



CB/CF Series



CONDENSERS AND CONDENSING UNITS



CF Series



CB Series

Features:

- 2-70 ton air-cooled condensing units and remote air-cooled condensers
- Air-source heat pump configurations for energy efficient heating
- Variable capacity (10-100%) and two-step scroll compressors for load matching cooling and heat pump heating with improved part load efficiency.
- R-410A scroll compressors - one, two or four stages of cooling
- High efficiency variable speed ECM and VFD controlled condenser fans
- Modulating hot gas reheat humidity control independently controls temperature and humidity
- Labeled components for quick and easy installation
- Labeled controls components with color-coded wiring that matches the unit wiring diagram included in the control compartment
- Matching indoor and outdoor air handling units available for a complete split system solution

Application Flexibility
Minimizes Installation Time and Reduces Cost

○ High Efficiency
Heat Pump Option

○ Modulating
Dehumidification

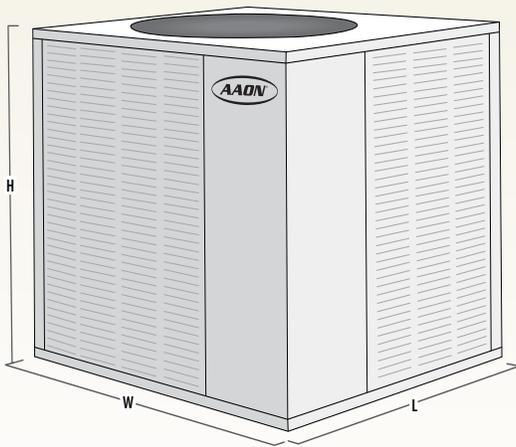
○ Part Load
Capacity Control

○ Quiet Operation

CB/CF Series

Condensing Units

CB/CF Series split system condensing units reflect the proven reliability and engineering excellence from the premier manufacturer of heating and cooling products. All selected options are factory installed to minimize field installation time and reduce cost. AAON CB/CF Series condensing units boast the same benefits that customers have come to expect from other AAON equipment: serviceability, quiet operation, reliability, high efficiency, durable construction, and a number of premier options that provide the flexibility to suit a wide variety of job requirements.



CB Series - Vertical Discharge

CB Series

CB Series Superior Features

- Cabinet is constructed of painted heavy gauge galvanized steel that surpasses a 2,500 hour salt spray test to provide the unit with corrosion protection.
- Single, easily removable, panel that provides access to the unit service compartments.
- Factory supplied and labeled split system copper stub outs with shut off valves for easy installation without the need to cut holes in the cabinet.
- Wrap-around, single row, high efficiency condenser coil with no additional rows to trap dirt and debris. A single row wrap-around coil is easier to clean than a multi-row wrap-around coil.
- Refrigerant circuits contain automatic low pressure and manual reset high pressure safety cut-outs, suction and liquid line Schrader valves, and a factory holding charge of R-410A.
- Heavy duty wire guards or painted louvered panels protect the condenser coil from damage and debris.
- Forklift slots in the base provide easy handling at the job site.
- Unit specific color-coded point-to-point wiring diagrams are provided and are laminated and permanently affixed inside the control compartment.

CB Model	Compressor/Circuit	Discharge Direction	Width	Height	Length
024	1/1	Vertical	37	39	31
036				43	37
048					
060					

All dimensions are in inches.

CB/CF Series Premier Options

- Lead variable or all variable capacity R-410A scroll compressors for load matching cooling, heat pump heating, and improved part load efficiency.
- Modulating hot gas reheat is available to provide precise dehumidification, even with low sensible heat loads, without the temperature swings common with on/off reheat systems.
- Polymer e-coated coils are available to extend the life of the coils and protect them in corrosive environments.
- Low ambient fan cycling or modulating head pressure control options (ECM driven or VFD controlled condenser fans) available to allow cooling operation down to 35° F ambient.
- Flooded condenser head pressure control options available to allow cooling operation down to 0° F ambient.
- 24V control circuit transformer to prevent exceeding the capacity of the air handling unit's control circuit transformer is standard in CF Series (option in CB Series).
- High density foam compressor sound suppression blanket to reduce radiated noise.
- Hail guards protect the CF condenser coil from damage and debris.
- Optional 5 year compressor warranty.
- Unit controls options including AAON provided controls and factory installed customer provided controls.



