



## Submittal Data Sheet

38 ton, 460V, VRV IV X HR

REYQ456XBYDA

### FEATURES

- Compatible with Low Temperature (LT) Hydrobox and EEV Kit for DOAS with hot gas reheat capability
- Industry's first 3 phase VRF system to integrate with communicating gas furnaces.
- Design flexibility to enlarge system from single to dual module or dual to triple module without changes to installed main pipe sizes.
- Engineered with Daikin vapor injection compressor for optimized part load efficiencies.
- Hot gas defrost circuit with improved control logic allows installation without base pan heater.
- New service window provides quick access to multi-functional display and configuration buttons.
- Multi-functional display provides refrigerant pressures and temperatures eliminating the need to connect gauges during regular maintenance check.
- Easy commissioning with ability to program settings off site using configurator tool.
- Assembled in the US to increase flexibility and reduce lead times.
- Standard Limited Warranty: 10-year limited parts warranty.



### BENEFITS

- Choice of gas furnace or heat pump heating for optimizing operational costs based on utility cost.
- Engineered to optimize capital on phased & tenant fit out commercial buildings.
- Year round comfort and energy savings with Variable Refrigerant Temperature technology (VRT).
- Modular and lightweight - enables flexibility in system layout and installation
- Corrosion resistance 1000hr salt spray tested Daikin PE blue fin heat exchanger
- Refrigerant cooled inverter technology keeps PCB cool independent of ambient temperature
- Field performable Intermittent outdoor fan operation to help minimize snow accumulation on fan blades when the system is off.
- Backwards compatible with T-series Branch Selector boxes.



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PERFORMANCE

|                                  |   |                                      |   |
|----------------------------------|---|--------------------------------------|---|
| Outdoor Unit Model No.           | REYQ456XBYDA  | Outdoor Unit Name:                   | 38 ton, 460V, VRV IV X HR                                 |
| Type:                            | Heat Recovery   | Unit Combination:                    | REYQ144XBYDA(x2) + REYQ168XBYDA                           |
| Rated Cooling Conditions:        | Indoor (°F DB/WB): 80 / 67<br>Ambient (°F DB/WB): 95 / 75 | Rated Heating Conditions:            | Indoor (°F DB/WB): 70 / 60<br>Ambient (°F DB/WB): 47 / 43 |
| Rated Piping Length(ft):         |   |                                      |   |
| Rated Height Difference (ft):    |   |                                      |   |
| Rated Cooling Capacity (Btu/hr): | 430,000   | Rated Heating Capacity (Btu/hr):     | 400,000   |
| Nom Cooling Capacity (Btu/hr):   | 450,000   | Nom Heating Capacity (Btu/hr):       | 513,000   |
| Cooling Input Power (kW):        |   | Heating Input Power (kW):            |   |
| EER (Non-Ducted/Ducted):         | 8.90 / 8.90   | Heating COP (Non-Ducted/Ducted):     | 3.2 / 3.2   |
| IEER (Non-Ducted/Ducted):        | 15.60 / 15.20   | Heating COP 17F (Non-Ducted/Ducted): | 2.1 / 2.1   |
|                                  |   | SCHE (Non-Ducted/Ducted):            | 10.00 / 10.80   |

OUTDOOR UNIT DETAILS

|                                       |                    |                                |          |
|---------------------------------------|--------------------|--------------------------------|----------|
| Power Supply (V/Hz/Ph):               | 460 / 60 / 3       | Compressor Stage:              | Inverter |
| Power Supply Connections:             | L1, L2, L3, Ground | Capacity Control Range (%):    | 4 - 100  |
| Min. Circuit Amps MCA (A):            | 27.9 + 27.9 + 31.1 | Capacity Index Limit:          | -        |
| Max Overcurrent Protection (MOP) (A): | 40 + 40 + 40       | Airflow Rate (H) (CFM):        | 9480     |
| Max Starting Current MSC(A):          |                    | Gas Pipe Connection (inch):    | 1-5/8    |
| Rated Load Amps RLA(A):               |                    | Liquid Pipe Connection (inch): | 3/4      |
| Dimensions (Height) (in):             | 66-11/16           | H/L Pressure Connection (inch) | 1-3/8    |
| Dimensions (Width) (in):              | 48-7/8             |                                |          |
| Dimensions (Depth) (in):              | 30-3/16            | Sound Pressure (H) (dBA):      | 70       |
| Net Weight (lb):                      | 793 + 793 + 793    | Sound Power Level (dBA):       |          |
|                                       |                    | Max. No. of Indoor Units:      | 64       |

