ECOTROC® KTD

KTD-B and KTD-TM Refrigeration Dryers

ECOTROC® KTD

Certified Management System
DIN EN ISO 9001:2000

Reliable, energy-saving and easy to service system for drying compressed air

Why is water so detrimental to the industrial use of compressed air, and where does it come from? Water in a compressed air system leads to corrosion of the pneumatic components, causes malfunctions, washes the lubricant off pneumatic tools etc. The consequences are costly downtimes and loss of production. The intake air drawn in by the compressor contains water vapour, which is how water enters the compressed air network. Due to the compression process and subsequent cooling, the water vapour changes its overall state, condensing to form condensate in the piping system, thereby causing the problems mentioned above. The ECOTROC® KTD-B and KTD-TM refrigeration dryers provide condensate-free and dry compressed air, thereby maintaining the efficiency and reliability of the compressed air system at low operating cost.

ECOTROC® KTD-TM (thermal mass)

In most installations, the demand for compressed air is variable. Conventional refrigeration dryers are very difficult to design for this type of environment, because a dryer that is „too small“ will no longer be able to supply the desired dewpoint during demand peaks or, at the other extreme, an underused dryer will run the risk of freezing or at least of consuming energy unnecessarily. The answer is provided by the **ECOTROC®** KTD-TM with its thermal mass contained in the heat exchanger. This thermal mass stores cold energy, which can then be made available. Only when this stored energy is no longer sufficient to deliver the required pressure dewpoint will the **ECOTROC®** KTD-TM automatically switch itself back on. Consequently, a pressure dewpoint of +3°C, conforming to Class 4 of ISO Standard 8573-1, is guaranteed for all types of application. A digital display provides constant information on the condition of the compressed air. KTD-TM are Bureau VERITAS certified.

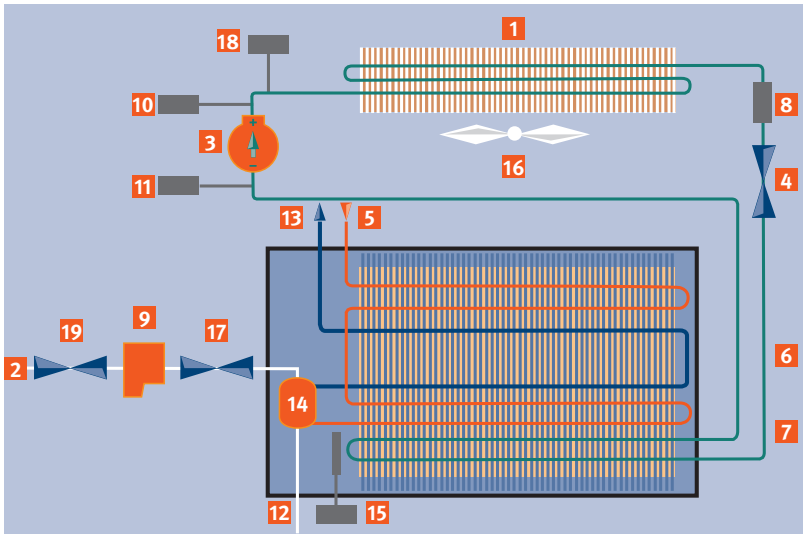
ECOTROC KTD-B

The **ECOTROC®** KTD-B refrigeration dryers are of compact construction. The high capacity, durability and reliability of these dryers is ensured by the use of brand-name components. The **ECOTROC®** KTD-B product line stands out by its technology. These dryers use high-efficiency monobloc heat exchangers. The result is an absolutely economical refrigeration dryer that has excellent capacity ratings and that is easy to use and highly reliable over many years.