- ▲ ECM driven condenser fans for head pressure control and complete capacity modulation.

Air-Source Heat Pump from 2-70 tons

Air-source heat pumps provide energy efficient cooling and heating through the unit's refrigeration circuit. Air-source heat pumps transfer heat to the outside in the summer and to the space in the winter to provide both space heating and cooling. When paired with AAON air handling units, CB/CF Series air-source heat pumps can create a complete dual fuel split system with hot water, steam, electric, or gas heating.

Variable Capacity Scroll Compressors

CB and CF series units are available with variable capacity scroll compressors that can modulate from 10-100% capacity. This allows the system, with a matching AAON air handling unit, to maintain consistent supply air temperatures at all operating conditions. During part load operation, reducing compressor capacity increases part load efficiency and ultimately saves valuable system operating costs.

- ◀ 10-100% variable capacity scroll compressors provide load matching cooling and improve part load efficiency.

CF Series

CF Series Superior Features

- Cabinet is constructed of painted heavy gauge galvanized steel that surpasses a 2,500 hour salt spray test to provide the unit with corrosion protection.
- Unit compressors and controls are housed in a service compartment.
- Access doors with full length stainless steel piano hinges and lockable handles provide superior access and serviceability for the isolated compressor and controls compartment.
- Factory supplied and labeled split system copper stub outs with shut off valves for easy installation without the need to cut holes in the cabinet.
- Refrigerant circuits contain automatic low pressure and manual reset high pressure safety cut-outs, suction and liquid line Schrader valves, and a factory holding charge of R-410A.
- Rigid base design with forklift slots (2-25 & 30 tons) and lifting lugs (9-70 tons) provide easy handling at the job site.
- Unit specific color-coded point-to-point wiring diagrams are provided and are laminated and permanently affixed inside the control compartment.



CF Series A Cabinet
(2-7 tons)



CF Series C Cabinet
(16-25 & 30 tons)



CF Series B Cabinet
(9-15 tons)

Remote Air-Cooled Condenser

Air-cooled condenser configuration without compressors is available on the CF Series for systems where the compressors are included with the air handling unit or self-contained unit. Configuration flexibility allows AAOV split systems to meet the application requirements.



CF Series D Cabinet
(26 & 31-70 tons)

CF Model	Cabinet	Compressor/Circuit	Discharge Direction	Width	Height	Length Base	Length Top
002	A	1/1	Horizontal	29 1/4	56 1/4	61 1/2	61 1/2
003							
004							
005							
006							
007	B			46 3/4	57	59 3/4	94
009							
011							
013	C	2/2	Vertical	63	67 1/4	58	91
015							
016							
018							
020							
025	D	4/2 or 4/4		84	69 1/4	104	121 1/4
030							
026							
031							
040							
050							
060							
070							

