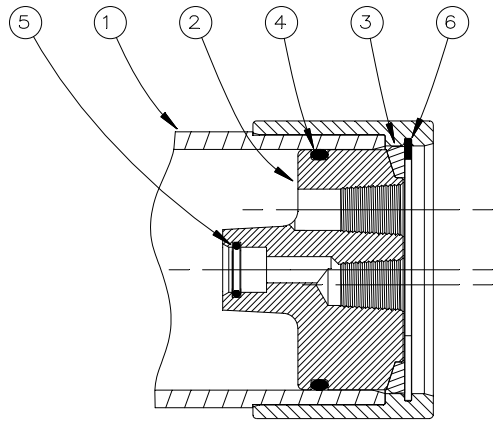
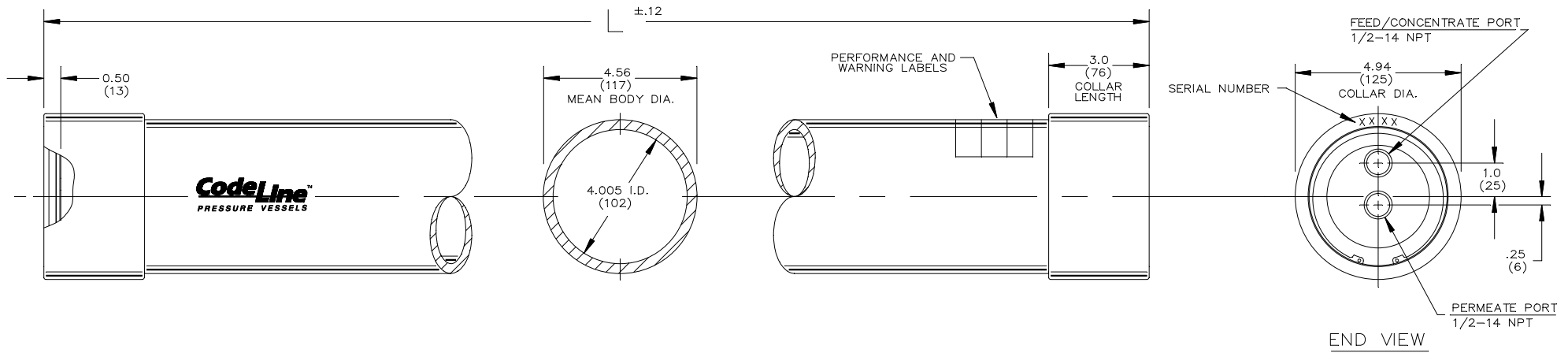


600  
PSI



SECTION THROUGH END CLOSURE

- DIMENSIONS IN INCHES (MM APPROX)
- NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED

Shell Length Code	L L.O.A. IN (MM)	S Span IN (MM)	Empty Weight LB (KG)
A1	45.0 (1143)	Any	16 (7)
B1	19.0 (483)	Any	9 (4)
C1	26.0 (660)	Any	11 (5)

**CodeLine™**  
PRESSURE VESSELS

by  
**CodeLine DIVISION**  
**STRUCTURAL NORTH AMERICA**  
Escondido, California U.S.A.

Dwg. Ref.	Qty. Per	Part Number	Part Name	Materials/Remarks
SHELL				
①	1	1010XX- Length	Shell	Filament wound epoxy/glass composite- with retainer groove formed by adhesive- bonded 6061-T6 hd. anod. Al. alloy collar
END PLUG				
②	2	401039-1	Plug	Engineering Thermoplastic
③	2	401045-1	Bearing Ring	Nickel-plated alloy steel
④	2	6ER001-342	Plug Seal	Ethylene Propylene O-Ring
⑤	2	6ER001-116	Adapter Seal	Ethylene Propylene O-Ring
END PLUG INTERLOCK				
⑥	2	6CR002-412	Retaining Ring	PH15-7Mo SST
FOR REFERENCE ONLY				

ENGR LF 23NOV98	<b>MODEL 4B</b> BRACKISH RO PRESSURE VESSEL (DIRECT CONNECT)				
QLTY JK 01DEC98					
MRKT DWE 01DEC98	ECO 89500	SHEET 1 OF 1	SIZE B	NUMBER 501004	REV H

