

RATING:

DESIGN PRESSURE/MAWP.....	450 PSI (3.10 MPa)
MAX. ALLOWABLE TEMP.....	120°F (49°C)
MIN. ALLOWABLE TEMP.....	20°F (-7°C)
FACTORY TEST PRESSURE.....	495 PSI (3.41 MPa)
BURST PRESSURE.....	2700 PSI (18.62 MPa)

INTENDED USE:

The CodeLine Model 80E45 Fiberglass RO Pressure Vessel is designed for continuous, long-term use as housing for reverse osmosis membrane elements to desalt typical brackish waters at pressures up to 450 psi. Any make of eight-inch nominal diameter spiral-wound element is easily accommodated; the appropriate interfacing hardware for the element specified is furnished with the vessel.

The CodeLine Model 80E45 must be installed operated and maintained in accordance with the listed precautions and good industrial practice to assure safe operation over a long service life.

The CodeLine Model 80E45 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code) Section X Edition 2025. F/C port, Bearing plate and Quick release spiral ring are designed as per ASME Section VIII Division I Edition 2025.

At small additional cost, vessels can be inspected during construction by an ASME Authorized inspector and ASME Code stamped.

The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell. The end closure, incorporating close fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the head.

The end closures, incorporating close-fitting, interlocking metal components, must be kept dry and free from corrosion; deterioration can lead to catastrophic mechanical failure of the heads.

Pentair will assist the purchaser in determining the suitability of this standard vessel for their specific operating conditions. The final determination however, including evaluation of the standard material of construction for compatibility with the specific corrosive environment, shall be the responsibility of the purchaser.

Specifications are subject to change without notice.

PRECAUTIONS:

- DO...read, understand and follow all instructions; failure to take every precaution will void warranty and may result in vessel failure
- DO...mount the shell on horizontal members at span “S” using complaint vessel supports furnished; tighten hold down straps just snug
- DO...provide overpressure protection for vessel set at not more than 105% of design pressure
- DO...inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion

- DO NOT... make rigid piping connections to ports or clamp vessel in any way that resists growth of fiberglass shell under pressure; ΔDIA = 0.02 in. (0.5mm) and ΔL = 0.2 in. (5mm) for a length code –8 vessel
- DO NOT... hang piping manifolds from ports or use vessel in any way to support other components; branch connection piping may be simply supported between the header and port; maximum weight of branch piping; feed/concentrate – 16 lbs (7 kg); permeate – 8 lbs (4 kg)
- DO NOT... operate vessel at pressures and temperatures in excess of its rating
- DO NOT... operate vessel without permeate ports internally connected with a complete set of elements and interconnecting hardware
- DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120°F (0.86 MPa at 49°C)
- DO NOT... overtighten the connection to the permeate port (hand-tighten plus one-quarter turn, check for leaks)
- DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way
- DO NOT... pressurize vessel until double-checking to verify that the retaining ring is completely inside the groove
- DO NOT... work on any component until first verifying that pressure is relieved from vessel
- DO NOT... operate outside the pH range 3-11.
- DO NOT...operate outside the pH range 2-12 for cleaning.
- DO NOT...exceed 43.2 hours in a year for cleaning with above mentioned pH range.

ORDERING: please check one

Using the chart below, please check the features you require and fax them with your purchase order to our customer service department for expedited processing. For optional materials and/or features not listed below, please consult factory for pricing and availability.

VESSEL LENGTH CODE – please check one

MODEL 80E45 ☐ -1 ☐ -2 ☐ -3 ☐ -4 ☐ -5 ☐ -6 ☐ -7 ☐ -8

MEMBRANE BRAND AND MODEL – please check one and fill in information

☐ Please supply adapters for the following membrane brand and specific model
Brand _____ Model _____

CERTIFICATION REQUIRED

- ☐ Hydro testing at 1.1 times the design pressure.
☐ **CE marked – MODULE-D1, CATEGORY-2**
☐ ASME Stamped and National Board Registered.

EXTERIOR FINISH – please check one

- ☐ White high-gloss polyurethane coating.
☐ Optional colors are available for 50 or more vessels per order.
Call factory for pricing details.

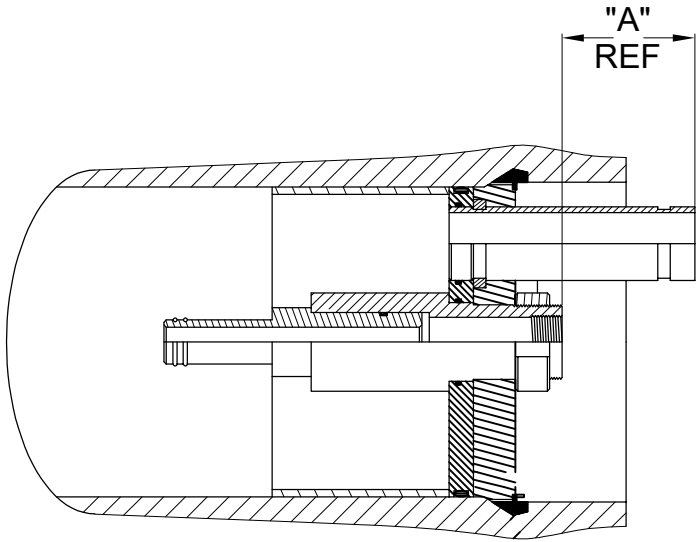
PERMEATE PORT OPTIONS

- ☐ Standard. 1” FNPT NORYL
☐ Optional. 1” BSPPF PVC

MATERIAL OPTIONS

- ☐ All materials as per drawing on the first page.
☐ Customer specified materials: -
(Please consult the factory, as these options will affect pricing and vessel lead-time.)

Please note that we require your membrane brand and model number when ordering. If this information is not initially available, you may provide it at a later date by checking the appropriate box below.



PERMEATE PORT PART NUMBERS & PERMPORT TO F/C PORT OFFSET DISTANCE			
SIZE	MATERIAL	FEMALE	
		PART NUMBER	DIM "A"
1"	PVC	96747	3.25

For complete information on proper use of this vessel please refer to the 80E series USER’S GUIDE Bulletin 523004.

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PENTAIR
CODELINE

VERNA, GOA
INDIA

DRAWN BY: DATE:	KK 10APR15	DRAWING DESCRIPTION: MODEL - 80E45 MEMBRANE HOUSING	DRAWING NO.: 99112	REV.: AF
CHECKED BY: DATE:	KPS 10APR15	CUSTOMER NAME: -	VESSEL MODEL: 80E45	
APPROVED BY: DATE:	MKS 10APR15	PROJECT NAME: -	TOTAL QTY: -	
PCO NO.:	548659	CUSTOMER P.O.#:	SIZE: A3	SCALE: NONE
REV. DATE:	27OCT25	-	PAGE NO.: 02 OF 02	