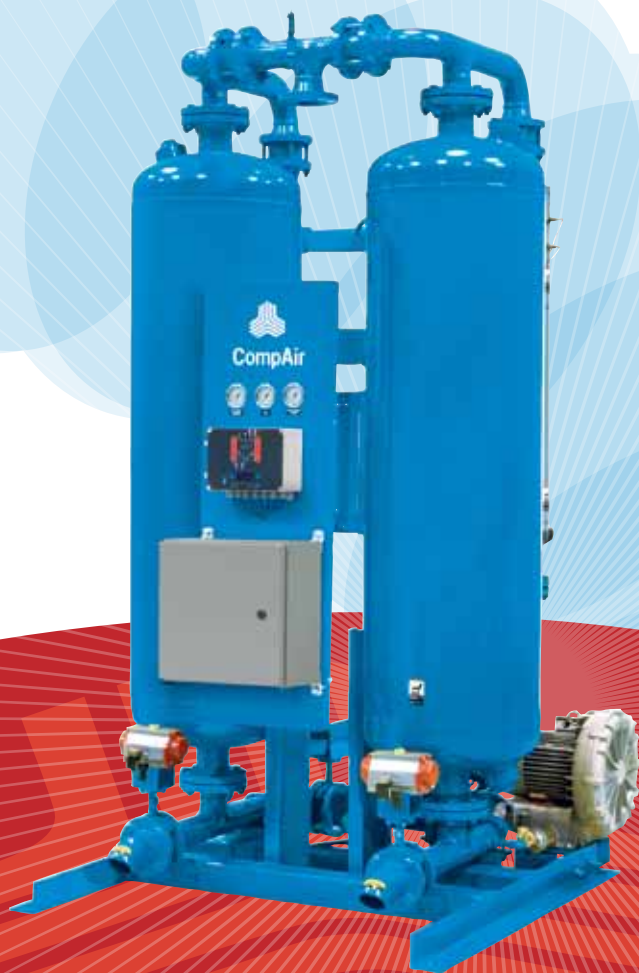




CBP Series
Blower Purge Desiccant Dryers
500–4300 CFM

NEW



Engineered to Save

CBP Series Dryers



➔ Do you have...

- Sensitive applications?
- Stringent process requirements?
- Precision equipment?

➔ Do you work with...

- food
- paper
- glass
- pharmaceutical
- painting
- hospitals
- chemicals
- petrochemicals...

➔ Have you found that a refrigerated air dryer does not meet your needs?

➔ You understand the need for clean, dry compressed air.

The CBP Series of blower purge desiccant air dryers can provide you with the dry air you require. The CBP can provide you with ISO 8573.1 Class 2 dewpoints.

Couple your CBP dryer with the appropriate CAF filtration to achieve up to ISO 8573.1 Class 1 for solids and oils.

➔ 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, C _w g/m ³			
7				C _w ≤ 0.5			
8				0.5 < C _w ≤ 5			
9				5 < C _w ≤ 10			

Per ISO 8573.1: 2001(E)

Energy Saving Features

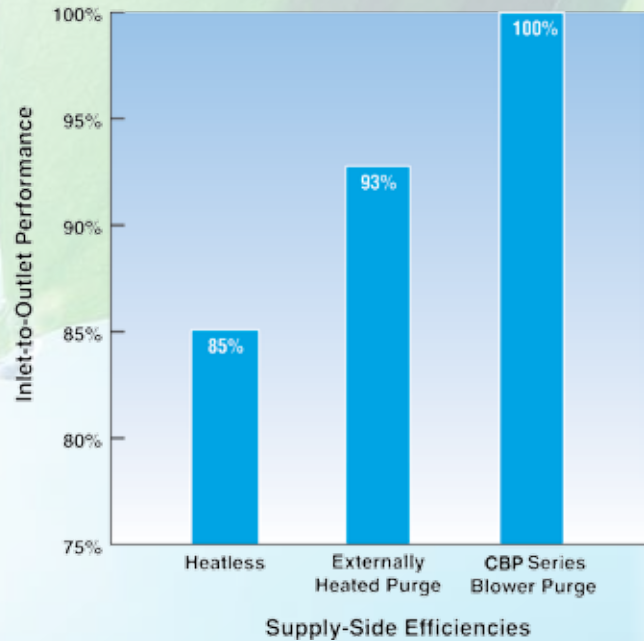
➔ Reduce Energy Consumption

The CBP Series process design offers the end user the opportunities to significantly reduce the energy costs associated with achieving a reliable -40°F (-40°C) pressure dew point. This is achieved by eliminating or reducing purge air requirements (compressed air utilized to regenerate desiccant beds) typical of other desiccant dryer designs

