



Blower Purge Desiccant Compressed Air Dryers

HBP SERIES

HBP SERIES BLOWER PURGE DESICCANT COMPRESSED AIR DRYERS

HBP SERIES DRYERS PRODUCE 100% EFFICIENT AIR SYSTEMS

HBP Series Dryers produce 100% efficient air systems. Since 1948, compressed air users have relied on Hankison to provide compressed air treatment solutions for applications around the world. HBP Series dryers improve air system efficiency by the use of a dedicated axial blower, instead of a percentage of dehydrated purge air, to regenerate the off-line desiccant tower. ISO 8573.1 Class 2 (-40°F/-40°C) dew point performance is guaranteed from 14.1 to 121.76 Nm³/min.



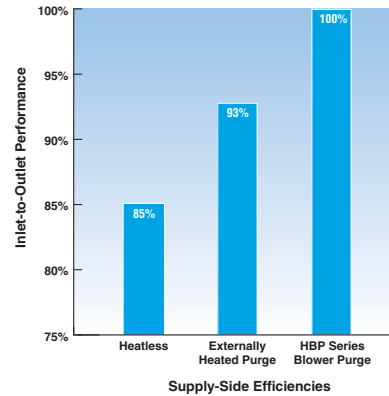
ISO 8573.1 QUALITY CLASSES

Class	Solid Particles			Humidity & Liquid Water		Oil	
	Particle Size, d (micron)			Pressure Dew Point		Total concentration, Aerosol, Liquid, and Vapor	
	0.10 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	°C	°F	mg / m ³	ppm w/w
0	As Specified			As Specified		As Specified	
1	100	1	0	≤ -70	≤ -94	≤ 0.01	≤ 0.008
2	100,000	1,000	10	≤ -40	≤ -40	≤ 0.1	≤ 0.08
3	Not Specified	10,000	500	≤ -20	≤ -4	≤ 1	≤ 0.8
4	Not Specified	Not Specified	1,000	≤ +3	≤ +38	≤ 5	≤ 4
5	Not Specified	Not Specified	20,000	≤ +7	≤ +45		
6				≤ +10	≤ +50		
				Liquid Water Content, Cw g/m ³			
7				Cw ≤ 0.5			
8				0.5 < Cw ≤ 5			
9				5 < Cw ≤ 10			

Per ISO8573-1: 2001(E)

REDUCE ENERGY CONSUMPTION

As the air compressor is the most costly system component to purchase and, it uses more electrical energy than the rest of the system combined, it is wise to ensure that the smallest air compressor is installed. HBP Series dryers are 100% efficient at delivering full supply-side compressor capacity. Therefore, users benefit from the ability to purchase a less expensive air compressor and, a 20% reduction in compressor operating costs.



ELIMINATE COSTLY COMPRESSED AIR LOSS

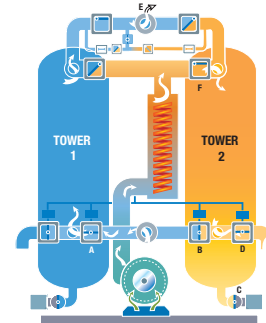
Global competition, spiraling energy costs and, the challenge to “do more, with less” require manufacturers to closely examine operating costs. Compressed air generation tends to be the most costly utility within a facility. Eliminate air loss to align supply-side equipment with demand-side requirements to optimize your air system.

Plant Air Demand (Nm ³ /min.)	Dryer Types (efficiency)	Air Volume Required to Meet Demand (Nm ³ /min.)	Air Compressor Required to Meet Air Volume (kW)	Compressor Purge Air Penalty* (dollars)	Preferred Supply-Side Solution
28.3	HBP Series Blower Purge (100%)	28.3	149	\$ 0	Yes
	Heated Purge (93%)	30.4	187	\$ 11,436	No
	Heatless (85%)	33.3	187	\$24,506	No



HOW IT WORKS

Filtered compressed air enters on-line desiccant-filled, drying Tower 1 through valve (A). Up-flow drying enables the desiccant to strip moisture from the airstream. Clean, dry compressed air exits through (E) to feed the air system. Tower 2 (shown in regeneration mode) valve (B) closed, depressurizes to atmosphere through muffler (C). Valves (D & F) open and the heater turns on. The high-efficiency blower draws ambient air and feeds it through the heater. The ambient airstream passes through valve (F) and flows downward through the moist desiccant in Tower 2, collecting water vapor before exiting valve (D). Once the desiccant is fully desorbed, the heater turns off. Valves (F & D) close and Tower 2 is repressurized. At a fixed time interval, valve (B) will open and Tower 2 will be placed on-line to dry the airstream and valve (A) will close. Operations will switch and Tower 1 will be regenerated.



