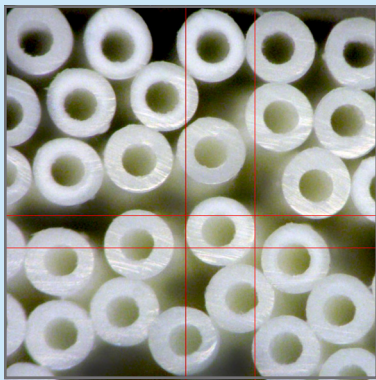
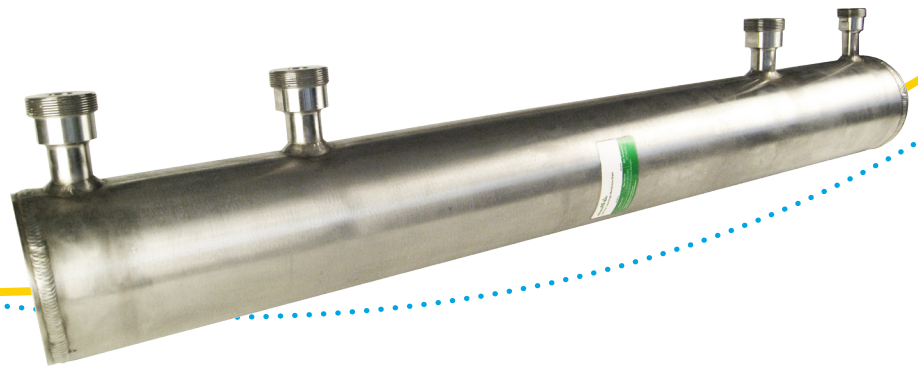


PRISM[®] Membranes

High-pressure dryers



A typical membrane separator contains thousands of hollow fibers bundled together. One or both ends of the bundle are cut, which allows a gas to travel either inside or alongside the hollow fibers depending on the application. The fiber bundle is enclosed in an inner ABS shell and outer stainless steel shell that structurally protects the fibers under high pressure, and properly routes the gas.

Air Products' PRISM membranes: experience, performance, and value.

One of the most cost-effective ways to generate a continuous stream of dry air on-site is with Air Products PRISM Membranes high-pressure dryers, which can be used as stand-alone equipment or between compressor stages to separate water vapor from an air stream.

Our high-pressure dryers dehydrate air at pressures from 300 to 1,200 psig and ambient temperatures ranging from 30° to 130° Fahrenheit.

The principle is simple, but very effective. As air at high-pressure flows along the outside of the membrane fibers, water is removed by selective permeation. Dry air exits at the opposite end. For optimum performance, a user-adjustable portion of the dried air is injected as a purge stream.

Features/benefits

Durability

PRISM Membrane dryers are manufactured with durability and performance in mind. They use no electricity, making them ideal for use in remote applications, compressor stations, or shipboard installations. Built from high-performance stainless steel, Air Products' high-pressure dryers withstand the most grueling environments.

Highest quality

Every PRISM Membrane dryer must pass our rigorous testing requirements before it can be sold. Our quality management systems are certified ISO 9001 or AS9100C to meet the stringent requirements of the global aerospace industry.

Industrial grade

Our high-pressure dryers are designed to handle industrial production loads at pressures of up to 1200 psig. Their solid construction is a perfect fit for remote and severe-duty installations, including shipboard systems and power plants.

Passive technology

The selective permeation technology has no moving parts; it is maintenance free.

Feed Temperature 110°F

HD4020

Pressure	Atmospheric Dew Point –40°F			Atmospheric Dew Point –76°F		
	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)
300 psig	67.3	53.8	20	43.3	32.5	25
700 psig	166.6	154.1	7.5	99.6	89.6	10
1100 psig	162.5	156.8	3.5	119.6	113.0	5.5

HD4030

Pressure	Atmospheric Dew Point –40°F			Atmospheric Dew Point –76°F		
	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)
300 psig	77.6	62.1	20	51.0	38.3	25
700 psig	187.5	173.4	7.5	114.6	103.2	10
1100 psig	194.3	187.1	3.7	125.1	118.1	5.6

HD4050

Pressure	Atmospheric Dew Point –40°F			Atmospheric Dew Point –76°F		
	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)	Feed Flow (scfm)	Outlet Flow (scfm)	Outlet Purge (%)
300 psig	97.3	77.8	20	68.4	51.3	25
700 psig	212.8	196.8	7.5	137.1	123.4	10
1100 psig	280.5	268.3	4.3	182.4	170.5	6.5

Performance specifications: dry, outlet flow air may not be breathed. Performance listed is for single dryer only. Contact PRISM Membranes for performance charts or simulations.

