

# CODELINE® - ECOLINE 8 INCH SERIES

## UNIQUE 8 INCH SIDE ENTRY MEMBRANE HOUSING FOR RO APPLICATION

MEMBRANE HOUSING DATASHEET

ARTICLE CODE: ECOLINE 80-300, ECOLINE 80-450

### GENERAL INFORMATION

Codeline Ecoline 8 Inch 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 300 PSI & 450 PSI. These are made up of epoxy / glass composite to meet the demands of long term and continuous use in RO processes. This vessel can accommodate any standard\* 8" membrane element.

\* Standard element length = 40 " long

### 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.

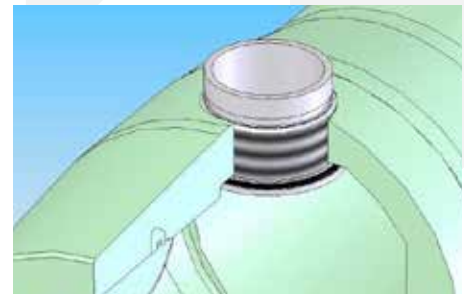
**The Research:** Research with various possibilities proved that an OCTAGON is the best shape to solve the problem of fitting of flat surface in a circular membrane housing. Hence, the technology named after OCTAGON as OCTA Technology.

**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
- **Advanced End Closure:** The most advanced single piece head, made of engineering thermoplastic, provides a superior permeate port seal joint and chemical resistance

#### UNIQUE FEATURES

- Side port options available only with 1.5" diameter
- Mirror Finish ID for easy & quick loading & unloading of membranes
- 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

#### CERTIFICATIONS

- CE certified

#### CODELINE® ECOLINE 8 INCH SERIES SPECIFICATION\*

MODEL NUMBER	DRAWING NUMBER	MAX. OPERATING PRESSURE	MAX. OPERATING TEMPERATURE	QUALIFICATION PRESSURE	ELEMENT LENGTH
CODELINE ECOLINE 80-300	99196	300 PSI / 20 Bar	120 °F / 49 °C	1200 PSI / 82 Bar	1-8
CODELINE ECOLINE 80-450	99197	450 PSI / 31 Bar	120 °F / 49 °C	1800 PSI / 124 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)

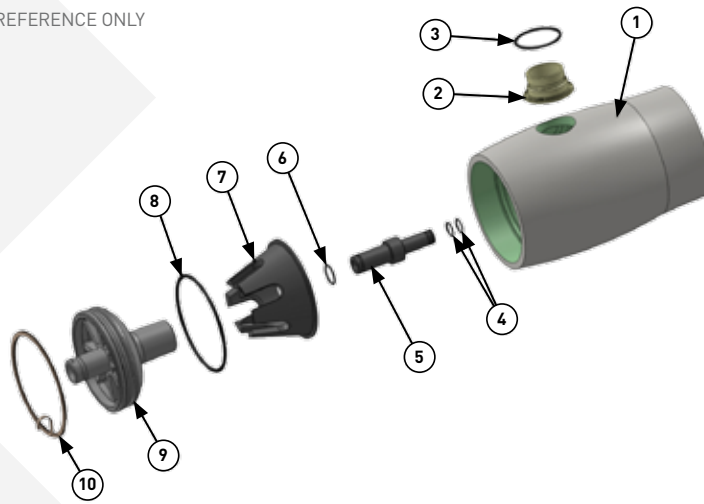
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#### EXPLODED VIEW & DETAILS

A GENERIC VIEW FOR VISUAL REFERENCE ONLY



#### PARTS TABLE

DRG REG	QTY	DESCRIPTION	MATERIAL	80-300	80-450
				PART NUMBER	PART NUMBER
1	1	Shell	Filament Wound Epoxy / Glass composites. Head Locking grooves integrally wound in place.	Order section	Order section
2	AR	1.5 Inch F / C Port	CF3M	98024	98024
3	AR	1.5 Inch F / C Port Seal	Ethylene Propylene	96077	96077
4*	4	PWT Seal	Ethylene Propylene - O Ring	As required	As required
5*	2	Adapter	Engineering Thermoplastic	As required	As required
6	2	Adapter Seal	Ethylene Propylene - O Ring	52245	52245
7	1	Thrust Cone	Engineering Thermoplastic	97014	97014
8	2	Head Seal	Ethylene Propylene - O Ring	96000	96000
9	2	Elliptical Head Sub Assembly	Engineering Thermoplastic	96668	96669
10	2	Retaining Ring	316 Stainless Steel	47336	47336
11**	AR	Saddle	Engineering Thermoplastic	52169	52169
12**	AR	Strap Assembly	304 Stainless Steel - PVC Cushion	45042	45042
13**	AR	Strap Screw	5/16-18 UNC, 18-8 Stainless Steel	46265	46265

\* Depends on membrane used

\*\* Not shown in the exploded view



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