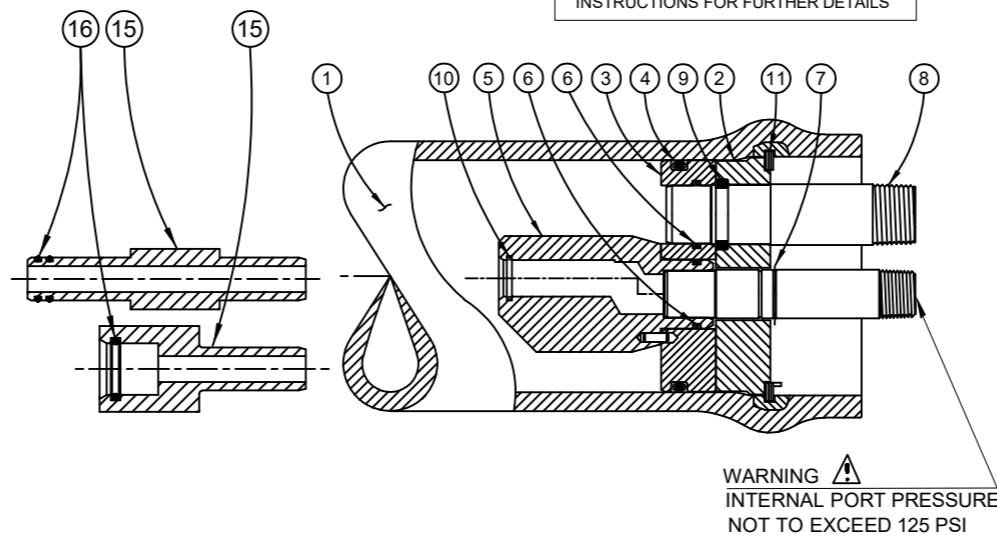


| DWG REF | QTY | PART NUMBER | DESCRIPTION | MATERIAL |
|--------------------------|-----|-------------|--------------------|---|
| SHELL | | | | |
| 1* | 1 | 418091 | SHELL | Filament Wound Epoxy/Glass composites-Head locking grooves integrally wound in place. |
| HEAD | | | | |
| 2* | 2 | 47471 | Bearing Plate | SB-221 A96061-T6 |
| 3 | 2 | 50481 | Sealing Plate | Engineering Thermoplastic. |
| 4 | 2 | 196266 | Head Seal | Ethylene Propylene - O - Ring |
| 5 | 2 | 47469# | Permeate Port | Engineering Thermoplastic. |
| 6 | 4 | 196432 | Permeate Port Seal | Ethylene Propylene - O - Ring |
| 7 | 2 | 45244 | Port Retainer | PH 15-7 Mo Stainless Steel. |
| 8* | 2 | 47472 | Feed/Conc. Port | SA-790 UNS S32750 |
| 9 | 2 | 50489 | Port Retainer Set | Cast SS,CF8M Two-piece set. |
| 10 | 2 | 196431 | Adapter Seal | Ethylene Propylene - O - Ring |
| HEAD INTERLOCK | | | | |
| 11* | 2 | 45260 | Spiral Ring | SA-479 SS-316 |
| VESSEL SUPPORT | | | | |
| 12 | 2* | 45058 | Saddle | Engineering Thermoplastic. |
| 13 | 2* | 47459 | Strap Assy. | 304 Stainless Steel - PVC cushion |
| 14 | 4** | 97821 | Strap screw. | 5/16-18 UNC,1.5" L, 18-8 Stainless Steel. |
| ELEMENT INTERFACE | | | | |
| 15 | 2 | A/R | Adapter | Engineering Thermoplastic. |
| 16 | A/R | A/R | PWT Seal | Ethylene Propylene - O - Ring |

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

CAUTION: INCORRECT MANIFOLDING WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE; TAKE EVERY PRECAUTION LISTED ON PAGE 02, SEE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS



SECTION THROUGH END CLOSURE

| Dash Length | L IN(MM) | S IN(MM) | F IN(MM) | Approx Weight LB(KG)** |
|-------------|---------------|--------------|---------------|------------------------|
| -1 | 56.60 (1438) | 28X1 (711) | 54.10 (1374) | 21 (10) |
| -2 | 96.60 (2454) | 56X1 (1422) | 94.10 (2390) | 31 (14) |
| -3 | 136.60 (3470) | 80X1 (2032) | 134.10 (3406) | 41 (19) |
| -4 | 176.60 (4486) | 64X2 (1626) | 174.10 (4422) | 51 (23) |
| -5 | 216.60 (5502) | 78X2 (1981) | 214.10 (5438) | 62 (28) |
| -6 | 256.60 (6518) | 92X2 (2337) | 254.10 (6454) | 71 (32) |
| -7 | 296.60 (7534) | 106X2 (2692) | 294.10 (7470) | 81 (37) |

GENERAL NOTES:

1. DIMENSION IN INCHES (MM APPROX).
2. NO TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED.
3. SHELL EXTERIOR COATED WITH WHITE RAL 9003, HIGH GLOSS POLYURETHANE PAINT.

