RAFAT
8850 GEORGE BOLTON PARKWAY, CALEDON, ONTARIO L7E 2Y4

Shop Drawings Transmittal No:	23 81 26-01R0

Project Name:	Construction of Victoria Park Arena and Brampton Sports Hall of Fame	**Project No.**	NRFP2024-232
		DATE:	30 May 2025
		Submittal Required Return Date:	13 Jun 2025
Submittal No:	84		
Title:	SD-VRV		
To:	Mark Falkenburger		
Checked by:	**Abdullah Hissamuddin**	**To Be Reviewed By the Following Consutlants**	Architecture49 & WSP
Submitted for:	Review and Approval		
Consultants Response			

wsp

☐ REVIEWED
☑ REVIEWED AS NOTED
☐ REVISE & RESUBMIT

BY Jerry Nweisser
DIVISION Buildings - Sustainability
DATE 6/25/2025
SUBMITTAL# 21-17
PROJECT CA-WSP-221-05263-00

THE REVIEW OF THIS DRAWING DOES NOT IN ANY WAY RELIEVE THE VENDOR OR CONTRACTOR OF RESPONSIBILITY FOR ITS ACCURACY OR FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.

RAFAT

SUBMITTAL REVIEW
For general compliance with the design concept and contract documents. Subcontractor is solely responsible for jobsite correlation and correctness of all ratings, sizings, type, style, dimensions, finish, quantities and satisfactory fitting to other work and equipment. This review does not change the intent of the contract document.

REVIEWED	✔
RESUBMIT	
REJECTED	

SHOP DRAWING REVIEW

Project Name: Victoria Park Arena

Project No. CA-WSP-221-05263-00
Date Received: 2025-06-18

Shop Drawing:
Title: Daikin VRV
Revision: 00
Submission No.: 21-17

This review by consultant is for sole purpose of ascertaining conformance with general design concept. This review does not mean that consultant approves detail design inherent in shop drawings, responsibility for which remains with contractor, and such review does not relieve contractor of responsibility for errors or omissions in shop drawings or of contractor's responsibility for meeting all requirements of contract documents. Be responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication process or to techniques of construction and installation, and for coordination of the work of subtrades.

☐ **Reviewed**	**Mechanical Review Required** ☒		**Electrical Review Required** ☒	
☒ **Reviewed as Noted**	**Reviewed by:**	Jerry Nweisser	**Reviewed by:**	Brad Li
☐ **Revise & Resubmit**	**Review Date:**	2025-06-25	**Review Date:**	2025-06-18

Item	Comments
1.	Contractor to refer to Division 20, Section 20 05 05, Subsection 1.14. Contractor shall ensure that any alternative or "approved equal" products fully meet all specified requirements with no impact to cost or schedule. Clearly identify any deviations and provide a credit if applicable.
2.	Submittal lists multiple references to work by others. Contractor shall be responsible for confirming that all work indicated as by others is properly coordinated. Clarify any scope gaps and include any specific items that need to be referenced.
3.	Vendor to confirm that all units meet the required RCL and comply with applicable CSA codes.
	Elec comments below through 1 to 2 (reviewed as noted):
1.	A separate breaker for each split AC, 208V, 1PH equipment of all AC1 to AC-29 was not provided, instead a breaker that is feeding multiple AC equipment was designed by considering the total FLA ratings of grouped AC equipment being fed from the breaker, where only limited breakers were provided from design basis of contract drawings. Electrical contractor to double confirm if the design from drawings with current breakers sized, and with the grouped AC equipment being fed from the breakers is acceptable by the manufacturer and as per relevant code requirements. Should a separate overcurrent protection is required for each AC unit, then either keep the current design with quantity of breakers, their sizes, and the group of AC equipment being connected to the breakers, but to install a fusible disconnect switch with the MOP fuse that is matching the required rating of shop drawing; or source the separate breaker for each AC equipment with the size as per requirement of shop drawing from available panel space of panels 'M-A", 'M-B' and 'M-C', then update the actual installations on as-built drawings set. Contractor to provide the RFI for any questions if needed regarding the final installations of the equipment and devices.
2.	As per proposed outdoor CU equipment through CU-1 to CU-9 of shop drawing, the breakers sizes got varied from the design basis size of each breaker, where the breakers sizes for CU-1, CU-2, CU-3, CU-4, CU-5, CU-7, CU-9 were reduced, and the breakers sizes for CU-6 and CU-8 were increased. Electrical contractor to provide the breaker with size for each CU equipment as per finalized reviewed shop drawing and mark up the actual installations on as-built drawings set. Contractor to evaluate the costs variation due to the changes of breakers size c/w associated feeders size by considering the balance of reduced and increased materials in association with the costs impact, and to provide the credit to the client if there is costs reduction from the changes.

End of Review

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(905)-738-1400

Submittal 24-280-006

PROJECT NAME	PROJECT ADDRESS	DATE SUBMITTED
VICTORIA PARK ARENA 24-280	20 Victoria Crescent, Brampton, ON L6T 1E4	Feb 10, 2025

TO
Abdullah Hissamuddin
COMPANY
RAFAT GENERAL CONTRACTOR INC.
EMAIL
abdullah.hissam@rafat.ca
ADDRESS
8850 GEORGE BOLTON PKWY BOLTON, ON L7E 2Y4

FROM
INZAMAN KHAN
COMPANY
Consult Mechanical Inc.
EMAIL
inzaman@consultmechanical.com
ADDRESS
54 Audia Court, Unit 2
Concord, ON L4K 3N5

Title
VRV (23 81 26 / 23 81 50)

Description
Daikin VRV

Package Items

SPEC	SUBSECTION	ITEM	TYPE

Submittal # 85390 **APPROVAL REQUIRED**

Project	22104386-MECH-1- Brampton Victoria Park Arena
Leader	Nevin Wong
Job Site	Brampton Victoria Park Arena
Submission Date	2025-02-09
Sold To	CONSULT MECH
Submitted By	Rohan Syal

Contacts

Role	Customer	Our Rep
Mechanical Contractor	Con-Sult Mechanical Inc.*	Nevin Wong
General Contractor	Rafat General Contracing Inc	
Mechanical Contractor	Con-Sult Mechanical Inc.*	Nevin Wong
Mechanical Contractor	Con-Sult Mechanical Inc.*	Nevin Wong
Designer	WSP MMM Group	Alex Forsea

Deliverables

Track #	**289022**	**289025**	**289023**
Tag	AC/CU-30, 32, 33, AC/CU-31, 34, AC/CU-36, AC/CU-35	BAFFLE-30, 32, 33, SNOW HOOD-35, 36, SNOW HOOD-35, 36, SNOW HOOD-35, 36	TSTAT-31, 34, BAS CTRL-31, 34, TSTAT-35, 36, TSTAT-30,32,33
Description	Daikin Split System	Baffle	Controls
Quantity	7	11	12
Manufacturer	Daikin Commercial	Daikin Commercial	Daikin Commercial
Revision #	0	0	0
Track #	**289028**	**289024**	**289029**
Tag	FILTER-35, 36	LOW-30, 32, 33, 31, 34	PAN HEATER-35, 36
Description	Filter Rack	Low Ambient Kit	Drain Pan Heater
Quantity	2	5	2
Manufacturer	Daikin Commercial	Daikin Commercial	Daikin Commercial
Revision #	0	0	0
Track #	**289026**	**289027**	**289015**
Tag	PUMP-30, 32, 33, 31, 34	STAND-30, 31, 32, 33, 34, 35, 36, SHIPPING	AC-16, 17, 18, 21, 20, 19, AC-22, 29, AC-1, AC-2, 23, 24, 25, 27, 26, 28, AC-5, 10, 14, AC-4, 6, 7, 8, 9, 11, 12, 13, 15, AC-3
Description	Condensate Pumps	Eco-Foot Stands	Indoor Units
Quantity	5	8	29
Manufacturer	Daikin Commercial	Daikin Commercial	Daikin Commercial
Revision #	0	0	0
Track #	**289019**	**289021**	**289017**
Tag	BAFFLE-1, BAFFLE-2,	COND-1	TSTAT-1, CTRL-1,

	BAFFLE-3, BAFFLE-3, BAFFLE-3		CTRL-2, CTRL-3, CTRL-4
Description	Baffle	HTS Cond Pumps	Controls
Quantity	17	6	33
Manufacturer	Daikin Commercial	Daikin Commercial	Daikin Commercial
Revision #	0	0	0
Track #	**289014**	**289018**	**289016**

Tag	CU-9, 7, CU-2, CU-5, CU-3, CU-4, CU-6, 8, CU-1	FFR-1, FFRS-2, FFRS-3, FFRS-4, FFRS-5	REF-1, REF-2, REF-3, REF-4
Description	Condensing Units	Filter Rack	Refnets
Quantity	9	29	20
Manufacturer	Daikin Commercial	Daikin Commercial	Daikin Commercial
Revision #	0	0	0
Track #	**289020**		

Tag	STAND-2, STAND-3, STAND-4, SHIP-1		
Description	Eco-Foot Stands		
Quantity	10		
Manufacturer	Daikin Commercial		
Revision #	0		

Attention:

1) HTS will provide equipment in accordance with the attached shop drawings.
2) Upon approved submittal and customer release, HTS will release equipment to fabrication per the published lead times. Any storage fees associated with project schedule changes will be the responsibility of the purchaser.
3) HTS can provide freight and logistics to the purchaser as an added benefit of doing business with HTS. When freight is received by the purchaser, any noticeable damage must be recorded. Otherwise, HTS is not responsible for subsequent damage claims.

Approval Stamps

SUBMITTAL DATA
APPROVAL REQUIRED

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APPROVAL STAMPS

Electrical Details (CU-1 and AC-1/2/3):
Outdoor unit power: 208-230/1/60
Indoor unit power: 208-230/1/60
Outdoor and indoor units require separate power feeds

Electrical Details (CU-2 to CU-9 and AC-4 to AC-29):
Outdoor unit power: 208-230/3/60
Indoor unit power: 208-230/1/60
Outdoor and indoor units require separate power feeds

Electrical Details (CU-10 to CU-16 and AC-30 to AC-36):
Outdoor unit power: 208-230/1/60
Indoor unit power: 208-230/1/60
Outdoor unit powers indoor unit

Controls:
Indoor unit c/w wired remote controller (shipped loose for field installation)

System c/w with centralized iTouch Manager and BACnet-Server Gateway
- **Contractor to mount central controller and bring 24 VAC power and Daikin D-III network**
- **BAS contractor to connect to IP Gateway and program front end as per sequence of operation**
- **BAS contractor to provide IP address and instance number prior to commissioning by DXS**
- **iTouch Manager to come with HTTP Web interface option (to be configured by BAS contractor)**

Condensate Pumps:
AC-1 to AC-15, AC-22 to AC-29 and, AC-35/36 Indoor units c/w factory installed condensate pumps
AC-16 to AC-21 and AC-30 to AC-34 Indoor units c/w condensate pumps (shipped loose for field installation)

Filters:
AC-1 to AC-29 and AC-35/36 Indoor units c/w filter racks (shipped loose for field installation)
AC-30 to AC-34 Indoor units c/w integral washable filters

Condensing Unit Elevation:
Condensing units c/w support frames for 18" elevation above roof level

Low Ambient Kit:
CU-10 to CU-14 c/w low ambient wind baffle (shipped loose for field installation)
CU-10 to CU-14 c/w low ambient kit for cooling operation down to -40 F

CU-1 to CU-7 and CU-15/16 c/w snow hoods (shipped loose for field installation)

DX Piping Details:

VRV System c/w REFNET Y Joints for refrigeration piping installation (shipped loose for field install)

Contractor to confirm pipe lengths with DXS prior to installation. Pipe measurements shown in the shop drawings are subject to change based on site conditions.

Upon installation, contractor to provide DXS with as-built piping schematic for proper calculation of field refrigerant charge.

All systems shall display appropriate Ozone Depletion Prevention (ODP) tags prior to commissioning. VRV manufacturer cannot commission any system not displaying proper ODP tag.

Systems exceeding 5-tons require TSSA registration and inspection.

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NOTE: EQUIPMENT WILL NOT BE RELEASED FOR PRODUCTION UNTIL APPROVED SHOP DRAWINGS ARE RECEIVED BY HTS ENGINEERING. PRODUCTION TIMING AND SHIPPING INFORMATION CAN NOT BE DETERMINED UNTIL APPROVED DRAWINGS ARE RECEIVED. RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THE SPECIFIED EQUIPMENT.

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VRV Installation Key Points

1. Contractor to ensure that air cooled VRV condensing units are elevated a minimum of 18”.

2. Contractor to contact DXS with any changes to pipe lengths or locations and receive revised piping & wiring diagrams which will be used for sizing pipe diameters and calculating extra refrigerant charge.

3. Contractor to confirm final location of condensing units.

4. Contractor to use clamps and installation practices which allow the pipes to expand & contract freely. Contractor to determine the use of expansion joints based on regular refrigeration practices to ensure piping does not rupture.

5. Contractor to schedule a site meeting with DXS technician prior to beginning piping installation. DXS may request to schedule a site visit to verify installation methods are in accordance with the Daikin requirements.

6. Control wiring is 18-AWG, 2 wire stranded, non-shielded for the entire system (control wiring between the fan coils & stats). No exception.

7. Contractor to pressure test system with the following procedure. 150 PSI test for 3 minutes, then 325 PSI for 3 minutes, then 550 PSI for 24 hours. Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 1 hour.

8. Contractor to insulate both suction and liquid refrigerant lines with armaflex insulation. 1/2" wall insulation for indoor piping, 3/4" wall diameter insulation for outdoor piping.

9. Refrigerant charge is to be calculated by DXS as per the actual installed pipework.

10. Condensate piping must be 3/4" ID, maximum lift noted in installation manual.

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TSSA Requirements

Tag: CU-2

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
• Design pressure
• High side psig 478
• Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
• Cooling Operation Range (°F DB): 23°F – 110°F
• Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
• R410A
• Factory Charge: 24.91 lb
• Estimated Field Charge: 3.81 lb
• Total Charge: 28.72 lb
• Min. Room Volume 1105 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
• Model # RXYQ96AATJB
• Cooling Capacity: 95,390 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
• See piping schematics for sizes

SUBMITTAL DATA
APPROVAL REQUIRED

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TSSA Requirements

Tag: CU-3

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
- Design pressure
- High side psig 478
- Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
- Cooling Operation Range (°F DB): 23°F – 110°F
- Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
- R410A
- Factory Charge: 25.79 lb
- Estimated Field Charge: 12.55 lb
- Total Charge: 38.34 lb
- Min. Room Volume 1475 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
- Model # RXYQ144AATJB
- Cooling Capacity: 142,072 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
- See piping schematics for sizes

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TSSA Requirements

Tag: CU-4

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
• Design pressure
• High side psig 478
• Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
• Cooling Operation Range (°F DB): 23°F – 110°F
• Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
• R410A
• Factory Charge: 25.79 lb
• Estimated Field Charge: 19.32 lb
• Total Charge: 45.11 lb
• Min. Room Volume 1735 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
• Model # RXYQ168AATJB
• Cooling Capacity: 157,179 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
• See piping schematics for sizes

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TSSA Requirements

Tag: CU-5

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
- Design pressure
- High side psig 478
- Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
- Cooling Operation Range (°F DB): 23°F – 110°F
- Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
- R410A
- Factory Charge: 25.35 lb
- Estimated Field Charge: 10.63 lb
- Total Charge: 35.98 lb
- Min. Room Volume 1384 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
- Model # RXYQ120AATJB
- Cooling Capacity: 122,150 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
- See piping schematics for sizes

SUBMITTAL DATA
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TSSA Requirements

Tag: CU-6

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
- Design pressure
- High side psig 478
- Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
- Cooling Operation Range (°F DB): 23°F – 110°F
- Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
- R410A
- Factory Charge: 25.79 lb
- Estimated Field Charge: 31.86 lb
- Total Charge: 57.65 lb
- Min. Room Volume 2217 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
- Model # RXYQ240AATJB
- Cooling Capacity: 226,332 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
- See piping schematics for sizes

SUBMITTAL DATA
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TSSA Requirements

Tag: CU-7

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
• Design pressure
• High side psig 478
• Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
• Cooling Operation Range (°F DB): 23°F – 110°F
• Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
• R410A
• Factory Charge: 15.21 lb
• Estimated Field Charge: 5.90 lb
• Total Charge: 21.11 lb
• Min. Room Volume 812 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
• Model # RXYQ72AATJB
• Cooling Capacity: 70,374 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
• See piping schematics for sizes

SUBMITTAL DATA
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TSSA Requirements

Tag: CU-8

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
• Design pressure
• High side psig 478
• Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
• Cooling Operation Range (°F DB): 23°F – 110°F
• Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
• R410A
• Factory Charge: 25.79 lb
• Estimated Field Charge: 33.54 lb
• Total Charge: 59.33 lb
• Min. Room Volume 2282 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
• Model # RXYQ240AATJB
• Cooling Capacity: 224,890 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
• See piping schematics for sizes

SUBMITTAL DATA
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TSSA Requirements

Tag: CU-9

Design pressure (maximum Allowable Working Pressure) High and Low (protection control sequence available upon request)
• Design pressure
• High side psig 478
• Low side psig 320

Design Temperatures (High and Low) (Provided in the shop drawing)
• Cooling Operation Range (°F DB): 23°F – 110°F
• Heating Operation Range (°F WB): -13°F – 60°F

Refrigerant name, Group number and Total weight of Charge (Provided in the shop drawing)
• R410A
• Factory Charge: 15.21 lb
• Estimated Field Charge: 6.14 lb
• Total Charge: 21.35 lb
• Min. Room Volume 821 ft^3

Refrigeration system Capacity (i.e. Tons) (Provided in the shop drawing)
• Model # RXYQ72AATJB
• Cooling Capacity: 69,857 BTU/hr

Test pressure, type of test and duration (Provided in the shop drawing)
Contractor to pressure test system with the following procedure.
1) 150 PSI test for 3 minutes
2) 325 PSI for 3 minutes
3) 550 PSI for 24 hours.
4) Following the pressure test the system is to be vacuumed/dehydrated to 500 microns and held in a vacuum for 12 hours.

Tubing Sizes and Schedule (Provided in the shop drawing)
• See piping schematics for sizes

Schedule & Spec Compliance

SCHEDULE OF VRF SPLIT REFRIGERATION SYSTEM

SYSTEM TAG	AREA SERVED	TERMINAL UNIT						AIRCOOLED CONDENSER							WEIGHT	REMARKS
		MODEL NO.	COOLING CAPACITY (kW)		HEATING CAPACITY (KW)	AIRFLOW (L/S)	V/Ø/Hz	MCA	TAG	LOCATION	MODEL	COOLING CAPACITY (kW)	HEATING CAPACITY (KW)	V/Ø/Hz	MCA	KG	
			TOTAL	SENSIBLE													
AC-1 ✓	KITCHENETTE ✓	~~PEFY-P6NMAU-E4~~ ~~FXSQ15TBVJU~~	~~4.4~~ 4.4 ✓	~~3.20~~ ~~2.7~~	~~4.98~~ ~~4.5~~	~~250~~ ~~200~~	208-230/1/60 ✓	~~1.4~~ ~~2.88~~									
AC-2 ✓	MANAGER ✓	~~PEFY-P15NMAU-E4~~ ~~FXSQ18TBVJU~~	~~5.3~~ 5.3 ✓	~~3.2~~ ~~3.2~~	~~5.85~~ ~~5.0~~	~~200~~ ~~200~~	208-230/1/60 ✓	~~2.94~~ ~~2.94~~	CU-1 ✓	ROOF ✓	~~RXTQ48TBVJUA~~ ~~PUHY-P48NKMJ3~~	13.3 ~~13.5~~	14.5 ~~15.6~~	208-230/1/60 ✓	29.1 ~~29.0~~	79.8 ~~123.0~~	
AC-3 ✓	RECEPTION ✓	~~PEFY-P12NMAU-E4~~ ~~FXSQ24TBVJU~~	~~3.5~~ 3.5 ✓	~~2.0~~ ~~2.0~~	~~3.96~~ ~~3.8~~	~~150~~ ~~150~~	208-230/1/60 ✓	~~2.13~~ ~~2.13~~									
AC-4 ✓	ATRIUM ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ72TBVJU~~	~~14.1~~ 14.1 ✓	~~9.60~~ ~~9.6~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~4.38~~ ~~4.38~~									
AC-5 ✓	ATRIUM ✓	~~PEFY-P36NMAU-E4~~ ~~FXSQ54TBVJU~~	~~10.6~~ 10.6 ✓	~~6.20~~ ~~6.2~~	~~11.72~~ ~~10.0~~	~~525~~ ~~508~~	208-230/1/60 ✓	~~4.38~~ ~~4.25~~	CU-2 ✓	ROOF ✓	~~RXYQ96AATJB~~ ~~PUHY-P96TNU-A~~	28.1 ✓	31.7 ✓	208-230/3/60 ✓	34.1 ~~33.0~~	309.8 ~~263.0~~	
AC-6 ✓	MULTI PURPOSE ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 14.1 ✓	~~9.85~~ ~~7.8~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-7 ✓	MULTI PURPOSE ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 14.1 ✓	~~9.85~~ ~~7.8~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~	CU-3 ✓	ROOF ✓	~~RXYQ144AATJB~~ ~~PUHY-P144TNU-A~~	42.2 ~~40.0~~	47.5 ~~45.0~~	208-230/3/60 ✓	47.8 ~~45~~	340.2 ~~284~~	
AC-8 ✓	MULTI PURPOSE ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 14.1 ✓	~~9.85~~ ~~7.8~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-9 ✓	HALL OF FAME ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~12.1~~ 12.6 ✓	~~9.85~~ ~~7.5~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-10 ✓	HALL OF FAME ✓	~~PEFY-P36NMAU-E4~~ ~~FXSQ36TBVJU~~	~~10.55~~ 9.5 ✓	~~7.30~~ ~~6.2~~	~~11.72~~ ~~10.0~~	~~525~~ ~~500~~	208-230/1/60 ✓	~~4.38~~ ~~4.25~~	CU-4 ✓	ROOF ✓	~~RXYQ168AATJB~~ ~~PUHY-P168TNU-A~~	47.4 ✓	55.4 ~~54.4~~	208-230/3/60 ✓	54.9 ~~59~~	340.2 ~~328~~	
AC-11 ✓	HALL OF FAME ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 12.6 ✓	~~9.85~~ ~~7.5~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-12 ✓	HALL OF FAME ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~12.1~~ 12.6 ✓	~~9.85~~ ~~7.5~~	~~15.93~~ ~~13.5~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-13 ✓	OPEN CIRCULATION ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 12.6 ✓	~~9.85~~ ~~7.6~~	~~15.93~~ ~~12.9~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-14 ✓	OPEN CIRCULATION ✓	~~PEFY-P36NMAU-E4~~ ~~FXSQ36TBVJU~~	~~10.55~~ 9.5 ✓	~~7.30~~ ~~6.2~~	~~11.72~~ ~~10.0~~	~~525~~ ~~500~~	208-230/1/60 ✓	~~4.38~~ ~~4.25~~	CU-5 ✓	ROOF ✓	~~RXYQ120AATJB~~ ~~PUHY-P120TNU-A~~	34.9 ~~35.3~~	39.6 ~~39.5~~	208-230/3/60 ✓	36.5 ~~41~~	309.8 ~~274~~	
AC-15 ✓	MAIN LOBBY ✓	~~PEFY-P48NMAU-E4~~ ~~FXSQ48TBVJU~~	~~14.1~~ 12.6 ✓	~~9.85~~ ~~7.6~~	~~15.93~~ ~~12.9~~	~~617~~ ~~525~~	208-230/1/60 ✓	~~2.94~~ ~~4.38~~									
AC-16 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~									
AC-17 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~	CU-6 ✓	ROOF ✓	~~RXYQ240AATJB~~ ~~PUHY-P240TSNU-A~~	69.8 ~~67.9~~	79.1 ~~77.6~~	208-230/3/60 ✓	73.7 ~~82~~	410 ~~548~~	
AC-18 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~									
AC-19 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~									
AC-20 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~	CU-8 ✓	ROOF ✓	~~RXYQ240AATJB~~ ~~PUHY-P240TSNU-A~~	69.8 ~~67.9~~	79.1 ~~77.6~~	208-230/3/60 ✓	73.7 ~~82~~	410 ~~548~~	
AC-21 ✓	VIEWING AREA ✓	~~PEFY-P72NMHSU-E~~ ~~FXMQ72TBTVJU~~	21.1 ✓	~~15.27~~ ~~13.3~~	~~23.74~~ ~~19.1~~	1017 ✓	208-230/1/60 ✓	~~9.5~~ ~~7.70~~									
AC-22 ✓	COACHES ✓	~~PEFY-P6NMAU-E4~~ ~~FXSQ09TBVJU~~	~~2.8~~ 2.8 ✓	~~2.0~~ ~~1.6~~	~~3.08~~ ~~2.2~~	125 ✓	208-230/1/60 ✓	~~0.0~~ ~~1.75~~									
AC-23 ✓	CHANGE E ✓	~~PEFY-P15NMAU-E4~~ ~~FXSQ18TBVJU~~	5.3 ✓	~~3.2~~ ~~3.2~~	~~5.85~~ ~~5.0~~	~~283~~ ~~242~~	208-230/1/60 ✓	~~1.6~~ ~~2.94~~	CU-9 ✓	ROOF ✓	~~RXYQ72AATJB~~ ~~PUHY-P72TNU-A~~	21.1 ~~21.2~~	23.7 ~~23.4~~	208-230/3/60 ✓	27.3 ~~24~~	225 ~~213~~	
AC-24 ✓	CHANGE D ✓	~~PEFY-P18NMAU-E4~~ ~~FXSQ18TBVJU~~	5.3 ✓	~~3.2~~ ~~3.2~~	~~5.80~~ ~~5.0~~	~~283~~ ~~242~~	208-230/1/60 ✓	~~1.6~~ ~~2.94~~									
AC-25 ✓	CHANGE C ✓	~~PEFY-P18NMAU-E4~~ ~~FXSQ18TBVJU~~	5.3 ✓	~~3.0~~ ~~3.2~~	~~5.86~~ ~~5.0~~	~~283~~ ~~242~~	208-230/1/60 ✓	~~1.6~~ ~~2.94~~									
AC-26 ✓	CHANGE B ✓	~~PEFY-P18NMAU-E4~~ ~~FXSQ18TBVJU~~	5.3 ✓	~~3.0~~ ~~3.2~~	~~5.86~~ ~~5.0~~	~~283~~ ~~242~~	208-230/1/60 ✓	~~1.6~~ ~~2.94~~									
AC-27 ✓	CHANGE A ✓	~~PEFY-P18NMAU-E4~~ ~~FXSQ18TBVJU~~	5.3 ✓	~~3.0~~ ~~3.2~~	~~5.86~~ ~~5.0~~	~~283~~ ~~242~~	208-230/1/60 ✓	~~1.6~~ ~~2.94~~	CU-7 ✓	ROOF ✓	~~RXYQ72AATJB~~ ~~PUHY-P72TNU-A~~	21.1 ~~14.6~~	23.7 ~~23.4~~	208-230/3/60 ✓	27.3 ~~24~~	225 ~~213~~	
AC-28 ✓	REF CHANGEROOM	~~PEFY-P6NMAU-E4~~ ~~FXSQ09TBVJU~~	2.8 ✓	~~2.0~~ ~~2.0~~	~~3.08~~ ~~2.2~~	125 ✓	208-230/1/60 ✓	~~0.0~~ ~~1.75~~									
AC-29 ✓	FGO ROOM ✓	~~PEFY-P6NMAU-E4~~	~~2.8~~ 2.8 ✓	~~2.0~~ ~~1.6~~	~~3.08~~ ~~2.2~~	125 ✓	208-230/1/60 ✓	~~0.0~~ ~~1.75~~									

NOTES:
1. THE ABOVE COOLING CAPACITY IS RATED ON ~~24/19.4~~ 26.6/19.4 °C DB/WB ON COIL TEMPERATURE.
2. THE ABOVE HEATING CAPACITY IS RATED ON ~~21/15~~ 20.0°C DB ON COIL TEMPERATURE.
3. C/W ECO FOOT SYSTEM ROOF STAND, INSTALL THE HEAT PUMP MINIMUM 450MM ABOVE ROOF, PROVIDE VIBRATION ISOLATION PADS. ROOF STAND ENGINEERING BY SUPPLIER. ✓
4. REFRIGERANT SHALL BE R410A. ✓
5. INDOOR UNIT SHALL COME WITH INTEGRAL DRAIN PUMP. All units but AC-16 to AC-21 c/w integral drain pump. AC-16 to AC-21 to have loose drain pump (mounted by mechanical contractor)
6. C/W INDIVIDUAL THERMOSTAT/CONTROLLER FOR EACH INDOOR UNIT AND CENTRAL CONTROLLER FOR ALL SYSTEMS, CONNECT TO BAS, COORDINATE CENTRAL CONTROLLER LOCATION WITH OWNER ✓
7. PROVIDE 1200x600MM ACCESS PANEL IN CEILING WHERE REQUIRED FOR INDOOR UNITS By others

SCHEDULE OF SPLIT AC SYSTEM

MANUFACTURER	TERMINAL UNIT - EVAPORATOR							AIR COOLED CONDENSER						WEIGHT	REMARKS
	UNIT TAG	AREA SERVED	MODEL NO.	COOLING CAPACITY (kW)	HEATING CAPACITY (kW)	AIR FLOW (L/S)	ELECTRICAL V/Ø/Hz / MCA	UNIT TAG	LOCATION	MODEL NO.	ELECTRICAL V/Ø/Hz	ELECTRICAL MCA	KG	
DAIKIN ✓	AC-30 ✓	ELEVATOR'S MACHINE ROOM ✓	~~FTKF24AXVJU~~ ~~FTK24NMVJU~~	~~7.74~~ 6.21 ✓	-	337 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-10 ✓	ROOF ✓	~~RKF24AXVJU~~ ~~RK24NMVJU~~	208/1/60 ✓	~~14.23~~ 18.3 ✓	~~45.8~~ 55 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-31 ✓	IT DATA ✓	~~FTX30WVJU9~~ ~~FTX30NVJU~~	9.2 ✓	-	420 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-11 ✓	ROOF ✓	~~RK30WMVJU9~~ ~~RK30NMVJU~~	208/1/60 ✓	~~16.6~~ 17 ✓	~~59.9~~ 65 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-32 ✓	COMMS ROOM ✓	~~FTKF24AXVJU~~ ~~FTK24NMVJU~~	~~7.74~~ 6.21 ✓	-	337 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-12 ✓	ROOF ✓	~~RKF24AXVJU~~ ~~RK24NMVJU~~	208/1/60 ✓	~~14.23~~ 18.3 ✓	~~45.8~~ 55 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-33 ✓	ELECTRICAL ROOM - GROUND FL ✓	~~FTKF24AXVJU~~ ~~FTK24NMVJU~~	~~7.74~~ 6.21 ✓	-	337 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-13 ✓	ROOF ✓	~~RKF24AXVJU~~ ~~RK24NMVJU~~	208/1/60 ✓	~~14.23~~ 18.3 ✓	~~45.8~~ 55 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-34 ✓	ELECTRICAL ROOM - SECOND FL ✓	~~FTX30WVJU9~~ ~~FTX30NVJU~~	9.2 ✓	-	420 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-14 ✓	ROOF ✓	~~RK30WMVJU9~~ ~~RK30NMVJU~~	208/1/60 ✓	~~16.6~~ 17 ✓	~~59.9~~ 65 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-35 ✓	STORAGE A ✓	~~FDMQ24WVJU9~~ ~~FDMQ24RVJU~~	~~6.74~~ 7 ✓	~~8.09~~ 8.6 ✓	~~345~~ 320 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-15 ✓	ROOF ✓	~~RXL24WMVJU9~~ ~~RXL24UMVJUA~~	208/1/60 ✓	~~18.8~~ 19.8 ✓	~~59.9~~ 60 ✓	C/W CONDENSATE PUMP
DAIKIN ✓	AC-36 ✓	STORAGE B ✓	~~FDMQ18WVJU9~~ ~~FDMQ18RVJU~~	~~5.74~~ 5.3 ✓	~~7.33~~ 5 ✓	~~290~~ 270 ✓	POWERED FROM OUTDOOR UNIT ✓	CU-16 ✓	ROOF ✓	~~RXL18WMVJU9~~ ~~RXL18UMVJUA~~	208/1/60 ✓	~~18.6~~ 19.5 ✓	~~59.9~~ 60 ✓	C/W CONDENSATE PUMP

NOTES:
1. REFRIGERANT SHALL BE R410A. Considering R410A phaseout, R-32 units to be supplied. Record purpose shop drawings to be submitted as R-32 submittals become available.
2. UNIT SHALL COME WITH -29°C LOW AMBIENT CONTROL KIT. ✓
3. INDOOR UNIT SHALL COME WITH FIELD MOUNTED DRAIN PUMP. ✓
4. C/W ROOF STAND, INSTALL OUTDOOR UNIT MINIMUM 450MM ABOVE ROOF. ✓
5. INDOOR UNIT IS POWRED FROM THE OUTDOOR UNIT. ✓
6. CONNECT TO BAS ✓
7. AC-35 & AC-36 C/W SNOW HOOD & DRAIN PAN HEATER FOR LOW AMBIENT HEATING ✓

ARCHITECTURE 49

CONSULTANT - SUB CONSULTANT:

wsp

SEAL:

CLIENT:

BRAMPTON
CITY OF BRAMPTON

CLIENT REF. #:

PROJECT:

Victoria Park Arena

20 Victoria Crescent, Brampton, ON L6T 1E4

KEY PLAN:

ISSUED FOR - REVISION:

REV	DATE	DESCRIPTION
12	2024/05/29	ISSUED FOR TENDER
11	2023/10/27	ISSUED FOR TENDER
10	2023/09/22	ISSUED FOR TENDER
9	2022/08/15	ISSUED FOR BUILDING PERMIT
8	2022/08/05	ISSUED FOR TENDER - FINAL
7	2022/04/13	ISSUED FOR TENDER
6	2022/03/25	ISSUED FOR BUILDING PERMIT
5	2022/03/02	ISSUED FOR TENDER REVIEW
4	2021/11/26	REISSUED FOR 90% REVIEW
3	2021/11/19	ISSUED FOR TENDER REVIEW
2	2021/09/27	ISSUED FOR PROGRESS REVIEW
1	2021/08/30	ISSUED FOR 60%DD

PROJECT NO: 209-00238-00
DATE: 2024/05/29
ORIGINAL SCALE:
IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE.
1"
DESIGNED BY: MK
DRAWN BY: SG/VO
CHECKED BY: MK
DISCIPLINE:

TITLE:

MECHANICAL EQUIPMENT SCHEDULES #1

SHEET NUMBER: M-900
SHEET #: OF

ISSUE: ISSUED FOR TENDER
REV #: 12
DATE OF: 2024/05/29

1 GENERAL

1.01 SUBMITTALS

Comply

.1 Submit shop drawings/product data sheets, complete with control components, and piping and wiring schematics.

.2 Submit a start-up and certification letter from equipment supplier as specified in Part 3 of this Section.

.3 Prepare and submit a schematic layout of refrigerant piping showing all piping components required for satisfactory operation and maintenance of the system(s), including but not limited to pipe sizes, charging valve, isolating valves, sight glasses, strainers, driers, traps, etc. Schematic diagram must be reviewed with and approved by air conditioning equipment supplier prior to submittal to Consultant.

1.02 QUALITY ASSURANCE

.1 Split system air conditioning equipment and installation of equipment are to be in accordance with requirements of following:

.1 all applicable Provincial Codes and Standards;

.2 ANSI/AHRI Standard 210/240, Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment.

.2 Split system air conditioning system installation tradesmen are to be journeyman refrigeration mechanics.

2 PRODUCTS

2.01 SPLIT SYSTEM AIR CONDITIONING EQUIPMENT

.1 Factory assembled and tested, package type equipment consisting of an indoor evaporator unit and an exterior condensing unit in accordance with drawing schedule, CSA or ETL listed and labelled, AHRI rated and certified and with a minimum system efficiency of 13 SEER.

.2 Wall mounting evaporator assembly consisting of a white moulded high-strength plastic cabinet with front access panel, a motorized horizontal vane to automatically direct air flow in a horizontal and downward direction and which closes when fan operation is stopped, motorized vertical vanes controlled remotely, and a mounting plate supplied loose. Evaporator complete with:

Wall mounted units c/w 4 or 5 speed motor depending on model

.1 double inlet, forward curve fan(s) direct driven by a single ~~4~~-speed motor;

.2 removable and washable return air filter;

.3 factory pressure tested multi-angled coil of non-ferrous construction with aluminium fins, copper tubes with silver alloy solder joints, and an insulated condensate drain pan sloped to a drain connection for positive drainage.

Comply .3 Factory run tested, weatherproof condensing unit equipped with a control board to interface with indoor unit and perform all necessary operation functions. Pre-charge unit
R-32 with ~~R-410a~~ refrigerant for a minimum of 21 m ~~(70')~~ of refrigerant tubing. Unit is to be 33'
capable of operation at -18°C (0°F) without additional low ambient controls, and capable of a height difference between condensing unit and evaporator of 30 m ~~(100')~~. Each 66'
condensing unit complete with:

.1 galvanized steel plate cabinet with an electrostatically applied thermally fused polyester powder finish, and an ABS plastic fan grille;

.2 draw-through direct driven balanced fan with horizontal air discharge, mounted in front of coil, arranged to pull air across coil, and equipped with a raised fan guard;

.3 "L" shaped coil with copper tubes and aluminium fins, factory pressure tested, complete with an integral metal guard and refrigerant flow controlled by a linear expansion valve metering orifice controlled by a microprocessor controlled step motor;

.4 vibration isolated DC rotary compressor driven by an inverter circuit to dynamically control compressor speed to match room load, complete with an accumulator, high pressure safety switch, and circuitry to permit a minimal amount of current to be applied to motor to maintain enough heat during off cycle to prevent liquid from accumulating.

.4 System controls consisting of a microprocessor in each indoor and outdoor unit, and an indoor wall mounted controller site connected to indoor evaporator unit. System is to be capable of automatic restart after power interruption, and have self-diagnostics ability and indication of ~~total compressor run time~~, and following:

.1 Indoor unit microprocessor is capable of monitoring return air temperature and evaporator coil temperature, receiving and processing commands from wall mounted controller, providing emergency operation, and controlling outdoor unit through its microprocessor and interface board;

.2 controller is complete with an integral temperature sensor, able to perform input and output functions necessary to operate system, and equipped with following:

.1 liquid crystal display to indicate diagnostic codes for both indoor and outdoor units, ~~compressor run time~~, a weekly timer with up to 8 pattern settings per day, set temperature, room temperature, ~~refrigerant piping temperatures,~~ compressor operating conditions, and linear expansion valve opening pulses, ~~sub-cooling~~ and ~~discharge super heat;~~

.2 On/Off button, Increase/Decrease Set Temperature buttons, a Cool/Dry/Fan mode selector, a Timer Menu button, a Timer On/Off button, Set Time buttons, a Fan Speed selector, a Vane Position selector, a Louvre Swing button, a Ventilation button, a Test Run button, and a Check Mode button.

.5 Suitable anchoring connection hardware factory installed on equipment to suit requirements of Section entitled Seismic Control and Restraint.

.6 Acceptable manufacturers are:

~~.1 Mitsubishi Electric Sales Canada Inc.;~~

~~.2 LG Electronics Canada Inc.;~~

~~.3 Panasonic Canada Inc.;~~

~~.4 Fujitsu General America Inc.~~;

Comply .5 Daikin Industries Ltd.

3 EXECUTION

3.01 INSTALLATION OF SPLIT SYSTEM AIR CONDITIONING EQUIPMENT

By others

.1 Provide split system air conditioning equipment consisting of an exterior condensing unit and an indoor evaporator.

.2 Secure condensing unit in place, level and plumb, on vibration isolation pads on 18" height stand.

.3 Mount indoor evaporator unit. Confirm exact location prior to roughing-in.

.4 Connect condensing unit and indoor evaporator with refrigerant piping in accordance with piping shop drawing schematic. Refer to Section entitled Refrigerant Piping, Valves, and Accessories. Provide any required additional refrigerant.

.5 Install loose control components and perform required control wiring (except building automation system connections) between condensing unit and evaporator in conduit in accordance with manufacturer's control wiring schematic and wiring standards of electrical work.

.6 Refer to Section entitled Basic Mechanical Materials and Methods for equipment/system manufacturer certification requirements.

.7 Refer to Section entitled Basic Mechanical Materials and Methods for equipment/system start-up requirements.

Comply .8 Include for 4 hours of on-site operation demonstration and training session. Training is to be a full review of all components including, but not limited to, a full operation and maintenance demonstration, with control set-up and abnormal events.

END OF SECTION

1 GENERAL

1.01 SYSTEM DESCRIPTION

Daikin

Comply .1 The basis of design of variable capacity, heat pump air conditioning system is ~~Mitsubishi Electric CITY MULTI~~ VRF (Variable Refrigerant Flow) zoning system.

.2 Acceptable manufacturers are:

~~.1 Mitsubishi Electric CITY MULTI;~~

Comply .2 Daikin VRV;

~~.3 LG;~~

~~.4 Carrier~~;

Daikin

.3 The ~~Mitsubishi Electric CITY MULTI~~ VRF ~~Y-Series~~ system shall consist of ~~PUHY~~ outdoor unit, multiple indoor units, and ~~M-NET DDC~~ (Direct Digital Controls). The sum of connected capacity of all indoor air handlers shall range from 50% to 130% of outdoor rated capacity.

Comply

1.02 QUALITY ASSURANCE

Comply .1 The units shall be listed by Electrical Testing Laboratories (ETL) and bear the ETL label.

.2 All wiring shall be in accordance with the National Electrical Code (N.E.C.).

.3 The units shall be manufactured in a facility registered to ISO 9001 and ISO14001 which is a set of standards applying to environmental protection set by the International Standard Organization (ISO).

.4 All units must meet or exceed the 2010 Federal minimum efficiency requirements and the ASHRAE 90.1 efficiency requirements for VRF systems. Efficiency shall be published in accordance with the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 1230.

.5 A full charge of R-410A for the condensing unit only shall be provided in the condensing unit.

R-32 units may be provided depending upon project timeline. Record purpose shops to be submitted if any equipment change is required due to refrigerant transition.

1.03 DELIVERY, STORAGE AND HANDLING

.1 Unit shall be stored and handled according to the manufacturer's recommendation.

1.04 CONTROLS

.1 The control system shall consist of a low voltage communication network of unitary built-in controllers with on-board communications and a web-based operator interface. A web controller with a network interface card shall gather data from this system and generate web pages accessible through a conventional web browser on each PC connected to the network. Operators shall be able to perform all normal operator functions through the web browser interface.

.2 System controls and control components shall be installed in accordance with the manufacturer's written installation instructions.

Comply

.3 Furnish energy conservation features such as optimal start, night setback, request-based logic, and demand level adjustment of overall system capacity as specified in the sequence.

.4 System shall provide direct and reverse-acting on and off algorithms based on an input condition or group conditions to cycle a binary output or multiple binary outputs.

.5 Provide capability for future system expansion to include monitoring and use of occupant card access, lighting control and general equipment control.

.6 System shall be capable of email generation for remote alarm annunciation.

Mechanical contractor to have completed Daikin training. Controls training not required.

.7 ~~C~~control system start-up shall be a required service to be completed by the manufacturer or a duly authorized, competent representative that has been factory trained in Mitsubishi Electric controls system configuration and operation. The representative shall provide proof of certification for Mitsubishi Electric Controls Applications Training indicating successful completion of no more than two (2) years prior to system installation. This certification shall be included as part of the equipment and/or controls submittals. This service shall be equipment and system count dependent and shall be a minimum of one (1) eight (8) hour period to be completed during normal working hours.

1.05 WARRANTY

Daikin

Comply

.1 The ~~CITY MULTI~~ units shall be covered by the manufacturer's limited warranty for a period of ~~one (1) ye~~ar parts and ~~seven (7) y~~ear compressor to the original owner from date of installation.

ten (10) year parts limited

ten (10)

.1 If the systems are:

Daikin

.1 Installed by a contractor that has successfully completed the ~~Mitsubishi Electric three-day service~~ course.

Daikin

.2 Verified with required materials submitted to and approved by the ~~Mitsubishi Electric Service~~ Department, which include:

.1 As built ~~Diamond System Builder~~ file;

.2 A one (1) hour Maintenance Tool record with system information, in Ordinary Control Mode (not initial);

.3 Outdoor and Indoor unit dip switch settings;

.4 Outdoor unit(s) function settings.

.2 Then the units shall be covered by an extended manufacturer's limited warranty for a period of ten (10) years to the original owner from date of installation.

.3 In addition, the compressor shall have a manufacturer's limited warranty for a period of ten (10) years to the original owner from date of installation.

.4 If, during this period, any part should fail to function properly due to defects in workmanship or material, it shall be replaced or repaired at the discretion of the manufacturer.

.5 This warranty shall not include labor.

Comply .6 Manufacturer shall have a minimum of 10 years of HVAC experience in the Canadian. market.

.7 All manufacturer technical and service manuals must be readily available for download by any local contractor should emergency service be required. Registering and sign-in requirements which may delay emergency service reference are not allowed.

Daikin Daikin

.8 The ~~CITY MULTI VRF~~ system shall be installed by a contractor with extensive ~~CITY MULTI~~ install and service training. The mandatory contractor service and install training should be performed by the manufacturer.

2 PRODUCTS

Daikin Emerion

2.01 ~~N-GENERATION Y-SERIES~~ OUTDOOR UNIT

.1 General:

Comply .1 The ~~Y-Series PUHY~~ outdoor unit shall be specifically used with ~~CITY MULTI VRF~~ components. The ~~PUHY~~ outdoor units shall be equipped with multiple circuit boards that interface to the ~~M-NET~~ controls system and shall perform all functions necessary for operation. Each outdoor unit module shall be completely factory assembled, piped, wired and run tested at the factory.

61

.2 69 Outdoor unit shall have a sound rating no higher than ~~62~~ dB(A) individually or ~~65~~ dB(A) twinned. Units shall have a sound rating no higher than ~~51~~ dB(A) individually or ~~55~~ dB(A) twinned while in night mode operation. If an alternate manufacturer is selected, any additional material, cost, and labor to meet published sound levels shall be incurred by the contractor.

.3 Outdoor unit shall be able to connect to up to 50 indoor units depending upon model.

.4 The outdoor unit shall have the capability of installing the main refrigerant piping through the ~~bottom~~ Side of the unit.

.5 Both refrigerant lines from the outdoor unit to indoor units shall be insulated.

.6 The outdoor unit shall have an accumulator with refrigerant level sensors and controls.

.7 The outdoor unit shall have a high pressure safety switch, over-current protection and DC bus protection.

.8 The outdoor unit shall have the ability to operate with a maximum height difference of 360' ~~164 feet (294 feet optional)~~ and have a total refrigerant tubing length of 3280 feet. The greatest length is not to exceed 541 feet between the outdoor unit and the indoor units without the need for line size changes or traps.

-13 F

.9 The outdoor unit shall be capable of operating in heating mode down to ~~-4°F~~ ambient temperature or cooling mode down to 23°F ambient temperature, without additional low ambient controls. If an alternate manufacturer is selected, any additional material, cost, and labor to meet low ambient operating condition and performance shall be incurred by the contractor.

.10 The outdoor unit shall have a high efficiency oil separator plus additional logic controls to ensure adequate oil volume in the compressor is maintained.

Comply

.11 Unit must defrost ~~all circuits simultaneously~~ in order to resume full heating more quickly. ~~Partial defrost which may extend "no or reduced heating" periods shall not be allowed.~~

Staged defrost to occur on Daikin units to minimize heat losses

.2 Unit Cabinet:

.1 The casing(s) shall be fabricated of galvanized steel, bonderized and finished. Units cabinets shall be able to withstand 960 hours per ASTM B117 criteria for seacoast protected models (–BS models).

.3 Fan:

.1 Each outdoor unit module shall be furnished with one direct drive, variable speed propeller type fan.

.2 The fan motor shall have inherent protection, have permanently lubricated bearings, and be completely variable speed. The fan shall be factory set for operation under 0 in. WG external static pressure, but capable of normal operation under a maximum of 0.24 in. WG external static pressure via dipswitch.

.3 The fan motor shall be mounted for quiet operation.

.4 The fan shall be provided with a raised guard to prevent contact with moving parts.

.5 The outdoor unit shall have vertical discharge airflow.

.4 Refrigerant:

.1 R410A refrigerant shall be required for PUHY-TNU outdoor unit systems.

.2 Polyolester (POE) oil shall be required. Manufacturers using alternate oil types shall submit material safety data sheets (MSDS) and comparison of hygroscopic properties for alternate oil with list of local suppliers stocking alternate oil for approval.

.5 Coil:

.1 The outdoor ~~Hexicoil™~~ heat exchanger shall be of construction with COPPER tube construction.

.2 The coil fins shall have a factory applied corrosion resistant blue-fin finish.

.3 The coil shall be protected with an integral metal guard.