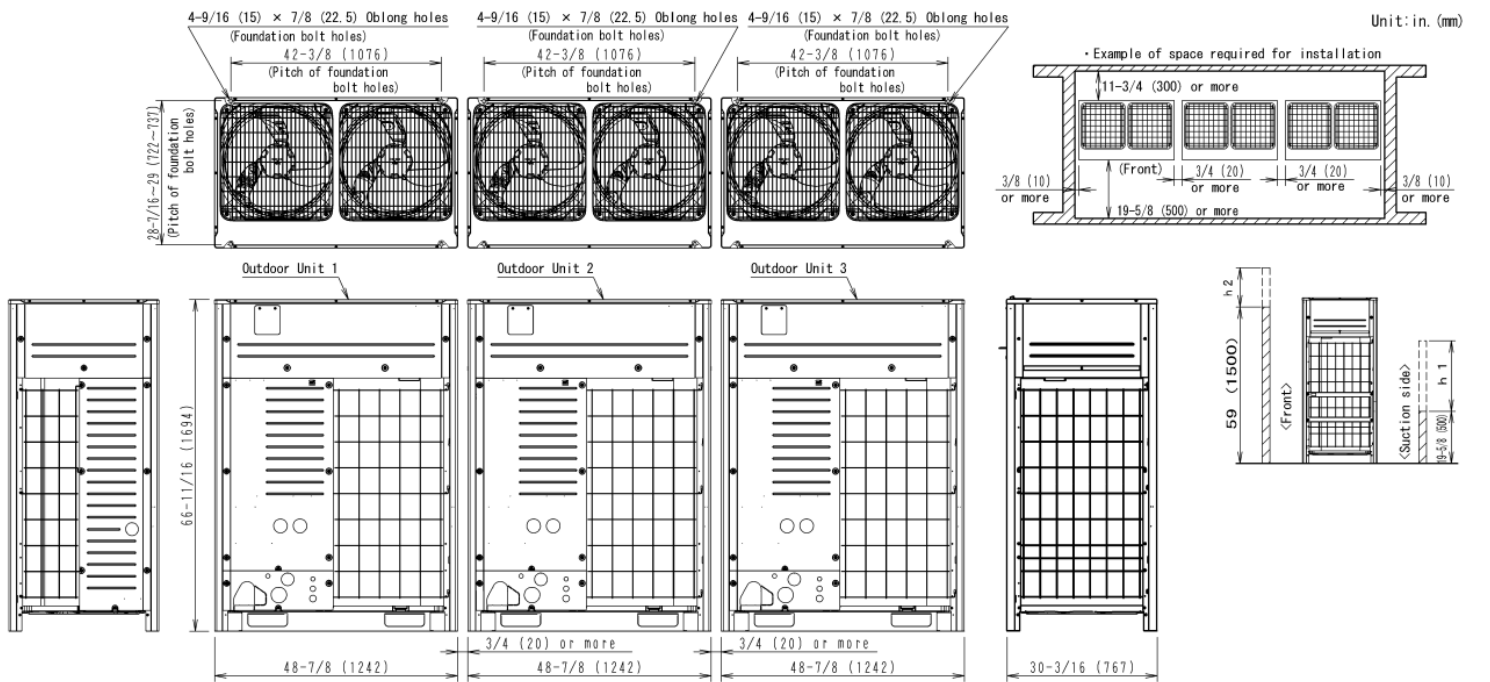
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## SYSTEM DETAILS

