SPXFLOW

Blower Purge Desiccant Compressed Air Dryers IBP SERIES 500 - 4,300 SCFM



>Pneumatic Products[•]

Since 1946, the world has turned to SPX FLOW's Pneumatic Products brand for the quality and service demanded by the most critical of applications. Global leaders of industry require durable components that deliver unquestionable reliability. Our precision engineered components and designs deliver outstanding service life and operational longevity. Invest in our experience and gain annuities that will grow for years.

Based in Charlotte, North Carolina, SPX FLOW is a leading global supplier of highly engineered flow components, process equipment and turnkey systems, along with the related aftermarket parts and services, into the food and beverage, power and energy and industrial end markets. SPX FLOW has more than \$2 billion in annual revenues and approximately 8,000 employees with operations in over 35 countries and sales in over 150 countries around the world. To learn more about SPX FLOW, please visit our website at www.spxflow.com

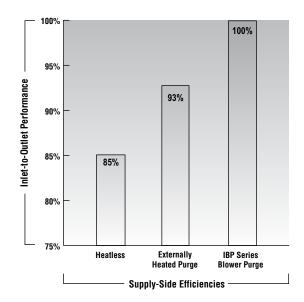
IBP Series Dryers

PRODUCE 100% EFFICIENT AIR SYSTEMS

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 system combined, it is wise to ensure that the smallest appropriately sized 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.

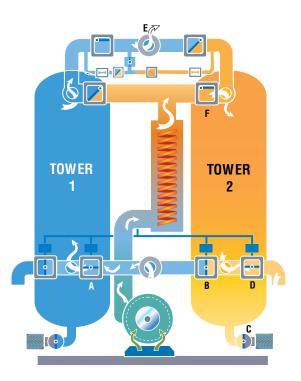


ELIMINATE COSTLY COMPRESSED AIR LOSS

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.

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) with 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.



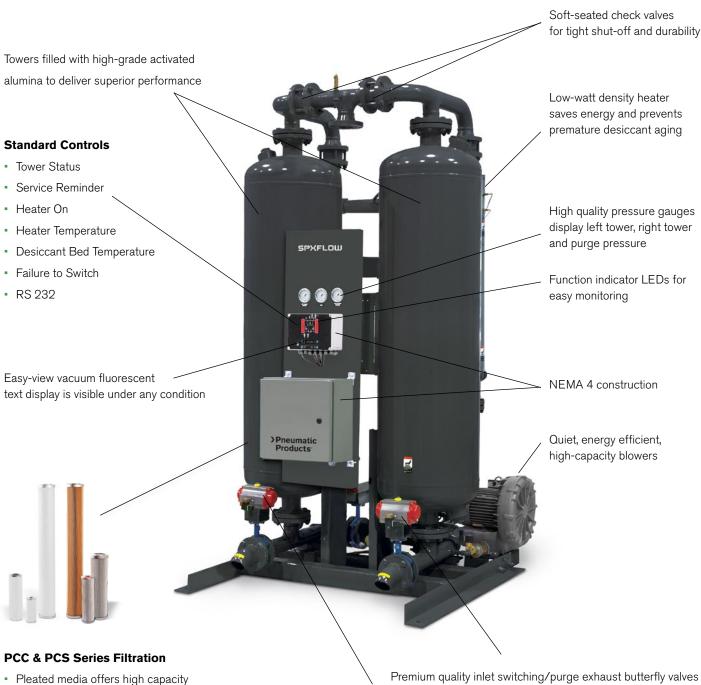
DEMAND-SIDE IMPACT ON SUPPLY-SIDE DRYER TYPES

| PLANT AIR DEMAND | DRYER TYPES | AIR VOLUME REQUIRED TO MEET DEMAND | AIR COMPRESSOR NEEDED TO MEET AIR VOLUME | | COMPRESSED PURGE AIR PENALTY* | PREFERRED SUPPLY-SIDE SOLUTION |
|---------------------|---------------------|--|--|-------|-------------------------------------|--------------------------------------|
| scfm | Efficiency | scfm | hp | scfm | dollars | SOLOTION |
| 1,000 | Blower Purge (100%) | 1,000 | 200 | 1,000 | \$0 | Yes |
| 1,000 | Heated Purge (93%) | 1,075 | 250 | 1250 | \$11,436 | No |
| 1,000 | Heatless (85%) | 1,176 | 250 | 1250 | \$24,506 | No |

