

Compressed Air Dryer

Membrane Dryer



Simplicity in drying

Kaeser Modular Membrane (KMM) dryers provide a simple and reliable way to reduce maintenance of air tools, motors, and cylinders. KMMs keep moisture from ruining paint jobs and clogging sandblasters. They also eliminate fouling of pneumatic instruments, valves, and controls. KMMs dry compressed air to dew points as low as -40°F. The dryer provides dew point suppression so a margin of dryness is always maintained between the inlet and outlet air. The KMM can be sized for the worst

conditions, such as high inlet temperatures during the summer or low dew point requirements in the winter. Ideal for paint spray booths, instrument air, medical and packaging equipment.

Operation

Compressed air, saturated with water vapor, flows through a bundle of tubular membranes. The membranes allow water vapor to pass but not air. At the top of the bundle near the air discharge, a fraction of the dry compressed air is directed down, sweeping the water vapor out of

the bottom of the dryer. For larger quantity orders the KMM can be tailored to match specific feed air and dew point requirements.

Easy installation

With the new modular design of the KMM, installation is easy. The KMM is lightweight, so no support is needed other than the piping. The KMM requires no electricity and because water is removed as a vapor, no condensate drain is needed.

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Standard Features:

- Space-saving modular design mates easily to prefilters and afterfilters
- Unique outside-to-inside permeation increases surface area for more efficient drying
- Replaceable membrane bundles combine the convenience of a filter with the reliability of a dryer
- Rugged welded aluminum housings are lightweight and robust
- Epoxy powder coating offers protection in harsh environments

Optional equipment:

- Pre-filter (shown at left)
- Digital filter monitor (shown at left).

Easy maintenance

There are no moving parts to maintain, repair, or wear out, and the KMM has no consumables or chemicals to replace. The only maintenance required is replacing the filter elements or membrane bundles.

Sizing

Table 1 shows flows for each model at selected outlet pressure dew points as well as various inlet temperatures. All data is based on 100 psig inlet pressure. For flows at other pressures please consult your Kaeser representative.

Recommended filtration

The KMM connects to Kaeser prefilters quickly and easily. Connection to other types of filters is also simple. For normal applications, a KOR prefilter is recommended to protect the membrane from oil aerosols. For highly contaminated systems or applications requiring the highest level of air purity, a KPF and a KOX fine filter are recommended as pre-filters. The filters include auto drains and differential pressure indicators to signal filter element replacement. The optional Kaeser Filter Monitor can also be used.

Do not use for breathing air.

Specifications are subject to change without notice.

Table 1: Flow (scfm) @ 100 psig

	Inlet Temperature (1)	Outlet Dew Point				
		40°F	20°F	-20°F	-40°F	
KMM 1-3	40°F	Inlet	—	3.1	0.9	0.6
		Outlet	—	2.9	0.6	0.4
	60°F	Inlet	3.7	1.4	0.7	0.5
		Outlet	3.5	1.2	0.5	0.3
	100°F	Inlet	1.2	0.9	0.5	0.4
		Outlet	0.9	0.7	0.3	0.2
KMM 2-3	40°F	Inlet	—	8.3	2.8	2.2
		Outlet	—	7.7	2.2	1.6
	60°F	Inlet	9.7	4.2	2.4	1.9
		Outlet	9.2	3.6	1.8	1.3
	100°F	Inlet	3.6	2.8	1.9	1.5
		Outlet	3.0	2.2	1.3	0.9
KMM 3-4	40°F	Inlet	—	20.3	6.1	4.7
		Outlet	—	18.9	4.6	3.3
	60°F	Inlet	24.0	9.2	5.1	4.1
		Outlet	22.6	7.8	3.7	2.7
	100°F	Inlet	7.8	6.1	4.0	3.3
		Outlet	6.43	4.7	2.6	1.9
KMM 4-4	40°F	Inlet	—	26.7	8.3	6.5
		Outlet	—	24.9	6.5	4.7
	60°F	Inlet	31.5	12.3	7.1	5.7
		Outlet	29.7	10.4	5.3	3.9
	100°F	Inlet	10.5	8.4	5.6	4.7
		Outlet	8.7	6.5	3.8	2.8
KMM 5-6	40°F	Inlet	—	47.6	15.1	11.8
		Outlet	—	44.3	11.8	8.5
	60°F	Inlet	56.1	22.7	12.9	10.3
		Outlet	52.8	19.4	9.6	7.0
	100°F	Inlet	19.4	15.3	10.1	8.3
		Outlet	16.1	12.0	6.8	5.0
KMM 6-6	40°F	Inlet	—	77.6	23.9	18.8
		Outlet	—	72.2	18.6	13.4
	60°F	Inlet	91.5	35.5	20.5	16.5
		Outlet	86.1	30.1	15.1	11.2
	100°F	Inlet	30.4	24.2	16.2	13.4
		Outlet	25.1	18.8	10.9	8.0

