

Compressed Air Dryer

Membrane Dryer with optional Purge Saver



Simplicity in drying

Kaeser Modular Membrane (KMM) dryers provide a simple and reliable way to dry compressed air to dew points as low as -40°F and reduce maintenance costs. KMMs keep moisture from ruining paint jobs, clogging sandblasters, and fouling pneumatic instruments, valves, and controls.

Operation

Compressed air, saturated with water vapor, flows through a bundle of parallel, tube-shaped membranes. As the compressed air passes along the length of

the bundle, water vapor passes through the membrane, dehydrating the compressed air. The separated water vapor is then purged from the membrane bundle housing with a stream of the dried air and exits to atmosphere through a port in the bottom of the housing.

Automatic Purge Saver control

The Kaeser automatic Purge Saver (PS) valve prevents the unnecessary loss of valuable compressed air. The PS valve is strategically located to automatically stop the flow of purge air while maintaining pressure on the membrane tubes

Standard Features:

- Space-saving modular design mates easily to prefilters
- No after-filter required
- Inside-to-outside premeation allows tight control of purge flow rate
- Replaceable membrane bundles combine convenience and simplicity
- Welded aluminum housings are lightweight and rugged
- Powder coating inside and out for excellent corrosion resistance

Optional equipment:

- Purge Saver (shown at left)
- Pre-filter packages
 - Single pre-filter
 - Dual pre-filters (shown at left)
- Digital filter monitor

and keeping the bundle housing at atmospheric pressure. This design not only saves energy and purge air, it also extends the life of the membrane bundle by preventing the excessive flexing of the membrane material that results from pressurizing and depressurizing the dryer. The Purge Saver valve can be actuated by an external signal, such as the air compressor unload signal or from a device no longer demanding air.

Easy installation

With the new modular design of the KMM, installation is easy. The KMM is lightweight, so no support is needed

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other than the piping. The KMM requires no electricity (unless it has the Purge Saver) and because water is removed as a vapor, no condensate drain is needed.

Easy maintenance

With regular service of pre-filters and drains, KMM dryers provide years of reliable service.

Selecting the proper dryer

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 digital Kaeser Filter Monitor can also be used.

Specifications are subject to change without notice.

Table 1: Rated Capacity (scfm) @ 100 psig

		Inlet Temperature (1)	Outlet Dew Point			
			40°F	20°F	-20°F	-40°F
KMM 1-3	40°F	Inlet	—	—	1.07	0.81
		Outlet	—	—	0.88	0.62
	60°F	Inlet	—	1.62	0.90	0.69
		Outlet	—	1.43	0.71	0.50
	100°F	Inlet	1.39	1.08	0.67	0.53
		Outlet	1.20	0.89	0.48	0.34
KMM 2-3	40°F	Inlet	—	—	3.56	2.75
		Outlet	—	—	2.96	2.15
	60°F	Inlet	—	5.24	3.02	2.38
		Outlet	—	4.64	2.42	1.78
	100°F	Inlet	4.55	3.60	2.34	1.88
		Outlet	3.95	3.00	1.74	1.28
KMM 3-4	40°F	Inlet	—	—	7.21	5.38
		Outlet	—	—	5.89	4.06
	60°F	Inlet	—	11.09	5.98	4.57
		Outlet	—	9.77	4.66	3.25
	100°F	Inlet	9.47	7.29	4.47	3.50
		Outlet	8.15	5.97	3.15	2.18
KMM 4-4	40°F	Inlet	—	—	10.83	8.46
		Outlet	—	—	9.05	6.68
	60°F	Inlet	—	15.72	9.24	7.36
		Outlet	—	13.94	7.46	5.58
	100°F	Inlet	13.69	10.94	7.22	5.87
		Outlet	11.91	9.16	5.44	4.09
KMM 5-6	40°F	Inlet	—	—	18.4	13.3
		Outlet	—	—	15.1	10.0
	60°F	Inlet	—	28.4	15.0	11.0
		Outlet	—	25.1	11.7	7.7
	100°F	Inlet	24.3	18.6	10.7	7.9
		Outlet	21.0	15.3	7.4	4.6
KMM 6-6	40°F	Inlet	—	—	32.4	25.3
		Outlet	—	—	27.3	20.2
	60°F	Inlet	—	46.2	27.7	21.9
		Outlet	—	41.1	22.6	16.8
	100°F	Inlet	40.5	32.7	21.5	17.1
		Outlet	35.4	27.6	16.4	12.0

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	—	—	48.6	33.7
		Outlet	—	—	39.0	24.1
	60°F	Inlet	—	79.2	38.6	27.1
		Outlet	—	69.6	29.0	17.5
	100°F	Inlet	66.6	49.3	26.2	18.5
		Outlet	57.0	39.7	16.6	8.9
KMM 8-16	40°F	Inlet	—	—	79.8	57.6
		Outlet	—	—	65.1	42.9
	60°F	Inlet	—	124.8	65.0	47.4
		Outlet	—	110.1	50.3	32.7
	100°F	Inlet	106.3	80.8	46.1	33.8
		Outlet	91.6	66.1	31.4	19.1
KMM 9-16	40°F	Inlet	—	—	104.8	76.6
		Outlet	—	—	86.0	57.8
	60°F	Inlet	—	161.4	86.0	63.7
		Outlet	—	142.6	67.2	44.9
	100°F	Inlet	138.1	106.1	62.0	46.2
		Outlet	119.3	87.3	43.2	27.4

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: 200 psig
Minimum Operating Pressure: 60 psig
Maximum Inlet Temperature: 150°F
Dimensions and weights are for reference only



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