

# CODELINE® - OCTA 80S SERIES

## 8 INCH SIDE ENTRY MEMBRANE HOUSING WITH OCTA TECHNOLOGY FOR RO APPLICATION

### MEMBRANE HOUSING DATASHEET

ARTICLE CODE: 80S15, 80S30, 80S45, 80S60, 80S100, 80S120, 80S15 (NC), 80S30 (NC), 80S45 (NC), 80S60 (NC)

#### GENERAL INFORMATION

Codeline OCTA 80S Series is membrane housing of 8" diameter with side entry design with OCTA Technology. This is used for commercial, municipal and industrial RO applications. Vessel models are available upto a maximum operating pressure of 150 PSI, 300 PSI, 450 PSI, 600 PSI, 1000 PSI & 1200 PSI with multiport connectivity. These are made up of epoxy / glass composite to meet the demands of long term and continuous use in RO processes. Codeline OCTA 80S Series vessels can accommodate any standard\* 8" membrane element.

\* Standard element length = 40 " long

#### CERTIFICATIONS

- Codeline 80S non-coded: CE certified NSF certified
- Codeline 80S coded: ASME code compliant, CE certified, NSF certified
- Contact us for DWI certified products

#### THE OCTA TECHNOLOGY - AN OVERVIEW

**The Background:** The conventional internal shape for a membrane housing is considered as a round shape, but use of a round shape with multiple side ports provides a higher probability of side port leakage. Hence, the research background was that how to fit a flat surface in a circular membrane housing with multiple side ports.

**The Research:** Research with various possibilities proved that an OCTAGON is the best shape to solve the problem of fitting of flat surface in a circular membrane housing. Hence, the technology named after OCTAGON as OCTA Technology.

**The Theory & Explanation:** Inside of industrial membrane housing made up of OCTAGONAL SHAPE can accommodate multiple side ports with the best fit surface. The reasons are explained as shown on the pictures.

**The Conclusion:** Successful execution showed that an Octagon, besides providing the best fit, would also allow for multiple sealing surfaces, each at certain intervals along with side port mounting. Apart from the above it will also provide the benefits like easy on-site service & maintenance with quick locking mechanism along with improved head sealing and integrally wound locking groove. Thus, OCTA Technology sets a benchmark for manufacturing a membrane housings series using the unique "Octagonal Groove Forming Technique" and applicable for 8" membrane housings only.



*Flat surface formed in the vessel shell - reduces counter boring*



*Seal seated against a flat surface*



*Threaded side port; seal seating on side port*

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#### UNIQUE BENEFITS

- **Minimized Leakage:** The octagonal shape which is integrally formed provides a flat sealing surface for superior and reliable sealing of side ports
- **Easy Service & Maintenance:** The threaded side ports are easy to mount and allows quick & easy onsite maintenance and replacements reducing downtime
- **Quick Locking Mechanism:** The user friendly Quick Lock System eliminates the requirement of special tools for removal and lets easy access the membrane quickly
- **Improved Head Sealing:** Head seal which is captured in the head / sealing plate gives better sealing and avoids head seal to roll eliminating head leak defect
- **Integrally Wound Locking Groove:** Integrally wound locking groove gives enhanced end margin strength for better performance
- **Flexibility in permeate piping:** Standard permeate ports can be customised as special requirements
- **Reduced system cost:** Availability of Multiple Side port options for high flow rate cuts down the investments on expensive manifolds
- **Ultrapure / Sanitary Applications:** 80S Serie can accommodate optionally a special designed sanitary connection for the coded models

#### UNIQUE FEATURES

- **Mirror Finish ID** for easy & quick loading and unloading of membranes
- **Multi-porting options** available with 1.5", 2.0" & 2.5" diameter for connecting vessels to each other
- **Quick lock head retention system** for quick access to membranes
- **Exteriors coated** with high gloss polyurethane paint for UV resistance
- **Head seal is captured**, hence doesn't roll during head assembly fitment
- **Compatible** for using in all water type application
- **Available** in ASME certified & CE marked models
- **Available** in ASME code compliant and non-coded models

