



Heatless Desiccant Dryers

KAD Series

40 to 5400 cfm

kaeser.com

Heatless desiccant dryer (KAD)

KADs produce pressure dew points as low as -94°F at rated conditions (see Dew Point Options on page 4).

Sizes: 40 – 5400 scfm

Controls and instrumentation

- Tower pressure gauges
- Tower status
- Switching failure alarm*
- Purge flow indicator
- NEMA 4X electrical enclosure
- Ethernet connection - KAD EC3

*Not available on KAD E

Separate top fill and bottom drain ports

- Easy desiccant replacement and removal

ASME stamped pressure vessels

- Fabricated per Section VIII of the boiler and pressure vessel code
- ASME safety relief valve

Standard purge pressure adjusting valve

- Offers convenient purge rate adjustment

Inlet and outlet shuttle valves

- Nylon shuttle
- Tested to over 500,000 cycles
- Corrosion resistant aluminum housing
- Single moving part has very long life
- No maintenance
- No check valves

Standard moisture indicator

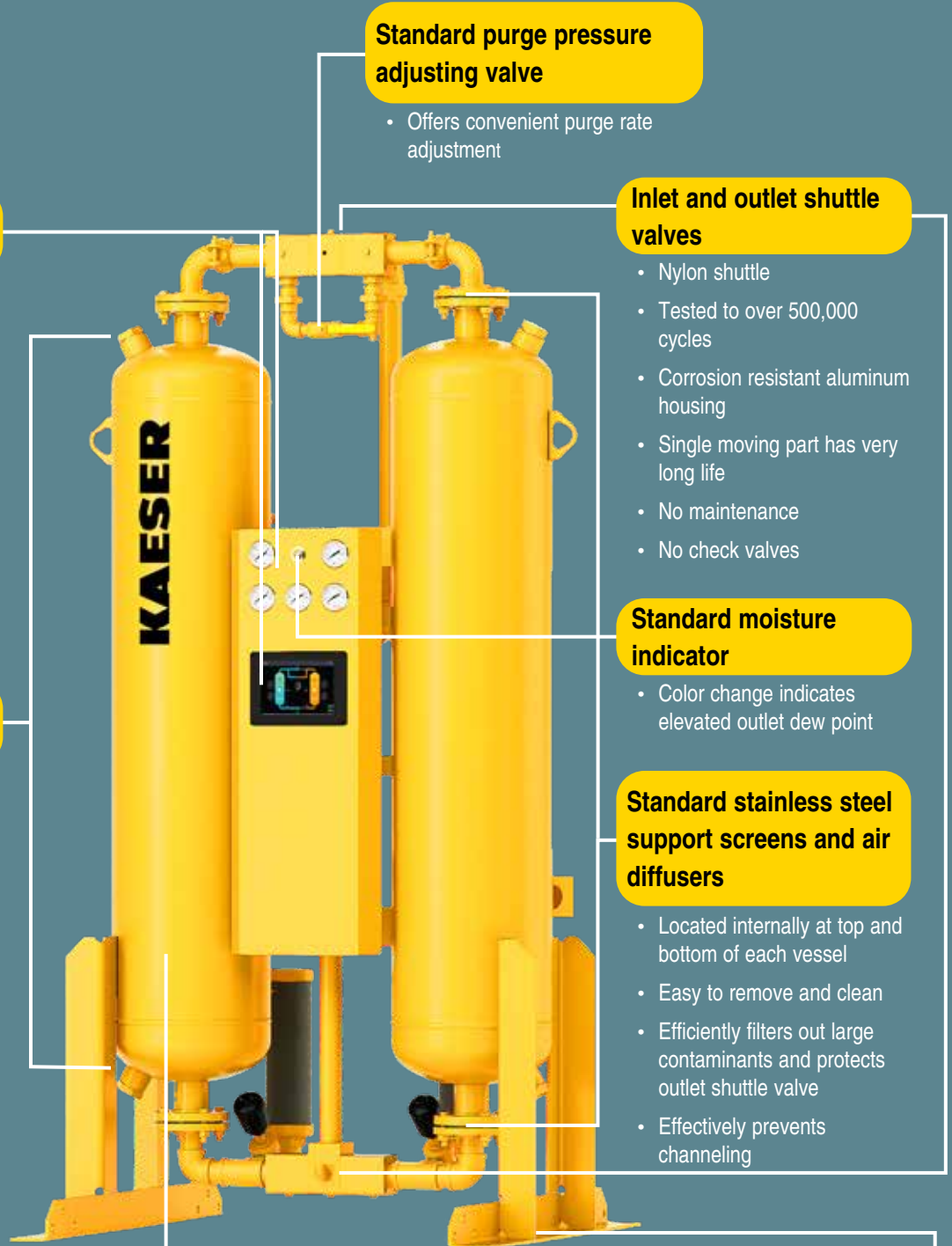
- Color change indicates elevated outlet dew point

