

Desiccant Dryers

DB SERIES

BENEFITS AND FEATURES

- External-heat regeneration system
- No loss of compressed air for regeneration or cooling
- Pressure drop lower than 0.1 bar at full capacity
- Sophisticated PLC control and communication unit
- Parallel drying phase for steady dew point performance
- Low maintenance and long-life desiccant

Design specifications of DB series

- Fully-automatic and continuous cycle control
- Steel support frame with foundation holes
- Pressure vessels according to various industrial designs, codes and regulations
- „Heavy-duty“ blower system
- Easy-access to the heating system and the single-replaceable elements
- Control box with IP54 rating
- Temperature and pressure indicators on both vessels
- Compressor Start-Stop function linked into drying cycle
- Dew point-controlled cycle with indication and dew point setting
- PLC (Siemens S-series) controls offering:
 - Fully automatic cycle
 - Alarm indication for all important dryer functions
 - Memory of alarm history
 - Fast-run cycle test
 - Display of required service intervals
 - Communication port to remote systems (optional)
- Thermal insulation of all hot parts



- Top-to-bottom flow direction avoiding fluidisation of adsorbent bed
- Epoxy painting RAL 5015
- All butterfly valves for lowest pressure drop

Available options according to customer specifications

- Installed filtration package
- By-pass over complete dryer
- Different PLC types
- Outdoor installation
- Pressure dew point -70°C
- Steam regeneration system
- Other options available on request

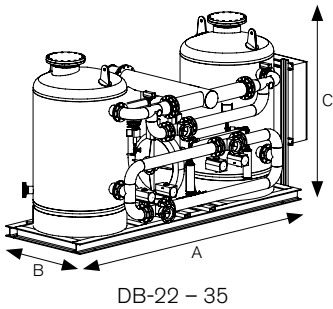
General Data	
Medium	Compressed air
Housing	Steel support frame
Colour	Epoxy-painting RAL 5015 (blue)
Location	Indoors

Design Data	Min.	Nom.	Max.
Operating pressure	5 bar (g)	7 bar (g)	10 bar (g)
Inlet temperature	+5°C	+35°C	+45°C
Ambient temperature	+0°C	+25°C	+35°C@60% RH +30°C@80% RH

Model	Flow Rate*	Connection	Dimensions			Weight	El. connection	Power		Power Consumption**	
			A	B	C			Fan	Heating		
	m³/h		mm			kg	V/Ph/Hz	kW		kW	
DB-22	710	DN 80	2,160	1,590	2,925	1,400	400/3/50	3	9	6.6	
DB-23	985		1,500			13.2			9		
DB-24	1,675		2,000			21.3			15		
DB-25	2,180		2,400			32.4			19.3		
DB-26	2,595	DN 100	2,730	1,890	2,985	2,900	5.5	55.8	29.8		
DB-27	3,385		3,500							66.3	40.6
DB-28	4,620	DN 150	3,640	2,550	3,270	4,700	7.5	80.1	49.1		
DB-29	5,540		5,900							96.9	60.4
DB-30	6,860		6,900							102	74.8
DB-31	8,310	DN 200	4,040	2,425	3,035	10,500	11	114	84.1		
DB-32	9,370		11,500							132	98.1
DB-33	10,885		12,500							144	107.3
DB-34	11,915		13,500							162	121.4
DB-35	13,550		5,625	2,595	3,085	12,500	15	144	107.3		

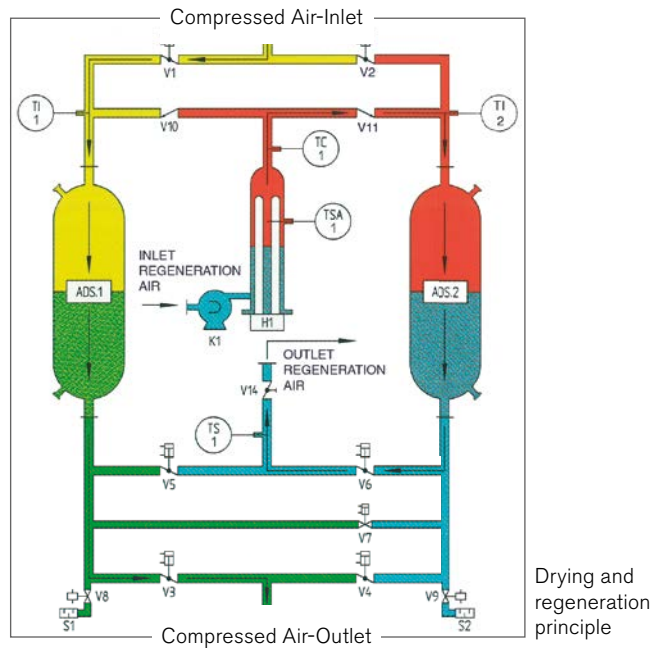
* ISO 7183, based on the intake volume of the compressor at +20°C and 1 bar (a), operating pressure 7 bar (g), inlet temperature +35°C, ambient or cooling water temperature +25°C, pressure dew point -40°C/100% RH

** Power consumption at full load (design conditions) | Technical data and specifications are subject to change without prior notice



Drying and regeneration cycle of the DB dryers

- Drying time is 6 hours minimum.
- The dew point controller will extend until complete saturation is reached
- Depressurisation time lasts 10 minutes
- Heating period is temperature controlled and depends on the load
- Cooling with ambient air during 75 minutes
- Pressurisation time of regenerated adsorber lasts 10 minutes
- Stand-by time until adsorption time of drying adsorber is completed
- Change-over period of parallel drying during 10 minutes



Top-to-bottom flow direction in all cycle phases offers the following advantages

- No desiccant fluidisation at compressor start-up
- The fan is not loaded with warm, humid and dusty regeneration air
- No ambient moisture reaches the outlet of the dryer
- No compressed air is needed to support the cooling process
- Compression heat of the fan is used for regeneration

Correction factors for inlet temperature and operating pressure (F_T)

		Inlet pressure bar (g)					
		5	6	7	8	9	10
Inlet temp. °C	30	0.97	1.13	1.30	1.49	1.62	1.78
	35	0.69	0.85	1.00	1.12	1.25	1.37
	40	0.43*	0.60	0.74	0.85	0.95	1.02

For other operating conditions or special conditions please contact your local sales representative.



SPX Flow Technology Moers GmbH | Konrad-Zuse-Straße 25 | D-47445 Moers

Tel.: +49 (0) 28 41 / 8 19-0 | Fax: +49 (0) 28 41 / 8 19 83 | E-Mail: csc@dehydration.spx.com

www.hankison-europe.com | www.spx.com

SPX reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.spx.com. The green ">" is a trademark of SPX Corporation, Inc.

ISSUED 03/2014 COPYRIGHT © 2014 SPX Corporation

