



Quality is standard: DR-series Refrigerent Dryers

Flow capacity: 0.33 – 27.5 m³/min; 12 – 972 cfm



BOGE DR-series refrigerant dryers (20 models)

BOGE Type	Flow capacity			max. pressure	Pressure differential at full load		Electr. power consumption		Electr. power supply		Compressed air connection	Cooling air required		Dimensions			Weight
	DR	m³/min	m³/h		cfm	bar	bar	psig	kW	HP		50 Hz	60 Hz	m³/h	cfm	W x D x H (mm)	
3	0.33	20	12	16	0.06	0.9	0.15	0.20	230	230	G 1/2	380	224	310x450x	450	25	
6	0.58	35	21	16	0.15	2.1	0.16	0.22	230	230	G 1/2	380	224	310x450x	450	26	
8	0.83	50	29	16	0.19	2.7	0.22	0.30	230	230	G 1/2	320	188	310x450x	450	27	
11	1.08	65	38	16	0.22	3.1	0.24	0.33	230	230	G 1/2	320	188	310x450x	450	28	
17	1.75	105	62	16	0.22	3.1	0.35	0.48	230	230	G 1/2	260	153	310x450x	450	31	
21	2.08	125	74	16	0.28	4.0	0.44	0.60	230	230	G 1/2	260	153	310x450x	450	32	
25	2.50	150	88	14	0.28	4.0	0.45	0.61	230	–	G 1	650	383	500x710x	740	59	
30	3.00	180	106	14	0.14	2.0	0.56	0.76	230	–	G 1 1/2	650	383	500x710x	740	60	
50	5.00	300	177	14	0.28	4.0	0.90	1.22	230	–	G 1 1/2	1300	765	500x710x	740	79	
60	6.00	360	212	14	0.16	2.3	0.95	1.29	230	–	G 1 1/2	1300	765	500x710x	740	80	
75	7.50	450	265	14	0.24	3.4	1.08	1.47	230	–	G 1 1/2	900	530	500x710x	740	85	
91	9.17	550	324	14	0.18	2.6	1.25	1.70	400	–	G 2	2700	1589	500x850x	970	90	
108	10.83	650	383	14	0.24	3.4	1.30	1.77	400	–	G 2	2700	1589	500x850x	970	92	
125	12.50	750	442	14	0.19	2.7	1.50	2.04	400	–	G 2	2700	1589	500x850x	970	117	
141	14.16	850	501	14	0.18	2.6	1.77	2.41	400	–	G 2	2700	1589	500x850x	970	121	
180	17.75	1065	627	16	0.30	4.3	2.56	3.48	400	–	G 2 1/2	3100	1825	900x800x1230	176	176	
190	18.50	1110	654	16	0.28	4.0	2.80	3.81	400	–	G 2 1/2	2600	1530	900x800x1230	181	181	
225	22.50	1350	795	16	0.16	2.3	2.95	4.01	400	–	G 2 1/2	2600	1530	900x800x1230	186	186	
235	23.50	1410	830	16	0.19	2.7	3.10	4.22	400	–	G 2 1/2	2600	1530	900x800x1230	191	191	
275	27.50	1650	972	16	0.31	4.4	3.25	4.42	400	–	G 2 1/2	2600	1530	900x800x1230	197	197	

Installation Requirements

For standard dryer designs, the room temperature and ambient temperature must not exceed +50 °C or fall below +2 °C. Sufficient clearance must be provided on all sides of the dryer to ensure good circulation of the cooling air. A suitably dimensioned drainage pipe must be installed to remove condensate.

Explanations / Installation data

Flow capacity is based on the compressor's air intake (+20 °C and 1 bar)

- Compressed air temperature +35 °C**
(max. +65 °C or +70 °C is possible)
- Operating pressure 7 bar**
(max. 14/16 bar is possible)
- Ambient temperature +25 °C**
(max. +50 °C is possible)

Pressure dewpoint +3 °C

(different pressure dewpoints are possible) measured at dryer outlet

Technical data according to DIN ISO 7183.

For higher pressures and temperatures, different pressure dewpoints, and dryer capacities for values differing from DIN ISO 7183, available upon request.

Refrigeration system:

Complete refrigeration system with fully hermetic, refrigerant compressor.

Condensate drainage:

Bekomat

Equipment:

- Operating switch (illuminated)
- Additional mains disconnecting device from DR 91
- Pressure dew point indicator
- Wall mounting possible (DR 3 to DR 21)
- Power plug up to DR 75
- Terminal box from DR 91
- Heat exchanger with demister
- Energy-saving control from model DR 25 onwards (with up to 90% savings)

Options:

On models DR 3 to DR 275:

- Bypass assembly
- Potential-free error message, Status message and Remote On/Off
- Special voltages
- Water-cooling (from model DR 180 onwards)
- Internal frost protection (down to -10 °C) from model DR 25 onwards

Conversion factors

According to DIN ISO 7183, refrigerant dryers are designed for 7 bar operating pressure, an ambient temperature of 25 °C and an inlet temperature of 35 °C. For different operating pressures and temperatures, the following conversion factors should be used.

Ambient/cooling water temperature	(°C)	25	30	35	40	45	50									
Factor	f ₁	1	0.97	0.94	0.87	0.75	0.62									
Inlet temperature	(°C)	30	35	40	45	50	55	60	65	70						
Factor	f ₂	1.28	1	0.88	0.75	0.58	0.48	0.44	0.42	0.40						
Operating pressure	(bar)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	f ₃	0.6	0.7	0.8	0.88	0.94	1	1.04	1.06	1.09	1.1	1.12	1.14	1.15	1.16	1.17

Example (for dewpoint 3°C)

Delivery quantity	m³/h	750	Factor							
Ambient temperature (f ₁)	°C	40	=	0.87						
Inlet temperature (f ₂)	°C	45	=	0.75						
Operating overpressure (f ₃)	bar	13	=	1.14						
				=	$\frac{V}{f_1 \times f_2 \times f_3}$	=	$\frac{750}{0.87 \times 0.75 \times 1.14}$	=	1008	DR 180