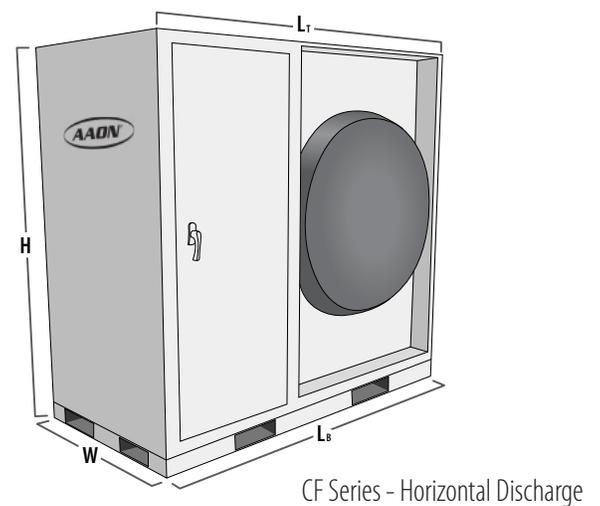
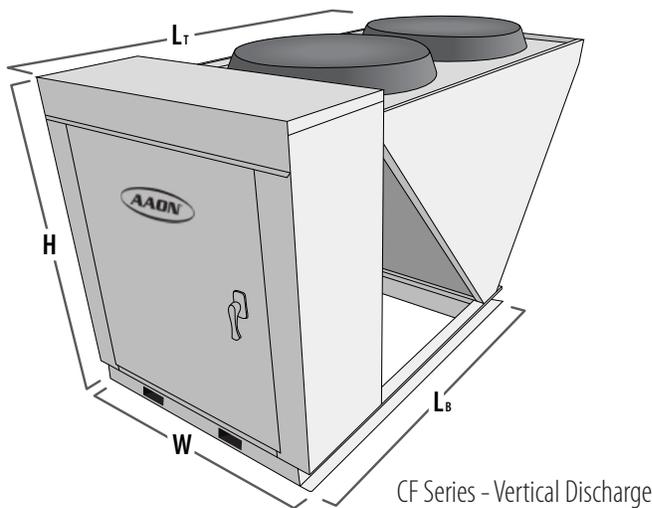
All dimensions are in inches.

Dehumidification

CB and CF series units are available with modulating hot gas reheat humidity control to provide precise dehumidification, even with low sensible heat loads, without the temperature swings common with on/off reheat systems. Factory installed modulating valve allows only the necessary amount of reheat to create a consistent supply air temperature while maintaining space relative humidity.



▲ Microchannel condenser coils are durable, more efficient, lighter, and use less refrigerant than traditional fin and tube condenser coils.



Serviceability

Corrosion resistant 2,500 hour salt spray tested painted extends the life of the equipment.

CF Series D Cabinet (26 & 31-70 tons)



Compressors and controls are isolated from the condenser airflow and are included in the control compartment for easy service and scheduled maintenance.

Service access doors with full length stainless steel piano hinges and lockable handles.

Factory installed non-fused disconnect

CF Series A Cabinet (2-7 tons)

Optional AAON VCC-X controller includes onboard BACnet with a keypad and display. Only two shielded pairs run from the air handler to the CB/CF condensing unit (one system, one diagnostic) which simplifies field wiring.



Low voltage controls on a hinged control panel.

A unit specific color-coded wiring diagram matches the labeled electrical components and color-coded wiring to make component identification simple.



Factory wired convenience outlet ▶ permits the use of the outlet while power to the unit is shut off.

◀ Compressor isolation valves reduce the amount of refrigerant that must be recovered during compressor service or replacement.



Split System Matching

CB/CF Series condensing units can be paired with AAON H3 Series, V3 Series, M2 Series, RQ Series, and RN Series air handling units. The AAON ECat selection software includes refrigeration options, such as Modulating Hot Gas Reheat or Flooded Condenser 0°F Low Ambient Controls, when matching an AAON split system. Pairing a CF Series condensing unit with an AAON air handling unit simplifies design and installation with factory supplied split system refrigerant line piping and wiring diagrams.



◀ Labeled split system piping stub outs with shut-off valves allow for easy installation.

**H3 Series Horizontal
Air Handling Unit**



**V3 Series Vertical
Air Handling Unit**





AAON Environmentally Friendly HVAC Product Family

Outdoor Air Handling Units

(800 - 72,000 + cfm)



Condensing Units

(2-70 tons)



Chillers

(4-55 tons)



Self-Contained Units

(3-70 tons)



Indoor Air Handling Units

(800 - 50,000 + cfm)



Water-Source Heat Pumps

(1/2 - 230 tons)



Packaged Rooftop Units

(2-240 tons)



Controls

(WSHP, RTU, SELF-CONTAINED, SPLIT SYSTEM, & CHILLER)



BasX Solutions



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