#### CODELINE 80S SERIES SPECIFICATION\*

##### Code Compliant

| MODEL NUMBER    | DRAWING NUMBER | MAX. OPERATING PRESSURE | MAX. OPERATING TEMPERATURE | QUALIFICATION PRESSURE | ELEMENT LENGTH |
|-----------------|----------------|-------------------------|----------------------------|------------------------|----------------|
| CODELINE 80S15  | 99159          | 150 PSI / 10 Bar        | 190 °F / 88 °C             | 900 PSI / 62 Bar       | 1-8            |
| CODELINE 80S30  | 99160          | 300 PSI / 20 Bar        | 190 °F / 88 °C             | 1800 PSI / 124 Bar     | 1-8            |
| CODELINE 80S45  | 99161          | 450 PSI / 31 Bar        | 190 °F / 88 °C             | 2700 PSI / 186 Bar     | 1-8            |
| CODELINE 80S60  | 99162          | 600 PSI / 41 Bar        | 190 °F / 88 °C             | 3600 PSI / 248 Bar     | 1-8            |
| CODELINE 80S100 | 99163          | 1000 PSI / 68 Bar       | 150 °F / 66 °C             | 6000 PSI / 413 Bar     | 1-8            |
| CODELINE 80S120 | 99164          | 1200 PSI / 82 Bar       | 150 °F / 66 °C             | 7200 PSI / 496 Bar     | 1-8            |

##### Non-coded\*\*

| MODEL NUMBER      | DRAWING NUMBER | MAX. OPERATING PRESSURE | MAX. OPERATING TEMPERATURE | QUALIFICATION PRESSURE | ELEMENT LENGTH |
|-------------------|----------------|-------------------------|----------------------------|------------------------|----------------|
| CODELINE 80S15 NC | 99171          | 150 PSI / 10 Bar        | 190 °F / 88 °C             | 900 PSI / 62 Bar       | 1-8            |
| CODELINE 80S30 NC | 99172          | 300 PSI / 20 Bar        | 190 °F / 88 °C             | 1800 PSI / 124 Bar     | 1-8            |
| CODELINE 80S45 NC | 99173          | 450 PSI / 31 Bar        | 190 °F / 88 °C             | 2700 PSI / 186 Bar     | 1-8            |
| CODELINE 80S60 NC | 99174          | 600 PSI / 41 Bar        | 190 °F / 88 °C             | 3600 PSI / 248 Bar     | 1-8            |

Any make of 8" nominal diameter spiral-wound element is easily accommodated.

\* Specifications are subjected to change without prior notice (for more details refer to model specific engineering drawings)

\*\* 80S Non-coded series cannot be ASME stamped

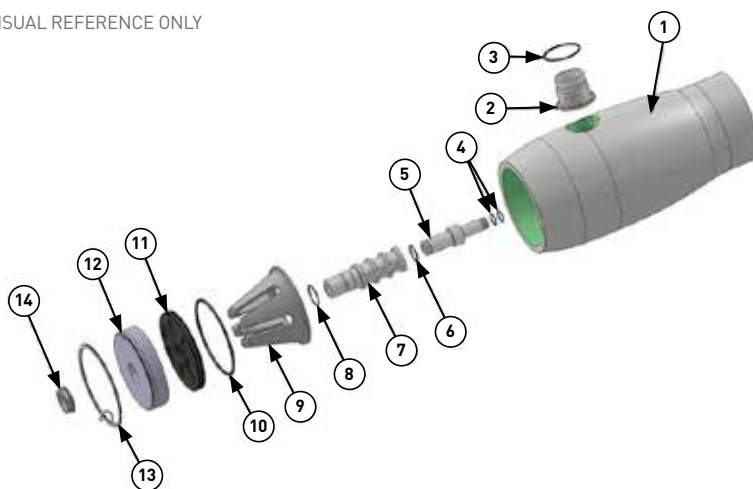
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### MEMBRANE HOUSING DATASHEET

