



APET-10 to APET-1200

The Aircel APET Series (45 - 1,000 scfm) offers the highest efficiencies at high pressure conditions in a lightweight, compact design. APET Series dryers feature high pressure stainless steel, brazed plate heat exchangers, as well as all stainless steel air-side components. The design pressure of 725 psig (50 bar) is suitable for applications such as PET container production, injection molding, and component testing, as well as various naval and military functions.

The APET Series utilizes a double circuit heat exchanger in conjunction with a centrifugal separator for removing humidity from compressed air. This three-step process thoroughly removes condensed moisture from the chilled, compressed air. This process provides separation efficiency in excess of 98% throughout the dryer's entire flow range. Our APET 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.

APET Series Features

- Precooling and reheating of compressed air for high efficiency & low energy consumption.
- Stainless steel plate heat exchanger.
- Environmentally friendly R-134a refrigerant.
- Refrigerant suction pressure gauge.
- Refrigerant discharge pressure gauge (APET 260+)
- Inlet pressure and temperature gauge (APET 570+)
- External moisture separator & condensate drain.
- Heavy-duty industrial powder coated cabinet w/ access panel.
- NEMA 1 Standard.

APET Series Benefits

- Environmentally friendly R-134a refrigerant.
- Highly efficient moisture separator
- Precise dew point at any load.
- Reduced power and energy consumption.
- Lightweight & compact.
- All stainless steel air-side components

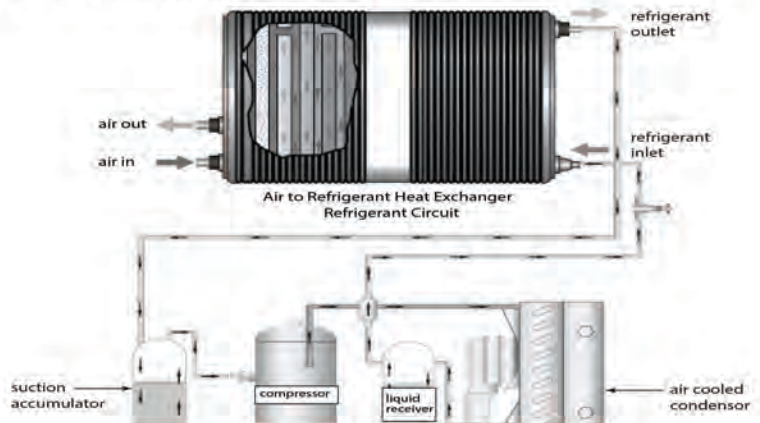
Sustainable Energy Savings

APET Series
Proven Performance from 0-100% Load

APET Series How it Works

Hot, saturated compressed air is first pre-cooled by exiting cold air in the air-to-air portion of heat exchanger. The pre-cooled air then enters the air-to-refrigerant portion of the heat exchanger where it is cooled to its final dew point. The mixture of cold air

and condensation flows into the centrifugal separator where liquids and contaminants are reliably removed and ejected from the system via a programmable timer drain valve. The cold air is then reheated by the incoming hot air before leaving the dryer.



APET Series Model Comparison

Model Number	Capacity @ 225 psig	Capacity @ 500 psig	Capacity @ 725 psig	Voltage	Connection (NPT)	Weight (lbs)	FLA	Dimensions (in.)		
								Height	Width	Depth
APET-45	43	46	47	115-1-60	1/2"	71	4.5	15	16	16
APET-65	61	66	67		1/2"	78	5.5	15	16	16
APET-80	76	82	84		1/2"	102	8	15	16	16
APET-125	115	125	128		1/2"	124	8	22	24	18
APET-200	182	198	202		1"	162	14.5	22	24	18
APET-260	237	257	262	230-1-60	1"	240	13.5	30	36	25
APET-415	379	410	419	460-3-60	1"	345	8	30	36	25
APET-570	517	560	572		1"	567	9.5	45	34	45
APET-860	780	845	864		1"	582	12.5	45	34	45
APET-1000	906	981	1002		1"	790	11.5	48	38	54

1 Capacity rated in accordance with CAGI ADF 100 @ 680 psig, 100°F inlet, 100°F ambient, and a PDP of 38°F. Ambient air temperature: 35°-120°F, inlet air temperature: 140°F max., operating pressure: 725 psig max. Due to a continuous program of product improvement, specification and dimensions are subject to change without notice.

APET Series Capacity Correction Factors

To Size the Dryer Capacity for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3$$

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

EXAMPLE: Dryer Model: HP-100
Standard Capacity: 100 scfm
Actual Operating Conditions: 90°F ambient temperature: C1 = 1.05
100°F inlet temperature: C2 = 1.0
125 psig system pressure: C3 = 1.07

$$\text{Adjusted Capacity} = 100 \text{ scfm} \times 1.05 \times 1.0 \times 1.07 \times 1.0 = 112.4 \text{ scfm}$$

To Select the Dryer Model for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm}/C1/C2/C3$$

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

EXAMPLE: Given Flow: 75 scfm
Actual Operating Conditions: 80°F ambient temperature: C1 = 1.07
90°F inlet temperature: C2 = 1.21
100 psig system pressure: C3 = 1.0

$$\text{Adjusted Capacity} = 75 \text{ scfm} / 1.07 / 1.21 / 1.0 / 1.0 = 57.9 \text{ scfm}$$

Selected Dryer Model: HP-60

The Compressed Air and Gas Institute (CAGI) has developed standards to protect users of compressed air & gas equipment. ADF100 the current standard for refrigerated compressed air dryers, specifies the dryers performance to be rated at 100°F inlet temperature, 100°F ambient temperature, and 100 psig system pressure. To

adjust the dryer capacity from these "CAGI conditions" to your specific application, please use the correction factors below for differing ambient air temperatures (C1), inlet air temperatures (C2), and varying dew point requirements (C3).

Capacity correction factors for differing ambient air temperature (C1)

Ambient Temperature (°F)	70	80	90	100	110	115	120
Correction Factor	1.10	1.07	1.05	1	0.94	0.85	0.65

Capacity correction factors for differing inlet air temperature (C2)

Inlet Temperature (°F)	80	90	100	110	120	140
Correction Factor	1.50	1.21	1	0.82	0.72	0.61

Capacity correction factors for differing pressure dew point requirements (C3)

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