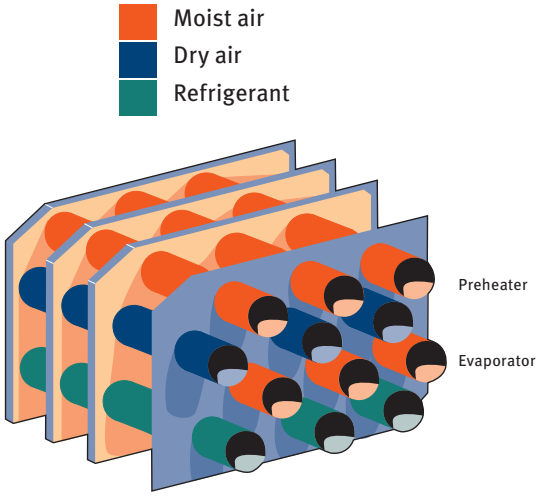
Condensate draining

Both product lines are standard-fitted with automatic condensate drains. Safe and economical condensate draining is therefore guaranteed.

KTD-TM Refrigeration Dryers (thermal mass)



Schematic illustration of the operating principle



Aluminium: Direct transfer (conduction)
Intermediate layer: Indirect transfer (storage)

1	Condenser
2	Condensate outlet
3	Compressor
4	Expansion valve
5	Air inlet
6	Preheater
7	Evaporator
8	Filter dryer
9	Filter
10	High-pressure switch
11	Low-pressure switch
12	Water-separator as option
13	Air outlet
14	Water separator
15	Control sensor
16	Fan
17	Cut-off valve
18	Pressure relief valve
19	Valve with delay

Technical features:

- Frame and housing galvanized and epoxy coated
- Hermetically sealed compressor
- Axial fan
- High-pressure and low-pressure switches
- Microprocessor control system with digital display of the setpoint and dewpoint to control the condensate drain
- Heat exchangers made of copper and aluminium
- Optionally available with fault signal output
- Bureau VERITAS certified

