**NOTES:**

- DIMENSIONS IN INCHES (3MM APPROX.).
- SHELL OUTSIDE COATED WITH WHITE RAL 9003, HIGH GLOSS POLYURETHANE PAINT.
- MITER 17° SPINDLE BEAK OFF.
- NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED.
- FC PORT, BEARING PLATE, PVP PORT & QUICK RELEASE SPRING MATERIALS ARE AS PER STAMPED APPROPRIATE ABSEI EDITION.
- 80 PSI FOR TALL & PEEP PORTS.
- FOR OPTIONAL PART NUMBERS REFER PAGE 3.
- **WEIGHTS DENOTED IN THE TABLE ARE FOR HIGHEST CONFIGURATION AND WILL VARY WITH CHANGE IN CONFIGURATION.

**WARNING:**

INTEGRAL PORT PRESSURE NOT TO EXCEED 125 PSI. #

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**VESSLE SUPPORT**

- 11 2" 52169 Saddle Engineering Thermoplastic.
- 12 2" 45042 Stop Assy. 304 Stainless Steel PVC Cushion.
- 13 4" 46265 Stop screw. 8/16-18 UNC, 2.5"L, 18-8 Stainless Steel.

**ELEMENT INTERFACE**

- 14 2 A/R Adapter Engineering Thermoplastic.
- 15 2 52249 Adapter seal Ethylene Propylene - O-Ring.
- 16 4 A/R PWT Seal Engineering Thermoplastic - O-Ring.
- 17 1 96163 Thrust Cone Engineering Thermoplastic.

---

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
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<tbody>
<tr>
<td>99219</td>
<td>SHELL</td>
<td>Filament Wound Epoxy/Glass composite - Head locking grooves integrally wound in place.</td>
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<tr>
<td>96157</td>
<td>Bearing Plate</td>
<td>6061-T6 as per SA-221</td>
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<tr>
<td>96160</td>
<td>Sealing Plate</td>
<td>Ethylene Propylene</td>
</tr>
<tr>
<td>96162</td>
<td>Perfor Port Plate</td>
<td>Engineering Thermoplastic</td>
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<tr>
<td>45042</td>
<td>Port Nut</td>
<td>Engineering Thermoplastic</td>
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<tr>
<td>39200</td>
<td>Foot Seal</td>
<td>Ethylene Propylene - O-Ring</td>
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<td>45312</td>
<td>Perma Port Seal</td>
<td>Engineering Thermoplastic - O-Ring</td>
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<td>47336</td>
<td>Quick Release Spiral Seal</td>
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<tr>
<td>46265</td>
<td>Strap Screw</td>
<td>5/16-18 UNC, 2.5&quot;L, 18-8 Stainless Steel.</td>
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<tr>
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<td>Adapter Seal</td>
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<td>46163</td>
<td>Thrust Cone</td>
<td>Engineering Thermoplastic</td>
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**Vessel Support**

1. **Dash Length**
   - L (IN/MM): 59.75 (1518), 99.75 (2534), 139.75 (3550), 179.75 (4566), 219.75 (5562), 259.75 (6598), 299.75 (7814), 339.75 (8830)
   - P (IN/MM): 47 (1194), 87 (2210), 127 (3226), 167 (4242), 207 (5258), 247 (6274), 287 (7290), 327 (8306)
   - S (IN/MM): 20X1 (86), 56X1 (110), 80X1 (135), 64X1 (160), 78X1 (183), 92X2 (208), 106X2 (230), 120X2 (255)
   - **Approx Weight LB(KG)***: 116, 50, 50, 50, 50, 50, 50, 50

---

**Element Interface**

1. **Dash Length**
   - L (IN/MM): 59.75 (1518), 99.75 (2534), 139.75 (3550), 179.75 (4566), 219.75 (5562), 259.75 (6598), 299.75 (7814), 339.75 (8830)
   - P (IN/MM): 47 (1194), 87 (2210), 127 (3226), 167 (4242), 207 (5258), 247 (6274), 287 (7290), 327 (8306)
   - S (IN/MM): 20X1 (86), 56X1 (110), 80X1 (135), 64X1 (160), 78X1 (183), 92X2 (208), 106X2 (230), 120X2 (255)
   - **Approx Weight LB(KG)***: 116, 50, 50, 50, 50, 50, 50, 50

---

**Vessel Configuration**

1. **Dash Length**
   - L (IN/MM): 59.75 (1518), 99.75 (2534), 139.75 (3550), 179.75 (4566), 219.75 (5562), 259.75 (6598), 299.75 (7814), 339.75 (8830)
   - P (IN/MM): 47 (1194), 87 (2210), 127 (3226), 167 (4242), 207 (5258), 247 (6274), 287 (7290), 327 (8306)
   - S (IN/MM): 20X1 (86), 56X1 (110), 80X1 (135), 64X1 (160), 78X1 (183), 92X2 (208), 106X2 (230), 120X2 (255)
   - **Approx Weight LB(KG)***: 116, 50, 50, 50, 50, 50, 50, 50
RATING:
DESIGN PRESSURE.............................600 PSIG
(4.14 MPa )
MAX. OPERATING TEMP...........................190°F
(88°C)
MIN. OPERATING TEMP...........................20°F
FACTORY TEST PRESSURE......................CE / ASME
900 PSIG/660 PSIG
(6.20 MPa)/4.55 MPa
QUALIFICATION PRESSURE......................3600 PSI
(24.8 MPa)

INTENDED USE:
The CodeLine 80560 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 600 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 80560 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME) and is as per Section X. At small additional cost vessels can be inspected during construction by an ASME Authorized Inspector and ASME Code stamped.