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

| AIR QUALITY CLASS | MAXI | DLID PARTICL MUM NUMB RTICLES PER | ER OF | | R PRESSURE POINT | IL NCENTRATION: UID & VAPOR | | | | |
|----------------------|--|---|---------------------|-------|---------------------|-----------------------------------|--------------------|--|--|--|
| CLASS | 0.10 - 0.5 micron | 0.5 - 1.0 micron | 1.0 - 5.0 micron | °C | °F | mg ∕ m³ | ppm _{w/w} | | | |
| 0 | As specified by the equipment user or supplier and more stringent than class 1 | | | | | | | | | |
| 1 | ≦ 20,000 | ≦ 400 | ≦ 10 | ≦ -70 | ≦ -94 | 0.01 | 0.008 | | | |
| 2 | ≦ 400,000 | ≦ 6,000 | ≦ 100 | ≦ -40 | ≦ -40 | 0.1 | 0.08 | | | |
| 3 | - | ≦ 90,000 | ≦ 1,000 | ≦ -20 | ≦ -4 | 1 | 0.8 | | | |
| 4 | - | - | ≦ 10,000 | ≦ +3 | ≦ +37 | 5 | 4 | | | |
| 5 | - | - | ≦ 100,000 | ≦ +7 | ≦ +45 | - | - | | | |

IBP Series - Key Product Features



Uniform pore size reduces downstream contamination

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

Exclusive Feature Details

PCC & PCS SERIES FILTRATION

Critical applications and hostile environments demand premium grade products. Global industry leaders rely on PCS & PCC Series filters for their unmatched quality, durability and reliability in tough applications. PPC's large flow filters meet the challenge and provide contaminant protection for the premium grade desiccants used in our dryers as well as contaminant sensitive applications. Power plants, paper mills, refineries, and petro-chemical installations are a few examples of the challenging environments that rely on PPC filters for lasting protection.



Controller Feature List

| | Con | Controller Configuration | | |
|--|----------|--------------------------|----------|--|
| | Standard | Option A | Option B | |
| Pressure Dew Point | | | | |
| ISO Class 2 -40°F (-40°C) | 1 | 1 | 1 | |
| MS Control | | | | |
| | | | | |
| Automatic Energy Savings | _ | 1 | 1 | |
| acuum Fluorescent Text | | | | |
| Digital Dew Point Monitoring | - | _ | 1 | |
| High Humidity Alarm | _ | 1 | 1 | |
| 2 Line, 16 Characters (high-visibility in darkness or sunlight) | ✓ | 1 | 1 | |
| | | | | |
| anguages | | | | |
| English, Spanish, French | ✓ | 1 | 1 | |
| | | | | |
| Power Recovery | | | | |
| Automatic Restart after Power Loss | ✓ | 1 | 1 | |
| | | | | |
| Dry Contacts | | _ | | |
| Remote Indication of Alarm | 1 | 1 | 1 | |
| Overlay w/Circuit Graphics & LED Indicators Alarm LEDs with Text Display | | | | |
| Tower Status - (drying switchover heat, cool, etc.) | 1 | 1 | 1 | |
| Tower - Switchover, Failure (low heater temp/high heater temp) | ✓ | 1 | 1 | |
| Sensor Over-range & Under-range | ✓ | 1 | 1 | |
| Service Reminder | 1 | 1 | 1 | |

