
Aluminum	mg/L	0.05

THE SYSTEM DESIGNED FOR CITY WATER APPLICATIONS OR SIMILAR.

PLEASE CONTACT US FOR OTHER WATER QUALITY OR APPLICATIONS

# ADES BRO 8" Series

## Principle of RO Membrane: Spiral Wound Element Construction



OPTION 2 HP PUMPS

## COMMERCIAL REVERSE OSMOSIS SYSTEMS

### Capacity: 5 - 100 m<sup>3</sup>/h and above

RO system nowadays is being applying commonly in drinking water treatment system to ensure purewater to supply in the building service, factory production, drinking water and so on. The RO system was designed for easy operation and maintenance purpose.

### Other solutions can be offered together with this RO system

- » Pre-treatment with UF
- » Post-treatment with EDI
- » Post-treatment with chemical dosing

### Applications

- » Pure-water
- » Drinking water
- » Special design for city water or Building service water

### Documents (will be provided with Order)

- » Operation & Maintenance Manual
- » P&ID and system drawings with piping, instruments & sizing

ATS supplies a full line of standard and fully customizable RO systems, that may include 8" BWRO, SWRO or 4" BWRO with variable application from city water, well water, brackish water, wastewater reuse or sea water.

### Solutions for wastewater reuse

- » UF protection with Auto-selfcleaning strainer/disc filter
- » Pre-treatment with UF
- » Using anti-fouling RO membrane (AFR)
- » Post-treatment with EDI
- » Post-treatment with chemical dosing

### Solutions for Sea Water Desalination

- » UF protection with Automatic self cleaning strainer/disc filter
- » Pre-treatment with UF
- » RO system with Sea water membrane (SWRO)
- » 2<sup>nd</sup> pass RO system with Brackish water membrane (BWRO)
- » Post-treatment with EDI
- » Post-treatment with chemical dosing



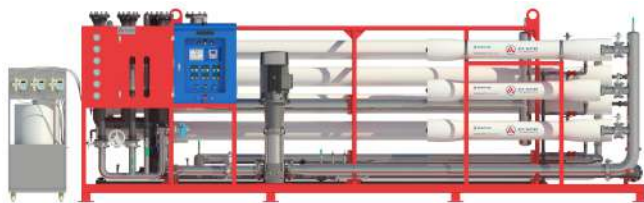
ATS WATER  
TECHNOLOGY



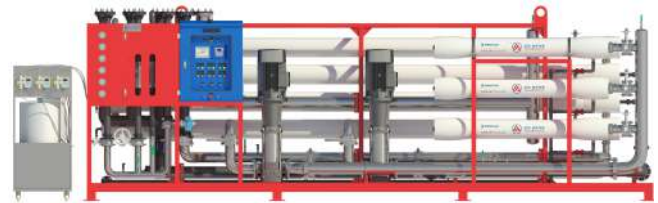
## ADES BRO 8" MODELS (50Hz)

Model	RO System Configuration (Elements/PV)	Total 8" membrane	Capacity (m <sup>3</sup> /h)	<sup>1</sup> Recommended capacity m <sup>3</sup> /h	Feed / Permeate / Concentrate / Off-spec Connections, (DN)	Approx. Dimensions (LxWxH)m	Approx. weight (kg)
ADES-BR08-007	2-1 (3)	09	5-7	7	50/40/25/40	5.0 x 1.3 x 2.4	1330
ADES-BR08-010	2-1 (4)	12	8-10	10	65/40/25/40	6.0 x 1.3 x 2.4	1640
ADES-BR08-015	4-2 (3)	18	12-15	15	80/50/32/50	5.0 x 1.6 x 2.5	2070
ADES-BR08-020	4-2 (4)	24	16-20	20	80/65/40/65	6.1 x 1.6 x 2.5	2470
ADES-BR08-030	6-3 (4)	36	25-30	30	100/80/50/80	6.2 x 1.9 x 2.6	3240
ADES-BR08-040	6-3 (5)	45	35-40	40	125/80/50/80	7.2 x 1.9 x 2.2	3910
ADES-BR08-050	8-4 (5)	60	45-55	50	125/100/65/100	7.3 x 2.0 x 2.2	4760
ADES-BR08-060	10-5 (5)	72	56-65	60	125/100/65/100	7.5 x 2.2 x 2.6	5730
ADES-BR08-070	12-6 (5)	84	70-80	70	150/125/65/125	7.7 x 2.4 x 3.0	6610
ADES-BR08-100	16-8 (5)	120	90-100	100	150/125/80/125	7.9 x 2.8 x 3.0	8360

<sup>1</sup> for city water (TDS<1000ppm, recovery 75%)



**STANDARD SYSTEM WITH 1 HP PUMP**



**OPTION WITH 2 HP PUMPS**

**For other flow rate and applications, please contact us for detail design and suitable offer.**

With other RO configurations, the model can be offered accordingly.

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