

PRESS RELEASE

Hydranautics Launches ESNA5-LD: Setting New Standards in Energy-Efficient Removal of Organic Contaminants for Safe Drinking Water

Hydranautics – A Nitto Group Company, a leading global membrane technology company, is excited to announce the launch of its innovative solution, ESNA5-LD. This advanced membrane technology provides high contaminant removal at low pressures, enabling the production of safe drinking water with significantly reduced energy consumption.

Surface waters naturally collect organic matter, such as humic and fulvic acids, from decaying plant material. As this water percolates into shallow aquifers, it absorbs hardness and iron from sediment, leading municipalities to pump this well water for drinking. While typically low in salinity, this water often contains high levels of iron, hardness, color, and natural organic matter (NOM). Chlorine disinfectants used during treatment can react with these organics, forming micro-pollutants known as disinfection byproducts (DBPs).

The ESNA5-LD membrane is specifically designed to tackle these challenges. It effectively removes NOM, taste and odor compounds, environmental pollutants, pharmaceuticals, and personal care products (PPCPs), as well as harmful substances like fluorine and arsenic.

Key features of ESNA5-LD:

- **Ideal for Drinking Water Applications:** Ensures high-quality water suitable for consumption.
- **Exceptional Removal of Contaminants:** Provides excellent removal rates for NOM, total organic carbon (TOC), per- and polyfluoroalkyl substances (PFAS), and other organic compounds.

Key Advantages of ESNA5-LD:

- **Outstanding Removal of Organic Contaminants:**
 - Eliminates the risk of DBP formation through effective NOM removal.
 - Significantly reduces 2-MIB and Geosmin, the compounds responsible for unpleasant odors.
 - High removal rates for heavy metals, herbicides, and nitrate (NO₃-N).
- **High Permeability Membrane with Low dP Feed Spacer:**
 - Enables ultra-low-pressure operation, leading to substantial energy savings.
 - Operating pressures range from approximately 0.2 to 0.4 MPa.

Hydranautics' ESNA5-LD is positioned to redefine water treatment processes, making it an ideal choice for municipalities seeking to enhance drinking water quality while reducing energy consumption.

For more information about ESNA5-LD and Hydranautics' innovative solutions, please visit www.membranes.com or write at hy-marketing@nitto.com



Introducing **ESNA5-LD**

Setting New Standards in Energy-Efficient Removal of Organic Contaminants for Safe Drinking Water.

**Excellent Removal of Organic Contaminants**

- NOM removal eliminates the risk of DBP formation.
- Effectively removes 2-MIB and Geosmin, which cause odors.
- High removal rates for heavy metals, herbicides, and NO₃-N.

**High Permeability Membrane with Low dP Feed Spacer**

- Enables ultra-low pressure operation for energy savings.
- Operating pressures: ~0.2 to 0.4 MPa.



ABOUT HYDRANAUTICS

Hydranautics, a member of the Nitto Group, is a global leader in innovative membrane solutions. We provide comprehensive membrane technologies, including reverse osmosis, nanofiltration, and microfiltration, for water, wastewater, and process treatment applications. Our membrane-based solutions are utilized across seven continents in various fields such as seawater desalination, industrial high-purity water production, surface water treatment, wastewater treatment, and specialty process applications. Our Global Membrane Division is headquartered in Oceanside, CA, USA, and we operate two state-of-the-art manufacturing facilities in Oceanside and Shiga, Japan. For more information about Hydranautics, please visit our website at www.membranes.com.

ABOUT NITTO

Nitto is Japan's leading diversified materials manufacturer. Based on four core technologies: adhesion, coating, polymer function control, and polymer analysis & evaluation, Nitto provides customers with various products such as polarizing films for displays, industrial adhesive tapes, reverse osmosis membranes for desalination and transdermal drug delivery patches. Under the brand slogan of "Innovation for Customers", Nitto contributes to a better life by solving social issues and improving corporate value. For further information on Nitto please visit www.nitto.com

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