#### EXPLODED VIEW & DETAILS (CODED MODELS)

A GENERIC VIEW FOR VISUAL REFERENCE ONLY



#### PARTS TABLE

| DRG<br>REG | QTY | DESCRIPTION        | MATERIAL                                                                                 | 80S15          | 80S30          | 80S45          | 80S60          | 80S100         | 80S120         |
|------------|-----|--------------------|------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |     |                    |                                                                                          | PART<br>NUMBER | PART<br>NUMBER | PART<br>NUMBER | PART<br>NUMBER | PART<br>NUMBER | PART<br>NUMBER |
| 1          | 1   | Shell              | Filament Wound Epoxy / Glass composites. Head Locking grooves integrally wound in place. | Order section  | Order section  | Order section  | Order section  | Order section  | Order section  |
| 2          | AR  | F / C Port         | CF3M / CD3MWCuN                                                                          | CF3M           | CF3M           | CF3M           | CF3M           | CD3MWCuN       | CD3MWCuN       |
| 3          | AR  | F / C Port Seal    | Ethylene Propylene                                                                       | As required    | As required    | As required    | As required    | As required    | As required    |
| 4          | 4   | PWT Seal           | Ethylene Propylene - O Ring                                                              | As required    | As required    | As required    | As required    | As required    | As required    |
| 5          | 2   | Adapter            | Engineering Thermoplastic                                                                | As required    | As required    | As required    | As required    | As required    | As required    |
| 6          | 2   | Adapter Seal       | Ethylene Propylene - O Ring                                                              | 52245          | 52245          | 52245          | 52245          | 52245          | 52245          |
| 7          | 2   | Permeate Port      | Engineering Thermoplastic                                                                | 96162          | 96162          | 96162          | 96162          | 96162          | 96162          |
| 8          | 2   | Permeate Port Seal | Ethylene Propylene - O Ring                                                              | 45312          | 45312          | 45312          | 45312          | 45312          | 45312          |
| 9          | 1   | Thrust Cone        | Engineering Thermoplastic                                                                | 96163          | 96163          | 96163          | 96163          | 96163          | 96163          |
| 10         | 2   | Head Seal          | Ethylene Propylene - O Ring                                                              | 96000          | 96000          | 96000          | 96000          | 96000          | 96000          |
| 11         | 2   | Sealing Plate      | Engineering Thermoplastic                                                                | 96160          | 96160          | 96160          | 96160          | 96160          | 96160          |
| 12         | 2   | Bearing Plate      | 6061-T6 Aluminum Alloy - Hard Anodized                                                   | 96156          | 96156          | 96157          | 96157          | 96158          | 96158          |
| 13         | 2   | Retaining Ring     | 316 Stainless Steel                                                                      | 47336          | 47336          | 47336          | 47336          | 47336          | 47336          |
| 14         | 2   | Port Nut           | Engineering Thermoplastic                                                                | 45066          | 45066          | 45066          | 45066          | 45066          | 45066          |
| 15*        | AR  | Saddle             | Engineering Thermoplastic                                                                | 52169          | 52169          | 52169          | 52169          | 52169          | 52169          |
| 16*        | AR  | Strap Assembly     | 304 Stainless Steel - PVC Cushion                                                        | 45042          | 45042          | 45042          | 45042          | 45042          | 45042          |
| 17*        | AR  | Strap Screw        | 5/16-18 UNC, 18-8 Stainless Steel                                                        | 46265          | 46265          | 46265          | 46265          | 46265          | 46265          |