The CodeLine 80560 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 80560 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.

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 compliant vessel supports furnished; Shim saddles if required. Tighten down straps just snug
DO...align and center side ports with the manifold header. Correct, causes of misalignment in a row of vessels connected to the same header.
DO...use flexible type IPS grooved-end pipe couplings, at side ports; allow full, 0.125 inch gap between port and piping, and position piping to maximize flexibility of connection.
DO...provide flexibility in, and support for piping manifolds so that vessel can grow in length under pressure without undue restraint; provide additional flexible joints in large pipes leading to manifold header.
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...Lubricate seals sparingly, using nonpetroleum based lubricants, i.e. Parker Super O-lube®, Glycerin or suitable silicone based lubricants.
DO NOT...work on any component until first verifying that pressure is relieved from vessel
DO NOT...make rigid piping connections to ports or clamp vessel in any way that restricts growth of fiberglass shell under pressure;
***ADIA = 0.015 in. (0.4mm) and
***AL = 0.2 in. (6mm) for a length code –8 vessel
DO NOT...hang piping manifolds from ports or use vessel in any way to support other components
DO NOT...tighten Permeate Port connection more than one turn past hand tight
DO NOT...operate vessel without connecting both Permeate Ports internally to complete set of elements or otherwise plug ports internally so that external piping connection is not subjected to feed pressure
DO NOT...install Spacer on downstream end of vessel
DO NOT...operate vessel without Thrust Cone installed downstream
DO NOT...pressurize vessel until double-checking to verify that the Locking Ring is in place and fully seated.
DO NOT...operate vessel at pressure and temperature in excess of its rating.
DO NOT...operate vessel with permeate in excess of 125 psi at 190°F (88°C).
DO NOT...tolerate leaks or allow end closures to be routinely wetted in any way.
DO NOT...operate outside the pH range 3-11.

For complete information on proper use of the vessel please refer to the 805 Series USER'S GUIDE 94182

CERTIFICATION REQUIRED
DO...Hydro testing at 1.1 times the design pressure.
DO...Hydro testing at 1.5 times the design pressure.
DO...CE Marked Standard.
DO...Certified by Pentair

PERMEATE PORT SELECTION
Serial Number End
Size of the Permeate Port
□ 1” □ 1.25” □ 1.5”
Type of Connection
□ FNPT □ MNPT □ BSPTM □ BSPTF □ IPS GROOVED □ SANITARY
Material of Construction
□ Noryl □ SS316L □ Zoron 100
Non Serial Number End
Size of the Permeate Port
□ 1” □ 1.25” □ 1.5”
Type of Connection
□ FNPT □ MNPT □ BSPTM □ BSPTF □ IPS GROOVED □ SANITARY
Material of Construction
□ Noryl □ SS316L □ Zoron 100

Note:
• Standard offering is 1.0” FNPT in Noryl.
• 1.25” & 1.5” BSPTF, 1.25” & 1.5” FNPT and 1.25” SANITARY connections cannot be offered on Sanitary permeate port cannot be offered in Noryl

STRA FOR ASSEMBLY
□ Standard SS304 □ Optional SS316 □ Optional SS316L

FEED/CONCENTRATE PORT SELECTION
Material of Construction
□ Standard CF3M □ Optional Duplex SS (CD3MN)
□ Optional Super Duplex SS (CD3MWCuN)

Configuration
□ Standard - CF3M 1D5D
□ Optional – Multi port: (Ref SPEC SHEET/PM/1.5”-3” for Multi ports selection). 2.5” Ports not available in 90° Configuration.

PORT SIZE CODE
D 1/2” GROOVED END
E 2” GROOVED END
F 2 1/2” GROOVED END

BEARING PLATE MATERIAL
□ Standard – 6061 T6 Aluminium
□ Optional – Stainless Steel 316L

Note: Please refer to 99321 for sanitary details and refer page-3 for optional Part numbers.

ORDERING:
Using the chart below, please check the features you require

VESSEL LENGTH CODE – please check one
MODEL 80560 □ -1 □ -2 □ -3 □ -4 □ -5 □ -6 □ -7 □ -8

MEMBRANE BRAND AND MODEL
□ Please supply adapters for the following membrane brand and specific model
Brand __________________________ Model _________________________

CERTIFICATION REQUIRED
□ ASME Stamped and National Board Registered.
□ In compliance with the ASME Sec X but not Code Stamped.

Please supply adapters for the following membrane brand and specific model
Brand __________________________ Model _________________________

CERTIFICATION REQUIRED
□ ASME Stamped and National Board Registered.
□ In compliance with the ASME Sec X but not Code Stamped.
**STRAP ASSEMBLY PART NUMBERS**

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<th>Port Retainer Ring</th>
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**PERMEATE PORT SIZE & SEAL PORT NUMBER**

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**PERM PORT RETAINER RING & PORT NUT PART NUMBERS**

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**BEARING PLATE PART NUMBERS**

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**SEALING PLATE PART NUMBERS**

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**PART NUMBERS & PORT OFFSET DISTANCE**

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**NOTES:**
- DIMENSION IN INCHES (MM APPROX.)
- GRADE CF3M AS PER SA-351
- GRADE CD3MN AS PER SA-995 (UNS-32205)
- GRADE CD3MWCuN AS PER SA-995 (J 93380)
- GRADE ZERON 100 AS PER SA-479
- GRADE SS316L AS PER SA-479
- GRADE SS-F316L AS PER SA-182
- OPTIONAL STRAP ASSEMBLY WITH SS-316 & 316L SHALL BE SUPPLIED AS PER METRIC STANDARDS