Standard stainless steel support screens and air diffusers

- Located internally at top and bottom of each vessel
- Easy to remove and clean
- Efficiently filters out large contaminants and protects outlet shuttle valve
- Effectively prevents channeling

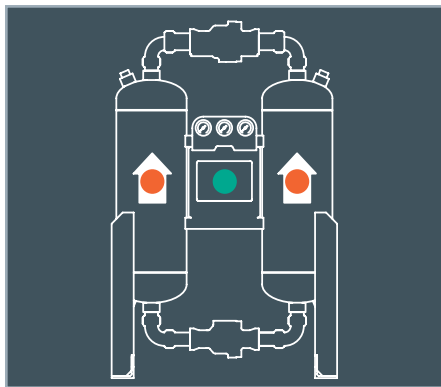
Structural steel frame complete with floor stand for easy installation

- Lifting lugs for easy handling
- Optional factory mounting of pre- and after-filters



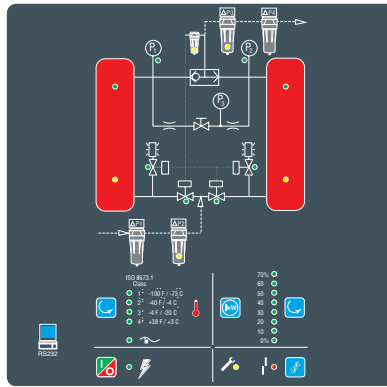
Controls and instrumentation

Heatless desiccant dryers



Basic timer control (KAD E)

The Basic Timer Control is a reliable fixed cycle timer with LED's indicating which tower is drying. This controller maintains a fixed 10-minute cycle delivering an ISO Class 2 pressure dew point (-40°F). Choose this controller when air demand is uniform and closely matches dryer capacity.



Standard control (KAD)

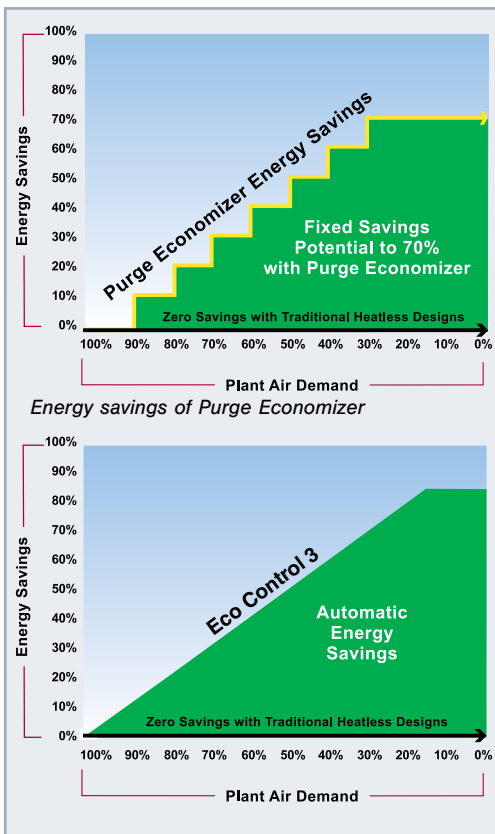
The standard controller, with process flow schematic and LED's, makes status checks of control sequence, valves, and filters simple and allows the user to program reminders for routine maintenance intervals. A diagnostic mode steps through the dryer's operational sequence to verify proper function and performance. The display clearly notifies the user if a malfunction occurs.



Eco Control 3 (KAD EC3)

To precisely and automatically match purge air consumption to a changing load, KAESER offers the Eco Control 3. It has the same features as the Standard Control (except the Purge Economizer Switches), plus the Eco Control 3 monitors temperature changes within the desiccant bed when the dryer is operating at less than its full capacity and keeps the towers on-line until the full drying capacity is reached. This reduces the number of purge cycles and ensures that only the necessary volume of purge air is consumed.

