

## BOGE DH-2 high-pressure refrigerant dryer

The energy-saving dryer

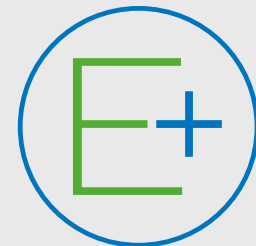
Discover the most efficient way to dry compressed air with the BOGE DH-2 series: these refrigerant compressed air dryers boast particularly low energy consumption levels and extremely low pressure losses. This means the two leading cost factors in compressed air drying are reduced to a minimum – meaning maximum efficiency!

The DH-2 series also proves it is the premium standard when it comes to sustainability – only high-quality, ozone-friendly refrigerants are used. Used in the performance segment up to 2.25 m<sup>3</sup>/min, the refrigerant R 513 A stands out due to its very low global warming potential (GWP: 631) and CO<sub>2</sub> equivalent.



### Constant pressure dew point & minimal pressure losses

Thanks to its generously designed components, the DH-2 series reliably provides a constant pressure dew point and therefore also consistently high compressed air quality. As a result of the extremely low pressure losses, the need to compensate them at the compressor is greatly reduced. This saves – per bar – 6% in energy costs compared with over-compression. The result? The DH-2 series can achieve savings potentials that comparable systems can only dream of.



### Intelligent design & optimal maintenance-friendliness

The side panels are easy to remove to ensure quick access to all components. The simple, intelligent design of the components and refrigerant circuit guarantee easy maintenance. All DH-2 models are fitted with a condensate monitoring system and safety pressure switch. In comparison with existing dryers, the DH-2 series offers safe operation even at high inlet temperatures up to 65°C and ambient temperature of up to 50°C.



### Everything under control with simple operations

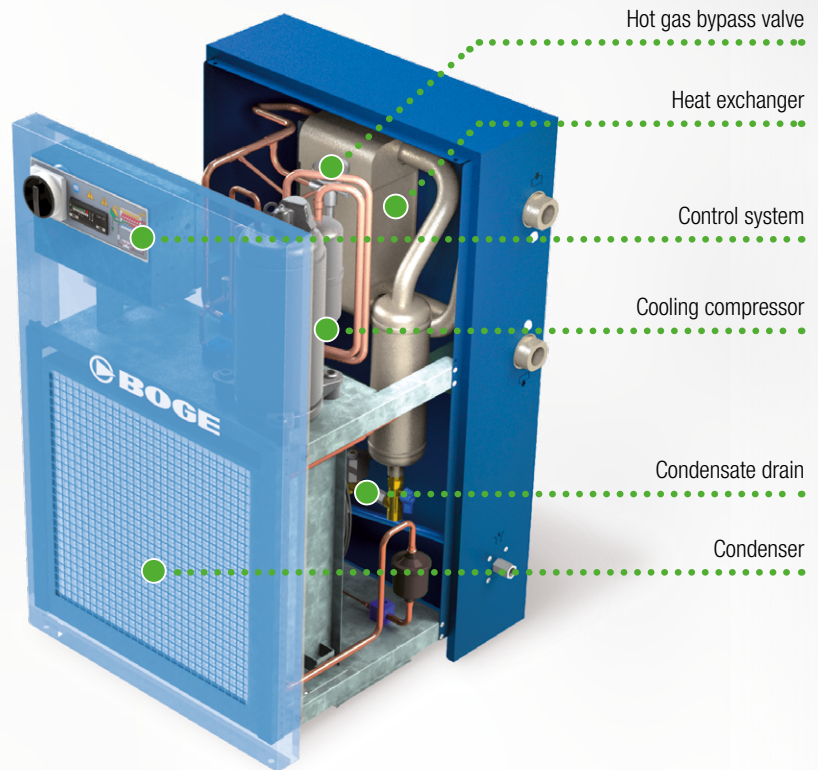
The DH-2 series comes as standard with a modern control system that combines simple operation with improved functionality and safe running. The most important display and operating functions include: a visual dew point display, targeted fan operation with the help of temperature or pressure sensors, alarm display warnings for exceeding the dew point and failure of the temperature sensor, an operating hours meter and timer settings for the condensate drain.



