



Your advantages with Deltech® Membrane Dryers

DMD Series (Light construction)

DMM Series (Pressure-resistant aluminium housing)



- Multifunctional applications
- No electrical connection needed
- No moving parts
- No liquid condensate to be treated
- No oxygen loss

The DMM and DMD Deltech membranes are an excellent alternative to refrigerant and adsorption dryers. Membrane dryers can be selected independently from the desired pressure dew point and need no maintenance. In order to protect the delicate membrane surface, a particle and oil-fine filtration is required. The appropriate filter combinations are available in our Deltech filter program.

The purge air, saturated with water vapour is dispersed freely in the environment without any noise exposure and without the need for a condensate treatment.

Membrane dryers are specially suitable as point-of-use dryers or in areas where there is no electrical power supply available. Due to the dew point suppression, membranes provide in combination with refrigerant dryers extreme low pressure dew points.

Membrane dryers make use of a small quantity of the compressed air as purge air. The quantity of purge air depends, among others, on the desired pressure dew point. In the model DMM, the membrane bundle is located in a pressure-resistant housing.

This construction offers the possibility to interrupt the purge air flow by means of an optionally mounted solenoid valve, which can be operated from the compressor on-off contact.



Optional: Purge-Stop Valve

| Technical Data Deltech Membrane Dryers DMM and DMD Series | | | | | | | |
|---|----------------------------|-----------------------------|----------------------|--------------|---------|--------------|-----------------------------|
| Model | Inlet m ³ /h | Outlet m ³ /h | Connection in/out | Weight kg | Ø mm | Length mm | Inlet filter combination |
| DMM 1 | 2,4 | 2,0 | R 3/8" | 2,5 | 209 | 281 | PF/HF 18 |
| DMM 2 | 7,9 | 6,8 | R 3/8" | 2,8 | 209 | 387 | PF/HF 18 |
| DMM 3 | 16,4 | 13,9 | R 1/2" | 3,0 | 209 | 486 | PF/HF 36 |
| DMM 4 | 24,0 | 20,7 | R 1/2" | 3,6 | 209 | 696 | PF/HF 36 |
| DMM 5 | 42,0 | 35,8 | R 3/4" | 5,9 | 267 | 498 | PF/HF 54 |
| DMM 6 | 70,2 | 60,6 | R 3/4" | 6,2 | 267 | 696 | PF/HF 54 |
| DMM 7 | 117,0 | 99,0 | R 1" | 7,6 | 310 | 747 | PF/HF 90 |
| DMM 8 | 186,0 | 158,0 | R 1" | 15,9 | 346 | 885 | PF/HF 90 |
| DMM 9 | 240,0 | 205,0 | R 1" | 18,1 | 346 | 1040 | PF/HF 90 |
| DMD 20.1 | 2,6 | 2,3 | R 3/8" | 0,6 | 53 | 312 | PF/HF 18 |
| DMD 20.2 | 10,1 | 8,8 | R 3/8" | 0,8 | 53 | 671 | PF/HF 18 |
| DMD 20.3 | 15,8 | 13,9 | R 3/8" | 2,2 | 99 | 389 | PF/HF 18 |
| DMD 20.4 | 33,7 | 29,8 | R 1/2" | 3,1 | 99 | 683 | PF/HF 36 |
| DMD 20.5 | 56,1 | 49,6 | R 1/2" | 4,9 | 99 | 1041 | PF/HF 36 |
| DMD 20.6 | 110,0 | 97,0 | R 3/4" | 6,0 | 125 | 1050 | PF/HF 54 |

The flow capacity is based on the intake volume of compressed air by the compressor at 20°C and 1 bar (a)
 All data acc. to DIN 7183: Working pressure: 7 bar, Pressure dew point: +3°C, Working temperature 35°C
 The technical data are for the dryers without filters.

A selection in case of divergent working conditions can be made using the following correction factors.

| F1 Capacity factors* for different working pressure | | | | | | |
|---|-------|--------------|-------|-------|--------|------------|
| 4 bar | 6 bar | 7 bar | 8 bar | 9 bar | 10 bar | 11-14 bar |
| 0,4 | 0,8 | 1 | 1,2 | 1,4 | 1,7 | on request |

| F2 Capacity factors* for different working temperature | | | | | |
|--|------|-------------|------|------|--------------|
| 5°C | 25°C | 35°C | 40°C | 50°C | higher temp. |
| 1,7 | 1,2 | 1 | 0,9 | 0,8 | on request |

| F3 Capacity factors* for different pressure dew point | | | | |
|---|-------|-------|-------------|-------|
| -40°C | -30°C | -10°C | +3°C | +10°C |
| 0,4 | 0,5 | 0,7 | 1 | 1,1 |

*These data are approximate and may slightly vary from model to model.

*In case of deviation of more than one factor, the factors should be multiplied.

Selection formula: =
$$\frac{\text{Compressor capacity}}{F_1 \cdot F_2 \cdot F_3}$$

| Design data: | Min. | Nom. | Max. | Purge air consumption for PDP: | +3°C | approx. 15% |
|---------------------|-----------|-----------|------------|--------------------------------|-------------|-------------|
| Inlet pressure: | 4 bar (g) | 7 bar (g) | 14 bar (g) | -10°C | approx. 17% | |
| Inlet temperature: | 5°C | 35°C | 66°C | -20°C | approx. 22% | |
| Pressure dew point: | -40°C | +3°C | +10°C | -40°C | approx. 24% | |