.4 Refrigerant flow from the outdoor unit shall be controlled by means of an inverter driven compressor.

.5 The outdoor coil shall include 4 circuits with two position valves for each circuit, except for the last stage.

.6 Compressor:

.1 Each outdoor unit module shall be equipped with one inverter driven scroll hermetic compressor. Non inverter-driven compressors, which cause inrush current (demand charges) and require larger wire sizing, shall not be allowed.

Comply

.2 A crankcase heater(s) shall be factory mounted on the compressor(s).

.3 The outdoor unit compressor shall have an inverter to modulate capacity. The capacity shall be completely variable with a turndown of 15%-3% of rated capacity, depending upon unit size

.4 The compressor shall be equipped with an internal thermal overload.

.5 The compressor shall be mounted to avoid the transmission of vibration.

.7 Electrical:

.1 The outdoor unit electrical power shall be 208/230 volts, 3-phase, 60 hertz.

.2 The outdoor unit shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz), 207-253V (230V/60Hz).

.3 The outdoor unit shall be controlled by integral microprocessors.

.4 The control circuit between the indoor units, ~~BC Controller~~ and the outdoor unit shall be ~~24~~16VDC completed using a 2-conductor, twisted pair ~~shielded~~ Non-shielded cable to provide total integration of the system.

2.02 ~~PEFY-NMAU~~ (CEILING-CONCEALED DUCTED) INDOOR UNIT

.1 General:

Comply

.1 The ~~PEFY~~ shall be a ceiling-concealed ducted indoor fan coil design that mounts above the ceiling with a 2-position, field adjustable return and a fixed horizontal discharge supply and shall have a modulating linear expansion device. The PEFY shall be used with the ~~R2-Series~~ outdoor unit and ~~BC Control~~ler, ~~Y-Series~~ outdoor unit, or ~~S-Series~~ outdoor unit. The ~~PEFY~~ shall support individual control using ~~M-NET~~ DDC controllers. The unit shall be suitable for use in plenums in accordance with UL1995 ed 4.

.2 Indoor Unit:

.1 The indoor unit shall be factory assembled, wired and run tested. Contained within the unit shall be all factory wiring, piping, electronic modulating linear expansion device, control circuit board and fan motor. The unit shall have a self-diagnostic function, 3-minute time delay mechanism, and an auto restart function. Indoor unit and refrigerant pipes shall be charged with dehydrated air before shipment from the factory.

.3 Unit Cabinet:

.1 The unit shall be, ceiling-concealed, ducted.

.2 The cabinet panel shall have provisions for a field installed filtered outside air intake.

.4 Fan:

.1 PEFY-NMAU models shall feature external static pressure settings from ~~0.14~~ 0.2 to 0.60 in. WG.

Comply

.2 The indoor unit fan shall be an assembly with one or two ~~Sirocco~~ fan(s) direct driven by a single motor.

.3 The indoor fan shall be statically and dynamically balanced and run on a motor with permanently lubricated bearings.

.4 The indoor fan shall consist of three (3) speeds, High, Mid, and Low plus the Auto-Fan function

.5 The indoor unit shall have a ducted air outlet system and ducted return air system.

.5 Filter:

.1 Return air shall be filtered by means of a standard ~~factory~~ field installed return air filter.

.2 Optional return filter box (rear or bottom placement) with high-efficiency filter shall be available for all ~~PEFY~~ indoor units.

.6 Coil:

.1 The indoor coil shall be of nonferrous construction with smooth plate fins on copper tubing.

.2 The tubing shall have inner grooves for high efficiency heat exchange.

.3 All tube joints shall be brazed with phos-copper or silver alloy.

.4 The coils shall be pressure tested at the factory.

.5 A condensate pan and drain shall be provided under the coil.

.6 The condensate shall be gravity drained from the fan coil.

.7 Both refrigerant lines to the ~~PEFY~~ indoor units shall be insulated in accordance with the installation manual.

.7 Electrical:

.1 The unit electrical power shall be 208/230 volts, 1-phase, 60 hertz.

.2 The system shall be capable of satisfactory operation within voltage limits of 187-228 volts (208V/60Hz) or 207-253 volts (230V/60Hz).

.8 Controls:

.1 This unit shall use controls provided by ~~Mitsubishi Electric Cooling & Heating~~ to perform functions necessary to operate the system. Please refer to section 2.03 of this guide specification for details on controllers and other control options.

.2 Indoor unit shall compensate for the higher temperature sensed by the return air sensor compared to the temperature at level of the occupant when in HEAT mode. Disabling of compensation shall be possible for individual units to accommodate instances when compensation is not required.

Comply

.3 Control board shall include contacts for control of external heat source. External heat may be energized as second stage with 1.8°F – 9.0°F adjustable deadband from set point.

.4 Indoor unit shall include no less than four (4) digital inputs capable of being used for customizable control strategies.

.5 Indoor unit shall include no less than three (3) digital outputs capable of being used for customizable control strategies.

.6 All room temperature/co2 sensors shall have strengthened glass colored touchscreen user interface has the capability to display the setpoint, room temperature, relative humidity and Co2 level with Bacnet-MS/TP interface. Coordinate with control contractor.

2.03 CONTROLS

.1 General:

Comply

.1 The ~~CITY MULTI Controls Network (CMCN)~~ shall be capable of supporting remote controllers, centralized controllers, an integrated web based interface, graphical user workstation, and system integration to Building Management Systems via BACnet® and LonWorks®.

.2 All room temperature/co2 sensors shall have strengthened glass colored touchscreen user interface has the capability to display the setpoint, room temperature, relative humidity and Co2 level with Bacnet-MS/TP interface. Coordinate with control contractor.

.2 Electrical Characteristics

.1 General:

16

.1 The ~~CMCN~~ shall operate at ~~30~~VDC. Controller power and communications shall be via a common non-polar communications bus.

.2 Wiring:

.1 Control wiring shall be installed in a daisy chain configuration from indoor unit to indoor unit, to the ~~BC~~ controller (main and subs, if applicable) and to the outdoor unit. Control wiring to remote controllers shall be run from the indoor unit terminal block to the controller associated with that unit.

.2 Control wiring for the ~~Smart ME~~ remote controller shall be from the remote controller to the first associated indoor unit ~~(TB-5) M-NET~~ connection. The ~~Smart ME~~ remote controller shall be assigned an ~~M-NET address~~.

.3 Control wiring for the ~~Simple MA and Wireless MA~~ remote controllers shall be from the remote controller (receiver) to the first associated indoor unit ~~(TB-15)~~ then to the remaining associated indoor units ~~(TB-15)~~ in a daisy chain configuration.

Comply

.4 Control wiring for centralized controllers shall be installed in a daisy chain configuration from outdoor unit to outdoor unit, to the system controllers (centralized controllers and/or integrated web-based interface), to the power supply.

.5 The ~~AE-200, AE-50, and EB-50GU~~ centralized controller shall be capable of being networked with other ~~AE-200, AE-50, and EB-50GU~~ centralized controllers for centralized control.

.3 Wiring Type:

Non-shielded

.1 Wiring shall be 2-conductor (16 AWG), twisted, stranded, ~~shielded~~ wire as defined by the ~~Diamond System Builder~~ output.

.2 Network wiring shall be CAT-5 with RJ-45 connection.

2.04 ~~CMCN: REMOTE CONTROLLERS BACKLIT SIMPLE MA REMOTE CONTROLLER (PAC-YT53CRAU)~~ Daikin Navigation

Comply

.1 The Backlit Simple ~~MA Remote Controller (PAC-YT53CRAU)~~ shall be capable of controlling up to 16 indoor units (defined as 1 group). The ~~Backlit Simple MA Remote~~ Controller shall be compact in size, approximately 3" x 5" and have limited user functionality. The Backlit Simple MA supports temperature display selection of Fahrenheit or Celsius. The Backlit Simple MA Remote Controller shall allow the user to change on/off, mode (cool, heat, auto ~~(R2/WR2-Series only)~~, dry, setback ~~(R2/WR2-Series only)~~ and fan), temperature setting, and fan speed setting and airflow direction. The Backlit ~~Simple MA Remote C~~ontroller shall be able to limit the set temperature range from the ~~Backlit Simple MA.~~ The ~~Backlit Simple MA Re~~mote controller shall be capable of night setback control with upper and lower set temperature settings. The room temperature shall be sensed at either the ~~Backlit Simple MA~~ Remote Controller or the Indoor Unit dependent on the indoor unit dipswitch setting. The ~~Backlit Simple MA~~ Remote Controller shall display a four-digit error code in the event of system abnormality/error.

.2 The ~~Backlit Simple MA~~ Remote Controller shall only be used in same group with Wireless MA Remote Controllers ~~(PAR-FL32MA-E / PAR-FA32MA-E)~~ or with other Backlit Simple MA Remote Controllers ~~(PAC-YT53CRAU)~~, with up to two remote controllers per group.

.3 The Backlit Simple MA Remote Controller shall require no addressing. The Backlit Simple MA Remote Controller shall connect using two-wire, stranded, non-polar control wire to TB15 connection terminal on the indoor unit. The Simple MA Remote Controller shall require cross-over wiring for grouping across indoor units.

~~PAC-YT53CRAU (Backlit Simple MA Remote Controller)~~			
Item	**Description**	**Operation**	**Display**
ON/OFF	Run and stop operation for a single group	Each Group	Each Group
Operation Mode	Switches between Cool/Drying/Auto/Fan/Heat/Setback. Operation modes vary depending on the air conditioner unit. Auto and Setback mode are available for the ~~R2/WR2-Series only.~~	Each Group	Each Group

Comply

~~PAC-YT53CRAU (Backlit Simple MA Remote Controller)~~			
Item	**Description**	**Operation**	**Display**
Temperature Setting	Sets the temperature from 40°F – 95°F depending on operation mode and indoor unit. Separate COOL and HEAT mode set points available depending on central controller and connected mechanical equipment.	Each Group	Each Group
Fan Speed Setting	Available fan speed settings depending on indoor unit.	Each Group	Each Group
Air Flow Direction Setting	Air flow direction settings vary depending on the indoor unit model.	Each Group	Each Group
Permit / Prohibit Local Operation	Individually prohibit operation of each local remote-control function (Start/Stop, Change operation mode, Set temperature, Reset filter). *1: Centrally Controlled is displayed on the remote controller for prohibited functions.	N/A	Each Group *1
Display Indoor Unit Intake Temp	Measures and displays the intake temperature of the indoor unit when the indoor unit is operating.	N/A	Each Group
Display Backlight	Pressing the button lights up a backlight. The light automatically turns off after a certain period of time. (The brightness settings can be selected from Bright, Dark, and Light off.)	N/A	Each Unit
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed	N/A	Each Unit
Test Run	Operates air conditioner units in test run mode. *2 The display for test run mode will be the same as for normal start/stop (does not display “test run”).	Each Group	Each Group *2
Ventilation Equipment	Up to 16 indoor units can be connected to an interlocked system that has one ~~LOSSNAY unit.~~	Each Group	N/A
Set Temperature Range Limit	Set temperature range limit for cooling, heating, or auto mode.	Each Group	Each Group

2.05 VRF SYSTEM COMMISSIONING

.1 General

Comply

.1 The VRF Manufacturer shall oversee and assist the installing contractor with the start up and commissioning of VRF equipment as outlined below. This process will be completed in two phases. Phase one shall cover the Pre-Start-Up inspection process, Phase two will cover the Physical Start-Up & Commissioning of Equipment.

.2 All VRF System Commissioning activities shall be completed by an employee of the VRF manufacturer whose primary job responsibilities are to provide start up and commissioning of their products; sales staff or in-house support staffs are not permitted to complete this scope of work.

.3 A factory certified representative may assist the VRF manufacturer's personnel in the completion of certain elements of work contained within this specification. Activities completed by a Factory Certified Representative shall be supervised onsite by the VRF manufacturer. Certified representatives shall not be used in lieu of the manufacturer's personnel.

.4 The installing contractor shall have been certified by the manufacturer to install VRF systems, having attended a minimum 3- day VRF Service & Installation course at an approved training center. A copy of this certificate shall be presented as part of the VRF equipment submittal process

.5 The installing contractor shall assist the VRF manufacturer in their completion of the system review and have available a technician with appropriate diagnostic tools, materials and equipment, as required, for the duration of the inspection process. The technician shall be fully licensed and insured to complete necessary duties as directed under the supervision of the VRF manufacturer.

.6 Upon completion of the Equipment Start-Up & VRF Commissioning process, the VRF manufacturer shall provide a formal report outlining the status of the system, in electronic format only. Contained within this report shall be copies of all field inspection reports, required action items and status, Manufacturers design software As-Built, equipment model & serial numbers.

.7 Completion of the Equipment Start-Up and VRF Commissioning process shall verify that the VRF system has been installed per the Engineer's design intent and complies with the VRF manufacturers engineering and installation specifications related to their equipment.

.8 Compliance with federal, state and local codes as well as other authorities having jurisdictions are not part of this process and are the responsibility of the installing contractor.

.9 Contact your regions ~~Mitsubishi Electric Professional Solutions Manager~~ for information and pricing related to services required under this projects scope of work.

2.06 PRE-START-UP INSPECTION

Comply

.1 Contractor shall employ the services of the VRF manufacturer to provide a comprehensive field review of the completed VRF system installation, prior to the physical start up and operation of equipment. Upon satisfaction that the system meets the VRF manufacturer's installation requirements and specifications, the contractor shall be allowed to proceed with the physical start up and operation of equipment.

.2 Prior to the pre-start-up inspection, all systems components shall be in a final state of readiness having been fully installed and awaiting inspection.

Daikin commissioning checks listed in pre-startup checklist

.3 The installing contractor shall provide the VRF manufacturer a copy of the electronic design file used in the design and engineering process of the system being inspected. This electronic design file shall have been completed on software approved by the specified VRF manufacturer and shall have been updated to reflect as-built conditions.

.4 The installing contractor shall have prepared the refrigeration piping systems per equipment installation and service manuals. All refrigerant piping systems, upon completion of assembly, shall have been pressurized to a minimum 600 PSI, using dry nitrogen, and held for an uninterrupted 24HR period, with acceptable change due to atmospheric conditions.

.1 A record of the pressure check process shall be recorded and tagged at the outdoor unit. The tag shall contain the following information: date & time of pressure check start, fill pressure, outdoor temperature at start & stop, date & time of pressure check completion, and the person's full name & company information completing the pressure check.

.2 The installing contractor shall engage the General Contractor as a witness of the pressure check process, confirming that all steps and procedures related to the pressure check where properly followed and that the system held the holding pressure of 600PSI for a period of 24hr hours, with acceptable change due to atmospheric conditions. Witness information, including full name, company name, title, phone number and signature shall be recorded on same pressure tag used by installing contractor.

.5 Upon completion of the 600 PSI pressure check, the system shall be evacuated to a level of 500 microns, where it will be held for a period of 1HR with no deflection. The installing contractor shall utilize the triple evacuation method per the equipment install and service manuals.

.1 Evacuation start & stop dates, times, and persons involved shall be recorded and tagged at the outdoor equipment.

.2 Installing contractor shall digitally capture a photo of the micron gauge reading, at the conclusion of the 1hr holding period, for each system and provide a copy to the VRF manufacturer. Each photo shall contain a tag providing the outdoor units Serial number.

.6 Upon the completion of the 500-micron hold, the calculated additional refrigerant charge can be added. The calculated refrigerant charge shall have been calculated using the VRF manufacturers design software.

.1 Total refrigerant charge of the system shall be recorded and displayed at the outdoor unit by permanent means.

.7 A review of the equipment settings shall be completed, with recommendations provided to improve system performance, if applicable. Physical changes of system settings will be completed by the contractor. Electronic recording of final DIP switches shall be provided as part of the commissioning report.

Comply .8 A comprehensive review and visual inspection shall be completed for each piece of equipment following a detailed check list, specific to the equipment being reviewed. A copy of the inspection report shall be provided as part of the manufacturers close out documentation. Any deficiencies found during the inspection process shall be brought to the attention of the installing contractor for corrective action. Any system components that are not accessible for proper inspection shall be noted as such.

Indoor Equipment report shall contain:

.1 Model & Serial Number

.2 Equipment location

.3 Equipment Tag/Identification number

.4 Network Address & Port Assignment

.5 Digital recording of equipment settings

.6 Mounting/support method

.7 Seismic restraints used

.8 Proper service clearance provided

.9 Wiring and connection points are correct

.10 High voltage reading(s) within acceptable range

.11 Low voltage reading(s) within acceptable range

.12 Type of Remote Controller used and its location

.13 Occupied space temperature sensing location

.14 Air temperature readings within acceptable range

.15 Condensate pump interlock method

.16 Fan E.S.P. setting

.17 Air Filter condition

.18 Height differential setting in heat mode

.19 Noise level acceptable

.20 Refrigerant pipe connected and insulated properly

.21 Condensate pipe connected and insulated properly

.22 Condition of connected ductwork

.23 Fresh air connected

Comply

.24 Humidifier connected and checked

.25 Review of air balance report complete

.26 Other interlocked systems, i.e. baseboard heat, booster fan etc.

2.07 PHYSICAL START-UP & COMMISSIONING OF EQUIPMENT

.1 Upon proper equipment start up by the contractor, following the manufacturers guidelines and specifications, an employee of the VRF manufacturer shall complete a review of the system performance and complete the following tasks:

.2 Check and confirm all communication addressing of system components.

.3 Check and confirm each indoor unit, individually, is properly piped and wired by commanding the indoor unit on, in either heat or cool mode and verifying proper response.

.1 This process shall be digitally recorded and included as part of the close out documentation.

.4 Electronically record a minimum of one-hour of operational data per refrigeration system.

.5 Electronically record selector switch positions on all indoor and outdoor equipment.

.6 The VRF manufacturer shall retain the electronically recorded data, collected during the start-up and equipment commissioning process, at a designated location within the US for future reference.

2.08 CLOSE-OUT INFORMATION

.1 The VRF manufacturer shall issue a System Performance report at the completion of all fieldwork. Contained within this report shall be an overview of the system performance, recommendations, field reports, all electronic data, and as-built design file.

3 EXECUTION

3.01 INSTALLATION OF VARIABLE REFRIGERANT FLOW UNITS

By others

.1 Provide VRF system air conditioning equipment consisting of an exterior condensing unit and an indoor evaporators.

.2 Secure condensing unit in place, level and plumb, on vibration isolation pads on 18” height stand.

.3 Mount indoor evaporator unit. Confirm exact location prior to roughing-in.

.4 Connect condensing unit and indoor evaporator with refrigerant piping in accordance with piping shop drawing schematic and VRF manufacturer requirements/recommendation. Refer to Section entitled Refrigerant Piping, Valves, and Accessories. Provide any required additional refrigerant.

.5 Install loose control components and perform required control wiring (except building automation system connections) between condensing unit and evaporator in conduit in accordance with manufacturer’s control wiring schematic and wiring standards of electrical work.

By others

.6 Refer to Section entitled Basic Mechanical Materials and Methods for equipment/system manufacturer certification requirements.

.7 Refer to Sections 2.05, 2.06, 2.07 & 2.08 of this specification for equipment/system start-up/commissioning requirements.

END OF SECTION

VRV Piping and Wiring Diagrams

VRV Selection

Project Report

Produced on: 2/8/2025

Project details

Project name: 22104386 - Brampton Victoria Park Arena

Solution name: 08-02-25 Shop Drawings

Client Name:

Project number: 659684/875538

1. Indoor Unit Details

CU-1 - RXTQ48TBVJUA

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-1	FXSQ15TBVJU	15,014	11,026	17,000	30 - 36	208-230V 1ph	1.4	15A	27.6 x 9.6 x 31.5	60.0
AC-2	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-3	FXSQ12TBVJU	12,011	9,413	13,500	30 - 34	208-230V 1ph	0.8	15A	21.7 x 9.6 x 31.5	55.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-2 - RXYQ96AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-4	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-5	FXSQ36TBVJU	36,000	25,125	40,000	32 - 39	208-230V 1ph	2.5	15A	55.1 x 9.6 x 31.5	101.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-3 - RXYQ144AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-8	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-6	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-7	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-4 - RXYQ168AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-12	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-11	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-10	FXSQ36TBVJU	36,000	25,125	40,000	32 - 39	208-230V 1ph	2.5	15A	55.1 x 9.6 x 31.5	101.0
AC-9	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-5 - RXYQ120AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-13	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-14	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0
AC-15	FXSQ48TBVJU	48,011	33,599	54,000	35 - 42	208-230V 1ph	2.8	15A	55.1 x 9.6 x 31.5	104.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-6 - RXYQ240AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-16	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0
AC-17	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0
AC-18	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-8 - RXYQ240AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-21	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0
AC-20	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0
AC-19	FXMQ72MVJU	72,004	55,504	80,997	45 - 48	208-230V 1ph	9.0	15A	54.3 x 18.1 x 43.3	302.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-9 - RXYQ72AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-22	FXSQ09TBVJU	9,486	6,831	10,500	28 - 33	208-230V 1ph	0.8	15A	21.7 x 9.6 x 31.5	55.0
AC-23	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-24	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-25	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

CU-7 - RXYQ72AATJB

Name	Model	Tot. Cool	Sens. Cool	Tot. Heat	Sound	Voltage	MCA	MOP	WxHxD	Weight
		BTU/h	BTU/h	BTU/h	dBA		A		inch	lbs
AC-27	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-26	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-28	FXSQ18TBVJU	18,017	13,291	20,000	29 - 34	208-230V 1ph	1.6	15A	39.4 x 9.6 x 31.5	77.0
AC-29	FXSQ09TBVJU	9,486	6,831	10,500	28 - 33	208-230V 1ph	0.8	15A	21.7 x 9.6 x 31.5	55.0

Entering Air Temperature:
Cooling: 80.0 FDB / 67.0
Heating: 70.0 FDB

2. Condensing Unit Details

Performance

Name	Model	Combination Ratio	Cooling		Heating	
			Ambient Temp.	Corrected Capacity	Ambient Temp.	Corrected Capacity
		%	°F	BTU/h	°F	BTU/h
CU-1	RXTQ48TBVJUA	93.8	95.0	47,228	47.0	50,738
CU-2	RXYQ96AATJB	87.5	95.0	95,390	47.0	106,881
CU-3	RXYQ144AATJB	100.0	95.0	142,072	47.0	159,108
CU-4	RXYQ168AATJB	107.1	95.0	157,179	47.0	197,619
CU-5	RXYQ120AATJB	120.0	95.0	122,150	47.0	148,298
CU-6	RXYQ240AATJB	90.0	95.0	226,332	47.0	263,095
CU-8	RXYQ240AATJB	90.0	95.0	224,890	47.0	262,319
CU-9	RXYQ72AATJB	88.2	95.0	69,857	47.0	78,588
CU-7	RXYQ72AATJB	88.2	95.0	70,374	47.0	78,970

Electrical Information

Name	Model	Voltage	MCA	MOP	WxHxD	Weight
			A	A	inch	lbs
CU-1	RXTQ48TBVJUA	208-230V 1ph	29.1	35.0	37.0 x 39.0 x 12.6	176.4
CU-2	RXYQ96AATJB	208V - 230V 3ph	34.1	35.0	48.8 x 65.4 x 30.1	683.4
CU-3	RXYQ144AATJB	208V - 230V 3ph	47.8	50.0	48.8 x 65.4 x 30.1	749.6
CU-4	RXYQ168AATJB	208V - 230V 3ph	54.9	60.0	48.8 x 65.4 x 30.1	749.6
CU-5	RXYQ120AATJB	208V - 230V 3ph	36.5	40.0	48.8 x 65.4 x 30.1	683.4
CU-6	RXYQ240AATJB	208V - 230V 3ph	73.7	80.0	68.9 x 65.4 x 30.1	903.9
CU-8	RXYQ240AATJB	208V - 230V 3ph	73.7	80.0	68.9 x 65.4 x 30.1	903.9
CU-9	RXYQ72AATJB	208V - 230V 3ph	27.3	30.0	36.6 x 65.4 x 30.1	496.0
CU-7	RXYQ72AATJB	208V - 230V 3ph	27.3	30.0	36.6 x 65.4 x 30.1	496.0

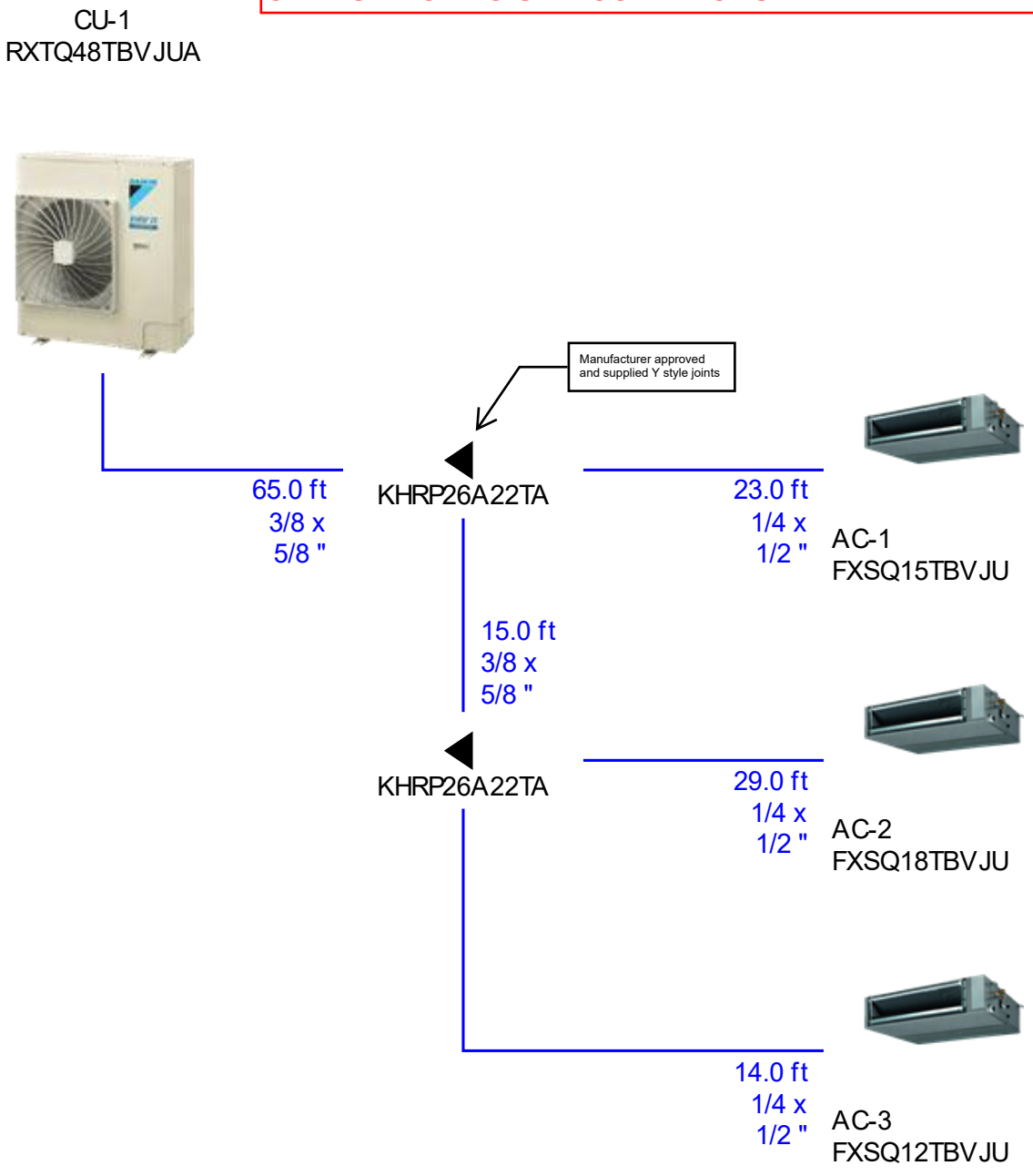
Refrigerant Information

Name	Model	Refrigerant	Factory Charge	Estimated Field Charge	Estimated Total Charge	Minimum Room Volume to Meet CSA B52
		Type	lbs	lbs	lbs	ft^3
CU-1	RXTQ48TBVJUA	R410A	7.50	3.81	11.31	435
CU-2	RXYQ96AATJB	R410A	24.91	3.81	28.72	1105
CU-3	RXYQ144AATJB	R410A	25.79	12.55	38.34	1475
CU-4	RXYQ168AATJB	R410A	25.79	19.32	45.11	1735
CU-5	RXYQ120AATJB	R410A	25.35	10.63	35.98	1384
CU-6	RXYQ240AATJB	R410A	25.79	31.86	57.65	2217
CU-8	RXYQ240AATJB	R410A	25.79	33.54	59.33	2282
CU-9	RXYQ72AATJB	R410A	15.21	6.14	21.35	821
CU-7	RXYQ72AATJB	R410A	15.21	5.90	21.11	812

3. Piping Diagrams

Piping CU-1

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-2
RXYQ96AATJB

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

Manufacturer approved and supplied Y style joints

57.0 ft
3/8 x
7/8 "

KHRP26A33TA

16.0 ft
3/8 x
5/8 "

AC-4
FXSQ48TBVJU

23.0 ft
3/8 x
5/8 "

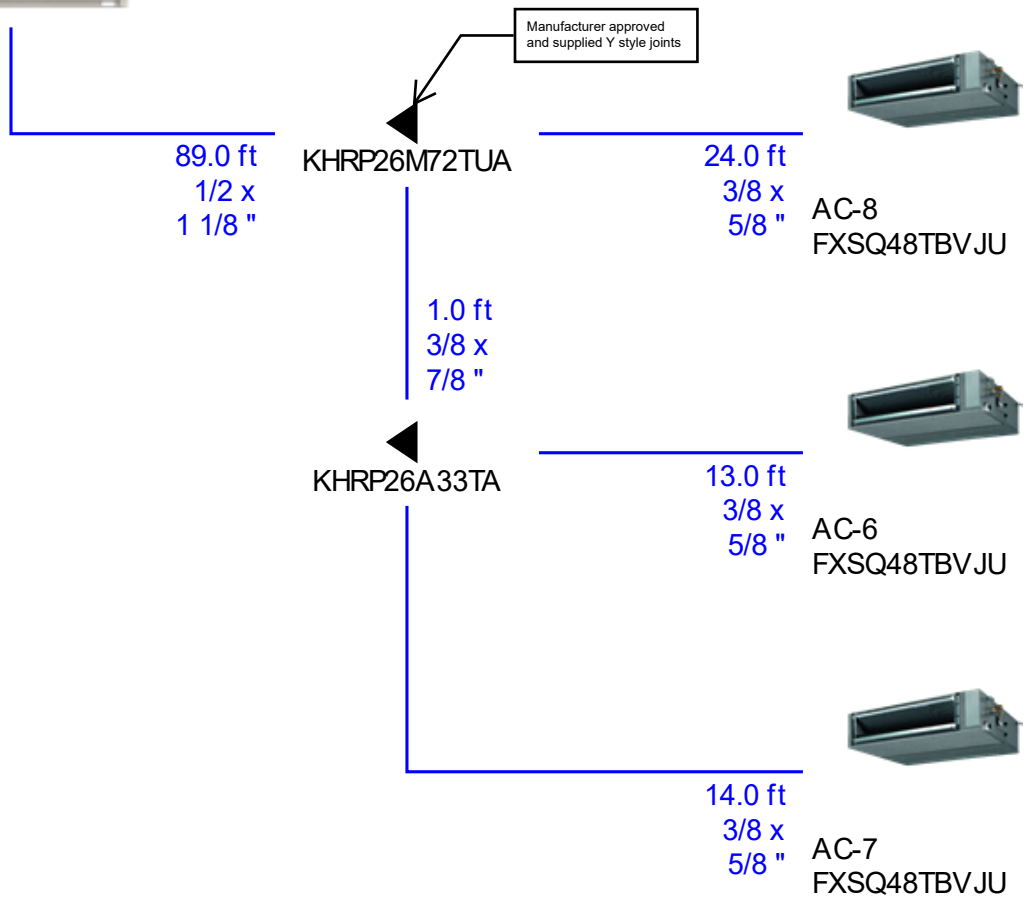
AC-5
FXSQ36TBVJU

All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-3
RXYQ144AATJB

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

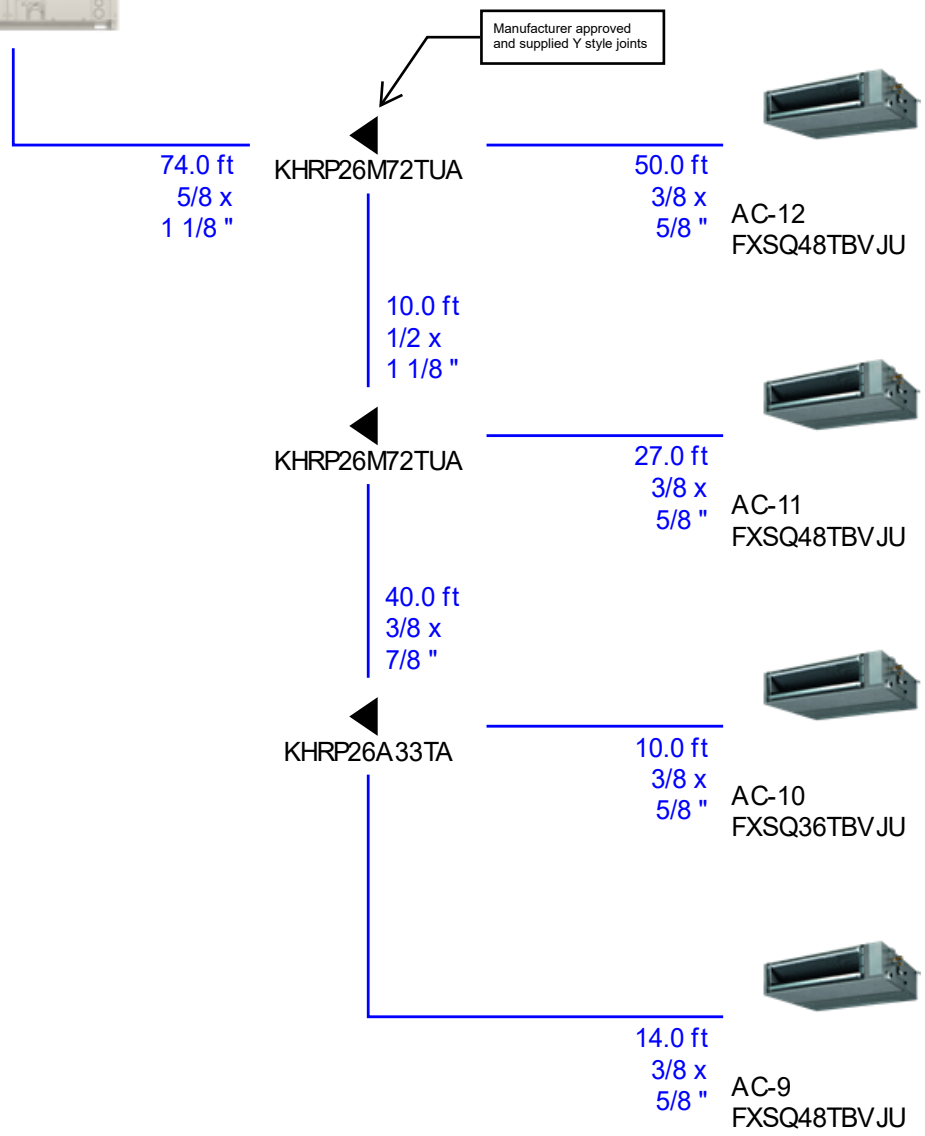


All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-4
RXYQ168AATJB

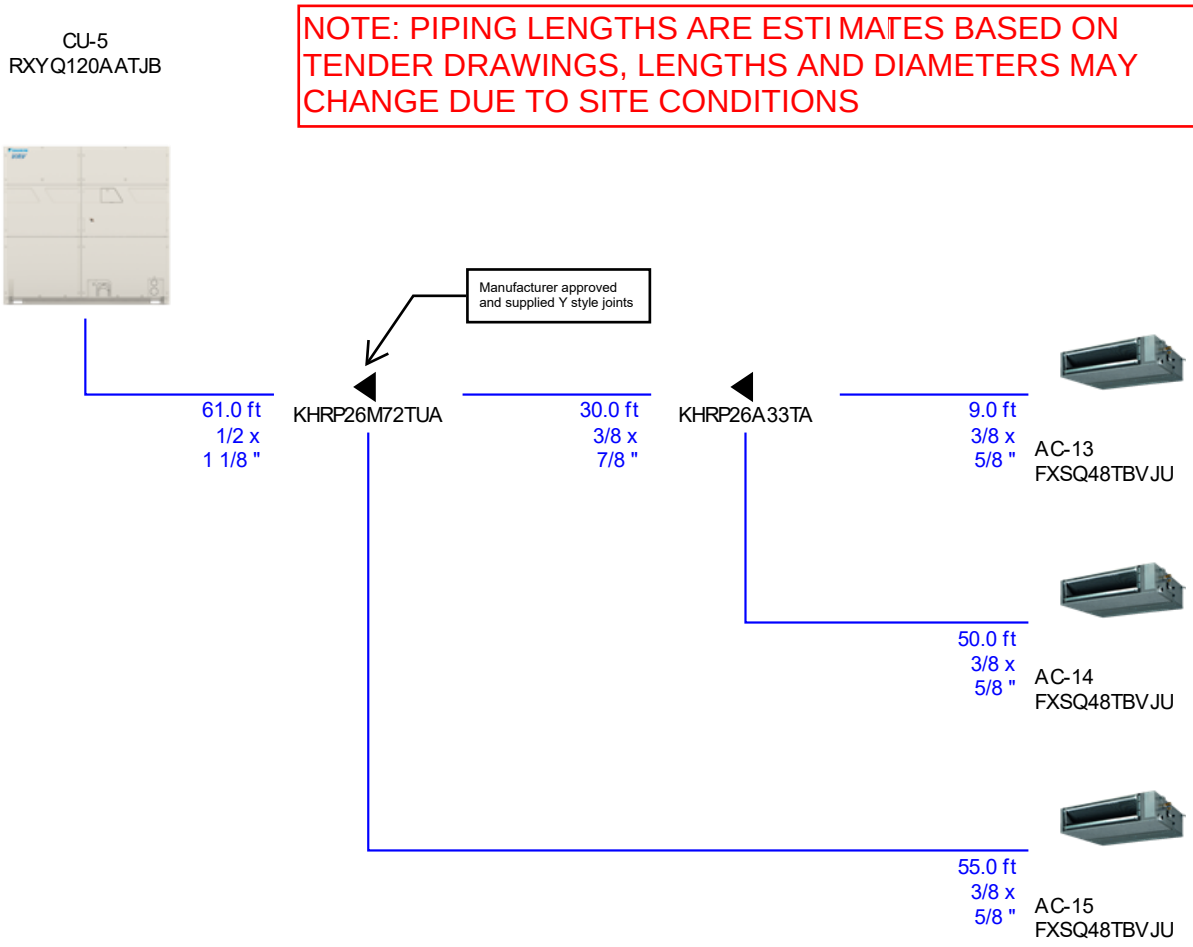
NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



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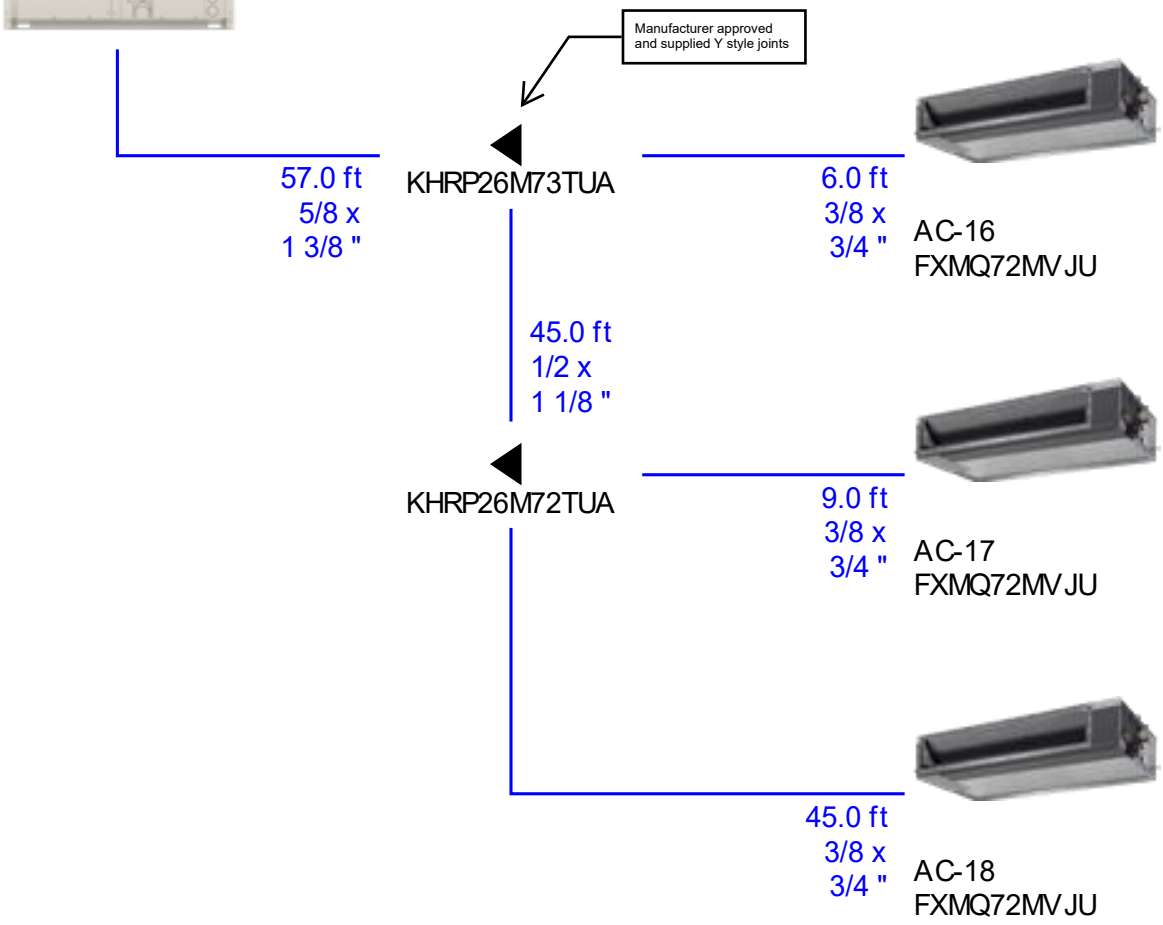
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-6
RXYQ240AATJB

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
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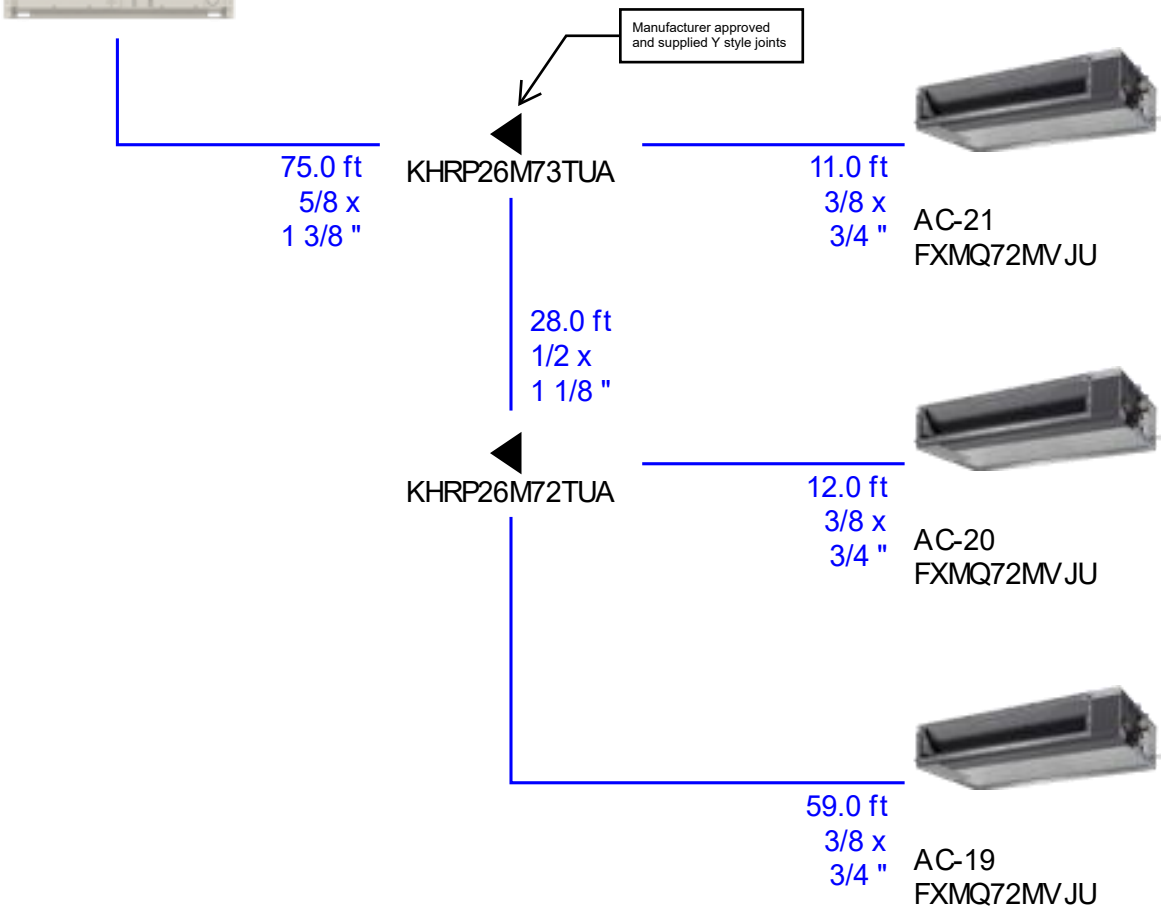
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-8
RXYQ240AATJB

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
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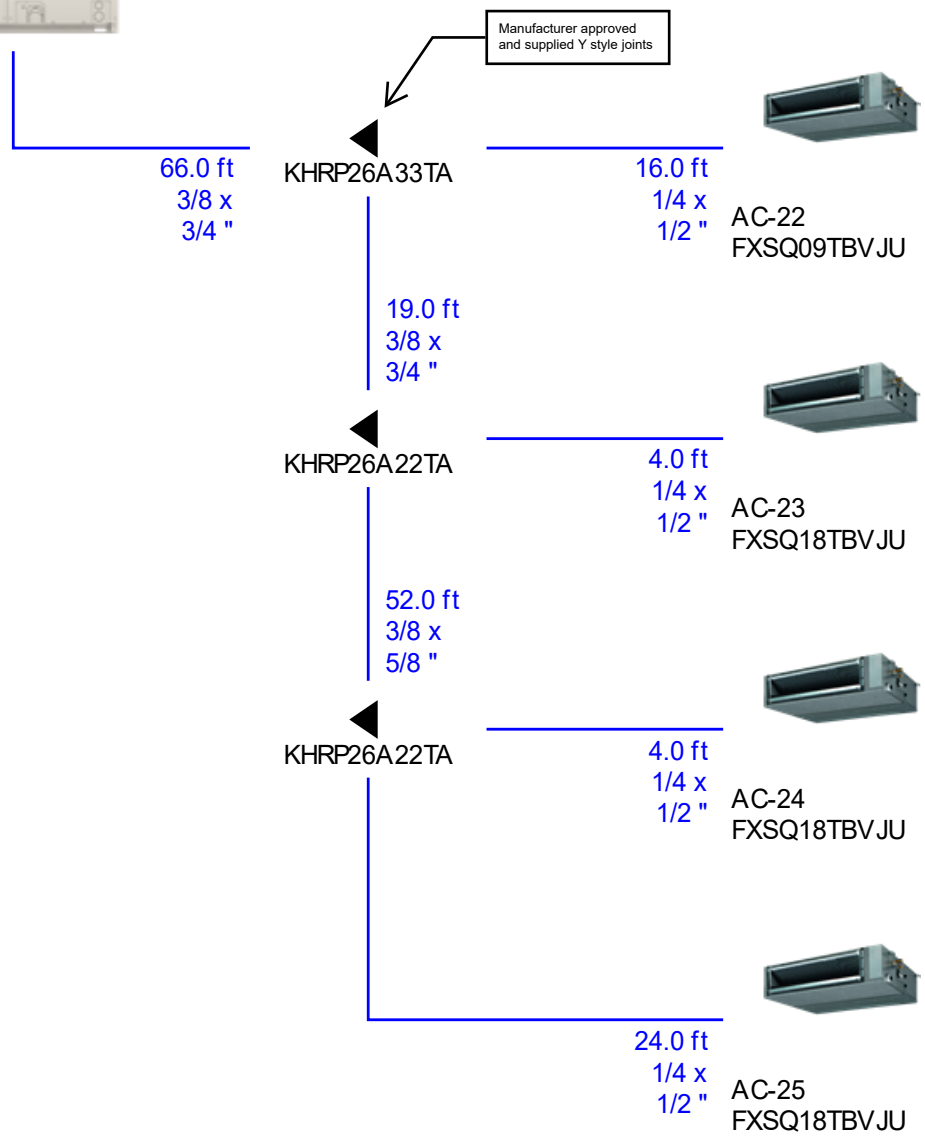
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

