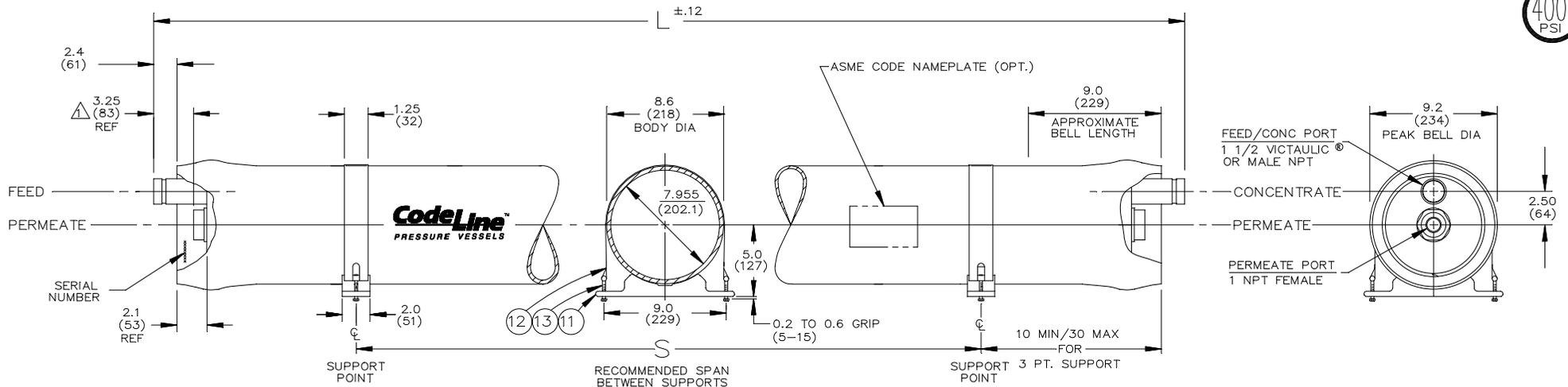
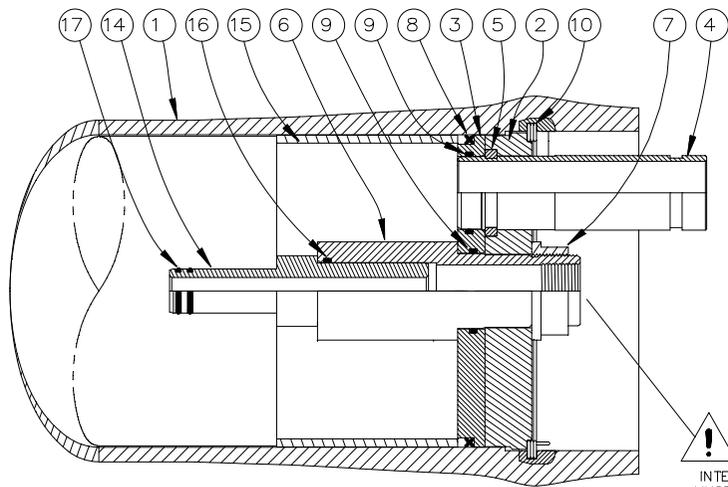


