

Aircel

Refrigerated Air Dryers

AXHP Series

Extreme High Pressure

45 - 1,000 scfm



AXHP Series High Pressure

Refrigerated Air Dryer | 45 - 1,000 scfm
1200, 3625, 5000, and 6000 psig



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.

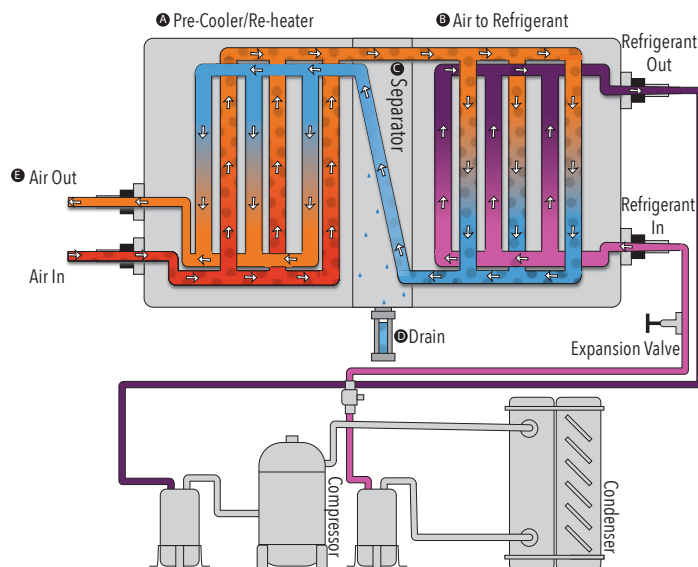
The Aircel AXHP Series (45 - 1,000 scfm) offers the highest efficiencies at high pressure conditions in a lightweight, compact design. AXHP Series dryers feature high pressure, stainless steel, tube-in-tube heat exchangers, as well as all stainless steel air-side components. **These dryers are offered in four different pressure configurations: 1,200, 3,625, 5,000, and 6,000 psig** and are suitable for applications such as PET container production, injection molding, and component testing, as well as various naval and military functions.

The AXHP Series utilizes a helical concentric tube-in-tube heat exchanger in conjunction with a centrifugal separator for separation of humidity in compressed air. This three-step process thoroughly removes condensed moisture from chilled, compressed air. This process provides separation efficiency in excess of 98% throughout the dryer's entire flow range. Our AXHP non-cycling range is focused on reliable, constant dew point performance in all flow conditions. With its excellent heat transfer coefficients and low pressure drop, these dryers will outperform the competition in protecting your compressed air system, machinery and tools, and will improve your manufacturing processes.

AXHP Series Features

- Stainless steel tube-in-tube heat exchanger
- Refrigerant suction pressure gauge standard
- Discharge gauge (AXHP-125 to AXHP-1,000)
- Inlet pressure gauge (AXHP-275 to AXHP-1,000)
- Inlet temperature gauge (AXHP-275 to AXHP-1,000)
- External, high efficiency separator and condensate drain
- R-134a refrigerant
- NEMA 1 standard
- Heavy-duty industrial powder coated cabinet with access panel

How It Works



- Saturated, compressed air enters the system and moves into the pre-cooler/re-heater (A), where it is pre-cooled by the cold outgoing air.
- The air is then directed through the air-to-refrigerant heat exchanger (B), where it is cooled to 38°F by the refrigeration system.
- The cold, saturated air flows into the centrifugal separator (C), where liquids are removed from the air. This separated condensate is then ejected from the system via the Aircel condensate drain (D).
- The cold, dry air is then reheated by the incoming warm air (E) before leaving the dryer.