CU-9
RXYQ72AATJB

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



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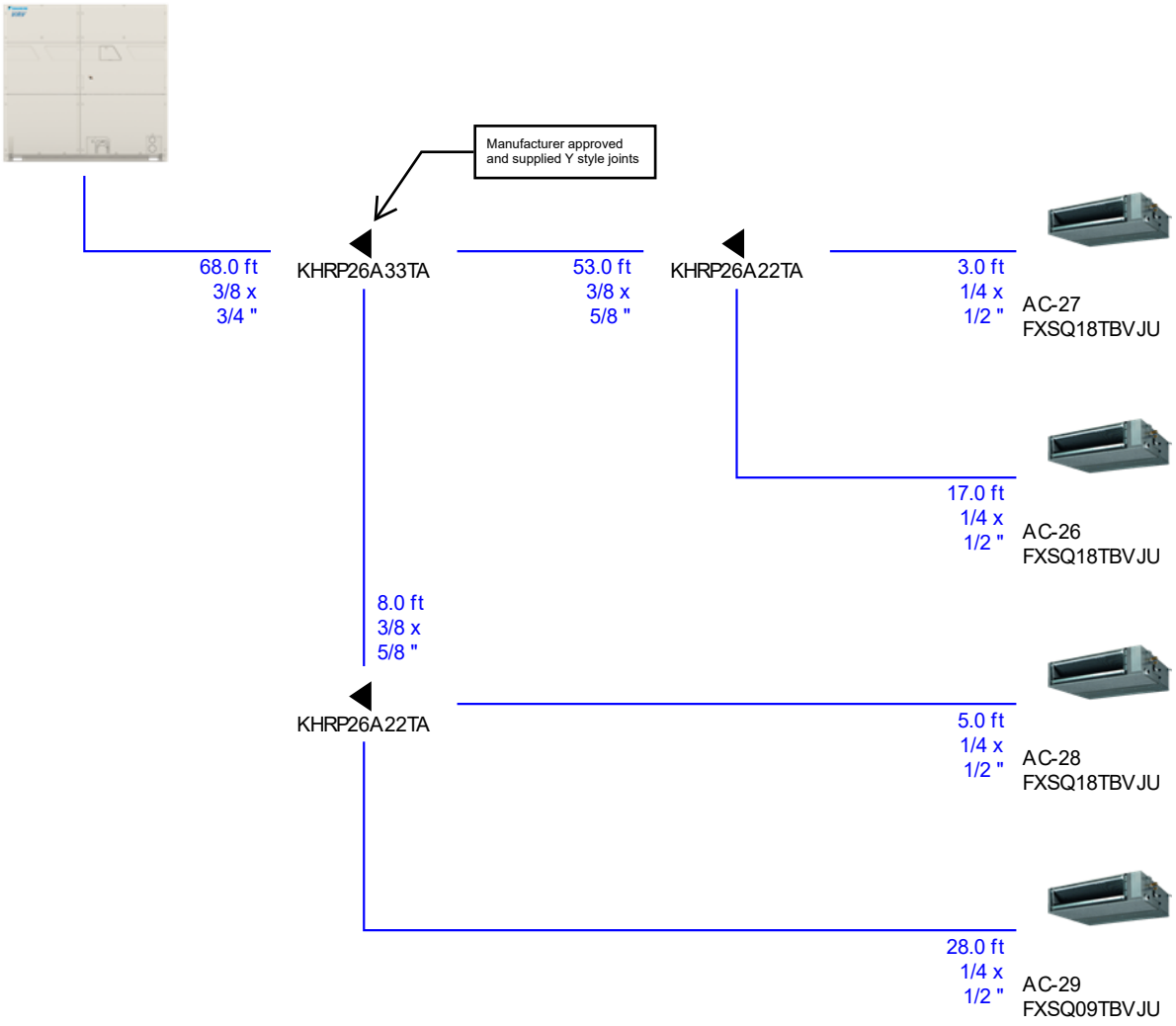
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

NOTE: PIPING LENGTHS ARE ESTI MATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS



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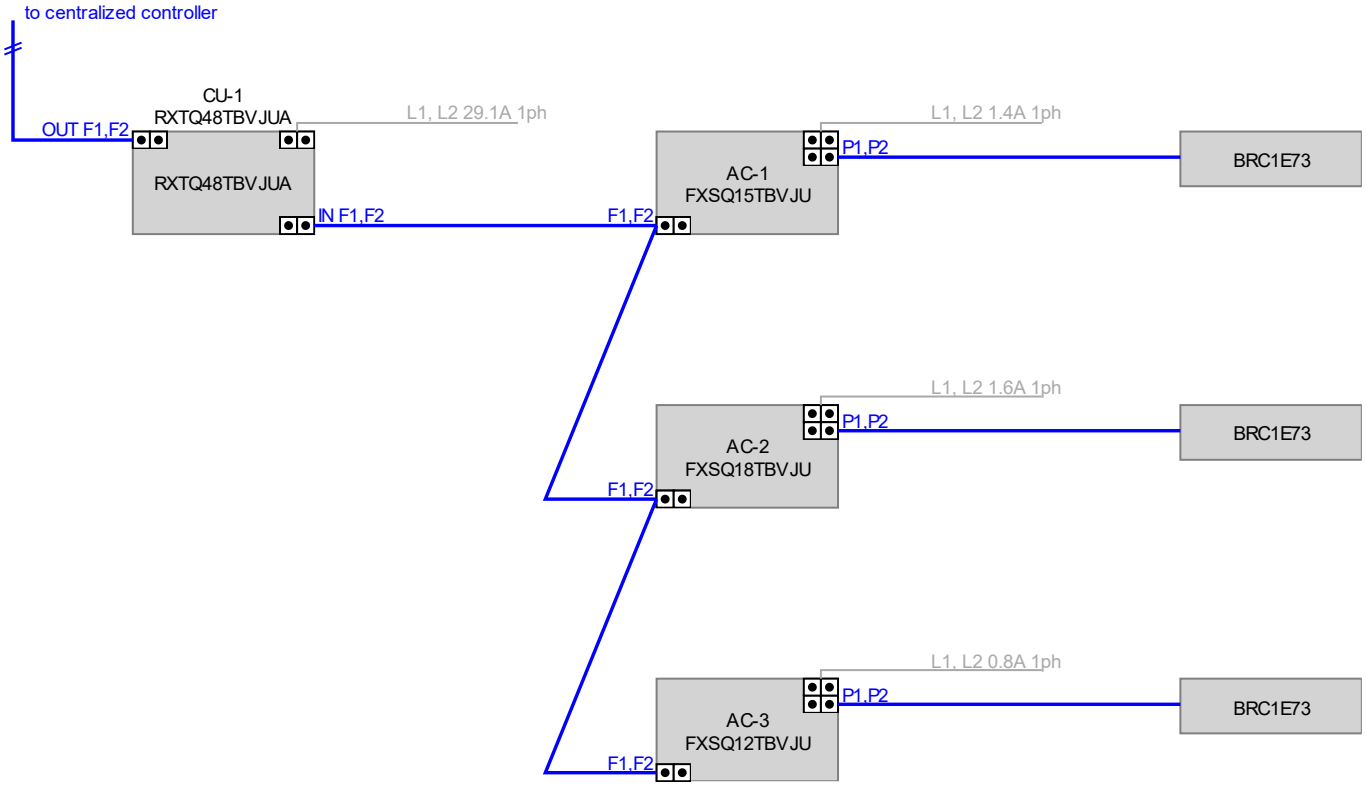
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

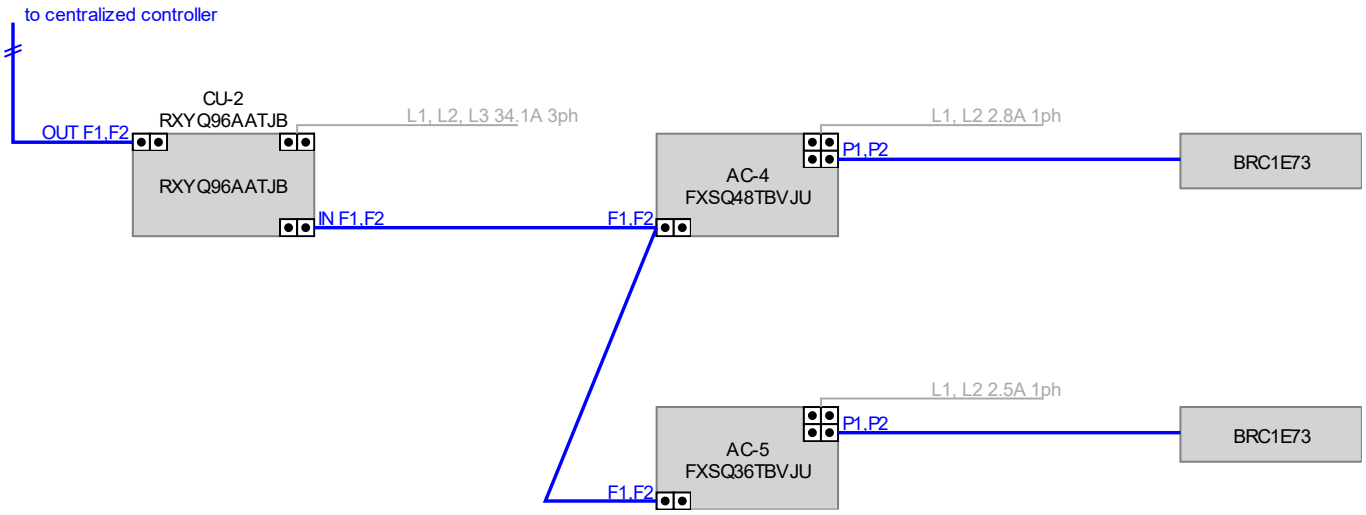
Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

4. Wiring Diagrams

Wiring CU-1



Wiring CU-2

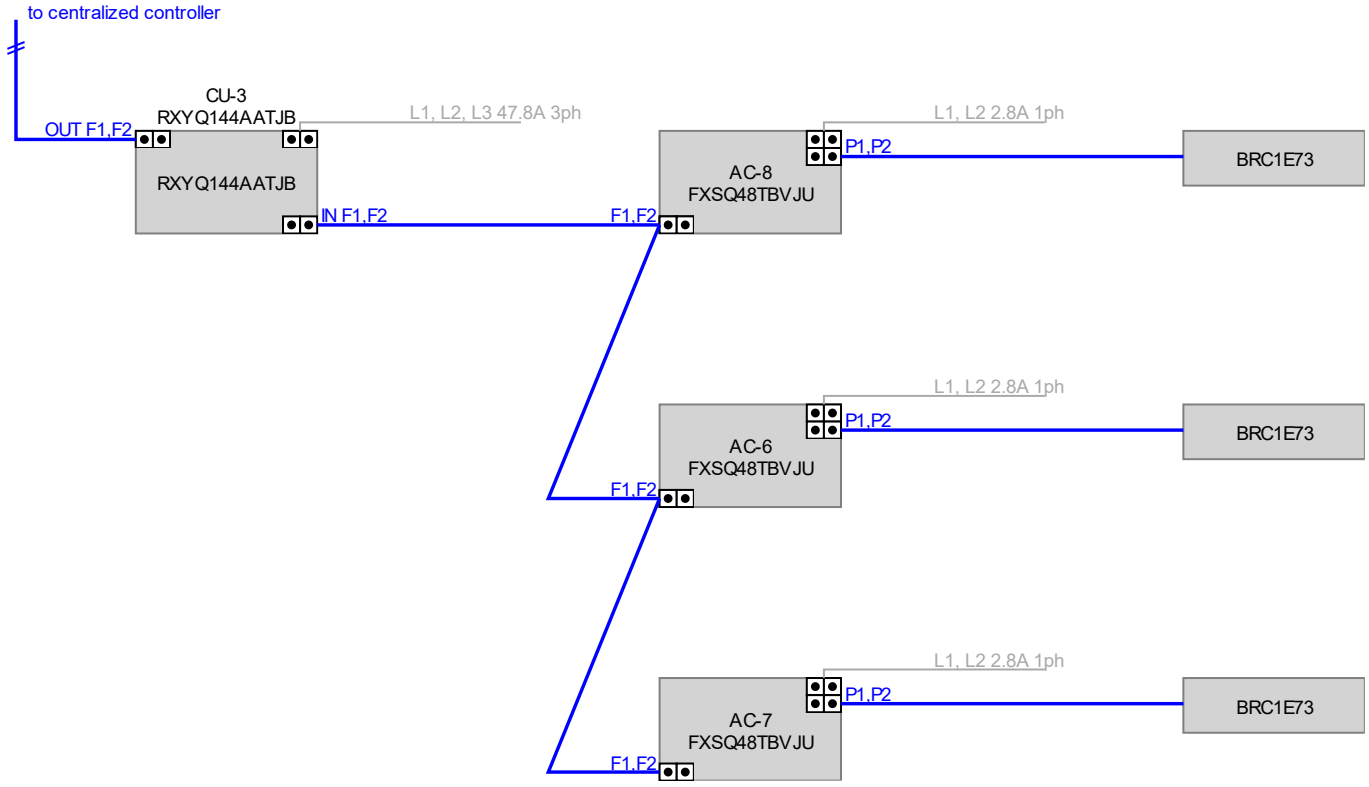


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-3

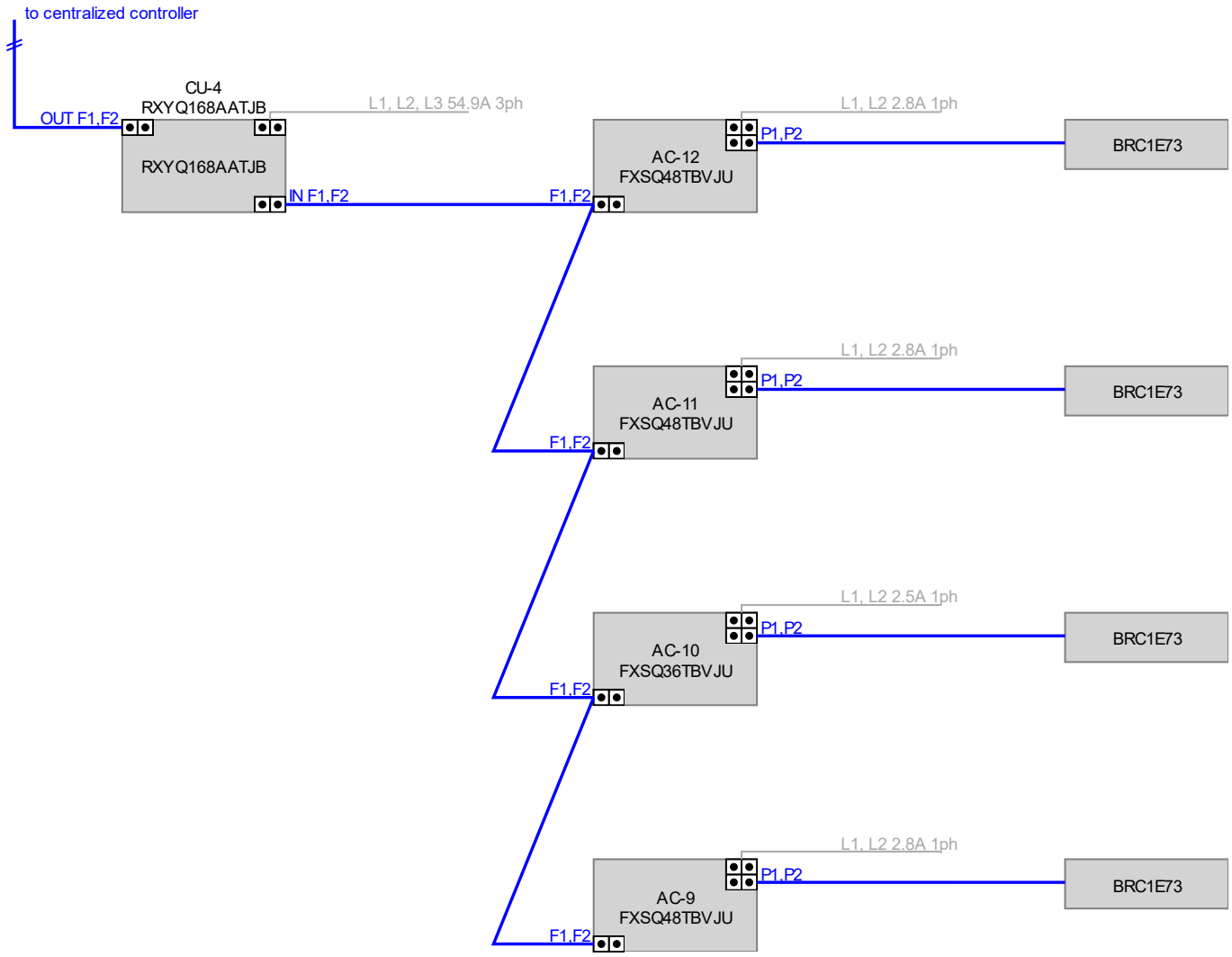


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-4

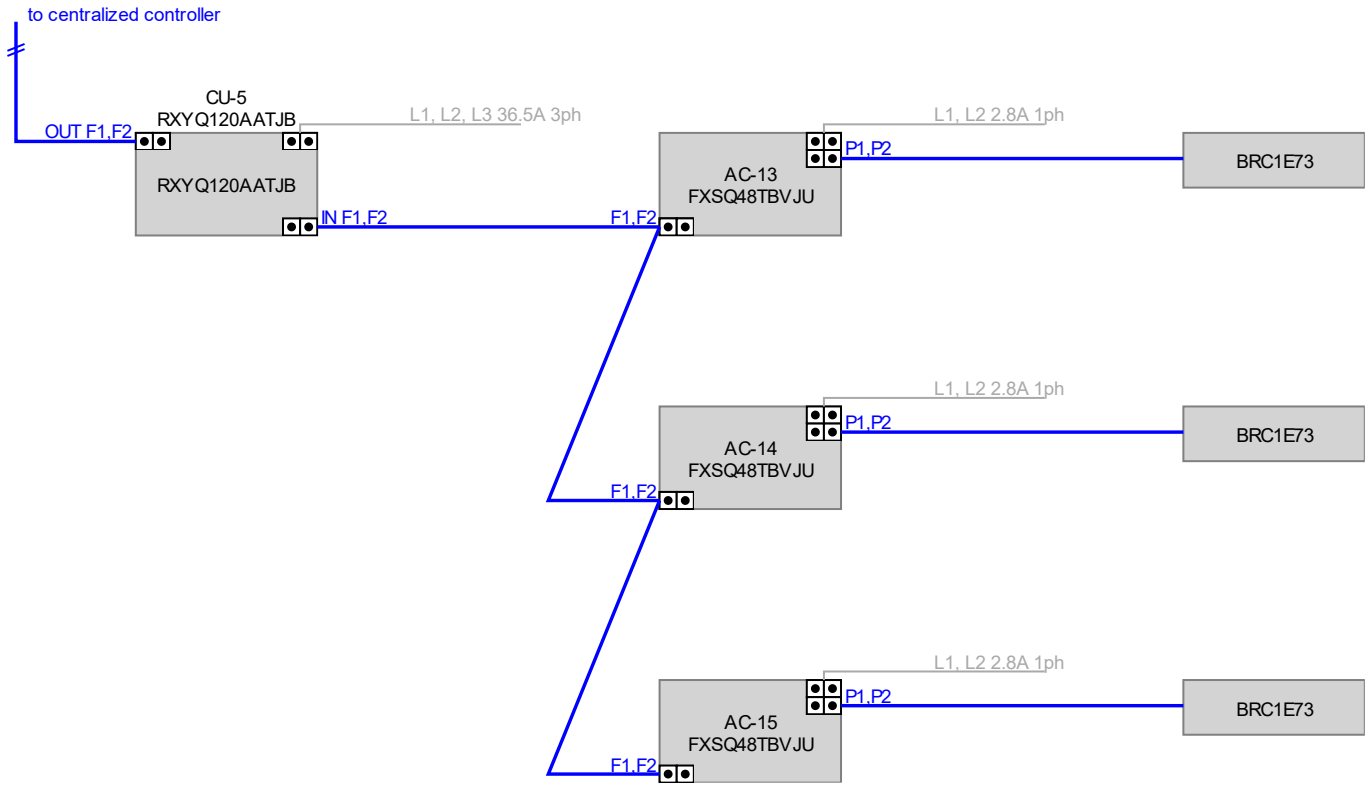


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

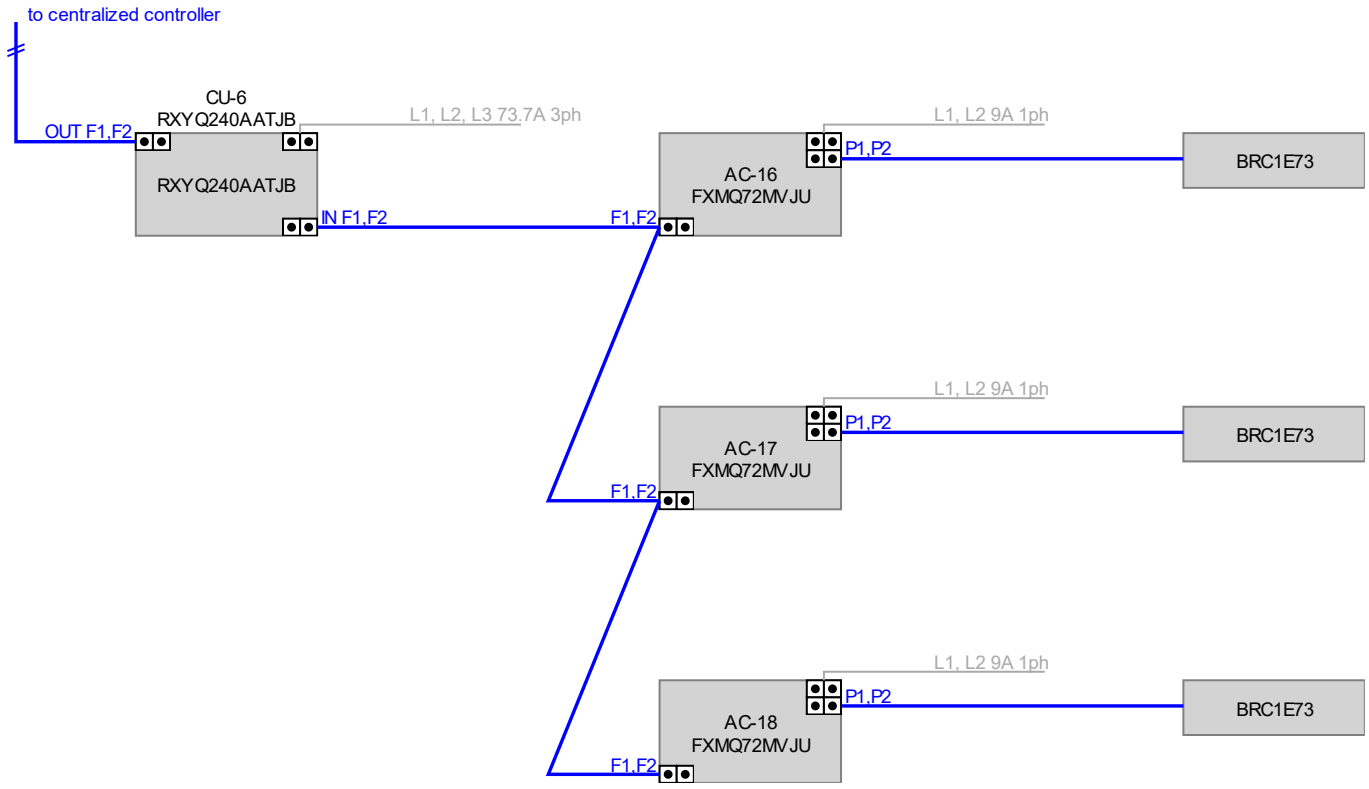
Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-5



Wiring CU-6

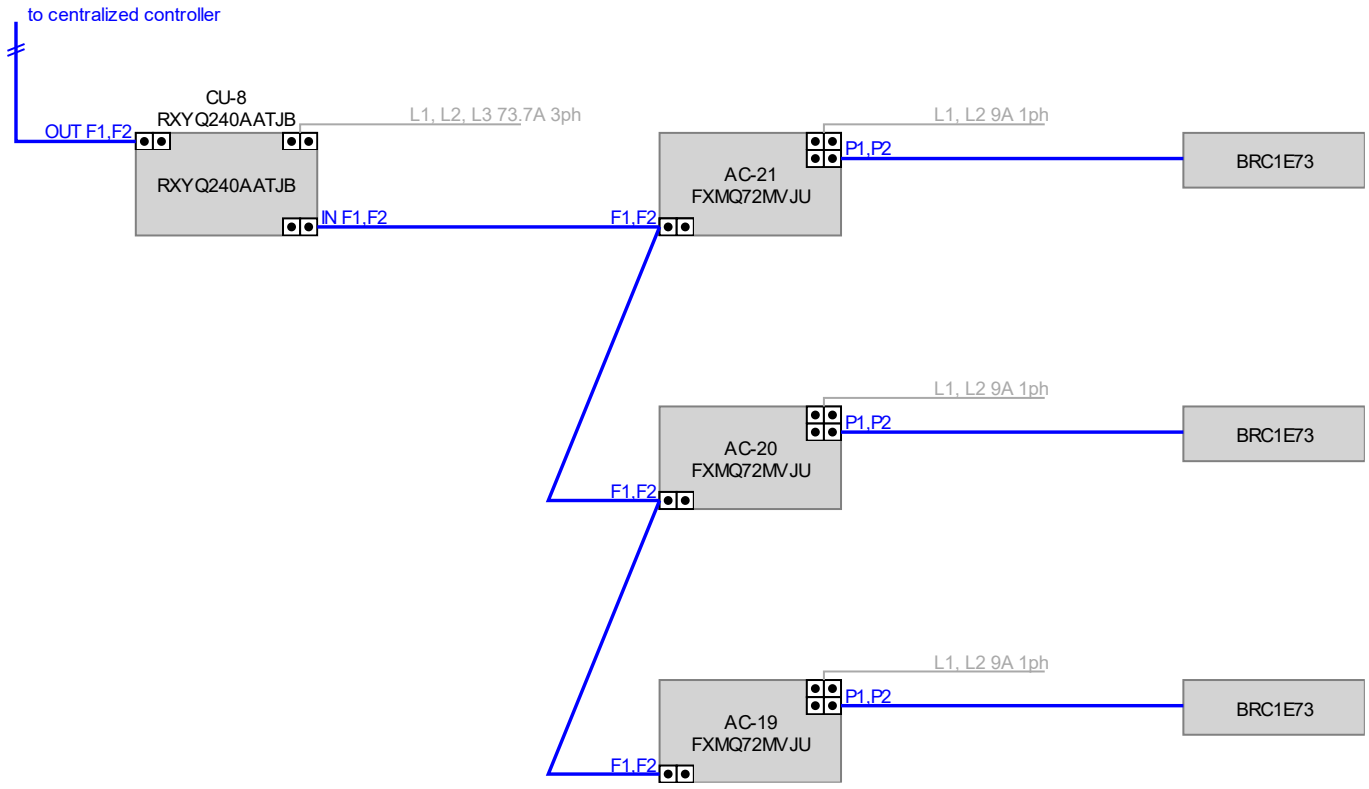


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-8

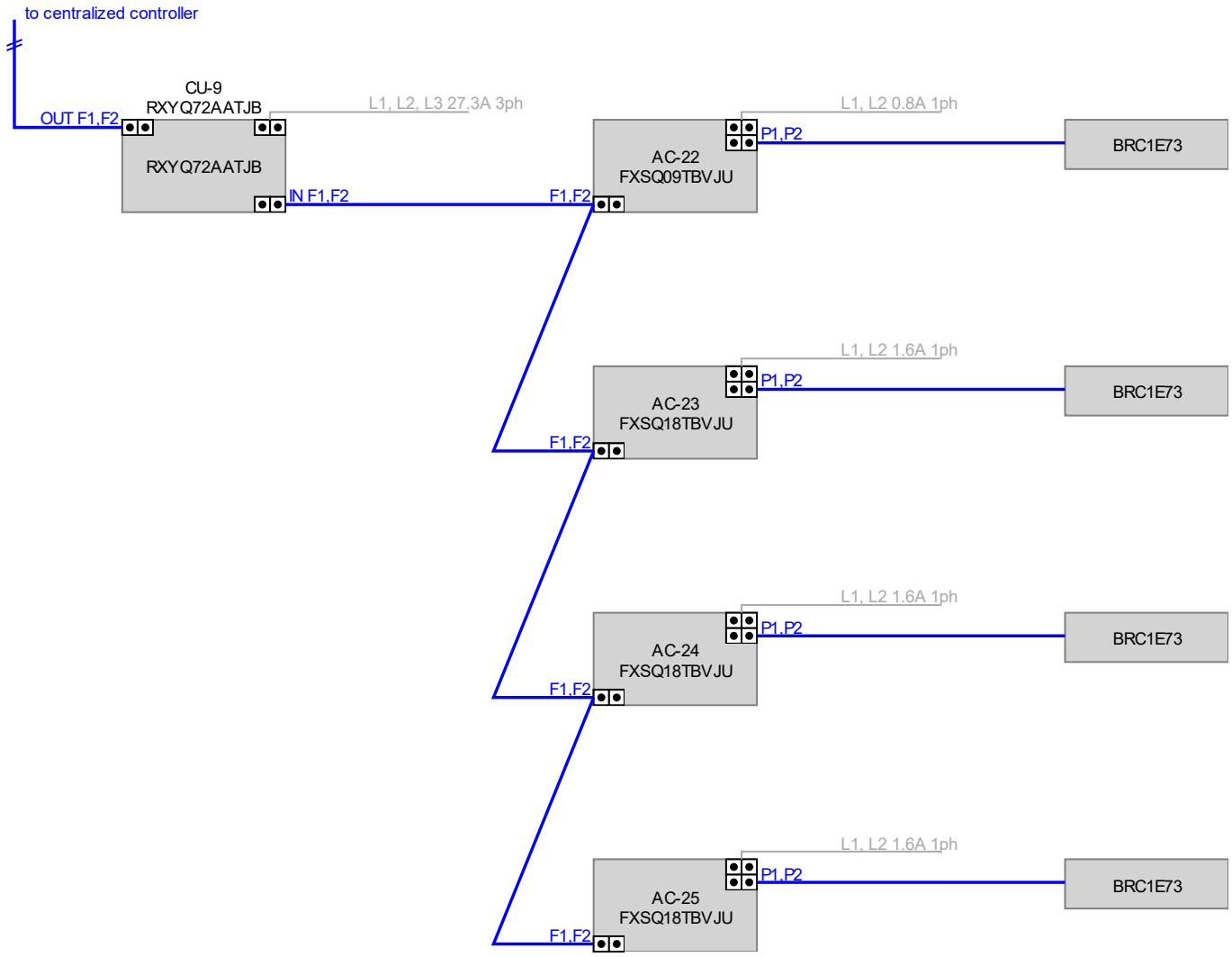


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-9

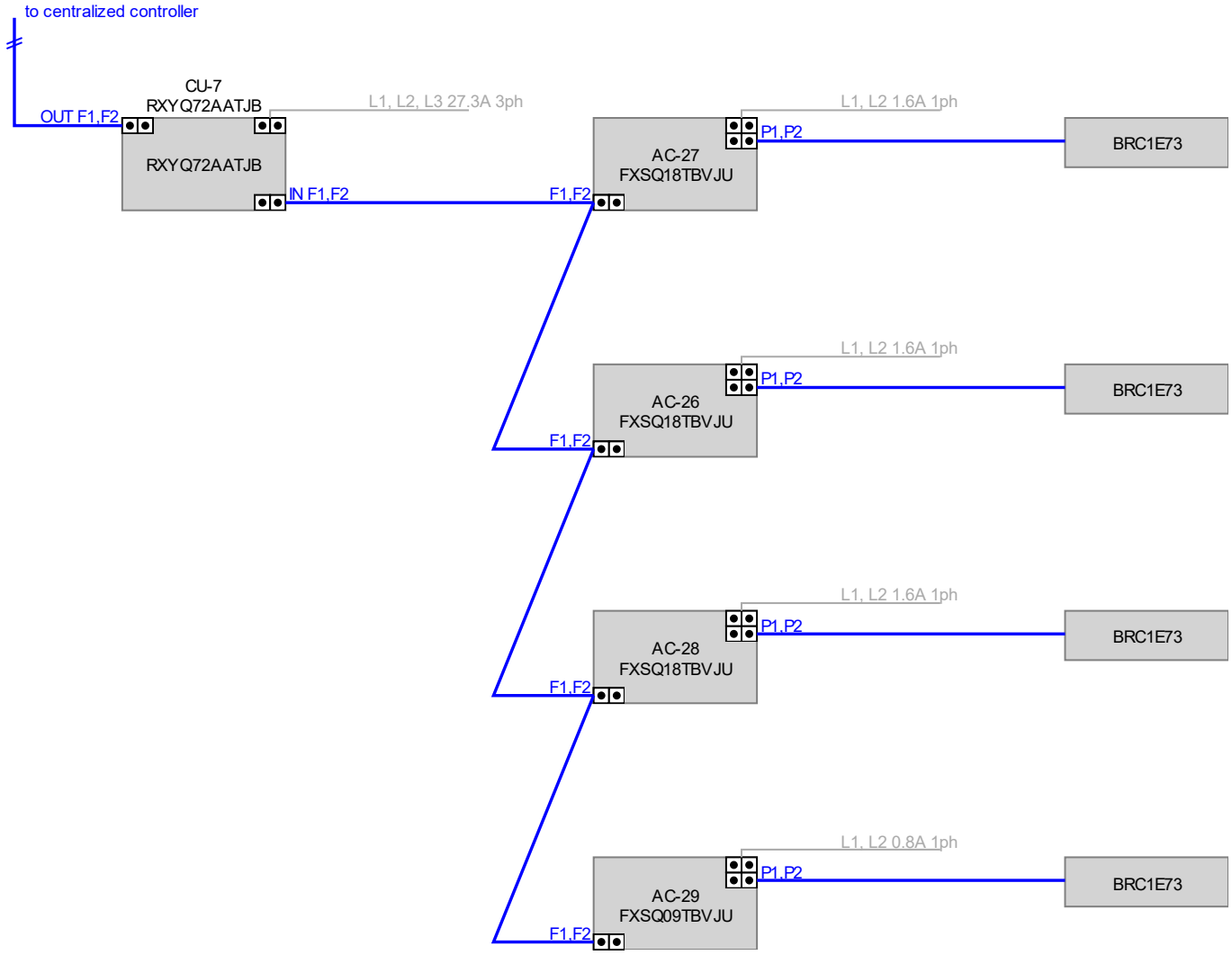


Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Wiring CU-7



Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

Split Systems
Piping & Wiring Diagrams

Split Piping Diagrams

Piping

NOTE: PIPING LENGTHS ARE ESTI MATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

Tag: CU-10/12/13
RKF24AXVJU

Max. total pipe length: 99'

1/4" x 5/8"

Tag: AC-30/32/33
FTKF24AXVJU

All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

Split Piping Diagrams

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

Piping

Tag: CU-11/14
RK30WMVJU9

Max. total pipe length: 99'

1/4" x 5/8"

Tag: AC-30/32/33
FTX30WVJU9

All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

Split Piping Diagrams

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

Piping

Tag: CU-16
RXL18WMVJU9

Max. total pipe length: 99'

1/4" x 1/2"

Tag: AC-36
FDMQ18WVJU9

All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

Split Piping Diagrams

NOTE: PIPING LENGTHS ARE ESTIMATES BASED ON TENDER DRAWINGS, LENGTHS AND DIAMETERS MAY CHANGE DUE TO SITE CONDITIONS

Piping

Tag: CU-15
RXL24WMVJU9

Max. total pipe length: 99'

1/4" x 1/2"

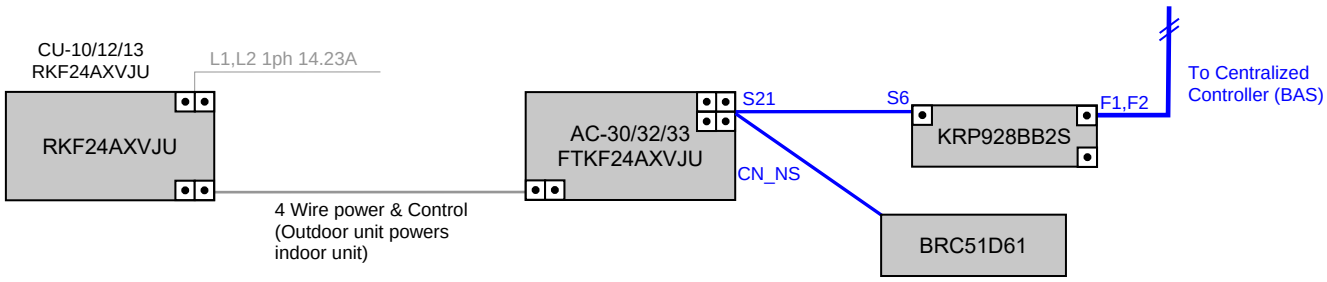
Tag: AC-35
FDMQ24WVJU9

All piping to be as per TSSA. Contractor to provide TSSA refrigerant piping certificate B31.5 prior to commissioning by VRV manufacturer
All systems shall display appropriate ODP tags prior to commissioning by VRV manufacturer.
Exposed outdoor insulation shall be protected by aluminum, sheet metal, painted canvas, plastic cover, or painted with an approved UV coating.
Isolation valves (if shown below) shall be bi-flow self seating valves rated for R-410A with operating pressures up to 650 PSI. Brass shrader connections shall be located on valve body
Contractor to use clamps, expansion joints and installation practices which allows the pipes to expand and contract freely.
All pipe lengths and sizes below are estimates. Contractor to contact VRV manufacturer prior to purchase and install of refrigerant piping to confirm actual piping lengths and sizes.

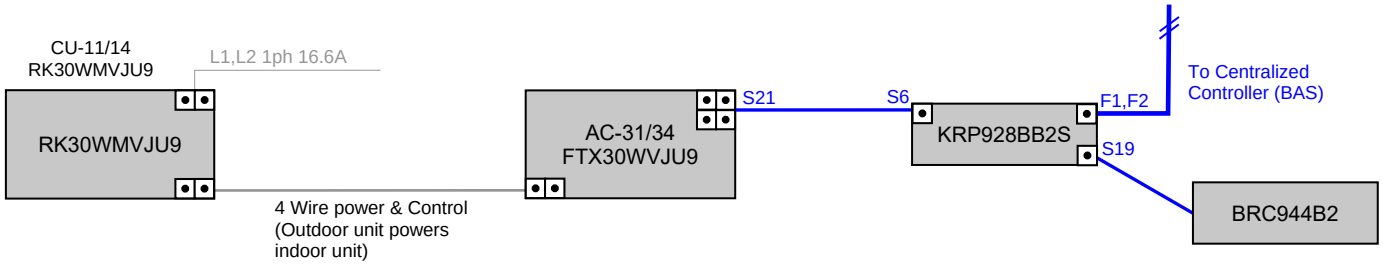
Insulation:
- For indoor piping : 1/2" wall diameter Armaflex
- For outdoor piping : 3/4" wall diameter Armaflex

Split Wiring Diagrams

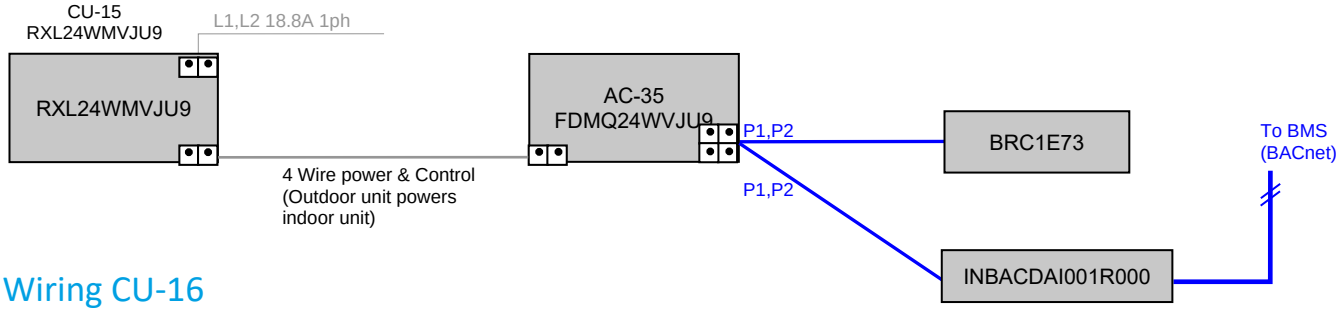
Wiring CU-10/12/13



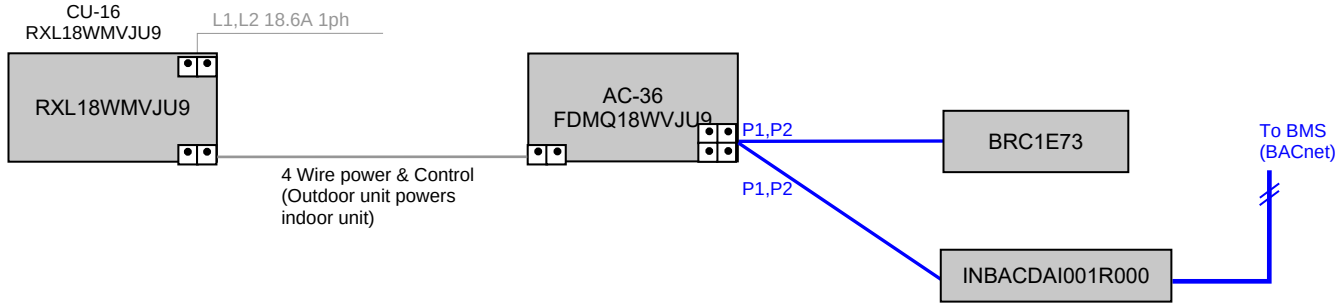
Wiring CU-11/14



Wiring CU-15



Wiring CU-16



Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

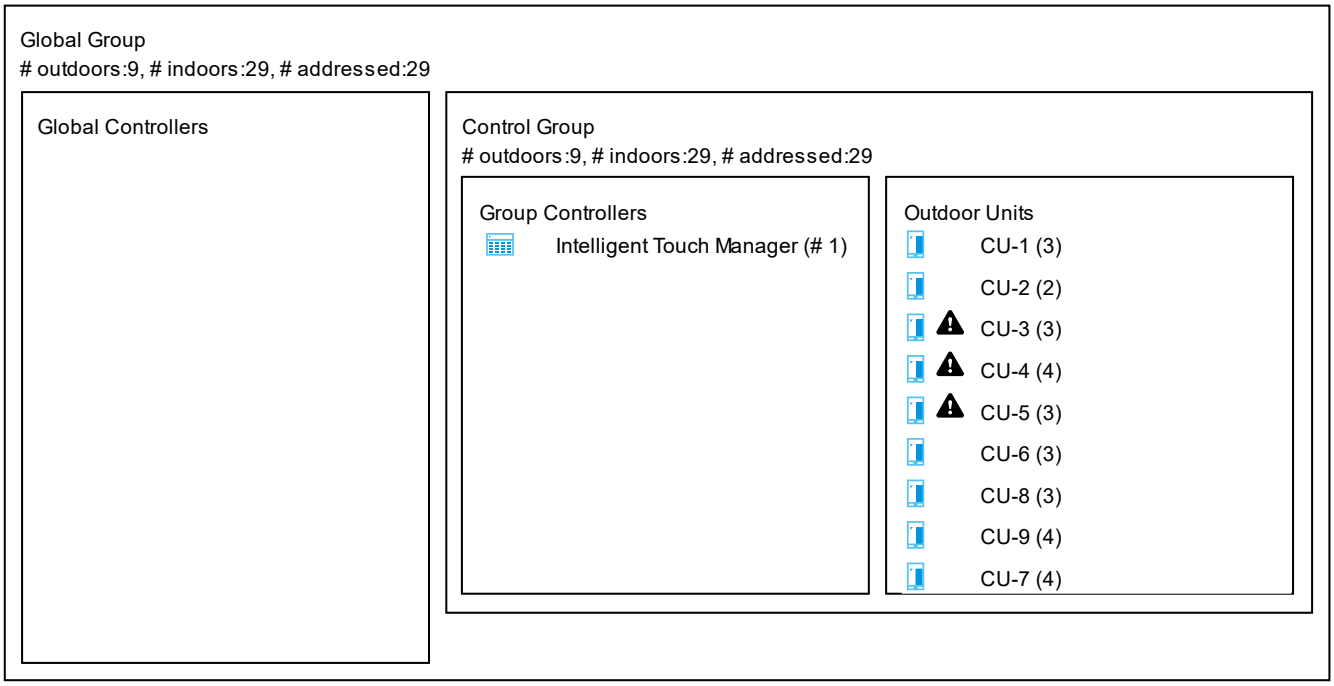
Div 16 : Electrical power wiring

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches not provided by DXS/HTS, to be supplied and installed by others

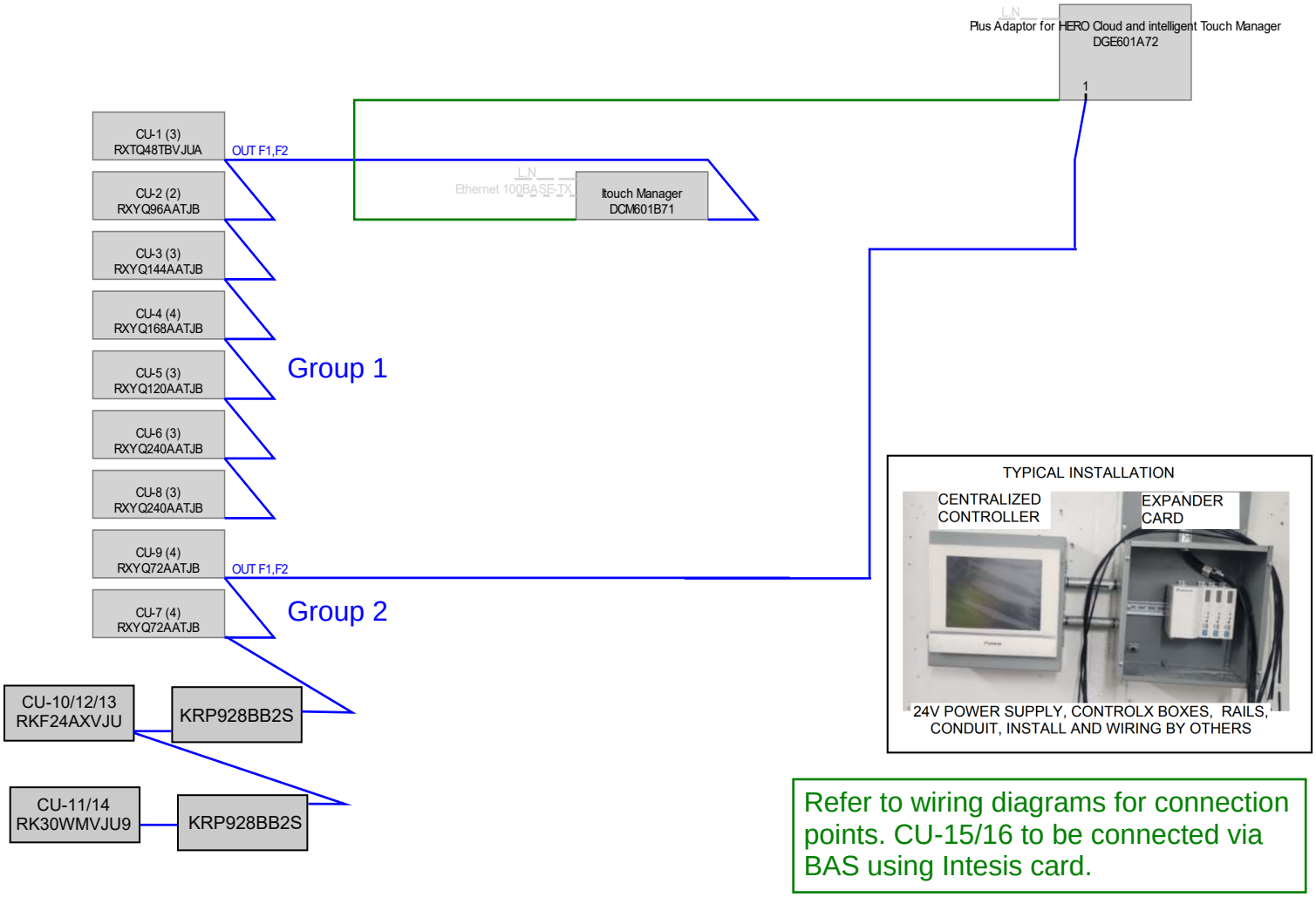
Centralized Controls

5. Centralized Controllers

Concept



5. Centralized Controllers



Refer to wiring diagrams for connection points. CU-15/16 to be connected via BAS using Intesis card.

