

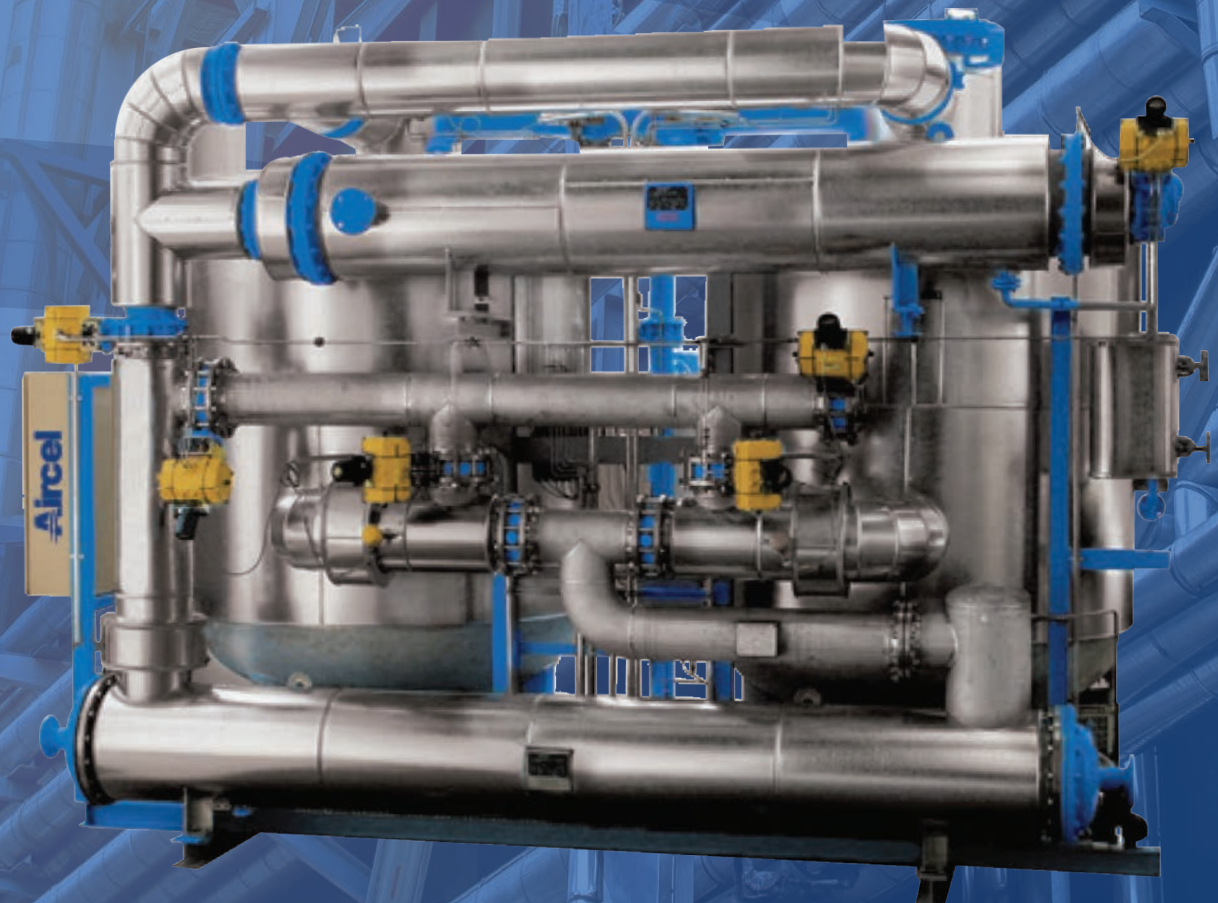


Desiccant Air Dryers

AZP Series

Zero Purge Desiccant Air Dryer

800 - 10,000 scfm



AZP Series Zero Purge Heated Desiccant Dryer 800 - 10,000 scfm

Since 1994, Aircel has been delivering quality, industry leading compressed air dryers and accessories for production lines and facilities all over the world.

Our precise engineering and designs provide reliable products that will protect your operations for years to come.

