



Adsorption Dryers for Medical Compressed Air

Medical Compressed Air Purification

Medical breathing air – reliably purified

The MT product line has been specially developed for the conversion of compressed air into medical air. Compressed air intended for use as breathing air is subject to particularly strict requirements concerning air quality and failure safety.

Use of the MT purification systems guarantees compliance with the internationally applied limits and current standards (e.g. Pharmacopée Européenne / DIN EN ISO 7396-1).



Your Safety

Medgas Technik is certified compliant with DIN EN ISO 9001 and EN ISO 13485 and is therefore your ideal partner if you are looking for a medical device manufacturer able to guarantee a risk-free installation.

Our trained team of medical equipment consultants will be glad to inform you of our capabilities and to devise and deliver a technically problem-free and safe solution for your specific requirements. In particular, the fact that we can also commission the compressed air processing system in conformity with DIN EN ISO 7396-1 will help you to simplify the procedures for new installation or expansion of your existing compressed air system.

For clean compressed air, free of moisture and dirt

Costs

The reduction of investment costs, operating costs and maintenance costs, in particular through the use of the **MT** product line, is our contribution to cost-cutting in the medical sector. Our intelligently structured spare parts packages will also reduce your long-term costs.

The **MT** product line can be used both as retrofit for existing compressed air supply systems and in new systems, which can also be commissioned and certified by Medgas.

MT 1 - MT 55

Standard Equipment

Composition of an MT purification unit:

- **Microfilter**
MFO/SMA prefilter combination (1 micron/0.01 micron)
- **MT Adsorption Dryer**
ATK heatless-type adsorption dryer, fully automatic, with special adsorbent combination
- **Control Device**
Electronic control system including compressor synchronizing circuit
- **Activated Carbon Filter**
CA activated carbon filter
(residual oil content 0,003 mg/m³)
- **Catalyst**
HC catalyst
- **Final Filter**
SMA final filter (0,01 micron) or sterile filter SE

Options

Dew Point Control Device

- Optional expansion or problem-free retrofit
- Dewpoint sensor with dewpoint indicator
- If required, regeneration control as a function of the detected operating situation
- Potential-free alarm output
- Storage of operating data in the event of power failure
- Automatic service indicator
- Interface for data output to PC/software [Option]

Limit values for Breathing Air

Residual values according to Pharmacopée Européenne / DIN EN ISO 7396-1 and MT purification unit

| | | | | Pharmacopée Européenne | MT |
|---------------------------------|-----------------|----------------------|---|---------------------------|-------------|
| Carbon monoxide | CO | (ppm) | < | 5 | 5 |
| Carbon dioxide | CO ₂ | (ppm) | < | 500 | 300 |
| Water vapour | | (ppm) | < | 67 | 67 |
| Sulphuric acid | SO ₂ | (ppm) | < | 1 | 1 |
| Nitrous gases | NO _x | (ppm) | < | 2 | 2 |
| Nitrogen oxide | NO ₂ | (ppm) | < | 2 | 2 |
| Oil vapour/residual content | | (mg/m ³) | < | 0,1 | 0,1 |
| Nitrogen | N ₂ | (ppm) | < | | 2 |
| Oxygen | O ₂ | % | < | 21 (+/-1) | 20,9 (+/-1) |
| Dirt particles | < | | | 0,01 micron with 99,9999% | |
| Aromatic and odorous substances | | | | free | |

The specified values are maximum concentrations

A thoroughly convincing product

... and how it works

Contaminated compressed air high in humidity and oil fractions is first fed into the prefilter combination. Here, the compressed air is cleaned of particles and condensate. Then, in the downstream adsorption dryer, the water vapour concentration is reduced to a dewpoint of -28°C. Next, the compressed air is freed of odours and various residues of gases and carbon monoxide in the activated carbon and catalyst stages. Finally, any abraded particles are blocked in the final filter stage.



MT

Medical Compressed Air Purification

| Type | Capacity m ³ /h | Connection | Width in mm | Depth in mm | Height in mm |
|-------|----------------------------|------------|-------------|-------------|--------------|
| MT 1 | 6 | 1/4" | 720 | 205 | 550 |
| MT 2 | 12 | 1/4" | 720 | 205 | 685 |
| MT 3 | 24 | 3/8" | 750 | 205 | 895 |
| MT 4 | 42 | 3/8" | 750 | 215 | 1155 |
| MT 6 | 60 | 1/2" | 885 | 215 | 1218 |
| MT 8 | 84 | 1/2" | 885 | 215 | 1360 |
| MT 9 | 108 | 1/2" | 1005 | 260 | 1360 |
| MT 15 | 180 | 1" | 1100 | 664 | 1106 |
| MT 18 | 216 | 1" | 1100 | 664 | 1266 |
| MT 22 | 252 | 1" | 1154 | 664 | 1382 |
| MT 34 | 408 | 1 1/2" | 1154 | 729 | 1652 |
| MT 45 | 576 | 1 1/2" | 1527 | 729 | 2011 |
| MT 55 | 720 | 1 1/2" | 1980 | 875 | 1800 |

*based on 1 bar (abs) and 20°C with 9 bar g and 35°C inlet temperature

Medium: compressed air

Pressure dewpoint: -28°C

Operating pressure: min. 4 bar / max. 16 bar (g)

Power supply: 230V/ 50-60 Hz AC

MT 15-55

MT 1-9