Div 15 : Low Voltage control wiring 18 AWG 2-conductor stranded non-shielded (unless otherwise noted)

Div 16 : Electrical power wiring

CPEV/FCPEV - Max distance is 164ft/50m

Notes:
- Individual disconnects are required for each piece of equipment
- Disconnect switches to be supplied and installed by others

System Technical Data

Daikin VRV System

Outdoor Units

CU - 7, 9	RXYQ72AATJB	(2)
CU - 2	RXYQ96AATJB	(1)
CU - 5	RXYQ120AATJB	(1)
CU - 3	RXYQ144AATJB	(1)
CU - 4	RXYQ168AATJB	(1)
CU - 6, 8	RXYQ240AATJB	(2)
CU - 1	RXTQ48TBVJUB	(1)

Indoor Units

AC - 16-21	FXMQ72TAVJU	(6)
AC - 22, 29	FXSQ09TBVJU	(2)
AC - 1	FXSQ15TBVJU	(1)
AC - 2, 23-28	FXSQ18TBVJU	(7)
AC - 5, 10, 14	FXSQ36TBVJU	(3)
AC - 4, 6-9, 11, 12, 13, 15	FXSQ48TBVJU	(9)
AC - 3	FXSQ12TBVJU	(1)

Submittal Data Sheet

6 Ton, 230V, VRV EMERION HP

RXYQ72AATJB

Tag: CU-7/9

FEATURES

- New Simple and Stylish design with expanded line up with single-modeule units from 6-2
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heate
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- Ingtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US.

Submittal Data Sheet

6 Ton, 230V, VRV EMERION HP

RXYQ72AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ72AATJB	Outdoor Unit Name:	6 Ton, 230V, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	69,000	Rated Heating Capacity (Btu/hr):	69,000
Nom Cooling Capacity (Btu/hr):	72,000	Nom Heating Capacity (Btu/hr):	81,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	/ 12.20	Heating COP (Non-Ducted/Ducted):	3.6 / 3.6
IEER (Non-Ducted/Ducted):	23.20 / 19.80	Heating COP 17F (Non-Ducted/Ducted):	2.4 / 2.4

OUTDOOR UNIT DETAILS

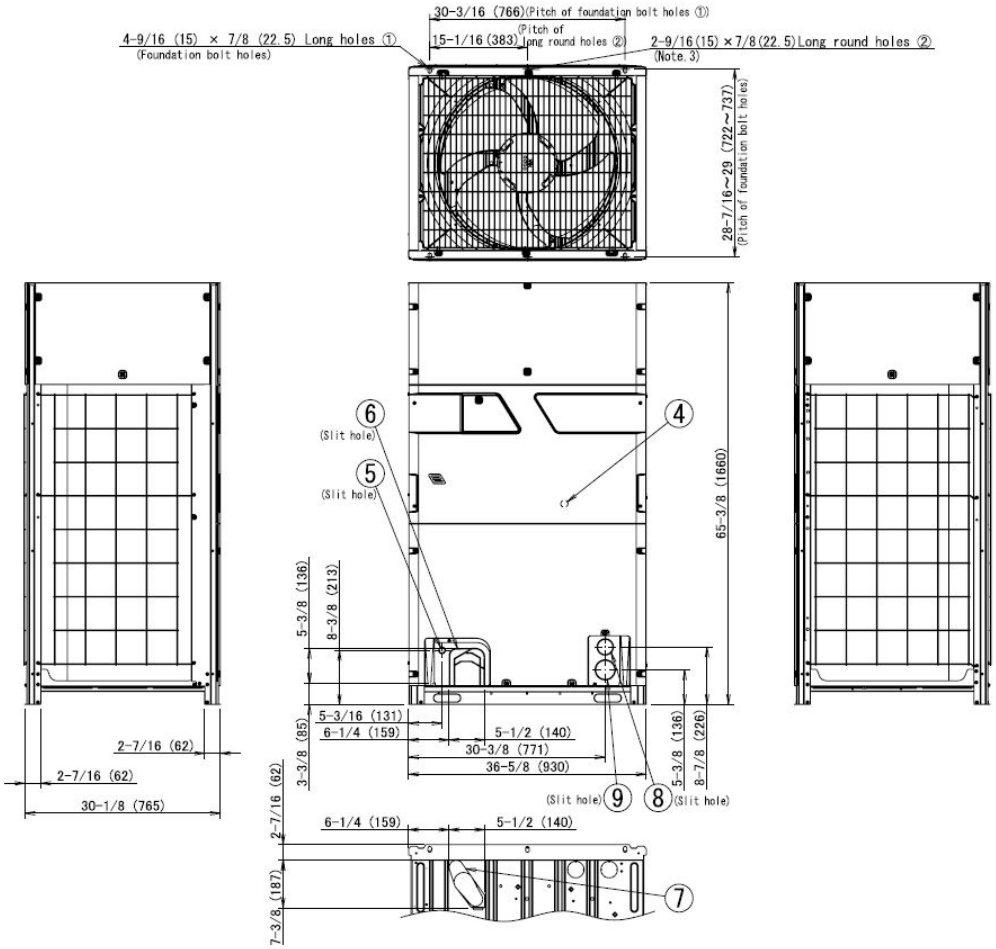
Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	8 - 100
Min. Circuit Amps MCA (A):	27.3	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	30	Airflow Rate (H) (CFM):	6210
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	3/4
Rated Load Amps RLA(A):	11.1	Liquid Pipe Connection (inch):	3/8
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	36-5/8	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	58
Net Weight (lb):	496	Sound Power Level (dBA):	

Submittal Data Sheet
6 Ton, 230V, VRV EMERION HP
RXYQ72AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	13.9	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

8 Ton, 230V, VRV EMERION HP

RXYQ96AATJB

Tag: CU-2

FEATURES

- New Simple and Stylish design with expanded line up with single-modeule units from 6-20T and dual-mod
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heater
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- Ingtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US.

Submittal Data Sheet

8 Ton, 230V, VRV EMERION HP

RXYQ96AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ96AATJB	Outdoor Unit Name:	8 Ton, 230V, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	92,000	Rated Heating Capacity (Btu/hr):	69,000
Nom Cooling Capacity (Btu/hr):	96,000	Nom Heating Capacity (Btu/hr):	108,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	/ 12.00	Heating COP (Non-Ducted/Ducted):	3.5 / 3.4
IEER (Non-Ducted/Ducted):	23.60 / 19.40	Heating COP 17F (Non-Ducted/Ducted):	2.4 / 2.4

OUTDOOR UNIT DETAILS

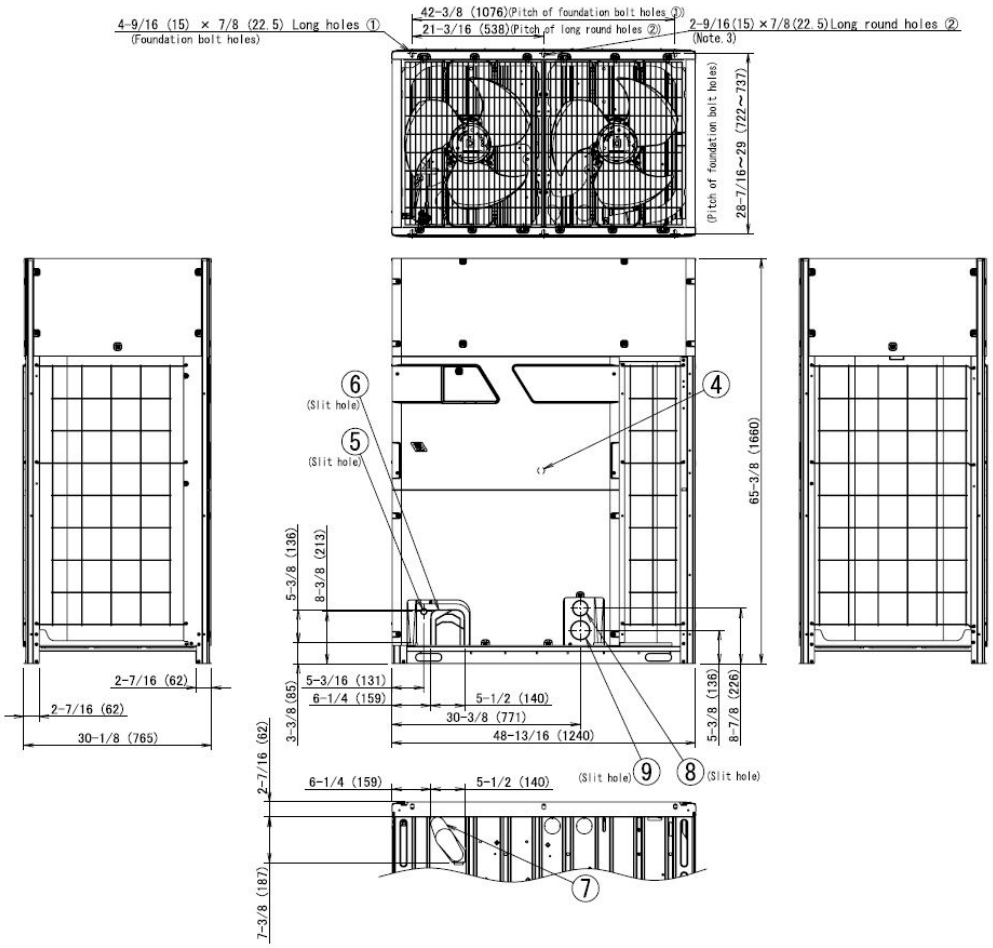
Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	4 - 100
Min. Circuit Amps MCA (A):	34.1	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	35	Airflow Rate (H) (CFM):	8965
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	7/8
Rated Load Amps RLA(A):	7.6 + 7.6	Liquid Pipe Connection (inch):	3/8
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	61
Net Weight (lb):	683	Sound Power Level (dBA):	

Submittal Data Sheet
8 Ton, 230V, VRV EMERION HP
RXYQ96AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	23.6	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

10 Ton, 230, VRV EMERION HP

RXYQ120AATJB

Tag: CU-5

FEATURES

- New Simple and Stylish design with expanded line up with single-modeule units from 6-20T an
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heater
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- ncreased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- ngtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US.

Submittal Data Sheet

10 Ton, 230, VRV EMERION HP

RXYQ120AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ120AATJB	Outdoor Unit Name:	10 Ton, 230, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	114,000	Rated Heating Capacity (Btu/hr):	110,000
Nom Cooling Capacity (Btu/hr):	119,000	Nom Heating Capacity (Btu/hr):	135,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	/ 11.10	Heating COP (Non-Ducted/Ducted):	3.5 / 3.4
IEER (Non-Ducted/Ducted):	22.80 / 19.30	Heating COP 17F (Non-Ducted/Ducted):	2.3 / 2.3

OUTDOOR UNIT DETAILS

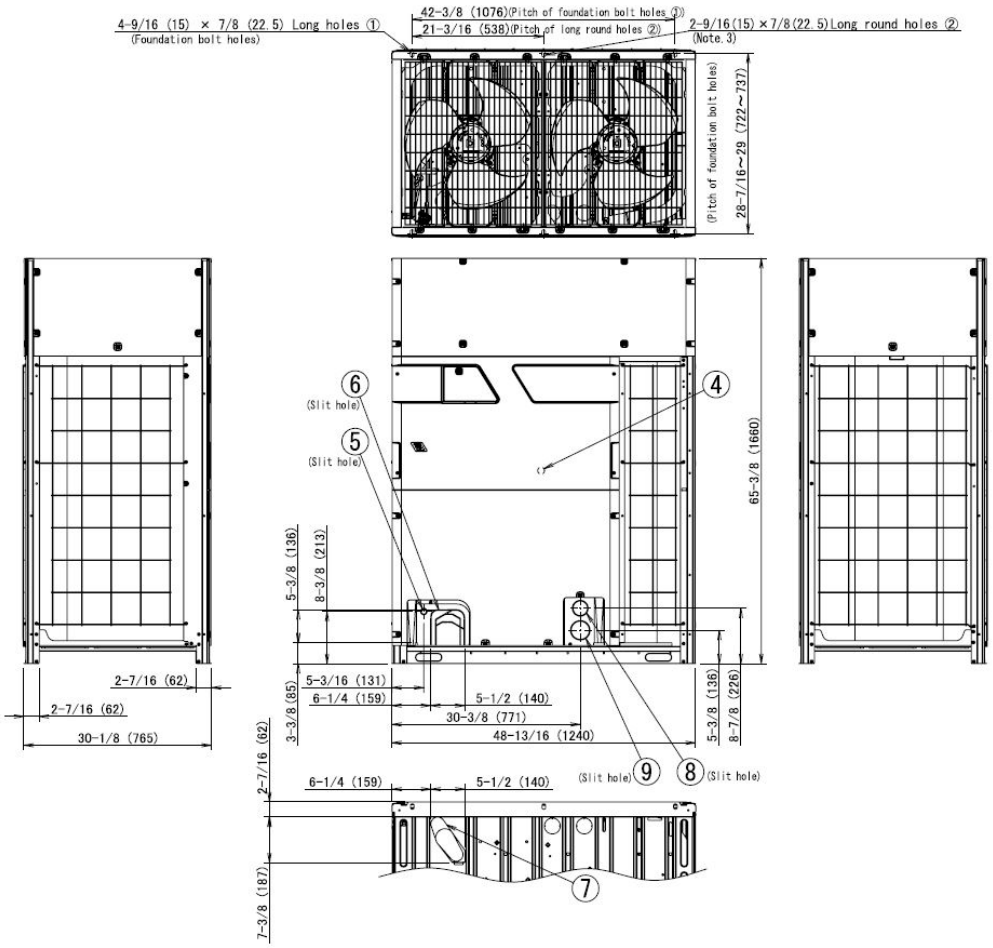
Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	3 - 100
Min. Circuit Amps MCA (A):	36.5	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	40	Airflow Rate (H) (CFM):	8965
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	10.5 + 10.6	Liquid Pipe Connection (inch):	1/2
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	61
Net Weight (lb):	683	Sound Power Level (dBA):	

Submittal Data Sheet
10 Ton, 230, VRV EMERION HP
RXYQ120AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	23.6	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

12 Ton, 230V, VRV EMERION HP

RXYQ144AATJB

Tag: CU-3

FEATURES

- New Simple and Stylish design with expanded line up with single-modeule units from 6-20T and dual-modules up to 40
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heater
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- Ingtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US.

Submittal Data Sheet

12 Ton, 230V, VRV EMERION HP

RXYQ144AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ144AATJB	Outdoor Unit Name:	12 Ton, 230V, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	138,000	Rated Heating Capacity (Btu/hr):	138,000
Nom Cooling Capacity (Btu/hr):	144,000	Nom Heating Capacity (Btu/hr):	162,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	11.00 / 10.90	Heating COP (Non-Ducted/Ducted):	3.3 / 3.4
IEER (Non-Ducted/Ducted):	21.80 / 18.80	Heating COP 17F (Non-Ducted/Ducted):	2.1 / 2.1

OUTDOOR UNIT DETAILS

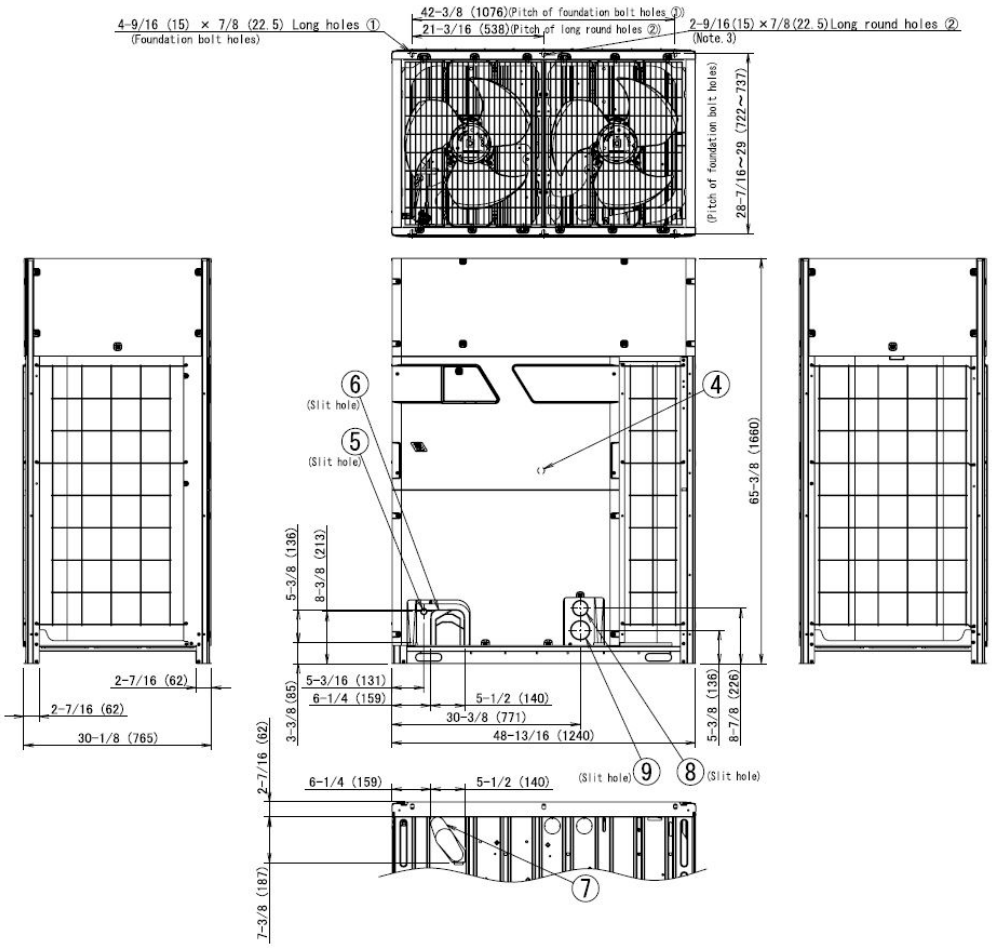
Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	3 - 100
Min. Circuit Amps MCA (A):	47.8	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	50	Airflow Rate (H) (CFM):	9935
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	10.0 + 15.8	Liquid Pipe Connection (inch):	1/2
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	65
Net Weight (lb):	750	Sound Power Level (dBA):	

Submittal Data Sheet
12 Ton, 230V, VRV EMERION HP
RXYQ144AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

14 Ton, 230V, VRV EMERION HP

RXYQ168AATJB

Tag: CU-4

FEATURES

- New Simple and Stylish design with expanded line up with single modeule units from 6-20T and dual-
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heater
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- Ingtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US.

Submittal Data Sheet

14 Ton, 230V, VRV EMERION HP

RXYQ168AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ168AATJB	Outdoor Unit Name:	14 Ton, 230V, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	156,000	Rated Heating Capacity (Btu/hr):	156,000
Nom Cooling Capacity (Btu/hr):	162,000	Nom Heating Capacity (Btu/hr):	189,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	10.30 / 10.20	Heating COP (Non-Ducted/Ducted):	3.3 / 3.3
IEER (Non-Ducted/Ducted):	21.70 / 18.40	Heating COP 17F (Non-Ducted/Ducted):	2.1 / 2.1

OUTDOOR UNIT DETAILS

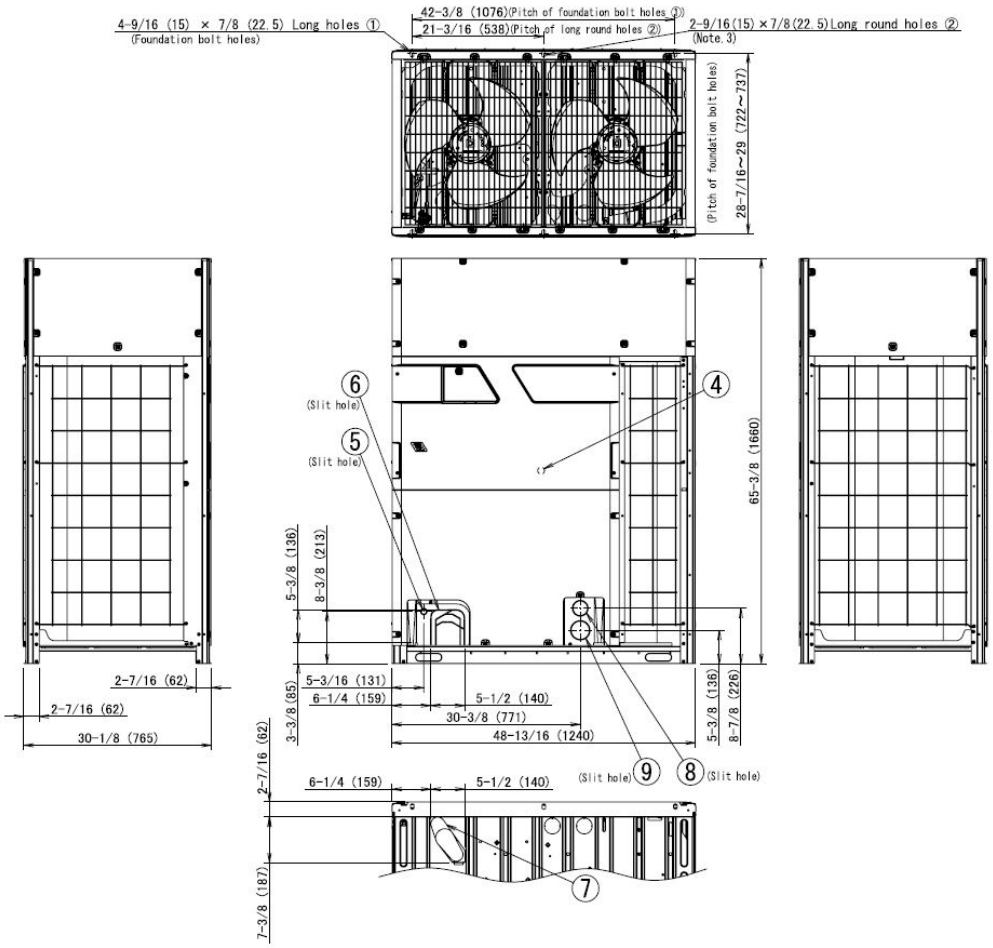
Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	2 - 100
Min. Circuit Amps MCA (A):	54.9	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	60	Airflow Rate (H) (CFM):	9935
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	12.5 + 20.0	Liquid Pipe Connection (inch):	5/8
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	65
Net Weight (lb):	750	Sound Power Level (dBA):	

Submittal Data Sheet
14 Ton, 230V, VRV EMERION HP
RXYQ168AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

20 Ton, 230V, VRV EMERION HP

RXYQ240AATJB

Tag: CU-6/8

FEATURES

- New Simple and Stylish design with expanded line up with single modeule units from 6-20T and dua
- Space-saving 16 - 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 28.5 delivers up to 30% efficiency increase
- Year-round comfort and energy saving with Daikin's Variable Refrigerant Temperature Technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Hot gas defrost circuit allows for installation without base pan heater
- High dust moisture protection with an IP55 rated sealed E-box
- Dual-Fuel ready with connectivity to Daikin communicating gas furnance or all-electric heat pump heating for optimized operational cost based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibilty compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago Pressure relief code
- Reduced wiring costs with up to 27.4% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel desgn
- Factory ships with increase space for easy field piping connection to service valves
- Built-in data recorder to store up to 40 minutes of operational data
- Ingtegrates with new Daikin HERO ecosystem, an IoT -based remote monitoring and diagnostics platform
- Connect non standard VRV terminal units and AHUs with Daikin VRV EMERION leveraging Daikin Air Handling Unit Integration Kit to extend benefits of inverter technology to custom terminal units and AHUs. A kit consists of One Control Box and One EEV box. Offered via EKEQMCBAV3-US and EKEQFCBAV3-US

Submittal Data Sheet

20 Ton, 230V, VRV EMERION HP

RXYQ240AATJB

PERFORMANCE

Outdoor Unit Model No.	RXYQ240AATJB	Outdoor Unit Name:	20 Ton, 230V, VRV EMERION HP
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 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	228,000	Rated Heating Capacity (Btu/hr):	220
Nom Cooling Capacity (Btu/hr):	238,000	Nom Heating Capacity (Btu/hr):	270,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	10.60 / 9.80	Heating COP (Non-Ducted/Ducted):	3.3 / 3.3
IEER (Non-Ducted/Ducted):	20.00 / 18.00	Heating COP 17F (Non-Ducted/Ducted):	2.2 / 2.2

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	3 - 100
Min. Circuit Amps MCA (A):	73.7	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	80	Airflow Rate (H) (CFM):	14510
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-3/8
Rated Load Amps RLA(A):	24.3 + 24.4	Liquid Pipe Connection (inch):	5/8
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	
Dimensions (Width) (in):	68-7/8	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	69
Net Weight (lb):	904	Sound Power Level (dBA):	

Submittal Data Sheet

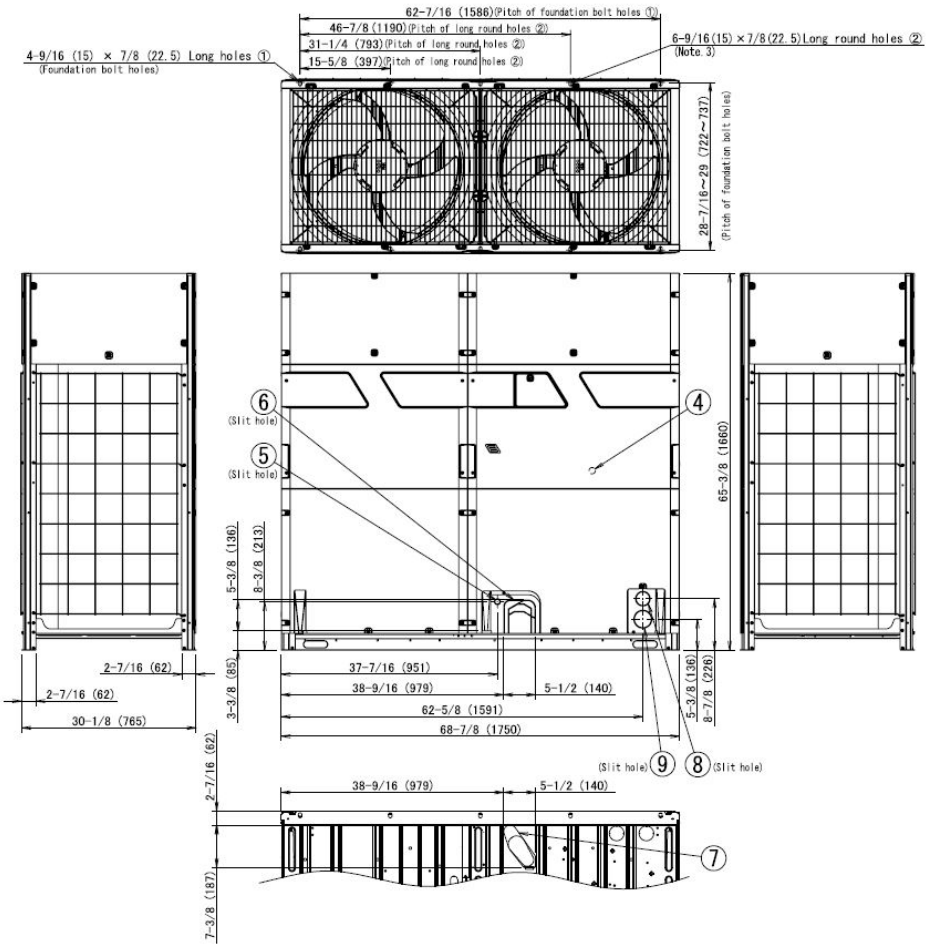
20 Ton, 230V, VRV EMERION HP

RXYQ240AATJB

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 110
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	3,280		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



Submittal Data Sheet

4.0 Ton VRV-IVS Heat Pump

RXTQ48TBVJUB

Tag: CU-1

FEATURES

- Variable Refrigerant Temperature (VRT) technology allows VRV IV S series to deliver improved efficiencies and year round comfort
- High Efficiency with SEER2 up to 18.2 and HSPF2 up 9.0
- Engineered with highly reliable Daikin Swing compressors
- All inverter compressors to increase efficiency and avoid starting current rush
- High heating capacities down to -4 as factory standard
- Added safety with optional auto changeover to auxiliary heat
- Compact design with under 13" depth and weight under 230lbs

BENEFITS

- Single-phase technology enables installation in light commercial and residential applications
- Broader diversity with up to 9 indoor units connectivity
- Space saving compact design
- Design flexibility with long piping lengths up to 984ft total and 33ft vertical separation between indoor units
- Designed with reduced MOP to optimize installation costs
- Backed by best in class 10-years Parts Limited Warranty and 10-years Replacement Compressor Limited Warranty*

Submittal Data Sheet

4.0 Ton VRV-IVS Heat Pump

RXTQ48TBVJUB

PERFORMANCE

Outdoor Unit Model No.	RXTQ48TBVJUB	Outdoor Unit Name:	4.0 Ton VRV-IVS Heat Pump
Type:	Heat Pump		
Rated Cooling Conditions:	Indoor (°F DB/DB): 80 / 67 Ambient (°F DB/WB): 95 / 75	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Cooling Capacity (Rated/Non-Ducted/Ducted) (Btu/hr):	/ 45,500 / 45,500	Heating Capacity (Rated/Non-Ducted/Ducted) (Btu/hr):	/ /
Cooling Input Power (kW):		Heating Input Power (kW):	
EER2 (Non-Ducted/Ducted):	10.30 / 7.90	SEER2 (Non-Ducted/Ducted):	20.00 / 14.60
HSPF2 (Non-Ducted/Ducted):	9.5 / 8.3	Heating COP (Non-Ducted/Ducted):	

OUTDOOR UNIT DETAILS

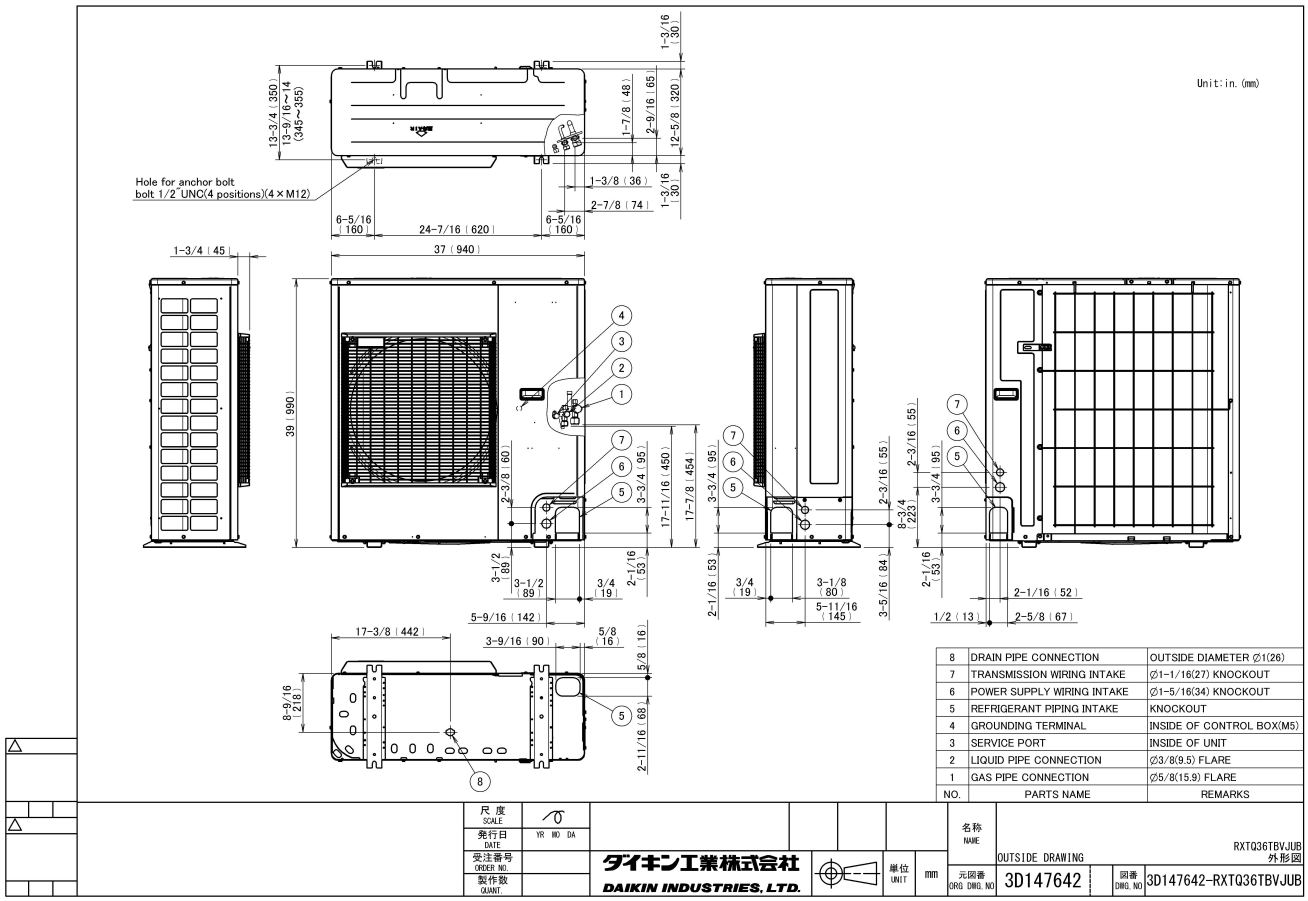
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	32.8	Airflow Rate (H) (CFM):	2682
Max Overcurrent Protection (MOP) (A):	35	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	3/8
Rated Load Amps RLA(A):		Sound Pressure (H) (dBA):	58
Dimensions (HxWxD) (in):	39 x 37 x 12-5/8	Sound Power Level (dBA):	
Net Weight (lb):	176		

Submittal Data Sheet
4.0 Ton VRV-IVS Heat Pump
RXTQ48TBVJUB

SYSTEM DETAILS

Refrigerant Type:		Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	7.5	Heating Operation Range (°F WB):	-4 - 60
Additional Charge (oz/ft):		Max. Pipe Length (Vertical) (ft):	
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):			
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



NO.	PARTS NAME	REMARKS
8	DRAIN PIPE CONNECTION	OUTSIDE DIAMETER ∅1(26)
7	TRANSMISSION WIRING INTAKE	∅1-1/16(27) KNOCKOUT
6	POWER SUPPLY WIRING INTAKE	∅1-5/16(34) KNOCKOUT
5	REFRIGERANT PIPING INTAKE	KNOCKOUT
4	GROUNDING TERMINAL	INSIDE OF CONTROL BOX(M5)
3	SERVICE PORT	INSIDE OF UNIT
2	LIQUID PIPE CONNECTION	∅3/8(9.5) FLARE
1	GAS PIPE CONNECTION	∅5/8(15.9) FLARE

尺度 SCALE		名称 NAME	OUTSIDE DRAWING / RXTQ36TBVJUB 外形図
発行日 DATE	YR MO DA		
受注番号 ORDER NO.		ダイキン工業株式会社 DAIKIN INDUSTRIES, LTD.	
製作数 QUANT.		単位 UNIT	mm
元図番 ORG DWG. NO	3D147642	図番 DWG. NO	3D147642-RXTQ36TBVJUB

Submittal Data Sheet

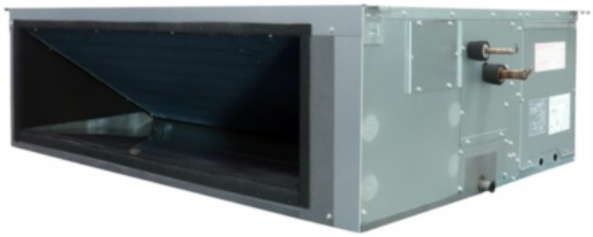
6.0-Ton Concealed Ceiling Unit

FXMQ72TAVJU

Tag: AC-16, 17, 18, 19, 20, 21

FEATURES

- Large Capacity VRV Applications possible with sizes in 72 & 96 MBh
- Up to 20% energy savings & electrical reductions with DC fan motor technology
- Engineered for wide range of static capability from 0.2-1.0in. ESP
- Increased design flexibillity with wider range of airflow settings
- Quieter fan with ~17% reduction in sound pressure at lowest airflow setting
- Easy-access service panels for drain pan inspection and maintenance
- Easy installation with up to ~19% weight reduction
- Ease of commissioning with static pressure adjustments via specified remote controller
- Compliance with the new UL 60335-2-40 regulator code
- Backed by 10 year parts limited warranty



Submittal Data Sheet

6.0-Ton Concealed Ceiling Unit

FXMQ72TAVJU

PERFORMANCE

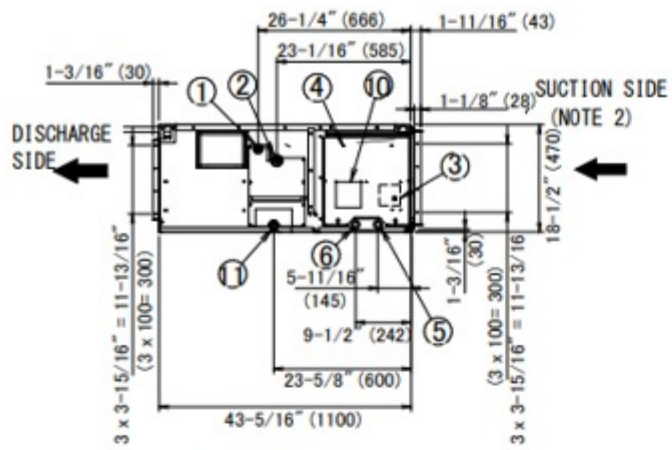
Indoor Unit Model No.	FXMQ72TAVJU	Indoor Unit Name:	6.0-Ton Concealed Ceiling Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 /
Rated Cooling Capacity (Btu/hr):	72,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / Ambient (°F DB/WB): 47 /
Sensible Capacity (Btu/hr):	52,100	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.932	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	81,000		
Heating Input Power (kW):	0.92		

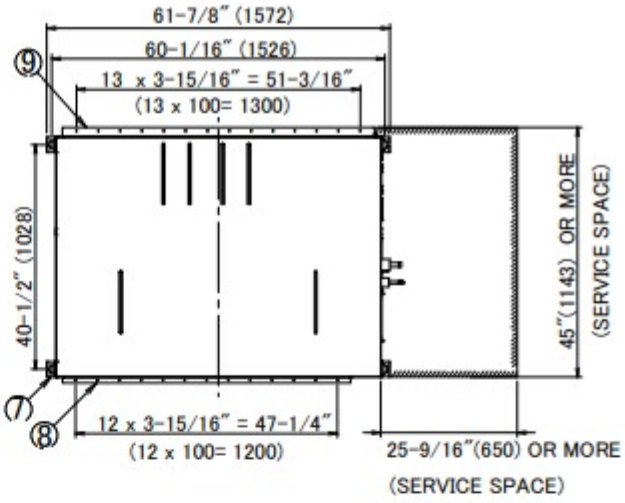
INDOOR UNIT DETAILS

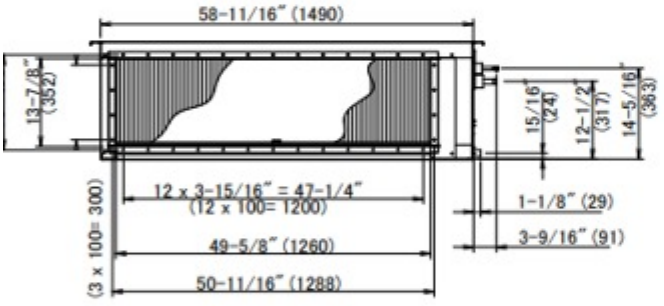
Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H/M/L) (CFM):	2612/2,153/1,625
Power Supply Connections:	L1, L2 Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	6.45	Gas Pipe Connection (inch):	3/4
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	3/8
Dimensions (HxWxD) (in):	18-1/2 x 58-11/16 x 43-5/16	Condensate Connection (inch):	
Ext. Static Pressure (Rated/Max) (inWg):	/ 1.0	Sound Pressure (H/M/L) (dBA):	47/43/37
Net Weight (lb):	245	Sound Power Level (dBA):	

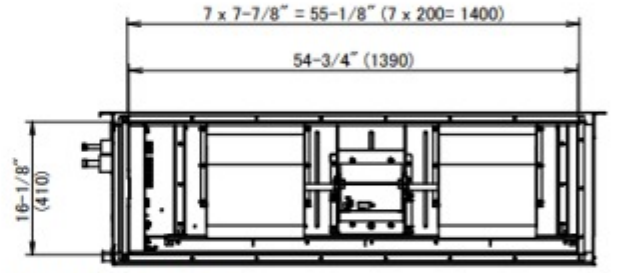
Submittal Data Sheet
6.0-Ton Concealed Ceiling Unit
FXMQ72TAVJU

DIMENSIONAL DRAWING









PIPING SIZE (FIELD SUPPLY)

INDOOR UNIT	GAS SIDE	LIQUID SIDE
FXMQ72TAVJU	Ø 3/4" (Ø 19.1)	Ø 3/8" (Ø 9.5)
FXMQ96TAVJU	Ø 7/8" (Ø 22.2)	Ø 3/8" (Ø 9.5)

NO.	DESCRIPTION	REMARK
1	LIQUID PIPE CONNECTION	BRAZING
2	GAS PIPE CONNECTION	BRAZING
3	GROUND TERMINAL	M5 (INSIDE CONTROL BOX)
4	CONTROL BOX	
5	POWER SUPPLY WIRING CONNECTION	
6	TRANSMISSION WIRING CONNECTION	
7	HOOK	M10
8	DISCHARGE FLANGE	
9	SUCTION FLANGE	
10	MANUFACTURER'S LABEL	
11	DRAIN PIPING CONNECTION	O.D. Ø1-1/16" (Ø26.7)

Submittal Data Sheet

0.75-Ton MSP Concealed Ducted Unit

FXSQ09TBVJU

Tag: AC-22, 29

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

0.75-Ton MSP Concealed Ducted Unit

FXSQ09TBVJU

PERFORMANCE

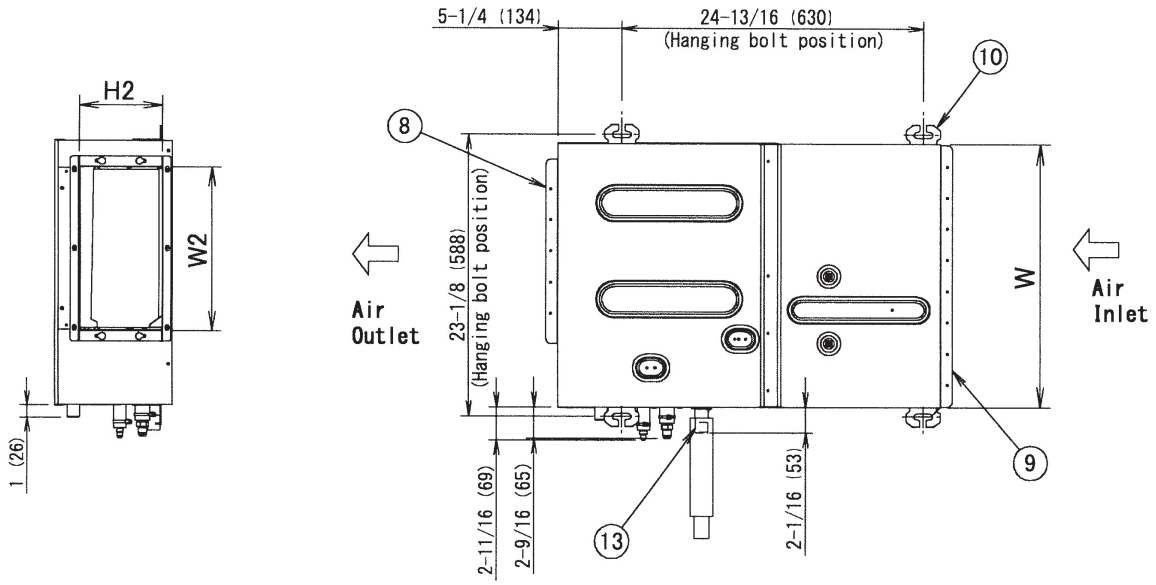
Indoor Unit Model No.	FXSQ09TBVJU	Indoor Unit Name:	0.75-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	9,500	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	7,000	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.104	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	10,500		

INDOOR UNIT DETAILS

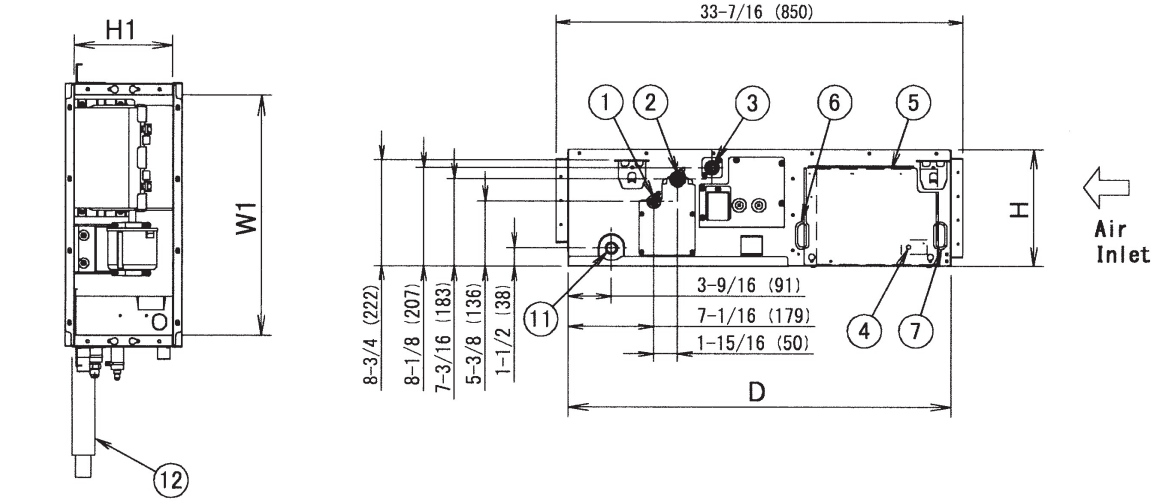
Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	318
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.8	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-11/16 x 21-11/16 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	55	Sound Pressure (H/L) (dBA):	33/30/28
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	61

Submittal Data Sheet
0.75-Ton MSP Concealed Ducted Unit
FXSQ09TBVJU

DIMENSIONAL DRAWING



(From the Air Outlet)



ITEM	PART NAME	REMARK
13	Drain socket	
12	Drain hose(Accessory)	
11	Socket(for maintenance)	O.D. φ1"(φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box(inside)	
4	Ground terminal(Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4"(φ32)
2	Gas pipe connection	φ1/2"(φ12.7) Flare connection
1	Liquid pipe connection	φ1/4"(φ6.4) Flare connection

H		9-11/16 (245)
W		21-11/16 (550)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	19-3/4 (502)
Air Outlet	H2	6-15/16 (176)
	W2	13-1/4 (337)

Note: For additional dimensional data and clearance information, refer to Engineering Data

Submittal Data Sheet

1.25-Ton MSP Concealed Ducted Unit

FXSQ15TBVJU

Tag: AC-1

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

1.25-Ton MSP Concealed Ducted Unit

FXSQ15TBVJU

PERFORMANCE

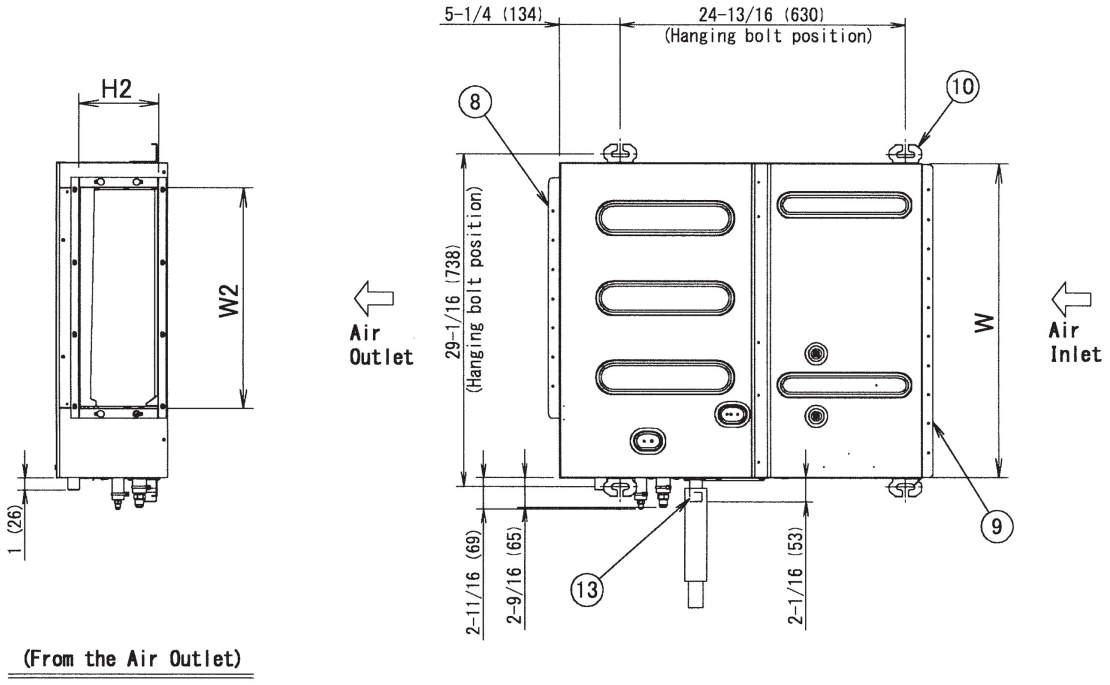
Indoor Unit Model No.	FXSQ15TBVJU	Indoor Unit Name:	1.25-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	15,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	11,300	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.162	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	17,000		

