



# RN/RQ Series



## PACKAGED ROOFTOP UNITS, HEAT PUMPS & OUTDOOR AIR HANDLING UNITS



### Features:

- Air-cooled condenser or air-source heat pump packaged DX rooftop units, 2-140 tons
- Water-cooled condenser, water-source heat pump, or geothermal heat pump configurations
- Chilled water or non-compressorized DX air handling units, 800-42,000 cfm
- R-410A scroll compressors - one, two or four stage cooling
- Variable capacity and variable speed R-410A scroll compressors for load matching cooling and improved part load efficiency.
- Electric, gas, steam or hot water heating
- Direct drive backward curved plenum supply fans
- Power exhaust and power return options
- Factory installed AAOAIRE® total and sensible energy recovery wheels
- Double wall rigid polyurethane foam panel construction with a minimum R-value of 13
- Service access doors with full length stainless steel piano hinges and lockable handles
- Sloped stainless steel drain pans

Application Flexibility  
Minimizes Installation Time and Reduces Cost

○ *Make-up Air Applications  
Up to 100% Outside Air*

○ *Dehumidification and  
Filtration Capabilities*

○ *Large Tonnage Rooftops  
with Small Footprints*

○ *Factory Installed or Customer  
Specific Controls Options*

# RN/RQ

## Rooftop/Air Handler

*AAON RN and RQ Series rooftop units continue to lead the packaged rooftop equipment industry in performance and serviceability. Double wall rigid polyurethane foam insulated cabinet construction and direct drive backward curved plenum fans allow RN and RQ Series units to have quiet, energy efficient airflow with high static pressure capabilities. RN and RQ Series units also feature lockable hinged doors which provide service access to all sections of the unit.*

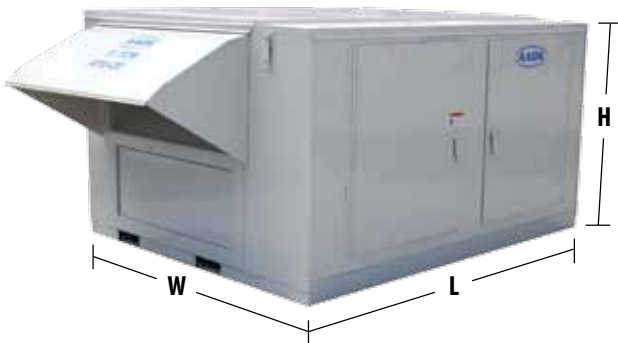
### Superior Features

- Cabinet construction consists of rigid polyurethane foam panels with G90 galvanized steel on both sides and a closed cell polyurethane foam interior core. The inner wall protects the insulation from moisture damage, prevents microbial growth and is easy to clean.
- Two inch rigid polyurethane foam insulated panels have a thermal resistance R-value of 13 or greater, which exceeds the R-value of a cabinet with four inch thick fiberglass construction. They also make the cabinet more rigid and resistant to damage and provide increased sound dampening.
- Access doors with full length stainless steel piano hinges and quarter turn, lockable handles provide improved reliability over single point hinges and make the unit easily serviceable.
- Corrosion resistant polyurethane paint exceeds a 2,500 hour salt spray test - over 5 times the industry standard of 500 hours.
- Compressors and unit controls are contained within a compartment isolated from the air stream for ease of service and increased sound dampening.
- Direct drive backward curved plenum fans with rubber isolation mounts provide improved energy efficiency and reduced maintenance versus belt driven fans.
- Sloped stainless steel drain pans eliminate standing water which can support microbial growth and stainless steel construction prevents corrosion that could lead to water leaks and contaminants in the air stream.
- Run test report, wiring diagram and Installation, Operation and Maintenance manual with startup form provided in control access compartment of every unit.
- 5 year non-prorated compressor warranty, 15 year non-prorated aluminized steel gas heat exchanger warranty and 25 year non-prorated stainless steel gas heat exchanger warranty.

