



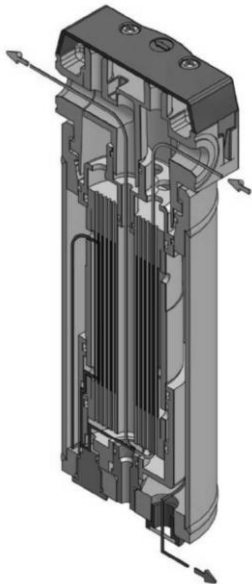
FS-CURTIS MDM SERIES MODULAR MEMBRANE COMPRESSED AIR DRYERS

Membrane Drying

MDM series modular membrane compressed air dryers were developed to complement our stable of industry leading refrigeration, adsorption and filtration technologies. Membrane dryers use a bundle of tiny tubular fibers that let fast gases like water vapor permeate through the tube wall to be swept away into the ambient. Our membrane fiber technology features multiple strands to form a continuous microscopic sieve that targets and removes "fast gases" like water molecules as a vapor. Pressure dew points from +50°F to -40°F are achieved by balancing the model size, air pressure and volume (scfm) requirements to the application.

Selective Permeation

Through the process of selective permeation, water vapor is removed while leaving the gas composition intact. Each membrane bundle is comprised of multiple tubular membrane fibers, evenly spaced to provide maximum surface area in a compact design. Each helically wrapped layer alternates direction to ensure consistent cross-sectional density and large flow paths for the sweep air that carries the water vapor to atmosphere. No oxygen is lost, which makes these ideal for medical applications.



Selective Permeation Process

- Compressed air enters the center of the membrane tubes
- Water (H₂O) vapor diffuses through the membrane wall faster than the other gases
- A small portion of dry compressed air is swept back across the outside of the membrane walls to evacuate the H₂O vapor to atmosphere
- Dry compressed air exits the unit ready for process applications

Filter Package Recommendations

Applications	Max. Liquid Inlet Content to Filter	Recommended CF Series Filtration	
Space-sensitive OEM's	1,000 ppm w/w	Prefilter	Grade 5 – 0.008ppm (0.01 mg/m ³) oil removal
General Industrial Point-of-use	2,000 ppm w/w	Prefilter	Grade 7 – 1 micron particulate Grade 3 – 0.0008ppm (0.001 mg/m ³) oil removal
Food & Pharmaceuticals Direct & Indirect air Contact with Product	2,000 ppm w/w	Prefilter Afterfilter	Grade 7 – 1 micron particulate Grade 3 – 0.0008ppm (0.001 mg/m ³) oil removal Grade 1 – Oil vapor and 0.003ppm (0.004 mg/m ³) oil removal

Features

MDM Series modular membrane compressed air dryers provide clean, dry compressed air wherever you need it. Designed for continuous flow applications, MDM Series dryers pass a constant side-stream of dry sweep air to exhaust the extracted water vapor into the ambient surroundings.

- Dewpoints to -40°F
- Inside-to-outside permeation for greater efficiency
- Helically wound bundles for low pressure drop, high flow capacity
- Compact design offers a space-saving point-of-use solution
- Internal and external epoxy powder coat offers durable protection
- Modular connections reduce leak points and simplify installation
- No oxygen is lost due to proprietary membrane design

MDM Series Technical Data

Model	100°F Inlet to 40°F pdp		100°F Inlet to 0°F pdp		In/Out Connections (inch)	Dimension		Weight (lbs)
	Inlet Flow (scfm)	Outlet Flow (scfm)	Inlet Flow (scfm)	Outlet Flow (scfm)		L (inch)	W (inch)	
MDM1	1.39	1.20	0.85	0.66	3/8"	11	4	5
MDM4	4.55	3.95	2.89	2.29	3/8"	15	4	6
MDM9	9.47	8.15	5.69	4.37	1/2"	19	4	7
MDM13	13.69	11.91	8.86	7.08	1/2"	27	4	8
MDM24	24.3	21.00	14.2	10.90	3/4"	20	5	11
MDM49	49.6	35.40	26.6	21.50	3/4"	27	5	14
MDM66	66.6	57.00	36.2	26.60	1"	29	6	17
MDM106	106.3	91.60	61.4	46.70	1"	35	8	35
MDM138	138.1	119.30	81.4	62.60	1"	41	8	40