Based in Maryville, Tennessee, Aircel is a multi-industry manufacturing leader. Aircel's highly-specialized, engineered products and technologies are powering facilities all over the world. Our products serve industries such as textile, food and beverage, automotive, production, PET market, breathing air, pneumatic instrumentation, and more.



The Aircel **AZP Series** dryers (800 - 10,000 scfm) utilize externally heated atmospheric air for regeneration of the desiccant bed. This eliminates the use of compressed purge air for regeneration, resulting in an overall reduction in the cost of operation. In the AZP Series, the cool down of the regenerated bed is assisted by a water-cooled heat exchanger that further reduces compressed air usage. As a result, only a small fraction of process air is consumed during depressurization of the off-line tower. This amounts to an average process air use of less than 0.05% of the rated capacity of the dryer.

- ISO 8573.1 Class 2 (-40°F/-40°C) dew point performance
- 0.05% average purge consumption
- Built-in energy management controls
- Low pressure drop design for energy savings

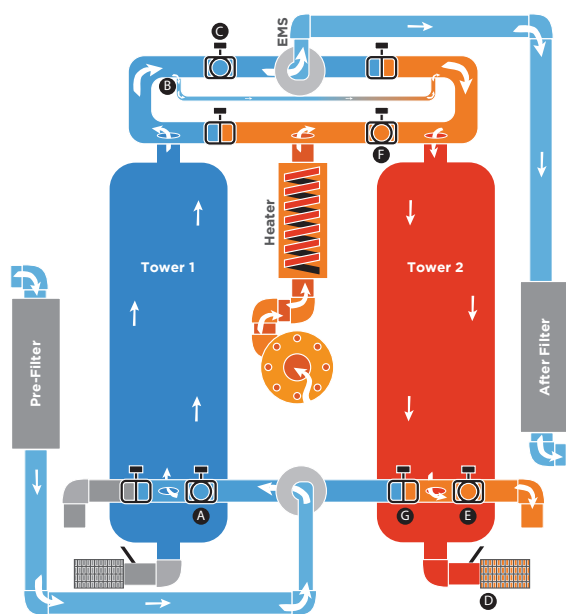
Standard Features

- Corrosion resistant finish
- NEMA 4 electrical enclosures
- Allen-Bradley™ PLC control system
- Common alarm/pilot light
- Switching alarm (using pressure switch logic)
- High performance butterfly and stainless steel valves
- Highly reliable angle body piston valves for depressurization
- Zero purge air consumption
- Unique parallel flow to reduce or eliminate dew point and temperature spikes
- Small footprint saves valuable floor space
- Water-cooled heat exchanger

Optional Equipment

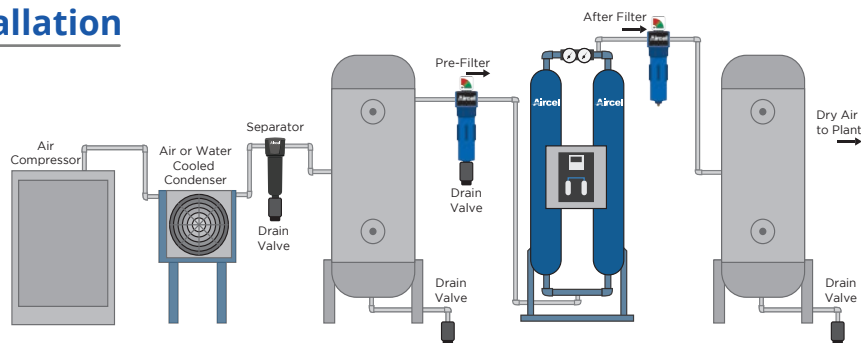
- NEMA 4X (corrosive protection) electrical construction
- NEMA 7 (explosion proof) electrical construction
- -100°F pressure dew point
- Low ambient temperature package
- Dew point monitor
- Demand cycle control with dew point monitor
- Pre-piped filters and bypass valve packages
- Visual moisture indicator
- High outlet temperature alarm
- Low ambient temperature alarm