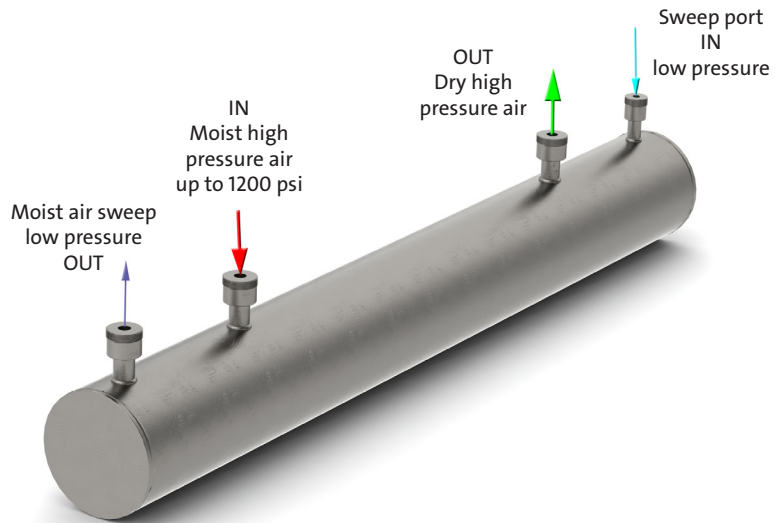
Ordering Information

Catalog Number	Model Number	Product Description
106991	HD4020-I2-A0-OE	High Pressure PRISM membrane dryer with three 1" JIC Flare connections, European Certified 3/4" fixed internal JIC Flare Connection Purge, 316L stainless steel shell
106992	HD4030-I2-A0-OE	High Pressure PRISM membrane dryer with three 1" JIC Flare connections, European Certified 3/4" fixed internal JIC Flare Connection Purge, 316L stainless steel shell
106995	HD4030-I2-A0-OP	High Pressure PRISM membrane dryer with three 1" JIC Flare connections, industrial stainless steel 3/4" fixed internal JIC Flare Connection Purge, 316L stainless steel shell
106996	HD4050-I2-A0-OE	High Pressure PRISM membrane dryer with three 1" JIC Flare connections, European Certified 3/4" fixed internal JIC Flare Connection Purge, 316L stainless steel shell
106998	HD4050-I2-A0-OP	High Pressure PRISM membrane dryer with three 1" JIC Flare connections, industrial stainless steel 3/4" fixed internal JIC Flare Connection Purge, 316L stainless steel shell

Feed air requirements

PRISM membrane dryers are specifically designed to remove water vapor. Dryer performance will be reduced if liquid water or liquid compressor oil enters the membrane dryer.

Also, pre-heating the feed gas may be required depending on the application. Coalescing filters must be installed before the membrane dryer to remove bulk and aerosol liquid water and liquid compressor oil. Certain applications may require removal of oil vapor using activated carbon adsorption installed after the coalescing filters.



Operating Limits

Feed pressure maximum	1200 psig
Purge inlet pressure maximum	1000 psig
Ambient temperature range	30°F – 130°F

Material

316 stainless steel

Weight | Dimensions

HD4020

Length	42 inches
Diameter	6.06 inches
Height (w/purge fitting)	8.53 inches
Weight	108 lbs

HD4030

Length	49 inches
Diameter	6.06 inches
Height (w/purge fitting)	8.53 inches
Weight	120 lbs

HD4050

Length	78.5 inches
Diameter	6.06 inches
Height (w/purge fitting)	8.53 inches
Weight	172 lbs

WARNINGS:

Operating a PRISM Membranes high-pressure dryer above the rated design pressure may be hazardous. Do not connect the dryer to compressed air sources that can exceed the maximum rated pressure of 1200 psig without installing appropriate pressure controls and safety relief devices in the compressed air supply line.

Compressed air can be dangerous. Know and follow all safety rules, especially when breaking into and blowing down compressed air lines when installing or modifying equipment.

For more information regarding
Air Products' PRISM membrane
products, please contact our Customer
Service department.

Air Products PRISM Membranes

11444 Lackland Road
Saint Louis, Missouri 63146 USA
T 314-995-3300
F 314-995-3500
Membrane@airproducts.com
or visit airproducts.com/membranes

Permea China LTD

60 Jinshajiang Road
Shandong, 264006 China
T +86-535-2165333
F +86-535-2165336
fungp@airproducts.com
or visit permea.com.cn

Air Products Japan, Inc.

21F, Muza Kawasaki Central Tower
1310 Omiya-cho, Saiwai-Ku, Kawasaki
Kanagawa, Japan 212-8554
T +81-44-542-1531
F +81-44-542-1521
higucht@airproducts.com
or visit airproducts.co.jp

The information contained in this document is believed to be true and accurate at time of publication. Air Products PRISM Membranes reserves the right to change product specifications without notification. Please consult current *Product Design and Reference* manual for detailed information associated with these products.

PRISM is a registered trademark of Air Products and Chemicals, Inc.

The Air Products PRISM Membranes
Business Unit's quality management
system is certified to ISO9001 and
AS9100C.



tell me more
airproducts.com/membranes