

Membrane Drying

DRYPOINT® MD

space saving compressed air membrane dryers



Truth in Compressed Air.



DRYPOINT® MD Membrane Dryers

■ At a Glance

Membrane air dryers are a type of dryer that use permeable fiber technology and the process of de-humidification to dry compressed air streams to the required dew point of an application. The Compressed Air and Gas Institute advises us to dry only the compressed air that is actually being used, and to make it only as dry as the application truly requires. Membrane air dryers are perfectly suited for this type of point-of-use drying, are adaptable to various ambient conditions, and require no electricity.

■ Features and Benefits

+ Twist 45 Technology

Highest possible performance with 45° wound fibers

+ Maximum Reliability

Designed to perform even in the toughest environments

+ Nearly Instant Results

Achieves dew point in 10-minutes or less

+ Maintenance Free

With no moving parts, reliable even in mobile applications

+ Perfect Design

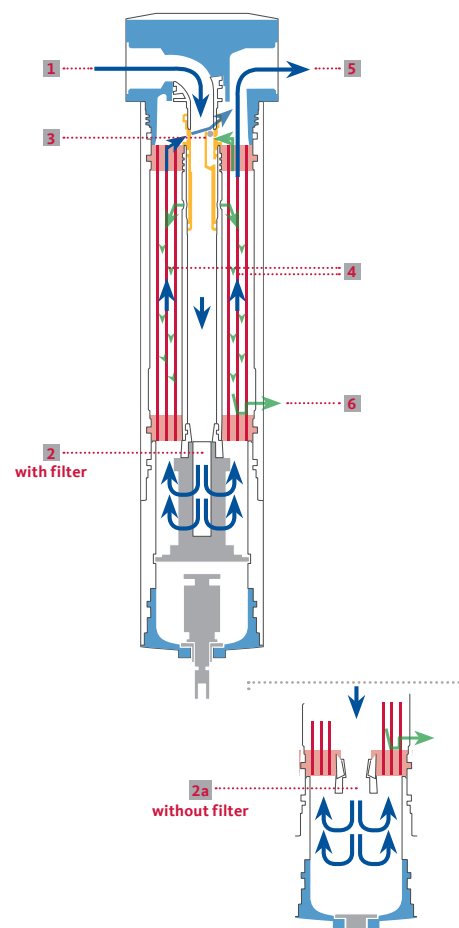
Small footprint with several configurations

+ Preset Pressure Dew Point

The only dryer in the world with the ability to preset dew point (MDi models only)

■ How it Works

- 1 The compressed air flows into the core tube of the membrane dryer.
- 2 | 2a In the filter element, it is diverted; filtered compressed air enters the hollow fibers of the membrane element.
- 3 The purge air required for drying is continuously diverted in the outlet zone of the membrane element and is atmospherically expanded through a defined nozzle opening. This purge air is significantly drier due to the expansion, as the humidity contained in the compressed air is now distributed to a multiple of volume. The dry purge air is led via the outside of the membrane fibers.
- 4 Two air flows with different moisture contents move in a reverse current through the membrane element, only separated by the membrane wall. The humid compressed air flows inside the hollow fiber membranes, and the dry purge air flows outside. As a result of the different moisture contents, the humidity diffuses from the compressed air into the purge air. The drying process is highly efficient thanks to the controlled winding of the membrane fibers, the TWIST 45 technology.
- 5 The dry compressed air leaves the membrane element.
- 6 The humid purge air is released into the environment.



