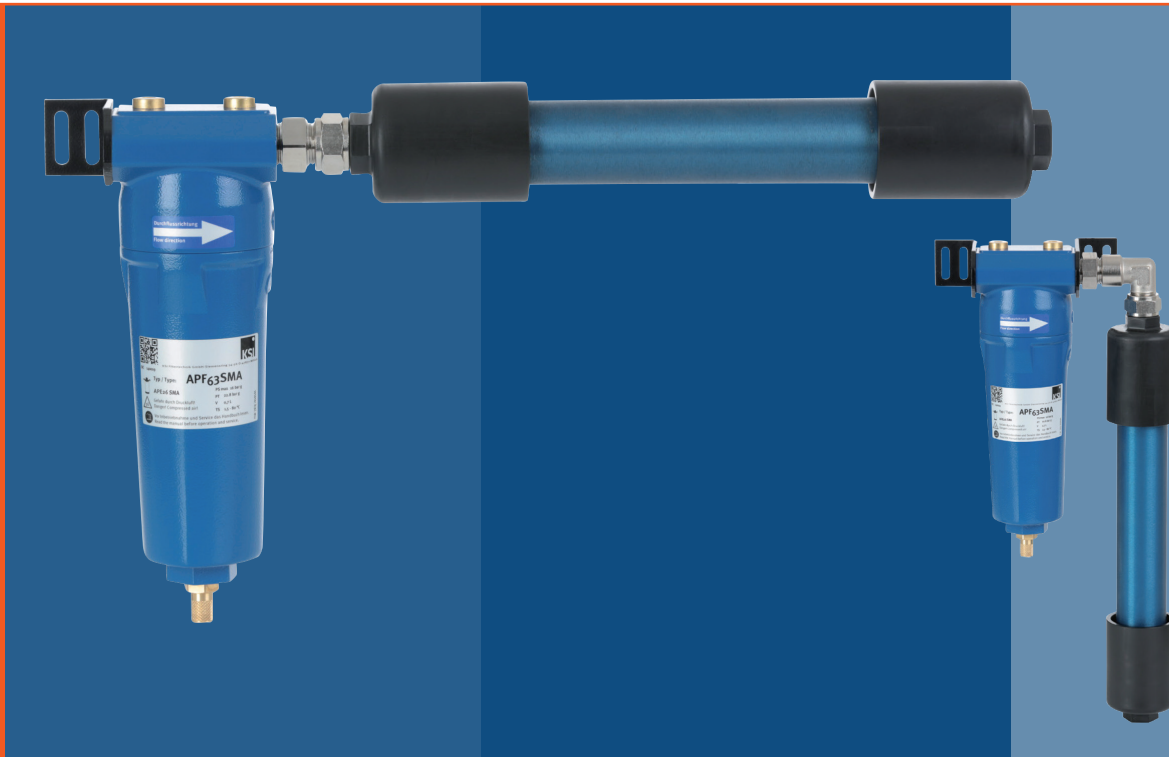


ECOTROC®

Membrane Dryer MBD

Demand-oriented drying solutions



Compressed air drying without power or maintenance

Moisture in compressed air systems can damage machines, pneumatic controls and precise instruments. **ECOTROC®** MBD membrane dryers are the preferred choice for installations with space requirements, no power supply or critical atmospheres that would make electrical installations too complex and costly. The compact design is a great option for mobile applications and point of use treatment. Whether for a dental laboratory, a research analyzer or a printing machine - **ECOTROC®** MBD provides reliable quality - always.

Applications:

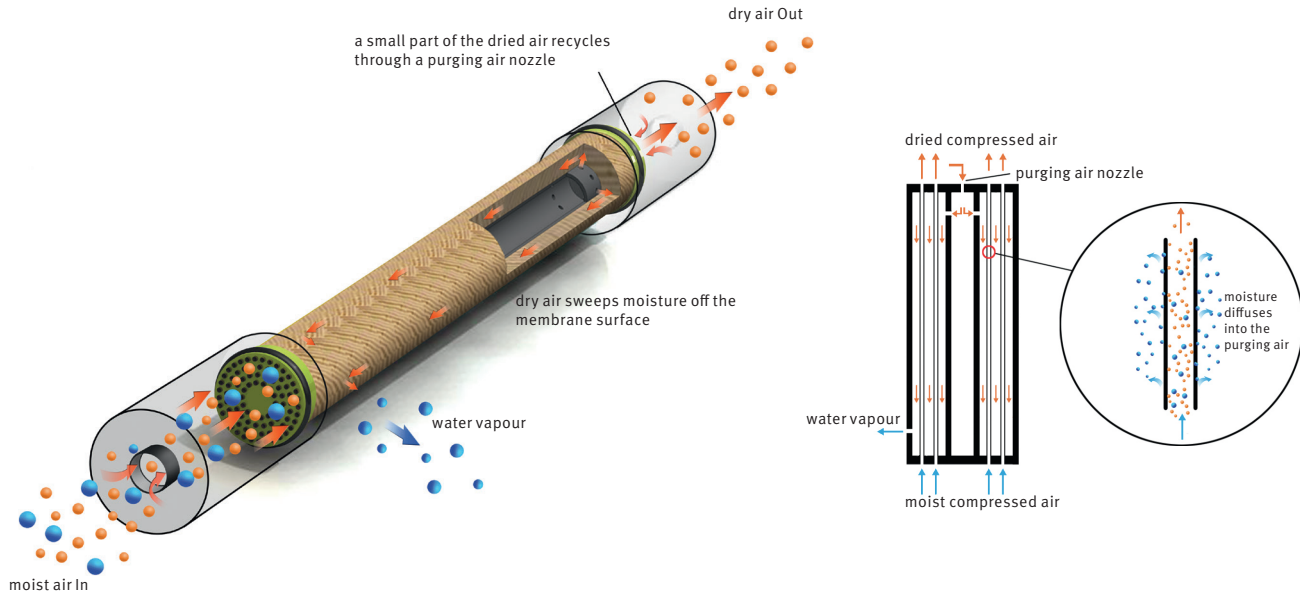
- instrument air
- pneumatic controls
- laboratory air
- analyzers
- ozone generators

