1. SHELL
   - Filament Wound Epoxy/Glass composite - Head locking grooves integrally wound in place.

2. A/R F/C Port
   - CF3M As per SA-351

3. A/R Port Seal
   - Ethylene-Propylene

4. 1
   - 96156 Bearing Plate
     - 6061-T6 As per SB-221

5. 2
   - 96159 Sealing Plate
     - Engineering Thermoplastic

6. 2
   - 96262 Spacer
     - Engineering Thermoplastic

7. 2
   - 96263 Permeate Port
     - Engineering Thermoplastic

8. 2
   - 45066 Port Nut
     - Engineering Thermoplastic

9. 2
   - 96000 Head Seal
     - Ethylene-Propylene - O-Ring

10. 2
    - 45312 Perm Port Seal
        - Ethylene-Propylene - O-Ring

11. 2
    - 47336 Quick Release
        - Spiral Ring SS-316 As per SA-479

12. 2
    - 52169 Saddle
        - Engineering Thermoplastic

13. 2
    - 45042 Strap Assy
        - 304 Stainless Steel-PVC Cushion

14. 2
    - 46263 Strap Screw
        - S16-18 UNC, 2.5" L, 18-8 Stainless Steel

15. 2
    - 52245 Adapter
        - Engineering Thermoplastic

16. 2
    - 5245 Adapter Seal
        - Ethylene-Propylene - O-Ring

17. 4
    - 96183 PWT Seal
        - Ethylene-Propylene - O-Ring

18. 1
    - 96163 Thrust Cone
        - Engineering Thermoplastic

NOTES:
- MAX. ANGULAR VARIATION BETWEEN ANY PORTS 80.5°.
- DIAMETER IN INCHES (UN APPROX.)
- SHELL EXTENSION COATED WITH WHITE RAL 9003, HIGH GLOSS POLYURETHANE PAINT.
- ITEM 12 Dimension drinks only.
- NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED.
- PVC PORT, BEARING PLATE, PERMEATE PORT & RETAINING RING MATERIALS ARE AS PER STAMPED APPRASE ASH R2207.
- 360 PSI FOR METALLIC PERFOREMENTS.
- FOR OPTIMAL PART NUMBERS, REFER PAGE 3.
- **WEIGHTS GIVEN IN THE TABLE ARE FOR HIGHEST CONFIGURATION AND WILL VARY WITH CHANG IN CONFIGURATION.

**CAUTION: incorrect installation will cause severe local stress around PORT and may result in leaks and premature failure. Take every precaution listed in reverse. See Installation Instructions for further details.

**PO NUMBER
**CUSTOMER NAME:
**PROJECT NAME:
**TOTAL QUANTITY:

**PORT CONFIGURATION DETAILS
**VESEL CONFIGURATION QUANTITY

**DRAWN
**CHECKED
**APPROVED

**DATE
**DATE
**DATE

**SHEET
**SHEET

**DWG REF
**QTY
**PART NUMBER
**DESCRIPTION
**MATERIAL

**L IN(MM)
**P IN(MM)
**S IN(MM)
**Approx Weight LB(KG)**

-1
    - 62.65
    - 1591
    - 1219
    - 48
-2
    - 102.65
    - 2607
    - 2235
    - 48
-3
    - 142.65
    - 3623
    - 3251
    - 48
-4
    - 182.65
    - 4639
    - 4267
    - 48
-5
    - 222.65
    - 5655
    - 5293
    - 48
-6
    - 262.65
    - 6671
    - 6299
    - 48
-7
    - 302.65
    - 7687
    - 7315
    - 48
-8
    - 342.65
    - 8703
    - 8331
    - 48
RATING:

DESIGN PRESSURE……………………..300 PSIG

MAX. OPERATING TEMP………………..190°F

MIN. OPERATING TEMP…………………..20°F

FACTORY TEST PRESSURE………………CE/ASME

450PSIG/330PSIG

QUALIFICATION PRESSURE ………………1800 PSI

(12.4 MPa)

INTENDED USE:
The CodeLine 80U30 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 300 psi. Any make of end pipe couplings, at brackish waters at pressures up to 300 psi. Any make of steam or gas may be connected to ports or clamps in any way that results in the pressure of the vessel.

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. Alternate materials with enhanced corrosion resistance are available on special order.

Specifications are subject to change without notice.

PRECAUTIONS:

DO...read, understand and follow all instructions; failure to take proper precautions 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 hold 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...inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion.

DO...Lubricate seals sparingly, using non petroleum based lubricants, i.e. Parker Super O-lube®.

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 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 pressure in excess of 125 psi at 190°F (0.86 Mpa at 88°C).

DO NOT...operate vessel with permeate pressure in excess of 300 psi. Any make of steam or gas may be connected to ports or clamps in any way that results in the pressure of the vessel.

DO NOT...operate vessel outside the pH range 3-11.

For complete information on proper use of the vessel please refer to the 80U Series USER’S GUIDE 94315

ORDERING:

Using the chart below, please check the features you require

VEssel LENGTH CODE – please check one

MODEL 80U30 □-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

□ Hydro testing at 1.1 times the design pressure.

□ ASME Stamped and National Board Registered.

□ In compliance with the ASME Sec X, but not Code Stamped

□ Hydro testing at 1.5 times the design pressure.

□ CE Marked Standard.

□ 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

Material of Construction □ PET/Noryl □ SS316L □ Zeron 100

Non Serial Number End

Size of the Permeate Port □ 1” □ 1.25” □ 1.5”

Type of Connection □ FNPT □ MNPT □ BSPTM □ BSPTF □ IPS GROOVED

Material of Construction □ PET/Noryl □ SS316L □ Zeron 100

Note:

• Standard offering is 1.0” FNPT in Noryl.

• 1.25” & 1.5” BSPTF, 1.25” & 1.5” FNPT connections cannot be offered.

STRAP ASSEMBLY

□ Standard SS304 □ Optional SS316 □ Optional SS316L

FEED/CONCENTRATE PORT SELECTION

Material of Construction □ CF3M □ Optional Duplex SS (CD3M)

□ Optional Super Duplex SS (CD3MW/CUN)

Configuration □ Standard - CF3M 151

□ Optional – Multi ports ( Refer SPEC.SHEET/PM/4” for Multi port selection)

PORT SIZE CODE

Serial number end □ □ □ □ □ □ □ □ □ □

Opposite end □ □ □ □ □ □ □ □ □ □

BEARING PLATE MATERIAL

□ Standard – 6061 T6 Aluminium

□ Optional – Stainless Steel 316L

Note: Refer page-3 for optional Part numbers.

Dwg. No. 99021-Q. © Pentair
### Strap Assembly Part Numbers

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### F/C Port & Seal Part Numbers

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### Permeate Port Part Numbers & PermPort to F/C Port Offset Distance

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### Notes
- Dimension in inches (9mm approx.)
- * GRADE CF3M AS PER SA-301
- ** GRADE CD3MN AS PER SA-955 (UNS J92205)
- *** GRADE CD3MWCuN AS PER SA-955 (UNS J93380)
- # GRADE ZERON 100 AS PER SA-479 (UNS S32760)
- ## GRADE SS-316L AS PER SA-479.
- ### GRADE SS-F316L AS PER SA-162.
- * Optional strap assembly with SS316 & 316L shall be supplied as per metric standards