### Premier Options

- Variable capacity and variable speed R-410A scroll compressors for load matching cooling and improved part load efficiency.
- Refrigerant-to-water heat exchanger for improved unit efficiency.
- Air-source, water-source and geothermal heat pump options for energy efficient heating.
- Factory installed total or sensible AAONAIRE® energy recovery wheels.
- Humidity control options including: High Capacity Coils, Modulating Humidity Control, Return Air Bypass and Mixed Air Bypass.
- Chilled water cooling coils allow unit to tie into existing chilled water system.
- Hot water or steam heating coils allow unit to tie into existing boiler system.
- Polymer e-coated coils, copper finned coils and stainless steel coil casings are available to extend the life of the coils and protect them in corrosive environments.
- Power exhaust and power return fans with economizer for application flexibility.
- VFD controlled supply, exhaust and return fans for precise airflow control, building pressure control and reduced power consumption.
- Modulating gas heat with stainless steel heat exchanger provides greater fuel efficiency, longer heater life and improved occupancy comfort.
- SCR (Silicon Controlled Rectifier) electric heat control for reduced power consumption, longer heater life and improved occupant comfort.
- Multiple high efficiency air filtration options.
- Unit controls options including factory installed control-by-others.

### B Cabinet Air Handling Unit



# Air-Cooled or Water-Cooled Condensers

RN/RQ Model	Cabinet	Air-Cooled EER	Water-Cooled EER	Nominal CFM	Width	Height*	Length*
RQ-002	--	Up to 19.2 SEER	NA	800	44	43	82
RQ-003				1,200			
RQ-004				1,600			
RQ-005				2,000			
RQ-006				2,400			
RN-006	A	Up to 14.0	NA	1,800	79	44	82
RN-007				2,100			
RN-008				2,400			
RN-010				3,000			
RN-009	B	Up to 13.9	NA	2,700	96	50	88
RN-011				3,300			
RN-013				3,400			
RN-015				4,500			
RN-016	C	Up to 12.7	NA	4,800	101	59	110
RN-018				5,400			
RN-020				6,000			
RN-025			Up to 16	7,500			
RN-030				9,000			
RN-026	D	Up to 12.2	Up to 16.5	7,800	100	97	155
RN-031				9,300			
RN-040				12,000			
RN-050				15,000			
RN-060				18,000			
RN-070				21,000			
RN-055	E	Up to 11.6	Up to 15.2	16,500	142	102	294
RN-065				19,500			
RN-075				22,500			
RN-090				27,000			
RN-105				31,500			
RN-120				36,000			
RN-130				39,000			
RN-140				42,000			

\*Length and height vary depending on options selected.  
All dimensions are in inches.  
Design cfm may be 30-50% greater or less than nominal cfm.

## R-13 Double Wall Rigid Polyurethane Foam Panel Construction

AAON is setting a new standard for performance with double wall construction using closed cell polyurethane foam insulation. Not only does it have more than twice the insulating R-value, it creates a far more rigid and stronger assembly with less air leakage than fiberglass insulated panels.

## Dehumidification

AAON offers many humidity control options. High capacity cooling coils are available which allow for more dehumidification versus standard cooling coils. Return air bypass and mixed air bypass are available on RN Series units for single coil humidity control. Modulating humidity control is available to provide energy efficient dehumidification, even with low sensible heat loads, without the temperature swings common with on/off reheat systems.

## Make Up Air Capability

AAON RN and RQ Series units have make up air capability and can be specified with up to 100% outside air. AAONAIRE® energy recovery wheels are available on make up air units to increase the unit's energy efficiency. High capacity cooling coils are available to handle the higher latent load of outside air. Modulating gas heat and SCR electric heat are available to provide energy efficient, consistent supply air temperature heating. Modulating humidity control is available to provide dehumidification without over cooling when the outside air humidity is above setpoint. Variable capacity scroll compressors are available to provide energy efficient consistent supply air temperature.

## Air Handler Option

AAON RN and RQ Series outdoor air handling units provide a hydronic cooling and heating option. Gas, electric, steam and hot water heating are available on an RN and RQ Series air handling units. Cabinet construction is similar to the packaged rooftop units with easily accessible coil connections.

**RN/RQ** Series  
Rooftop / Air Handler

# 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)** ■ .....  
(5-365 tons)

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

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

**Self Contained Units** ■ .....  
(2-70 tons)

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

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

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

## Heating and Cooling *for...*

**Auditoriums**  
**Convenience Stores**  
**Health Clubs**  
**Healthcare Facilities**  
**Homes**  
**Lodgings**  
**Manufacturing**  
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**Natatoriums**  
**Office Buildings**  
**Restaurants**  
**Retail Stores**  
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