The KAD EC3 controller uses Modbus TDP/IP communication via Ethernet ports. Dryer operating status is displayed on a 7" LCD, capacitive color touchscreen. Controller is housed in a NEMA 4X, IP66 rated electrical enclosure.



Heatless desiccant dryer (KAD) (Table 1)

All Models	Inlet Flow @ 100 psig (scfm)	Purge Rate @ 100 psig (scfm)		Outlet Air Flow Rate (scfm)		Power Supply	Dimensions* W x D x H (inches)	Inlet and Outlet Connection* (inches)	Wt.* (lb.)	Filter Package Capacity (scfm)	Total Replacement Desiccant (lb.)
		Avg	Max	Avg	Min						
KAD 40	40	5.8	7	34.2	33.0	90-305 V 1 Ph 50 or 60 Hz	31 x 32 x 49	1 NPT	365	55	52
KAD 60	60	8.6	10.5	51.4	49.5		31 x 32 x 64		445	75	80
KAD 90	90	13	15.8	77.0	74.3		31 x 32 x 81		575	90	110
KAD 115	115	16.6	20.1	98.4	94.9		42 x 38 x 57		685	160	210
KAD 165	165	23.8	28.9	141	136			685	290		
KAD 260	260	37.4	45.5	223	215		47 x 38 x 75	2 NPT	1010	290	318
KAD 370	370	53.3	64.8	317	305		55 x 38 x 65		1215	390	458
KAD 450	450	64.8	78.8	385	371		55 x 38 x 73		1350	500	542
KAD 590	590	85	103	505	487		49 x 48 x 103		1473	625	710
KAD 750	750	108	131	642	619		50 x 48 x 107		2134	1250	910
KAD 930	930	134	163	796	767		55 x 56 x 112		2414	1250	1180
KAD 1130	1130	163	198	967	932		59 x 56 x 115	3 FLG	2875	1250	1420
KAD 1350	1350	194	236	1156	1114		60 x 56 x 120		3722	1875	1846
KAD 1550	1550	223	271	1327	1279		66 x 56 x 116	4 FLG	4167	1875	2064
KAD 2100	2100	302	368	1798	1733		72 x 56 x 119		4417	2500	2520
KAD 3000	3000	432	525	2568	2475		76 x 62 x 125	6 FLG	9010	3125	3734
KAD 4100	4100	590	718	3510	3383		85 x 62 x 124		9900	5000	5398
KAD 5400	5400	778	945	4622	4455		96 x 66 x 124	12,000	6875	7200	

Note 1: KAD dryer inlet flow capacities are established in accordance with ISO 7183 Option A2: Inlet air pressure 100 psig, inlet air temperature 100°F, saturated.

Note 2: The purge flow rate of any pressure swing (heatless) desiccant dryer is not constant throughout the purge cycle. The purge cycle consists of a maximum purge flow period when the purge valve is open and a reduced flow period during repressurization. The total air consumption during the purge cycle is the average purge flow and is based on a 10 minute cycle time (-40°F PDP).

Note 3: Maximum working pressure: 150 psig standard; 250 psig optional. Maximum working pressure to 500 psig available for most models. Consult factory.

*Dryer only. See drawing for inlet/outlet connection size for dryer with filter package. Weight is dryer only. Dryer shipping weight appears on drawing. For shipping with a filter package, consult factory.

KAD inlet pressure correction factor (Table 2)

Inlet Pressure (psig)	Multiplier	Inlet Pressure (psig)	Multiplier
60*	0.65	125	1.10
70	0.74	130	1.12
80	0.83	140	1.16
90	0.91	150	1.20
100	1.00	175	1.29
110	1.04	200	1.37
115	1.06	225	1.45
120	1.08	250	1.52

*For operation at pressures lower than 60 psig, please contact factory.

(Table 3)

ISO 8573.1 Class	Dew Point	Cycle Time and Mode	
		Standard	Eco Control 3 Demand Mode*
1	-94°F (-70°C)	4 min. fixed	N/A
2	-40°F (-40°C)	10 min. fixed	Yes
3	-4°F (-20°C)	16 min. fixed	Yes
4	+38°F (+3°C)	24 min. fixed	No

* The Eco Control 3 also offers fixed cycle settings
ISO Class 4 not available



Built for a lifetime.

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