



VC-2000

### VC Series Features

- SingleCel and MultiCel designs.
- Proven scroll technology.
- Stainless steel heat exchangers.
- Highly efficient moisture separation.
- Globally accepted ozone safe R407C refrigerant.
- High performance micro-channel condensers.
- Robust industrial controls.
- Zero-loss drains are standard.
- NEMA 4 standard.

### VC Series Benefits

- Easy set-up and installation with small footprint.
- Lightweight design.
- Easy to maintain and service.
- Minimum installation cost.
- Single electrical connection.
- Proven performance.



MultiCel Model

The **Aircel VC Series (1,250 - 4,000 scfm)** provides exceptional performance in a lightweight modular design. Air-Cooled and Water-Cooled models are available, along with a number of custom options to exactly match the application requirements. SingleCel models range from 1,250 scfm to 2,000 scfm and the MultiCel design is standard on 2,500 scfm through 4,000 scfm.

All VC Series non-cycling refrigerated dryers utilize compact high-efficiency stainless steel brazed plate heat exchangers incorporating precooling and reheating of compressed air for high-efficiency and low energy consumption. Aircel's demisting moisture separator and zero-loss drains insure efficient moisture separation and discharge from the system regardless of load.

### Sustainable Energy Savings

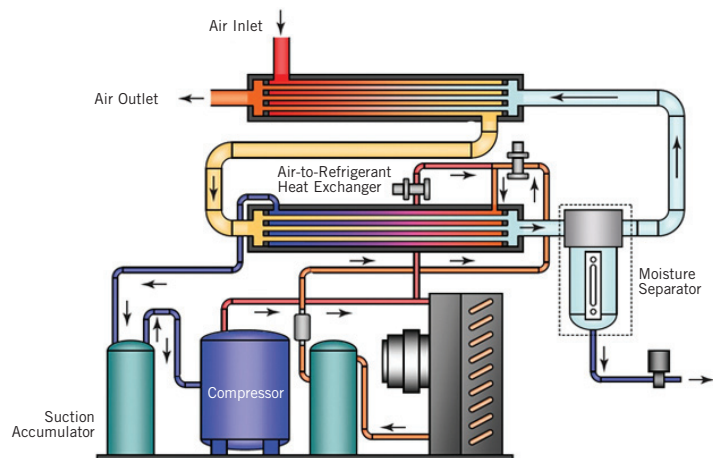
#### VC Series

Consistent Performance from 0 - 100% Load

### VC SERIES How it Works

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

the separator/mist eliminator where liquids and contaminants are reliably removed and ejected from the system via a zero-loss drain valve. The cold air is then reheated by the incoming hot air before leaving the dryer.



# VC SERIES TECHNICAL SPECIFICATIONS



## VC SERIES Model Comparison

	Model	Capacity (scfm)	Connection (in)	H"	W"	Air-Cooled D"	Water-Cooled D"	Weight (lbs)	Nominal Ref. HP	Air-Cooled kW	Water-Cooled kW
SINGLECEL MODEL	VC-1250	1250	3" Flange	60	26	81	55	1450	8.5	5.6	3.1
	VC-1600	1600	4" Flange	60	26	81	55	1700	10	7.7	4.3
	VC-2000	2000	4" Flange	60	26	81	55	1900	13	10.5	6.4
MULTICEL MODEL	VC-2500	2500	4" Flange	79	70	81	55	3400	17	11.2	6.2
	VC-3200	3200	6" Flange	79	70	81	55	3900	20	15.4	8.5
	VC-4000	4000	6" Flange	79	70	81	55	4300	26	21.0	12.9

\*Capacity rated in accordance with CAGI:  
100 psig inlet pressure / 100°F inlet temperature / 100°F ambient temperature / 38°F pressure dew point. Average kW per hour of dryer operation at full capacity. 460/3/60 standard.  
Due to a continuous program of product improvement, specification and dimensions are subject to change without notice.

## VC SERIES Capacity Correction Factors

### To Size the Dryer Capacity for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm} \times C1 \times C2 \times C3 \times C4$$

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: VC-1600  
Standard Capacity: 1600 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  
38°F required dew point: C4 = 1.0

$$\text{Adjusted Capacity} = 1600 \text{ scfm} \times 1.05 \times 1.0 \times 1.07 \times 1.0 = 1798 \text{ scfm}$$

### To Select the Dryer Model for Actual Conditions

$$\text{Adjusted Capacity} = \text{scfm} / C1 / C2 / C3 / C4$$

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: 2000 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  
Required dew point: 38°F pdp: C4 = 1.0

$$\text{Adjusted Capacity} = 2000 \text{ scfm} / 1.07 / 1.21 / 1.0 / 1.0 = 1545 \text{ scfm}$$

Selected Dryer Model: VC-1600

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), system pressures (C3), and varying dew point requirements (C4).

### 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 system air pressure (C3)

System Pressure (psig)	50	75	100	125	150	175	200	225	250
Correction Factor	0.85	0.95	1	1.07	1.13	1.18	1.20	1.22	1.24

### Capacity 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