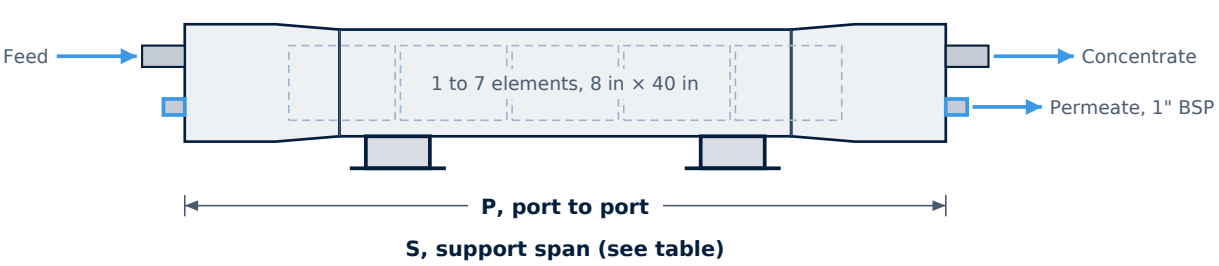
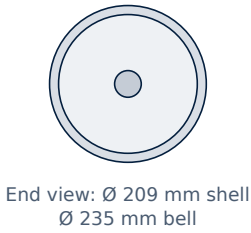
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Armaflux 80-300-EP

8-inch RO pressure vessel, 300 psi, end port · Datasheet

FRP pressure vessel for 8-inch spiral-wound RO and NF elements, Armaflux series. Design pressure 300 psi (20.7 bar), end entry, for 1 to 7 elements of 40-inch length. Feed and concentrate pass through the heads on 1.5-inch grooved ports, which keeps the shell wall uninterrupted and the skid narrow. For tap water, low brackish water and UF permeate.





End view: Ø 209 mm shell
Ø 235 mm bell

Rating

Design (maximum operating) pressure	300 psi (20.7 bar)
Factory hydrostatic test	330 psi (22.8 bar), 1.1 × design
Operating temperature	−7 to 65 °C
pH, continuous	3 to 11
pH, cleaning, under 30 minutes	2 to 12
Design basis	ASME Boiler and Pressure Vessel Code, Section X

Dimensions and connections

Elements	1 to 7 × 8 in × 40 in
Shell outside diameter	209 ± 2 mm
Shell inside diameter	202.2 ± 0.1 mm
Bell (head) diameter	235 ± 2 mm
Feed and concentrate	1.5-inch IPS pipe, grooved end, through the heads
Permeate	1-inch BSP female, both ends
Feed/concentrate port	SS304

Materials

Shell	Filament-wound epoxy/glass composite; head-locking grooves wound in, not machined
Bearing plate	Aluminium alloy, hard anodised
Sealing plate, port nut, thrust ring, adapter	Engineering thermoplastic
O-rings and seals	EPDM

Materials (continued)

Saddles	Engineering thermoplastic
Straps	SS304 with cushion
Exterior	White high-gloss polyurethane, RAL 9003
Retaining ring	SS304

* General-use limits. A project design may set more conservative values for the best performance and the longest service life.

Armaflux 80-300-EP lengths

Model	Elements	P, port to port	S, recommended span
80-300-EP-1	1	1,572 mm	676
80-300-EP-2	2	2,588 mm	1,656
80-300-EP-3	3	3,604 mm	2,674
80-300-EP-4	4	4,620 mm	1,845 × 2
80-300-EP-5	5	5,636 mm	2,355 × 2
80-300-EP-6	6	6,652 mm	2,865 × 2
80-300-EP-7	7	7,668 mm	3,300 × 2

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Installation and operation

- Mount the vessel centred on level supports at the span in the table, with the saddles and straps supplied. Tighten straps lightly; the shell must be free to grow under pressure.
- Connect feed, concentrate and permeate with flexible grooved couplings or hoses. Do not hang manifolds or valves from the vessel ports.
- Tighten the permeate port by hand, then no more than one further turn.
- Fit overpressure protection set at no more than 105 % of the design pressure. The vessel is not for vacuum service.
- Release all pressure before opening a head. Check that each retaining ring is fully seated before start-up.
- Flush with permeate before a long shutdown, and inspect heads and seals at every element change.

General notes

- Each vessel is supplied with heads, seals, element adapters and thrust ring for the element specified, plus two saddles and two straps (three for 4-element and longer vessels).
- Permeate side of the head is rated for 125 psi (8.6 bar) internal pressure. Design pressure applies at the maximum operating temperature.
- State with the order: model, number of elements, element make and model, and port configuration.
- Port-to-port length grows by 1,016 mm per element. The 5-element vessel weighs about 35 kg assembled.
- Theway standard limited warranty applies to vessels used within the stated pressure, temperature and pH limits and installed as described here.

Theway Membranes believes the information here to be accurate and offers it in good faith. Conditions of use are outside our control, and the user is responsible for checking that the product suits the application. This datasheet is not a contract specification; the order acknowledgement and drawings issued with it govern.

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Important information

Armaflux 80-300-EP RO pressure vessel datasheet. Read with every page of this document.

DOCUMENT	VERSION	RELEASED	PAGES	ISSUED BY
TWM-DS-ARMAFLUX-80-300-EP	**1.0**	**November 2026**	**3**	**Theway Membranes**

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