



Membrane Dryer

Solution-Oriented Compressed Air Drying

ECOTROC® MT



Reliable Compressed Air Drying without the need of Power or Service

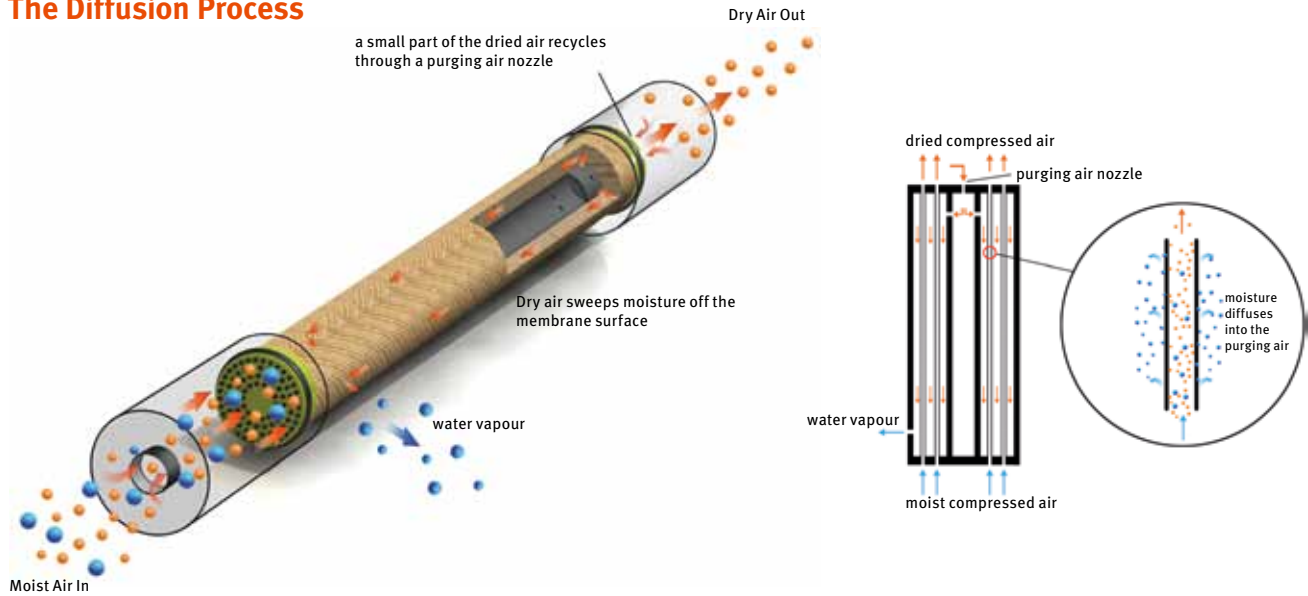
Water and moisture in compressed air damages installations, machines and pneumatic controls. Corrosion and pockets of bacteria can form quickly. For that reason treatment of the compressed air is always required as a preventative measure, with minimum cost implications. **ECOTROC® MT** is the most compact KSI solution for drying compressed air to specific demand requirements. Membrane dryers require no power and almost no service. Furthermore they only treat compressed air when it is needed, and at the required level of quality. The compact construction seems destined for mobile use but is also for stationary applications at the “point of use”. Whether in a dental laboratory, with an analyzer, or a printing machine in a factory building: **ECOTROC® MT** provides the best output, every time.



The ECOTROC® MT Plus-Effect +++

- + quick & simple installation
- + no moving parts, no wear
- + simple and cost effective service
(only replacement of protective filter element required)
- + low purging requirement
- + highly cost-effective concept for smaller volume flows
- + robust construction ensuring long life
- + quick response time
- + no condensate drain required
- + no reduction in oxygen content
- + can also be used in external protected areas
- + no power connection required
- + continuous operation possible
- + low noise levels
- + any installation orientation possible

The Diffusion Process



The path of the Compressed Air through the Membrane Dryer

The compressed air flows into the dryer and is directed into the membrane element. The still moist compressed air then flows through the selective hollow fibre membranes interior. Purging air is continuously diverted back along the outer walls of the membrane element for the purposes of drying, and using a specific nozzle opening it is released to atmospheric pressure. Due to this expansion the purging air is now significantly dryer, due to the moisture being distributed across a larger expanded volume. In the process the dried purging air flows across the outside of the membrane. Two air flows, separated only by the membrane wall and with different moisture content, move through the membrane element in a counter flow configuration. Due to the different moisture content the moisture in the compressed air diffuses into the purging air. The compressed air treated in this process is now dry when it leaves the membrane dryer.

Applications:

- Instrument air
- Pneumatic controls
- Laboratory air
- Analyzers
- Ozone generators
- Precision pneumatic instruments
- Laser applications
- Painting plant
- Electric switch boxes and pipes
- Packaging machines
- Printing machines
- CNC installations
- Robot technology
- Electronics & telecommunications

and many more

ECOTROC® MT PLUS

Filtration at the 0.01 micron level prior to the membrane is strictly required

In the ECOTROC® MT PLUS version KSI supplies a system solution of the membrane dryer combined with matching ECOCLEAN® SMA prefilter and wall mount. The combination can be mounted in this case in a vertical or horizontal arrangement.



ECOTROC® MT

Membrane Dryer Performance Data

	20°C	32°C	55°C	75°C
Dew point reduction	20°C	32°C	55°C	75°C
Purging air consumption	10 %	14 %	21 %	29 %
Moisture reduction	69,7 %	88,7 %	98 %	99 %
Type	Max. inlet capacity l/min	Max. inlet capacity l/min	Max. inlet capacity l/min	Max. inlet capacity l/min
MT 50	50	36	24	17
MT 100	100	71	47	34
MT 150	150	107	71	51
MT 200	200	142	95	69
MT 300	300	213	142	103
MT 400	400	284	189	137
MT 600	600	427	284	206
MT 800	800	569	379	274
MT 1050	1050	747	497	360
MT 1500	1500	1120	730	518
MT 2050	2050	1530	980	710
MT 3000	3000	2135	1425	1025

All specifications in reference to 7 bar g and an inlet pressure dew point of +35°C
 Maximum inlet temperature +60°C
 Maximum inlet pressure 10 bar g

Dimensions and Connections

Type	Length mm	Diameter mm	Connection
MT 50	224	58,4	1/4"
MT 100	325	58,4	1/4"
MT 150	427	58,4	1/4"
MT 200	503	58,4	1/4"
MT 300	312	81,3	1/2"
MT 400	376	81,3	1/2"
MT 600	465	81,3	1/2"
MT 800	592	81,3	1/2"
MT 1050	411	109,2	1/2"
MT 1500	551	124	1/2"
MT 2050	627	124	1/2"
MT 3000	607	150	1"

Suitable for different Dew Point requirements

- The requested dew point at the outlet of the membrane dryer can be adapted to the operator's specific requirement.

Typical Dew Points at the outlet of an ECOTROC® MT

- Refrigerated dryers typically reach dew points of 0°C to +6°C. This application is commonly used in industrial operations.
- Dew points from -20°C are frequently required in medical compressed air or process air.
- A dew point from -40°C indicates high-quality instrument air.

Technical Data

Volume flow: 0.6 cfm – 37.06 cfm | 1 m³/h – 60 m³/h

Pressure dew point: - 40°C maximum

Pressure: 10 bar maximum

Differential pressure: ~0.2 bar

Operating temperature: +60°C maximum