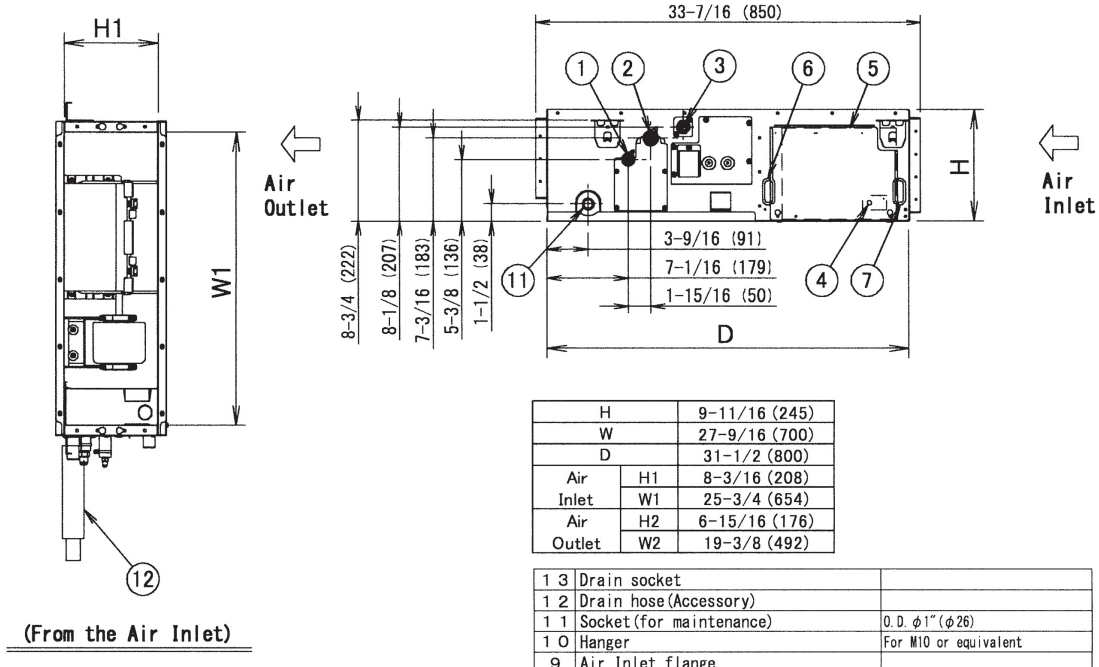
INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	530
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	1.4	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-11/16 x 27-9/16 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	60	Sound Pressure (H/L) (dBA):	36/33/30
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	64

Submittal Data Sheet
1.25-Ton MSP Concealed Ducted Unit
FXSQ15TBVJU

DIMENSIONAL DRAWING





H		9-11/16 (245)
W		27-9/16 (700)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	25-3/4 (654)
Air Outlet	H2	6-15/16 (176)
	W2	19-3/8 (492)

ITEM	PART NAME	REMARK
13	Drain socket	
12	Drain hose(Accessory)	
11	Socket(for maintenance)	O.D. φ1"(φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box(inside)	
4	Ground terminal(Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4"(φ32)
2	Gas pipe connection	φ1/2"(φ12.7) Flare connection
1	Liquid pipe connection	φ1/4"(φ6.4) Flare connection

Note: For additional dimensional data and clearance information, refer to Engineering Data

Submittal Data Sheet

1.5-Ton MSP Concealed Ducted Unit

FXSQ18TBVJU

Tag: AC-2, 23, 24, 25, 26, 27, 28

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

1.5-Ton MSP Concealed Ducted Unit

FXSQ18TBVJU

PERFORMANCE

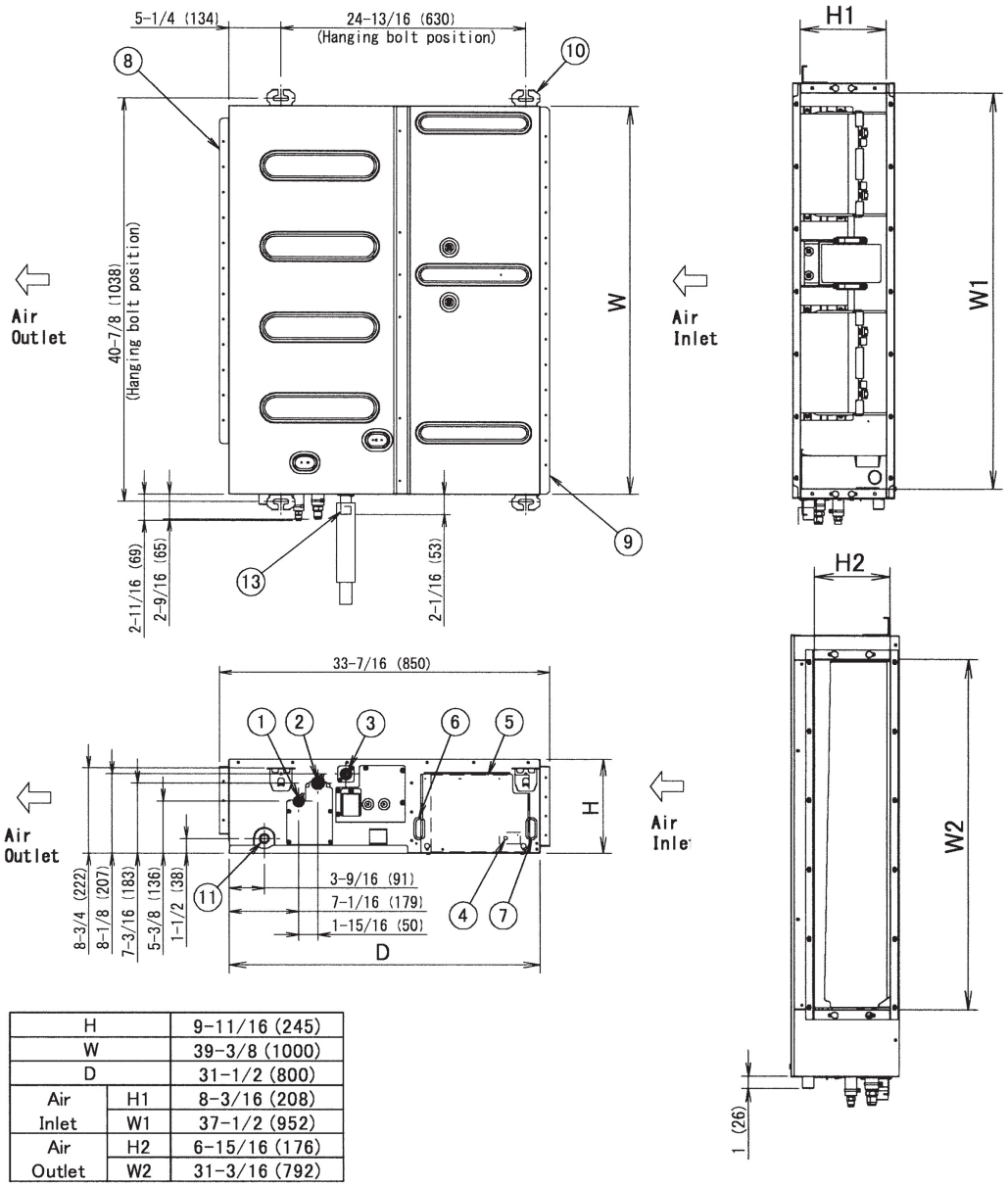
Indoor Unit Model No.	FXSQ18TBVJU	Indoor Unit Name:	1.5-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	18,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	13,600	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.164	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	20,000		

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	600
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	1.6	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-11/16 x 39-3/8 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	77	Sound Pressure (H/L) (dBA):	34/32/29
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	62

Submittal Data Sheet
1.5-Ton MSP Concealed Ducted Unit
FXSQ18TBVJU

DIMENSIONAL DRAWING



H		9-11/16 (245)
W		39-3/8 (1000)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	37-1/2 (952)
Air Outlet	H2	6-15/16 (176)
	W2	31-3/16 (792)

ITEM	PART NAME	REMARK
13	Drain socket	
12	Drain hose (Accessory)	
11	Socket (for maintenance)	O.D. φ1" (φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box (inside)	
4	Ground terminal (Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4" (φ32)
2	Gas pipe connection	φ1/2" (φ12.7) Flare connection
1	Liquid pipe connection	φ1/4" (φ6.4) Flare connection

Note: For additional dimensional data and clearance information, refer to Engineering Data

Submittal Data Sheet

3-Ton MSP Concealed Ducted Unit

FXSQ36TBVJU

Tag: AC-5, 10, 14

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

3-Ton MSP Concealed Ducted Unit

FXSQ36TBVJU

PERFORMANCE

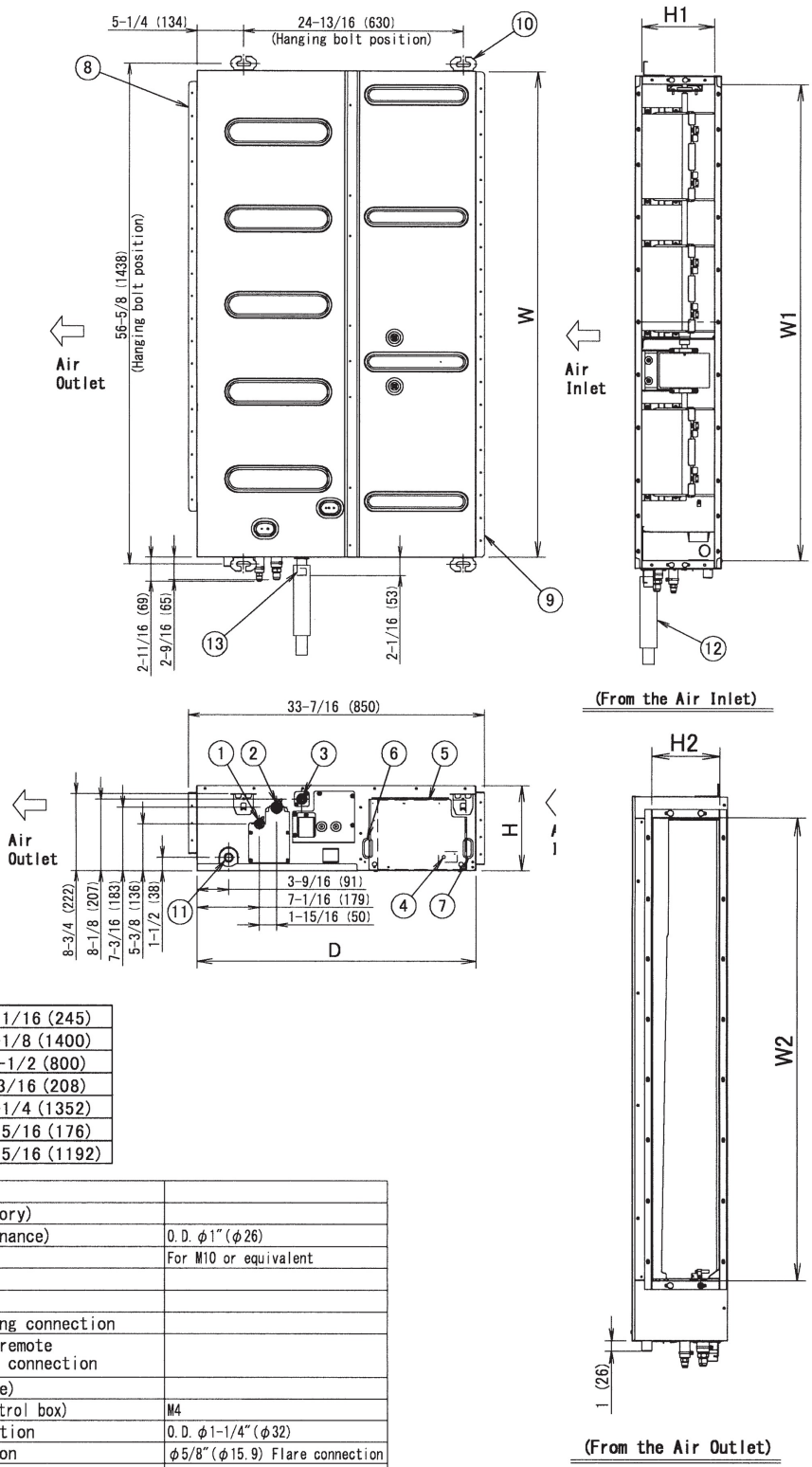
Indoor Unit Model No.	FXSQ36TBVJU	Indoor Unit Name:	3-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	36,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	25,700	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.331	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	40,000		

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	1130
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	2.5	Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	3/8
Dimensions (HxWxD) (in):	9-11/16 x 55-1/8 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	101	Sound Pressure (H/L) (dBA):	39/35/32
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	67

Submittal Data Sheet
3-Ton MSP Concealed Ducted Unit
FXSQ36TBVJU

DIMENSIONAL DRAWING



H		9-11/16 (245)
W		55-1/8 (1400)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	53-1/4 (1352)
Air Outlet	H2	6-15/16 (176)
	W2	46-15/16 (1192)

13	Drain socket	
12	Drain hose(Accessory)	
11	Socket(for maintenance)	O.D. φ1"(φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box(inside)	
4	Ground terminal(Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4"(φ32)
2	Gas pipe connection	φ5/8"(φ15.9) Flare connection
1	Liquid pipe connection	φ3/8"(φ9.5) Flare connection
ITEM	PART NAME	REMARK

Note: For additional dimensional data and clearance information, refer to Engineering Data

Submittal Data Sheet

4-Ton MSP Concealed Ducted Unit

FXSQ48TBVJU

Tag: AC-4, 6, 7, 8, 9, 11, 12, 13, 15

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

4-Ton MSP Concealed Ducted Unit

FXSQ48TBVJU

PERFORMANCE

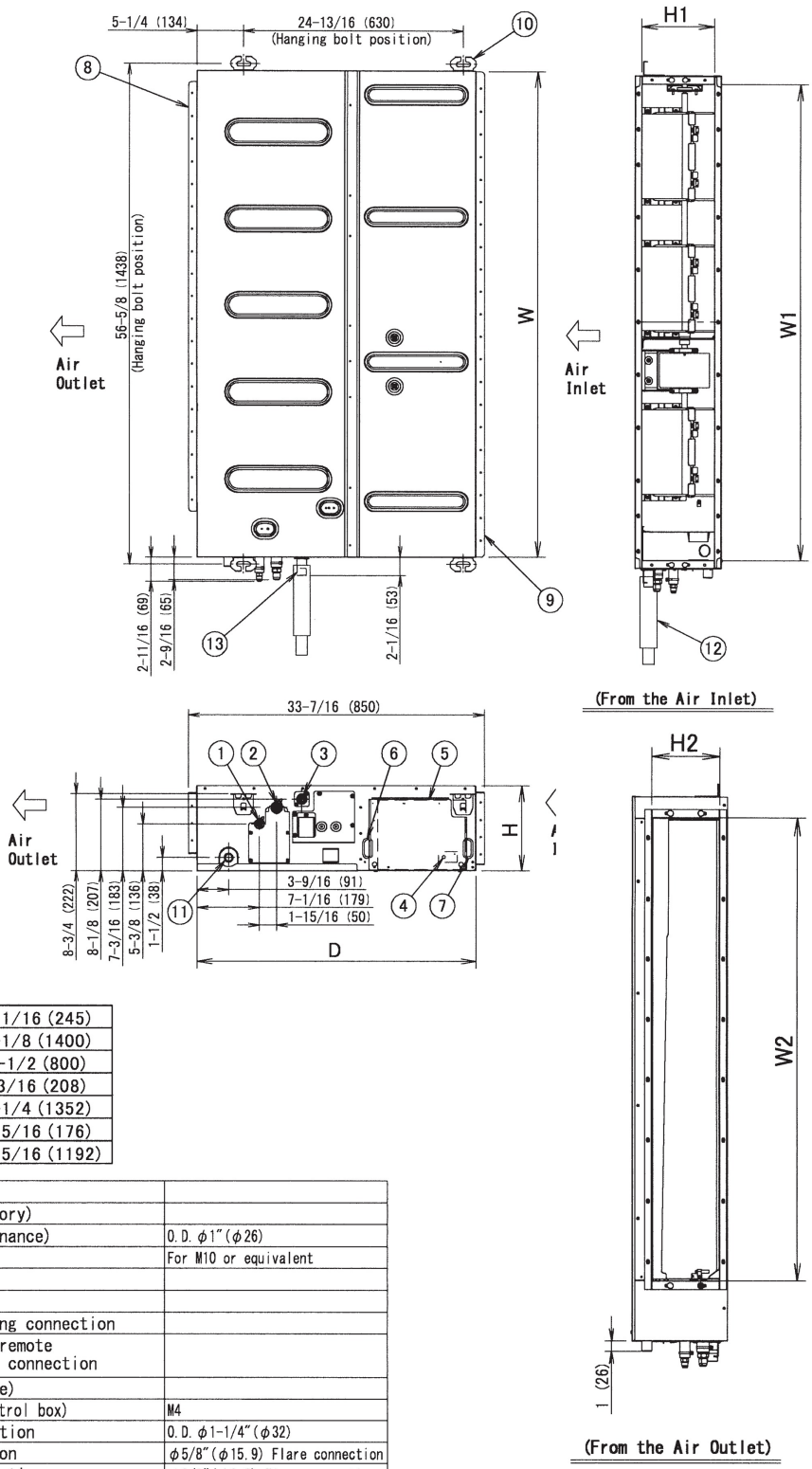
Indoor Unit Model No.	FXSQ48TBVJU	Indoor Unit Name:	4-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	48,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	34,300	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.360	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	54,000		

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	1307
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	2.8	Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	3/8
Dimensions (HxWxD) (in):	9-11/16 x 55-1/8 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	104	Sound Pressure (H/L) (dBA):	42/38/35
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	70

Submittal Data Sheet
4-Ton MSP Concealed Ducted Unit
FXSQ48TBVJU

DIMENSIONAL DRAWING



H		9-11/16 (245)
W		55-1/8 (1400)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	53-1/4 (1352)
Air Outlet	H2	6-15/16 (176)
	W2	46-15/16 (1192)

ITEM	PART NAME	REMARK
13	Drain socket	
12	Drain hose(Accessory)	
11	Socket(for maintenance)	O.D. φ1"(φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box(inside)	
4	Ground terminal(Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4"(φ32)
2	Gas pipe connection	φ5/8"(φ15.9) Flare connection
1	Liquid pipe connection	φ3/8"(φ9.5) Flare connection

Note: For additional dimensional data and clearance information, refer to Engineering Data

Submittal Data Sheet

1-Ton MSP Concealed Ducted Unit

FXSQ12TBVJU

Tag: AC-3

FEATURES

- Eleven capacity options from 5,800 Btu/h to 54,000 Btu/h External static pressure up to 0.6 in. w.g. (150 Pa).
- Low profile height of 9-5/8" (245 mm) for all models.
- 5-speed DC fan motor with selectable Auto fan speed.
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure.
- Independently configurable auxiliary heat on/off temperature settings.
- Factory rear-return, field convertible to bottom-return.
- Integral condensate pump with up 25-5/16" (643 mm) of lift from the drain outlet.
- Drain pan inspection port.
- Standard Limited Warranty: 10-year limited parts warranty.

BENEFITS

- Requires as little as 11-1/4" (285 mm) of clearance above the ceiling thanks to the low profile design.
- Auto fan speed control optimizes fan energy use by automatically adjusting the unit's fan speed as the room temperature approaches the set point.
- The drain pan inspection port simplifies maintenance by allowing for simple and easy inspection of the drain pan conditions.
- Designed for quiet operation, with sound levels as low as 28 dB(A).

Submittal Data Sheet

1-Ton MSP Concealed Ducted Unit

FXSQ12TBVJU

PERFORMANCE

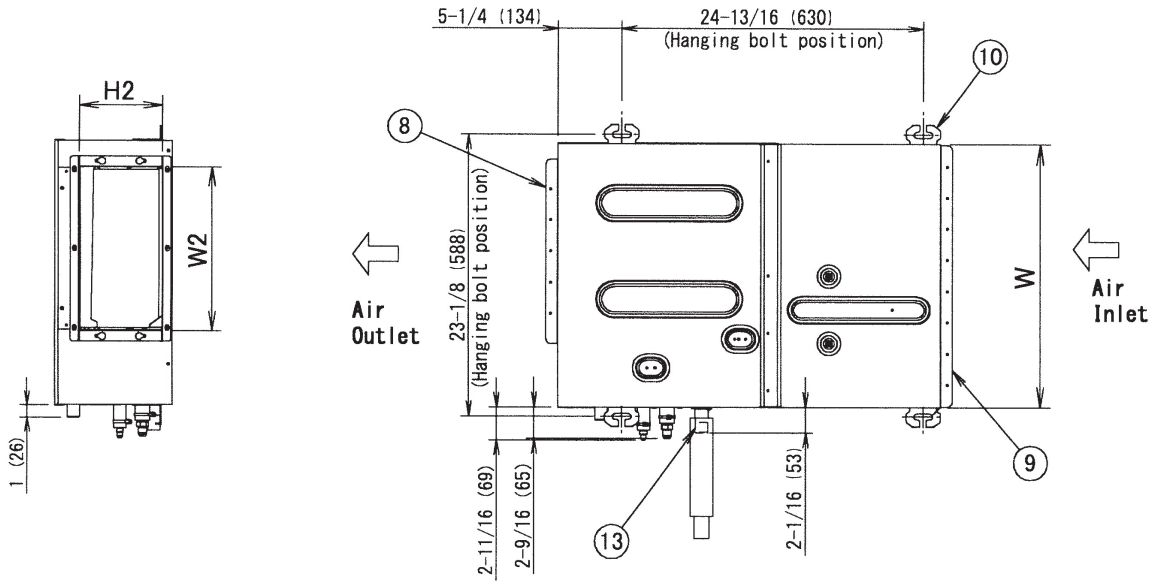
Indoor Unit Model No.	FXSQ12TBVJU	Indoor Unit Name:	1-Ton MSP Concealed Ducted Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	12,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	9,700	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.111	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	13,500		

INDOOR UNIT DETAILS

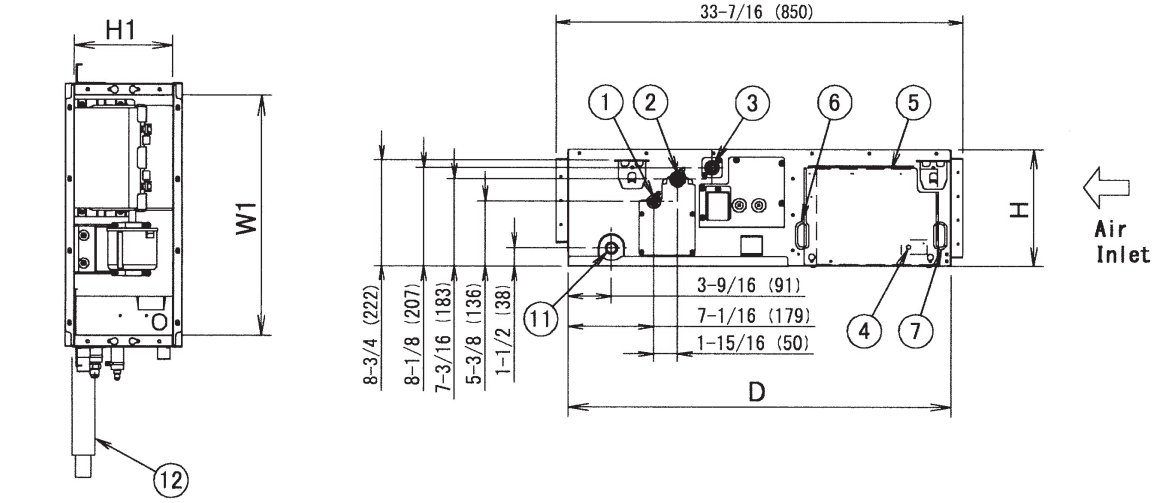
Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H) (CFM):	335
Power Supply Connections:	L1, L2, G	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.8	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-11/16 x 21-11/16 x 31-1/2	Condensate Connection (inch):	1-1/4
Net Weight (lb):	55	Sound Pressure (H/L) (dBA):	34/32/30
Ext. Static Pressure (Rated/Max) (inWg):	0.2 / 0.6	Sound Power Level (dBA):	62

Submittal Data Sheet
1-Ton MSP Concealed Ducted Unit
FXSQ12TBVJU

DIMENSIONAL DRAWING



(From the Air Outlet)



ITEM	PART NAME	REMARK
13	Drain socket	
12	Drain hose(Accessory)	
11	Socket(for maintenance)	O.D. φ1"(φ26)
10	Hanger	For M10 or equivalent
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply wiring connection	
6	Transmission and remote controller wiring connection	
5	Control box(inside)	
4	Ground terminal(Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4"(φ32)
2	Gas pipe connection	φ1/2"(φ12.7) Flare connection
1	Liquid pipe connection	φ1/4"(φ6.4) Flare connection

H		9-11/16 (245)
W		21-11/16 (550)
D		31-1/2 (800)
Air Inlet	H1	8-3/16 (208)
	W1	19-3/4 (502)
Air Outlet	H2	6-15/16 (176)
	W2	13-1/4 (337)

Note: For additional dimensional data and clearance information, refer to Engineering Data

VRV Accessories

Accessory	Accessory model number	Outdoor unit tag	Indoor unit tag	Quantity
Wind Baffle	KPW5G112	CU-1	-	1
Snow Hood	VRV6-SH-RL	CU-2 to CU-9	-	8
Snow Hood	VRV6-SHL-FR	CU-2 to CU-5	-	4
Snow Hood	VRV6-SHM-FR	CU-7/9	-	2
Snow Hood	VRV6-SHXL-FR	CU-6/8	-	2
Condensate Pump	VCMA-20ULS	-	AC-16 to AC-21	6
Thermostat	BRC1E73	-	AC-1 to AC-29	29
Web Interface	DCM007A51	-	-	1
BACnet Server	DCM014A51	-	-	1
Centralized Controller	DCM601B71	-	-	1
Condensing unit expander card	DGE601A72	-	-	1
Filter Rack	FFR96	-	AC-16 to AC-21	6
Filter Rack	FFRS12	-	AC-3/22/29	3
Filter Rack	FFRS15	-	AC-1	1
Filter Rack	FFRS30	-	AC-2/23/24/25/27/26/28	7
Filter Rack	FFRS48	-	AC-4/5/6/7/8/9/10/11/12/13/14/15	12
Stand	EFMD5-PB5CB483	CU-2/3/4/5/7/9	-	6
Stand	EFMD10-PB5CB486	CU-6/8	-	2
Stand	MF-175	CU-1	-	1

Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

MODEL COMPATIBILITY:

Compatible with VRV and VRV Life™ indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ
Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ
Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

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) (without condensation)
Dimensions (WxHxD)	4.72x4.72x0.75 inch (120x120x19 mm)
Weight (Mass)	0.42 lbs. (0.19 kg)

PRODUCT IMAGE:

Notes:
(1) 1 of 3 display options – Detailed display shown

FEATURES:

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

Submittal Data Sheet

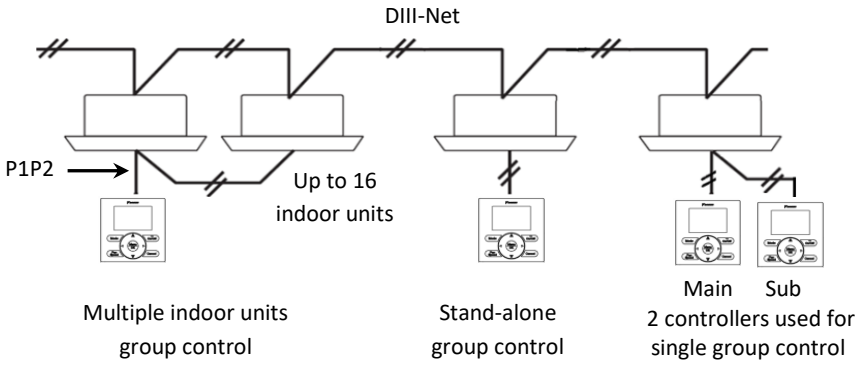
BRC1E73 – Navigation Remote Controller

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

9. Independent cooling and heating setback setpoints (unoccupied period)
10. Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
11. Airflow – Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)*
12. Built-in 7 days, weekdays+weekend, weekdays+Sat+Sun, and 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, FXUQ_PVJU, and FXZQ_TA indoor units
**Available for FXFQ_TVJU indoor units

SYSTEM DIAGRAM:



FACE DECAL OPTIONS:

Face decal options are used to hide unnecessary buttons:
1. The face decal is designed to adhere to the faceplate
2. Hidden buttons can be accessed by service personnel without removing the face decal due to its flexibility

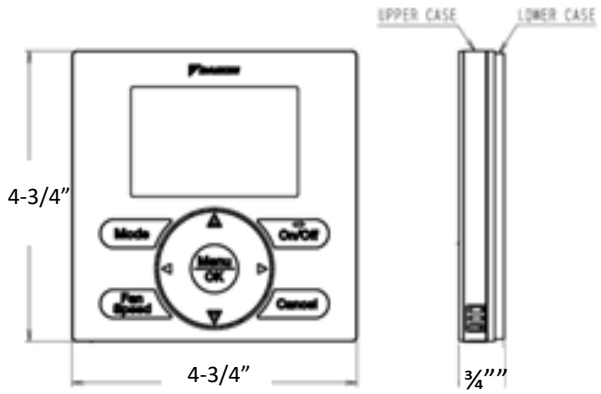
Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

Used with	Single Setpoint mode			Dual Setpoint mode		
Model	BRC1E72RM	BRC1E72RF	BRC1E72RMF	BRC1E72RM2	BRC1E72RF2	BRC1E72RMF2
						
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						

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual

Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

- Submittal
- Guide Specifications
- Quick User Guide
- Field Setting Table

Submittal Data Sheet

DCM601B71 – intelligent Touch Manager

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

SPECIFICATIONS:

Model	DCM601B71
Description	intelligent Touch Manager (iTM)
Maximum Indoor Unit Groups	64
Max Indoor Units	128
Max Outdoor Units	7
Max BACnet Servers	50
System Total with option adaptors	512 Indoor Unit Groups (1024 Indoor Units)
Power Supply	24 VAC, 60 Hz
Power Consumption	23 Watts
Operating Temp Range	32-104˚F
Operating Humidity Range	85% or less (w/o condensation)
Dimensions (W x H x D)	11.42 x 9.57 x 1.97 in.
Weight (Mass)	5.3 lbs. (2.4 kg)
Certifications	FCC Part 15 Class B
DIII-NET Systems – (On board)	1
DIII-NET Systems – (With Plus Adaptors & slot card)	8
RJ-45 (Ethernet) 100Base-TX or 10Base-T	2
USB Port-USB2.0 (2GB to 32GB)	1
RS485 (19 - 22 AWG)	1
Digital Input forced shutdown of all indoor unit systems	1
Digital Input and/or Pulse Input Terminals	3 x 10 mA @ 16 VDC/ 3 x 1 pulse at 1 or 10 kWh at 100 ms interval

PRODUCT IMAGE:

DCM601B71

iTouch Manager

OPTIONS:

- Software Options:
  - Power Proportional Distribution (PPD) Option (DCM002A71) (1)
  - Web (HTTP) Interface Software (DCM007A51) ← Web Interface included
  - BACnet Client Option Software (DCM009A51)
  - BACnet/IP Server Gateway Option (DCM014A51) (2)(3) ← BACnet Server included
- Hardware Options:
  - Plus Adapter (DGE601A72) for expanding DIII-NET ports ← Included to expand connection network
  - Slot card for Plus adaptor (DGE601A53), added to DGE601A72 to expand available DIII-NET ports.
  - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi

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

- Spare Parts:
  - iTM Sliding Door (Part# B72A930)
  - SD Card (Part# 2336767)

Notes:

(1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.

(2) The BACnet Server Gateway option cannot use together with the BACnet Client software option.

(3) BACnet/IP Server Gateway option is not compatible with the VAM unit or the Low Temp Hydrobox.

MODEL COMPATIBILITY:

The following indoor units are compatible with the iTM:

System	Model
VRV and VRV Life™	FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM*, Low Temperature Hydrobox (HXY48TAVJ)*
SkyAir	FAQ, FBQ, FCQ, FHQ, FTQ
Single Zone/Multi Zone/SkyAir	• FDMQ, FFQ_Q • FFQ_LVJU with the use of the Interface Adaptor DTA112BA51 • FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S • FTK_N, FTX_N, FTX_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E

**iTM BACnet Server Gateway Option is not compatible with VAM unit and LT Hydrobox*

The outdoor operational data is available for the following outdoor unit models:

VRV Family	Model
VRV III S	RXYMQ_PVJU
VRV IV S	RXTQ_TAVJU
VRV LIFE	RXSQ_TAVJU
VRV III	RXYQ_PBTJ, RXYQ_PBYD, REYQ_PATJ, REYQ_PBTJ, REYQ_PBYD, REYQ_PCTJ, REYQ_PCYD, RWEYQ_PTJU and RWEYQ_PYDN
VRV AURORA	RXLQ_TATJU, RXLQ_TAYDU, RXLQ_TAYCU, RELQ_TATJU, RELQ_TAYDU and RELQ_TAYCU
VRV IV X	REYQ_XATJU, REYQ_XAYDU, REYQ_XAYCU, RXYQ_XATJA, RXYQ_XAYDA, REYQ_XATJA, REYQ_XAYDA, REYQ_XAYCA
VRV T	RWEQ_TATJU, RWEQ_TAYDU, RWEQ_TAYCU
VRV IV	RXYQ_TTJU, RXYQ_TATJU, RXYQ_TAYDU, REYQ_TATJU, REYQ_TAYDU, RXYQ_TAYCU, RXYQ_TYDN, REYQ_TAYCU, REYQ_TTJU, REYQ_TYDN, RWEYQ_PCTJ and RWEYQ_PCYD
VRV Emerion	REYQ_AATJA, REYQ_AAYDA, RXYQ_AATJA, RXYQ_AAYDA

Submittal Data Sheet

DCM601B71 – intelligent Touch Manager

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

FEATURES:

1. **Management size -** up to 512 indoor unit groups (1024 indoor units).
   a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
   b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the Plus Adapters which can manage one (1) DIII-Net system each.
2. **Control / Monitoring**
   a. Independent Cool and Heat setpoints
      i. Setpoint tracking for full range of setpoint differentials
   b. Independent Cool and Heat Setback setpoints (unoccupied)
      i. Adjustable timed override
   c. Room temperature displayed in 0.1°F
   d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
      i. Optimum Start
      ii. Schedule the capacity demand limit of the outdoor unit's compressor by 0%, 40%, 70% or 100%
      iii. Schedule the outdoor unit low noise operation
   e. Auto-changeover: Fixed, Individual, Average, and Vote
      i. Weighted demand (0-3) configurable for Average and Vote methods
      ii. Adjustable (1-4°F) Primary and Secondary changeover bands
3. **Web Accessibility**
   a. Web and Alert Email function standard with iTM
   b. All iTM configuration/setup can be done through Web Option or touch screen
4. **Visual Navigation Screen**
   a. Floor plan layout view is available
   b. Graphical User Interface (GUI) for BACnet IP Client management points
5. **Easy installation**
   a. Wall mount and flush mount installation.
   b. Automatic indoor unit registration and indoor unit model detection.
6. **Easy Engineering**
   a. iTM can be configured off site via Pre-setting Tool.
   b. All data can be uploaded and downloaded by USB flash drive.
7. **Building facilities management**
   a. The iTM is equipped with 3 digital/pulse inputs and the Plus Adaptor comes equipped with 4 digital/pulse inputs.
   b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
      i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
   c. BACnet IP Client management points with BACnet Client option (optional).
      i. AI, AO, AV, BI, BO, BV, MI, MO and MV
8. **Power Proportional Distribution (PPD) (Optional)**
   a. Provide function to distribute the energy consumption of the Outdoor units to the selected indoor unit group address, based on indoor unit operation duration, electronic expansion valve opening ration, indoor size…. etc.
   b. Up to 512 indoor unit group address
   c. PPD data can be downloaded in CSV format to a PC or USB flash drive
9. **Web (HTTP) Interface Software (Optional)**
   a. Provide function to monitor and control up to 512 indoor unit group addresses by a BMS via HTTP protocol.

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b. The following data points are available: Fan Speed - Louver Direction - Ventilation Mode - Ventilation Amount - Normal/Error monitor - On/Off - Operation Mode – Setpoint - Room Temp

10. **BACnet Client (Optional)**
    a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
        i. Up to 50 BACnet IP servers can be connected
11. **BACnet Server Gateway (Optional)**
    a. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
        i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
        ii. Up to 4000 BACnet objects
        iii. Virtual BACnet router function embedded
            i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.
12. **History**
    a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).
13. **D-Net compatible (Service option)**
    a. Remote monitoring of VRV equipment status and reporting
14. **Operation Data**
    a. Operation data are stored in the iTM every minute for the last 5 days.
        i. Indoor and outdoor unit operation data.
        ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
        iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
    b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period. (See iTM BACnet Server points list below for IDU/ODU operational data list)
15. **Demand Limiting**
    a. Interlock the digital input signals to provide the following automatic demand control functions
        i. Indoor unit set-point shift control
        ii. Indoor unit forced thermo-off
        iii. Indoor unit on/off control
        iv. Outdoor unit's capacity demand limit control

WIRING SPECIFICATION:

Specifications of Communication Cabling	
DIII-Net	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
Plus Adaptor (DGE601A72)	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
RS485 Length	Maximum distance between iTM and furthest Plus Adapter 150 ft.
Total Length, DIII-Net	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
WAGO	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV)

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Size	2 Wire AWG 24 - 18 stranded
Total Length	Maximum wiring distance between iTM and Bus Coupler 1640 ft.

BACNET CLIENT OPTION MANAGEMENT POINTS:

- The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

Object Type #	Object Name	Description
0	Analog Input	Analog input value such as a temperature and measurement value.
1	Analog Output	Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).
2	Analog Value	Analog input value such as a temperature and measurement value or analog output value such as a setting value.
3	Binary Input	Digital input value such as an On/Off status and error status.
4	Binary Output	Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).
5	Binary Value	Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.
13	Multi-state Input	Digital input value such as an operation mode
14	Multi-state Output	Digital output value such as an operation mode (For example, can be used as the digital input value of an operation mode).
19	Multi-state Value	Digital input value such as an operation mode or digital output value such as an operation mode.

BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

- **System configuration points linked to iTM control logic (one set of points per iTM):**

Point Name	Point Description
Enable ITM Schedule Operation	Enable or Disable iTM Schedule operation
Enable ITM Auto Changeover Operation	Enable or disable iTM Auto changeover logic.
Timed Override Minutes	Set override time in minutes
System Forced Off	The Forced System Stop command will force the indoor unit to stop running. Remote controllers will be locked out from restarting indoor units during the forced system stop event.

- **Indoor unit monitoring points (one set of points per indoor unit group):**

Point Name	Point Description
Unit On_Off Status	Monitors if the indoor unit fan is On or Off
Alarm Status	Monitors whether or not the indoor unit is operating normally and issues an alarm if the indoor unit has a malfunction. Error Code is shown in the description.

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

Room Temperature	Monitors and displays the room temperature.
Unit On Details	Indoor unit details operation Off - Normal (ON) - Override - Setback
Filter Sign Status	Monitors filter run time and provides service alert.
Indoor Fan Status	Monitors if the indoor unit fan is On or Off
Communication Status	Monitor if the communication is Normal or in Alarm
Thermo-on Status	Monitors whether or not the indoor unit is actively cooling or heating.
Compressor Status	Monitors if the compressor of the outdoor unit is On/Off/Defrost
Aux Heater Status	Monitors if the external heater controlled by the indoor unit is operating.
Changeover Option	Monitor if iTM changeover logic is Active.
Return Air Temperature	Monitors and displays the return air temperature.
Discharge Air Temperature	Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.
Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature.
Gas Pipe Temperature	Monitors and displays the gas pipe temperature.
EV Position	Monitors and displays the expansion valve position.
Freeze Protection	Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).

- **Indoor unit monitoring and control points (one set of points per indoor unit group):**

Point Name	Point Description
Occupancy Mode	Set the occupancy of the indoor unit Occupied, Unoccupied or Standby
Operation mode	Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode
Occ Cooling Setpoint	Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Occ Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Cooling Setpoint	Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Max Cooling Setpoint	Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Min Cooling Setpoint	Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Max Heating Setpoint	Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Heating Setpoint	Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Setpoint Differential (Cooling & Heating)	Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value.
Cooling & Heating Setpoint Tracking Mode	Enable or disable iTM setpoint tracking mode.
Fan speed	Sets the indoor unit fan speed and monitors the latest setting
Timed Override Operation	Enable or disable iTM override timer

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Engineer:	Date:
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Submitted by:	Unit #:
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Remote Controller Prohibit (On_Off)	Permits or prohibits the remote controller to control the indoor unit's On/Off.
Remote Controller Prohibit (Operation Mode)	Permits or prohibits the remote controller to control the indoor unit's Operation mode.
Remote Controller Prohibit (Setpoint)	Permits or prohibits the remote controller to control the indoor unit's Setpoint.
Filter Sign Reset	Clears the filter sign status.
Forced Thermo-off	Force the indoor unit to stop actively cooling or heating.

- **Outdoor unit monitoring points*:**

Point Name	Point Description
Communication Status	Monitors and displays the communication status ***(General)***
Operation Mode	Monitors and displays the operation mode (Cool, Heat, Fan or Heat &Cool) ***(General)***
Outdoor Unit Alarm Status	Monitors whether or not the outdoor unit is operating normally. ***(General)***
Defrost Mode	Monitors if the defrost mode is active. ***(General)***
Oil Return Mode	Monitors whether or not the outdoor unit is in oil return operation. ***(General)***
Electric Power	Monitors and displays the electric power (calculated). ***(General)***
Electric Current	Monitors and displays the electric current (calculated). ***(General)***
System Capacity Code	Monitors and displays the system capacity code. ***(General)***
Outdoor Air Temperature	Monitors and displays the outdoor air temperature. ***(General)***
M_Condensing Pressure	Monitors and displays the condensing pressure ***(Master Module)***
M_Evaporating Pressure	Monitors and displays the evaporating pressure ***(Master Module)***
M_Condensing Temperature	Monitors and displays the condensing temperature ***(Master Module)***
M_Evaporating Temperature	Monitors and displays the evaporating temperature ***(Master Module)***
M_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ***(Master Module)***
M_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ***(Master Module)***
M_Fan Step	Monitors and displays the fan step ***(Master Module)***
M_EV Position 1	Monitors and displays the position of the expansion valve1 ***(Master Module)***
M_EV position 2	Monitors and displays the position of the expansion valve2 ***(Master Module)***
M_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ***(Master Module)***
M_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ***(Master Module)***
M_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ***(Master Module)***
M_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ***(Master Module)***
M_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ***(Master Module)***
M_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ***(Master Module)***
M_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ***(Master Module)***

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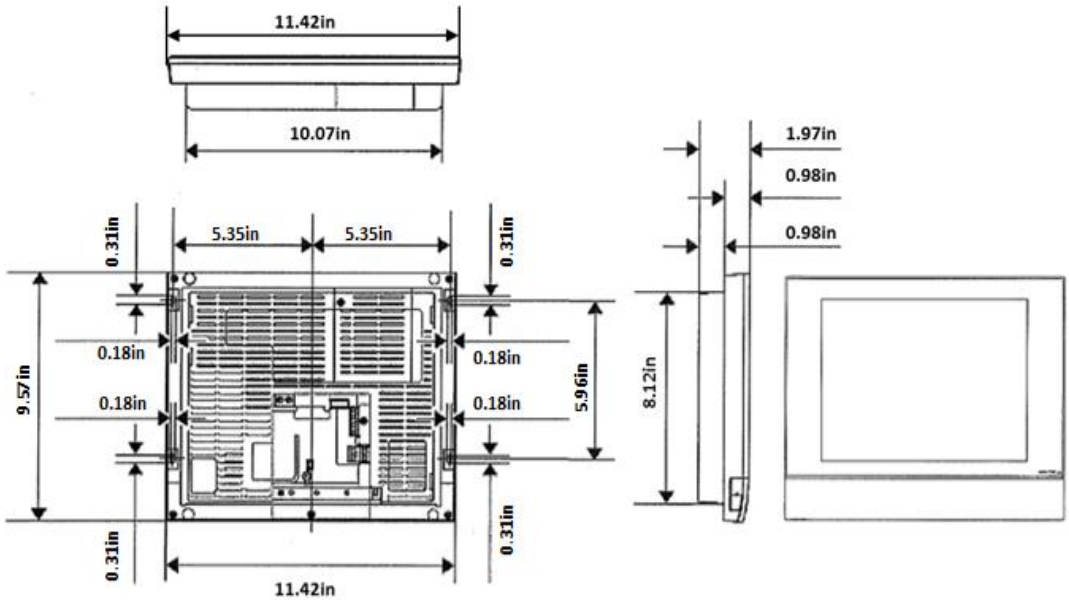
M_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX ***(Master Module)***
M_Suction Temperature	Monitors and displays the suction temperature ***(Master Module)***
M_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ***(Master Module)***
M_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ***(Master Module)***
M_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ***(Master Module)***
M_Subcool EV Position	Monitors and displays the subcool expansion valve position ***(Master Module)***
S1_Condensing Pressure	Monitors and displays the condensing pressure ***(Sub Module1)***
S1_Evaporating Pressure	Monitors and displays the evaporating pressure ***(Sub Module1)***
S1_Condensing Temperature	Monitors and displays the condensing temperature ***(Sub Module1)***
S1_Evaporating Temperature	Monitors and displays the evaporating temperature ***(Sub Module1)***
S1_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ***(Sub Module1)***
S1_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ***(Sub Module1)***
S1_Fan Step	Monitors and displays the fan step ***(Sub Module1)***
S1_EV Position 1	Monitors and displays the position of the expansion valve1 ***(Sub Module1)***
S1_EV position 2	Monitors and displays the position of the expansion valve2 ***(Sub Module1)***
S1_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ***(Sub Module1)***
S1_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ***(Sub Module1)***
S1_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ***(Sub Module1)***
S1_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ***(Sub Module1)***
S1_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ***(Sub Module1)***
S1_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ***(Sub Module1)***
S1_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ***(Sub Module1)***
S1_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX***(Sub Module1)***
S1_Suction Temperature	Monitors and displays the suction temperature ***(Sub Module1)***
S1_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ***(Sub Module1)***
S1_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ***(Sub Module1)***
S1_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ***(Sub Module1)***
S1_Subcool EV Position	Monitors and displays the subcool expansion valve position ***(Sub Module1)***
S2_Condensing Pressure	Monitors and displays the condensing pressure ***(Sub Module2)***
S2_Evaporating Pressure	Monitors and displays the evaporating pressure ***(Sub Module2)***
S2_Condensing Temperature	Monitors and displays the condensing temperature ***(Sub Module2)***
S2_Evaporating Temperature	Monitors and displays the evaporating temperature ***(Sub Module2)***
S2_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ***(Sub Module2)***
S2_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ***(Sub Module2)***

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

S2_Fan Step	Monitors and displays the fan step ***(Sub Module2)***
S2_EV Position 1	Monitors and displays the position of the expansion valve1 ***(Sub Module2)***
S2_EV position 2	Monitors and displays the position of the expansion valve2 ***(Sub Module2)***
S2_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ***(Sub Module2)***
S2_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ***(Sub Module2)***
S2_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ***(Sub Module2)***
S2_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ***(Sub Module2)***
S2_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ***(Sub Module2)***
S2_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ***(Sub Module2)***
S2_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ***(Sub Module2)***
S2_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX***(Sub Module2)***
S2_Suction Temperature	Monitors and displays the suction temperature ***(Sub Module2)***
S2_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ***(Sub Module2)***
S2_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ***(Sub Module2)***
S2_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ***(Sub Module2)***
S2_Subcool EV Position	Monitors and displays the subcool expansion valve position ***(Sub Module2)***

DIMENSIONS:

iTM:



Submittal Data Sheet

DCM601B71 – intelligent Touch Manager

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

DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Submittal
- Sales Brochure
- Guide Specs
- Installation Manual
- Operation Manual
- iTM D3 Operation Data Analysis Tool
- Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager
  - Submittal
  - Installation manual
- iTM BACnet Server Gateway
  - Design Guide
  - Sales Flyer
  - Quick User Guide
- iTM BACnet Client
  - Sales Flyer
  - iTM BACnet Client macro tools
- WAGO I/O Basic Kit and Modules
  - Submittal
  - Installation Manual
  - Sales Flyer

Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

SPECIFICATIONS:

Model	DGE601A72	DGE601A53
Description	Plus ADP for HERO Cloud and intelligent Touch Manager	Slot card for DGE601A72
Maximum Indoor Unit Groups	64	64
Max Indoor Units	64	64
Max Outdoor Units	7	7
Power Supply (Field provided)	24 VAC, 60 Hz	Powered by DGE601A72
Power Consumption	23 Watts, 36VA	N/A
Operating Temp Range	14-122˚F	14-122˚F
Operating Humidity Range	85% or less (w/o condensation)	85% or less (w/o condensation)
Dimensions (W x H x D)	3-13/16 x 3-13/64 x 5-3/4 in.	63/64 X 3-13/64 X 5-3/4 in.
Weight (Mass)	1.05 kg / 2.31 lbs	0.13 kg / 0.29 Lbs
DIII-NET Ports	1	1
Plus ADP IF (D+, D-)	1	N/A
Digital Inputs / Pulse Inputs	4	4
Installation type	DIN rail (1-3/8 in) mount or screw mount to a field provided control enclosure	DIN rail (1-3/8 in) mount or screw mount to a field provided control enclosure
Certification	FCC Class B	FCC Class B

PRODUCT IMAGE:

The DGE601A72 is an option for systems featuring the Daikin HERO Pro Edge (DGE601A71) or iTM (DCM601A71 or DCM601B71), allowing these systems to control more DIII-net networks than would otherwise be possible. As an option, the DGE601A72 cannot be used standalone, and requires a connection to the Daikin HERO Pro Edge or iTM.

