

Perma Pure Gas Drying Solutions

Desiccant Membrane Dryer (DM) Series

Application

The DM Series Desiccant Membrane Dryer from Perma Pure is designed for applications where mobility and efficiency in gas sample conditioning are essential. Its compact form and ability to operate without power or purge gases make it ideal for portable analyzers, field measurements, and mobile labs. Typical use cases include environmental monitoring and emissions testing where precise moisture control is needed. Its durable design makes it particularly well suited for long-term use in changing outdoor environments.

Technology

The DM Series Dryer uses Nafion™ membrane technology in combination with a molecular sieve desiccant. Gas passes through a Nafion™ tube that selectively allows water vapor to permeate while retaining other gases. The vapor is absorbed by the surrounding desiccant. A view window with color-indicating media enables easy saturation monitoring.

The combination of selective membrane and adsorptive desiccant ensures consistent drying performance even with varying gas compositions.

Functions

The DM Series Dryer removes moisture from gas samples down to a dew point of -30 °C, depending on flow rate. Other gas components remain unaffected. A snap-access door simplifies maintenance, and various fittings allow for flexible system integration. This makes the unit ideal for sensitive measurement tasks where even minimal residual moisture could affect analytical accuracy.



- ✓ Compact design for mobile use
- ✓ Operates without power supply or purge gas
- ✓ Selective drying using Nafion™ membrane
- ✓ Integrated molecular sieve desiccant
- ✓ Dew points down to -30 °C (flow-dependent)
- ✓ No impact on other gas components
- ✓ Easy maintenance with snap-access housing
- ✓ Color indicator for desiccant saturation monitoring
- ✓ Multiple connection options for flexible integration
- ✓ Ideal for environmental monitoring, emission analysis, and field labs

Technical Data

Model			
Type		DM-060-24	DM-110-24
Operating Data			
Flow Rate		Up to 500 mL/min	Up to 1 L/min
Drying Efficiency		Down to -30°C dew point	
Drying Per Charge		72 liters per desiccant refill	150 liters per desiccant refill
Desiccant		2.5 oz. – 4Å Molecular Sieve w/indicator	5.5 oz. – 4Å Molecular Sieve w/indicator
Design Data			
Drying Tube		0.063" O.D., 0.052" I.D.	0.108" O.D., 0.086" I.D.
Housing Dimensions	Inch	4.2 x 2.4 x 1.0	5.0 x 2.75 x 1.5
Housing Material		molded ABS	
Connection Type		Female luer fittings (mounted to the enclosure); 1/8" barb adapter	

Note:

- 1 Inch = 2,54 cm

Abbildung

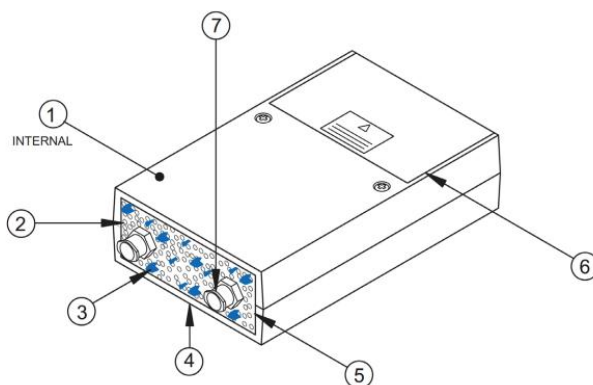


Figure #	Description
1	24" Nafion™ tube dryer
2	2 Molecular sieve desiccant
3	3 Scattered crystals of indicating desiccant
4	Clear window
5	Molded ABS plastic case
6	Snap lock door
7	Gas connection fittings (Luers shown)