The air compressor is the most costly compressed air system component to purchase and operate. CBP 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

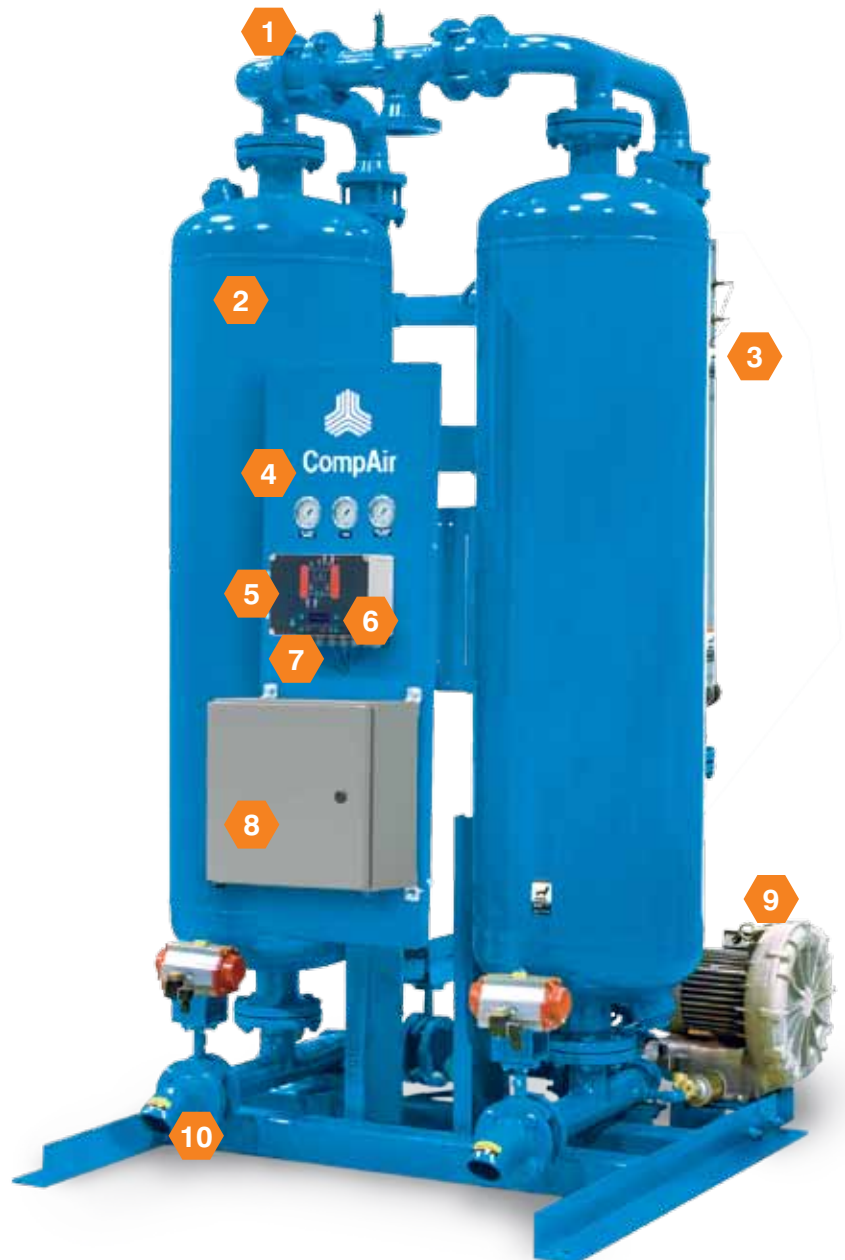
Plant Air Demand (scfm)	Dryer Types (efficiency)	Air Volume Required to Meet Demand (scfm)	Air Compressor Required to Meet Air Volume		Compressor Purge Air Penalty* (dollars)	Preferred Supply-Side Solution
			(HP)	(scfm)		
1,000	CBP Series Blower Purge (100%)	1,000	200	1,000	\$ 0	Yes
	Heated Purge (93%)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

