



Ultra Membrane Dryers

Features

- Clean Dry Air with Dew Points as Low as -40°F
- Dew Point Achieved in 10 Minutes or Less
- No Electricity Required
- Compact Designs - Quiet Operation
- Includes Built-In Final Filter with Float Drain

Applications

- Instrument Air
- Packaging
- Food Processing / Medical
- Remote Locations with No Electricity
- Laboratory

Our UMD series uses hollow fiber technology to reliably reduce the dewpoint (PDP) of compressed air. The PDP is achieved by forcing water vapor through the semi permeable hollow membrane wall. This action reduces the PDP of the remaining air within the hollow fiber tube. The water vapor is subsequently purged out of the housing by sweeping dry air over the outer diameter of the fiber wall. This allows membrane dryers to operate continuously 24 hours a day 7 days a week for a decade or more.

We recommend changing the coalescing pre-filter every six months to maintain proper efficiency. No other service/maintenance is required.

In order to provide the most cost-effective solution for your application we offer four (PDP) Pressure Dew Point levels to meet your specific application requirements.



Horizontal In-Line Models

Housing Model	UMD20H	UMD40H	UMD60H	UMD80H
Connection Size (NPT)	1/4"	1/4"	1/4"	1/4"
Max. Standard Operating Conditions	140°F / 100 PSIG			
Max. Optional Operating Conditions	120°F / 180 PSIG			
Inlet Flow Rate (scfm)	2.09	4.18	6.27	8.36
Weight of Housing (lbs)	1.74	1.92	2.07	2.07
Principle Dimensions: (inches)				
Diameter	1.81	1.81	1.81	1.81
Overall Length	10.43	12.40	13.98	16.34
Material of Construction:				
Body	Cast Alum. Anodized	Cast Alum. Anodized	Cast Alum. Anodized	Cast Alum. Anodized
Membrane	Polyethersulphone, Polyethylene, ABS, and Polyurethane			
O-Ring	Buna-N	Buna-N	Buna-N	Buna-N
Mounting Bracket	Optional	Optional	Optional	Optional
Recommended Prefilters	360AF-1/4"-70CS	360AF-1/4"-70CS	360AF-1/4"-70CS	360AF-1/4"-70CS
**Other Options Are Available				

Vertical T-Type Models

Housing Model	UMD100V	UMD120V	UMD170V	UMD250V	UMD350V
Connection Size (NPT)	3/8"	3/8"	3/8"	3/4"	3/4"
Max. Standard Operating Condition	140°F / 100 PSIG				
Max. Optional Operating Conditions	120°F / 180 PSIG				
Inlet Flow Rate (scfm)	11.34	12.55	16.73	25.09	33.46
Weight of Housing (lbs)	4.13	4.63	5.07	7.72	9.03
Principle Dimensions: (inches)					
Diameter	2.95	2.95	2.95	3.94	3.94
Overall Length	17.00	19.76	22.19	22.57	24.59
Material of Construction:					
Body	Cast Aluminum Anodized				
Membrane	Polyethersulphone , Polyethylene, ABS, and Polyurethane				
O-Ring	Buna-N	Buna-N	Buna-N	Buna-N	Buna-N
Mounting Bracket	Included	Included	Included	Included	Included
Recommended Prefilters **Other Options Are Available	360AF-3/8"-70CS	360AF-3/8"-70CS	360AF-3/8"-70CS	380AHPF-3/4"-70CS	380AHPF-3/4"-70CS

