SPXFLOW

COMPRESSED AIR TECHNOLOGY

Membrane dryers

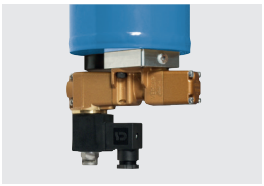
HMD | HMM - SERIES

BENEFITS AND FEATURES

- Multifunctional applications, no electrical connection needed
- No moving parts
- No liquid condensate to be treated
- No oxygen loss
- HMD: Light construction,
  HMM: Pressure-resistant aluminium housing

HMD

HMM



Option: Purge stop valve, only for HHM
(not as retrofit-kit available)

The HMD and HMM Hankison 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, particle and oil-fine filtration are required.

The appropriate filter combinations are available in our Hankison filter program.

The purge air, saturated with water vapour is dispersed freely in the environment without any noise 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 compressed air as purge air. The quantity of purge air depends, among others, on the desired pressure dew point. In the model HMM, 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.

Design Data	Min.	Nom.	Max.
Inlet pressure	4 bar (g)	7 bar (g)	14 bar (g)
Inlet temperature	+5 °C	+35 °C	+66 °C
Pressure dew point	-40 °C	+3 °C	+10 °C

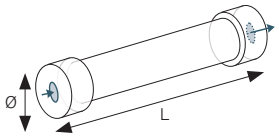
Purge air consumption* for PDP:	+3°C	-10°C	-20°C	-40°C
Consumption approx. %	15	17	22	35

* At design conditions

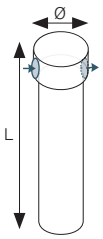
Hankison®

Model	Flow Inlet	Flow Outlet	Connection	Ø	Length	Weight	Pre-filter combination
	m³/h			mm		kg	PF/HF
HMD 20.1	2.6	2.3	R 3/8"	62	311	0.6	F02-B-PF/HF
HMD 20.2	10.1	8.8			670	0.8	
HMD 20.3	16.1	14.0		107	387	2.2	
HMD 20.4	34.8	30.5	R 1/2"		683	3.1	
HMD 20.5	57.8	50.6			1,041	4.3	F03-B-PF/HF
HMD 20.6	112.8	98.7	R 3/4"	133	1,045	6.6	F06-B-PF/HF
HMM 1	2.4	2.0	R 3/8"	105	298	2.5	F02-B-PF/HF
HMM 2	7.9	6.8			400	2.8	
HMM 3	16.4	13.9	R 1/2"		502	3.0	
HMM 4	24.0	20.7			702	3.6	
HMM 5	42.0	35.8	R 3/4"	133	514	4.9	F03-B-PF/HF
HMM 6	70.2	60.6			711	6.2	F04-B-PF/HF
HMM 7	117.0	99.0	R 1"	164	762	7.6	F06-B-PF/HF
HMM 8	186.0	158.0		194	876	15.9	F07-B-PF/HF
HMM 9	240.0	205.0			1,035	18.1	F08-B-PF/HF

* ISO 7183, based on the intake volume of the compressor at +20°C and 1 bar (a), operating pressure 7 bar (g), inlet temperature +35°C, ambient or cooling water temperature +25°C, pressure dew point +3°C
The technical data are for the dryers without filters. **Important:** Use Membrane Dryers only with the recommended inlet filters.
Technical data and specification are subject to change without prior notice



HMD 20-1 – 20-6



HMM 1-3 – 9-16

The following correction factors need to be used to select the correct unit for other operating conditions.

Correction factors[1] for different operating pressure in bar(g) (F_1)							
bar (g)	4	6	**7**	8	9	10	11 – 14
HMD 20.1 - 20.6 | HMM 1 - 9	0.4	0.8	1	1.2	1.4	1.7	on request

Correction factors[1] for different inlet temperature in °C (F_2)						
°C	+5	+25	**+35**	+40	+50	higher temp. on request
HMD 20.1 - 20.6 | HMM 1 - 9	1.7	1.2	1	0.9	0.8	

Correction factors[1] for different outlet pressure dew point (F_3)					
°C	-40	-30	-10	**+3**	+10
HMD 20.1 - 20.6 | HMM 1 - 9	0.4	0.5	0.7	1	1.1

Selection example		Calculation
Compressor capacity (V_1)	100 m³/h	$V_2 = \frac{V_1}{F_1^* \cdot F_2^* \cdot F_3} = \frac{100}{1.2 \cdot 1.2 \cdot 1} = 69.4\ m^3/h$
Inlet pressure (F_1)	8 bar (g)	
Inlet temperature (F_2)	+25 °C	
Pressure dew point (F_3)	+3 °C	Selection: HMD 20.6 / HMM 6
V_2	Required dryer capacity	

[1] These data are approximate and may slightly vary from model to model.

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