Hankison™

Membrane Compressed Air Dryers

HMD Series

hankisonair.com

Hankison™

HMD Series Membrane Dryers

The Next Generation in Membrane technology

Advancements in design allow membrane technology to efficiently dehydrate compressed air. Versatile, environmentally and user-friendly, membrane dryers are the ideal solution for low flow and point of use applications.

Versatile

- Lightweight—can be installed without additional support
- Operates in both horizontal and vertical orientation
- Convenient mounting systems available
- High inlet and outlet flows
- Dryers may be sized to produce dew point temperatures from -40°F (-40°C) or below to +50°F (+10°C)

Efficient

- Low sweep air rates — more air available downstream
- Choice of Prefilter packages:
  - HF Series Grade 5 high efficiency oil removal filter for normal applications
  - HF Series Grade 7 air linet filter and Grade 3 ultra high efficiency oil removal filter for critical applications

Low Maintenance

- No power source required
- No moving parts to maintain, repair or wear out
- No consumables to replace
- No liquid condensate to dispose of

Drying Protection

- Pressurized air is contained inside the membranes
- Housing contains air at atmospheric pressure
- No oil/water emulsions or chemicals to dispose of

Durable Construction

- Maximum working pressure for all models: 175 psig (12.3 kg/cm^2)
- Maximum inlet temperature: 150°F (66°C)

Dedicated to Excellence Since 1948, compressed air users around the world have relied on Hankison to provide innovative compressed air treatment solutions for critical applications. Hankison maintains a long standing reputation for manufacturing products that deliver superior performance, time proven reliability and optimal energy savings. Hankison today is the preferred choice for providing clean, dry compressed air for the most challenging industries.

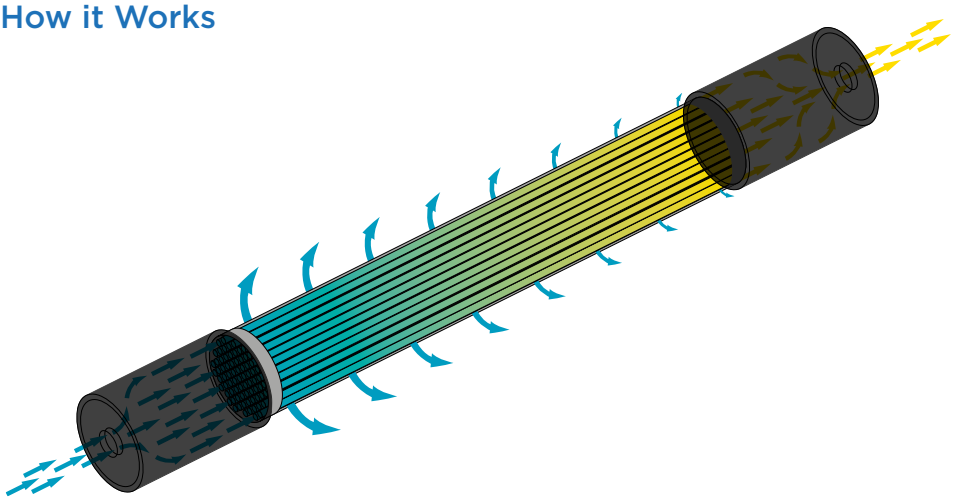
3 Year Warranty

Standard one year warranty is extended to three years when the dryer is installed with an optional prefilter package. To keep the warranty in effect, cartridges must be replaced at six month intervals and the drain mechanism yearly.

** Fitness Guarantee*

If during the first three months of operation, you are not satisfied with the suitability of the membrane dryer for your application, return the dryer for full credit. The credit can be applied to the purchase of any other Hankison drying equipment.

How it Works



Compressed air, saturated with water vapor, flows through a bundle of tube-shaped hollow membrane fibers. A sweep orifice installed at the end of the bundle meters the amount of sweep air required to remove the water vapor from the dryer. Dry air then exits the tube bundle for use downstream. As long as the dried air isn't exposed to temperatures below the specified pressure dew point, no troublesome liquid water will form in the air system.