How It Works



- Wet compressed air, controlled by butterfly valves, enters the base of the on-line vessel after passing through the pre-filter.
- As the compressed air passes through the desiccant bed, moisture is removed, lowering the dew point to -40°F.
- Dry compressed air exits the top of the vessel, passes through a check valve and flows downstream, through the after filter, and then to the point of use.
- When the desiccant bed becomes saturated with moisture, it goes off-line and depressurizes to ambient through an angle seat globe valve. A muffler attenuates the noise of depressurization.
- After the off-line vessel has depressurized, a blower draws in ambient air for regeneration.
- The ambient air is heated to 400°F, giving it the energy required to initiate and accomplish desorption, after which it passes through a check valve and enters the top of the regenerating vessel.
- As the hot ambient air passes through the desiccant bed, water molecules are released from the surface of the desiccant and enter the air stream.
- At the end of the heating phase, the heater is turned off and regeneration air is directed through a water-cooled heat exchanger.
- The blower circulates the cooled air back through the vessel.
- As the cooled air passes through the desiccant bed, it picks up heat energy which is removed from the system via the water-cooled heat exchanger. The closed-loop cycle continues until the bed temperature is lowered to its operation point without the use of purge air.

Recommended Installation



Dimensions (in.)

Model Number	Capacity	Voltage	Connection (FLG)	FLA	Blower HP	Heater kW	Weight (lbs)	Height	Width	Depth
AZP-800	800	460-3-60	3"	31.3	5	18	5,500	103	95	65
AZP-1000	1,000		3"	39.7	7.5	22	6,400	103	100	65
AZP-1200	1,200		4"	46	7.5	27	6,800	109	105	70
AZP-1400	1,400		4"	55.9	10	32.5	7,600	110	110	70
AZP-1600	1,600		4"	61.5	10	37	9,800	112	125	75
AZP-2000	2,000		4"	78.6	15	45	10,800	120	130	80
AZP-2500	2,500		6"	80.4	10	52	12,200	120	135	85
AZP-3000	3,000		6"	102.4	15	64	16,100	129	155	90
AZP-3500	3,500		6"	126	20	78	17,800	129	165	95
AZP-4000	4,000		6"	141.1	20	90	19,900	135	165	98
AZP-5000	5,000		6"	166.2	20	110	23,400	142	175	110
AZP-6000	6,000		8"	178.7	20	120	27,600	150	185	118
AZP-7000	7,000		8"	223.4	25	150	32,400	C/F	C/F	C/F
AZP-8000	8,000		8"	254.7	25	175	36,900	C/F	C/F	C/F
AZP-10000	10,000		10"	304.1	40	200	45,900	C/F	C/F	C/F

Capacity rated in accordance with CAGI ADF 200 @ 100 psig, 100°F inlet, 100°F ambient and a PDP of -40°F

For larger capacities and custom dryer options, please contact an Aircel factory representative

Capacity Correction Factors

To Size the Dryer Capacity for Actual Conditions

Adjusted Capacity = scfm x C1 x C2

Example:

Dryer Model: AZP-600
 Standard Capacity: 600 scfm
 Actual Operating Conditions:
 80°F ambient: C1 = 1.15
 90 psig system pressure: C2 = 0.91

Adjusted Capacity: 600 scfm x 1.15 x 0.91 = 628 scfm

To Size the Dryer Model for Actual Conditions

Adjusted Capacity = scfm / (C1 x C2)

Example:

Given Flow: 600 scfm
 Actual Operating Conditions:
 80°F inlet: C1 = 1.15
 130 psig system pressure: C2 = 1.27

Adjusted Capacity: 600 scfm / (1.15 x 1.27) = 410 scfm
 Selected Dryer Model: ABP-600

Correction Factors for Differing Inlet Air Temperature (C1)

Inlet Temperature (°F)	70	80	90	100	105	110	120
Correction Factor	1.2	1.15	1.1	1	0.9	0.8	0.6

Correction Factors for Differing System Air Pressure (C2)

System Pressure (psig)	60	70	80	90	100	110	120	130	140	150
Correction Factor	0.65	0.73	0.82	0.91	1	1.09	1.18	1.27	1.35	1.44