DRYPOINT® MD Membrane Dryers

Compare



MDe Series



MDp Series



MDi Series

Flow Rates

1 - 120 scfm	1 - 120 scfm	1 - 120 scfm
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Maximum Inlet Air Temperature

140 °F at 100 psig 120 °F at 180 psig	140 °F at 100 psig 120 °F at 180 psig	122 °F at 145 psig
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Fixed or Adjustable Outlet Pressure Dew Point | ISO 8573-1:2010 Air Quality Class

Fixed Class 2-6	Fixed Class 2-6	User Adjustable Class 2-6
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Pre-filter Integrated to Housing

No	Yes	Yes
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Standard Pipe Sizes

¼ - 1 ½"	¼ - 1 ½"	¾ - 1"
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Available Options

Wall brackets, Cover3More extended warranty	Wall brackets, Remote purge air switch, Cover3More extended warranty	Cover3More extended warranty
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Product Family



Tubular model for low flow rates



Filter style MDp version for higher flow rates



MDi with adjustable outlet PDP

■ Technical Details

DRYPOINT® MD Product Selector Chart

product sizing table for MDe and MDp series membrane air dryers

Inlet Pressure Dew Point (PDP)		Desired Outlet PDP Result Based on Nearest Inlet PDP Parameter			
40 °F	with refrigerant drying	26 °F	0 °F	-30 °F	-40 °F
100 °F	without refrigerant drying	70 °F	35 °F	-4 °F	-20 °F

Model Selector	Flow Rate (scfm)							
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
MDe 2 and MDp 2	2.09	1.92	.98	.81	.64	.47	.58	.42
MDe 4 and MDp 4	4.18	3.83	2.07	1.72	1.44	1.09	1.33	.96
MDe 6 and MDp 6	6.27	5.75	3.10	2.58	2.15	1.63	2.00	1.44
MDe 8 and MDp 8	8.36	7.67	4.13	3.43	2.87	2.17	2.63	1.89
MDe 10 and MDp 10	11.34	10.29	5.70	4.66	4.10	3.05	3.85	2.77
MDe 12 and MDp 12	12.55	11.50	6.20	5.15	4.31	3.26	3.89	2.81
MDe 17 and MDp 17	16.73	15.33	8.25	6.85	5.75	4.35	5.17	3.76
MDe 25 and MDp 25	25.09	23.00	12.41	10.31	8.63	6.53	7.94	5.69
MDe 35 and MDp 35	33.46	30.66	16.53	13.74	11.50	8.70	10.51	7.56
MDe 45 and MDp 45	43.29	39.09	24.24	20.05	17.25	13.06	15.97	11.52
MDe 55 and MDp 55	55.89	50.64	28.92	23.68	20.65	15.40	19.08	13.68
MDe 65 and MDp 65	67.21	60.81	35.49	29.09	25.21	18.81	23.56	16.92
MDe 100 and MDp 100	100.77	91.37	53.26	43.85	37.86	28.46	35.33	25.42
MDe 130 and MDp 130	134.35	121.78	71.00	58.41	50.48	37.90	46.79	33.70

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

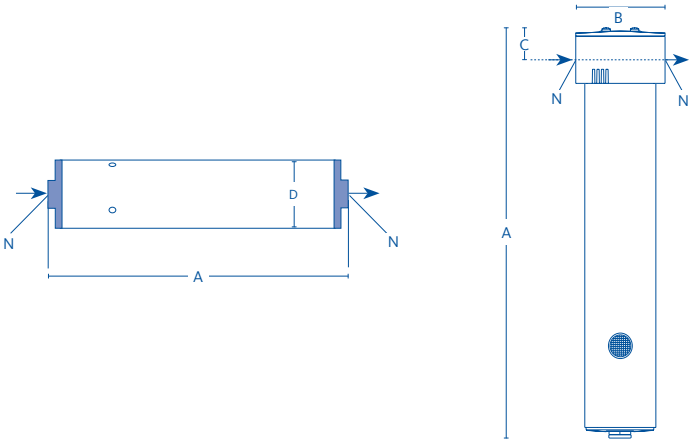
The correction factors on this page provide an estimation of the performance that can be achieved with the model sizes shown. For precise sizing for your application, please contact your BEKO Technologies sales representative.

