Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 07/13/16

Submittal Data Sheet

12-Ton VRV-III Heat Pump Unit - RXYQ144PBTJ

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

FEATURES

- Extended operating range with the ability to operate at outdoor ambient conditions down to -4°F in heating and 23°F in cooling mode
- Fans and grilles designed for low sound level and efficient operation
- Long refrigerant piping lengths with up to 3,280 ft. of total â€œone-wayâ€ piping in the complete piping network
- Automatic charge function
- Automatic check of wiring, shut off vales, sensors and refrigerant volume
- Automatic diagnose of errors and malfunctions to speed up troubleshooting
- Standard Limited Warranty: 10-year warranty on compressor and all parts

BENEFITS

- Can operate up to 62 indoor units on a single piping network
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Very low sound levels allows flexibility in layout of systems
- Modular and lightweight - enables flexibility in system layout and installation
- DC fan motors improves efficiency, especially at low fan speed
- Fans and grilles designed for low sound level and efficient operation

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PERFORMANCE

Outdoor Unit Model No.	RXYQ144PBTJ	Outdoor Unit Name:	12-Ton VRV-III Heat Pump Unit
Type:	Heat Pump	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 70 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):	0.00		
Rated Cooling Capacity (Btu/hr):	138,000	Rated Heating Capacity (Btu/hr):	154,000
Nom Cooling Capacity (Btu/hr):		Nom Heating Capacity (Btu/hr):	
Cooling Input Power (kW):	12.21	Heating Input Power (kW):	13.27
EER (Non-Ducted/Ducted):	11.30 / 11.30	Heating COP (Non-Ducted/Ducted):	3.6 / 3.4
IEER (Non-Ducted/Ducted):	20.50 / 20.50	Heating COP 17F (Non-Ducted/Ducted):	2.6 / 2.5

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 3	Compressor Type	Inverter
Power Supply Connections:	L1, L2, L3 Ground	Capacity Control Range (%):	10 - 100
Min. Circuit Amps MCA (A):	72.20	Capacity Index Limit:	72.0 - 187.0
Max Overcurrent Protection (MOP) (A):		Airflow Rate (H) (CFM):	8,300
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	14.3 + 14.3	Liquid Pipe Connection (inch):	1/2
Dimensions (Height) (in):	66-1/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	51-3/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	62
Net Weight (lb):	747	Sound Power Level (dBA):	
		Max. No. of Indoor Units:	25

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Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

SYSTEM DETAILS			
Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	24.5	Heating Operation Range (°F WB):	
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	295
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	540	Heating Range w/Baffle (°F WB):	4 - 60
Max Height Separation (Ind to Ind ft):	0		

DIMENSIONAL DRAWING

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Submittal Data She

BRC1E73 - Navigation Remote Contr

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 07/13/16

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

Model Compatibility:

For use with the following VRV indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXTQ, FXUQ, FXZQ

For use with the following Daikin SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ

Specifications:

Model	BRC1E73
Description	Navigation Remote Controller
Maximum Connections	16 indoor units
Communication Wire	18AWG-2, No polarity Stranded, Non-shielded
Total Wiring Length	1,640 ft. (500 m)
Communication Protocol	Daikin Proprietary P1P2 protocol
Power	16VDC supplied by Indoor unit (1.58VA maximum)
Comfort Setpoint Range	60 to 90 °F (16 to 32 °C)
Setback Setpoint Range	40 to 95 °F (5 to 35°C)
Operating Temp Range	14 to 122°F (-10 to 50°C)
Operating Humidity Range	75% or less (RH) (w/o condensation)
Dimensions (WxHxD)	4.72x4.72x0.75 inch (120x120x19 mm)
Weight (Mass)	0.42 lbs. (0.19 kg)

Product Image:

1 of 3 display options – Detailed display shown

Dimensions:

Features/Benefits:

1. Up to 16 indoor units are controllable within one group
2. Within one group, up to 2 Navigation Remote Controllers can be used, one as a main and one as a sub
3. Backlit LCD displays in English, Spanish or French
4. Temperature sensor built-in with configurable offset
5. Display of Temperature and Setpoint in 1°F / °C increments
6. Three configurable display options: Detailed, Standard and Simple
7. Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
8. Setpoint range limit for cooling and heating modes
9. Independent cooling and heating setback setpoints (unoccupied period)
10. Auto changeover control with configurable Primary changeover at setpoint ±1° F with guard timer

Group Control:

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11. Airflow – Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)*
12. Built-in 7, 5+2, 5+1+1 and 1 (Everyday) schedules with up to 5 actions per day with independent cooling and heating or setback setpoints
13. Automatic Setback by occupancy sensor*
14. Automatic Off by occupancy sensor*
15. Configuration for Self-cleaning filter panel**
16. Automatic adjustment for Daylight Savings Time (DST)
17. 48 hour clock/calendar battery backup (protects schedule timing in cases of short term power loss from indoor unit)
18. Real-time monitoring of system malfunctions with immediate display of unit in error and error code
19. The buttons on the remote controller are selectable by locking out the unwanted buttons
20. The operation modes can be restricted to provide only the desired mode(s) of operation
21. Display can be configured to show "Off" and room temperature only when indoor unit is turned off
22. To prevent unwanted changes, fan speed selection and display may be hidden
23. Auto off timer configurable in 10 minute increments (range 30-180 minutes)
24. Can be used to replace earlier versions of remote controllers

* Available for FXFQ_TVJU and FXUQ_PVJU indoor units
**Available for FXTQ_TVJU indoor units

Auto changeover:
Automatic changeover is available for Heat Pump system and Heat Recovery systems. The setpoint for cooling and heating are configurable with a minimum differential of 0 to 7°F or single setpoint. The changeover is automatically controlled to happen in either of the following two cases:
Case 1: Changeover at the primary changeover temperature after the guard timer expires.