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All the components in the DH-2 series have been designed to ensure maximum efficiency and longevity. The heat exchanger – a combination of air-air heat exchanger and refrigerant-heat exchanger – results in extremely low pressure drops. All pipes, connections and the water separator are made from high-quality stainless steel.

The cooling compressors in the DH 4-2 – DH 22-2 models are fitted with piston compressors, whereas our larger models DH 50-2 up to DH 100-2 are equipped with a highly efficient rotary compressor. With the rotary compressor the refrigerant is condensed between a cylindrical stator and a rotating eccentric core. The result is reduced wear, improved efficiency and lower energy consumption.



BOGE Type	Flow capacity m <sup>3</sup> /min	Max. operating pressure bar	Electr. power consumption* kW		Total installed output kW		Pressure loss bar	Refrigerant	Refrigerant quantity kg	Global warming potential (GWP)	CO <sub>2</sub> equivalent t	Cooling air requirement m <sup>3</sup> /h	Dimensions W x D x H mm	Compressed air connection	Weight kg
			50 Hz	60 Hz	50 Hz	60 Hz									
DH 4-2	0.42	50	0.16	0.21	0.29	0.29	0.25	R513-A	0.17	631	0.11	200	370 x 475 x 515	G 3/8	28
DH 12-2	1.20	50	0.22	0.27	0.33	0.33	0.25	R513-A	0.28	631	0.18	300	370 x 475 x 515	G 3/8	32
DH 22-2	2.25	50	0.46	0.49	0.73	1.00	0.23	R513-A	0.38	631	0.24	300	345 x 740 x 420	G 3/4	39
DH 50-2	5.52	50	0.70	0.95	1.80	1.90	0.20	R407C	0.61	1,774	1.08	450	555 x 885 x 580	G 1	89
DH 75-2	7.50	50	0.84	1.18	1.70	1.85	0.22	R407C	0.70	1,774	1.24	450	555 x 885 x 580	G 1	101
DH 100-2	10.25	50	1.10	1.39	1.90	2.10	0.22	R407C	1.18	1,774	2.09	1,900	555 x 885 x 580	G 1	115

\* Technical data according to ISO 7183:2007 at a pressure dew point of +3°C  
The nominal volumetric flow rate corresponds to dryer suction conditions at +35°C compressed air inlet temperature, 40 bar(a) operating pressure and 25°C ambient temperature.

**Conversion factors** The following conversion factors are to be applied if the operating pressures or temperatures vary.

Ambient temperature	°C	20	<b>25</b>	30	35	40	45	50
Factor	f <sub>1</sub>	-	<b>1.00</b>	0.96	0.90	0.82	0.72	0.60
Inlet temperature	°C	30	<b>35</b>	40	45	50	55	60
Factor	f <sub>2</sub>	1.12	<b>1.00</b>	0.83	0.69	0.59	0.50	0.44
Operating pressure	bar	15	20	25	30	35	<b>40</b>	45
Factor	f <sub>3</sub>	0.57	0.70	0.80	0.88	0.94	<b>1.00</b>	1.05

**Example:** (pressure dew point 3°C)

Volumetric flow rate	m <sup>3</sup> /h	70	Factor	
Ambient temperature (f <sub>1</sub> )	°C	35	=	0.90
Inlet temperature (f <sub>2</sub> )	°C	45	=	0.69
Operating pressure (f <sub>3</sub> )	bar	30	=	0.88

$$= \frac{V}{f_1 \times f_2 \times f_3} = \frac{70}{0.90 \times 0.69 \times 0.88} = 128.1 = \text{DH 22-2}$$