■ Technical Details

DRYPOINT® MDe Economy Series Membrane Dryers

standard membrane air dryer with tubular or filter style housing

- › Required pre-filtration: 1 µm
- › Min. ambient air temperature: 34 °F
- › Max. standard operating conditions: 140 °F / 100 psig
- › Max. optional operating conditions: 120 °F / 180 psig



DRYPOINT® MDe	MDe 2	MDe 4	MDe 6	MDe 8	MDe 10	MDe 12	MDe 17
Connection Size (NPT)	¼"	¼"	¼"	¼"	⅜"	⅜"	⅜"
Inlet Flow Rate (scfm)	2.09	4.18	6.27	8.36	11.34	12.55	16.73
Installation Orientation and Housing Design	Horizontal Tubular Style	Horizontal Tubular Style	Horizontal Tubular Style	Horizontal Tubular Style	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style

Dimensions and Weight							
A (inches)	5.51	7.48	9.06	11.42	13.34	16.10	18.46
B (inches)	-	-	-	-	2.95	2.95	2.95
C (inches)	-	-	-	-	1.10	1.10	1.10
D (inches)	ø1.77	ø1.77	ø1.77	ø1.77	-	-	-
Weight (lbs)	0.60	0.77	0.90	1.08	4.08	4.58	4.97

DRYPOINT® MDe	MDe 25	MDe 35	MDe 45	MDe 55	MDe 65	MDe 100	MDe 130
Connection Size (NPT)	¾"	¾"	¾"	¾"	1½"	1½"	1½"
Inlet Flow Rate (scfm)	25.09	33.46	43.29	55.89	67.21	100.77	134.35
Installation Orientation and Housing Design	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style	Vertical Filter Style

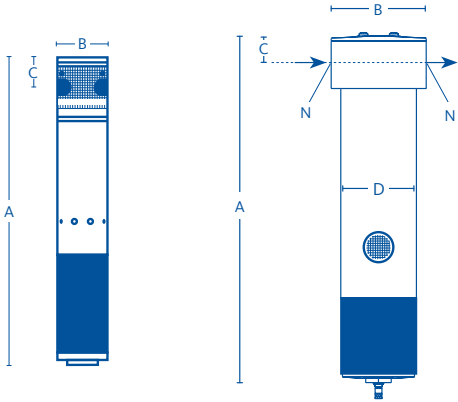
Dimensions and Weight							
A (inches)	18.98	20.95	23.70	26.46	23.20	28.30	34.60
B (inches)	3.94	3.94	3.94	3.94	5.74	5.74	5.74
C (inches)	1.34	1.34	1.34	1.34	1.89	1.89	1.89
D (inches)	-	-	-	-	-	-	-
Weight (lbs)	7.66	8.38	8.99	9.64	17.14	19.56	22.00

■ Technical Details

DRYPOINT® MDp Premium Series Membrane Dryers

membrane air dryer with integrated pre-filter

- › Integrated pre-filtration: .01 µm
- › Recommended pre-filtration: 1 or 5 µm
- › Min. ambient air temperature: 34 °F
- › Max. standard operating conditions: 140 °F / 100 psig
- › Max. optional operating conditions: 120 °F / 180 psig



DRYPOINT® MDp	MDp 2	MDp 4	MDp 6	MDp 8	MDp 10	MDp 12	MDp 17
Connection Size (NPT)	¼"	¼"	¼"	¼"	⅜"	⅜"	⅜"
Inlet Flow Rate (scfm)	2.09	4.18	6.27	8.36	11.34	12.55	16.73
Dimensions and Weight							
A (inches)	10.43	12.40	13.98	16.34	17	19.76	22.19
B (inches)	1.81	1.81	1.81	1.81	2.95	2.95	2.95
C (inches)	1.06	1.06	1.06	1.06	1.10	1.10	1.10
D (inches)	ø1.77	ø1.77	ø1.77	ø1.77	-	-	-
Weight (lbs)	1.74	1.92	2.07	2.07	4.13	4.63	5.07

