



CODELINE[®] MEMBRANE HOUSINGS



ENGINEERED TO MAXIMIZE SYSTEM PERFORMANCE

ABOUT CODELINE®

Built to maximize the performance of your water treatment and purification systems, Codeline's membrane housings are the world's leading brand.

Since Codeline first introduced membrane housing in 1976, ground breaking developments have shaped the water treatment industry. Continuous innovation and uncompromising reliability make Codeline the most trusted name in membrane housings.

Codeline membrane housings are the ideal solution for a wide range of applications including:

- Desalination
- Municipal water treatment
- Power generation
- Food and beverage
- Ultra-pure water production
- Oil & Gas

SETTING QUALITY STANDARDS

Codeline's membrane housings are manufactured using the highest grade raw materials, computer controlled precision machines, and adherence to international manufacturing standards.

Our rigorous quality inspection and hydro-testing before shipping each membrane housing demonstrates Codeline's commitment to quality. With a Total Quality Management system that is certified according to ISO 9001:2008, depending on the model, Codeline membrane housings can be certified per ASME Sec-X, NSF-61, CE, or DWI.

CONTINUOUS INNOVATION

An industry leader for more than 30 years, Codeline continually raises the bar for system performance through advanced engineering and expertise.

Keeping with the tradition of setting benchmarks in the industry, Codeline pioneered the OCTA technology.

The OCTA series is unique as it provides the 'Best-Fit-Flat-Surface' for multiporting inside a conventional circular membrane housing.

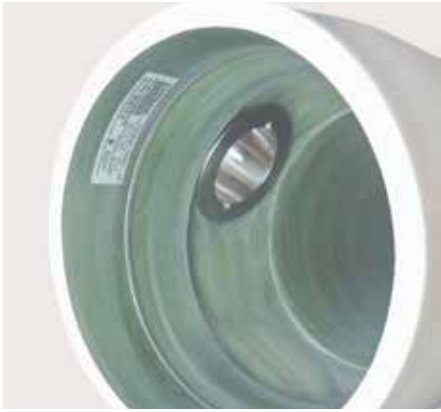
OCTA FAST FACTS

- Octagonal-shape is formed inside a circular membrane housing
- The shape provides the 'Best-Fit-Flat-Surface' of a multi-port membrane housing
- 'Unique Octagonal Groove Forming' technology is used for manufacturing



Codeline membrane housings are designed to meet the demands of cost effective, continuous, long term use of any type of commercial and industrial water processing. The vessels are made up of fibre reinforced epoxy/glass composites and can accommodate up to 8 membrane elements with a wide range of operating pressure at 150 psi, 300 psi, 450 psi, 600 psi, 1000 psi & 1200 psi. Codeline vessels are highly compatible for using in brackish, high brackish and seawater applications. Membrane housings with 8" and 4" diameter are most common in use throughout the world in various projects.

MEMBRANE HOUSING SPECIALIST



FLAT SEALING

Codeline, with its continuous innovation, designed the OCTA technology that makes flat sealing in a circular vessel a reality. The result is reliable and superior sealing of the side-ports.



THREADED SIDE-PORT

IPS grooved side-ports are threaded into the vessel shell. The threaded port facilitates easy port and seal replacement in the field.



QUICK LOCK SYSTEM

The user friendly, quick lock head retention system allows easy access to the membranes. The single piece retention system does not require tools and is available for pressures up to 1200 psi.



MULTI-PORTING

Multi-porting for 1.5, 2.0, 2.5, 3.0 and 4.0 inch sizes eliminates costly manifolds and reduces the system's footprint.



