

Membrane Dryers – GENERON® GMD Series

Reliable Drying for Critical Applications



Typical Applications

- Laboratories
- Manufacturing and Paint Shops
- Air and Gas compression
- Trains, Trucks or other mobile machinery
- Offshore Platforms and FPSO's
- Natural Gas drying
- CNC Machines
- Packaging Machines
- Conveying Machines
- Precision Instrumentation
- Pneumatic Controls
- Lasers

Simple Installation and Operation

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 dry product. A fraction of the dry air is redirected internally to sweep the permeated water vapor as a gas out of the module.

Thanks to our pioneering Advanced Fiber Technology and state-of-the-Art Module Fabrication, 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 of GENERON® Membrane Dryers

- **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
- No moving parts
- Adjustable dew point to -70°F
- Service-free
- No dust from desiccants and no post-filters required to protect your application



Advantages of Drying Compressed Air

- Save money
- Regulatory requirements
- Prevent corrosion in instruments and piping
- Increase tool efficiency
- Increase product quality
- Reduce equipment maintenance

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
- ... where air or gas or ambient temperatures are > 70°F

GENERON® GMD Membrane Dryers perform where other Technologies won't

- Where no power is available
- If high vibrations are present
- In classified hazardous areas
- In corrosive environments
- If space is limited
- If flexible installation is required
- In fluctuating and high temperatures
- If noise can create a problem

Tom Jeffers, President and CEO of IGS:

“In any application it is most economical to only dry the portion of your compressed air that you actually use in your 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.”

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 given as well.

To match your required dryer capacity, use multiples of one or different GMD modules and simply add up the given flow rates.

Table 2 shows the influence of a higher operating pressure on the flow rates. Simply multiply the feed air and dry air flow rates of Table 1 with the performance factors from Table 2.

For flow rates at other pressures please consult your Generon representative.

Pre-Filtration

In normal operating conditions the GMD membrane modules need to be connected directly to one (1) HVM coalescing filter. More filtration is not required but will extend the membrane life-time where highly contaminated feed air is present.

Ask your Generon representative for additional information.

Table 1: GENERON® GMD Performance
Flow in [scfm] @100 psig

Feed Air Temperature		40°F		60°F		80°F		100°F		120°F	
GMD-210		Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air
Dry Air Dew Point (@Pressure)	40°F	-	-	7.3	6.8	5.4	4.8	4.2	3.7	3.5	2.9
	20°F	6.0	5.5	4.6	4.1	3.8	3.2	3.2	2.6	2.7	2.2
	0°F	4.1	3.5	3.4	2.8	2.9	2.3	2.5	2.0	2.3	1.7
	-20°F	3.1	2.5	2.7	2.1	2.4	1.8	2.1	1.6	1.9	1.4
	-40°F	2.5	1.9	2.2	1.6	2.0	1.4	1.8	1.2	1.7	1.1
GMD-4100		Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air
Dry Air Dew Point (@Pressure)	40°F	-	-	73.2	67.6	53.7	48.1	42.4	36.8	35.0	29.4
	20°F	60.3	54.7	46.4	40.8	37.7	32.1	31.8	26.1	27.4	21.8
	0°F	40.9	35.2	34.0	28.3	29.1	23.4	25.4	19.8	22.6	16.9
	-20°F	30.9	25.3	26.8	21.2	23.6	18.0	21.2	15.5	19.2	13.5
	-40°F	24.8	19.2	22.1	16.5	19.9	14.3	18.1	12.5	16.6	11.0
GMD-6150		Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air
Dry Air Dew Point (@Pressure)	40°F	-	-	159	147	116	104	91.9	79.7	75.9	63.7
	20°F	131	119	101	88.4	81.7	69.5	68.8	56.6	59.5	47.2
	0°F	88.6	76.3	73.6	61.4	63.0	50.8	55.0	42.8	48.9	36.7
	-20°F	67.0	54.7	58.1	45.8	51.2	39.0	45.9	33.6	41.5	29.3
	-40°F	53.8	41.6	47.9	35.7	43.2	31.0	39.3	27.1	36.0	23.8

Table 2: Performance-Factors @100°F Inlet Temp. **Table 3: Technical Data**

All GMD Modules	125 PSIG		150 PSIG		200 PSIG		
	Feed Air	Dry Air	Feed Air	Dry Air	Feed Air	Dry Air	
Dry Air Dew Point (@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

GMD Model	Dimension [inch]		Weight [lb]	Inlet/Outlet Connection [NPT]
	L	Ø		
210	27	2.13	4	½"
4100	36.5	4.5	24	1"
6150	38	6.75	40	1-½"

- Max. Operating Pressure: 200 psig
- Max. Feed Air Temperature: 150 °F
- Custom Sizes or Stainless-Steel available on request.

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