



Membrane Dryer

Solution-Oriented Compressed Air Drying

ECOTROC® MT

Reliable Compressed Air Drying without the need of Power or Service

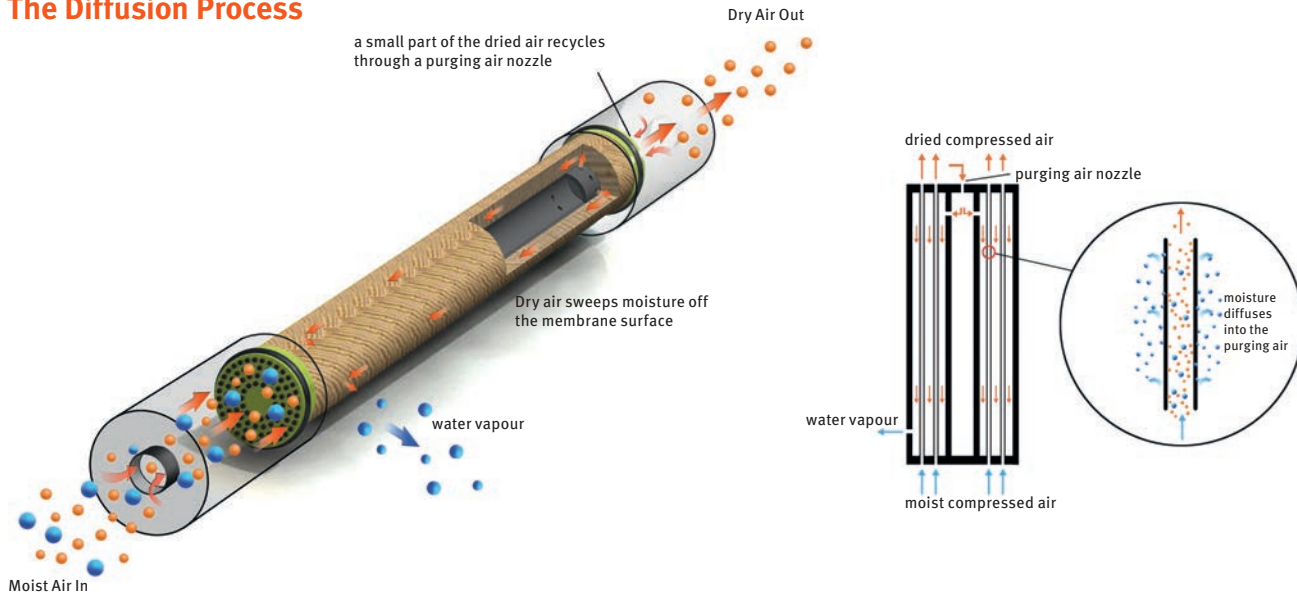
Water and moisture in compressed air damages installations, machines and pneumatic controls. Corrosion and pockets of bacteria can form quickly. For that reason treatment of the compressed air is always required as a preventative measure, with minimum cost implications. **ECOTROC® MT** is the most compact 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	Maximum inlet capacity		Maximum inlet capacity		Maximum inlet capacity		Maximum inlet capacity	
	cfm	l/min	cfm	l/min	cfm	l/min	cfm	l/min
MT 50	1.76	50	1.27	36	0.84	24	0.60	17
MT 100	3.53	100	2.50	71	1.66	47	1.20	34
MT 150	5.29	150	3.78	107	2.50	71	1.80	51
MT 200	7.06	200	5.01	142	3.35	95	2.43	69
MT 300	10.59	300	7.52	213	5.01	142	3.64	103
MT 400	14.12	400	10.02	284	6.67	189	4.84	137
MT 600	21.18	600	15.07	427	10.02	284	7.27	206
MT 800	28.24	800	20.08	569	13.38	379	9.67	274
MT 1050	37.06	1050	26.36	747	17.54	497	12.71	360

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	Diameter	connection
	mm	mm	
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"

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



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.