1. In default, the primary changeover setpoint is 1°F above cooling setpoint or 1°F below heating setpoint, which is configurable between 1°F – 4°F.
2. In default, the guard timer is 60 minutes, which is selectable among 15, 30, 60 (default) or 90 minutes.
3. The initiation of guard timer is built in to help prevent frequent changeover which may cause energy loss.

Case 2: Changeover at the secondary changeover temperature.

1. In default, the secondary changeover temperature is 1°F above the primary changeover temperature for cooling or 1°F below the primary changeover temperature for heating, which is configurable between 1°F – 4°F.
2. Case 2 will happen while the guard time is active in case 1.

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BRC1E73 - Navigation Remote Contr

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Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

Face Decal Options:

Face decal options to hide unnecessary buttons

1. The face decal is designed to adhere to the BRC1E faceplate
2. Hidden buttons can be used/accessed by service personnel without removing the face decal due to its flexibility

Used with	Single Setpoint mode			Dual Setpoint mode		
	BRC1E72RM	BRC1E72RF	BRC1E72RMF	BRC1E72RM2	BRC1E72RF2	BRC1E72RMF2
Model						
On/Off	X	X	X	X	X	X
Mode	X		X	X		X
Fan		X	X		X	X
Up, Down	X	X	X	X	X	X
Left, Right				X	X	X
Menu/Ok						
Cancel						

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Documentation:

Documentation available on www.daikincity.com or www.daikinac.com

- Installation Manual
- Operation Manual
- Submittal
- Guide Specifications

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Submittal Data Sheet

3.0-Ton DC Ducted Concealed Ceiling - FXMQ36PBVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

FEATURES

- Increased capacity range for increased flexibility
- Improved efficiency with DC fan motor
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure
- Easy maintenance with service access from below
- Installation flexibility with a low profile, compact design at less than 12" in height
- Standard Limited Warranty: 10-year warranty on compressor and all parts

BENEFITS

- Enhanced indoor air quality and LEED ready with MERV 13 filter options
- Flexible ductwork design with ESP capabilities up to 0.80" W.G.
- New economizer control logic
- New configurable auxiliary heater control logic
- Design allows it to be completely concealed - perfect for retail, classrooms, offices, banks, restaurants, and hotels.

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Submittal Data Sheet

3.0-Ton DC Ducted Concealed Ceiling - FXMQ36PBVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

Reviewed for Code Compliance
Inspections Division
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Date: 07/13/16

PERFORMANCE

Indoor Unit Model No.	FXMQ36PBVJU	Indoor Unit Name:	3.0-Ton DC Ducted Concealed Ceiling
Type:	Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	36,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 70 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	28,800	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.380	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	40,000		
Heating Input Power (kW):	0.36		

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/M/L) (CFM):	1,130/1,130/953/812
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	2.90	Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):	15.00	Liquid Pipe Connection (inch):	3/8
Dimensions (HxWxD) (in):	11-13/16 x 55-1/8 x 27-9/16	Condensate Connection (inch):	1-1/4
Panel (HxWxD) (in):		Sound Pressure (H/M/L) (dBA):	43/41/39
Net Weight (lb):	102	Sound Power Level (dBA):	
Panel Weight (lb):		Ext. Static Pressure (Rated/Max) (inWg):	0.40 / 0.80

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Submittal Data Sheet

3.0-Ton DC Ducted Concealed Ceiling - FXMQ36PBVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

DIMENSIONAL DRAWING

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Submittal Data Sheet

4.0-Ton DC Ducted Concealed - FXMQ48PAVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

FEATURES

- Increased capacity range for inreased flexibility
- Improved efficiency with DC fan motor
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure
- Easy maintenance with service access from below
- Installation flexibility with a low profile, compact design at less than 12" in height
- Standard Limited Warranty: 10-year warranty on compressor and all parts

BENEFITS

- Enhanced indoor air quality and LEED ready with MERV 13 filter options
- Flexible ductwork design with ESP capabilities up to 0.8" W.G.
- New economizer control logic
- New configurable auxiliary heater control logic
- Design allows it to be completely concealed â€“ perfect for retail, classrooms, offices, banks, restaurants, and hotels.

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Submittal Data Sheet

4.0-Ton DC Ducted Concealed - FXMQ48PAVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

Reviewed for Code Compliance
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Date: 07/13/16

PERFORMANCE

Indoor Unit Model No.	FXMQ48PAVJU	Indoor Unit Name:	4.0-Ton DC Ducted Concealed
Type:	Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	48,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 70 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	35,800	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.460	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	54,000		
Heating Input Power (kW):	0.45		

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/M/L) (CFM):	1,377/1,377/1,165/988
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	3.40	Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):	15.00	Liquid Pipe Connection (inch):	3/8
Dimensions (HxWxD) (in):	11-13/16 x 55-1/8 x 27-9/16	Condensate Connection (inch):	1-1/4
Panel (HxWxD) (in):		Sound Pressure (H/M/L) (dBA):	44/42/40
Net Weight (lb):	102	Sound Power Level (dBA):	
Panel Weight (lb):		Ext. Static Pressure (Rated/Max) (inWg):	0.40 / 0.80

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Submittal Data Sheet

4.0-Ton DC Ducted Concealed - FXMQ48PAVJU

Project: PORTLAND WATER DISTRICT

Submitted by: David Chadwick of F W WEBB CO on 4/20/2016

Submitted to: No Engineer Name Specified

DIMENSIONAL DRAWING

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