In case of DGE601A71: A total 6 additional DGE601A72/DGE601A53 can be added.
In case of DCM601(A)B71: A total of 7 additional DGE601A72/DGE601A53 can be added.
DGE601A53 must be installed with DGE601A72.

Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

OPTIONS:

- Hardware Options:
  - Add one DGE601A53 to connect an additional DIII-net port which will add 64 Indoor units and 7 Outdoor units.
  - DGE601A53 cannot be used standalone and must be used with the DGE601A72.
  - Up to 5 DGE601A53 can be used with the DGE601A72 when combined with the HERO Pro Edge (DGE601A71).
  - Up to 6 DGE601A53 can be used with a single DGE601A72 when combined with the iTM (DCM601A71/B71)

WIRING SPECIFICATION:

Specifications of Communication Cabling	
DIII-Net	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
Communication wiring between DGE601A72 and iTM/DGE601A71	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
Total Length	164ft

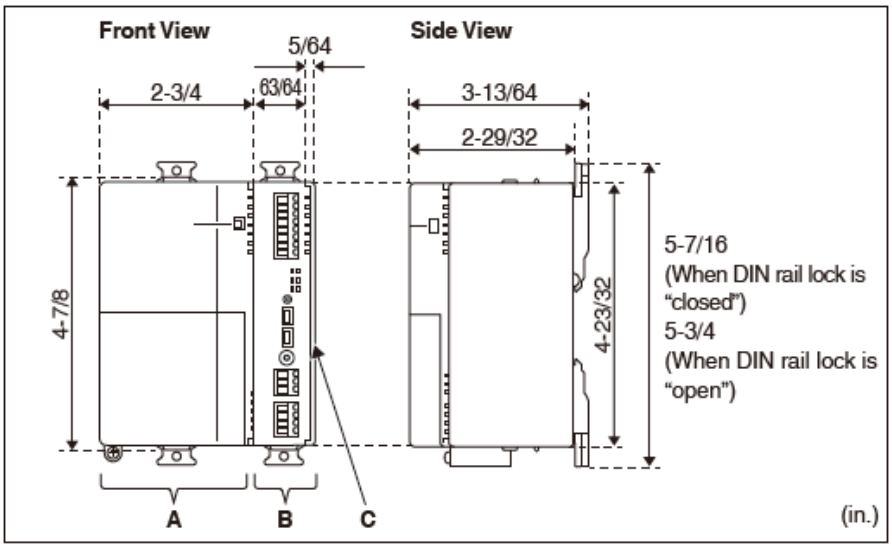
Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

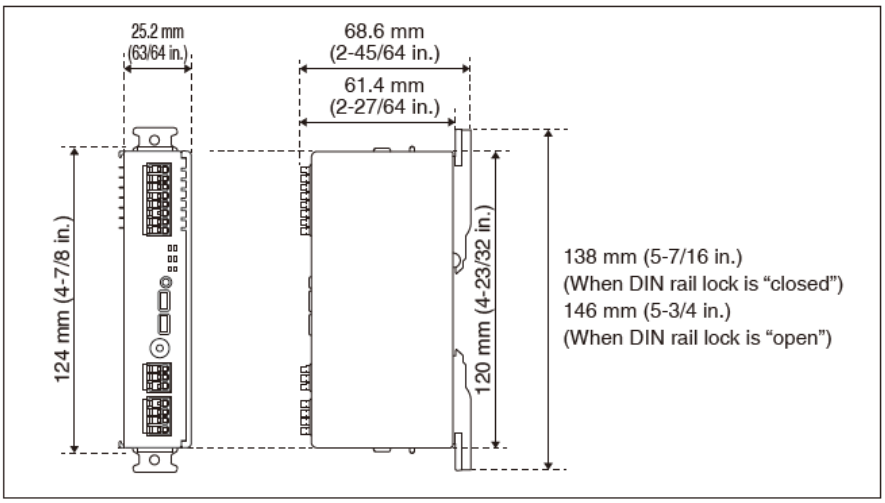
DIMENSIONS:

DGE601A72



A. Power Supply Unit
B. Main Unit
C. End Cover

DGE603A53



Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

Project Name:	
Location:	Approval:
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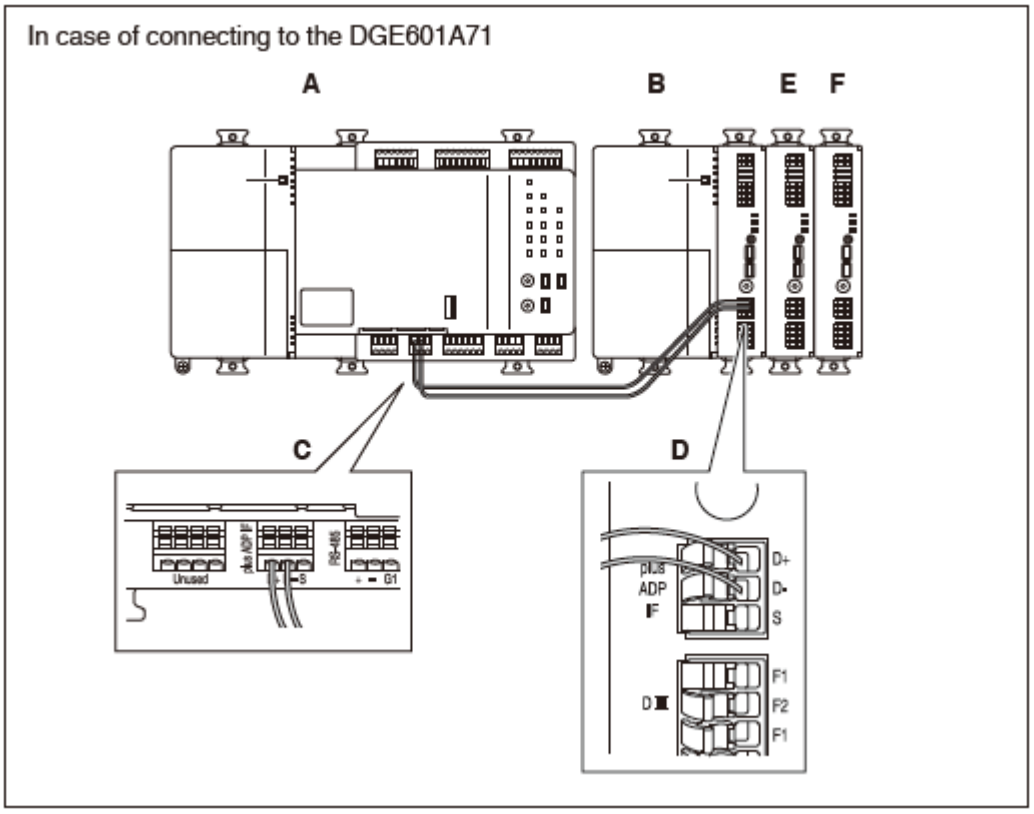
Reference:	Drawing #:

SCHEMATIC IN CASE OF CONNECTING TO DAIKIN HERO PRO EDGE (ONE DGE601A72 AND ADDITIONAL DGE601A53)



A. Daikin HERO Pro Edge DGE601A71
B. DGE601A72
C. plus ADP IF (DGE601A71)
D. plus ADP IF (DGE601A72)
E. Slot card for DGE601A72 DGE601A53
F. Slot card for DGE601A72

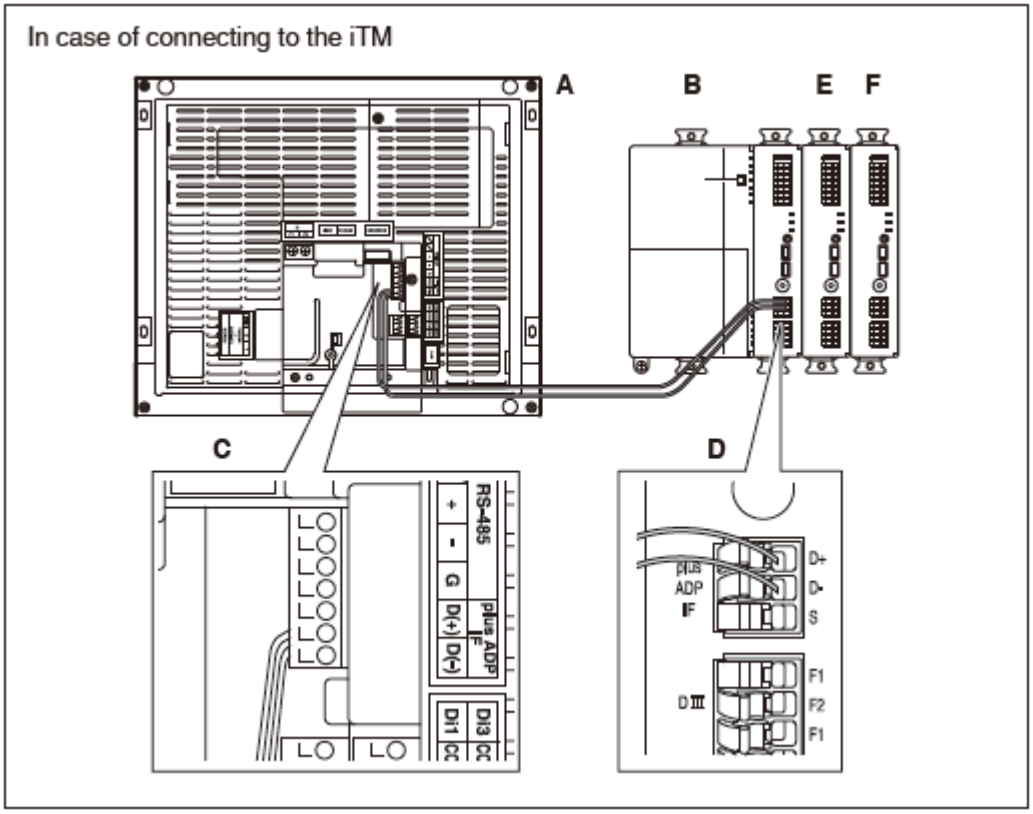
In the above example, up to 5 DIII-net circuits can be connected i.e a maximum of 320 Indoor units (320 group address) and 35 outdoor units.

Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

SCHEMATIC IN CASE OF CONNECTING TO ITM (ONE DGE601A72 AND ADDITIONAL DGE601A53)

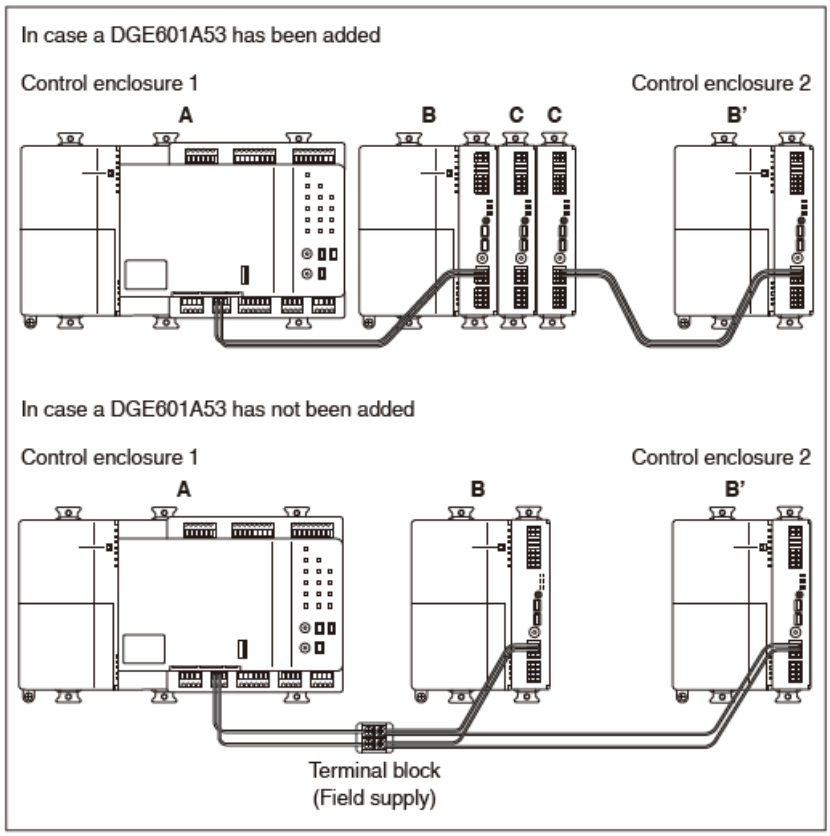


A. iTouch Manger DCM601A(B)71
B. DGE601A72
C. plus ADP IF (DGE601A71)
D. plus ADP IF (DGE601A72)
E. Slot card for DGE601A72 (PN# DGE601A53)
F. Slot card for DGE601A72 (PN# DGE601A53)

In the above example, up to 4 DIII-net circuits can be connected i.e a maximum of 512 Indoor units (256 group address) and 28 outdoor units.

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

SCHEMATIC IN CASE OF CONNECTING TO DAIKIN HERO PRO EDGE BUT USING DIFFERENT CONTROL ENCLOSURES (ONE DGE601A72 AND ADDITIONAL DGE601A53)



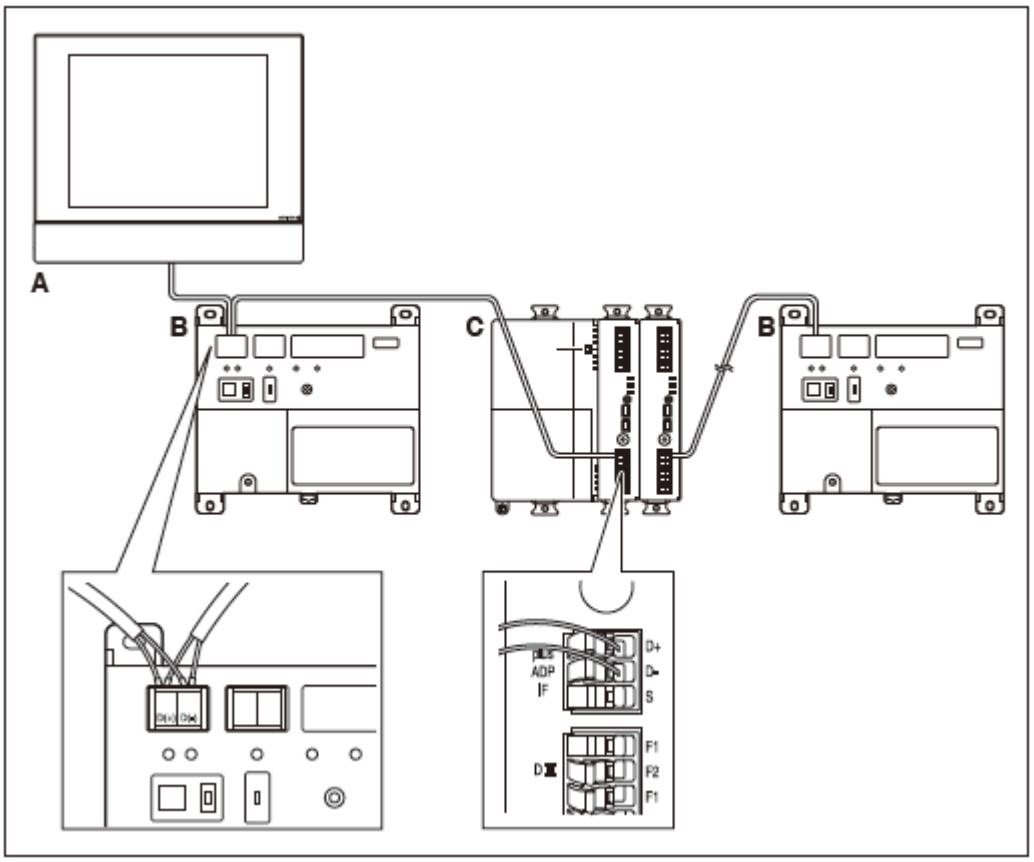
A. iTouch Manger DCM601A(B)71
B. DGE601A72
   B" DGE601A72 in a second enclosure.
C. DGE601A53

Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

SCHEMATIC IN CASE OF CONNECTING TO ITM AND USING AND ITM PLUS ADAPTOR



In case of connecting to the iTM, the DGE601A72 and the iTM plus adaptor can be used together.

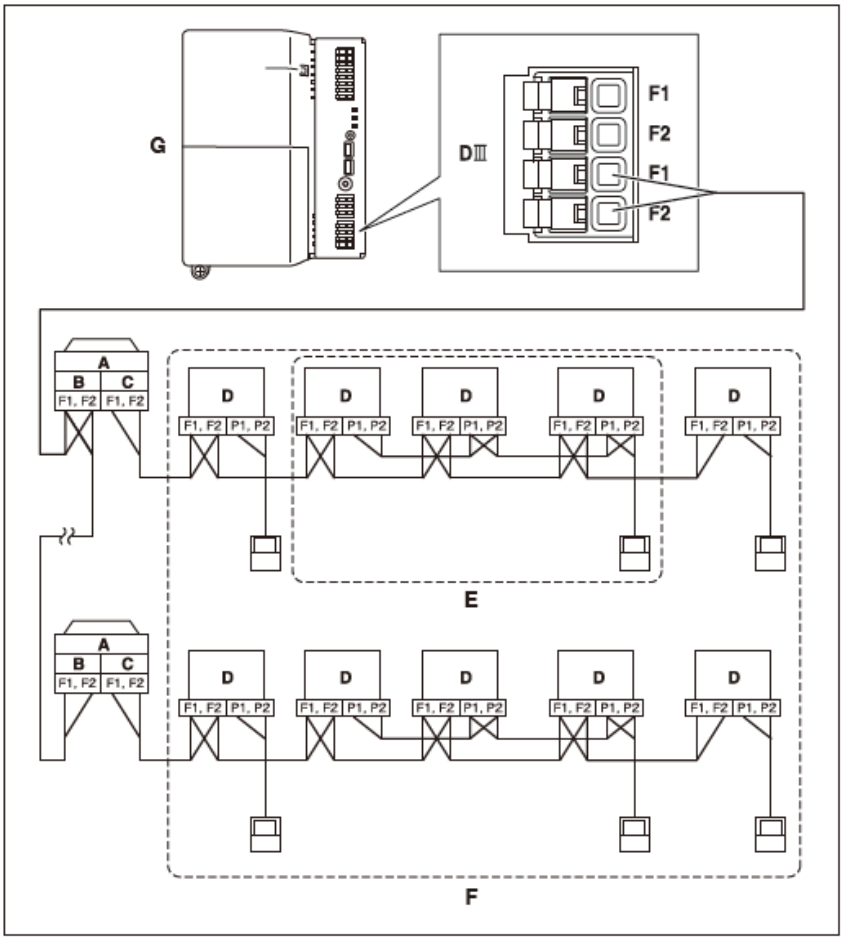
A. iTM
B. iTM plus adaptor
C. DGE601A72

Submittal Data Sheet

DGE601A72/A53 – Plus ADP for HERO Cloud Pro Edge and intelligent Touch Manager

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

SCHEMATIC FOR DIII-NET COMMUNICATION WIRING



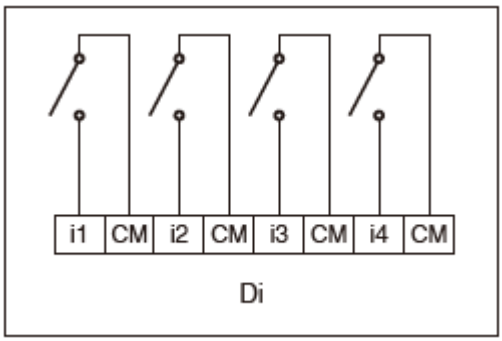
A. Outdoor unit
B. OUT - OUT communication (terminal)
C. IN - OUT communication (terminal)
D. Indoor unit
E. A maximum of 16 indoor units can be connected to 1 remote controller group.
F. A remote controller group can connect a maximum of 64 groups (64 indoor units) to each DIII-NET communication line.
G. DGE601A71 (Daikin HERO Pro Edge)

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

Centralized controllers that cannot be connected to the same network as the DGE601A72/DGE601A53:

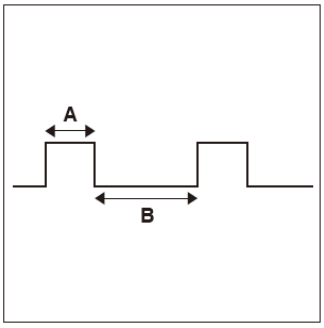
- intelligent Processing Unit
- Intelligent Touch Controller
- DIII-NET Plus Adapter
- Residential Central Remote Controller
- Schedule Timer
- Group Control Adapter PCB (KRP4)

SCHEMATIC FOR DI WIRING



- Cable type: CPEV cable, FCPEV cable, CVV(S) cable
- Core thickness: CPEV cable, FCPEV cable: AWG 22-18, CVV(S) cable: AWG 18-16
- Cable length: 656 ft. or less
- The contact connected to the contact input terminal must be capable of handling 10 mA at 16 V DC.
- If an instantaneous contact is used for triggering an emergency stop, use one that has an energized time of 200 ms or more.

  Pulse width specifications



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

A. Pulse width: 20 to 400 ms
B. Pulse interval: 100 ms or more

DOCUMENTATION:

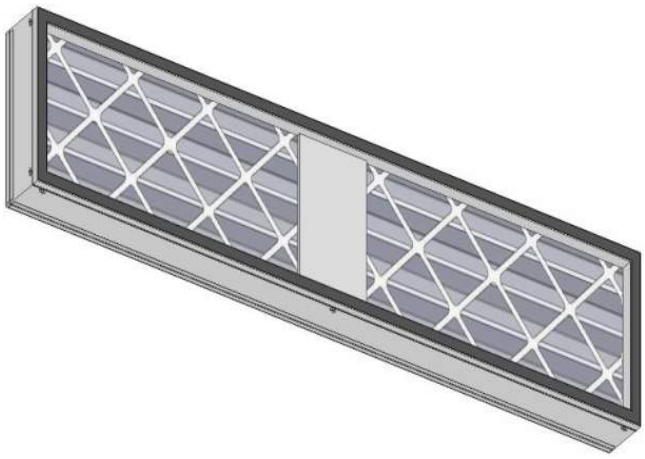
Documentation available on www.daikincity.com and/or www.daikinac.com:

- Submittal
- Sales Brochure
- Guide Specs
- Installation Manual
- Operation Manual
  - Submittal
  - Installation Manual
  - Sales Flyer

Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFR96
Air Filter Dimensions (HxWxD):	16"x24"/16"x24" x 2"
Cabinet Dimensions (HxWxD):	17" x 50" x 4"

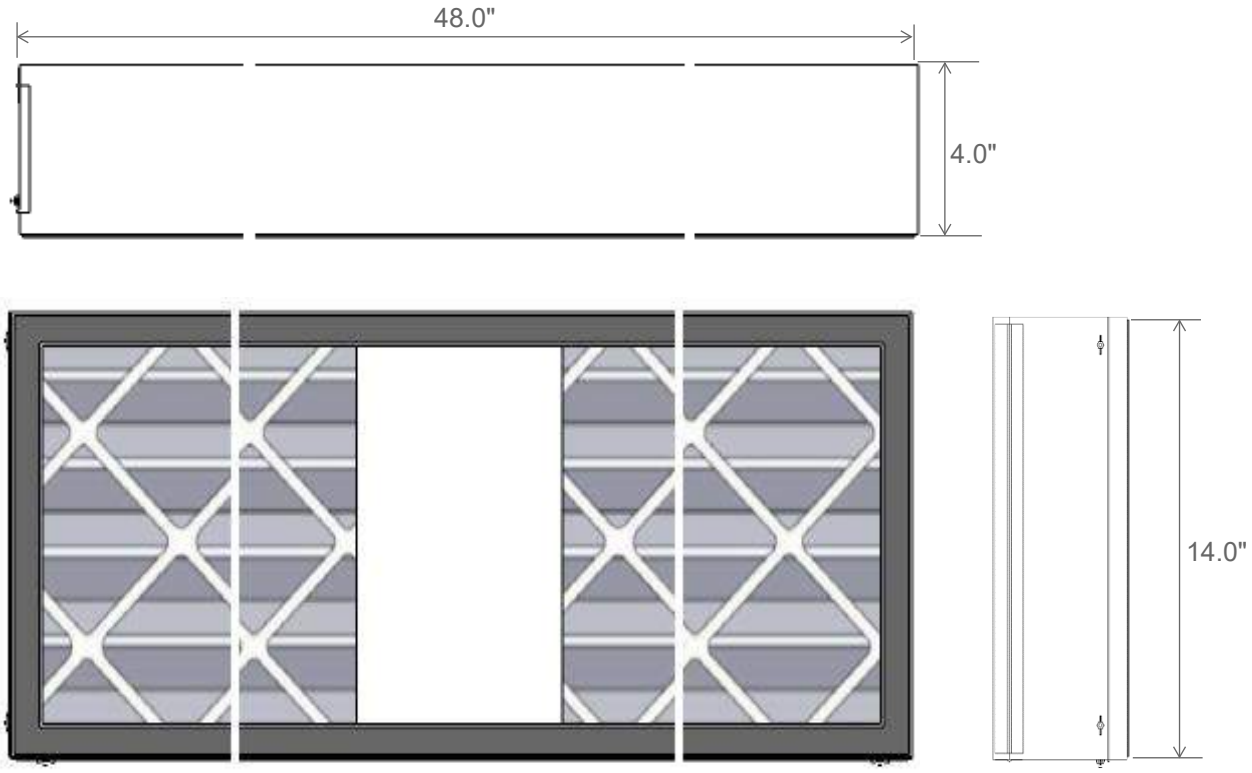


Indoor unit Compatibility

Model No.	Airflow CFM
FXMQ72MVJU	2047
FXMQ96MVJU	2541

Dimensional Drawing – FFR96 Air Filter and Cabinet Kit

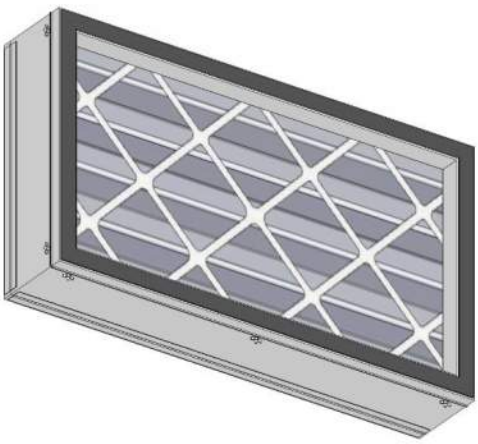
Hinged access doors (service side & bottom)



Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFRS12
Air Filter Dimensions (HxWxD):	10" x 20" x 2"
Cabinet Dimensions (HxWxD):	9-5/8" x 21-5/8" x 4"



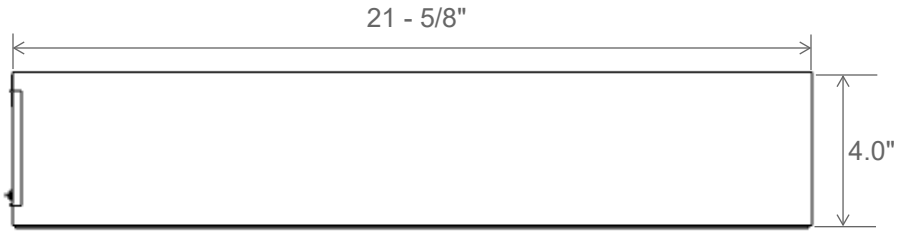
Indoor unit Compatibility

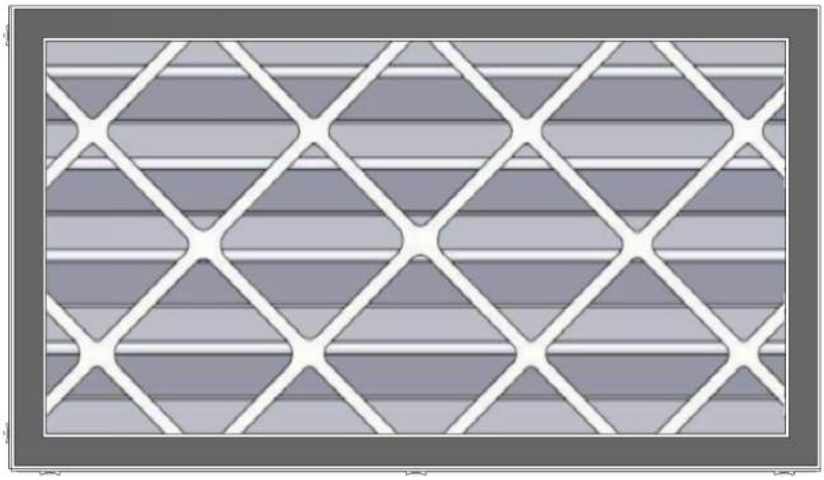
Model No.

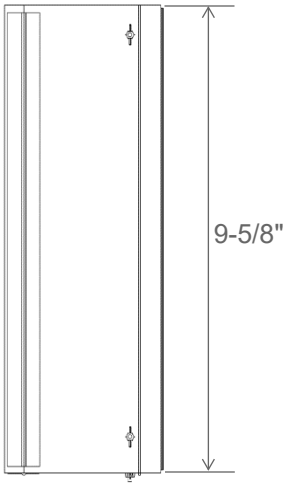
FXSQ05, FXSQ07, FXSQ09, FXSQ12

Dimensional Drawing – FFRS12 Air Filter and Cabinet Kit

Hinged access doors (service side & bottom)



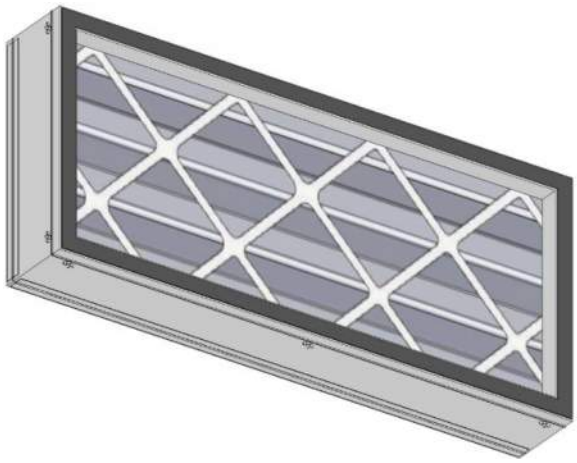




Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFRS15
Air Filter Dimensions (HxWxD):	10" x 24 " x 2"
Cabinet Dimensions (HxWxD):	9-5/8" x 27-9/16 x 4"



Indoor unit Compatibility

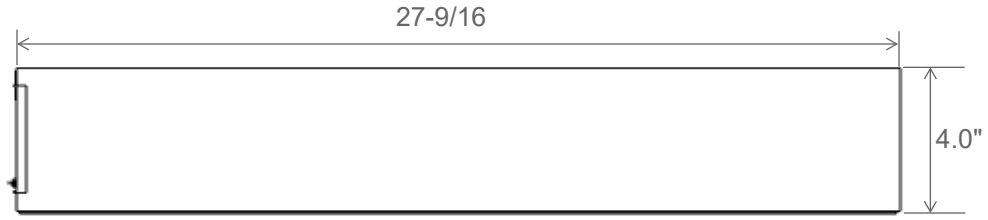
Model No.

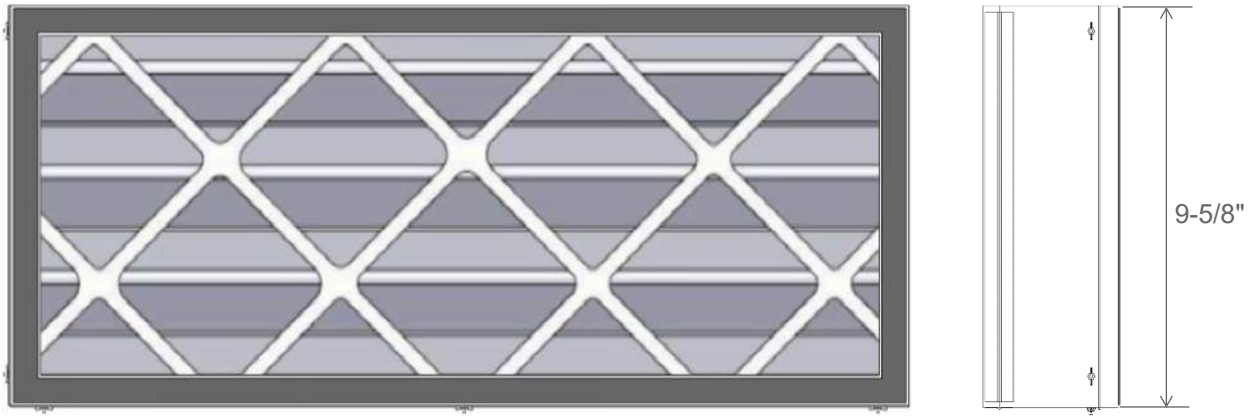
FXSQ15

FDMQ09, FDMQ12

Dimensional Drawing – FFRS15 Air Filter and Cabinet Kit

Hinged access doors (service side & bottom)

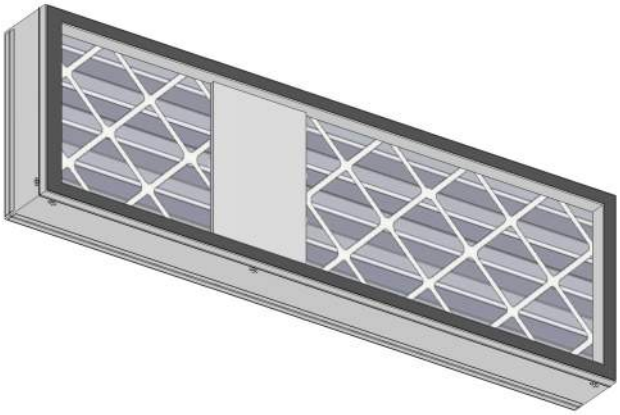




Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFRS30
Air Filter Dimensions (HxWxD):	10"x12" + 10"x24"
Cabinet Dimensions (HxWxD):	9-5/8" x 39-3/8" x 4"



Indoor unit Compatibility

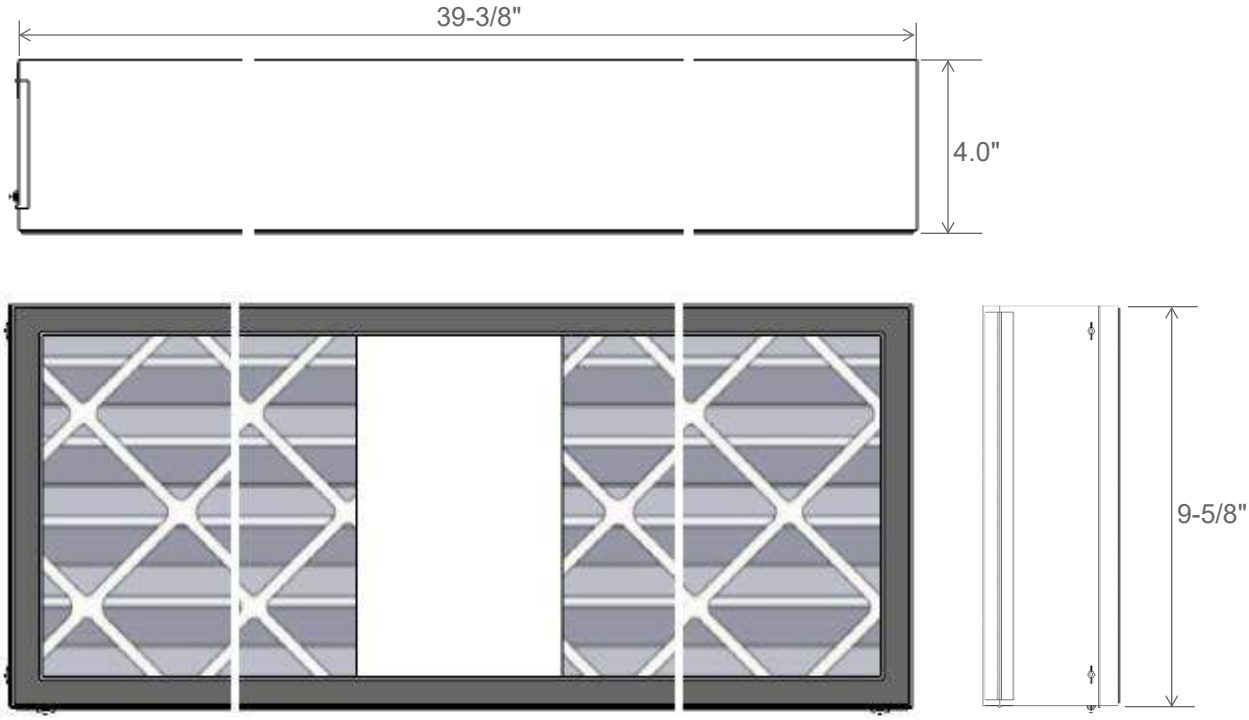
Model No.

FXSQ18, FXSQ24, FXSQ30

FDMQ15, FDMQ18, FDMQ24

Dimensional Drawing – FFRS30 Air Filter and Cabinet Kit

Hinged access doors (service side & bottom)



Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFRS48
Air Filter Dimensions (HxWxD):	10"x24" + 10"x24"
Cabinet Dimensions (HxWxD):	9-5/8" x 55-1/8" x 4"

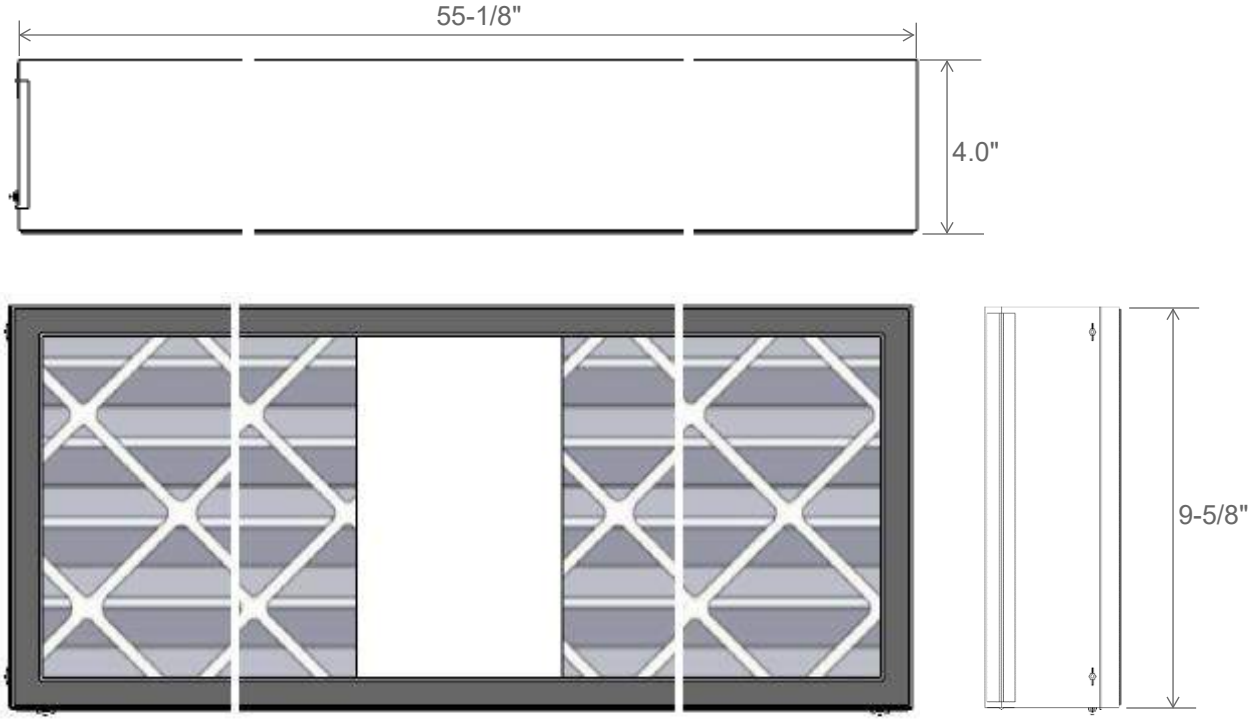
Indoor unit Compatibility

Model No.

FXSQ36, FXSQ48

Dimensional Drawing – FFRS48 Air Filter and Cabinet Kit

Hinged access doors (service side & bottom)



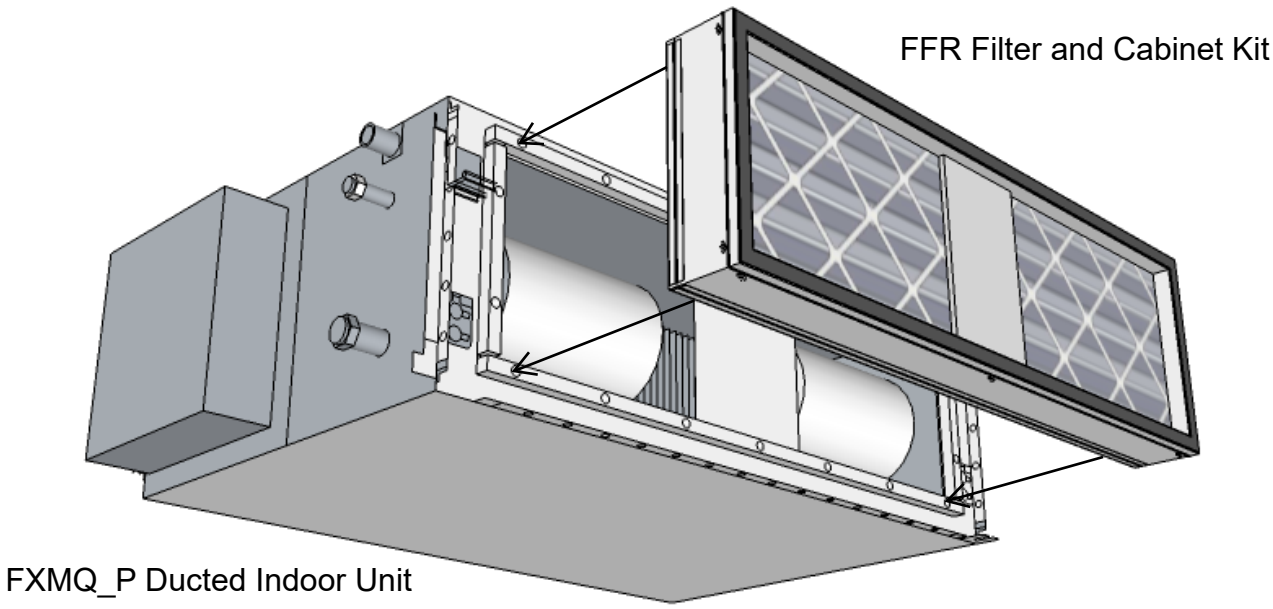
Direct Expansion Solutions

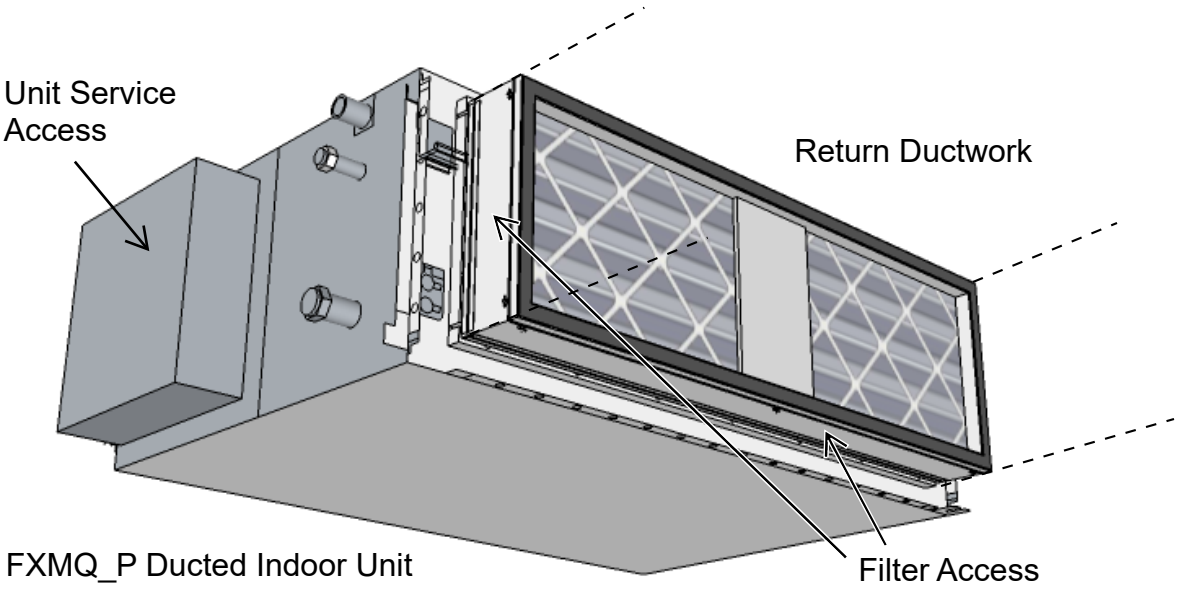
Submittal Data Sheet

FFR Filter and Cabinet Kit Installation Guide

Model No.

FFR09 - FFR96





- Attach filter cabinet to the return of the FXMQ_P ducted unit
- Orient filter cabinet so that filter access matches the electrical access panel of the unit
- Filters are accessible from the bottom and side

VCMA-20 SERIES

APPLICATIONS

- Designed for automatic collection and removal of condensate from air conditioning, refrigeration and dehumidification equipment when gravity drainage is not possible or practical. Also, suitable for high efficiency oil and gas-fired condensing furnace and condensing boiler equipment.

FEATURES

- 1/2-gallon collection tank
- Vertical centrifugal pump design
- Stainless steel motor shaft
- Automatic start and stop operation
- Some models equipped with float (solid polymer) activated switch for automatic high-level water detection (overflow detection switch)
- For models with overflow detection switch: dual function NO and NC operation (set to NO from factory for equipment shut down connection)
- Models equipped with overflow detection switch include two 5" switch lead wires
- 3/8" O.D. barbed discharge adapter with built-in check valve
- Three 1-1/8" diameter inlet openings (two fitted with removable cap plug)
- Thermally protected, fan cooled motor
- Built-in wall mount tabs on tank
- Removable pump float locking tab for safety during transportation (remove at time of installation)
- Maximum water temperature: 140 °F
- 6 ft, 3-conductor cable with grounded 3-prong plug
- Some models include 20' x 3/8" I.D. vinyl discharge tubing

SERIES SPECIFICATIONS

Item No.	Model	HP	Input Voltage	Hz	Amps	Watts	Discharge Size	Performance GPH (LPH) @ Head				Shut-Off Ft.	PSI	Cord	Weight (lbs)
								1'	5'	10'	20'				
554421	VCMA-20UL	1/30	115	60	1.5	93	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	20 (6.1 m)	8.7	6 (1.8 m)	5 (2.3 Kg)
554451	VCMA-20UL	1/30	230	50/60	0.5	75	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	17 (5.2 m)	7.4	6 (1.8 m)	5 (2.3 Kg)
554431	VCMA-20ULT	1/30	115	60	1.5	93	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	20 (6.1 m)	8.7	6 (1.8 m)	6 (2.7 Kg)
554425	VCMA-20ULS	1/30	115	60	1.5	93	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	20 (6.1 m)	8.7	6 (1.8 m)	5 (2.3 Kg)
554455	VCMA-20ULS	1/30	230	50/60	0.5	75	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	17 (5.2 m)	7.4	6 (1.8 m)	5 (2.3 Kg)
554435	VCMA-20ULST	1/30	115	60	1.5	93	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	20 (6.1 m)	8.7	6 (1.8 m)	6.3 (2.9 Kg)
554461	VCMA-20ULST	1/30	230	60	0.5	75	3/8" (9.5mm) OD Barbed	80 (303.2)	70 (265.3)	48 (181.9)	0 (0)	17 (5.2 m)	7.4	6 (1.8 m)	6.3 (2.9 Kg)

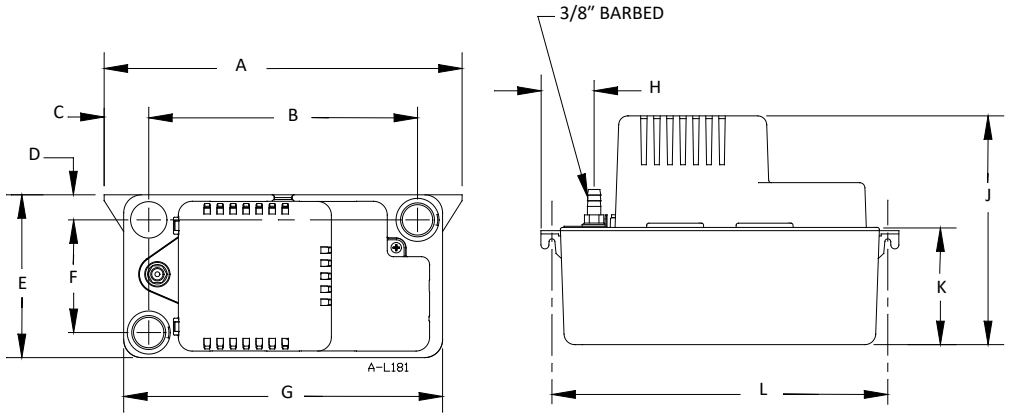
Note: GPH is through check valve.