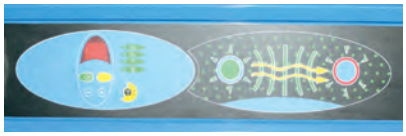


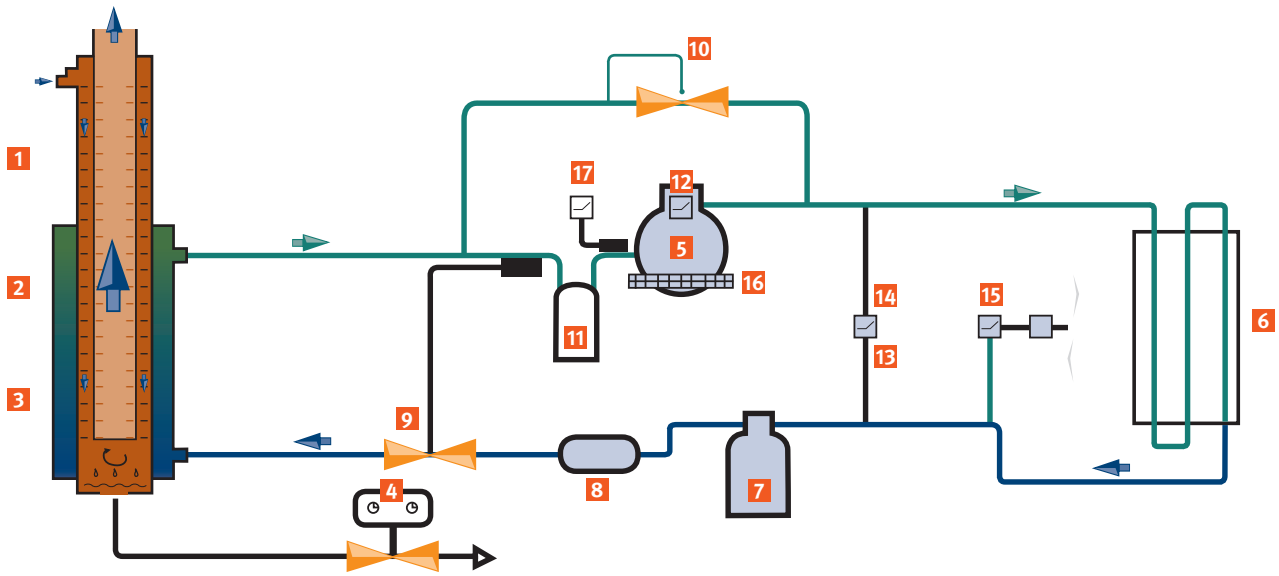
Fig.: Digital display

Type	KTD-TM	30	48	70	100	140	175	210	260	300	420	540	660	780	920	1020
Capacity*	m³/h	30	48	70	100	140	175	210	260	300	420	540	660	780	920	1020
max. operating pressure	bar	16														
max. power consumption	kw	0,3	0,5	0,7	0,75	0,84	1,05	1,1	1,3	1,5	1,85	2,2	2,4	2,8	3,2	3,5
Air connection		¾“			1“			1 ½“			2“			2 ½“		
Refrigerant		R134a			R407c											
Power supply	V/PH/Hz	230 / 1 / 50 – 60														
Width	mm	430	465		575			740			740			740		
Height	mm	430	585		685			945			980			1200		
Length	mm	430	470		540			600			760			1075		
Weight	kg	35	52	55	81	83	86	169	174	178	215	220	226	345	351	360

* based on 1 bar (abs) and 20°C with 7 bar g operating pressure

Higher capacity available on request.

KTD-B Refrigeration Dryers



Type	Capacity*	Dimensions (mm)			Weight	Capacity	Connection
	m³/h	Width	Depth	Height	kg	kw	
KTD-B 15	11	363	502	338	25	0,15	½“
KTD-B 20	16	363	502	338	25	0,17	½“
KTD-B 30	29	363	502	38	25	0,20	½“
KTD-B 50	44	363	502	338	30	0,22	½“
KTD-B 70	68	410	677	475	43	0,20	¾“
KTD-B 100	97	410	677	475	47	0,30	¾“
KTD-B 130	133	410	677	475	50	0,50	¾“
KTD-B 160	155	410	677	475	55	0,60	¾“
KTD-B 220	216	490	700	600	66	0,70	1 ¼“
KTD-B 270	270	490	700	600	75	1,00	1 ¼“
KTD-B 330	324	490	700	600	80	1,20	1 ¼“
KTD-B 430	432	672	555	815	120	1,00	1 ½“
KTD-B 500	504	752	700	1040	150	1,20	2“
KTD-B 630	630	752	700	1040	170	1,20	2“
KTD-B 870	864	752	700	1040	195	1,60	2“
KTD-B 950	936	800	700	1320	250	1,60	3“
KTD-B 1100	1098	800	700	1320	280	2,10	3“
KTD-B 1300	1260	800	700	1320	350	2,10	3“
KTD-B 1500	1440	1000	1120	1325	450	2,70	3“
KTD-B 1700	1710	1000	1120	1325	460	3,40	3“
KTD-B 2100	2088	1000	1120	1325	500	4,30	3“
KTD-B 2300	2304	1000	1120	1325	525	4,70	3“
KTD-B 2700	2664	1120	1120	1325	560	5,20	4“
KTD-B 3200	3132	1120	1120	1325	600	6,10	4“
KTD-B 4100	4068	1120	1120	1800	770	7,20	4“
KTD-B 4700	4680	1120	1120	1800	820	8,40	DN150
KTD-B 5600	5580	1120	1120	1800	940	10,10	DN150
KTD-B 6300	6300	1120	1120	1800	1000	12,10	DN150
KTD-B 7200	7200	1120	1120	1800	1050	14,00	DN150

* based on 1 bar (abs) and 20°C with 7 bar g operating pressure

1	Air-air economizer
2	Air-refrigerant heat exchanger
3	Cyclone separator
4	Condensate drain
5	Compressor
6	Air-cooled condenser
7	Liquid tank
8	Dehydrator
9	Dewpoint adjusting valve
10	Hot gas bypass valve
11	Liquid separator
12	Thermostatic switch
13	Low pressure safety switch
14	Overpressure safety switch
15	Pressure switch for fan
16	Heater
17	Refrigerant temperature switch

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