\* Not shown in the exploded view

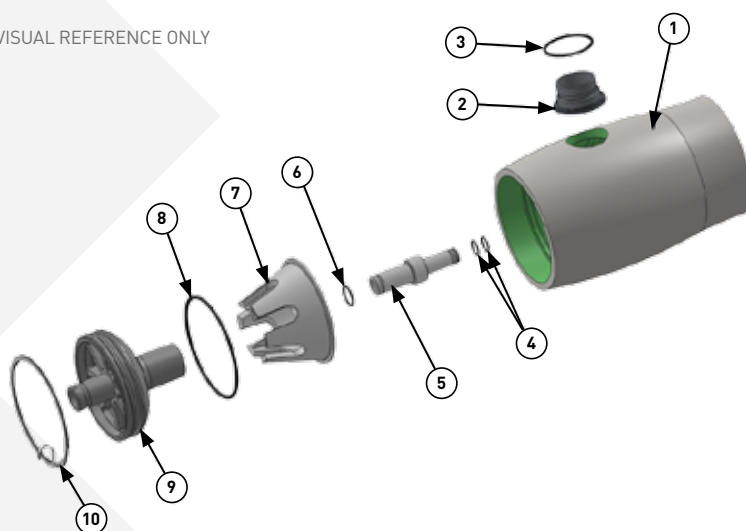
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## 8 INCH SIDE ENTRY MEMBRANE HOUSING WITH OCTA TECHNOLOGY FOR RO APPLICATION

### MEMBRANE HOUSING DATASHEET

#### EXPLODED VIEW & DETAILS (NON-CODED MODELS)

A GENERIC VIEW FOR VISUAL REFERENCE ONLY



#### PARTS TABLE

| DRG<br>REG | QTY | DESCRIPTION                     | MATERIAL                                                                                    | 80S15 NC      | 80S30 NC      | 80S45 NC      | 80S60 NC      |
|------------|-----|---------------------------------|---------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
|            |     |                                 |                                                                                             | PART NUMBER   | PART NUMBER   | PART NUMBER   | PART NUMBER   |
| 1          | 1   | Shell                           | Filament Wound Epoxy / Glass composites.<br>Head Locking grooves integrally wound in place. | Order section | Order section | Order section | Order section |
| 2          | AR  | F / C Port                      | CF3M                                                                                        | As required   | As required   | As required   | As required   |
| 3          | AR  | F / C Port Seal                 | Ethylene Propylene                                                                          | As required   | As required   | As required   | As required   |
| 4          | 4   | PWT Seal                        | Ethylene Propylene - O Ring                                                                 | As required   | As required   | As required   | As required   |
| 5          | 2   | Adapter                         | Engineering Thermoplastic                                                                   | As required   | As required   | As required   | As required   |
| 6          | 2   | Adapter Seal                    | Ethylene Propylene - O Ring                                                                 | 52245         | 52245         | 52245         | 52245         |
| 7          | 1   | Thrust Cone                     | Engineering Thermoplastic                                                                   | 97014         | 97014         | 97014         | 97014         |
| 8          | 2   | Head Seal                       | Ethylene Propylene - O Ring                                                                 | 96000         | 96000         | 96000         | 96000         |
| 9          | 2   | Elliptical Head<br>Sub Assembly | Engineering Thermoplastic                                                                   | 96247         | 96243         | 96248         | 96244         |
| 10         | 2   | Retaining Ring                  | 316 Stainless Steel                                                                         | 47336         | 47336         | 47336         | 47336         |
| 11*        | AR  | Saddle                          | Engineering Thermoplastic                                                                   | 52169         | 52169         | 52169         | 52169         |
| 12*        | AR  | Strap Assembly                  | 304 Stainless Steel - PVC Cushion                                                           | 45042         | 45042         | 45042         | 45042         |
| 13*        | AR  | Strap Screw                     | 5/16-18 UNC, 18-8 Stainless Steel                                                           | 46265         | 46265         | 46265         | 46265         |

\* Not shown in the exploded view



CODELINE®

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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.  
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