VCMA-20 SERIES

REPLACEMENT PARTS & KITS

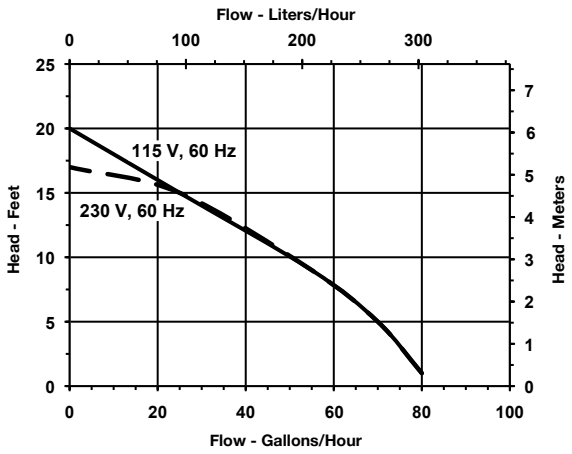
Item	Part Number
Tank	154401
Cover, Motor	154421
Float Arm	154452
Switch Holder	154471
Switch	950337

ENGINEERING DATA



A	B	C	D	E	F	G	H	J	K	L
11 (279.4)	8.3 (210.82)	1.4 (35.56)	0.8 (20.32)	5 (127)	3.5 (88.9)	9.8 (248.92)	1.6 (400.64)	7 (177.8)	3.6 (91.4)	10.3 (261.6)

PERFORMANCE DATA



CONSTRUCTION

Motor	1/30 hp
Discharge	3/8" OD barbed
Housing/Tank Cover	ABS
Volute	ABS
Tank	ABS
Impeller	Glass filled polypropylene
Check Valve	Acetal

Submittal Data Sheet
Wind Baffle
KPW5G112

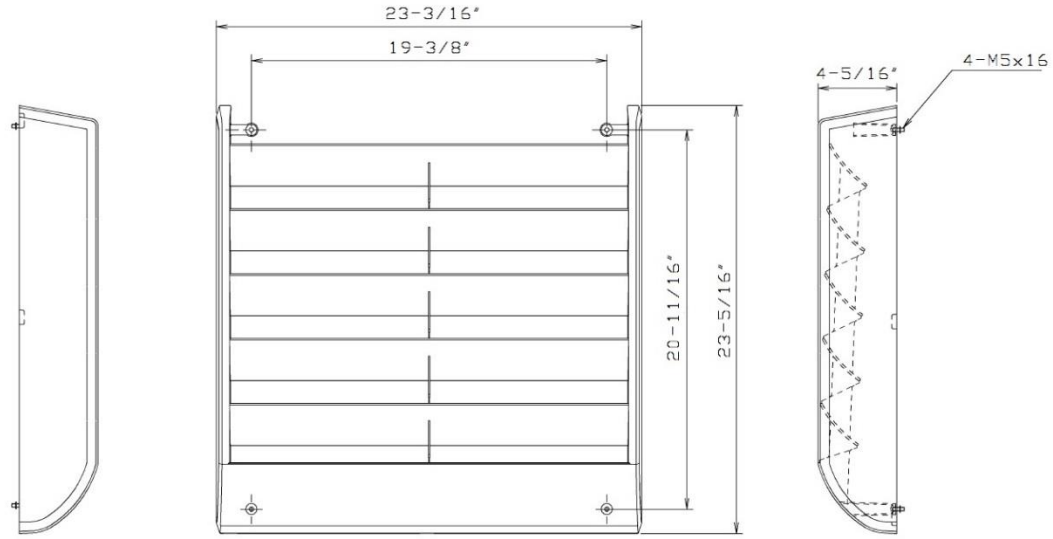
Image for REFERENCE ONLY

DESCRIPTION

Wind Baffle mounts over the standard air grille and allows adjustment in air blow-off direction.

SPECIFICATIONS			
Model No:	KPW5G112		
Unit Compatibility:	LV 30/36	RKS30LVJU, RKS36LVJU	Qty (1)
	Sky Air	RZR18TAVJU(A), RZR24TAVJU(A), RZQ18TAVJU(A), RZQ24TAVJU(A)	Qty (1)
	VRV IV S	RXTQ36TAVJU(9)(A), RXTQ48TAVJU(A),	Qty (1)
	VRV Life	RXSQ24TAVJU(A), RXSQ36TAVJU(A), RXSQ48TAVJU(A)	Qty (1)
Unit Names:	Wind Baffle		
Dimensions (WxHxD):	23-3/16” x 23-5/16” x 4-5/16”		
Unit Weight:	3.1 (lb.)		
Material:	Flame Retardant Grade UL94V-HB		

DIMENSIONAL DRAWINGS



Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056
www.daikinac.com www.daikincomfort.com

Submittal Data Sheet
Snow / Wind Hood Kits for *VRV* EMERION

DESCRIPTION

Snow / Wind Hoods mount to units over the heat exchanger coil to protect from snow build-up and wind in cold climates.

FEATURES

- Heavy duty powder paint finish matches Daikin equipment.
- Hoods install easily to condensing units using existing screw taps with no modification required.
- Different kits can be ordered for different job requirements per table below.

SPECIFICATIONS		
Unit Names:	Snow / Wind Hood Kits	
Material:	20 Gauge G90 Galvanized Steel	
Paint:	**Exterior:** Powder Paint Sandstone Beige	**Interior:** Primer

KIT PART #	CHASSIS SIZE	KIT INCLUSION	
VRV6-SHM-FR	M	Rear Hood	
VRV6-SHL-FR	L	Front Hood	Rear Hood
VRV6-SHXL-FR	XL	Rear Hood (x2)	
VRV6-SH-RL	M, L, XL	Right Hood	Left Hood
VRV6-SHM-T	M	Top Hood	
VRV6-SHL-T	L	Top Hood	
VRV6-SHXL-T	XL	Top Hood	

Number of kits required for each outdoor system

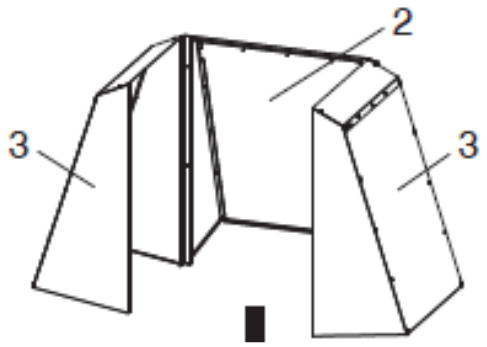
MODEL TYPE			MODULES	VRV6-SHM-FR	VRV6-SHL-FR	VRV6-SHXL-FR	VRV6-SH-RL	VRV6-SHM-T	VRV6-SHL-T	VRV6-SHXL-T
VRV* EMERION Heat Recovery / *Heat Pump	208-230V, 460V	**REYQ / RXYQ72A**	Single	1			1	1		
		REYQ / RXYQ96-168A	Single		1		1		1	
		REYQ / RXYQ192-240A	Single			1	1			1
		REYQ / RXYQ264-336A	Dual		2		1		2	
		REYQ / RXYQ360A	Dual		1	1	1		1	1
		REYQ / RXYQ384-480A	Dual			2	1			2

Daikin Comfort Technologies North America, Inc., 19001 Kermier Rd, Waller TX, 77484
www.daikinac.com www.daikincomfort.com

Submittal Data Sheet

Snow / Wind Hood Kits for *VRV* EMERION

		M Chassis Dimensions					
					per panel		
MODEL	Chassis Size	Kit Part Number	Panel:	Description	Height (in.)	Width (in.)	Depth (in.)
REYQ / RXYQ72AA*	M	VRV6-SHM-FR	#2	Rear Hood (x1)	45	36	19
		VRV6-SH-RL	#3	Right/Left Hoods (x2)	45	29	18.8

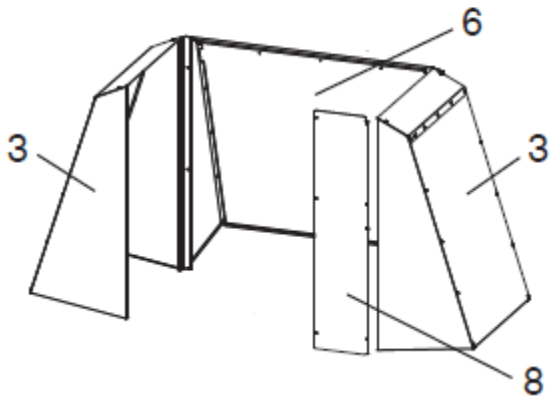


Daikin Comfort Technologies North America, Inc., 19001 Kermier Rd, Waller TX, 77484
www.daikinac.com www.daikincomfort.com

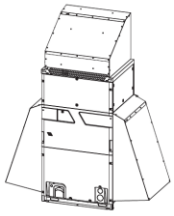
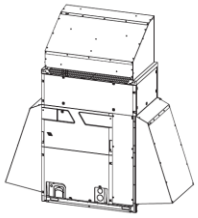
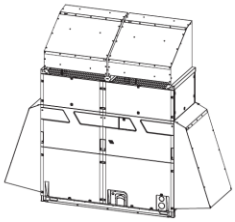
Submittal Data Sheet

Snow / Wind Hood Kits for *VRV* EMERION

		L Chassis Dimensions					
					per panel		
MODEL	Chassis Size	Kit Part Number	Panel:	Description	Height (in.)	Width (in.)	Depth (in.)
REYQ / RXYQ96/120/144/168AA*	L	VRV6-SHL-FR	#6	Rear Hood (x1)	45	48	19
			#8	Front Hood (x1)	45.5	10	
		VRV6-SH-RL	#3	Right/Left Hoods (x2)	45	29	18.8



Daikin Comfort Technologies North America, Inc., 19001 Kermier Rd, Waller TX, 77484
www.daikinac.com www.daikincomfort.com

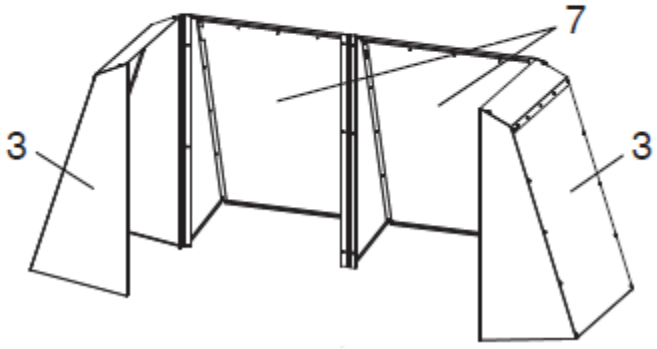




Submittal Data Sheet

Snow / Wind Hood Kits for *VRV* EMERION

XL Chassis Dimensions

MODEL	Chassis Size	Kit Part Number	Panel:	Description	per panel		
					Height (in.)	Width (in.)	Depth (in.)
REYQ / RXYQ192/216/ 240AA*	XL	VRV6-SHXL-FR	#7	Rear Hood (x2)	45	36 - left 32 - right	19
		VRV6-SH-RL	#3	Right/Left Hoods (x2)	45	29	18.8



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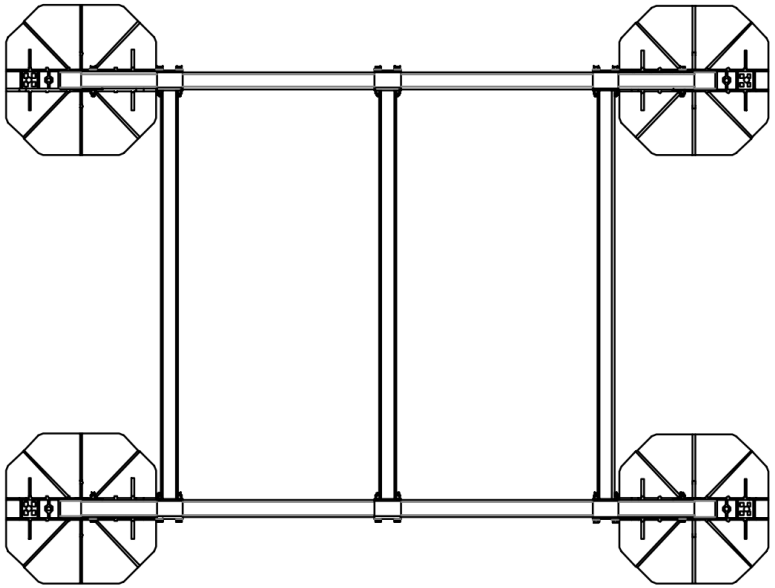
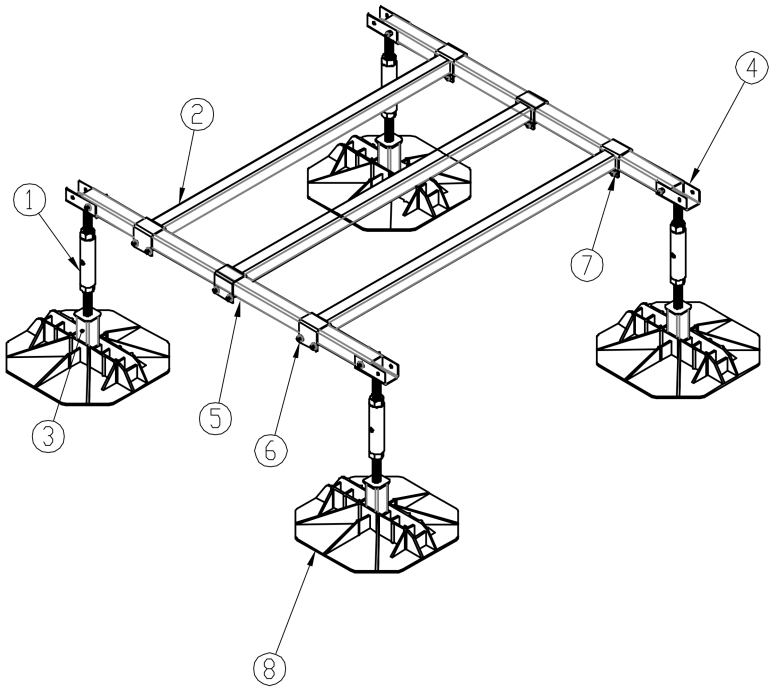
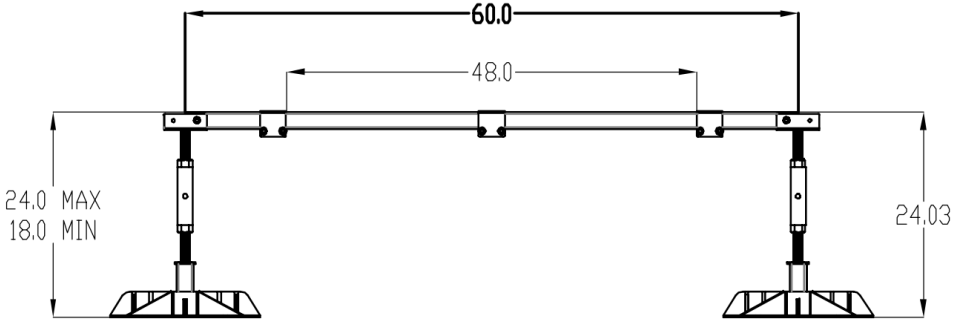
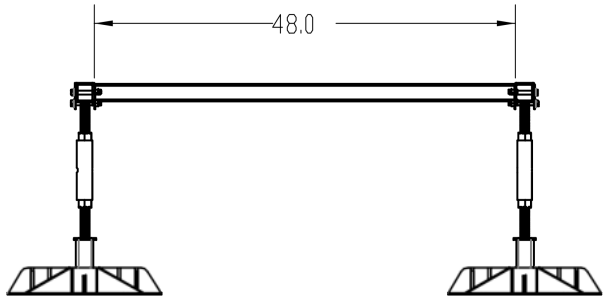








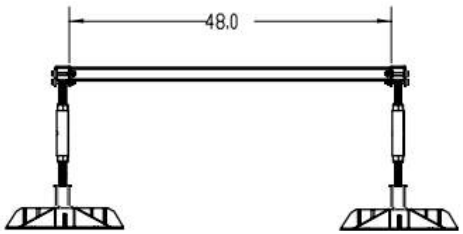
Item No.	Description	Qty
1	leveling jack weldment	4
2	48” cross rail	3
3	foot levelling weldment	4
4	EcoFrame saddle	4
5	60” straight bar	2
6	3/8”- 16 nylock x 3” flange head cap screw	16
7	3/8” nylock nut	16
8	EcoFoot base	4

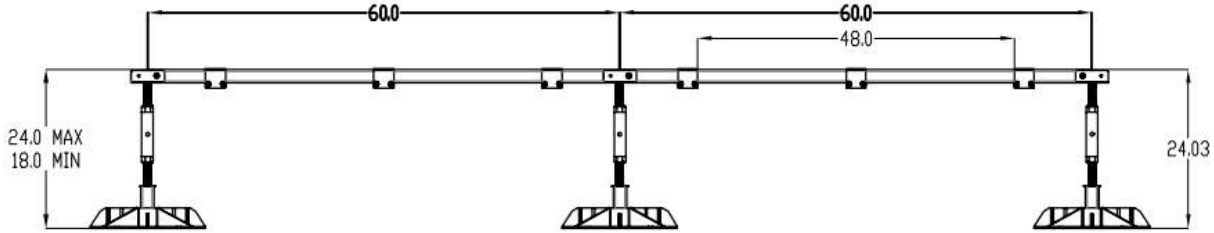
ECOFOOT THIS FOOT IS GREEN

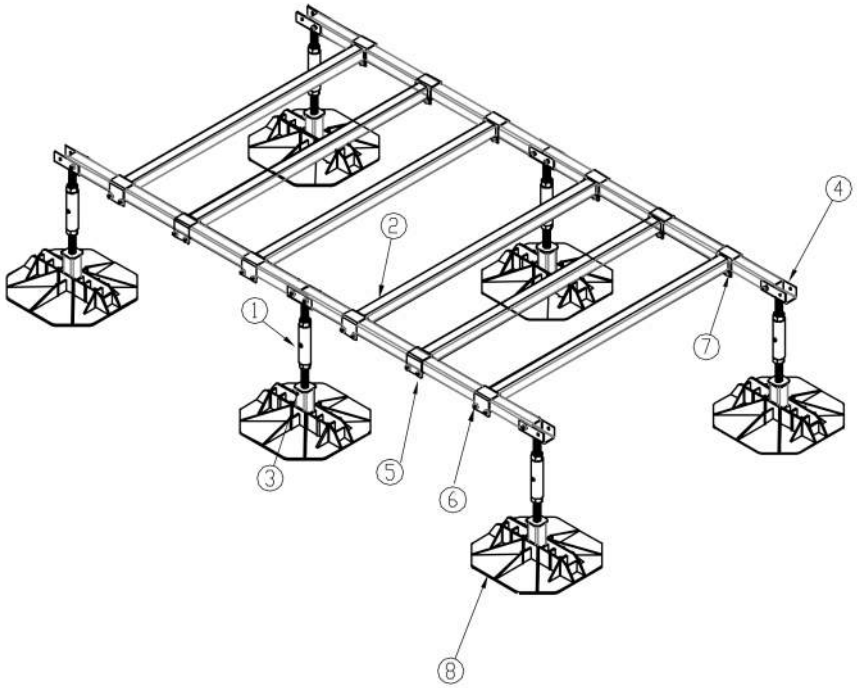
DXS

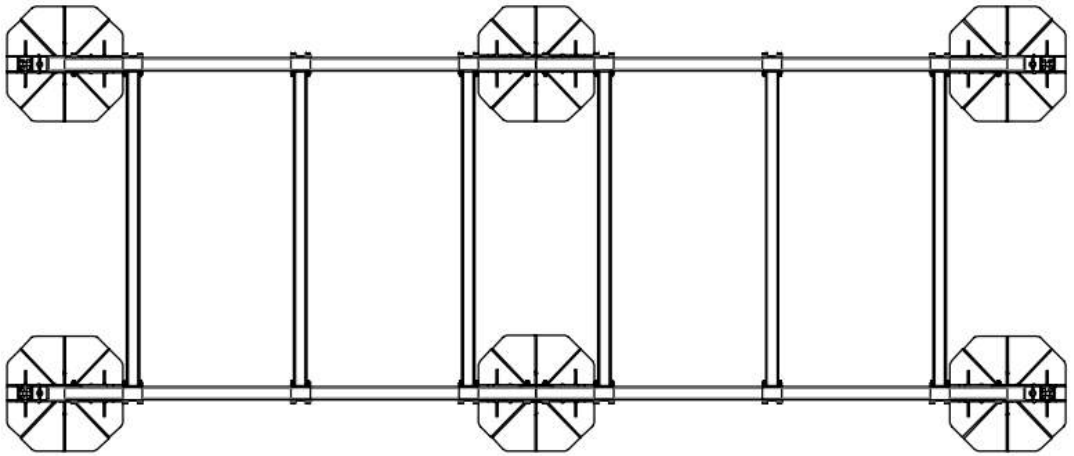
Support for: CU-X

Eco-Foot Model: **EFMD-5**







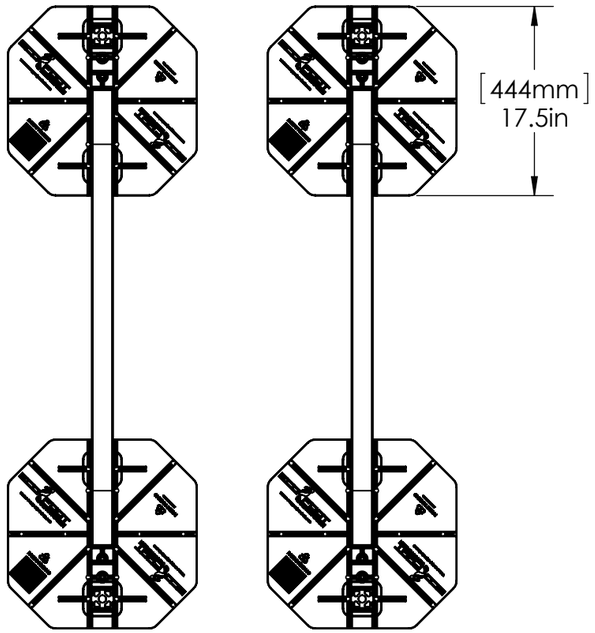


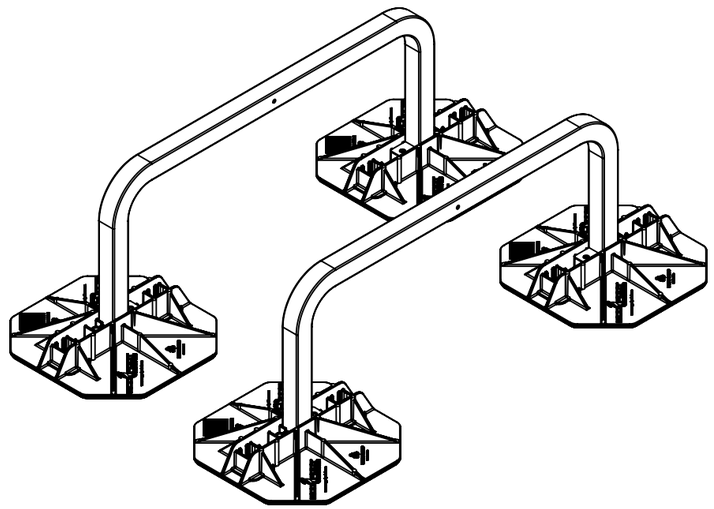
Item No.	Description	Qty
1	leveling jack weldment	6
2	48” cross rail	6
3	foot levelling weldment	6
4	EcoFrame saddle	6
5	60” straight bar	4
6	3/8”- 16 nylock x 3” flange head cap screw	32
7	3/8” nylock nut	32
8	EcoFoot base	6

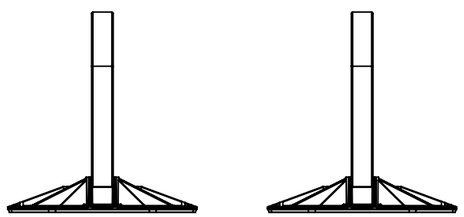
ECO FOOT THIS FOOT IS GREEN DXS

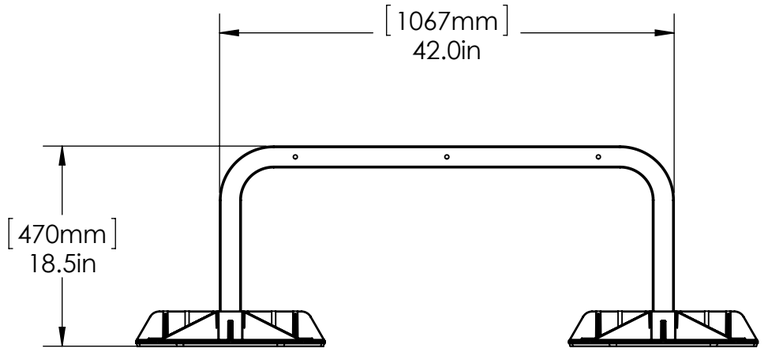
Support for: CU-X

Eco-Foot Model: **EFMD-10**









ECOFOOT THIS FOOT IS GREEN	DESCRIPTION: MF-175	DATE:	APPROVED:	REVISION: A ECOFOOT.CA	

Condenser Elevation / Clearance Requirements

DIRECT EXPANSION SOLUTIONS

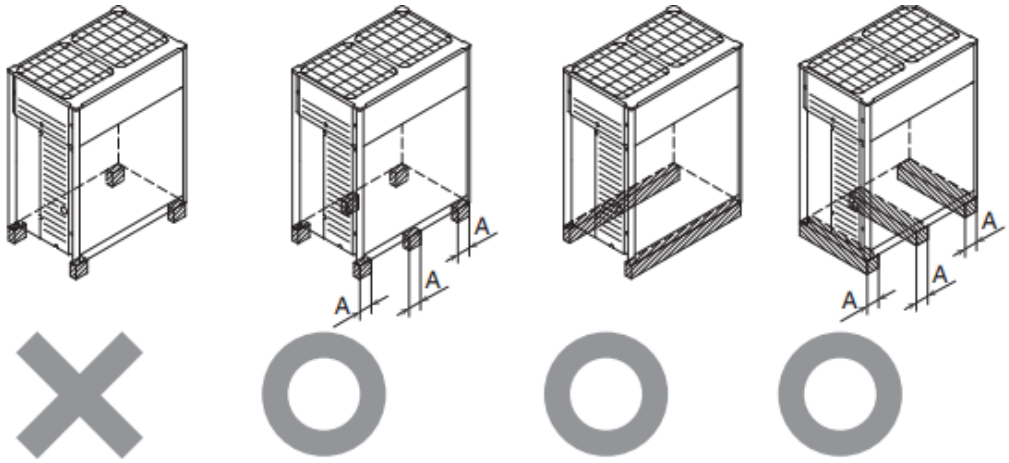
115 Norfinch Drive
Toronto, ON M3N 1W8
T 416.661.3400
F 416.661.0100

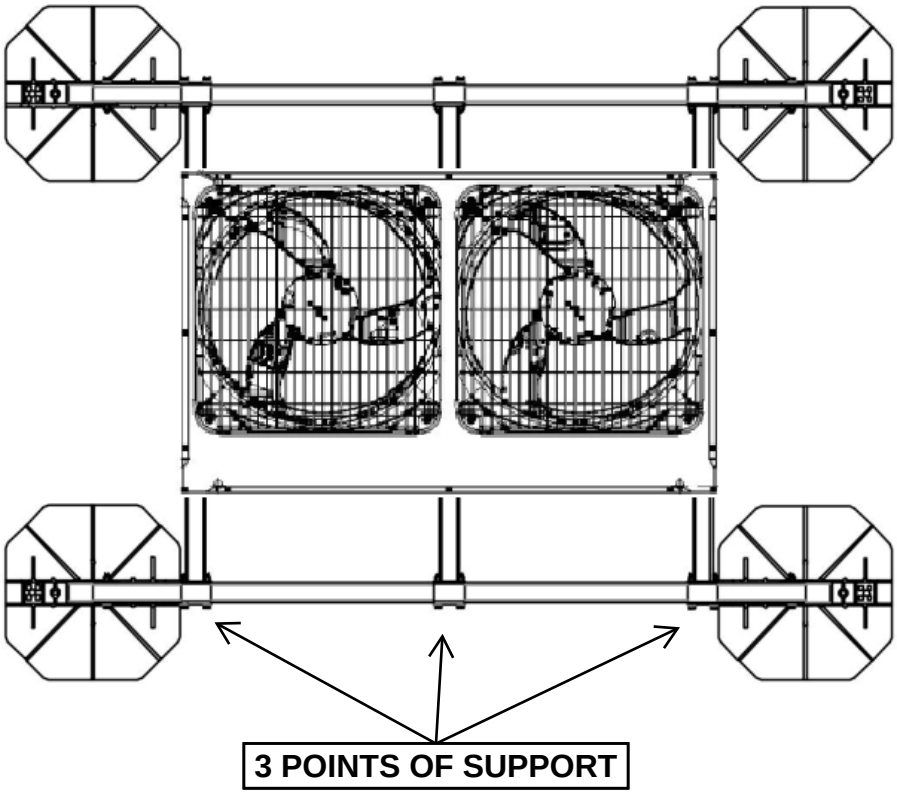
dxseng.com

Elevation requirements

1) All condensing units require minimum of 18” elevation with sufficient drainage below the condenser

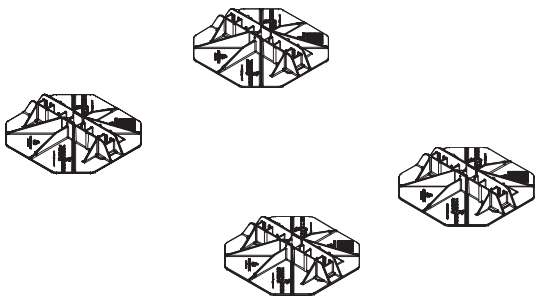
2) All condensing units require support along the front and rear rails as shown below.



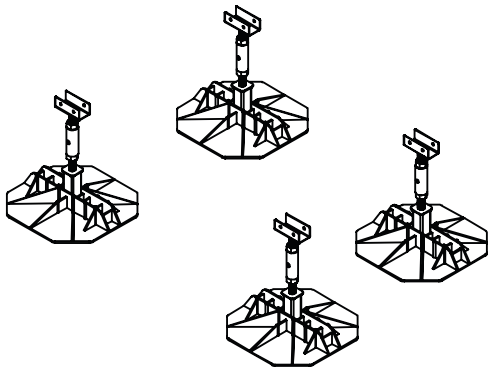


EcoFrame Installation Instructions

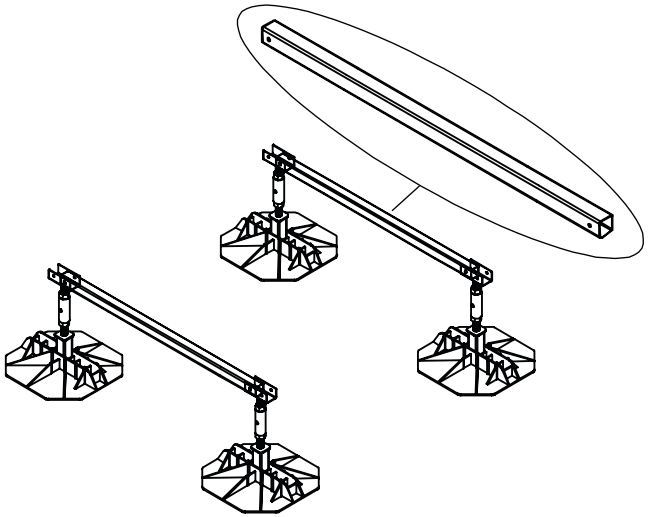
1 Place EcoFoot antivibration mats and support bases on surface approximately 48" apart. Ensure that all lose gravel and impediments are removed from roof surface.



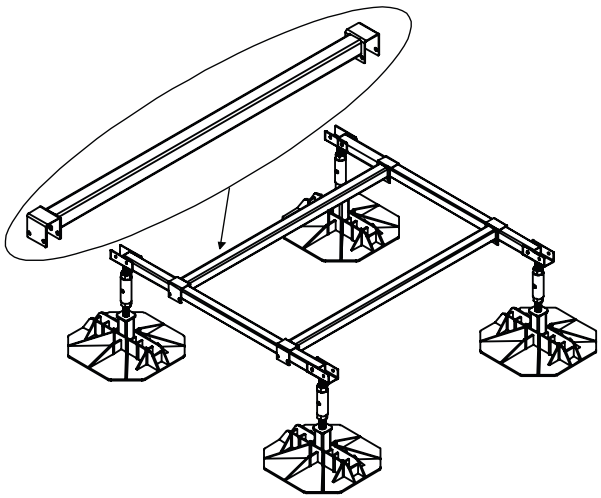
2 Insert leg assemblies inside EcoFoot base
(ensure each leg assembly is all the way into the bottom)



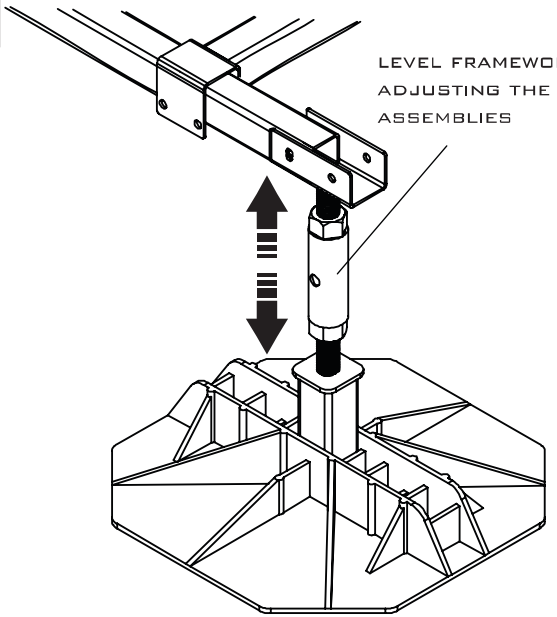
3
- Place the straight bars inside the EcoFrame saddle. Secure with provided bolts and hardware.
- Place each bar on the inner portion of the support for future expansion capabilities.



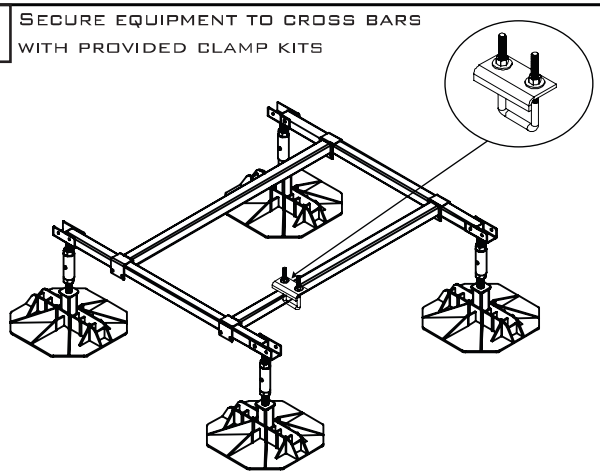
4
- Set the cross bars along the straight bars.
- Slide them to the required width.
- Secure with provided bolts and hardware at the bottom of the cross bars to ensure stability



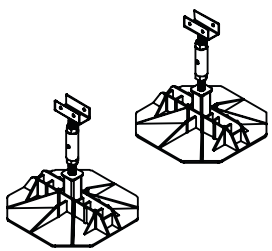
5 Level framework by adjusting the leg assemblies



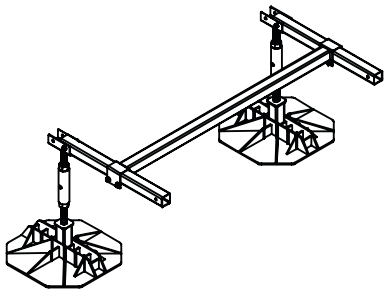
6 Secure equipment to cross bars with provided clamp kits



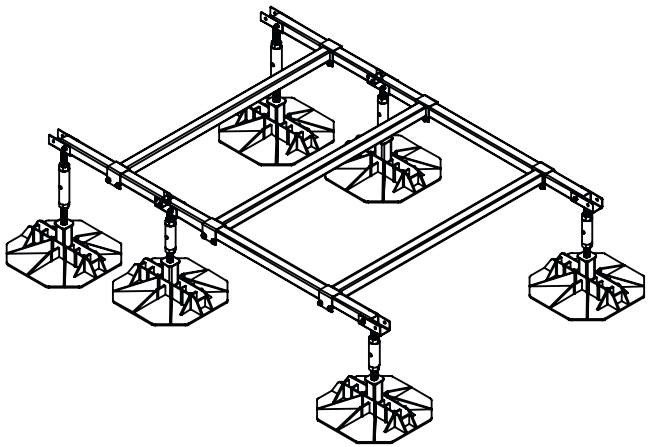
7 For additional expansion, use EFMD2. Repeat steps 1 & 2 and secure the supplied plain bars on the saddle.



8 Lock the cross bar on the plain bars to complete the expansion frame.



9 Secure the EFMD 2 framework to the saddle of the already complete EFMD4.



ECO-FOOT SUPPORT: DXSO@DXSENG.COM

Daikin Split System

Mini Splits

AC/CU - 30, 32, 33	FTKF24AXVJU / RKF24AXVJU	(3)
AC/CU - 31, 34	FTX30WVJU9 / RK30WMVJU9	(2)
AC/CU - 36	FDMQ18WVJU9 / RXL18WMVJU9	(1)
AC/CU - 35	FDMQ24WVJU9 / RXL24WMVJU9	(1)

Submittal Data Sheet

R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System

FTKF24AXVJU-RKF24AXVJU

Tag: AC-30,32,33/CU-10,12,13

FEATURES

- Daikin Swing Compressor
- Indoor Quite Operation
- Included Handheld Remote
- Titanium Apatite Air-Purifying Filter
- Anti-corrosion Treatment of Outdoor Heat Exchanger

BENEFITS

- R-32 Easy, Proven, Efficient, Available
- Precharged for up to 33 ft
- Cooling Operation Range - 50-118F for 9K/12K 50-122F for 18/24K
- 12 Year Parts and Compressor Registered Residential Warranty
- 5 year Parts and Compressor Commercial Warranty
- Cooling down to -4F for Facilities

INDOOR UNIT

OUTDOOR UNIT

Submittal Data Sheet

R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System

FTKF24AXVJU-RKF24AXVJU

SYSTEM PERFORMANCE

Indoor Unit Model No.	FTKF24AXVJU	Indoor Unit Name:	R-32 Daikin OTERRA 2 Ton AC only mini split indoor unit
Outdoor Unit Model No.	RKF24AXVJU	Outdoor Unit Name:	R-32 2 Ton, Cooling only, Ductless ODU Daikin OTERRA
Rated Cooling Capacity (Btu/hr):	22,400	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Sensible Capacity (Btu/hr):	16,360	Rated Piping Length(ft):	25
Max/Min Cooling Capacity (Btu/hr):	26,400 / 7,000	Rated Height Difference (ft):	0.00
Cooling Input Power (kW):	6.570		
SEER2 (Non-Ducted/Ducted):	21.00 /		
EER2 (Non-Ducted/Ducted):	12.00 /		

SYSTEM DETAILS

Refrigerant Type:	R-32	Cooling Operation Range (°F DB):	50 - 122
Holding Refrigerant Charge (lbs):	3.31		
Additional Charge (oz/ft):	0.18	Max. Pipe Length (Vertical) (ft):	66
Pre-charge Piping (Length) (ft):	33	Cooling Range w/Baffle (°F DB):	-4 - -4
Max. Pipe Length (Total) (ft):	99		
Max Height Separation (Ind to Ind ft):	0		

Submittal Data Sheet

R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System

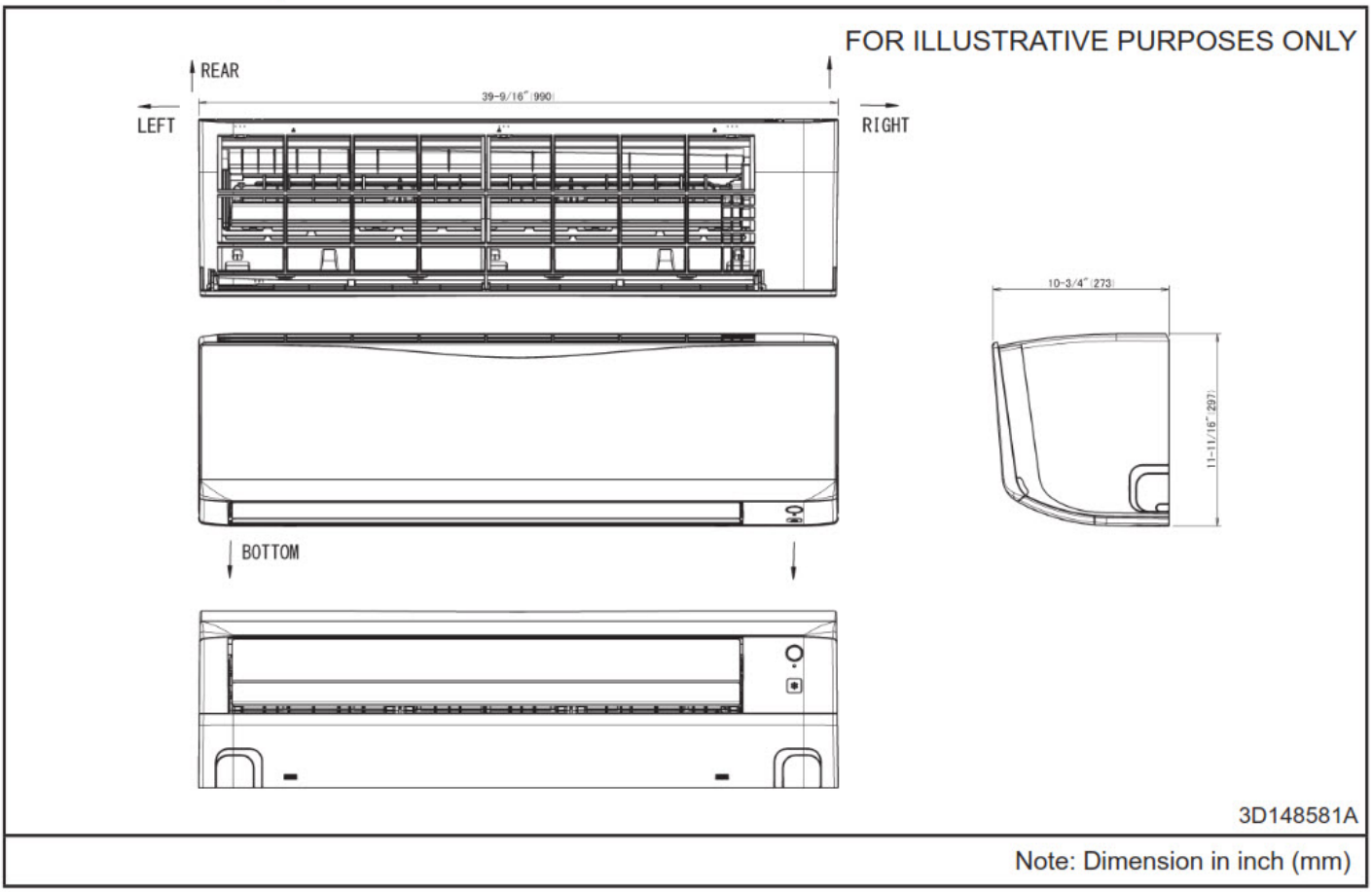
FTKF24AXVJU-RKF24AXVJU

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/M/L/SL) (CFM):	754/716/605/467/395
Power Supply Connections:	L1, L2, L3, Ground	Moisture Removal (Gal/hr):	0.9
Min. Circuit Amps MCA (A):		Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):		Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-11/16 x 39-9/16 x 10-3/4	Condensate Connection (inch):	5/8
Net Weight (lb):	30.5	Sound Pressure (H/M/L/SL) (dBA):	53/45/39/34
Ext. Static Pressure (Rated/Max) (inWg):	/	Sound Power Level (dBA):	

DIMENSIONAL DRAWING - INDOOR UNIT

Model : FTKF18/24A, FTXF18/24A



Submittal Data Sheet

R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System

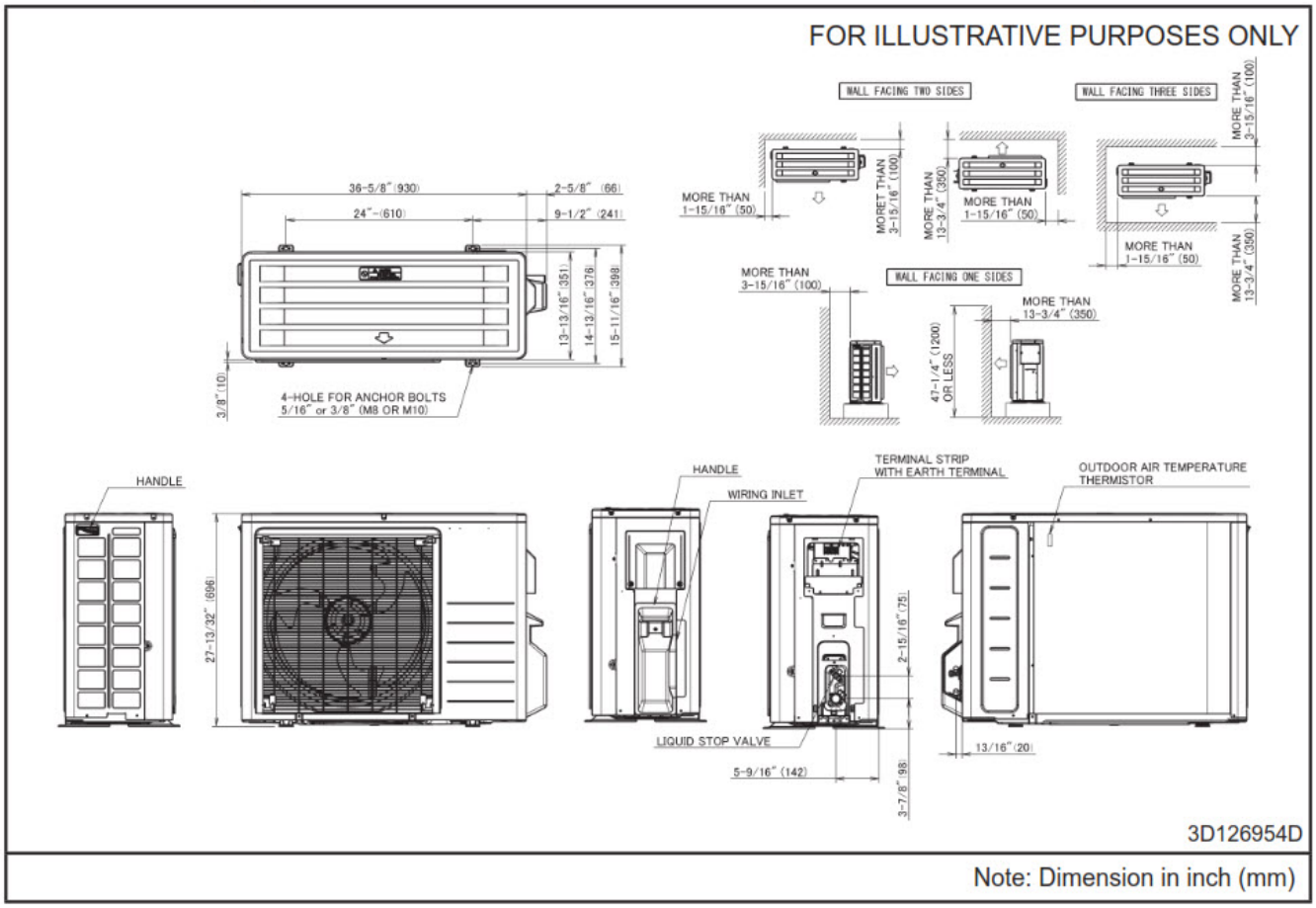
FTKF24AXVJU-RKF24AXVJU

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:	L1, L2, L3, Ground	Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	14.23	Airflow Rate (H) (CFM):	1879
Max Overcurrent Protection (MOP) (A):	20	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	1/4
Rated Load Amps RLA(A):		Sound Pressure (H) (dBA):	55
Dimensions (HxWxD) (in):	27-13/32 x 36-5/8 x 13-13/16	Sound Power Level (dBA):	
Net Weight (lb):	101		

DIMENSIONAL DRAWING - OUTDOOR UNIT

Model : RKF18/24A, RXF18/24A



INDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
AZAI6WSCDKB	DKN Residential Cloud Wi-Fi Adaptor for Single- and Multi-Zone System (S21)	No
AZAI6WSPDKC	DKN Plus Interface	No
BRC51D61	Wired Remote Controller Kit	No
DACA-CP1-1	Mini Aqua Condensate Pump	No
DACA-CP4-1	MINI WHITE PUMP KIT 100-250V	No
DTST-LTE-LA-A	Daikin One Lite (with Translation Adaptor for S21 only)	No
DTST-ONE-ADA-A	Daikin One+ Smart Thermostat for VRV, SkyAir, Single- and Multi-Zone System	No
DTST-TOU-ADA-A	Daikin One Touch Smart Thermostat (with Translation Adaptor for S21 and P1P2)	No
KRP928BB2S	RA Interface Adaptor for DIII-Net -	No

OUTDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
DACA-WB-3	Powder-Coated Wall-Mounted Bracket	No
KEH063A4EA	Bml LRg Drain Pan Heater Rev A	No
KPW063B4E	Air Adjustment Grille	No

Submittal Data Sheet

Daikin Polara 2.5-Ton Wall Mounted Cooling only System

FTX30WVJU9RK30WMVJU9

Tag: AC-31,34/CU-11,14

FEATURES

- Powerful Operation Mode
- Econo Mode
- Program Dry Function
- Intelligent Eye
- Auto Fan Speed
- Wide Angle Louvers
- Dual Flap System
- Comfort Mode
- 3-D Airflow
- Low Ambient Cooling
- Quiet indoor and outdoor unit operation
- Auto Changeover and auto restart
- Self Diagnosis

BENEFITS

- For rooms with no false ceiling nor free floor space
- 10-year parts limited warranty for residential/commercial applications
- Cooling operation down to -22 F outside temperature
- Error codes display for fast and easy fault diagnosis
- Long lasting Titanium Apatite air filter
- Easy to clean flat panels
- Econo mode reduces power consumption.