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HMD Series Specifications

Inlet/Outlet Flow Capacities scfm (nm³/h)] @ 100 psig (kg/cm²)³

	INLET TEMP		FLOW	OUTLET PRESSURE DEW POINT					
				50ºF	40ºF	20ºF	0ºF	-20ºF	-40ºF
	ºF	ºC		10ºC	4.4ºC	-6.7ºC	-17.8ºC	-29ºC	-40ºC
HMD20-1	40	4.4	In				1.57	1.13	0.85
			Out				1.36	0.92	0.64
	60	16	In			1.73	1.24	0.94	0.72
			Out			1.52	1.03	0.73	0.51
	80	27	In		1.88	1.37	1.04	0.81	0.63
			Out		1.67	1.16	0.83	0.60	0.42
	100	38	In	1.70	1.48	1.14	0.89	0.70	0.55
			Out	1.49	1.27	0.93	0.68	0.49	0.34
	120	49	In	1.39	1.24	0.99	0.79	0.62	0.49
			Out	1.18	1.03	0.78	0.58	0.41	0.28
	150	66	In	1.11	1.01	0.82	0.67	0.53	0.43
			Out	0.90	0.80	0.61	0.46	0.32	0.22
HMD20-2	40	4.4	In				6.04	4.32	3.22
			Out				5.22	3.50	2.40
	60	16	In			6.68	4.76	3.58	2.73
			Out			5.86	3.94	2.76	1.91
	80	27	In		7.27	5.24	3.96	3.05	2.36
			Out		6.45	4.42	3.14	2.23	1.54
	100	38	In	6.55	5.69	4.37	3.40	2.66	2.08
			Out	5.73	4.87	3.55	2.58	1.84	1.26
	120	49	In	5.33	4.76	3.77	2.98	2.36	1.86
			Out	4.51	3.94	2.95	2.16	1.54	1.04
	150	66	In	4.25	3.86	3.13	2.51	2.01	1.60
			Out	3.43	3.04	2.31	1.69	1.19	0.78
HMD20-3	40	4.4	In				9.51	7.17	5.62
			Out				8.31	5.97	4.42
	60	16	In			10.36	7.78	6.14	4.90
			Out			9.16	6.58	4.94	3.70
	80	27	In		11.17	8.43	6.67	5.39	4.35
			Out		9.97	7.23	5.47	4.19	3.15
	100	38	In	10.19	9.04	7.24	5.88	4.81	3.92
			Out	8.99	7.84	6.04	4.68	3.61	2.72
	120	49	In	8.55	7.77	6.40	5.28	4.35	3.57
			Out	7.35	6.57	5.20	4.08	3.15	2.37
	150	66	In	7.08	6.53	5.49	4.59	3.81	3.15
			Out	5.88	5.33	4.29	3.39	2.61	1.95

1 Use inlet air temperature if the air entering the dryer has not been dried upstream (air is saturated). If air has been dried. (e.g. in a refrigerated dryer) use the dew point temperature of the inlet air.

2 Models HMD20-7, 8, and 9 for higher flows are available. Model HMD20-7 is three HMD20-5s piped in parallel. Multiply flows found in HMD20-5 table by 3 to determine capacity.
Model HMD20-8 is two HMD20-6s, and HMD20-9 is three HMD20-6s piped in parallel. Multiply flows in HMD20-6 table by 2 or 3 to find flow capacity.

3 Flow capacities at 100 psig (7 kg/cm²). For capacities at other pressures consult factory. Capacities are established in accordance with CAGI (Compressed Air and Gas Institute) Standard ADF 700: Membrane Compressed Air Dryers - Methods for Testing and Rating.

