

Technical data for the BOGE DX series of Refrigerant Dryers

Flow capacity 30 – 237.5 m³/min., 1059 – 8379 cfm

BOGE Type	Flow capacity			Pressure differential at full load		Electr. power consumption			Electr. power supply V/50 Hz	Com-connection (DIN 2633)	Cooling air pressed air		Cooling water required at		Dimensions required at		Weight W x D x H mm	kg
	m ³ /min	m ³ /h	cfm	bar	psig	100% full load kW	50% part load kW	0% off load kW			aircooling m ³ /h	watercooling cfm	m ³ /h	cfm	mm	mm		
300	30.0	1800	1059	0.12	1.74	3.1	1.7	0.4	400	DN 100	4800	2823	1.0	0.588	900 x 1175 x 1725	412		
330	33.3	2000	1176	0.14	2.03	3.2	1.9	0.4	400	DN 100	4800	2823	1.1	0.647	900 x 1175 x 1725	420		
380	38.3	2300	1353	0.19	2.76	3.4	2.0	0.4	400	DN 100	4800	2823	1.3	0.765	900 x 1175 x 1725	425		
465	46.6	2800	1647	0.24	3.48	3.9	2.3	0.5	400	DN 100	5200	3058	1.6	0.941	900 x 1175 x 1725	435		
580	58.3	3500	2058	0.11	1.60	5.9	3.4	0.7	400	DN 150	9600	5645	2.0	1.176	1200 x 1200 x 1940	610		
715	71.6	4300	2529	0.16	2.32	6.6	3.8	0.8	400	DN 150	9600	5645	2.5	1.470	1200 x 1200 x 1940	630		
915	91.6	5500	3234	0.24	3.48	8.0	4.6	1.0	400	DN 150	10400	6115	2.9	1.710	1200 x 1200 x 1940	670		
1165	116.7	7000	4116	0.19	2.76	9.9	5.6	1.2	400	DN 200	19200	11290	4.0	2.350	2225 x 1200 x 1970	995		
1455	145.8	8750	5145	0.17	2.47	12.4	7.0	1.6	400	DN 200	19200	11290	5.2	3.060	2225 x 1200 x 1970	1165		
1750	175.0	10500	6174	0.22	3.19	14.6	8.2	1.8	400	DN 200	20800	12231	6.4	3.760	2225 x 1200 x 1970	1225		
2080	208.3	12500	7350	0.22	3.19	18.6	10.3	2.3	400	DN 250	23000	13524	7.5	4.410	3345 x 1200 x 2030	1710		
2375	237.5	14250	8379	0.20	2.90	20.2	11.2	2.5	400	DN 250	23000	13524	8.5	5.000	3345 x 1200 x 2030	1940		

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. +70 °C is possible)
- Operating pressure 7 bar (max. 16 bar is possible)
- Ambient temperature +25 °C (max. +50 °C is possible)

Pressure dew point 3°C:

- Technical data according to DIN ISO 7183
Pressure dew point freely adjustable between:
- Normal, summer and automatic mode
 - Pressure dew point display
 - Max. operating pressure up to 16 bar
 - Air inlet temperature up to 70 °C
 - Ambient temperature up to 50 °C

Energy Saving:

- Intelligent load dependent refrigerant dryer regulation using:
- Suction pressure regulation on DX 300 thru DX 465
 - Frequency control on DX 580 thru DX 2375
- Standard energy saving potentials up to 90%

Display:

- Easy to read display of all major operation parameters
- Permanently lit display
- Informative display of energy consumption

Communication:

- Standard CAN Bus interface
- Potential free operating message
- Potential free DTP error message

Standard:

- Environment friendly coolant R134a
- Electronically level controlled condensate drain without pressure loss

Optional:

- By-pass for all DX models
- Water cooled version for DX 300 thru DX 915
- Air cooled version for DX 1165 thru DX 2375
- Frost proof inside installation up to -10 °C

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	0.98	0.93	0.84	0.72	0.56									
Inlet temperature	(°C)	30	35	40	45	50	55	60	65	70						
Factor	f ₂	1.20	1	0.82	0.67	0.55	0.45	0.38	0.34	0.30						
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 volume	m ³ /h	3500	Factor			
Ambient temperature (f ₁)	°C	40	=	0.84	= $\frac{V}{f_1 \times f_2 \times f_3} = \frac{3500}{0.84 \times 0.55 \times 1.09} = 6950$ DX 1165	
Inlet temperature (f ₂)	°C	50	=	0.55		
Operating overpressure (f ₃)	bar	10	=	1.09		

PDF adapted from the official BOGE website: www.boge.net.au