

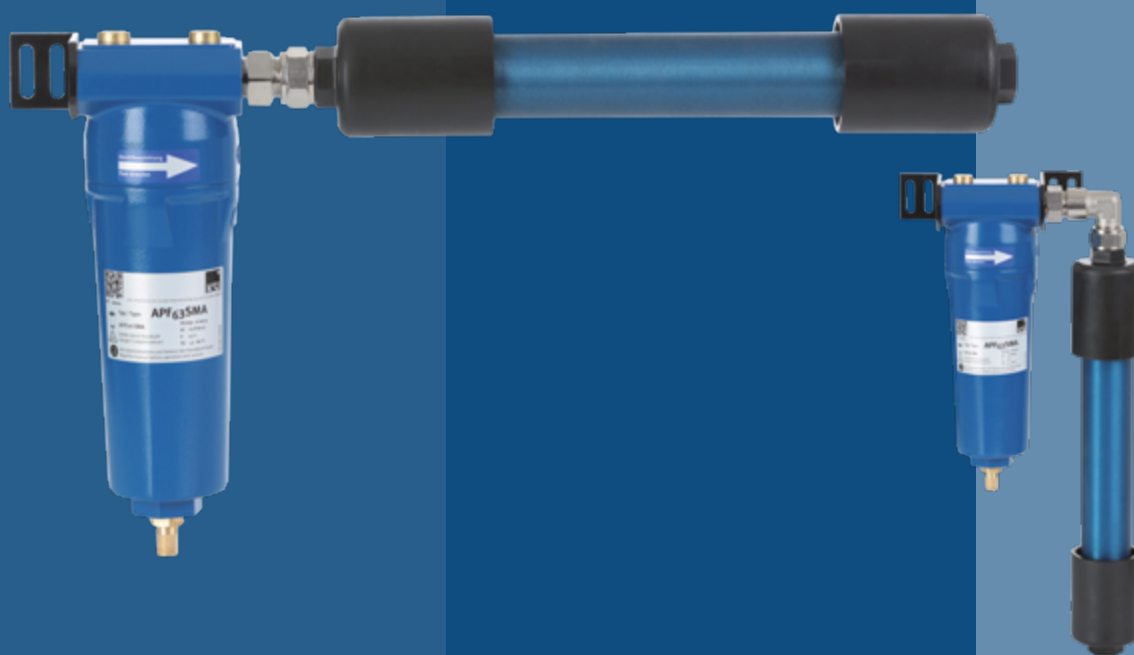
# ECOTROC®

## Membrane Dryer MT

### Solution-oriented Compressed Air Drying



Rev 01\_0225



### 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 special 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.

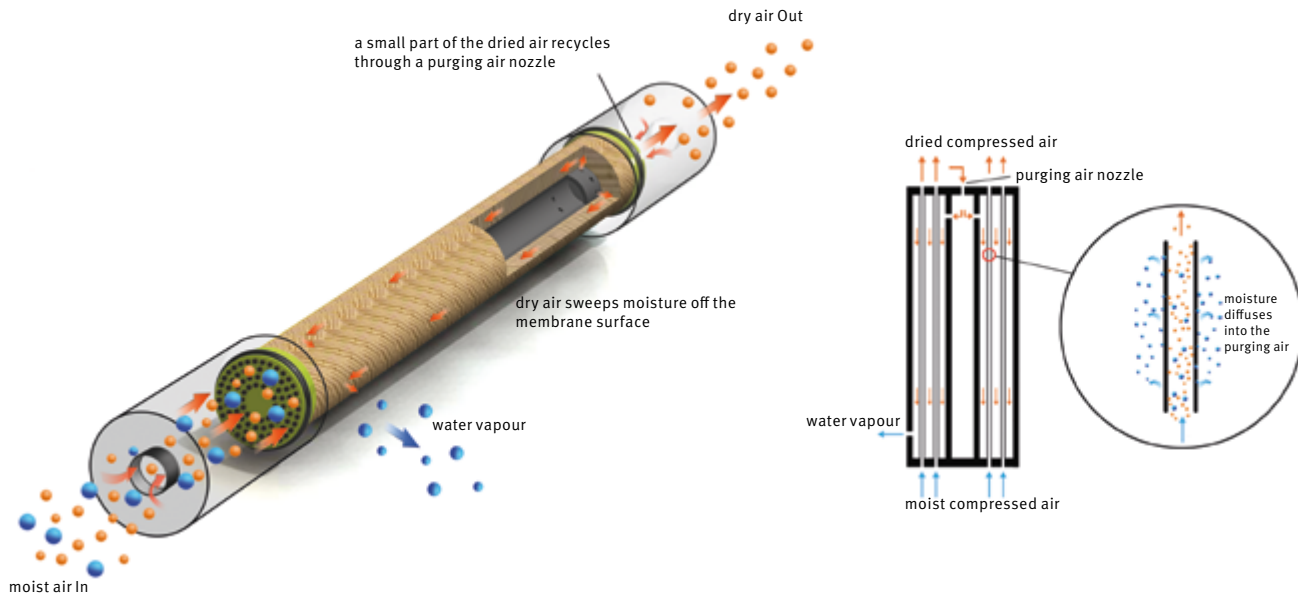
#### Applications:

- instrument air
- pneumatic controls
- laboratory air
- analyzers
- ozone generators
- precision pneumatic instruments
- laser applications
- painting plant
- CNC installations
- and many more

### The ECOTROC® MT Plus-Effects +++

- + quick & simple installation
- + no moving parts, no wear and tear
- + 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 explosion-protected areas
- + no power connection required
- + continuous operation possible
- + low noise levels
- + any installation orientation possible

**Cannot be used directly behind a piston compressor / pulsating compressed air! Offer available on request.**



## 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.

## 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 **KSI ECOCLEAN® SMA** prefilter and wall mount. The combination can be mounted in this case in a vertical or horizontal arrangement.



