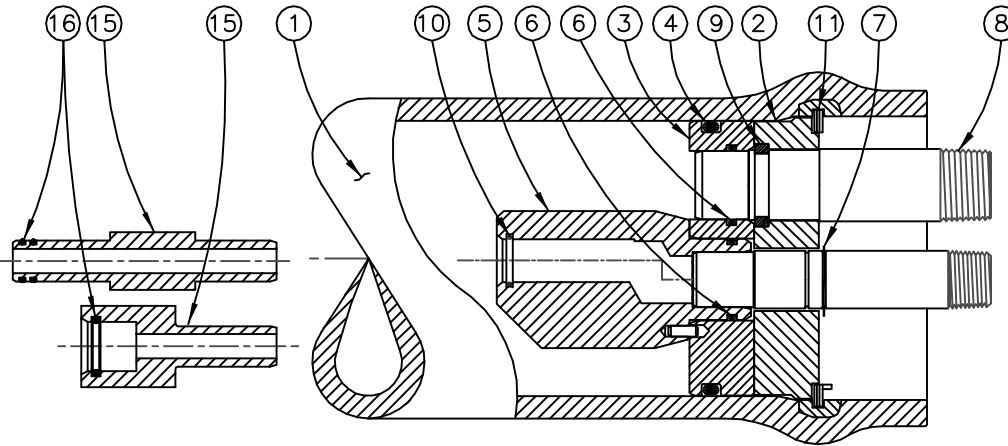


CENTER VESSEL ON 2 OR 3 SUPPORTS AT SPAN(S) "S" : 3 SUPPORTS REQUIRED FOR LENGTHS -4 AND OVER



SECTION THROUGH END CLOSURE

* PART LISTED ARE STANDARD OPTIONS				
Dwg. Ref.	Qty. Per	* Part Number	Part Name	Materials/Remarks
SHELL				
①	1		Shell	Filament wound epoxy/glass composite. Head locking grooves integrally wound in place. Shell exterior coated with white high gloss polyurethane paint.
HEAD				
②	2	47471	Bearing Plate	6061-T6 Hard Anodized Aluminium Alloy
③	2	50481	Seal Plate	Engineering Thermoplastic
④	2	45317	Plug Seal	Ethylene Propylene - O-Ring
⑤	2	47469	Permeate Port	Engineering Thermoplastic
⑥	4	45299	Permeate Port Seal	Ethylene Propylene - O-Ring
⑦	2	45244	Port Retainer	Stainless Steel
⑧	2	47472	Feed/Conc. Port	UNS S32750 AS PER ASME SA-790
⑨	2	50489	Port Retainer Set	CFBM Cast SS, Two-piece set
⑩	2	45294	Adapter Seal	Ethylene propylene O-Ring
HEAD INTERLOCK				
⑪	2	45260	Retaining Ring	316 Stainless Steel
VESSEL SUPPORT				
⑫	*2	45058	Saddle	Engineering Thermoplastic
⑬	*2	47459	Strap Assembly	304 Stainless Steel - Thermoplastic cushion
⑭	*4	47458	Strap Screw	5/16-18 UNC, 18-8 Stainless Steel
ELEMENT INTERFACE				
⑮	2	As Required	Adapter	Engineering Thermoplastic
⑯	A/R	As Required	PWT Seal	Ethylene propylene O-Ring
*3 each furnished with length code 4, 5 & 6				

NOTES

- DIMENSIONS IN INCHES (MM APPROX).
- NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED.
- SHELL EXTERIOR COATED WITH WHITE, HIGH GLOSS POLYURETHANE PAINT.

Shell Length Code	L L.O.A. IN (MM)	S Span IN (MM)	APPROX. ASSEMBLY Weight LB (KG)
1	56.6 (1438)	28 X 1 (711)	21.0 (9.5)
2	96.6 (2454)	56 X 1 (1422)	31.0 (14.0)
3	136.6 (3470)	80 X 1 (2032)	41.0 (18.6)
4	176.6 (4486)	64 X 2 (1626)	51.0 (23.1)
5	216.6 (5502)	78 X 2 (1981)	62.0 (27.8)
6	256.6 (6518)	92 X 2 (2337)	71.0 (32.2)
7	296.6 (7518)	106 X 2 (2692)	81.0 (36.7)



DRAWN		MODEL 40E100					
CHECKED		HIGH PRESSURE MEMBRANE HOUSING					
APPROVED	SS	ECN	DATE	SHEET	SIZE	NUMBER	REV
		3170	26FEB14	1 OF 2	B	518015	H

## RATING:

DESIGN PRESSURE.....1000 PSI at 120°F  
(6.9 MPa at 49°C)  
MIN. OPERATING TEMP.....20°F  
(-7°C)  
FACTORY TEST PRESSURE..... 1500/1100PSI  
(10.34/7.58MPa)  
BURST PRESSURE.....6000 PSI  
(41.4 MPa)

## INTENDED USE

The CodeLine Model 40E100 Fiberglass RO Pressure Vessel is designed for continuous, long-term use as a housing for reverse osmosis membrane elements to desalt typical seawater at pressures up to 1000 psi. Any make of four-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 40E100 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code). At small additional cost, vessels can be inspected during construction by an ASME Authorized Inspector and ASME Code stamped.

The CodeLine Model 40E100 must be installed, operated and maintained in accordance with the precautions listed and good industrial practice to assure safe operation over a long service life.

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.

Pentair Water 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 materials of construction for compatibility with the specific corrosive environment, shall be the responsibility of the purchaser.

Specifications 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 shell on horizontal members at central span "S" using compliant 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 restricts growth of fiberglass shell under pressure; ▲DIA = 0.02 in. (0.5mm) and ▲L = 0.2 in. (5mm) for a length code -6 vessel  
DO NOT... hang piping manifolds from ports or use vessel in any way to support other components.  
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 (0.9 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 in place and fully seated.  
DO NOT... work on any component until first verifying that pressure is relieved from vessel  
DO NOT... operate at pH levels below 3 or above 11

For complete information on proper use of this vessel please refer to the 40E Series USER'S GUIDE, Bulletin 526005

## ORDERING

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 feature not listed below, please consult the factory for pricing and availability.

### VESSEL LENGTH CODE – please check one

CODELINE MODEL 40E100 ☐-1 ☐-2 ☐-3 ☐-4 ☐-5 ☐-6 ☐-7

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

- ☐ Please supply adapters for the following membrane brand and specific model.  
Brand \_\_\_\_\_ Model \_\_\_\_\_  
☐ Membrane brand and model information is not currently available, but will be supplied to CodeLine on or before the following date. \_\_\_\_/\_\_\_\_/\_\_\_\_

### CERTIFICATION – please check one

- ☐ Option – Certified by ASME Authorized Inspector, Code stamped and registered with National Board. Call factory for pricing details.  
☐ CE Marked  
☐ Standard – certified by CodeLine, not code stamped.

### MATERIAL AND PORT CONFIGURATIONS OPTIONS – please check one

- ☐ Standard – all materials and port configurations per drawing 518015 on the previous page.  
☐ Option – feed/concentrate port, 3/4" victaulic.

### EXTERIOR FINISH – please check one

- ☐ Standard – white high-gloss polyurethane coating over sanded surface.  
☐ Option – optional colors are available for 50 or more vessels per order. Call factory for pricing details.

Distributed By:

**APPLIED**  
**MEMBRANES INC.®**

Industry Leader in RO Expertise and Membrane Applications since 1983™

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