

Breathing Air Purifier

Models 50 through 300 SCFM



PNEUMATIC PRODUCTS

Description

Pneumatic Products BAP Desiccant Dryer purifiers are designed to provide a continuous supply of clean, safe breathing air from your existing compressed air system. Every purifier is a complete full-capacity purification system that performs effectively with lubricated or oil-less compressors. With the BAP purifier in your air system you can achieve these benefits:

- Meet or exceed OSHA breathing air standards
- Protect workers from ambient and compressed air respiratory hazards
- Increase worker comfort and productivity

Applications

- | | |
|-----------------|-----------------------|
| • Sandblasting | • Acid Baths |
| • Painting | • Respiratory Therapy |
| • Grinding | • Purging |
| • Plating | • Welding |
| • Tank Cleaning | • Confined Spaces |
| • Degreasing | • Mixing |

Key Features and Advantages

- Simple Installation – Air and electric only
- Meets OSHA and CSA Standards – Worker safety and peace of mind
- Pneumatic Products ADC Controls
- Fail safe dryer operations
- RS-232 monitoring of system operations and maintenance schedule
- For complete dryer package features and benefits, refer to Product Information Sheet No. 116e (DHA/CDA Heat-Les® Desiccant Dryers).



BAP Series Purifier

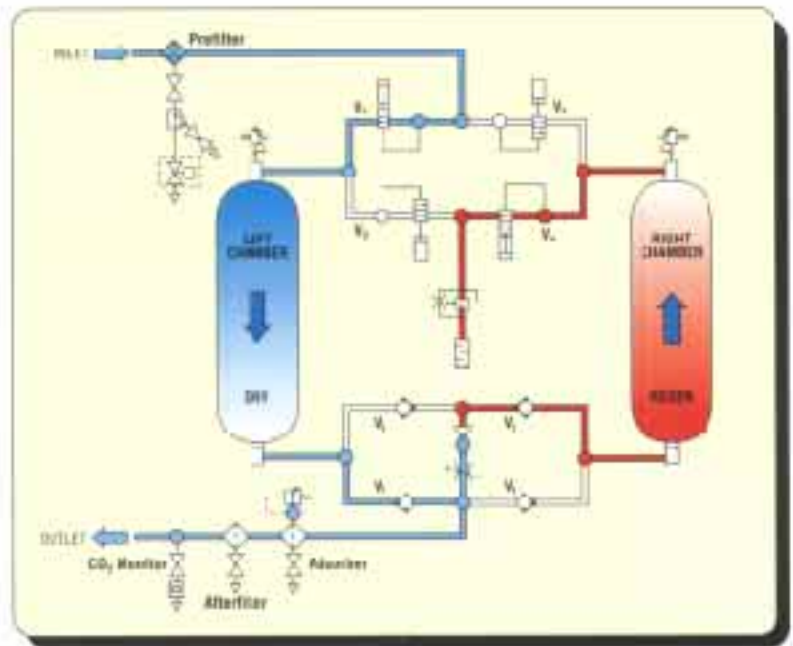
Industries

- Aerospace
- Automotive
- Chemical Processing
- Coatings and Finishes
- Food Processing
- Metal Working
- Medical
- Petroleum
- Pharmaceuticals
- Ship Building
- Utilities

How It Works

Air from the compressor first enters the prefilter where liquid water and other contaminants are removed. The air then enters the dryer where water vapor is removed and the dewpoint is decreased to -40°F or better. When the dried air exits the dryer it is directed through a carbon/catalyst adsorber to remove hydrocarbons and CO. In the final purification phase the air is filtered through a final particulate filter which removes all particulates 0.9 microns in size and larger.

Sizing and Specifications



Flow Schematic

Specifications

Model	Nominal Capacity (SCFM)	Electrical Service (V/PH/Hz)	Approximate Dimensions ¹ (inches)			Air Line Connections (in NPT)	Approx Ship Wt (lbs)
			W	H	D		
50-BAP	50	115/1/60	33	63	21	1"	350
70-BAP	70	115/1/60	33	77	21	1"	390
150-BAP	150	115/1/60	35	81	27	1"	430
200-BAP	200	115/1/60	35	96	27	1-1/2"	525
300-BAP	300	115/1/60	36	93	27	1-1/2"	715

¹Contact factory for certified dimensions.
Maximum inlet air temperature 120°F, maximum operating pressure 150 PSIG. For 300 PSIG consult factory.

How to size the BAP Series purifier

When operating conditions are different from rating conditions, correction factors must be used for accurate purifier sizing.

Example: Select a purifier to supply 100 SCFM breathing air when inlet air is 110°F and 90 PSIG. From the correction factor tables select 1.227 at 110°F and 90 PSIG. Adjust required flow to an equivalent flow at rating conditions:

$$\text{Adjusted flow} = \text{Required flow} \times \text{CF} = 100 \text{ SCFM} \times 1.227 = 122.70 \text{ SCFM}$$

From the specifications table select a purifier that has a rated nominal capacity equal to or greater than the adjusted flow. Select model 150 BAP.

Because of our policy of continuous improvement some information, specifications and dimensions contained herein may be revised. For confirmed accuracy always refer to factory submittals.



PNEUMATIC PRODUCTS

A United Dominion Company

Pneumatically Engineered Products

OCALA, FLORIDA 34474 (352) 237-5500, FAX: (352) 854-1402

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Flow Multiplier for Heatless Dryer Model Selection

Pressure PSIG	Temperature, deg F						
	<30	35	100	105	110	115	120
40	1.031	1.116	1.258	1.422	1.658	1.988	2.419
70	0.885	0.967	1.111	1.258	1.466	1.758	2.138
80	0.804	0.887	1.009	1.143	1.332	1.597	1.943
90	0.740	0.826	0.930	1.053	1.227	1.471	1.789
90	0.690	0.769	0.866	0.980	1.143	1.370	1.687
110	0.642	0.717	0.806	0.913	1.056	1.276	1.553
130	0.601	0.671	0.755	0.855	0.998	1.194	1.453
130	0.538	0.718	0.813	0.948	1.136	1.382	1.682
140	0.512	0.689	0.780	0.907	1.067	1.322	1.622
150	0.488	0.665	0.750	0.876	1.050	1.278	1.578
160	0.464	0.643	0.728	0.848	1.016	1.236	1.536
170	0.442	0.621	0.700	0.820	0.982	1.195	1.485
180	0.420	0.600	0.678	0.791	0.948	1.153	1.433
190	0.400	0.584	0.664	0.762	0.913	1.111	1.382
200	0.380	0.569	0.651	0.735	0.881	1.072	1.322
210	0.360	0.550	0.630	0.710	0.851	1.035	1.289
220	0.340	0.530	0.610	0.689	0.826	1.008	1.256
230	0.320	0.510	0.590	0.668	0.801	0.975	1.223
240	0.300	0.490	0.570	0.649	0.778	0.947	1.190
250	0.280	0.470	0.550	0.631	0.756	0.920	1.157
260	0.260	0.450	0.530	0.613	0.735	0.895	1.124
270	0.240	0.430	0.510	0.594	0.714	0.869	1.091
>180	0.220	0.410	0.490	0.574	0.694	0.845	1.058

To select correct dryer model size:

1. Determine flow correction factor at inlet conditions from table above (if required round inlet pressure down and inlet temperature up.)
2. Multiply actual inlet flow (SCFM) by correction factor
3. Select next larger dryer model size.

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