

BACTIVATOR® LSN Series for Nitrification / Denitrification © 2009

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ECOPROBIOTICS®, of the Bacta-Pur® System, are beneficial communities of natural bacteria, which have been on earth for millions of years and have been selected for their synergistic ability to biodegrade pollutants and to improve water quality. ECOPROBIOTICS® increase biodiversity. Just as people take probiotic yogurt for its ability to assure the presence of the optimal community for digestion and immunity, ECOPROBIOTICS® improve ecosystem health. EVERY PRODUCTION of Bacta-Pur® products is analyzed and cleared for shipment ONLY after passing all performance tests and being CERTIFIED PATHOGEN FREE using techniques from the food industry. ECOPROBIOTICS® are purely natural and beneficial. They NEVER contain added chemicals such as surfactants, emulsifiers or enzymes..., nor do they contain genetically modified (GMO) or deliberately mutated organisms. ECOPROBIOTICS® are safe and beneficial. Disease causing organisms are never used, as others do or permit.

The Bacta-Pur® System, of ECOPROBIOTICS® products combined with the BACTIVATOR®, has developed a worldwide reputation as state-of-the-art. The BACTIVATOR® is an automatic system, which continuously preactivates and optimizes the physiological condition of Bacta-Pur® products, prior to addition to the wastewater. It is in this manner that the Bacta-Pur® System succeeds, where others fail.

The BACTIVATOR® automatically performs the following operations:

1. awakens & grows the ECOPROBIOTICS® to increase their numbers;
2. optimizes the physiological condition the ECOPROBIOTICS® to control ammonia, nitrite, nitrates and to remove soluble phosphorus.

The BACTIVATOR® is designed to be simple to use, to save operator time and money as well as to help optimize treatment efficiency. The BACTIVATOR® is designed and built to operate for extended periods of time with a minimum of maintenance.

The BACTIVATOR® LSN series is designed to nitrify, denitrify and reduce soluble phosphorous. The BACTIVATOR® LSN series requires disinfected water. The modular design of the BACTIVATOR® LSN Series allows multiple units to be used, in series, to accommodate any flow rate.

Process and equipment

The BACTIVATOR® LSN series contains four principal components: (1) reservoir for the ECOPROBIOTICS® and nutrients, (2) multi-step bioreactor, (3) water conditioning and distribution system, and (4) electrical controls.

1. The reservoir — contains a supply of the ECOPROBIOTICS® and nutrients. A dosing pump transfers the bacterial/nutrient mixture to the bioreactor. Low level float switch, within the reservoir, send a signal to electrical control panel to light a red indicator light, located on the front of the unit, when the reservoir needs to be refilled. The BACTIVATOR® LSN1000 model has an external reservoir located on the floor, beneath the cabinet.

2. The bioreactor — has two internal compartments or growth chambers, with aeration. The first contains an immersion heater and receives the incoming ECOPROBIOTICS™, nutrients and water. This compartment serves to bring the ECOPROBIOTICS® out of dormancy and to begin their growth. The bacterial culture then flows through the second growth compartment before leaving the system and being fed into the system. Air is supplied to the bioreactor by an internal air pump.



The BACTIVATOR® LSN500



3. The water treatment and distribution system — contains an activated carbon filter and a flow control valve. The activated carbon filter removes chlorine from municipal water, used as water supply for the operation of the unit. A dosing pump, which is pre-adjusted to defined specifications, transfers precise quantities of treated water to the bioreactor.

4. Electrical control system — is available for 115v, 60Hz or 220-240v, 50/60Hz service. UL/CSA approved components are used.

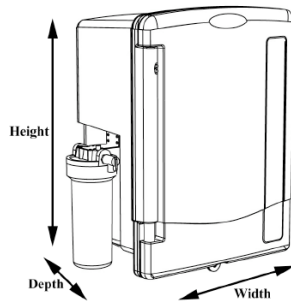
Products required — The **BACTIVATOR®** LSN series require the Bacta-Pur® N-KITs for operation. Each KIT contains the correct ratio of Bacta-Pur® N3000 and Bacta-Pur® PRECONDITIONER N. Starting after twelve months of operation, the units require one annual replacement parts kit per year.

Sizing:

BACTIVATOR® Model	LSN500	LSN1000
Flow MGD (m ³ /d) up to	0.13 (500)	0.26 (1000)
Volume MG (m ³) up to	0.92 (3,500)	1.85 (7,000)
# Bacta-Pur® N-KITs required for six months	4	8



BACTIVATOR® LSN1000 model with an external reservoir on the floor.



NOTE: To evaluate the size and model of the **BACTIVATOR®** required for your treatment system, please contact IET-Aquaresearch Ltd or one of our authorized representatives.

Some models are special order items, call for availability. The external configuration may vary with the model. The installation dimensions remain the same for all models, unless otherwise specified.

Technical Specifications: BACTIVATOR® LSN series

INSTALLATION DIMENSIONS	22"Width x 14.5"Depth x 26"Height (56cm x 37cm x 66cm) <u>LSN1000 model only:</u> the reservoir 19"Diameter x 24"Height (48cm x 61cm) is located beneath the cabinet of the BACTIVATOR® .
WET WEIGHT	90 lbs (41 Kg) wet weight.
OPERATING CONDITIONS	Minimum Temperature: 63°F (17°C) Maximum Temperature: 104°F (40°C)
ELECTRICAL REQUIREMENTS	115v, 60Hz (0.5 Amp) is standard. 220-240v, 50/60 Hz (0.25 Amp) is a special order option. GFI always required.
WATER REQUIREMENTS	Municipal or City water. Inlet water supply options: 1/4" OD Copper line or tubing capable of being used with quick disconnects.
WATER CONSUMPTION	26 US gal (96 L) per day
PRODUCT OUTPUT	The model numbers refer to the milliliters of product used daily. Output is by gravity feed. If the product must flow uphill, an auxiliary pump (not supplied) must be installed. Outfall water connections: 3/4" ID tubing.

