Nitto
Innovation for Customers

HYDRANAUTICS

LFC3-LD

True Hydrophilic Membrane Chemistry with LD Technology®

LFC3-LD from the LD Technology® innovative low fouling membranes combines the attributes of a neutrally charged surface with hydrophilicity to achieve the lowest colloidal fouling in the most demanding feed water conditions.

Superior membrane technology is the key to Hydranautics' innovative LFC (Low Fouling Composite) membranes. LFC3-LD membranes offer breakthrough technology in the treatment of difficult feedwaters and municipal wastewaters. Until now, these applications required significant pre-treatment prior to being subjected to a composite polyamide membrane, which is eliminated with the use of the LFC3-LD membrane.

Combining the attributes of a neutral surface charge and hydrophilicity, LFC3-LD provides significant reduction in fouling rates increasing the membrane's efficiency by restoring nominal performance after cleaning.

The low fouling composite LFC3-LD (Low Differential Pressure) provides a neutral surface charge that reduces fouling when treating wastewater and surface water with high fouling potential. With the low fouling LD Technology®, the differential pressure gets reduced lowering the colloidal fouling inside the membrane, and successfully reducing the number of cleanings required.

Key features:

- **High permeate flow – 11,000 gpd (41.6 m^3/d)**
- **High salt rejection – 99.7% (99.5% minimum)**
- **Increased membrane durability**
- **Lower dP (differential pressure)**
- **Greater tolerance to high pH cleanings**
- **Improved flux distribution**

Features and benefits:

- **Enhanced membrane chemistry** for increased chemical resistance
- **Innovative feed spacer design** to minimize trapping of small colloidal particles
- **Proprietary vented seal carrier** to eliminate pressure-shock damage during system startup

Applications:

- Municipal wastewater treatment
- Industrial wastewater treatment
- Wastewater with organic fouling potential



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Performance:

Permeate Flow	11,000 gpd (41.6 m^3/d)
Salt Rejection	99.7% (99.5% minimum)

Applications Data:

pH Range, Continuous (Cleaning)	2–10 (1–12)
Maximum Feedwater SDI (15 mins)	5.0
Maximum Feed Flow	85 gpm (19.3 m^3/h)

Test Conditions:

- 1500 ppm NaCl solution
- 225 psi (1.55 MPa) Applied Pressure
- 77 °F (25 °C) Operating Temperature
- 15% Permeate Recovery
- 6.5 – 7.0 pH Range

LFC3-LD, Low Fouling Composite Polyamide RO membranes, for Your Water Treatment Needs!



Hydranautics – A Nitto Group Company is a global leader in research, including reverse osmosis, nanofiltration, ultrafiltration, and microfiltration. Our membrane products (CPA, ESPA, LFC, SWC, ESNA, HYDRAcapMAX and HYDRAsub) are used extensively in municipal & industrial water and wastewater treatment.

Hydranautics has over 40 years experience in the membrane technology arena and are committed to creating innovative membrane technologies which provide clean water to a thirsty world.

Our Global Membrane Division is headquartered in Oceanside, CA, USA. With three state-of-the-art manufacturing sites located in Oceanside – CA – USA, Shiga – Japan and Shanghai – China, Hydranautics has a combined manufacturing area in excess of 1,400,000 ft^2 (130,064 m^2). Our world-wide sales and customer service offices are located throughout Europe, Asia, the Middle East, North America and South America.

Solutions You Need.
Technologies You Trust!

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