🗸 - Standard

Product Specifications

ENGINEERING DATA

| MODEL | CAPACITY ^{1,2} SCFM | BLOWER HP | HEATER RATING KW | AVERAGE KW | | ENSI NCHE W | | APPROX ³ WEIGHT LB | INLET/OUTLET ³ CONNECTIONS IN | FILTRATION ⁴ |
|---------|---------------------------------|--------------|------------------------|---------------|-----|-------------------|-----|-------------------------------------|--|--------------------------------|
| IBP500 | 500 | 2.5 | 10 | 6.4 | 105 | 53 | 59 | 1,900 | 1.5" NPT | PCS15001 |
| IBP600 | 600 | 4 | 12 | 7.7 | 108 | 55 | 60 | 2,200 | 2" NPT | PCS16001 |
| IBP750 | 750 | 4 | 14 | 9.6 | 114 | 60 | 71 | 2,200 | 2" NPT | PCS18001 |
| IBP900 | 900 | 4 | 17 | 10.8 | 114 | 60 | 68 | 2,400 | 3" FLG | PCS19501 |
| IBP1050 | 1050 | 5 | 19 | 12.5 | 113 | 67 | 70 | 3,000 | 3" FLG | PCS112001 |
| IBP1300 | 1300 | 7.5 | 23 | 15.5 | 118 | 66 | 92 | 3,600 | 3" FLG | PCC114003 |
| IBP1500 | 1500 | 10 | 28 | 19.3 | 116 | 80 | 98 | 5,400 | 4" FLG | PCC118003 |
| IBP1800 | 1800 | 10 | 33 | 21.7 | 119 | 84 | 98 | 5,500 | 4" FLG | PCC118003 |
| IBP2200 | 2200 | 10 | 40 | 27.6 | 127 | 90 | 107 | 8,100 | 4" FLG | PCC124004 |
| IBP2600 | 2600 | 15 | 45 | 30.7 | 127 | 89 | 106 | 8,200 | 6" FLG | PCC136003 |
| IBP3200 | 3200 | 5 | 54 | 37.7 | 127 | 97 | 105 | 9,400 | 6" FLG | PCC136003 |
| IBP3600 | 3600 | 7.5 | 60 | 42.0 | 133 | 97 | 116 | 9,900 | 6" FLG | PCC136003 |
| IBP4300 | 4300 | 7.5 | 70 | 50.1 | 132 | 109 | 123 | 12,350 | 6" FLG | PCC148004 |

¹ @ 100 psig, 100°F -40°F Pressure Dewpoints

² 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.

 $^{\rm 3}$ Dimensions, Weights & Inlet/Outlet Connections based on F01 pre-piped filter options $^{\rm 4}$ Prefilter element type SU: Afterfilter element type HT.

Consult factory for sizing assistance and -100°F pressure dewpoint applications. Larger models available.

TABLE 1: PRESSURE

| PRESSURE | INLET TEMPERATURE °F (°C) | | | | | | | | | |
|----------------|---------------------------|-----------|-----------|-----------|------------|------------|------------|--|--|--|
| PSIG (kgf/cm²) | 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 | 0.8 | 0.58 | 0.43 | 0.32 | | | |
| 70 (4.9) | 1.1 | 1.08 | 1.07 | 0.94 | 0.68 | 0.5 | 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 | 1.2 | 1.18 | 0.89 | 0.66 | 0.49 | | | |
| 100 (7.0) | 1.3 | 1.28 | 1.26 | 1.24 | 1 | 0.74 | 0.55 | | | |
| 110 (7.7) | 1.36 | 1.34 | 1.32 | 1.3 | 1.11 | 0.82 | 0.61 | | | |
| 120 (8.4) | 1.42 | 1.4 | 1.38 | 1.36 | 1.22 | 0.9 | 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 | 0.8 | | | |
| 150 (10.6) | 1.58 | 1.56 | 1.54 | 1.52 | 1.5 | 1.16 | 0.87 | | | |

Inlet Flow

Inlet Flow (scfm) capacities shown in the Engineering Data 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 Engineering Data 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.

OPERATING CONDITIONS

| IBP | MAX. WORKING | MIN. OPERATING | MAX. INLET AIR | MIN. INLET AIR | MAX. AMBIENT | Max. Ambient |
|----------|--------------|----------------|----------------|----------------|--------------|--------------|
| MODELS | PRESS. | PRESS. | TEMP. | TEMP. | AIR TEMP. | Air Temp. |
| 500-4300 | 150 psig | 60 psig | 120°F | 40°F | 120°F | 40°F |

IBP Series

500 TO 4,300 SCFM

SPXFLOW

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