3 Year Warranty

The standard one year warranty is extended to three years when the dryer is installed with an optional pre-filter package. To keep the warranty in effect, filter elements must be replaced at six month intervals and the drain mechanism yearly.

	Inlet Temperature (1)	Outlet Dew Point				
		40°F	20°F	-20°F	-40°F	
KMM 7-8	40°F	Inlet	—	147	44.7	34.9
		Outlet	—	137	34.5	24.7
	60°F	Inlet	173	67.4	38.1	30.5
		Outlet	163	56.8	27.9	20.4
	100°F	Inlet	57.2	45.1	30.0	24.6
		Outlet	47.1	35.0	19.8	14.5
KMM 8-16	40°F	Inlet	—	205	68.9	55.1
		Outlet	—	191	54.7	40.9
	60°F	Inlet	242	98.9	59.6	48.8
		Outlet	228	84.8	45.5	34.6
	100°F	Inlet	85.9	69.5	48.0	40.0
		Outlet	71.8	55.3	33.8	25.8
KMM 9-16	40°F	Inlet	—	287	89.6	71.7
		Outlet	—	267	69.7	51.8
	60°F	Inlet	339	129	77.6	63.5
		Outlet	319	109	57.7	43.6
	100°F	Inlet	112	90.4	62.4	52.0
		Outlet	91.8	70.5	42.5	32.2

NOTE: 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. Flow capacities are at 100 psig. Capacities are established in accordance with CAGI Standard ADF 700; Membrane Compressed Air Dryers - Methods for Testing and Rating. Larger capacities, alternate pressures, and dew points consult factory.

Model	Dimensions (in.)		Inlet/Outlet Connection NPT (in.)	Weight (lb.)
	Length	Width		
KMM 1-3	11	8	3/8"	5
KMM 2-3	15	8	3/8"	6
KMM 3-4	19	8	1/2"	7
KMM 4-4	27	8	1/2"	8
KMM 5-6	20	11	3/4"	11
KMM 6-6	27	11	3/4"	14
KMM 7-8	29	12	1"	17
KMM 8-16	35	14	1"	35
KMM 9-16	41	14	1"	40

Maximum Operating Pressure: Membrane Dryer: 200 psig
Maximum Inlet Temperature: 150°F. Dimensions and weights are for reference only.

KAESER COMPRESSORS

Built for a lifetime™

Corporate Headquarters:
P.O. Box 946
Fredericksburg, Virginia 22404
Phone 540-898-5500
Fax 540-898-5520
www.kaeser.com



The Air Systems Specialist

With over 85 years of experience, Kaeser is the air systems specialist. Our extensive 100,000 square foot facility allows us to provide unequalled product availability. With service centers nationwide and our 24-hour emergency parts guarantee, Kaeser customers can rely on the best after-sales support in the industry. Kaeser stands committed to providing the highest quality air system for your specific compressed air needs.