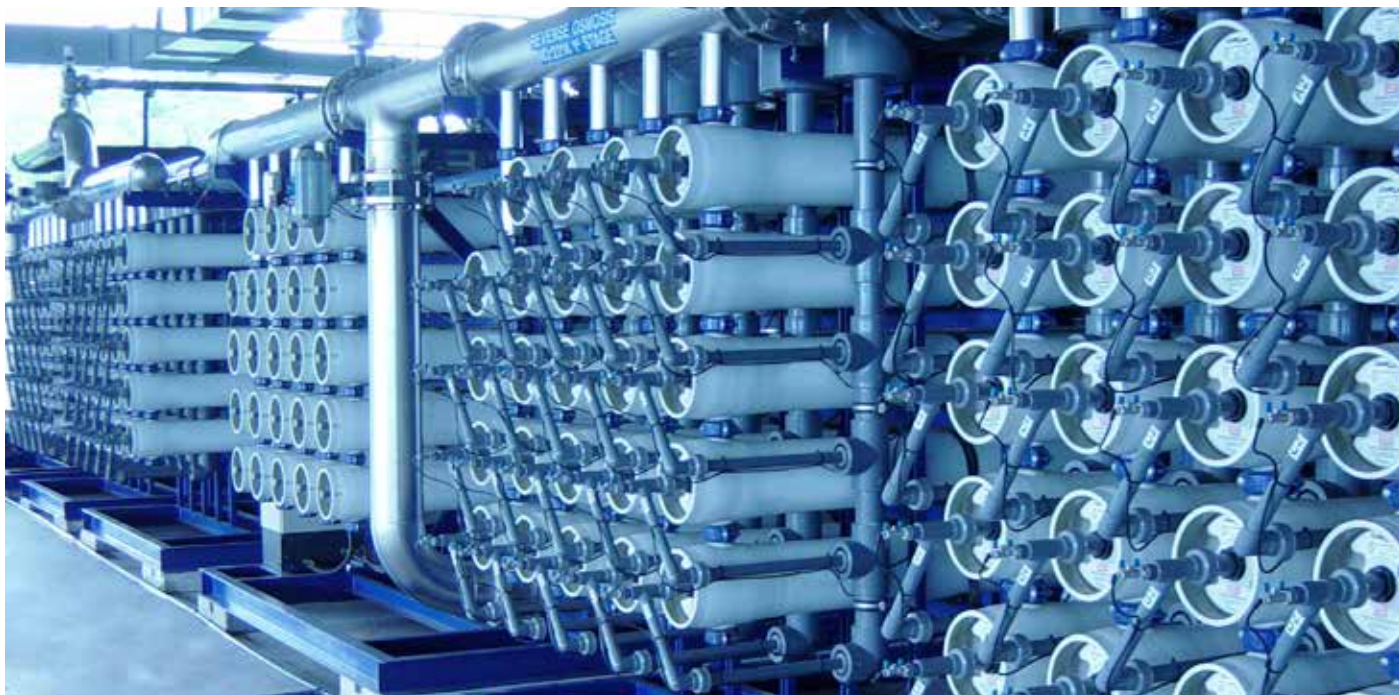
FAIL SAFE SHELL

The vessel is designed to weep, which prevents catastrophic failure. Codeline vessels meet ASME Section X requirements, including the 6x safety factor.



ONE PIECE HEAD

The single piece head for non-coded vessels results in fewer components and seals. This enables high operating temperatures, up to 190 °F, for vessels up to 600 psi. The flexible design provides standard options of 1 inch FNPT or 1.5 inch IPS grooved connections.



EXECUTIONS

Codeline's membrane housings are designed for long-term, continuous operation in critical and demanding applications such as in reverse osmosis, nanofiltration and ultrafiltration systems.

Our proprietary manufacturing process gives a 'Mirror ID' finish for easy loading and unloading of membranes. The 'Quick Lock' head retention technology provides faster access to the membranes.



8-INCH SIDE ENTRY - 80S/80H/80U

Codeline 8-inch side entry membrane housings are available in a wide operating pressure range from 150 to 1200 psi.

Codeline's multi-port feature allows vessel-to-vessel connection, which minimizes costly manifolds. Using OCTA technology, a patented Codeline feature, side ports are mounted on flat sealing surfaces and are threaded for easy service.

Depending on the system design requirements, side ports can be selected from the range of Codeline models available.

- 80S Series – Available with side-port options of 1.5, 2.0 and 2.5 inch IPS grooved
- 80H Series – Available with side-port options of 3.0 inch IPS grooved
- 80U Series – Available with side-port options of 4.0 inch IPS grooved

8-INCH END ENTRY - 80E

Codeline 8-inch end entry membrane housings are available in operating pressures of 300, 450, 600, 1000 and 1200 psi.

4-INCH SIDE ENTRY - 40S

Codeline 4-inch side entry membrane housings are available in operating pressures of 300 psi, 450 psi, and 600 psi.

The multi-port feature in 4-inch Codeline membrane housings allows vessel-to-vessel connection, which minimizes costly manifolds.

4-INCH END ENTRY - 40E

Codeline 4-inch end entry membrane housings are available in operating pressures of 300, 600 and 1000 psi. These housings accommodate any standard 40-inch long membrane.