ENGINEERED EFFICIENCY AND PERFORMANCE

Soft-seated check valves for tight shutoff and durability

Towers filled with extra, industrial-grade activated alumina to deliver superior performance

Low-watt density heater saves energy and prevents premature desiccant aging

High quality pressure gauges display left tower, right tower, and purge pressure

Standard Controls

- Tower Status
- Service Reminder
- Heater On
- Heater Temperature
- Desiccant Bed Temperature
- Failure to Switch
- RS 232

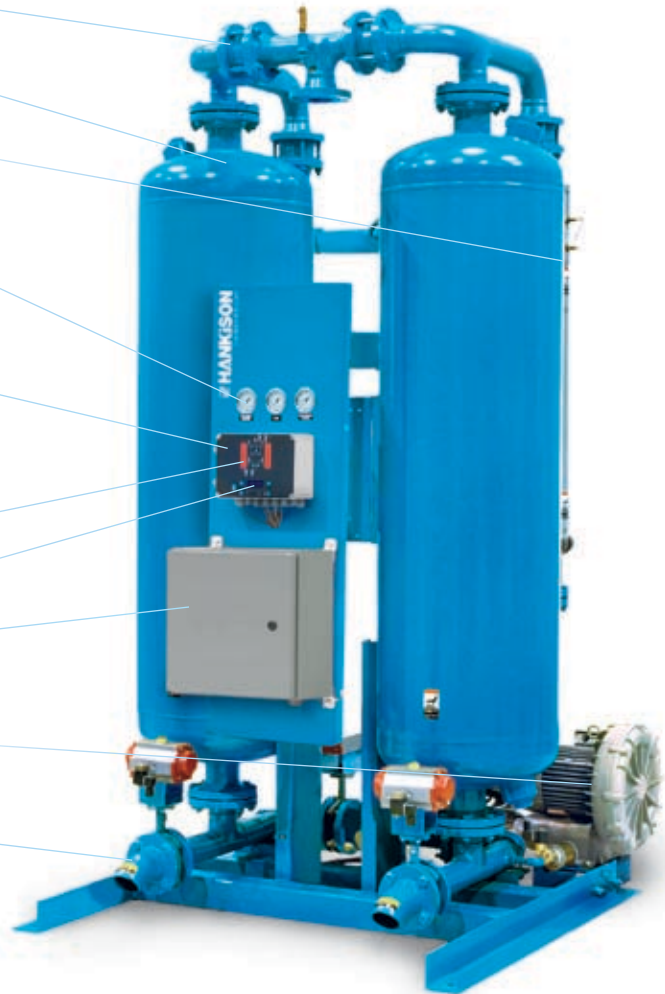
Function indicator LEDs for easy monitoring

Easy-view vacuum fluorescent text display is visible under any condition

NEMA 4 Construction

Quiet, energy efficient, high-capacity blowers

Premium quality inlet switching/purge exhaust butterfly valves for long life on 3" and larger. (High-performance pneumatic angle-seated valves for smaller sizes)



HBP SERIES FEATURES AND SPECIFICATIONS

HBP SERIES PRODUCT FEATURES

Controller	Pressure Dew Point	EMS Control	Vacuum Fluorescent Text			Languages	Power Recovery	Dry Contacts	Overlay w/ Circuit Graphics & LED Indicators Alarm LEDs with Text Display				Options		
			Model	ISO Class 2 -40°C (-40°F)	Automatic Energy Savings				Digital Dew Point Monitoring	High Humidity Alarm	2 Line, 16 Characters (high-visibility in darkness or sunlight)	English Spanish French	Automatic Restart after Power Loss	Remote Indication of Alarm	Tower Status (drying switchover heat, cool, etc.)
Standard	S	—	—	—	S	S	S	S	S	S	S	S	S	0	0
Option A	S	S	—	S	S	S	S	S	S	S	S	S	S	0	0
Option B	S	S	S	S	S	S	S	S	S	S	S	S	S	0	0

