

## 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 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

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

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### Standard Features:

- Space-saving modular design mates easily to prefilters
- No after-filter required
- Inside-to-outside permeation 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)

# Technical Specifications

Table 1: Rated Capacity (scfm) @ 100 psig

Model	Inlet Temp (°F)	Outlet Dew Point (°F)				
		40	20	-20	-40	
KMM 1-3	40	Inlet	—	—	1.07	0.81
		Outlet	—	—	0.88	0.62
	60	Inlet	—	1.62	0.90	0.69
		Outlet	—	1.43	0.71	0.50
	100	Inlet	1.39	1.08	0.67	0.53
		Outlet	1.20	0.89	0.48	0.34
KMM 2-3	40	Inlet	—	—	3.56	2.75
		Outlet	—	—	2.96	2.15
	60	Inlet	—	5.24	3.02	2.38
		Outlet	—	4.64	2.42	1.78
	100	Inlet	4.55	3.60	2.34	1.88
		Outlet	3.95	3.00	1.74	1.28
KMM 3-4	40	Inlet	—	—	7.21	5.38
		Outlet	—	—	5.89	4.06
	60	Inlet	—	11.09	5.98	4.57
		Outlet	—	9.77	4.66	3.25
	100	Inlet	9.47	7.29	4.47	3.50
		Outlet	8.15	5.97	3.15	2.18
KMM 4-4	40	Inlet	—	—	10.83	8.46
		Outlet	—	—	9.05	6.68
	60	Inlet	—	15.72	9.24	7.36
		Outlet	—	13.94	7.46	5.58
	100	Inlet	13.69	10.94	7.22	5.87
		Outlet	11.91	9.16	5.44	4.09
KMM 5-6	40	Inlet	—	—	18.4	13.3
		Outlet	—	—	15.1	10.0
	60	Inlet	—	28.4	15.0	11.0
		Outlet	—	25.1	11.7	7.7
	100	Inlet	24.3	18.6	10.7	7.9
		Outlet	21.0	15.3	7.4	4.6
KMM 6-6	40	Inlet	—	—	32.4	25.3
		Outlet	—	—	27.3	20.2
	60	Inlet	—	46.2	27.7	21.9
		Outlet	—	41.1	22.6	16.8
	100	Inlet	40.5	32.7	21.5	17.1
		Outlet	35.4	27.6	16.4	12.0
KMM 7-8	40	Inlet	—	—	48.6	33.7
		Outlet	—	—	39.0	24.1
	60	Inlet	—	79.2	38.6	27.1
		Outlet	—	69.6	29.0	17.5
	100	Inlet	66.6	49.3	26.2	18.5
		Outlet	57.0	39.7	16.6	8.9

Specifications are subject to change without notice.

Model	Inlet Temp (°F)	Outlet Dew Point (°F)				
		40	20	-20	-40	
KMM 8-16	40	Inlet	—	—	79.8	57.6
		Outlet	—	—	65.1	42.9
	60	Inlet	—	124.8	65.0	47.4
		Outlet	—	110.1	50.3	32.7
	100	Inlet	106.3	80.8	46.1	33.8
		Outlet	91.6	66.1	31.4	19.1
KMM 9-16	40	Inlet	—	—	104.8	76.6
		Outlet	—	—	86.0	57.8
	60	Inlet	—	161.4	86.0	63.7
		Outlet	—	142.6	67.2	44.9
	100	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 L x W (in.)	Inlet/Outlet Conn. NPT (in.)	Weight (lb.)
KMM 1-3	11 x 8	3/8	5
KMM 2-3	15 x 8		6
KMM 3-4	19 x 8	1/2	7
KMM 4-4	27 x 8		8
KMM 5-6	20 x 11	3/4	11
KMM 6-6	27 x 11		14
KMM 7-8	29 x 12	1	17
KMM 8-16	35 x 14		35
KMM 9-16	41 x 14		40

**Maximum Operating Pressure:** 200 psig

**Minimum Operating Pressure:** 60 psig

**Maximum Inlet Temperature:** 150°F

*Dimensions and weights are for reference only*

### 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.

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 coalescing prefilter is required to protect the membrane from oil aerosols. For highly contaminated systems or applications requiring the highest level of air purity, a particulate and extra fine oil coalescing filter are recommended as prefilters. The filters include auto drains and differential pressure indicators to signal filter element replacement.



**Built for a lifetime.**



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