



Blower Purge Desiccant Compressed Air Dryers

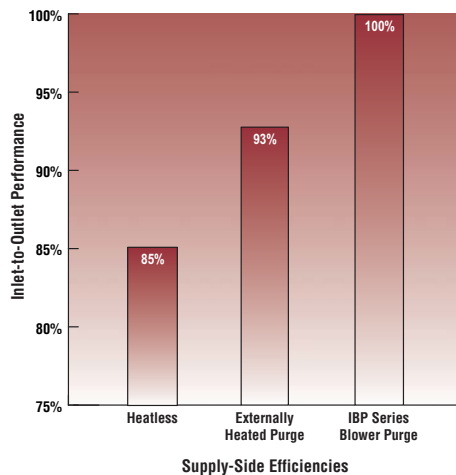
IBP Series



IBP Series Blower Purge Desiccant Compressed Air Dryers

The Pneumatic Products Guarantee

Pneumatic Products guarantees that IBP Series dryers will produce the design dew point while operating continuously at maximum rated flow (100% duty cycle) at CAGI ADF 200 inlet standards of 100°F inlet temperature and 100% relative humidity at 100 psig.



IBP Series Dryers Produce 100% Efficient Air Systems

Since 1946, compressed air users have relied on Pneumatic Products to provide compressed air treatment solutions for applications around the world. IBP 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.

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. IBP 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.

Demand-Side Impact on Supply-Side Dryer Types

Plant Air Demand (scfm)	Dryer Types (efficiency)	Air Volume Required to Meet Demand (scfm)	Air Compressor		Compressed Purge Air Penalty* (Dollars)	Preferred Supply-Side Solution
			Needed to Meet Air Volume (HP)	Needed to Meet Air Volume (scfm)		
1000	Blower Purge (100%)	1,000	200	1,000	\$0	Yes
1000	Heated Purge (93%)	1,075	250	1250	\$11,436	No
1000	Heatless (85%)	1,176	250	1250	\$24,506	No

* Assumes 5 scfm/HP, 8760 hours of operation per year, 10 cents per kWh

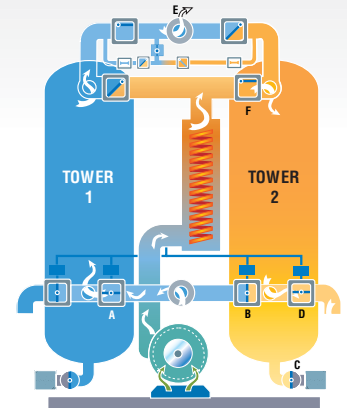
ISO 8573.1 Air Quality Standards

Class	Solid Particles, (d μm)			Pressure Dew Point		Oil, Aerosol, Liquid Vapor	
	0.10 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	°C	°F	mg/m ³	ppm w/v
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	-	10,000	500	≤ -20	-4	≤ 1	0.8
4	-	-	1,000	≤ +3	38	≤ 5	4
5	-	-	20,000	≤ +7	45	> 5	> 4
6				≤ +10	50		
7				Liquid Water g/m ³			
				C _w ≤ 0.5			
8				0.5 < C _w ≤ 5			
9				5 < C _w ≤ 10			

Per ISO 8573-1: 2001(E)

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 air stream. 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 air stream 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. Valve (D) closes 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

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

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

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

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

Soft-seated check valves for tight shutoff and durability

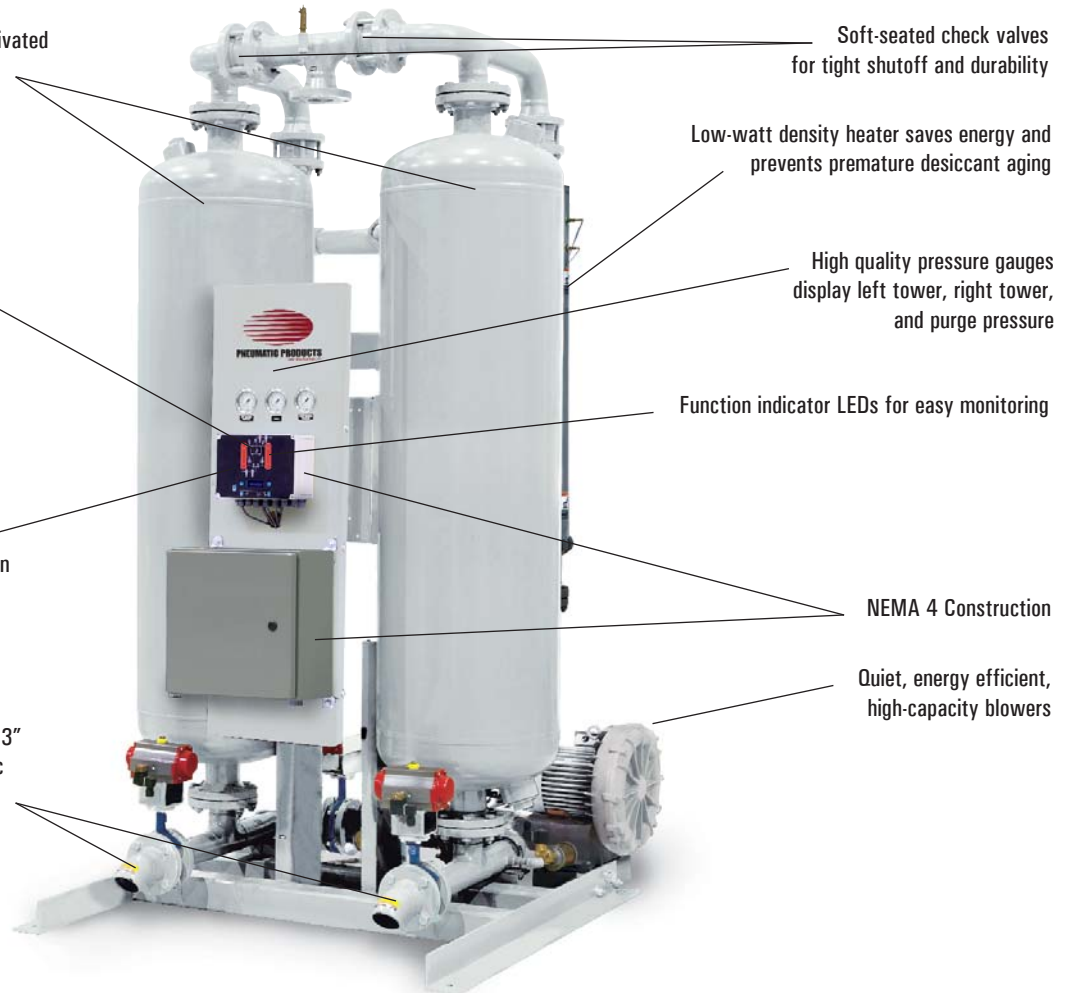
Low-watt density heater saves energy and prevents premature desiccant aging

