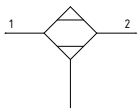
PNEUMAX

SERIES Airplus

MEMBRANE DRYER

Membrane dryer (ESC)

- Membrane air dryer
- Available in 2 sizes with 3/8" and 1/2" connections
- Pressure dew point reduction as a function of flow rate
- Reliable drying performance ensured by the hollow fiber membrane system
- Low regeneration air loss
- Inlet pressures up to 13 bar
- Flow rate up to 230 Nl/min
- Compact design
- Low noise level



Note

Always use a 5μ filter and purifier before the dryer.

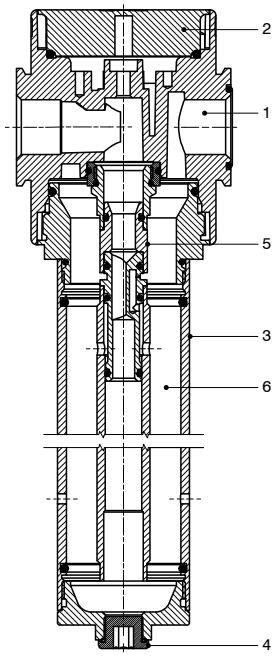
Technical characteristics		
Size	Size 2	Size 3
Body and connections type	Aluminum body, integrated aluminum connections	
IN / OUT connections	G3/8"	G1/2"
Assembly configuration	Stand alone	
Assembly positions	Indifferent	
Working fluid	Compressed air with no condensation	
	Maximum size of solid particles: 1 μm	
	Max. oil residue: 0,01 mg/m^3	
Noise level	< 45 dB(A)	

Operational characteristics		
Size	Size 2	Size 3
Maximum working pressure	13 bar	
Working temperature	+2 °C ... +60 °C	
Recommended flow rate	230 Nl/min	
Compressed air consumption for regeneration at 6.3 bar	20 Nl/min	

Weights		
Size	Size 2	Size 3
Aluminium body version	795 g	920 g

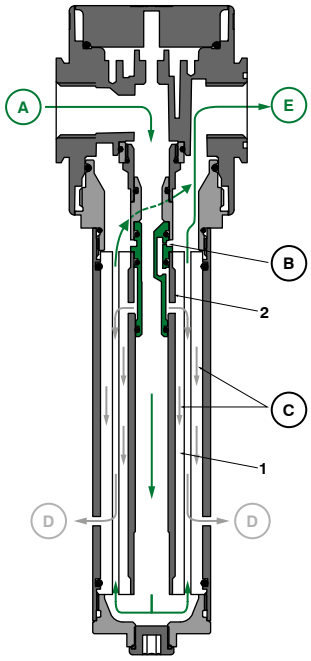
Materials

Sectioned view



Membrane dryer		
1	Body	Die-cast aluminium
2	Plug	Polyamide
3	Dryer case	Aluminium
4	Dryer plug	Nickel plated brass
5	Adapter	POM
6	Diaphragm	Polyethersulfone

Operating principle



A. Compressed air enters the body of the dryer and, through the pipe located at the center of the membrane (1), flows downwards. At the bottom, the flow direction is inverted, and the air rises, passing through the membrane.

B. From the nozzle (2), a quantity of dried compressed air (called regeneration air) is directed towards the outside of the membrane. Thanks to the membrane's structure, the regeneration air is evenly distributed.

C. As a result, two airflows with different humidity levels move in opposite directions through the device, separated only by the membrane walls. Inside the membrane there is humid compressed air, while outside there is dry regeneration air. Due to the humidity difference, moisture diffuses from the compressed air to the regeneration air.

D. Humid regeneration air is exhausted into the environment through holes (3).

E. The dried compressed air flows out of the dryer.

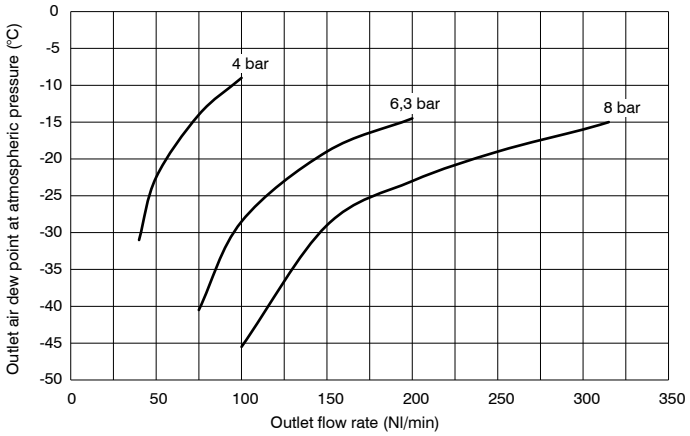
CODING: P17ⓉESC

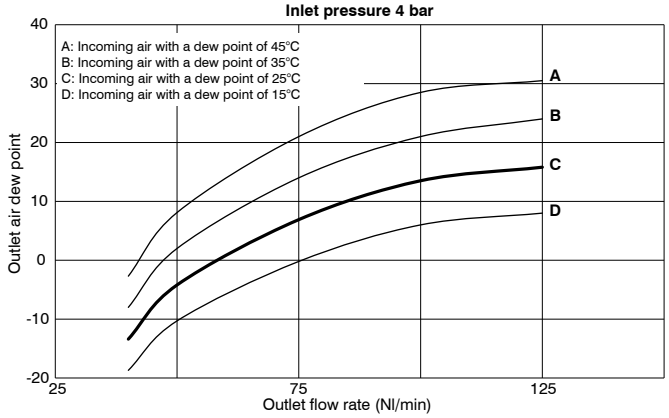
Ⓣ	SIZE AND CONNECTIONS
	2B = Size 2 - G3/8"
	3B = Size 3 - G1/2"