## Performance data and capacities

Dew point reduction	20°K	32°K	55°K				
Purge air consumption	10 %	14 %	21 %				
Moisture reduction	69,7 %	88,7 %	98 %				
Type	Capacity inlet l/min	Capacity inlet l/min	Capacity inlet l/min	Length mm	Diameter mm	Connection	PG
MT50	50	36	24	224	58,4	1/4"	440
MT100	100	71	47	325	58,4	1/4"	440
MT150	150	107	71	427	58,4	1/4"	440
MT200	200	142	95	503	58,4	1/4"	440
MT300	300	213	142	312	81,3	1/2"	440
MT400	400	284	189	376	81,3	1/2"	440
MT600	600	427	284	465	81,3	1/2"	440
MT800	800	569	379	592	81,3	1/2"	440
MT1050	1050	747	497	411	109,2	1/2"	440
MT1500	1500	1120	730	551	124	1/2"	440
MT2050	2050	1530	980	627	124	1/2"	440
MT3000	3000	2135	1425	607	150	1"	440
Typ							
MT300-PC	300	213	142	312	81,3	1/2"	440
MT400-PC	400	284	189	376	81,3	1/2"	440
MT600-PC	600	427	284	465	81,3	1/2"	440
MT800-PC	800	569	379	592	81,3	1/2"	440
MT1500-PC	1500	1120	730	551	124	1/2"	440
MT2050-PC	2050	1530	980	627	124	1/2"	440
MT3000-PC	3000	2135	1425	607	150	1"	440

All data is calculated at 7 barg and an inlet dew point of +35°C

**0,01 micron filtration in front of the membrane is mandatory. Included in scope of supply for MT-Plus.**

## 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.

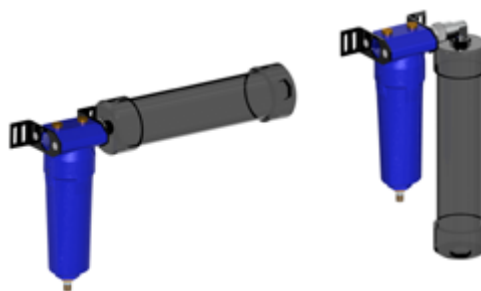
Specifications	
Pressure dew point	-40°C max.
Medium	Compressed air and gases
Max. working pressure	12,5 barg
Max. temperature	60°C
Min. temperature	1,5°C
Differential pressure	~0,2 bar
Colour	blue

## 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.

### ECOTROC® MT PLUS

The **ECOTROC® MT PLUS** version is a system solution of the membrane dryer combined with a suitable pre-filter **KSI ECOCLEAN®** SMA and wall bracket. The combination here can be either a vertical or horizontal version.



#### Scope of supply

**KSI ECOCLEAN®** pre-filter SMA with automatic condensate drain, wall brackets and connectors.

Can also be combined with the „purge air control“ options. The unit is supplied fully assembled.

#### MT-PLUS horizontal

Typ	PG
MT-OPT-PLUS50-200-W	440
MT-OPT-PLUS300-800-W	440
MT-OPT-PLUS1050-1500-W	440
MT-OPT-PLUS2050-W	440
MT-OPT-PLUS3000-W	440

#### MT-PLUS vertical

Typ	PG
MT-OPT-PLUS50-200-S	440
MT-OPT-PLUS300-800-S	440
MT-OPT-PLUS1050-1500-S	440
MT-OPT-PLUS2050-S	440
MT-OPT-PLUS3000-S	440

### ECOTROC® MT PC

The **ECOTROC® MT PC** version is available in both manual and automatic versions. The regulation of the manual version **PC-M** is done by a stainless steel needle valve. The automatic version **PC-A** is switched via a solenoid valve and regulated via a compact throttle check valve.

#### Scope of supply

Completely assembled unit for manual or automatic purging air control.

Can also be combined with the MT PLUS option. Can only be combined with the MT-PC membrane dryer.

#### MT-PC manual

Typ	PG
MT-OPT-PC300-800-M	440
MT-OPT-PC1500-2050-M	440
MT-OPT-PC3000-M	440



#### MT-PC automatic

Typ	PG
MT-OPT-PC300-800-A	440
MT-OPT-PC1500-2050-A	440
MT-OPT-PC3000-A	440



#### Correction factors

Working pressure	bar g	4	5	6	7	8	9	10	11	12
	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 MT 300 at 10 bar g = Capacity nominal (300 l/m) x Factor (1,8) = Capacity corrected (540 l/m).