Product Data Sheet

DuPont™ Ligasep™ Degasification Modules

Models LDM-040-HS, LDM-040-LS

Description

Ligasep™ Degasification Modules use a proprietary Polymethylpentene (PMP) hollow fiber membrane that provides an efficient transfer of gases between a liquid and a gas. These modules are ideal for deoxygenation, decarbonation, and gas control of liquids.

Ligasep™ Degasification Modules have the following features:

- Utilizes a hollow fiber membrane with a skin layer that reduces the passage of water vapor through the membrane. Low water vapor passage across the membrane allows blowers and other vacuum pump technologies to be used on the gas side of the membrane.
- The membrane offers a barrier that prevents mixing between the gas and the liquid, hence avoiding any cross-contamination between both fluids.
- Provides a stable and efficient contact area, allowing the modules to achieve low dissolved gas levels at outlet.
- Immediate transfer of gas allows for a rapid start-up.
- Low pressure drop across the module eliminates the need for a booster pump, reducing energy consumption.
- Inline installation ensures continuous operation and improving process reliability.

"LS" fiber is typically used in applications with gases with lower solubility in water, such as oxygen, and where high levels of removal are required.

"HS" fiber is designed for more efficient contact between the sweep gas and the liquid, which is ideal for gases that have a high solubility in water, such as CO_2, H_2S, and NH_3.

Applications

- Boiler feedwater
- Ultrapure water
- Deionized water

Industries

- Industrial water treatment
- Power
- Beverage
- Oil & Gas
- Microelectronics
- Pharmaceutical

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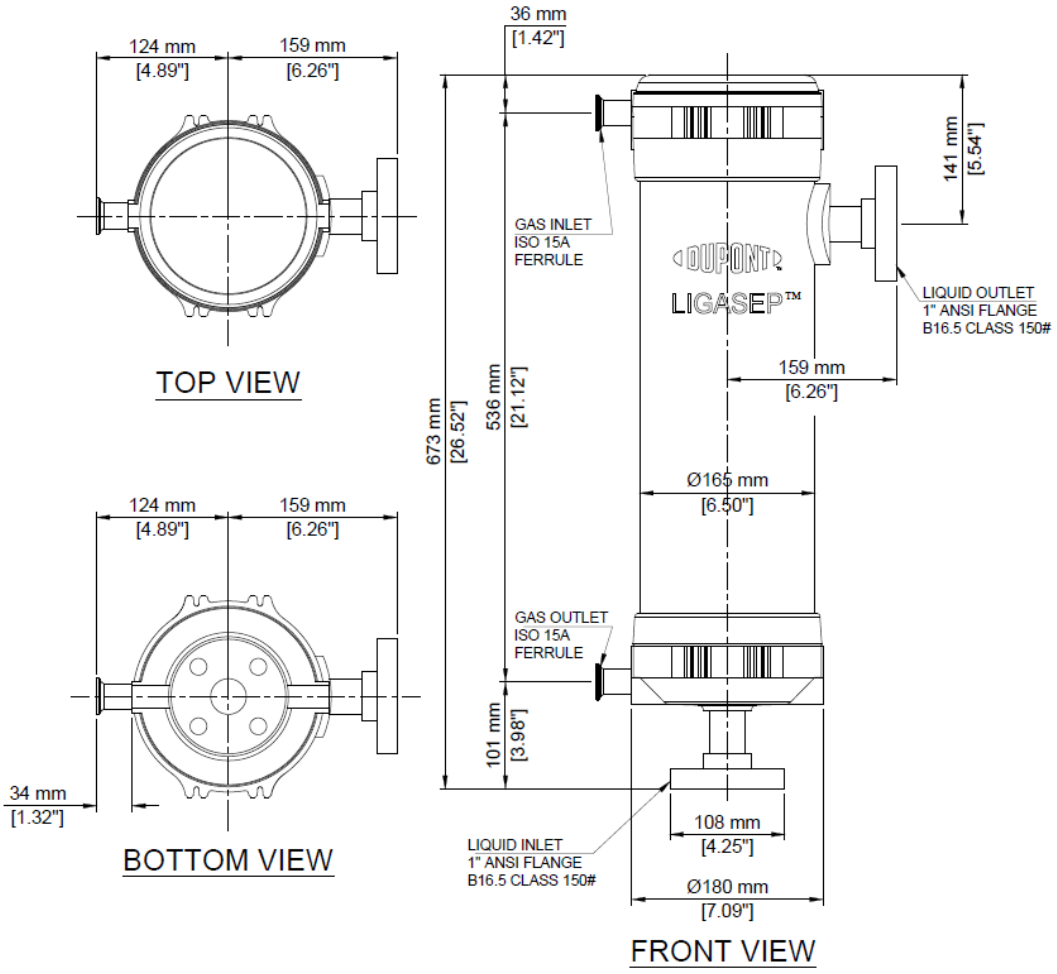
Product Properties

Configuration	
Flow Structure	External Flow
Connection Type	
Liquid	1” ANSI B16.5 class 150
Gas	ISO 15A Ferrule
Physical Properties	
Volume (liquid phase)	6.5 L (1.7 gal)
Height (including flanges)	673 mm (26.5 in)
Diameter	180 mm (7.1 in)
Weight	
Empty	10 kg (22.1 lb)
Full	16.5 kg (36.4 lb)
Materials of Construction	
Hollow Fiber Membrane	Polymethylpentene (PMP)
Housing	PVC
Cap	Polysulfone
Pipe	Polysulfone
Sealing Resin	Epoxy resin, Polyurethane resin
O-ring	EPDM

Suggested Operating Conditions

Water Flowrate	1 – 11 m^3/h (4.4 – 48.4 gpm)
Temperature Range	5 – 50°C (41 – 122°F)
Water Pressure	
5 – 40°C (41 – 104°F)	6 bar (87 psig)
40 – 50°C (104 – 122°F)	5 bar (72.5 psig)
Operating Vacuum Level	10 – 760 mmHg (Torr)
Feedwater Characteristics	
Total Suspended Solids	< 1 ppm
Total Dissolved Solids	Under saturation limits
Total Organic Carbon	< 1 ppm
Oil & Grease	< 0.1 ppm
Free Chlorine	< 0.1 ppm
Oxidizer	Not detectable
pH Range	1 – 13
Turbidity	< 0.5 NTU
SDI_{15}	< 3

Dimensions



Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

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