Housing Model	UMD450V	UMD550V	UMD650V	UMD1000V	UMD1300V
Connection Size (NPT)	3/4"	3/4"	1 1/2"	1 1/2"	1 1/2"
Max. Standard Operating Condition	140°F / 100 PSIG	140°F / 100 PSIG	140°F / 100 PSIG	140°F / 100 PSIG	140°F / 100 PSIG
Max. Optional Operating Conditions	120°F / 180 PSIG	120°F / 180 PSIG	120°F / 180 PSIG	120°F / 180 PSIG	120°F / 180 PSIG
Inlet Flow Rate (scfm)	43.29	55.89	67.21	100.77	134.35
Weight of Housing (lbs)	9.04	9.75	20.00	22.44	24.86
Principle Dimensions: (inches)					
Diameter	3.94	3.94	5.74	5.74	5.74
Overall Length	27.35	29.98	31.30	36.80	42.75
Material of Construction:					
Body	Cast Aluminum Anodized	Cast Aluminum Anodized	Cast Aluminum Anodized	Cast Aluminum Anodized	Cast Aluminum Anodized
Membrane	Polyethersulphone , Polyethylene, ABS, and Polyurethane	Polyethersulphone , Polyethylene, ABS, and Polyurethane	Polyethersulphone, Polyethylene, ABS, and Polyurethane	Polyethersulphone , Polyethylene, ABS, and Polyurethane	Polyethersulphone , Polyethylene, ABS, and Polyurethane
O-Ring	Buna-N	Buna-N	Buna-N	Buna-N	Buna-N
Mounting Bracket	Included	Included	Included	Included	Included
Recommended Prefilters **Other Options Are Available	380AHPF-3/4"-70CS	380AHPF-3/4"-70CS	385AHPF-1 1/2-70CS	385AHPF-1 1/2-70CS	385AHPF-1 1/2-70CS

Technical Details

The table below is color coded to simplify your UMD choice. The outlet PDP is dependent on the inlet PDP as well as flow rate, and pressure. The flow rate chart is based on a 100 psig inlet. Please use the correction factor multiplier below for other pressures.

1. Determine what your outlet PDP requirement is (keep in mind your inlet PDP temperature 40°F or 100°F)
2. Determine what your outlet (scfm) flow needs to be
3. After choosing PDP outlet and outlet scfm – pick the model on the left

Example: (1) -20°F PDP @ (2) 10 scfm = (3) Model UMD450V

Inlet Pressure Dew Point (PDP)		Desired Outlet PDP Result Based on Nearest Inlet PDP Parameter							
40°F	Chilled Air	-40 °F		-30 °F		0 °F		26 °F	
100°F	Ambient Air (without Pre-dryer / chiller)	-20 °F		-4 °F		35 °F		70 °F	

Model Selector	Flow Rate (SCFM)							
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
UMD20H	0.58	0.42	0.64	0.47	0.98	0.81	2.09	1.92
UMD40H	1.33	0.96	1.44	1.09	2.07	1.72	4.18	3.83
UMD60H	2.00	1.44	2.15	1.63	3.10	2.58	6.27	5.75
UMD80H	2.63	1.89	2.87	2.17	4.13	3.43	8.36	7.67
UMD100V	3.85	2.77	4.10	3.05	5.70	4.66	11.34	10.29
UMD120V	3.89	2.81	4.31	3.26	6.20	5.15	12.55	11.50
UMD170V	5.17	3.76	5.75	4.35	8.25	6.85	16.73	15.33
UMD250V	7.94	5.69	8.63	6.53	12.41	10.31	25.09	23.00
UMD350V	10.51	7.56	11.50	8.70	16.53	13.74	33.46	30.66
UMD450V	15.97	11.52	17.25	13.06	24.24	20.05	43.29	39.09
UMD550V	19.08	13.68	20.65	15.40	28.92	23.68	55.89	50.64
UMD650V	23.56	16.92	25.21	18.81	35.49	29.09	67.21	60.81
UMD1000V	35.33	25.42	37.86	28.46	53.26	43.85	100.77	91.37
UMD1300V	46.79	33.70	50.48	37.90	71.00	58.41	134.35	121.78

Correction Factors

Operating Pressure(psig)	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
Correction Factor	0.22	0.32	0.42	0.54	0.68	0.83	1.00	1.13	1.26	1.40	1.55	1.70	1.87	2.03	2.19

Multiply the correction factor by the outlet PDP flow to provide an estimated flow at the given PSIG. Pressures below 100 psig will have lower scfm output, and higher output above 100 psig.

For precise sizing for your application, please contact us.

