Brackish Water Reverse Osmosis Membranes

**CPA**

**High Rejection Membranes**

CPA (Composite Polyamide) membranes set the standard for RO membranes – over 600 million gallons per day of pure water are produced by CPA elements for global municipalities and industries. CPA membranes are available in 4” and 8” diameters.

**CPA Applications:**
- Treatment of well waters for municipal drinking water
- Production of boiler feed water in power plants
- Production of ultrapure water for semiconductor, pharmaceutical and food and beverage industries

**CPA Product Offerings***:
CPA2-4040, CPA2, CPA3, CPA5-LD-4040, CPA5-LD, CPA5 MAX, CPA6-LD, CPA6 MAX, CPA7-LD-4040, CPA7-LD, CPA7 MAX

**ESPA**

**Energy Saving Membranes**

ESPA (Energy Saving Polyamide) membranes achieve high flux / lower pressure without compromising standards for high rejection. Since their introduction in the late 1990s, the ESPA membranes have gained wide acceptance in the water treatment industry due to the significant operational cost savings associated with their use. ESPA membranes are available in 4”, 8” and 16” diameters.

**ESPA Applications:**
- Treatment of ground, surface and wastewater
- High purity industrial applications
- Boron reduction for potable and agricultural water
- Municipal waste water reclamation

**ESPA Product Offerings***:
ESPA1-LD-4040, ESPA1, ESPA2-LD-4040, ESPA2-LD, ESPA2 MAX, ESPA2-LD MAX, ESPA4-LD-4040, ESPA4-LD, ESPA4 MAX

**LFC**

**Low Fouling Membrane**

LFC (Low Fouling Composite) membranes combine neutral surface charge and hydrophilicity, providing significant reduction in fouling rates and increasing membrane efficiency by restoring nominal performance after cleaning. LFC membranes are available in 4” and 8” diameters.

**LFC Applications:**
- Municipal wastewater treatment
- Industrial wastewater treatment
- Wastewater with organic fouling potential

**LFC Product Offerings***:
LFC3-LD-4040, LFC3-LD
Seawater Reverse Osmosis Membranes

SWC
High Rejection Membranes for Seawater Desalination

SWC (Seawater Composite) membranes offer a consistently pure end-product with lowest energy consumption at varying levels of seawater salinities. SWC membranes are available in 4”, 8” and 16” diameters.

SWC Applications:
- Conventional and hybrid seawater desalination plants
- Boron reduction for potable and agricultural water

SWC Product Offerings*:
- SWC4-LD, SWC4 MAX, SWC5-LD-4040, SWC5-LD, SWC5 MAX, SWC6-LD, SWC6 MAX

Nanofiltration Membranes

Hydranautics’ broad line of nanofiltration elements include our ESNA, NANO and HYDRACoRe membranes that provide a range of salinity rejections from 30% to 90% but with high rejection for selected contaminants such as pesticides, natural organic matter (NOM), pathogens, sulfate, iron or other specific material. These nanofiltration membranes are available in 4” and 8” diameters.

Applications:
- Brackish water softening
- Removal of NOM, TOC and other organics
- Industrial waste water reclamation to achieve high recovery

Product Offerings*:
- ESNA1-LF-LD-4040, ESNA1-LF-LD, ESNA1-LF2-LD-4040, ESNA1-LF2-LD, NANO-SW-4040, NANO-SW, NANO-SW MAX, HYDRACoRe10, HYDRACoRe50, HYDRACoRe70pHT

Integration Membrane Solutions Design (IMSDesign)

IMSDesign is a powerful software tool for designing an integrated membrane system. It offers enhanced program features, improved graphics and includes new features, which enhance the user’s ability to quickly and accurately design and analyze membrane-based systems. IMSDesign is available as a complimentary download at www.membranes.com.

* Element specification sheets and technical bulletins are available at www.membranes.com. The LD variant of a membrane uses the low-differential LD Technology® which minimizes colloidal fouling when used with conventional pre-treatment equipment. LD membranes offer consistently low feed pressures and longer intervals between cleanings. The MAX variant of a membrane has 440 ft² (40.9 m²) active membrane surface area. The increased membrane area reduces capital costs as fewer pressure vessels are required which also reduces the required floor space.

Installation references are also available upon request.