HMD Series Specifications

Inlet/Outlet Flow Capacities scfm (nm^3/h)] @ 100 psig (kg/cm^2)[3]

	INLET TEMP		FLOW	OUTLET PRESSURE DEW POINT					
				50ºF	40ºF	20ºF	0ºF	-20ºF	-40ºF
	ºF	ºC		10ºC	4.4ºC	-6.7ºC	-17.8ºC	-29ºC	-40ºC
HMD20-4	40	4.4	In				20.5	15.9	12.8
			Out				18.0	13.4	10.3
	60	16	In			22.2	17.1	13.8	11.3
			Out			19.7	14.6	11.3	8.8
	80	27	In		23.8	18.3	14.9	12.3	10.2
			Out		21.3	15.8	12.4	9.8	7.7
	100	38	In	21.8	19.5	16.0	13.3	11.1	9.3
			Out	19.3	17.0	13.5	10.8	8.6	6.8
	120	49	In	18.6	17.0	14.3	12.1	10.2	8.6
			Out	16.1	14.5	11.8	9.6	7.7	6.1
	150	66	In	15.7	14.6	12.5	10.7	9.1	7.7
			Out	13.2	12.1	10.0	8.2	6.6	5.2
HMD20-5	40	4.4	In				34	26.2	20.9
			Out				29.8	22	16.7
	60	16	In			36.9	28.2	22.6	18.4
			Out			32.7	24	18.4	14.2
	80	27	In		39.7	30.4	24.5	20.1	16.5
			Out		35.5	26.2	20.3	15.9	12.3
	100	38	In	36.3	32.4	26.4	21.8	18.1	15
			Out	32.1	28.2	22.2	17.6	13.9	10.8
	120	49	In	30.8	28.2	23.6	19.7	16.5	13.7
			Out	26.6	24	19.4	15.5	12.3	9.5
	150	66	In	25.8	24	20.5	17.3	14.6	12.2
			Out	21.6	19.8	16.3	13.1	10.4	8
HMD20-6	40	4.4	In				66.4	51	40.7
			Out				58.2	42.8	32.5
	60	16	In			72	55	44.1	35.8
			Out			63.8	46.8	35.9	27.6
	80	27	In		77.4	59.3	47.7	39.1	32.1
			Out		69.2	51.1	39.5	30.9	23.9
	100	38	In	70.8	63.3	51.4	42.4	35.2	29.1
			Out	62.6	55.1	43.2	34.2	27	20.9
	120	49	In	60.1	54.9	45.9	38.4	32.1	26.7
			Out	51.9	46.7	37.7	30.2	23.9	18.5
	150	66	In	50.3	46.7	39.8	33.7	28.4	23.8
			Out	42.1	38.5	31.6	25.5	20.2	15.6

1 Use inlet air temperature if the air entering the dryer has not been dried upstream (air is saturated). If air has been dried. (e.g. in a refrigerated dryer) use the dew point temperature of the inlet air.

2 Models HMD20-7, 8, and 9 for higher flows are available. Model HMD20-7 is three HMD20-5s piped in parallel. Multiply flows found in HMD20-5 table by 3 to determine capacity.
Model HMD20-8 is two HMD20-6s, and HMD20-9 is three HMD20-6s piped in parallel. Multiply flows in HMD20-6 table by 2 or 3 to find flow capacity.

3 Flow capacities at 100 psig (7 kg/cm^2). For capacities at other pressures consult factory. Capacities are established in accordance with CAGI (Compressed Air and Gas Institute) Standard ADF 700: Membrane Compressed Air Dryers - Methods for Testing and Rating.

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Inlet/Outlet Flow Capacities scfm (nm^3/h)] @ 100 psig (kg/cm^2)[3]