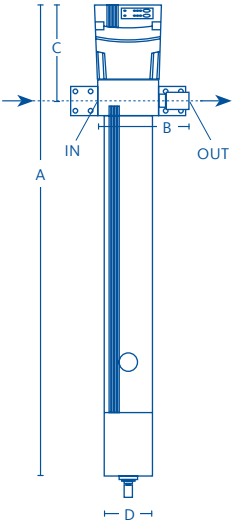
DRYPOINT® MDp	MDp 25	MDp 35	MDp 45	MDp 55	MDp 65	MDp 100	MDp 130
Connection Size (NPT)	¾"	¾"	¾"	¾"	1½"	1½"	1½"
Inlet Flow Rate (scfm)	25.09	33.46	43.29	55.89	67.21	100.77	134.35
Dimensions and Weight							
A (inches)	22.57	24.59	27.35	29.98	31.30	36.80	42.75
B (inches)	3.94	3.94	3.94	3.94	5.74	5.74	5.74
C (inches)	1.34	1.34	1.34	1.34	1.89	1.89	1.89
D (inches)	-	-	-	-	-	-	-
Weight (lbs)	7.72	9.03	9.04	9.75	20.00	22.44	24.86

■ Technical Details

DRYPOINT® MDi ecoIntelligent Series Membrane Dryers

membrane air dryer with adjustable pressure dew point control

- › Integrated pre-filtration: .01 µm
- › Electrical power required: 115-230 VAC / 50-60 Hz
- › Min. ambient air temperature: 34 °F
- › Max. operating temperature: 122 °F
- › Max. operating pressure: 145 psig



DRYPOINT® MDi	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
Connection Size (NPT)	3/8"	3/8"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"
Inlet Flow Rate (scfm)	12.55	16.73	25.09	33.46	43.01	52.63	64.13	95.84	128.25
Dimensions and Weight									
A (inches)	24.44	26.81	27.20	29.17	31.93	34.69	35.87	41.38	47.28
B (inches)	5.90	5.90	7.06	7.06	7.06	7.06	9.84	9.84	9.84
C (inches)	5.67	5.67	5.90	5.90	5.90	5.9	6.46	6.46	6.46
D (inches)	2.36	2.36	3.14	3.14	3.14	3.14	4.92	4.92	4.92
Weight (lbs)	7.50	7.93	10.80	11.46	12.13	12.79	24.03	26.46	28.88

Inlet Pressure Dew Point (PDP)	Desired Outlet PDP Result Based on Nearest Inlet PDP Parameter			
40 °F with refrigerant drying	26 °F	0 °F	-30 °F	-40 °F
100 °F without refrigerant drying	70 °F	35 °F	-4 °F	-20 °F

Model Selector	Flow Rate (scfm)							
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
MDi 12	12.55	11.50	6.20	5.15	4.31	3.26	3.89	2.84
MDi 17	16.73	15.33	8.25	6.85	5.75	4.35	5.14	3.74
MDi 25	25.09	23.00	12.41	10.31	8.63	6.53	7.86	5.76
MDi 35	33.46	30.66	16.53	13.74	11.50	8.70	10.38	7.58
MDi 45	43.01	38.99	23.70	19.68	16.49	12.47	14.52	10.50
MDi 55	52.63	47.90	27.50	22.78	19.38	14.66	16.94	12.22
MDi 65	64.13	58.36	33.11	27.34	23.49	17.72	20.99	15.19
MDi 100	95.84	87.10	50.53	41.79	35.69	26.95	32.09	23.39
MDi 130	128.25	116.72	66.98	55.45	47.40	35.86	43.15	31.65

Flow rate values and performance values are based on having the DRYPOINT® MDi in the constant mode. Outlet pressure dew point settings are user adjustable and will alter the flow rate at the outlet of the membrane dryer based on the adjustment made.

Operating Pressure (psig)	40	50	60	70	80	90	100	110	120	130	140
Correction Factor	0.22	0.32	0.42	0.54	0.68	0.83	1.00	1.13	1.26	1.40	1.55

The correction factors on this page provide an estimation of the performance that can be achieved with the model sizes shown. For precise sizing for your application, please contact your BEKO Technologies sales representative.

Reliable | Efficient | Innovative

What can we do for you?



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