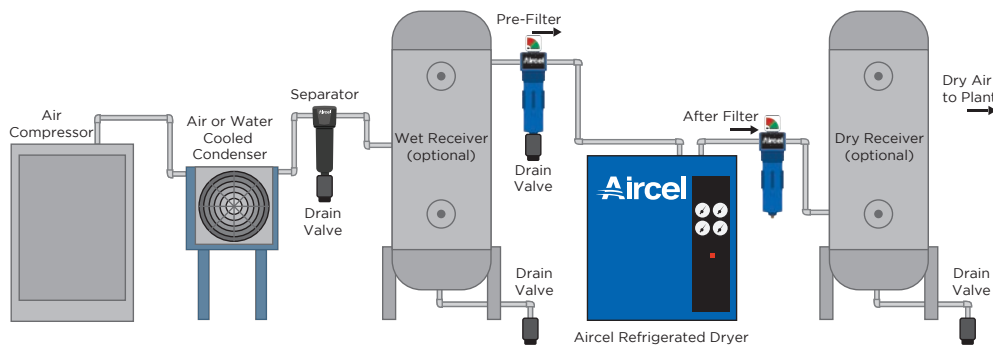
AXHP Series Options

- Various voltage options
- Water cooled condenser
- Condenser cleaner assembly
- Low ambient temperature protection¹
- NEMA 4
- NEMA 4X
- Corrosion resistant package²

¹ Low ambient package brings ambient temperature down to 32°F

² Corrosion resistant package includes: NEMA 4 enclosure, e-coated condenser, isolation pads, vibration absorbers, and epoxy painted refrigeration lines

Recommended Installation



Specifications

Each model available in 1200, 3625, 5000, and 6000 PSIG

Dimensions (in.)

Model Number	Capacity	Voltage	Connection (NPT)	Weight (lbs)	Power Input kW	Height	Width	Depth
AXHP-20	20	115-1-60	1/2"	71	0.29	22	24	18
AXHP-30	30			78	0.42	22	24	18
AXHP-40	40			102	0.57	22	24	18
AXHP-60	60			124	0.83	22	24	18
AXHP-100	100			162	1.05	30	36	25
AXHP-125	125	230-1-60		240	1.35	30	36	25
AXHP-200	200	460-3-60		345	1.99	30	36	25
AXHP-275	275			567	2.53	45	34	45

Capacity rated in accordance with CAGI ADF 100 @ 100 psig, 100°F inlet, 100°F ambient and a PDP of 38°F

Operating pressure: 40 to 200 psig | Ambient air temperature: 40°F to 120°F (32°F with ambient low temperature option) | Inlet air temperature: 40°F to 120°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 x C3 x C4)

Example:

Dryer Model: AXHP-100
 Standard Capacity: 100 scfm
 Actual Operating Conditions:
 90°F ambient: C1 = 1.05
 125 psig system pressure: C2 = 1.07
 100°F inlet: C3 = 1
 38°F required dew point: C4 = 1

Adjusted Capacity: 100 scfm x (1.05 x 1 x 1.07 x 1) = 112.4 scfm

To Size the Dryer Model for Actual Conditions

Adjusted Capacity = scfm / (C1 / C2 / C3 / C4)

Example:

Given Flow: 75 scfm
 Actual Operating Conditions:
 80°F ambient: C1 = 1.07
 100 psig system pressure: C2 = 1
 90°F inlet: C3 = 1.21
 38°F required dew point: C4 = 1

Adjusted Capacity: 75 scfm / (1.07 / 1.21 / 1 / 1) = 57.9 scfm
 Selected Dryer Model: AXHP-60

Correction Factors for Differing Ambient Temperature (C1)

Ambient Temperature (°F)	70	80	90	100	110	115	120
Correction Factor	1.1	1.07	1.05	1	0.94	0.85	0.65

Correction Factors for Differing System Air Pressure (C2)

System Pressure (psig)	50	75	100	125	150	175	200	225
Correction Factor	0.85	0.95	1	1.07	1.13	1.18	1.2	1.22

Correction Factors for Differing Inlet Air Temperature (C3)

Inlet Temperature (°F)	80	90	100	110	120
Correction Factor	1.5	1.21	1	0.82	0.75

Correction Factors for Differing Pressure Dew Point Requirements (C4)

Dew Point (°F)	38	41	45	50
Correction Factor	1	1.12	1.17	1.22

