

GENERON®



MEMBRANE MODULES MODEL 4100GMD Dryer Module

The compressed air, saturated with water vapor, flows through a bundle of GENERON® hollow fibers. The membrane fibers allow water vapor to pass. The air stays in the membrane fibers and is discharged as a dry product. A fraction of the dry air is internally redirected to sweep the permeated water vapor as gas out of the module.

Thanks to our advanced fiber technology, state-of-the-art module fabrication and our patented ejector technology, Generon Membrane Dryers perform with the lowest purge air loss for the highest possible efficiency – saving you time and money in your production process.

Advantages:

- Lowest purge loss in the industry (greater than 10% power savings compared to closest competitor)
- Designed for the harshest environments
- Custom design and installation
- Low Pressure Drop, 2 to 3 psig
- No moving parts
- Adjustable dew point to -70°F (-56°C)
- Service-free
- No dust from desiccants and no post-filters required to protect your application
- No regulatory requirements
- Prevent corrosion in instruments and piping
- Increase tool efficiency
- Increase product quality
- Reduce equipment maintenance

When to use GENERON® GMD MEMBRANE DRYERS and NOT REFRIGERATED DRYERS!!

- where pressure dew points are to be < 32°F (0°C)
- where maintenance shall be eliminated
- where space is limited
- where no power is available
- where simplicity is preferred
- where vibrations are present
- where air or gas pressures are > 100 psig (6.9 barg)
- where air or gas or ambient temperatures are > 70°F (21°C)

GENERON®GMD MEMBRANE DRYERS perform where other Technologies won't!!

- where no power is available
- in classified hazardous areas
- in corrosive environments
- in fluctuating and high temperatures
- if noise can create a problem

Operating Conditions

Max Pressure:	200psig (14.0 barg)
Temperature (Min/Max):	40°F-149°F (4.4°C- 65°C)
Max Relative Humidity:	100% (no liquid water)
Max Particle Size:	0.01 Micron

Mechanical Description

Outer Diameter:	4.50 inch (114 mm)
Length:	36.5 inch (927 mm)
Weight:	24 lbs (10.9 kg)
Case Material:	6061-T6 Aluminum

GENERON MEMBRANE MODULES - MODEL 4100GMD

"In any application, it's most economical to only dry the portion of your compressed air that you actually use in the application, and to make it only as dry as you actually need it to be. Thus GENERON Membrane Dryers are best satisfying your requirements. The dried compressed air is available immediately and reliable." - Tom Jeffers, President and CEO of IGS

Sizing for your Application

- Table 1 shows dry air flow rates for one GMD membrane model at desired dry air pressure dew points. The influence of the moisture-saturated air inlet temperature is in Table 1.
 - To match your required dryer capacity, use multiples of one or different GMD modules and add up the flow rates.
 - Table 2 shows the influence of higher operating pressure on the flow rates. Multiply the feed air and dry air flow rates from Table 1 with the performance factors from Table 2.
- For flow rates at other pressures, please consult your Generon representative.

Table 1: Dry Air Product Flow at 100psig vs. Dew Point

Feed Temp.		40°F		60°F		80°F		100°F		120°F	
		Feed Flow (scfm)	Dry Flow (scfm)	Feed Flow (scfm)	Dry Flow (scfm)	Feed Flow (scfm)	Dry Flow (scfm)	Feed Flow (scfm)	Dry Flow (scfm)	Feed Flow (scfm)	Dry Flow (scfm)
Outlet Dew Point (at pressure)	40°F	-	-	65.5	60.0	49.1	43.6	43.6	33.8	32.7	27.2
	20°F	54.5	49.0	42.6	37.1	35.0	29.5	29.5	24.2	25.8	20.3
	0°F	37.7	32.2	31.6	26.1	27.2	21.7	21.7	18.4	21.3	15.8
	-20°F	28.8	23.3	25.1	19.6	22.3	16.8	16.8	14.5	18.2	12.7
	-40°F	23.3	17.8	20.8	15.3	18.8	18.8	17.2	11.7	15.8	10.3

All GMD Modules		125psig		150psig		200psig	
		Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air
Dry Dew Point (at pressure)	40°F	1.47	1.50	2.08	2.15	4.09	4.37
	20°F	1.40	1.42	1.87	1.92	3.08	3.27
	0°F	1.36	1.38	1.76	1.80	2.69	2.83
	-20°F	1.34	1.35	1.70	1.73	2.48	2.58
	-40°F	1.32	1.33	1.65	1.68	2.35	2.42

Table 2: Performance Factors @ 100°F Inlet Temp

1. Seal connections with Teflon Tape or Formula 8 Thread Sealant only.
2. Performance after 1 year (9,000 hours) of continuous operation.

Pre-Filtration

In traditional operating conditions, GMD membrane modules must be connected directly to one (1) HVM coalescing filter. More filtration is not required but will extend the membrane lifetime where highly contaminated feed air is present. Ask your Generon representative for additional information.

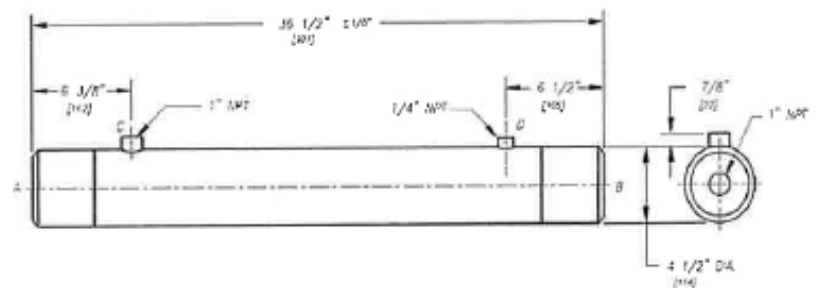


FIGURE
 A - COMPRESSED AIR INLET
 B - DRY PRODUCT AIR
 C - WET PERMEATE AIR
 D - PRODUCT SWEEP STREAM

