



# CN Series



## CONDENSING UNITS



### Features:

- Air-cooled condensing units with capacities from 55 to 140 tons
- VFD controlled variable speed R-410A scroll compressors
- High efficiency microchannel condenser coils
- Double wall rigid polyurethane foam injected panel construction
- Service access doors with full length stainless steel piano hinges and zinc cast lockable handles
- VFD controlled variable speed condenser fans
- Modulating hot gas reheat humidity control
- Matching indoor and outdoor air handling units available for a complete split system solution

Application Flexibility  
Minimizes Installation Time and Reduces Cost

◦ Quiet Operation

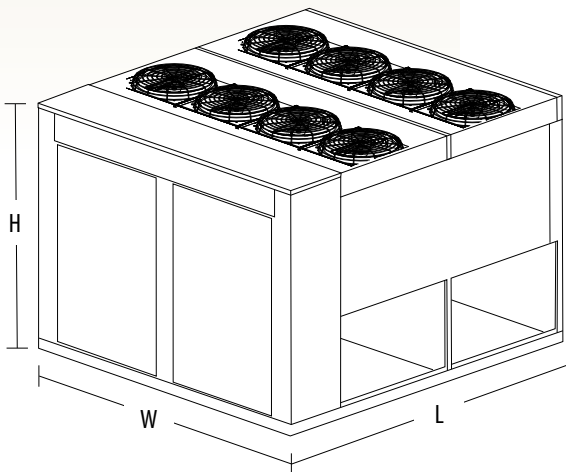
◦ Variable Capacity Compressors

◦ Easy to Install and Service

◦ Compact Construction

# CN Series Condensing Units

AAON CN Series condensing units offer a cost effective, feature laden approach to energy efficient cooling. The split system condensing units reflect the proven reliability and engineering excellence from the premier manufacturer of heating and cooling products. AAON CN Series condensing units boast the same world class benefits that customers have come to expect from AAON packaged equipment: serviceability, quiet operation, reliability, premium efficiency, rugged construction, and a number of premier options that provide the flexibility to suit any application.



## Superior Features

- VFD controlled variable speed R-410A scroll compressors are available for load matching cooling and increased part load efficiency.
- Compressors are factory installed on structural decks and rubber isolation mounts for quiet and efficient operation.
- High efficiency air-cooled microchannel condenser is designed to maximize performance of the condensing unit.
- Two inch double wall polyurethane foam panel construction with integrated thermal break provides R-13 or greater thermal resistance, makes the cabinet more rigid and resistant to damage, and attenuates radiated compressor sound.
- Access doors with full length stainless steel piano hinges and zinc cast, lockable handles provide ample access and serviceability to the isolated compressor and controls compartment.
- Designed specifically for outdoor operation, CN Series condensing units include UV and corrosion resistant exterior paint that exceeds a 2,500 hour salt-spray test.
- Run test report, color-coded wiring diagram, and Installation, Operation, and Maintenance manual with startup form are included in the controls compartment.

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



CN Model	Cabinet	Width	Height	Length
055	A	142	104	90
065				152
075				
090	B	142	104	152
105				
120	C	142	104	152
130				
140				

All dimensions are in inches.

# Compact Construction

## Premier Options

- VFD controlled variable speed condenser fans increase part load efficiency and offer complete capacity modulation when coupled with VFD controlled variable speed compressors.
- Flooded condenser low ambient controls allow mechanical cooling operation during periods of low ambient conditions down to 0°F.
- E-coated condenser coils are available to extend the life of the coils and protect them in corrosive environments.
- Modulating hot gas reheat is available to provide energy efficient dehumidification, even with low sensible heat loads, without the temperature swings inherent in on/off reheat systems.
- Optional 5 year non-prorated compressor warranty.



Compressor and Control Service Compartment



VFD controlled variable speed scroll compressors provide load matching cooling and improve part load efficiency.



## Variable Capacity Scroll Compressors

CN Series condensing units include lead VFD controlled variable speed scroll compressors that can modulate compressor capacity. This allows the system, when paired 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. CN Series units are also available with VFD controlled compressors on all circuits to maximize energy savings.

## Variable Speed Condenser Fans

CN Series condensing units are available with VFD controlled condenser fans that increase part load efficiency and save operating costs. The factory controlled VFDs vary the fan speed for head pressure control.

## Microchannel Condenser

CN Series condensing units are designed with microchannel condenser coils that are more efficient, lighter, and use less refrigerant than traditional fin and tube condenser coils. The microchannel tube design increases unit efficiency by enhancing heat transfer, and the all aluminum construction of the coil is up to 30 percent lighter than fin and tube coils.

## Dehumidification

CN Series condensing units are available with modulating hot gas reheat humidity control. Factory installed reheat valves use only the minimum amount of reheat to deliver a consistent supply air temperature during dehumidification. Modulating hot gas reheat provides energy efficient dehumidification when paired with AAON air handling units containing high capacity cooling coils.

## Split System Matching

CN Series condensing units can be paired with AAON RN Series, M3 Series, and M2 Series air handling units. The AAON ECat32 selection software includes refrigeration options, such as Modulating Hot Gas Reheat or Flooded Condenser 0°F Low Ambient, when matching a split system. Pairing a CN Series condensing unit with an AAON air handling unit ensures ease of installation with split system piping and control wiring.

# AAON Environmentally Friendly HVAC Product Family

**Custom & Cataloged  
Air Handling Units** ■ .....  
(800-200,000+ cfm)

**Condensers & Condensing Units** ■ .....  
(2-230 tons)

**Chillers (Air-Cooled, Evaporative-  
Cooled, & Heat Pumps)** ■ .....  
(5-540 tons)

**Rooftop Units** ■ .....  
(2-240 tons)

**Outdoor Equipment Rooms** ■ .....  
(Chillers, Boilers, & Pumps)

**Self Contained Units** ■ .....  
(3-70 tons)

**Residential Systems** ■ .....  
(2-5 tons)

**Geothermal & WSHP Units** ■ .....  
(2-230 tons)

**Air-Source Heat Pumps** ■ .....  
(2-230 tons)

**Heating and Cooling Coils** ■ .....  
(Booster, Hydronic, & DX)

**Fluid Coolers** ■ .....  
(50-400 tons)

## Heating and Cooling *for...*

**Auditoriums**  
**Convenience Stores**  
**Health Clubs**  
**Healthcare Facilities**  
**Homes**  
**Lodgings**  
**Manufacturing**  
**Museums & Libraries**  
**Natatoriums**  
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**Restaurants**  
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