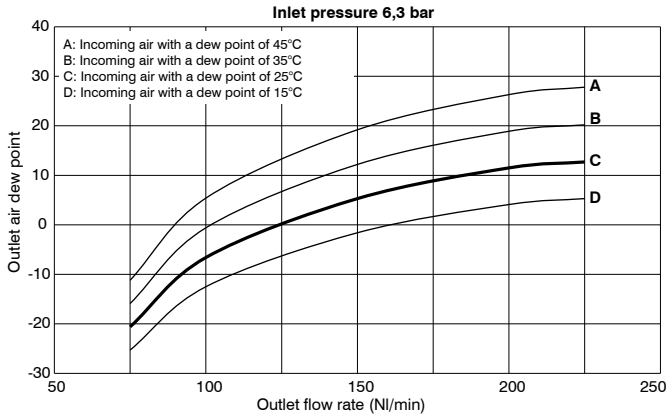
Example: **P172BESC**: Size 2 membrane dryer G3/8"

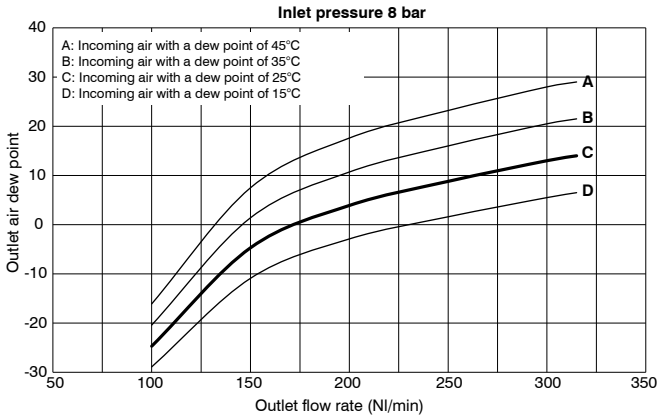
Characteristic curves

• Atmospheric dew point
• Incoming air with a dew point of 25°C

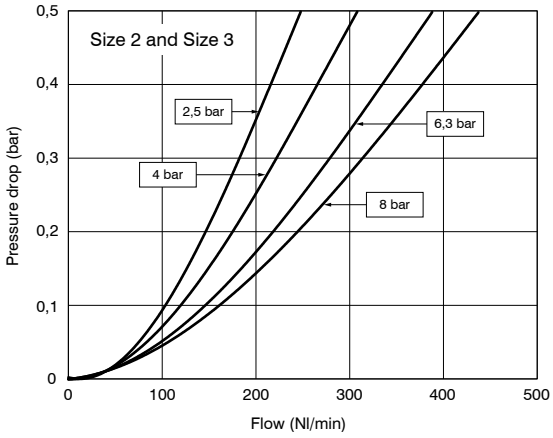




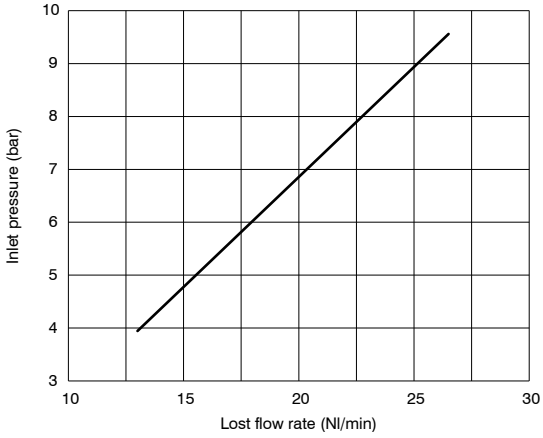




Flow rate curves

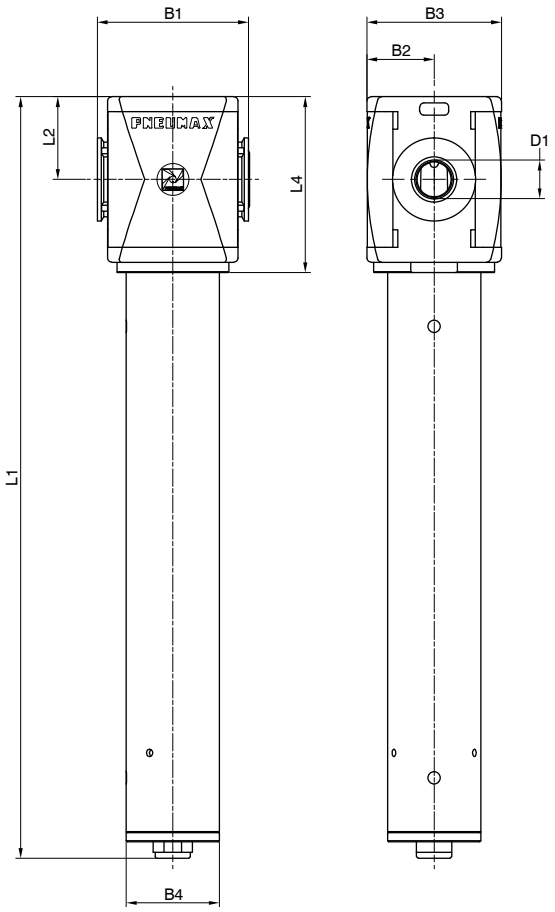


Regeneration air



For higher drying efficiency, use the highest possible inlet pressure, even if this results in an increase in regeneration air.

Dimensions



Model	B1	B2	B3	B4	D1	L1	L2	L4
P172BESC	62	28.5	57	45	G3/8"	357	34	74
P173BESC	73	32.5	65	45	G1/2"	368	40	85

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