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

Engineered Efficiency & Performance

➔ *CBP Features*

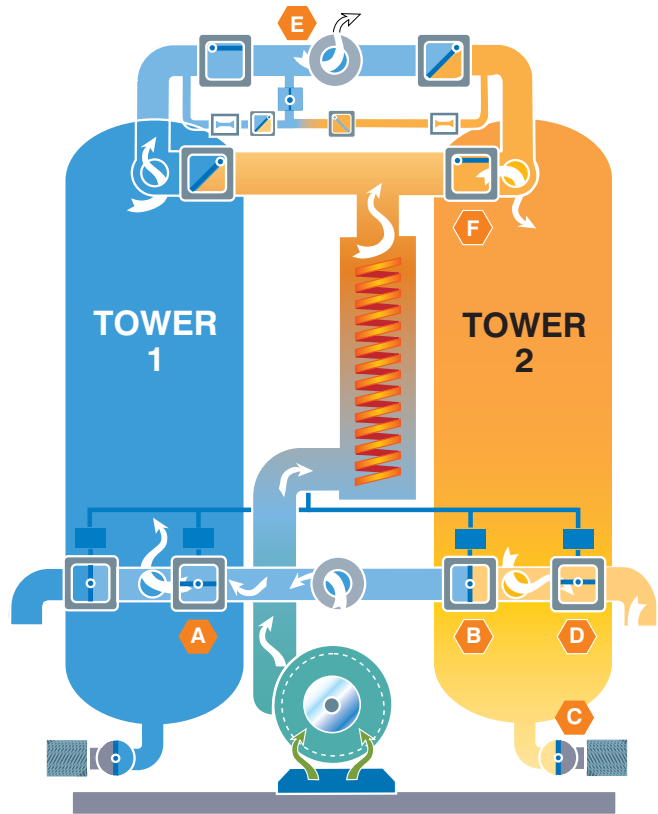
1. Soft-seated check valves for tight shutoff and durability
2. Towers filled with extra, industrial-grade activated alumina to deliver superior performance
3. Low-watt density heater saves energy and prevents premature desiccant aging
4. High quality pressure gauges display left tower, right tower, and purge pressure
5. Standard Controls
 - Tower Status
 - Service Reminder
 - Heater On
 - Heater Temperature
 - Desiccant Bed Temperature
 - Failure to Switch
 - RS 232
6. Function indicator LEDs for easy monitoring
7. Easy-view vacuum fluorescent text display is visible under any condition
8. NEMA 4 Construction
9. Quiet, energy efficient, high-capacity blowers
10. Premium quality inlet switching/purge exhaust butterfly valves for long life on 3" and larger. (High-performance pneumatic angle-seated valves for smaller sizes)



How It Works

➔ CBP Operation

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.



CompAir guarantees that CBP 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.

Reliability to meet your operations

➔ CBP Series Product Features

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

S = Standard O = Option

➔ Features, Benefits, Options

Standard Controller

- Tower status
- Service reminder
- Heater on
- Heater temperature
- Desiccant bed temperature
- Failure to switch
- RS 232 port
- NEMA 4 enclosure

Option A = energy saving demand controller

- Energy saving demand controller provides an integrated humidity/temperature sensor from the on-line drying tower. Sensor “over-range” and “under-range” alarms. High humidity alarm.
- Vacuum fluorescent text, 2 line 16 characters. Highly visible in darkness or sunlight
- English, Spanish, French languages
- Automatic restart after power loss
- Remote indication of alarm

- Power on light
- Heater on light
- Tower status (drying, switchover, heat, cool, etc.)
- Tower switch switchover, failure (low heater temp/ high heater temp)
- Dry Contacts (power, heater-on)
- LED sensor over-range or under-range temp/ humidity dew point
- Service reminder
- RS 232 port
- NEMA 4 enclosure

Option B = dewpoint monitor with energy saving demand controller

- Digital dew point monitoring (text display)
- All of the features of the Energy Saving Demand Controller
- High dew point alarm

Option V

- Insulate vessel shell and hot piping from heater to vessels

Option F0

- Mounted Grade E prefilter and CAF afterfilter with drain valve on separate skid package.

