

300
PSI

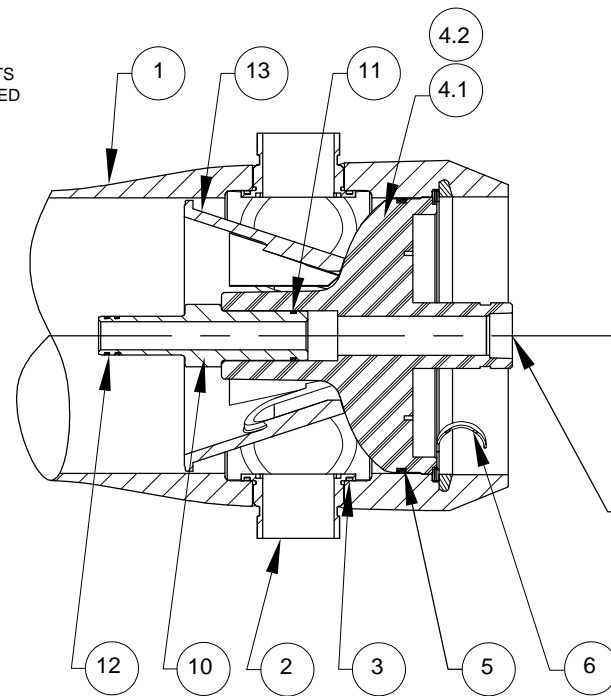
| DWG REF | QTY | PART NUMBER | DESCRIPTION | MATERIAL |
|--------------------------|-----|-------------|---------------------------|---|
| SHELL | | | | |
| 1 | 1 | 99218 | SHELL | Filament Wound Epoxy/Glass composites - Head locking grooves integrally wound in place. |
| 2 | A/R | A/R | F/C Port | SA-351 CF3M |
| 3 | A/R | A/R | F/C Port Seal | Ethylene Propylene . |
| HEAD - NON CODED | | | | |
| 4 | 2 | 96243 | Elliptical Head Assy. | Engineering Thermoplastic. |
| 4.1 | 2 | 194440 | Elliptical Head | Engineering Thermoplastic. |
| 4.2 | 2 | 96165 | Danger Label | - |
| 5 | 2 | 196223 | Head Seal | Ethylene Propylene - O - Ring |
| HEAD INTERLOCK | | | | |
| 6 | 2 | 47336 | Quick Release Spiral Ring | SA-479 316 |
| VESSEL SUPPORT | | | | |
| 7 | 2* | 52169 | Saddle | Engineering Thermoplastic. |
| 8 | 2* | 45042 | Strap Assy. | 304 Stainless Steel-PVC Cushion. |
| 9 | 4** | 46265 | Strap screw. | 5/16-18 UNC, 2.5" L, 304 Stainless Steel. |
| ELEMENT INTERFACE | | | | |
| 10 | 2 | A/R | Adapter | Engineering Thermoplastic. |
| 11 | 2 | 196222 | Adapter seal | Ethylene Propylene - O - Ring |
| 12 | 4 | A/R | PWT Seal | Ethylene Propylene - O - Ring |
| 13 | 1 | 97014 | Thrust Cone | Engineering Thermoplastic. |

*3 & **6 each furnished with length code 4,5,6,7 & 8.

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

| PORT SIZE CODE | |
|----------------|--------------------|
| D | 1 1/2" GROOVED END |
| E | 2" GROOVED END |
| F | 2 1/2" GROOVED END |

CAUTION: INCORRECT MANIFOLDING WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE; TAKE EVERY PRECAUTION LISTED ON REVERSE, SEE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS



SECTION THROUGH END CLOSURE

WARNING INTERNAL PORT PRESSURE NOT TO EXCEED 125 PSI.

| NO. OF PORTS | | PORT LOCATION | | | VESSEL QTY. |
|--------------|---------------|---------------|--------------|------------------------|-------------|
| Dash Length | L IN(MM) | P IN(MM) | S IN(MM) | Approx Weight LB(KG)** | |
| -1 | 59.15 (1502) | 47 (1194) | 23X1 (584) | 66 (30) | |
| -2 | 99.15 (2518) | 87 (2210) | 56X1 (1422) | 75 (34) | |
| -3 | 139.15 (3534) | 127 (3226) | 80X1 (2032) | 88 (40) | |
| -4 | 179.15 (4550) | 167 (4242) | 64X2 (1626) | 101 (46) | |
| -5 | 219.15 (5566) | 207 (5258) | 78X2 (1981) | 110 (50) | |
| -6 | 259.15 (6582) | 247 (6274) | 92X2 (2337) | 126 (57) | |
| -7 | 299.15 (7598) | 287 (7290) | 106X2 (2692) | 137 (62) | |
| -8 | 339.15 (8614) | 327 (8306) | 120X2 (3048) | 152 (69) | |

GENERAL NOTES:

- MAX. ANGULAR VARIATION BETWEEN ANY PORT ±0.5°.
 - DIMENSION IN INCHES (MM APPROX.).
 - SHELL EXTERIOR COATED WITH WHITE RAL 9003, HIGH GLOSS POLYURETHANE PAINT.
 - ITEM 13 DOWNSTREAM ONLY.
 - NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED BY PENTAIR.
- ** WEIGHTS GIVEN IN THE TABLE ARE FOR HIGHEST CONFIGURATION AND WILL VARY WITH CHANGE IN CONFIGURATION.