TECHNICAL SPECIFICATIONS

| MODEL* | DRAWING NUMBER | MAX. OPERATING PRESSURE | MAX. OPERATING TEMPERATURE | QUALIFICATION PRESSURE | ELEMENT LENGTH |
|-------------------|----------------|-------------------------|----------------------------|------------------------|----------------|
| 40E SERIES | | | | | |
| 40E30N | 518016 | 300 psi / 20 bar | 120 °F / 49 °C | 1800 psi / 124 bar | 1 - 3 |
| 40E60 | 518017 | 600 psi / 41 bar | 120 °F / 49 °C | 3600 psi / 248 bar | 1 - 6 |
| 40E100 | 518015 | 1000 psi / 68 bar | 120 °F / 49 °C | 6000 psi / 413 bar | 1 - 7 |
| 40S SERIES | | | | | |
| 40S30 Coded | 99311 | 300 psi / 20 bar | 120 °F / 49 °C | 1800 psi / 124 bar | 1 - 6 |
| 40S45 Coded | 99315 | 450 psi / 31 bar | 120 °F / 49 °C | 2700 psi / 186 bar | 1 - 6 |
| 40S60 Coded | 99313 | 600 psi / 41 bar | 120 °F / 49 °C | 3600 psi / 248 bar | 1 - 6 |
| 40S30 Non-coded | 99312 | 300 psi / 20 bar | 120 °F / 49 °C | 1800 psi / 124 bar | 1 - 6 |
| 40S45 Non-coded | 99316 | 450 psi / 31 bar | 120 °F / 49 °C | 2700 psi / 186 bar | 1 - 6 |
| 40S60 Non-coded | 99314 | 600 psi / 41 bar | 120 °F / 49 °C | 3600 psi / 248 bar | 1 - 6 |
| 80E SERIES | | | | | |
| 80E30 | 99111 | 300 psi / 20 bar | 120 °F / 49 °C | 1800 psi / 124 bar | 1 - 8 |
| 80E45 | 99112 | 450 psi / 31 bar | 120 °F / 49 °C | 2700 psi / 186 bar | 1 - 8 |
| 80E60 | 99109 | 600 psi / 41 bar | 120 °F / 49 °C | 3600 psi / 248 bar | 1 - 8 |
| 80E100 | 99108 | 1000 psi / 68 bar | 120 °F / 49 °C | 6000 psi / 413 bar | 1 - 8 |
| 80E120 | 99110 | 1200 psi / 82 bar | 120 °F / 49 °C | 7200 psi / 496 bar | 1 - 8 |
| 80S SERIES | | | | | |
| 80S15 Coded | 99159 | 150 psi / 10 bar | 190 °F / 88 °C | 900 psi / 62 bar | 1 - 8 |
| 80S30 Coded | 99160 | 300 psi / 20 bar | 190 °F / 88 °C | 1800 psi / 124 bar | 1 - 8 |
| 80S45 Coded | 99161 | 450 psi / 31 bar | 190 °F / 88 °C | 2700 psi / 186 bar | 1 - 8 |
| 80S60 Coded | 99162 | 600 psi / 41 bar | 190 °F / 88 °C | 3600 psi / 248 bar | 1 - 8 |
| 80S100 Coded | 99163 | 1000 psi / 68 bar | 150 °F / 66 °C | 6000 psi / 413 bar | 1 - 8 |
| 80S120 Coded | 99164 | 1200 psi / 82 bar | 150 °F / 66 °C | 7200 psi / 496 bar | 1 - 8 |
| 80S15 Non-coded | 99171 | 150 psi / 10 bar | 190 °F / 88 °C | 900 psi / 62 bar | 1 - 8 |
| 80S30 Non-coded | 99172 | 300 psi / 20 bar | 190 °F / 88 °C | 1800 psi / 124 bar | 1 - 8 |
| 80S45 Non-coded | 99173 | 450 psi / 31 bar | 190 °F / 88 °C | 2700 psi / 186 bar | 1 - 8 |
| 80S60 Non-coded | 99174 | 600 psi / 41 bar | 190 °F / 88 °C | 3600 psi / 248 bar | 1 - 8 |
| 80H SERIES | | | | | |
| 80H15 | 99165 | 150 psi / 10 bar | 190 °F / 88 °C | 900 psi / 62 bar | 1 - 8 |
| 80H30 | 99166 | 300 psi / 20 bar | 190 °F / 88 °C | 1800 psi / 124 bar | 1 - 8 |
| 80H45 | 99167 | 450 psi / 31 bar | 190 °F / 88 °C | 2700 psi / 186 bar | 1 - 8 |
| 80H60 | 99168 | 600 psi / 41 bar | 190 °F / 88 °C | 3600 psi / 248 bar | 1 - 8 |
| 80H100 | 99169 | 1000 psi / 68 bar | 150 °F / 66 °C | 6000 psi / 413 bar | 1 - 8 |
| 80H120 | 99170 | 1200 psi / 82 bar | 150 °F / 66 °C | 7200 psi / 496 bar | 1 - 8 |
| 80U SERIES | | | | | |
| 80U30 | 99021 | 300 psi / 20 bar | 190 °F / 88 °C | 1800 psi / 124 bar | 1 - 8 |
| 80U45 | 99189 | 450 psi / 31 bar | 190 °F / 88 °C | 2700 psi / 186 bar | 1 - 8 |
| 80U60 | 99186 | 600 psi / 41 bar | 190 °F / 88 °C | 3600 psi / 248 bar | 1 - 8 |

This is a generic overview, please contact us for more details.

* Customized models are available with specific requests and feasibility study.



CODELINE®

PENTAIR WATER INDIA PVT. LTD. L / 52 – 55, VERNA INDUSTRIAL ESTATE, VERNA, GOA, INDIA – 403 722 WWW.CODELINE.COM

Note: The information and data contained in this document are based on our general experience and are believed to be correct. They are given in good faith and are intended to provide a guideline for the selection and use of our products. Since the conditions under which our products may be used are beyond our control, this information does not imply any guarantee of final product performance and we cannot accept any liability with respect to the use of our products. The quality of our products is guaranteed under our conditions of sale. Existing industrial property rights must be observed.

BROC CODELINE GENERAL EN 3615 © 2015 Pentair. All Rights Reserved.