Option F3

- Mounted Grade E prefilter and CAF afterfilter with drain valve with block and by-pass valves on separate skid package.

CBP Series Specifications

Model	Inlet Flow @ 100 psig, 100°F ¹	Blower kW	Heater Rated Output kW	Full Load (average) kW	Dimensions			Inlet/Outlet Connections inches	Approx. Weight lb
	scfm				W	D	H		
					inches				
CBP500	500	1.6	10	10	53	70	105	2" NPT	1866
CBP600	600	2.5	12	12	55	71	108	2" NPT	2111
CBP750	750	2.2	14	14	60	83	114	3" FLG	2456
CBP900	900	2.0	16	16	60	83	114	3" FLG	2472
CBP1050	1050	2.8	19	19	64	84	113	3" FLG	2981
CBP1300	1300	5.3	23	25	66	85	118	3" FLG	3576
CBP1500	1500	7.5	28	32	80	93	116	3" FLG	5359
CBP1800	1800	7.0	32	35	80	93	116	3" FLG	5359
CBP2200	2200	5.6	39	41	85	104	124	4" FLG	8018
CBP2600	2600	10.3	45	50	85	104	124	4" FLG	8123
CBP3200	3200	2.8	53	52	97	117	121	6" FLG	9333
CBP3600	3600	4.0	58	59	97	117	128	6" FLG	9833
CBP4300	4300	4.4	70	70	105	130	124	6" FLG	12350

1. Performance data per CAGI Standard ADF 200 for Desiccant Compressed Air Dryer. Rating conditions are 100°F (37.8°C) inlet 100 psig (7 kg/cm²) inlet pressure, 100% relative humidity, 100°F (37.8°C) ambient temperature, and 5 psig (0.35 bar) pressure drop.

*Consult factory for larger models.

Inlet Flow

Inlet Flow capacities shown in the Specifications Table have been established at an inlet pressure of 100 psig (7 kg/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.

Table 1

Pressure psig kg/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	1.00	0.87

Dew Point

Outlet pressure dew point at rated inlet conditions of 100 psig (7 kg/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*

Max. working press.		Min. operating press.		Max. inlet air temp.		Min. inlet air temp.		Max. ambient temp.		Min. ambient temp.	
psig	kg/cm ²	psig	kg/cm ²	°F	°C	°F	°C	°F	°C	°F	°C
150	10.5	60	4.2	120	48.9	40	4.4	120	48.9	40	4.4

*Applies to CBP models 500–4300

Aftermarket Parts & Lubricants

Protect the Investment in CompAir

Regular maintenance and service of CompAir product is critical to the performance and longevity of the equipment. Only CompAir can provide the assurance that the investment will provide a lifetime of productivity.

Reliability

Only CompAir can provide aftermarket parts and services that are engineered for use in CompAir products. The parts and lubricant have been tested under rigorous conditions at the factory to the highest quality standards.

Performance

Only CompAir can provide aftermarket parts designed specifically for the CompAir product. Use of OEM parts ensures that the investment in CompAir will continue to perform year in and year out with the same reliability and efficiency.

Ease of Doing Business

Only CompAir can provide the peace of mind of turning to one supplier and one source for all aftermarket needs. CompAir has the support network in place to handle all customer service, service and technical support needs.

Value

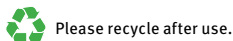
Only CompAir can provide the high quality aftermarket parts and services for the life of the investment in CompAir. Proper care of the CompAir product is vital to the equipment's performance and efficiency. Lean on a trusted source — CompAir.



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