

## Compressed Air Dryer

# Wall Mounted Desiccant Dryer



### Consistently dry air

For small applications that need very dry air, Kaeser offers a wall mounted version of its heatless adsorptive desiccant dryer. KADW dryers are based on a “counterflow” design in which towers dry air as it flows up and purge air on the way down. The driest desiccant is always at the top of the bed so air leaving the dryer is always at the specified dew point.

The towers are designed to limit the air velocity. This prevents bed fluidization, desiccant dusting, and ensures proper

contact time between the air and desiccant.

### Precise dew points

All KADW's include a highly accurate solid-state timer. The timer is set for a standard 4 minute cycle to maintain the required dew point.

Large desiccant beds mean sufficient water vapor removal; to yield -40°F pressure dew point or a -100°F pressure dew point.

### Easy installation

KADW series dryers are furnished in ready-to-mount cabinets. They arrive completely assembled, piped, wired, and fully charged with desiccant. Simply make the utility connections and the air dryer is ready for operation.

All units are designed for easy connection to the recommended Kaeser oil removal prefilter and the particulate afterfilter.

### Capacity

- 7 to 50 scfm @ 100 psig

### Features

- Convenient wall-mounting
- Consistent dew points
- Regenerative desiccant
- Solid state timer
- Completely assembled, piped, and wired for installation
- 6-foot cord set

### Recommended Accessories

- Coalescing oil removal filter as a prefilter (shown at left)
- Particulate filter as an afterfilter (shown at left)

## Flow capacities

**Maximum inlet flow capacities at various pressures:** To determine maximum inlet flow at air inlet pressures other than 100 psig, multiply the inlet flow from Table 1 by the multiplier from Table 2 that corresponds to system pressure at inlet of dryer.

**Purge flow at various capacities:** To determine average or maximum purge flow at inlet pressures other than 100 psig, multiply purge flow (Table 1), by the correction factor (Table 3) that corresponds to system pressure at inlet of dryer.

**Outlet flow capacities:** To determine outlet flow capacity, subtract purge flow from inlet flow.

## Optional equipment: Filters

Filters provide the additional protection from contaminants that degrade desiccant performance. Filters remove solid particles, oil aerosols, moisture, and oil vapors. Adding filters to the compressed air system will save considerable costs in process downtime, cleaning tools, and repairing equipment.

*Specifications are subject to change without notice.*

# Technical Specifications

**Table 1: Kaeser Wall Mounted Desiccant Dryers**

Model	Outlet Dew Point (°F)	Inlet Flow (1) (scfm)	Purge Flow (2) (scfm)		Downstream Air Available (scfm)		Dimensions W x D x H (in.)	Inlet / Outlet Conn. (in.)	Wt. (lb.)								
			Avg.	Max.	Avg.	Max.											
KADW 7A	-40	7.3	1.5	2.0	5.8	5.3	19 <sup>3</sup> / <sub>8</sub> x 6 <sup>11</sup> / <sub>16</sub> x 30 <sup>1</sup> / <sub>2</sub>	1/2 NPT(F)	55								
	-100	5.6			4.1	3.6											
KADW 13A	-40	13	2.7	3.7	10.3	9.3			26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 31 <sup>5</sup> / <sub>8</sub>	1/2 NPT(F)	60						
	-100	10			7.3	6.3											
KADW 20A	-40	20	4.2	5.5	15.8	14.5					26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 31 <sup>5</sup> / <sub>8</sub>	1/2 NPT(F)	71				
	-100	16			11.8	10.5											
KADW 25A	-40	25	5.1	6.8	19.9	18.2							26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 43 <sup>3</sup> / <sub>8</sub>	1/2 NPT(F)	93		
	-100	20			14.9	13.2											
KADW 30A	-40	30	6.2	8.2	23.8	21.8									26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 43 <sup>3</sup> / <sub>8</sub>	1/2 NPT(F)	93
	-100	24			17.8	15.8											
KADW 35A	-40	35	7.2	9.6	27.8	25.4	26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 43 <sup>3</sup> / <sub>8</sub>	1/2 NPT(F)									99
	-100	28			20.8	18.4											
KADW 50A	-40	50	10.2	13.6	39.8	36.4			26 <sup>1</sup> / <sub>4</sub> x 8 <sup>9</sup> / <sub>16</sub> x 43 <sup>3</sup> / <sub>8</sub>	1/2 NPT(F)							132
	-100	40			29.8	26.4											

**Max/Min working pressure:** 150/50 psig. **Electrical Power:** 115V/1ph/60 Hz. **Enclosure:** NEMA 1 (standard); NEMA 4 (optional). **Pressure drop:** <5 psi. **Ambient temperature range:** 40 to 120°F.

**Note 1:** Inlet flows are established in accordance with CAGI (Compressed Air and Gas Institute) standard ADF-200, Dual Stage Regenerative Desiccant Compressed Air Dryers - Methods for Testing and Rating. Conditions for rating dryers are: Inlet pressure - 100 psig; Inlet temperature - saturated at 100°F.

**Note 2:** Average Purge Flow is the total amount of air used to purge and repressurize off-stream towers averaged over the cycle time. Maximum purge flow is the flow rate through the off-stream tower during that portion of the cycle the purge/repressurization valve is open.

**Table 2: Capacity Correction Factor for Various Inlet Pressures**

Inlet Pressure (psig)	50	60	70	80	90	100	110	115	120	125	130	140	150
Multiplier	0.31	0.42	0.54	0.68	0.83	1.0	1.09	1.13	1.17	1.22	1.26	1.35	1.44

**Table 3: Purge Flow Correction Factor for Various Inlet Pressures**

Inlet Pressure (psig)	50	60	70	80	90	100	110	115	120	125	130	140	150
Multiplier	0.55	0.65	0.73	0.82	0.91	1.0	1.09	1.13	1.17	1.22	1.26	1.35	1.44



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