400  
PSI



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

Dwg. Ref.	Qty. Per	Item Number	Description	Materials/Remarks
SHELL				
①	1		Shell	Filament wound epoxy/glass composite-Head locking grooves integrally wound in-place
HEAD				
②	2	51051	Bearing Plate	6061-T6 aluminum alloy-hard anodized
③	2	50550	Sealing Plate	PVC Thermoplastic
④	2	50567	Feed/Conc Port	Type 316 Stainless Steel
⑤	2	45090	Port Retainer Set	CF8M Cast S.S., Two-piece set
⑥	2	50569	Permeate Port	PVC Thermoplastic
⑦	2	45066	Port Nut	PVC Thermoplastic-left hand thread
⑧	2	45320	Head Seal	Ethylene Propylene, Quad Ring
⑨	4	45312	Part Seal	Ethylene Propylene, O-Ring
HEAD INTERLOCK				
⑩	2	45261	Retaining Ring	302 SST
VESSEL SUPPORT				
⑪	*2	52169	Universal Saddle	Engineering Thermoplastic
⑫	*2	45042	Strap Assy	304 SST - Thermoplastic cushion
⑬	4	46265	Strap Screw	5/16-18 UNC, 18-8 Stainless Steel
ELEMENT INTERFACE				
⑭	2	As Required	Adapter	Engineering Thermoplastic
⑮	1	45069	Thrust Ring	Thermoplastic, White
⑯	2	45308	Adapter Seal	Ethylene Propylene - O-Ring
⑰	A/R	As Required	PWT Seal	Ethylene Propylene - O-Ring
*3 each furnished with length code 4, 5, 6 & 7				



SECTION THROUGH END CLOSURE

ITEM ⑮ DOWNSTREAM ONLY

⚠ PORT OFFSET IS 2.1" (53 mm) WITH SANITARY PERMEATE CONNECTION.

NOTES:  
• DIMENSIONS IN INCHES (MM APPROX)  
• NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED

⚠ WARNING!  
INTERNAL PORT PRESSURE MUST NOT EXCEED 125 PSI

Shell Length Code	L L.O.A. IN (MM)	S Span IN (MM)	Empty Weight LB (KG)
1	63.0 (1600)	28 x 1 (711)	50 (23)
2	103.0 (2616)	56 x 1 (1422)	70 (32)
3	143.0 (3632)	80 x 1 (2032)	90 (41)
4	183.0 (4648)	64 x 2 (1626)	110 (50)
5	223.0 (5664)	78 x 2 (1981)	130 (59)
6	263.0 (6680)	92 x 2 (2337)	150 (68)
7	303.0 (7696)	106 x 2 (2692)	170 (77)

**Pentair Water** VERNA, GOA INDIA.

CODELINE MODEL 80E40 MEMBRANE HOUSING				
ECN 8864	SHEET 1 OF 2	SIZE B	NUMBER 523002	REV G

## RATING:

DESIGN PRESSURE..... 400 PSI at 120°F  
(2.8 MPa at 49°C)  
MIN. OPERATING TEMP..... 20°F  
(-7°C)  
FACTORY TEST PRESSURE..... 600 PSI  
(4.1 MPa)  
BURST PRESSURE..... 2400 PSI  
(16.5 MPa)

## INTENDED USE

The CodeLine Model 80E40 Fiberglass RO Pressure Vessel is designed for continuous, long-term use as a housing for reverse osmosis membrane elements to desalt typical brackish waters at pressures up to 400 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 80E40 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 80E40 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 Treatment 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. Alternate materials with enhanced corrosion resistance are available on special order.

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 with drain holes down 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; 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 (0.9 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 10

For complete information on proper use of this vessel please refer to the 80E Series USER'S GUIDE, Bulletin 523004

## 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.

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

### VESSEL LENGTH CODE - please check one

CODELINE MODEL 80E40 -1 -2 -3 -4 -5 -6 -7

### 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.

### CERTIFICATION - please check one

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

### 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. \_\_\_/\_\_\_/\_\_\_

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

- Standard - all materials and port configurations per drawing 523002 on the opposite page.  
NOTE: The options listed below will increase the vessel price. Call factory for pricing details.
- Option Ultrapure package for ultrapure / high temperature operation. Includes:  
One 316 SS 1 1/2" permeate port with a type 3A sanitary connection.  
One PET permeate port with 1" NPT threads.  
One standard PET adapter and one solid adapter (to plug the PET permeate port).  
PET sealing plates
- Option Sanitary package for sanitary / high temperature operation.  
Same as the ultrapure package but also includes  
Two each 316 SS feed / concentrate ports with 1 1/2" type 3A sanitary connections.
- Option High Temperature package for high temperature operation only.  
Includes two PET permeate ports and sealing plates instead of the standard PVC material.