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

Function indicator LEDs for easy monitoring

NEMA 4 Construction

Quiet, energy efficient, high-capacity blowers



IBP Series - Product Features and Specifications

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

S = Standard

Engineering Data

Model	Inlet Flow @ 100 psig, 100°F	Blower	Heater Rated Output		Dimensions (inches)			Approx. Weight	Inlet/Outlet Connections	PPC Series Prefilter	PPC Series Afterfilter
			Average	kW	W	D	H				
IBP500	500	1.6	10	10.1	53	70	105	1900	2" NPT	PCS15001SU	PCS15001HT
IBP600	600	2.5	12	12.7	55	71	108	2200	2" NPT	PCS16001SU	PCS16001HT
IBP750	750	2.2	14	14.8	60	83	114	2500	3" FLG	PCS18001SU	PCS18001HT
IBP900	900	2.0	16	16.2	60	83	114	2600	3" FLG	PCS19501SU	PCS19501HT
IBP1050	1050	2.8	19	19.2	64	84	113	3000	3" FLG	PCS112001SU	PCS112001HT
IBP1300	1300	5.3	23	25.7	66	85	118	3600	3" FLG	PCC114003SU	PCC114003HT
IBP1500	1500	7.5	28	32.8	80	93	116	5400	3" FLG	PCC118003SU	PCC118003HT
IBP1800	1800	7.0	32	35.4	80	93	116	5500	3" FLG	PCC118003SU	PCC118003HT
IBP2200	2200	5.6	39	41.9	85	104	124	8100	4" FLG	PCC124004SU	PCC124004HT
IBP2600	2600	10.3	45	50.7	85	104	124	8200	4" FLG	PCC136003SU	PCC136003HT
IBP3200	3200	2.8	53	52.5	97	117	121	9400	6" FLG	PCC136003SU	PCC136003HT
IBP3600	3600	4.0	58	59.4	97	117	128	9900	6" FLG	PCC136003SU	PCC136003HT
IBP4300	4300	4.4	70	70.4	105	130	124	12350	6" FLG	PCC148004SU	PCC148004HT

¹ Performance data per CAGI Standard ADF 200 for Dual-Tower Regenerative Desiccant Compressed Air Dryer. Rating conditions are 100°F (37.8°C) inlet 100 psig (6.9 bar) inlet pressure, 100% relative humidity, 100°F (37.8°C) ambient temperature, and 5 psi (0.35 bar) pressure drop.
* Consult factory for larger models.

Table 1

Pressure psig (kgf/cm ²)	Inlet Temperature °F (°C)							
	60 (15.6)	70 (21.1)	80 (26.7)	90 (32.2)	100 (37.8)	110 (43.3)	120 (48.9)	
60 (4.2)	1.03	1.01	0.99	0.80	0.58	0.43	0.32	
70 (4.9)	1.10	1.08	1.07	0.94	0.68	0.50	0.37	
80 (5.6)	1.17	1.15	1.14	1.08	0.79	0.58	0.43	
90 (6.3)	1.24	1.22	1.20	1.18	0.89	0.66	0.49	
100 (7.0)	1.30	1.28	1.26	1.24	1.00	0.74	0.55	
110 (7.7)	1.36	1.34	1.32	1.30	1.11	0.82	0.61	
120 (8.4)	1.42	1.40	1.38	1.36	1.22	0.90	0.67	
130 (9.1)	1.48	1.46	1.44	1.42	1.33	0.99	0.74	
140 (9.8)	1.53	1.51	1.49	1.47	1.44	1.07	0.80	
150 (10.6)	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 100 psig (7kgf/cm²) and a saturated inlet temperature of 100°F (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 100 psig (7kgf/cm²) and 100°F (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

IBP Models	max. working press. psig	min. operating press. psig	max. inlet air temp.	min. inlet air temp.	max. ambient temp.	min. ambient temp.
500-4300	150	60	120°F	40°F	120°F	40°F

SPX PNEUMATIC PRODUCTS

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