196315 - (OPTIONAL)- REFER PAGE 2.

* ASME PARTS.

** APPROX. WEIGHT REFERS TO SHELL WEIGHT INCLUDING HEAD ASSEMBLIES WITHOUT MEMBRANES.

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| | | | | |
|--------------|---------|---------------------------------|---------------|--------------------|
| DRAWN BY: | KR | DRAWING DESCRIPTION: | DRAWING NO.: | REV.: |
| DATE: | - | MODEL - 40E100 MEMBRANE HOUSING | 518015 | W |
| CHECKED BY: | MD | CUSTOMER NAME: | VESSEL MODEL: | |
| DATE: | - | - | 40E100 | |
| APPROVED BY: | SS | PROJECT NAME: | TOTAL QTY: | |
| DATE: | - | - | - | |
| ECN NO.: | 6801 | CUSTOMER P.O.#: | SIZE: | SCALE: |
| REV. DATE: | 29MAY24 | - | A3 | NONE |
| | | | | PAGE NO.: 01 OF 02 |

RATING:

DESIGN PRESSURE/MAWP.....1000 PSI
(6.89 MPa)
MAX. ALLOWABLE TEMP.....120°F
(49°C)
MIN. ALLOWABLE TEMP.....20°F
(-7°C)
FACTORY TEST PRESSURE.....1100 PSI
(7.58 MPa)
BURST PRESSURE.....6000 PSI
(41.37 MPa)

INTENDED USE:

The CodeLine Model 40E100 Fiberglass RO Pressure Vessel is designed for continuous, long term use as housing for reverse osmosis membrane elements to desalt typical sea waters at pressures up to 1000 psi. Any make of four-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 40E100 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code) Section X Edition 2023. F/C port, Bearing plate and Quick release spiral ring are designed as per Section VIII Division I Edition 2023. At small additional cost, vessels can be inspected during construction by an ASME Authorized inspector and ASME Code stamped.

The CodeLine Model 40E100 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 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.

The end closures, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the heads.

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.

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 complaint 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 resists growth of fiberglass shell under pressure; ΔDIA = 0.02 in. (0.5mm) and ΔL = 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;
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 (0.86 MPa @ 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 completely inside the groove
DO NOT... work on any component until first verifying that pressure is relieved from vessel
DO NOT... operate outside the pH range 3-11.
DO NOT...operate outside the pH range 2-12 for cleaning.
DO NOT...exceed 43.5 hours in a year for cleaning with above mentioned pH range.

For complete information on proper use of this vessel please refer to the 40E100 USER’S GUIDE Bulletin 526005.

NOTE
Spiral retaining ring removal tool (50303) is recommended to open and close vessel.

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 features not listed below, please consult factory for pricing and availability.

VESSEL LENGTH CODE – please check one

MODEL 40E100 ☐ -1 ☐ -2 ☐ -3 ☐ -4 ☐ -5 ☐ -6 ☐ -7

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 available, but will be supplied to Pentair on or before the following date ____/_____/_____

CERTIFICATION REQUIRED– please check one

- ☐ Hydro testing at 1.1 times the design pressure.
- ☐ In compliance with the ASME Sec. X but not Code Stamped.
- ☐ ASME Stamped and National Board Registered.\\
- ☐ CE Marked – MODULE-D1, CATEGORY-2.

PERMEATE PORT

- ☐ 47469- Hub + Nipple assembly, Engineering Thermoplastic.
- ☐ 196315- Single piece Engineering Thermoplastic.

EXTERIOR FINISH – please check one

- ☐ White high-gloss RAL 9003 polyurethane coating.
- ☐ Optional colors are available for 50 or more vessels per order. Call factory for pricing details.

MATERIAL AND PORT CONFIGURATIONS OPTIONS– please check one

- ☐ All materials and port configurations as per drawing 518015 on the first page.
- ☐ Feed/Concentrate port, ¾” IPS Grooved (P/N 47473)

Caution:

Eye protection should be worn when removing or installing retaining rings.
Keep fingers clear from retaining ring while installing last of two turns. Ring may snap into position possibly pinching fingers.

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| DATE: | - | MODEL - 40E100 MEMBRANE HOUSING | 518015 | W |
| CHECKED BY: | MD | CUSTOMER NAME: | VESSEL MODEL: | |
| DATE: | - | - | 40E100 | |
| APPROVED BY: | SS | PROJECT NAME: | TOTAL QTY: | |
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| | | | | PAGE NO.: 02 OF 02 |