	INLET TEMP		FLOW	OUTLET PRESSURE DEW POINT				
				40°F	20°F	0°F	-20°F	-40°F
	°F	°C		4.4°C	-6.7°C	-17.8°C	-29°C	-40°C
RHD016SS	40	4.4	In		27.7	17.1	13.1	10.9
			Out		24.3	13.7	9.7	7.5
	60	16	In	28.8	18.7	14.1	11.7	10.1
			Out	25.4	15.3	10.7	8.3	6.7
	80	27	In	20.4	15.1	12.4	10.7	9.5
			Out	17	11.8	9	7.3	6.1
	100	38	In	16.3	13.3	11.3	10	9
			Out	12.9	9.9	7.9	6.6	5.6
	120	49	In	14.2	12.1	10.6	9.5	8.6
			Out	10.8	8.7	7.2	6.1	5.2
RHD026SS	40	4.4	In		47	29	22.2	18.5
			Out		41.3	23.3	16.5	12.8
	60	16	In	48.9	31.7	23.9	19.8	17.1
			Out	43.2	26	18.2	14.1	11.4
	80	27	In	34.6	25.8	21	18.1	16.1
			Out	28.9	20.1	15.3	12.4	10.4
	100	38	In	27.6	22.5	19.1	16.9	15.2
			Out	21.9	16.8	13.4	11.2	9.5
	120	49	In	24.1	20.5	17.9	16.1	14.5
			Out	18.4	14.8	12.2	10.4	8.8
RHD052SS	40	4.4	In		94	58	44.4	37
			Out		82.6	48.6	33	25.6
	60	16	In	97.8	63.4	47.8	39.6	34.2
			Out	86.4	52	36.4	28.2	22.8
	80	27	In	69.2	51.6	42	36	32.2
			Out	57.8	40.2	30.6	24.8	20.8
	100	38	In	55.2	45	38.2	33.8	30.4
			Out	43.8	33.6	26.8	22.4	19
	120	49	In	48.2	41	35.8	32.2	29
			Out	36.8	29.6	24.4	20.8	17.6

1 Use inlet air temperature if the air entering the dryer has not been dried upstream (air is saturated). If air has been dried. (e.g. in a refrigerated dryer) use the dew point temperature of the inlet air.

2 Models HMD20-7, 8, and 9 for higher flows are available. Model HMD20-7 is three HMD20-5s piped in parallel. Multiply flows found in HMD20-5 table by 3 to determine capacity.
Model HMD20-8 is two HMD20-6s, and HMD20-9 is three HMD20-6s piped in parallel. Multiply flows in HMD20-6 table by 2 or 3 to find flow capacity.

3 Flow capacities at 100 psig (7 kg/cm^2). For capacities at other pressures consult factory. Capacities are established in accordance with CAGI (Compressed Air and Gas Institute) Standard ADF 700: Membrane Compressed Air Dryers - Methods for Testing and Rating.

HMD Series Product Specifications

MODEL	DIMENSIONS				IN/OUT [2] CONN.		WEIGHT		MAX. WORKING PRESSURE	MAX. OPERATING TEMP.
	L		W							
	IN	MM	IN	MM	IN	MM	LBS	KG		
HMD20-2	26.4	671	2.5	63.5	0.4	10.2	1.8	0.8	175 psig (12.3 kg/cm²)	150°F (66°C)
HMD20-3	15.3	389	4.2	106.7	0.4	10.2	4.9	2.2		
HMD20-4	26.9	683	4.2	106.7	0.5	12.7	6.9	3.1		
HMD20-5	41	1,041	4.2	106.7	0.5	12.7	9.5	4.3		
HMD20-6	41.1	1,044	5.3	134.6	0.8	20.3	14.6	6.6		
HMD20-7[1]	52	1,321	19.3	490	1	25.4	30	13.6		
HMD20-8[1]	52	1,321	12	305	1	25.4	30.7	13.9		
HMD20-9[1]	52	1,321	21.5	546	1	25.4	45	20.4		
RHD016SS	26.9	683	4.2	106.7	0.5	12.7	6.9	3.1		
RHD026SS	41	1,041	4.2	106.7	0.5	12.7	9.5	4.3		
RHD052SS	41.1	1,044	5.3	134.6	0.8	20.3	14.6	6.6		

1 Models HMD20-7, 8, and 9 for higher flows are available.
Model HMD20-7 is three HMD20-5s piped in parallel.
Multiply flows found in HMD20-5 table by 3 to determine capacity.
2 Specify NPT or BSP

Materials Of Construction

MODELS	END CAPS	SHELL	INLET/OUTLET FITTINGS
HMD20-1 through HMD20-5	Nylon	CPVC	Brass
HMD20-6	Aluminum	CPVC	Aluminum*
HMD20-4SS through HMD20-6SS	304SS	304SS	304SS*