The ECOTROC® MBD Plus-Effects +++

- + quick & simple installation
- + no moving parts, no wear and tear
- + low purging requirement
- + cost-effective concept for smaller volume flows
- + robust construction ensuring long life
- + quick response time
- + can also be used in explosion-protected areas
- + no power connection required

- precision pneumatic instruments
- laser applications
- painting plant
- CNC installations
- and many more

The diffusion process



Function

Compressed air streams into the membrane dryer, is directed into the membrane element and flows through the selective hollow fibre membrane filaments. On the outer side of the membrane filaments dried air (purge air) flows across the membrane surface in counterflow direction. This concentration gradient between in- and outside the membrane filament results in moisture being transported by means of diffusion into the purge flow. The process stream therefore leaves the membrane dryer with reduced moisture content.



ECOTROC® MBD PLUS

Pre-filtration with a sub-micron filter element upstream the membrane dryer is strongly recommended

The ECOTROC® MBD PLUS version combines a membrane dryer with the matching KSI ECOCLEAN® SMA pre-filter and wall mount. The combination can be installed vertically or horizontally, depending on the requirements of the installation.

Performance data

Dew point reduction	20 K	32 K	55 K	75 K
Purge air consumption	10 %	14 %	21 %	29 %
Moisture reduction	69.7 %	88.7 %	98 %	99 %
Type	Max. inlet capacity	Max. inlet capacity	Max. inlet capacity	Max. inlet capacity
	cfm	cfm	cfm	cfm
MBD 13	1.8	1.3	0.8	0.6
MBD 25	3.5	2.5	1.7	1.2
MBD 40	5.3	3.8	2.5	1.8
MBD 50	7.1	5.0	3.4	2.4
MBD 75	10.6	7.5	5.0	3.6
MBD 100	14.1	10.0	6.7	4.8
MBD 150	21.2	15.1	10.0	7.3
MBD 200	28.3	20.1	13.4	9.7
MBD 280	37.1	26.4	17.6	12.7
MBD 400	53.0	39.6	25.8	18.3
MBD 540	72.4	54.0	34.6	25.1
MBD 750	105.9	75.4	50.3	36.2

All specifications in reference to 101 psi g and an inlet pressure dew point of +95°F

Dimensions and connections

Type	Length	Diameter	Connection
	inch	inch	
MBD 13	8.8	58.4	1/4"
MBD 25	12.8	58.4	1/4"
MBD 40	16.8	58.4	1/4"
MBD 50	19.8	58.4	1/4"
MBD 75	12.3	81.3	1/2"
MBD 100	14.8	81.3	1/2"
MBD 150	18.3	81.3	1/2"
MBD 200	23.3	81.3	1/2"
MBD 280	16.2	109.2	1/2"
MBD 400	21.7	124	1/2"
MBD 540	24.7	124	1/2"
MBD 750	23.9	150	1"

Flexible dew point reduction

- The dryer can be sized to accommodate the required outlet dew point of the membrane dryer

Typical applications at the outlet of an ECOTROC® MBD

- Refrigerated dryers typically achieve dew points of 32 °F to 42 °F. This is usually sufficient for most industrial applications.
- Dew points of -4 °F are frequently required in medical compressed air or process air.
- A dew point of -40 °F might be required for high-quality instrument air.

Technical data

- volume flow: 0.6 cfm – 105.9 cfm
- pressure dew point: - 40°F max.
- pressure: 145 psi max.
- differential pressure: ~3 psi
- operating temperature: +140°F max.

Correction factors										
Working pressure	psi g	58	73	87	101	116	131	145	160	174
	factor	0.4	0.6	0.8	1	1.2	1.5	1.8	1.9	2.2

Please multiply the capacity of the filter by the correction factor in the above table.

Example: Capacity at inlet MBD 75 at 101 psi g = Capacity nominal (10.6 cfm) x Factor (1.8) = Capacity corrected (19.08 cfm).