|  |        |                                   |          |
|--|--------|-----------------------------------|----------|
| Refrigerant Type:                      | R-410A | Cooling Operation Range (°F DB):  | 23 - 122 |
| Holding Refrigerant Charge (lbs):      | 25.8   | Heating Operation Range (°F WB):  | -13 - 60 |
| Additional Charge (oz/ft):             |        | Max. Pipe Length (Vertical) (ft): | 164      |
| Pre-charge Piping (Length) (ft):       |        | Cooling Range w/Baffle (°F DB):   | -        |
| Max. Pipe Length (Total) (ft):         | 540    |                                   |          |
| Max Height Separation (Ind to Ind ft): | 98     |                                   |          |

## DIMENSIONAL DRAWING



- Notes :
- Heights of walls of this example:  
Front : 59 in. (1500mm)  
Suction side : 19-5/8 in. (500mm)  
Side : Height unrestricted  
The installation space shown in this figure is based on the condition of cooling operation at the outdoor air temperature of 95 FDB (35 CDB).  
The installation space of suction side shown above must be expanded in the following case.  
• Design outdoor temperature becomes over 95 FDB (35 CDB).  
• Operating over max. operating load (In case of causing a heavy heating load at indoor unit side).
  - If the above wall heights are exceeded then "h2"/2 and "h1"/2 should be added to the front and suction side service spaces respectively as shown in the following figure.
  - When installing the units the most appropriate pattern should be selected from "Installation and repair space drawing" in order to obtain the best fit in the space available always bearing in mind the need to leave enough room for a person to pass between units and wall and for the air to circulate freely.  
(If more units are to be installed than are shown in "Installation and repair space drawing", your layout should take account of the possibility of short circuiting.)
  - The units should be installed to leave sufficient space at the front for the on site refrigerant piping work to be carried out comfortably.

| Model Name   | Outdoor Unit 1 | Drawing No. | Outdoor Unit 2 | Drawing No. | Outdoor Unit 3 | Drawing No. |
|--------------|----------------|-------------|----------------|-------------|----------------|-------------|
| REYQ360XBYCA | REYQ120XBYCA   | 3D149935    | REYQ120XBYCA   | 3D149935    | REYQ120XBYCA   | 3D149935    |
| REYQ384XBYCA | REYQ120XBYCA   | 3D149935    | REYQ120XBYCA   | 3D149935    | REYQ144XBYCA   | 3D149935    |
| REYQ408XBYCA | REYQ120XBYCA   | 3D149935    | REYQ144XBYCA   | 3D149935    | REYQ144XBYCA   | 3D149935    |
| REYQ432XBYCA | REYQ144XBYCA   | 3D149935    | REYQ144XBYCA   | 3D149935    | REYQ144XBYCA   | 3D149935    |
| REYQ360XBTJA | REYQ120XBTJA   | 3D149935    | REYQ120XBTJA   | 3D149935    | REYQ120XBTJA   | 3D149935    |
| REYQ384XBTJA | REYQ120XBTJA   | 3D149935    | REYQ120XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    |
| REYQ408XBTJA | REYQ120XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    |
| REYQ432XBTJA | REYQ144XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    |
| REYQ456XBTJA | REYQ144XBTJA   | 3D149935    | REYQ144XBTJA   | 3D149935    | REYQ168XBTJA   | 3D149935    |
| REYQ360XBYDA | REYQ120XBYDA   | 3D149935    | REYQ120XBYDA   | 3D149935    | REYQ120XBYDA   | 3D149935    |
| REYQ384XBYDA | REYQ120XBYDA   | 3D149935    | REYQ120XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    |
| REYQ408XBYDA | REYQ120XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    |
| REYQ432XBYDA | REYQ144XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    |
| REYQ456XBYDA | REYQ144XBYDA   | 3D149935    | REYQ144XBYDA   | 3D149935    | REYQ168XBYDA   | 3D149935    |