S=Standard 0=Option

HBP SERIES ENGINEERING DATA

Model	Flow Capacity ¹ Nm ³ /min	Blower kW	Heater Rated Output kW	Full Load (average) kW	Dimensions			Inlet/Outlet Connections inches	Approx. Weight kg
					H	W	D		
HBP 14.1	14.16	1.75	10	10	2667	1346	1778	2" NPT	846
HBP 16.9	16.99	2.55	12	12	2743	1397	1803	2" NPT	958
HBP 21.2	21.24	2.55	14	14	2896	1524	2108	3" FLG	1114
HBP 25.4	25.49	4.6	16	16	2896	1524	2108	3" FLG	1121
HBP 29.7	29.73	6.3	19	19	2870	1626	2134	3" FLG	1352
HBP 36.8	36.81	6.3	23	25	2997	1676	2159	3" FLG	1622
HBP 42.4	42.48	8.6	28	32	2946	2032	2362	3" FLG	2431
HBP 50.9	50.97	11.0	32	35	2946	2032	2362	3" FLG	2431
HBP 62.2	62.30	11.0	39	41	3150	2159	2642	4" FLG	3637
HBP 73.6	73.62	11.0	45	50	3150	2159	2642	4" FLG	3685
HBP 90.6	90.61	CF	53	52	3073	2464	2972	6" FLG	4233
HBP 101.9	101.94	CF	58	59	3251	2464	2972	6" FLG	4460
HBP 121.7	121.76	CF	70	70	3150	2667	3302	6" FLG	5602

¹ Performance data per CAGI Standard ADF 200 for Desiccant Compressed Air Dryer. Rating conditions are 37.8°C inlet 6.9 bar inlet pressure, 100% relative humidity, 37.8°C ambient temperature, and 0.35 bar pressure drop.
* Consult factory for larger models.

Table 1

Pressure kgf/cm ² (psig)	Inlet Temperature °C (°F)							
	15.6 (60)	21.1 (70)	26.7 (80)	32.2 (90)	37.8 (100)	43.3 (110)	48.9 (120)	
4.2 (60)	1.03	1.01	0.99	0.80	0.58	0.43	0.32	
4.9 (70)	1.10	1.08	1.07	0.94	0.68	0.50	0.37	
6.6 (80)	1.17	1.15	1.14	1.08	0.79	0.58	0.43	
6.3 (90)	1.24	1.22	1.20	1.18	0.89	0.66	0.49	
7.0 (100)	1.30	1.28	1.26	1.24	1.00	0.74	0.55	
7.7 (110)	1.36	1.34	1.32	1.30	1.11	0.82	0.61	
8.4 (120)	1.42	1.40	1.38	1.36	1.22	0.90	0.67	
9.1 (130)	1.48	1.46	1.44	1.42	1.33	0.99	0.74	
9.8 (140)	1.53	1.51	1.49	1.47	1.44	1.07	0.80	
10.3 (150)	1.58	1.56	1.54	1.52	1.50	1.16	0.87	

Inlet Flow

Inlet Flow capacities shown in the Specifications Table have been established at an inlet pressure of 6.9 bar and a saturated inlet temperature of 38°C. To determine maximum inlet flow at other conditions, multiply the inlet flow from the Specifications Table by the multiplier from Table 1 that corresponds to your operating conditions.

Dew Point

Outlet pressure dew point at rated inlet conditions of 6.9 bar and 38°C saturated. Dew point varies slightly at other conditions. Consult the factory to determine exact outlet pressure dew point at your operating conditions.

Operating Conditions

HBP Model	max. working press.	min. operating press.	max. inlet air temp.	min. inlet air temp.	max. ambient temp.	min. ambient temp.
	bar	bar	°C	°C	°C	°C
14.1-121.7	10.3	4.1	49°C	4.4°C	49°C	40°F



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 Specifications may change without notice.