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| | | | | |
|-----------------|--------------------|--|---------------------------------|-------------|
| DRAWN BY: KR | DATE: 05NOV07 | DRAWING DESCRIPTION: MODEL - 80S30 NC MEMBRANE HOUSING | DRAWING NO.: 99172 | REV.: V |
| CHECKED BY: MD | DATE: 05NOV07 | CUSTOMER NAME: | VESSEL MODEL: 80S30 (NON-CODED) | |
| APPROVED BY: RM | DATE: 05NOV07 | PROJECT NAME: | TOTAL QTY: - | |
| ECN NO.: 6242 | REV. DATE: 10NOV22 | CUSTOMER P.O.#: | SIZE: A3 | SCALE: NONE |
| | | | PAGE NO.: 01 OF 02 | |

RATING:

| | |
|------------------------------|-------------------------|
| DESIGN PRESSURE..... | 300 PSIG (2.07MPa) |
| MAX OPERATING TEMP..... | 190°F (88°C) |
| MIN. OPERATING TEMP..... | 20°F (-7°C) |
| FACTORY TEST PRESSURE..... | 450 PSIG (3.10 MPa) |
| QUALIFICATION PRESSURE | 1800 PSI (12.41 MPa) |

INTENDED USE:

The CodeLine 80S30 Non Coded 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 eight-inch nominal diameter spiral-wound element is easily accommodated; the appropriate interfacing hardware for the element specified is furnished with the vessel.

The Shell of CodeLine 80S30 Non Coded vessel is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME) as per Section X. ASME Edition 2021 and all metallic parts are designed as per section ASME VIII Division I Edition 2021

The CodeLine 80S30 Non Coded vessel 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 high performance Filament wound FRP shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell. This side-ported vessel requires special precautions in mounting and connection to piping so that the vessel will not be subjected to excessive stress due to bending moments acting at the side openings in the fiberglass 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 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 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 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...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 resists growth of fiberglass shell under pressure;
 - ***ΔDIA = 0.015 in. (0.4mm) and
 - ***ΔL = 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 pressure in excess of 125 psi at 190°F (0.86 Mpa at 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.

ORDERING:

Using the chart below, please check the features you require

VESSEL LENGTH CODE – please check one

MODEL 80S30 Non Coded -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

- CE Marked Standard.
- Certified by Pentair.

| ADAPTER KITS | |
|--------------|-------------|
| UP STREAM | DOWN STREAM |
| | |

PERMEATE PORT CONFIGURATION:

- Standard. 1" FNPT & 1.5" IPS GROOVED NORYL HEAD.
- Optional .1" BSP F/JIS F Parallel Thread & 1.5" IPS GROOVED NORYL HEAD.

STRAP ASSEMBLY

Standard SS304 Optional SS316 Optional SS316L

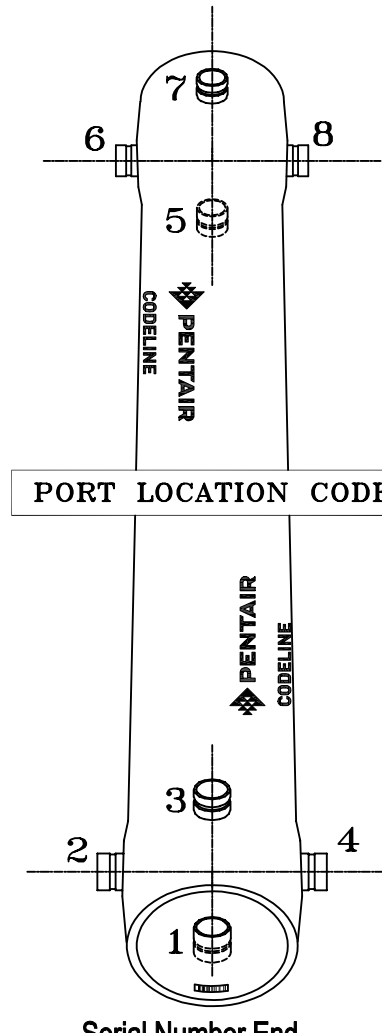
| STRAP ASSEMBLY PART NUMBERS | | |
|-----------------------------|--------------------|--------------------|
| SS304 | SS316 | SS316L |
| 45042 | 46926 ⁺ | 94371 ⁺ |

FEED/CONCENTRATE PORT SELECTION

- Material of Construction Standard CF3M Optional Duplex SS (CD3MN)
 Optional Super Duplex SS (CD3MWCuN)
- Configuration Standard - CF3M 1D5D
 Optional – Multi ports:

Serial number end
Opposite end

| F/C PORT & SEAL PART NUMBER | | | | |
|-----------------------------|-------|---------|-------------|--------|
| SIZE | *CF3M | **CD3MN | ***CD3MWCuN | SEAL |
| 1.5" | 98024 | 97353 | 96507 | 196224 |
| 2.0" | 98025 | 97357 | 96643 | 196225 |
| 2.5" | 98026 | 97364 | 96556 | 196226 |



Serial Number End
CODELINE BODY LABELS ARE PLACED AT 90° ON SERIAL NUMBER END AND AT 270° ON THE OPPOSITE SIDE END

GENERAL NOTES:

- DIMENSIONS IN INCHES (MM APPROX.).
- * GRADE SA-351 CF3M.
- ** GRADE SA-995 CD3MN (UNS J92205).
- *** GRADE SA-995 CD3MWCuN (UNS J93380)
- + OPTIONAL STRAP ASSEMBLY WITH SS-316 & 316L SHALL BE SUPPLIED AS PER METRIC STANDARDS.

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