**RATING:**

DESIGN PRESSURE..... 600 PSI at 120°F  
 (4.1 MPa at 49°C)  
 MIN. OPERATING TEMP..... 20°F  
 (-7°C)  
 FACTORY TEST PRESSURE..... 900 PSI  
 (6.2 MPa)  
 BURST PRESSURE..... 3600 PSI  
 (24.8 MPa)

**INTENDED USE**

The Model 4B Brackish Special 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 600 psi. Any make of 4-inch nominal diameter spiral-wound element with a 3/4" diameter male product water tube is easily accommodated.

The Model 4B 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 end plug.

Advanced Structures, Inc. 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 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
- 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...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 rings are in place
- DO NOT...work on any component until first verifying that pressure is relieved from vessel

**NOTE**

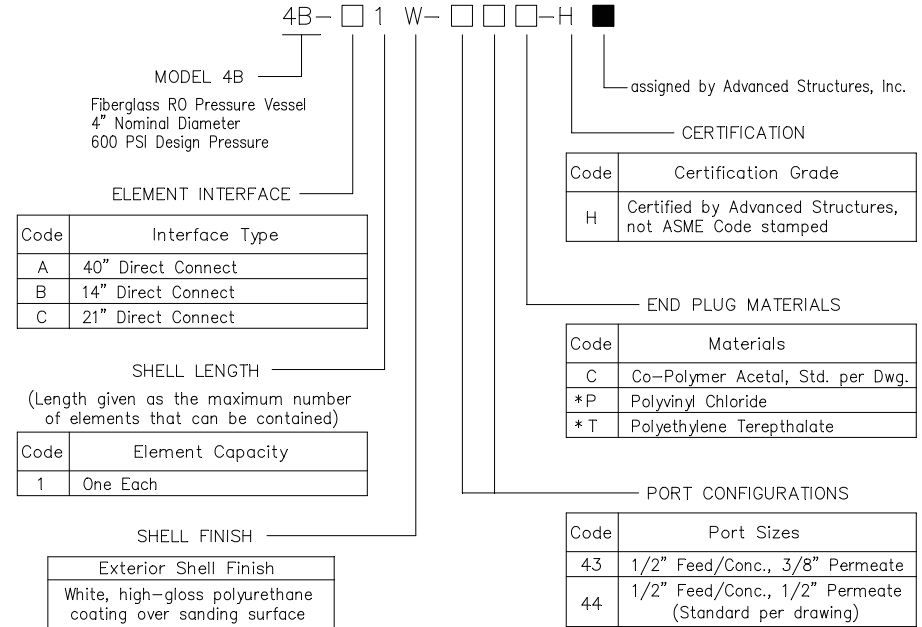
Retaining ring pliers (IMM001-3) required to open and close vessel.

**CAUTION:**  
 EYE PROTECTION SHOULD BE WORN  
 WHEN REMOVING OR INSTALLING  
 RETAINING RINGS

**ORDERING**

Please specify the following:

- VESSEL MODEL NUMBER built from table of options below
- MEMBRANE ELEMENT MAKE AND MODEL NUMBER
- SPECIFIC CONCERNS regarding INTENDED USE and requests for SPECIAL MATERIALS of CONSTRUCTION



CERTIFICATION	
Code	Certification Grade
H	Certified by Advanced Structures, not ASME Code stamped

ELEMENT INTERFACE	
Code	Interface Type
A	40" Direct Connect
B	14" Direct Connect
C	21" Direct Connect

END PLUG MATERIALS	
Code	Materials
C	Co-Polymer Acetal, Std. per Dwg.
*P	Polyvinyl Chloride
*T	Polyethylene Terephthalate

SHELL LENGTH	
(Length given as the maximum number of elements that can be contained)	
Code	Element Capacity
1	One Each

PORT CONFIGURATIONS	
Code	Port Sizes
43	1/2" Feed/Conc., 3/8" Permeate
44	1/2" Feed/Conc., 1/2" Permeate (Standard per drawing)

\* OPTIONAL - Consult factory for specifications and pricing