INDOOR UNIT

OUTDOOR UNIT

Submittal Data Sheet

Daikin Polara 2.5-Ton Wall Mounted Cooling only System

FTX30WVJU9RK30WMVJU9

SYSTEM PERFORMANCE

Indoor Unit Model No.	FTX30WVJU9	Indoor Unit Name:	Daikin POLARA 2.5T Wall Mounted Type IDU
Outdoor Unit Model No.	RK30WMVJU9	Outdoor Unit Name:	Daikin POLARA - 2.5-Ton, Cooling Only, Ductless ODU
Rated Cooling Capacity (Btu/hr):	31,400	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Sensible Capacity (Btu/hr):	31,400	Rated Piping Length(ft):	25
Max/Min Cooling Capacity (Btu/hr):	31,400 / 10,200	Rated Height Difference (ft):	0.00
Cooling Input Power (kW):			
SEER2 (Non-Ducted/Ducted):	17.50 /		
EER2 (Non-Ducted/Ducted):	9.85 /		
Rated Heating Capacity (Btu/hr):	34,800	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	50 - 115
Holding Refrigerant Charge (lbs):	3.64	Heating Operation Range (°F WB):	5 - 64
Additional Charge (lb/ft):	0.32	Max. Pipe Length (Vertical) (ft):	66
Pre-charge Piping (Length) (ft):	33	Cooling Range w/Baffle (°F DB):	-22 - 115
Max. Pipe Length (Total) (ft):	99		
Max Height Separation (Ind to Ind ft):	0		

Submittal Data Sheet

Daikin Polara 2.5-Ton Wall Mounted Cooling only System

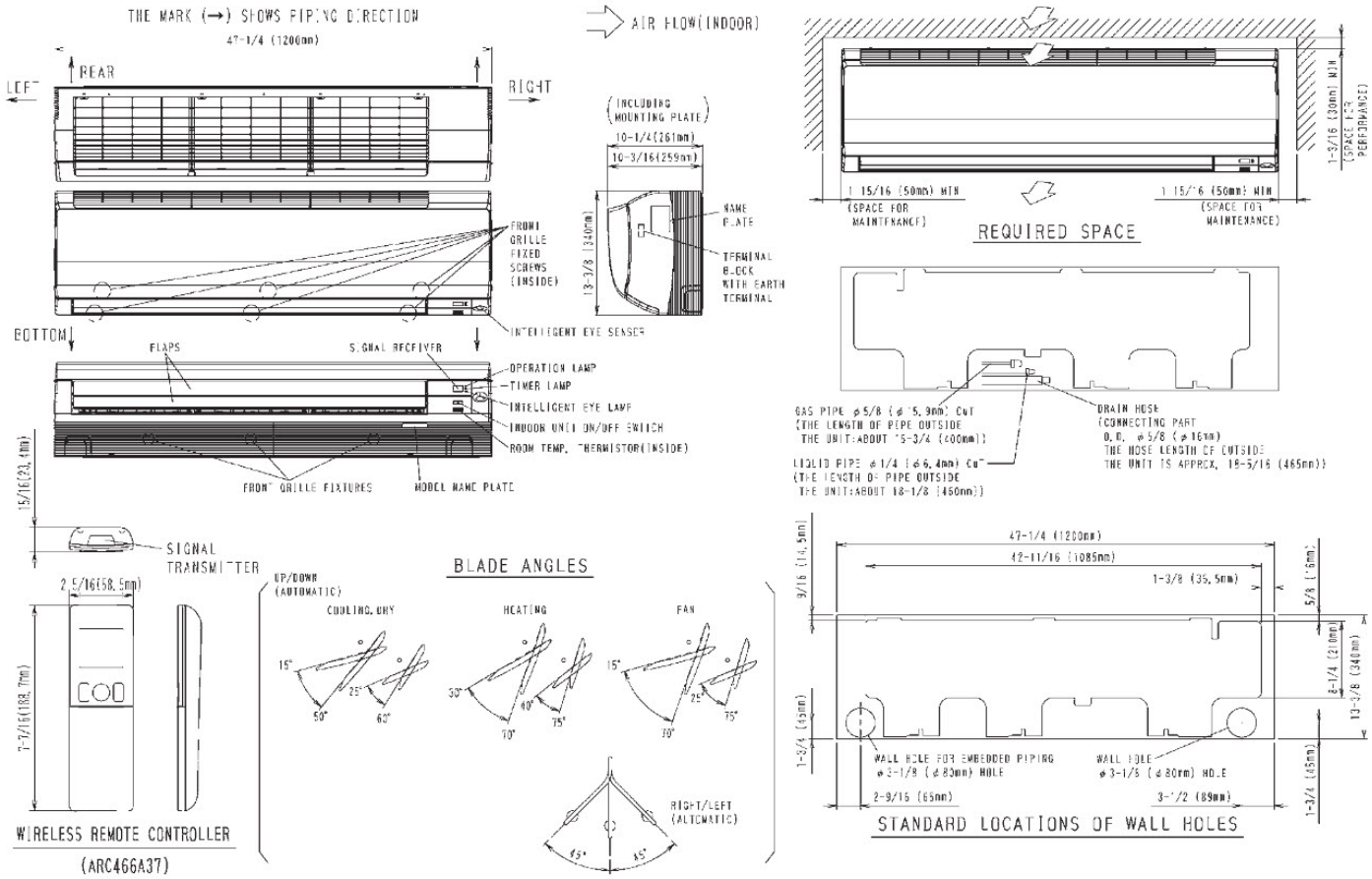
FTX30WVJU9RK30WMVJU9

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H/M/L/SL) (CFM):	890/727/572/512
Power Supply Connections:		Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):		Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):		Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	13-3/8 x 47-1/4 x 10-3/16	Condensate Connection (inch):	
Net Weight (lb):	38	Sound Pressure (H/M/L/SL) (dBA):	53/47/40/37
Ext. Static Pressure (Rated/Max) (inWg):	/	Sound Power Level (dBA):	

DIMENSIONAL DRAWING - INDOOR UNIT

FTX30/36WVJU9



Submittal Data Sheet

Daikin Polara 2.5-Ton Wall Mounted Cooling only System

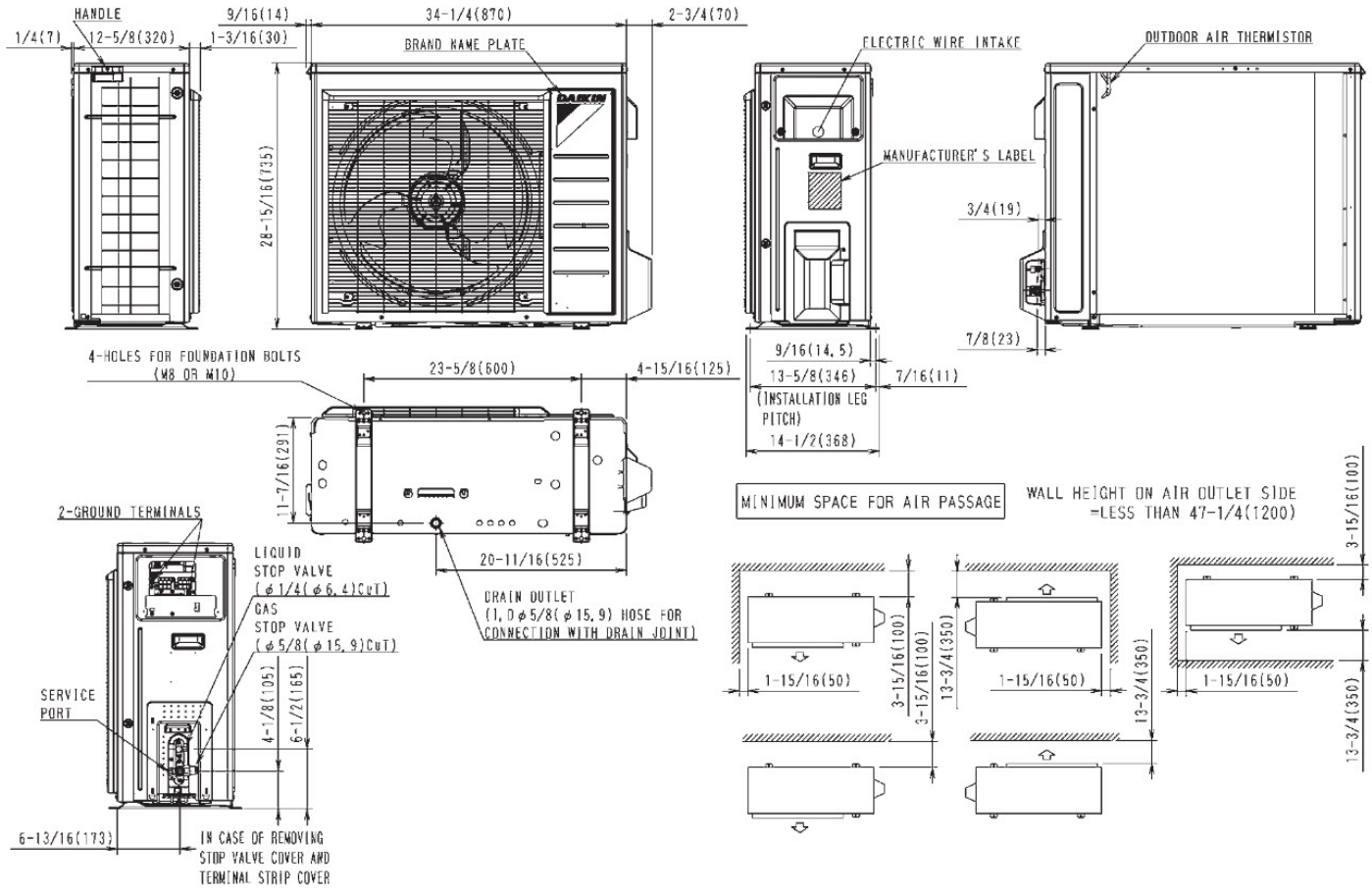
FTX30WVJU9RK30WMVJU9

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:		Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	16.6	Airflow Rate (H) (CFM):	2528
Max Overcurrent Protection (MOP) (A):	20	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	1/4
Rated Load Amps RLA(A):	16.3	Sound Pressure (H) (dBA):	56
Dimensions (HxWxD) (in):	28-15/16 x 34-1/4 x 12-5/8	Sound Power Level (dBA):	
Net Weight (lb):	132		

DIMENSIONAL DRAWING - OUTDOOR UNIT

RK30/36WMVJU9, RX30/36WMVJU9



Submittal Data Sheet
Daikin Polara 2.5-Ton Wall Mounted Cooling only System
FTX30WVJU9RK30WMVJU9

INDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
AZAI6WSCDKB	DKN Residential Cloud Wi-Fi Adaptor for Single- and Multi-Zone System (S21)	No
AZAI6WSPDKC	DKN Plus Interface	No
BRC944B2-A08	Wired Remote Controller kit	No
BRCW901A03	BRC944B2 CONTROL CABLE, 10FT	No
BRCW901A08	Wired Remote Controller Cord - 8m/26ft	No
BRP072A43	Daikin Comfort Control WiFi Adaptor	No
DACA-CP1-1	Mini Aqua Condensate Pump	No
DACA-CP4-1	MINI WHITE PUMP KIT 100-250V	No
DTST-LTE-LA-A	Daikin One Lite (with Translation Adaptor for S21 only)	No
DTST-ONE-ADA-A	Daikin One+ Smart Thermostat for VRV, SkyAir, Single- and Multi-Zone System	No
KRP928BB2S	RA Interface Adaptor for DIII-Net -	No

OUTDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
DACA-WB-3	Powder-Coated Wall-Mounted Bracket	No
KEH063A4E	Daikin BML DrainPan Heater Large	No
KKG063A42	Back protection wire net	No
KPW063B4	Air direction adjustment grille	No
RAQAHLGD1	Rear Coil Guard BML	No

Submittal Data Sheet

Daikin AURORA 1.5-Ton FDMQ Ducted Concealed Unit

FDMQ18WVJU9RXL18WMVJU9

Tag: AC-36/CU-16

FEATURES

- External Static Pressure .6 max
- Hot start technology
- Auto-restart (after power failure)

BENEFITS

- Low ambient cooling operation down to -4°F (-20°C) with field setting and air adjustment grille
- Operating Range - Cooling (50°F - 114.8°F)
- Operating Range - Heating (-13°F - 64.4°F)
- 12 year limited parts and compressor warranty with online registration
- 5 year limited parts warranty for commercial applications

INDOOR UNIT

OUTDOOR UNIT

Submittal Data Sheet

Daikin AURORA 1.5-Ton FDMQ Ducted Concealed Unit

FDMQ18WVJU9RXL18WMVJU9

SYSTEM PERFORMANCE

Indoor Unit Model No.	FDMQ18WVJU9	Indoor Unit Name:	1-1/2 Ton FDMQ Ducted Concealed Unit
Outdoor Unit Model No.	RXL18WMVJU9	Outdoor Unit Name:	19.5 SEER2, Heat Pump, Ductless ODU, 1.5 Ton, Daikin AURORA
Rated Cooling Capacity (Btu/hr):	17,600	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Sensible Capacity (Btu/hr):		Rated Piping Length(ft):	25
Max/Min Cooling Capacity (Btu/hr):	19,600 / 9,000	Rated Height Difference (ft):	0.00
Cooling Input Power (kW):			
SEER2 (Non-Ducted/Ducted):	/ 15.20	HSPF2 (Non-Ducted/Ducted):	/ 8.5
EER2 (Non-Ducted/Ducted):	/ 10.00		
Rated Heating Capacity (Btu/hr):	21,600	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Max/Min Heating Capacity (Btu/hr):	25,000 / 9,000		

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	50 - 115
Holding Refrigerant Charge (lbs):	3.53	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):	0.32	Max. Pipe Length (Vertical) (ft):	66
Pre-charge Piping (Length) (ft):	33	Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	99		
Max Height Separation (Ind to Ind ft):	0		
Fan/Compressor Drive Input:			

Submittal Data Sheet

Daikin AURORA 1.5-Ton FDMQ Ducted Concealed Unit

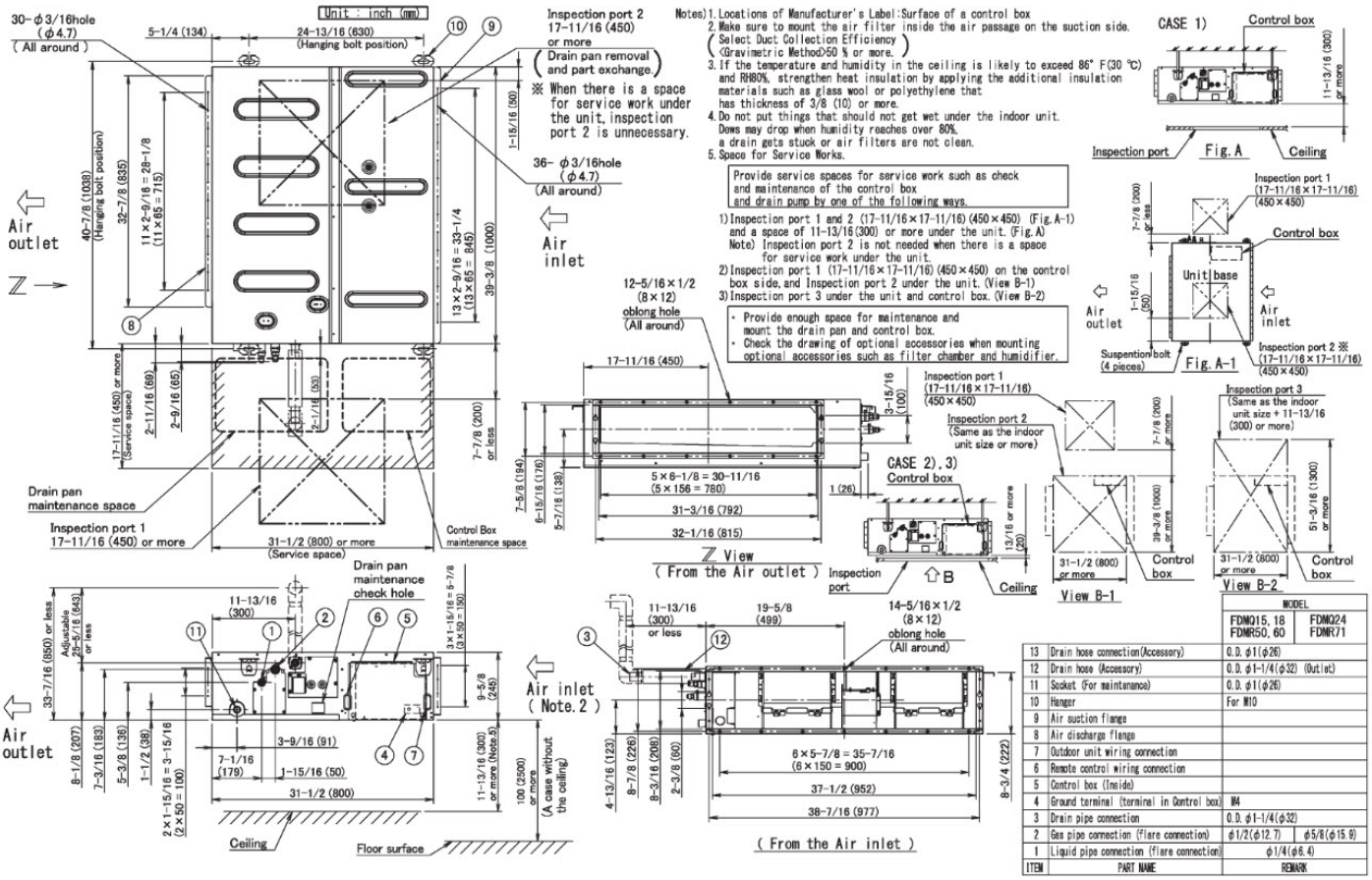
FDMQ18WVJU9RXL18WMVJU9

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H/M/L) (CFM):	614/523/431
Power Supply Connections:	See Outdoor Unit for Electrical Specs	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):		Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):		Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-5/8 x 39-3/8 x 31-1/2	Condensate Connection (inch):	1-1/4
Ext. Static Pressure (Rated/Max) (inWg):	/ 0.6	Sound Pressure (H) (dBA):	35
Net Weight (lb):	82	Sound Power Level (dBA):	

DIMENSIONAL DRAWING - INDOOR UNIT

FDMQ15/18/24WVJU9



ITEM	PART NAME	REMARK
13	Drain hose connection(Accessory)	O.D. φ1(φ26)
12	Drain hose (Accessory)	O.D. φ1-1/4(φ32) (Outlet)
11	Socket (For maintenance)	O.D. φ1(φ26)
10	Hanger	For M10
9	Air suction flange	
8	Air discharge flange	
7	Outdoor unit wiring connection	
6	Remote control wiring connection	
5	Control box (Inside)	
4	Ground terminal (terminal in Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4(φ32)
2	Gas pipe connection (flare connection)	φ1/2(φ12.7) / φ5/8(φ15.9)
1	Liquid pipe connection (flare connection)	φ1/4(φ6.4)

MODEL	FDMQ15, 18 FDMR50, 60	FDMQ24 FDMR71

Submittal Data Sheet

Daikin AURORA 1.5-Ton FDMQ Ducted Concealed Unit

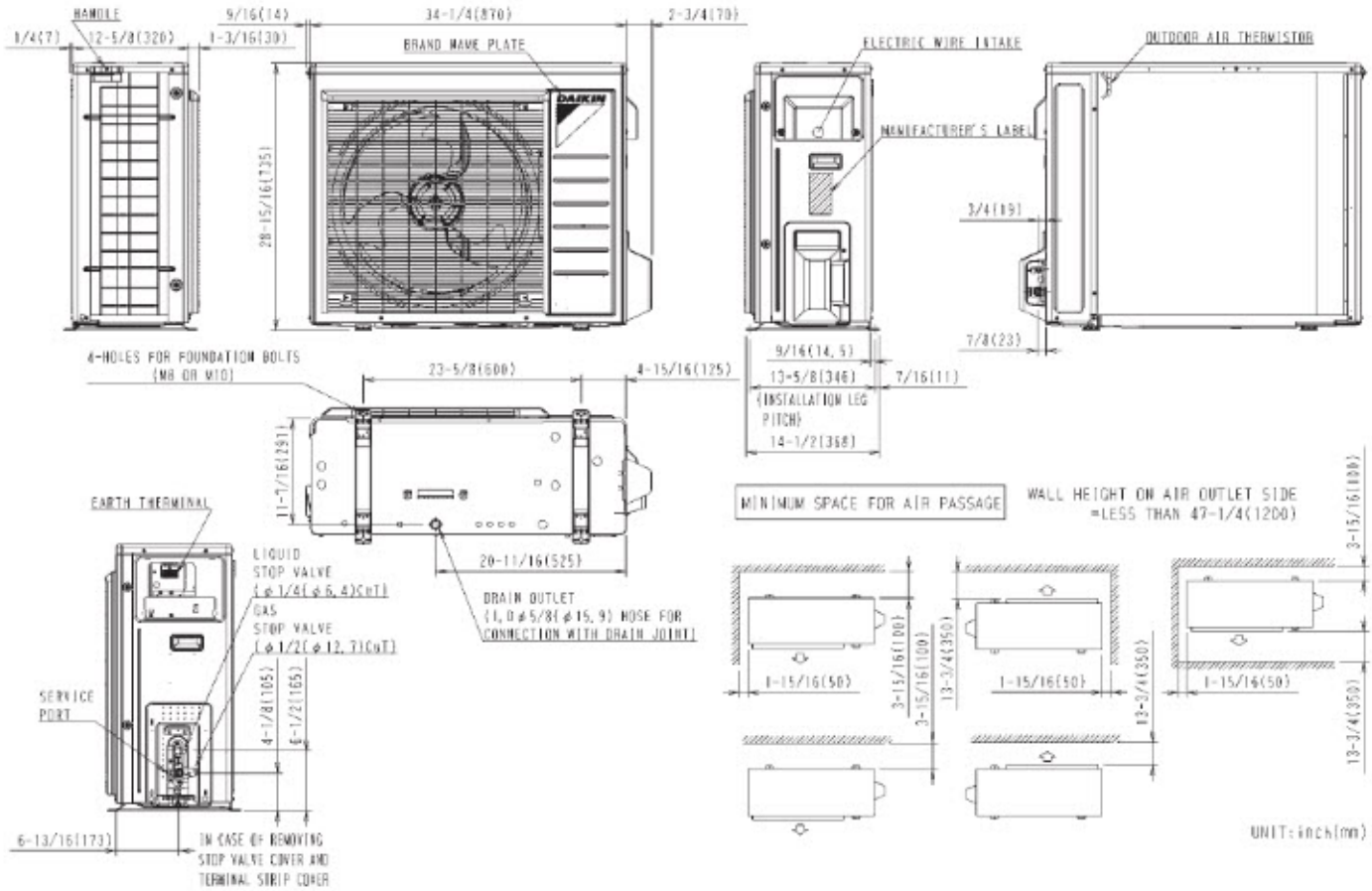
FDMQ18WVJU9RXL18WMVJU9

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 V 254/277 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:	L1, L2, L3, Ground	Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	18.6	Airflow Rate (H) (CFM):	2419
Max Overcurrent Protection (MOP) (A):	20	Gas Pipe Connection (inch):	1/2
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	1/4
Rated Load Amps RLA(A):		Sound Pressure (H) (dBA):	54
Dimensions (HxWxD) (in):	28-15/16 x 34-1/4 x 12-5/8	Sound Power Level (dBA):	
Net Weight (lb):	132		

DIMENSIONAL DRAWING - OUTDOOR UNIT

RX15/18WMVJU9



INDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
AZAI6WSCDKA	DKN Cloud Wi-Fi Adaptor (P1P2)	No
AZAI6WSPDKC	DKN Plus Interface	No
BRC082A43	IR controller for FDMQ	No
BRC1E73	Navigation Remote Controller III(73)	No
BRC1H71W	Madoka Remote Controller	No
DACA-CP1-1	Mini Aqua Condensate Pump	No
DACA-CP2-1	Maxi Orange Condensate Pump	No
DACA-CP3-1	Si-30 Condensate Pump	No
DFBS39A13	MERV 13 Filter Kit	No
DTST-ONE-ADA-A	Daikin One+ Smart Thermostat for VRV, SkyAir, Single- and Multi-Zone System	No
DZKS030E4-3	Zoning Box 4x8" for FXSQ and FDMQ	No
DZKS030E5-3	Zoning Box 5x6" for FXSQ and FDMQ	No
KRCS01-4B	Remote Sensor Kit, (FBQ, FCQ, FTQ, FXFQ, FXMQ, FXTQ)	No
KRCSH2018-01	Button Sensor Kit	No
KRP1C74	Wiring Adapter PCB	No
KRP4A71	Group Control Adaptor PCB	No
KRP4A98	Mounting plate for accessory PCB	No

OUTDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
DACA-WB-3	Powder-Coated Wall-Mounted Bracket	No
FTDBHML	Daikin Bml Drainpan Htr Large	No
KEH063A4E	Daikin BML DrainPan Heater Large	No
KEH063A4EA	Bml LRg Drain Pan Heater Rev A	No
KKG063A42	Back protection wire net	No
KPS063A41	Snow hood (intake side plate) (15, 18 & 24)	No
KPS063A44	Snow hood (intake rear plate) (15,18 & 24)	No
KPS063A47	Snow hood (outlet) (15, 18 & 24)	No
KPW063B4	Air direction adjustment grille	No

Submittal Data Sheet

Daikin AURORA 2.0-Ton FDMQ Ducted Concealed Unit

FDMQ24WVJU9RXL24WMVJU9

Tag: AC-35/CU-15

FEATURES

- External Static Pressure .6 max
- Hot start technology
- Auto-restart (after power failure)

BENEFITS

- Low ambient cooling operation down to -4°F (-20°C) with field setting and air adjustment grille
- Operating Range - Cooling (50°F - 114.8°F)
- Operating Range - Heating (-13°F - 64.4°F)
- 12 year limited parts and compressor warranty with online registration
- 5 year limited parts warranty for commercial applications

INDOOR UNIT

OUTDOOR UNIT

Submittal Data Sheet

Daikin AURORA 2.0-Ton FDMQ Ducted Concealed Unit

FDMQ24WVJU9RXL24WMVJU9

SYSTEM PERFORMANCE

Indoor Unit Model No.	FDMQ24WVJU9	Indoor Unit Name:	2 Ton FDMQ Ducted Concealed Unit
Outdoor Unit Model No.	RXL24WMVJU9	Outdoor Unit Name:	19.5 SEER2, Heat Pump, Ductless ODU, 2.0 Ton, Daikin AURORA
Rated Cooling Capacity (Btu/hr):	21,200	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Sensible Capacity (Btu/hr):		Rated Piping Length(ft):	25
Max/Min Cooling Capacity (Btu/hr):	23,000 / 9,000	Rated Height Difference (ft):	0.00
Cooling Input Power (kW):			
SEER2 (Non-Ducted/Ducted):	/ 15.20	HSPF2 (Non-Ducted/Ducted):	/ 8.4
EER2 (Non-Ducted/Ducted):	/ 9.60		
Rated Heating Capacity (Btu/hr):	24,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Max/Min Heating Capacity (Btu/hr):	27,600 / 9,000		

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	50 - 115
Holding Refrigerant Charge (lbs):	3.53	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (oz/ft):	0.32	Max. Pipe Length (Vertical) (ft):	66
Pre-charge Piping (Length) (ft):	33	Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	99		
Max Height Separation (Ind to Ind ft):	0		
Fan/Compressor Drive Input:			

Submittal Data Sheet

Daikin AURORA 2.0-Ton FDMQ Ducted Concealed Unit

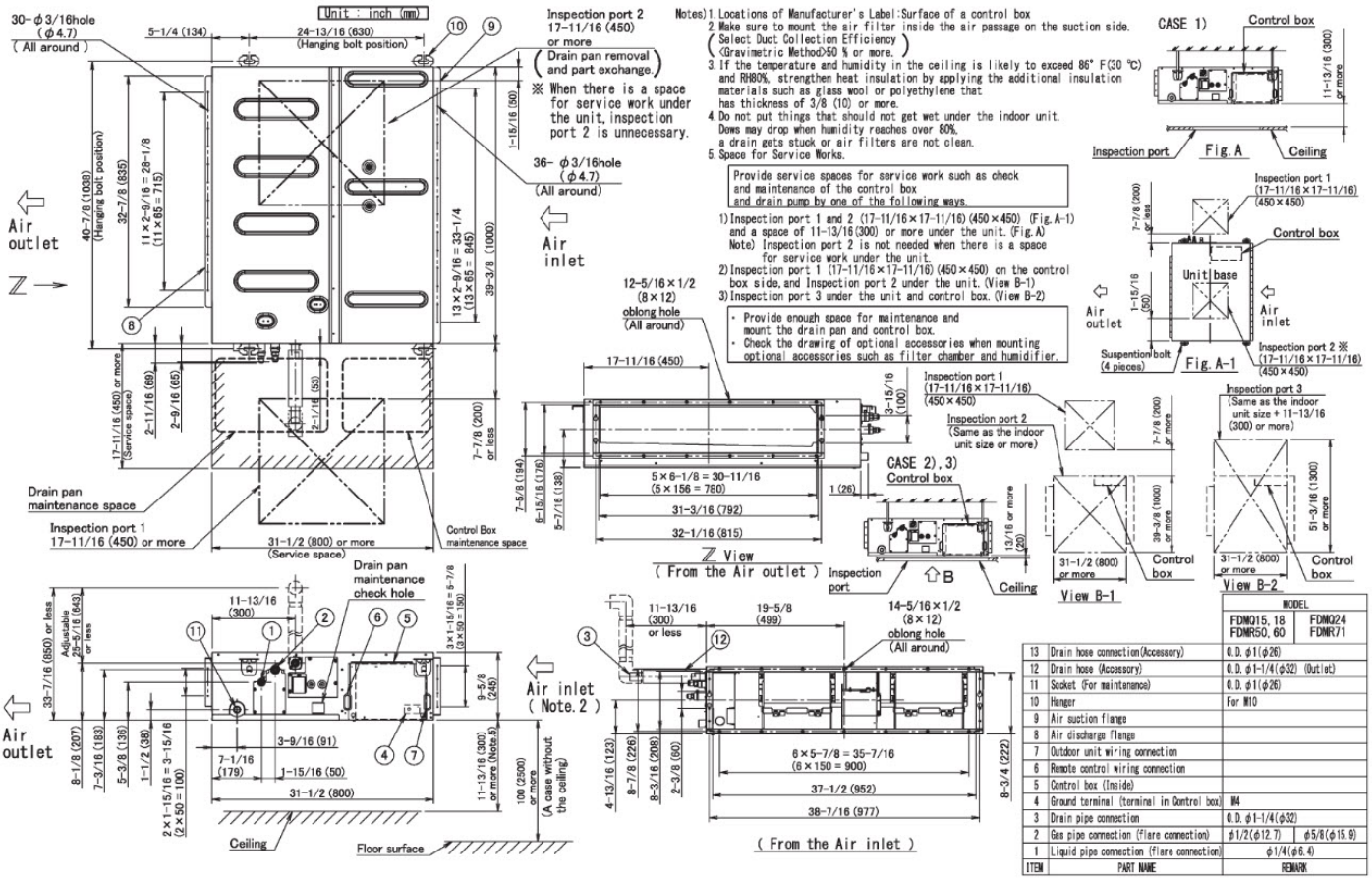
FDMQ24WVJU9RXL24WMVJU9

INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H/M/L) (CFM):	731/621/512
Power Supply Connections:	See Outdoor Unit for Electrical Specs	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):		Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):		Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	9-5/8 x 39-3/8 x 31-1/2	Condensate Connection (inch):	1-1/4
Ext. Static Pressure (Rated/Max) (inWg):	/ 0.6	Sound Pressure (H) (dBA):	40
Net Weight (lb):	82	Sound Power Level (dBA):	

DIMENSIONAL DRAWING - INDOOR UNIT

FDMQ15/18/24WVJU9



ITEM	PART NAME	REMARK
13	Drain hose connection(Accessory)	O.D. φ1(φ26)
12	Drain hose (Accessory)	O.D. φ1-1/4(φ32) (Outlet)
11	Socket (For maintenance)	O.D. φ1(φ26)
10	Hanger	For M10
9	Air suction flange	
8	Air discharge flange	
7	Outdoor unit wiring connection	
6	Remote control wiring connection	
5	Control box (Inside)	
4	Ground terminal (terminal in Control box)	M4
3	Drain pipe connection	O.D. φ1-1/4(φ32)
2	Gas pipe connection (flare connection)	φ1/2(φ12.7) / φ5/8(φ15.9)
1	Liquid pipe connection (flare connection)	φ1/4(φ6.4)

MODEL	FDMQ15, 18 FDMR50, 60	FDMQ24 FDMR71

Submittal Data Sheet

Daikin AURORA 2.0-Ton FDMQ Ducted Concealed Unit

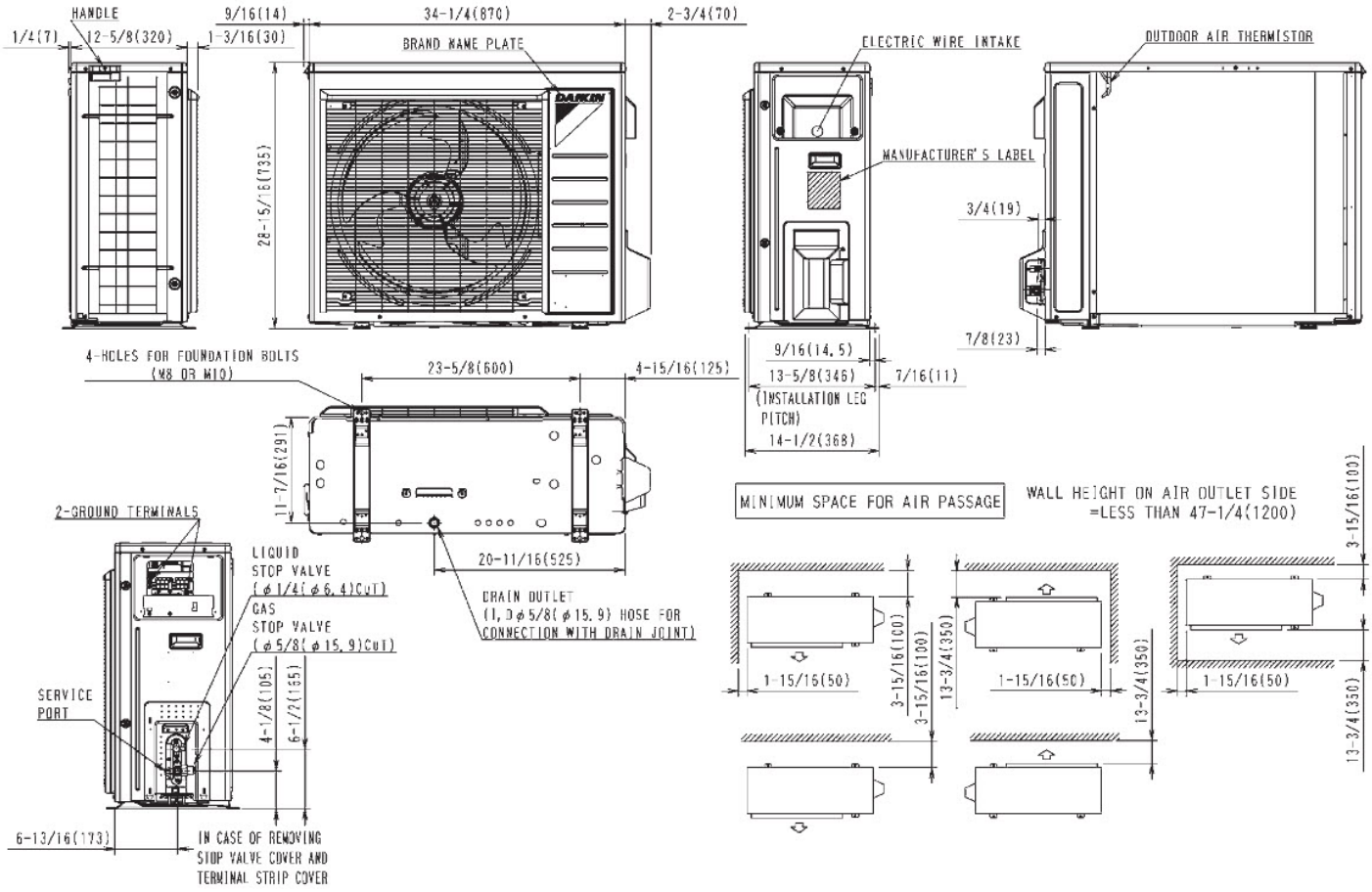
FDMQ24WVJU9RXL24WMVJU9

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 V 254/277 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:	L1, L2, L3, Ground	Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	18.8	Airflow Rate (H) (CFM):	2419
Max Overcurrent Protection (MOP) (A):	20	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	1/4
Rated Load Amps RLA(A):		Sound Pressure (H) (dBA):	55
Dimensions (HxWxD) (in):	28-15/16 x 34-1/4 x 12-5/8	Sound Power Level (dBA):	
Net Weight (lb):	132		

DIMENSIONAL DRAWING - OUTDOOR UNIT

RXL24WMVJU9



INDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
AZAI6WSCDKA	DKN Cloud Wi-Fi Adaptor (P1P2)	No
AZAI6WSPDKC	DKN Plus Interface	No
BRC082A43	IR controller for FDMQ	No
BRC1E73	Navigation Remote Controller III(73)	No
BRC1H71W	Madoka Remote Controller	No
DACA-CP1-1	Mini Aqua Condensate Pump	No
DACA-CP2-1	Maxi Orange Condensate Pump	No
DACA-CP3-1	Si-30 Condensate Pump	No
DFBS39A13	MERV 13 Filter Kit	No
DTST-ONE-ADA-A	Daikin One+ Smart Thermostat for VRV, SkyAir, Single- and Multi-Zone System	No
DZKS030E4-3	Zoning Box 4x8" for FXSQ and FDMQ	No
DZKS030E5-3	Zoning Box 5x6" for FXSQ and FDMQ	No
KRCS01-4B	Remote Sensor Kit, (FBQ, FCQ, FTQ, FXFQ, FXMQ, FXTQ)	No
KRCSH2018-01	Button Sensor Kit	No
KRP1C74	Wiring Adapter PCB	No
KRP4A71	Group Control Adaptor PCB	No
KRP4A98	Mounting plate for accessory PCB	No

OUTDOOR ACCESSORIES

PART NUMBER	DESCRIPTION	INCLUDED
DACA-WB-3	Powder-Coated Wall-Mounted Bracket	No
FTDBHML	Daikin Bml Drainpan Htr Large	No
KEH063A4E	Daikin BML DrainPan Heater Large	No
KEH063A4EA	Bml LRg Drain Pan Heater Rev A	No
KKG063A42	Back protection wire net	No
KPS063A41	Snow hood (intake side plate) (15, 18 & 24)	No
KPS063A44	Snow hood (intake rear plate) (15,18 & 24)	No
KPS063A47	Snow hood (outlet) (15, 18 & 24)	No
KPW063B4	Air direction adjustment grille	No

Split Accessories

Accessory	Accessory model number	Outdoor unit tag	Indoor unit tag	Quantity
Wind Baffle	KPW063B4E	CU-10/11/12/13/14	-	5
Snow Hood	KPS063A41	CU-15/16	-	2
Snow Hood	KPS063A44	CU-15/16	-	2
Snow Hood	KPS063A47	CU-15/16	-	2
Thermostat	BRC944B2-A08	-	AC-31/34	2
BAS Adapter Card	KRP928BB2S	-	AC-30 to AC-34	5
Thermostat	BRC51D61	-	AC-30/32/33	3
Thermostat	BRC1E73	-	AC-35/36	3
Filter Rack	FFRS30	-	AC-35/36	2
Drain Pan Heater	KEH063A4EA	CU-15/16	-	2
Condensate Pump	DACA-CP1-1	-	AC-30 to AC-34	5
Stand	MF-120		-	7

Submittal Data Sheet

BRC944B2-A08 – Wired Remote Controller Kit

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

MODEL COMPATIBILITY:

Compatible with Single-Zone and Multi-Zone indoor unit models: CDXS, CTXS, FDXS, FTK_N, FTK_A, FTK_B, FTX_A, FTX_B, FTX_N, FTX_U, FTXG*, FTXR, FTXS, FTXM, FVXS

*The Sarara drying function of the *QUATERNITY* units is not supported with the BRC944.

The following indoor units do not have the S21 connection and require an additional interface adaptor (ordered separately):

Indoor Unit Models	Required Interface Adaptor
FTX09NMVJU(A), FTX12NMVJU(A), FTX09WMVJU9, FTX12WMVJU9	KRP067A41E
FTX15NMVJU(A), FTX15WMVJU9	KRP980B2E
FTXM09VVJU, FTXM12VVJU, FTXM18VVJU, FTXM24VVJU, FTXM09WVJU9, FTXM12WVJU9, FTXM18WVJU9, FTXM24WVJU9	KER087A41

SPECIFICATIONS:

Model	BRC944B2-A08
Description	Wired Remote Controller Kit[1]
Maximum Indoor Units	1
Dimensions	4.75 in x 4.75 in x 0.69 in (120mm x 120mm x 17.5 mm)
Communication Protocol	S21
Comfort Setpoint Range	64°F – 90°F Set Point Range
Operation	Start / Stop
	Mode (Auto/Heat/Cool/Dry)
	Set Temperature Setpoint
	Fan Speed
	Airflow Direction
Scheduling	One-time Timer
	Daily Timer

PRODUCT IMAGE:

Remote Controller

Adaptor Board & S21 cable

BRC944B2

BRCW901A08

[1]The Wired Remote Controller Kit includes the BRC944B2 (the remote controller, adaptor board and S21 cable) and the BRCW901A08 (wired remote controller cable).

DAIKIN COMFORT TECHNOLOGIES NORTH AMERICA, INC.

19001 Kermier Road | Waller, TX, 77484

www.daikinac.com www.daikincity.com

Rev.0923

Submittal Data Sheet

BRC944B2-A08 – Wired Remote Controller Kit

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

FEATURES:

- Selectable auto / cool / heat / dry operation modes with adjustable setpoint and fan speed
- Set temperature setpoint in °F or °C units with 1-degree increments.
- Temperature is controlled through indoor unit temperature sensor.
- Built in one time or daily timer functionality with up to 2 timer actions per day.
- Approximately two-hour battery backup
- Can be used together with the factory supplied standard wireless remote controller.
- An additional or replacement wired remote controller cable can be ordered:
  - BRCW901A03: Non-plenum rated, 10ft.
  - BRCW901A08: Non-plenum rated, 26ft.
  - DACA-BRCW901P10: Plenum rated, 10ft.
  - DACA-BRCW901P25: Plenum rated, 25ft.
- For FTX_B, FTK_B, FTXB_B models the unit is running based on a 1°C temperature control. The setpoint command will be rounded to °C to send to the indoor unit. For some setpoints, the indoor unit temperature command may not change as shown in the table below.

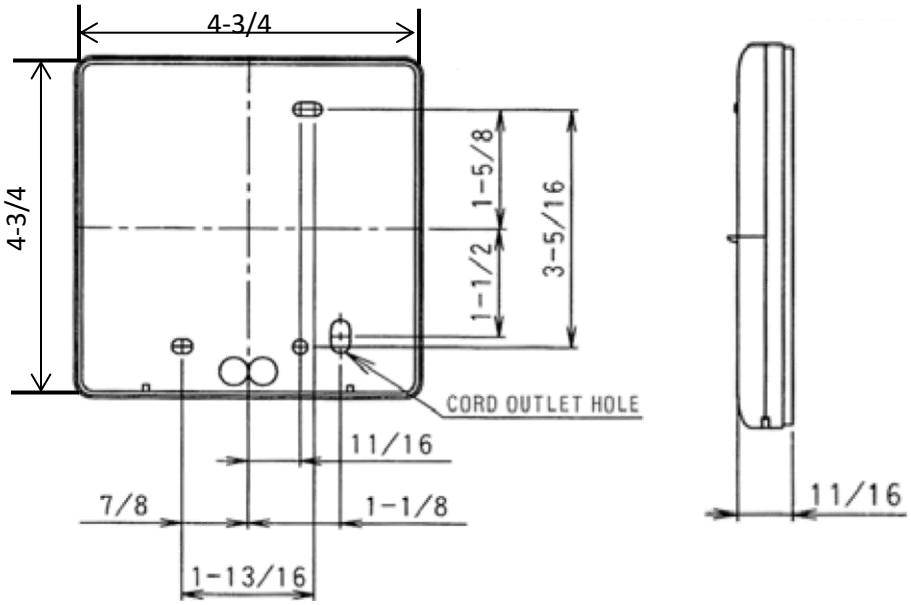
User Setpoint on Controller (°F)	Actual Indoor Unit Setpoint (°F)
68	68
69	68
70	70
71	70
72	72
73	73
74	73
75	75
76	75
77	77
78	77
79	79
80	79
81	81
82	82

Submittal Data Sheet

BRC944B2-A08 – Wired Remote Controller Kit

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

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Submittal
- Installation Manual
- Operation Manual

1.6 Interface Adaptor for DIII-NET Use (RA) <KRP928B2S>

1.6.1 Functions

Type	BRC1C62	KRP928B2S
Group/Zone / Item	One Group	Unified control for all Zone
ON/OFF	Possible	Possible
Temp. setting	Possible	Possible
Airflow rate setting	Possible	Impossible
Airflow direction setting	Possible	Impossible
Timer setting twice a day	Possible	Impossible
Mode setting	Possible	Possible
Filter sign reset	Possible	Impossible
Inspection/Test operation	Possible	Operation display only by lamps

<Overview, Features and Compatible Models>

This kit is the interface required when connecting the centralized control equipment and a Daikin Room Air Conditioner. Use of the centralized control equipment makes it possible to perform the following monitoring and operations. It is compatible with room air conditioners which have an HA connector S21.

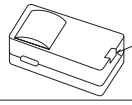
1. Run / stop for the centralized control equipment and wired remote controller, operating mode selection, and temperature can be set.
2. The operating status, any errors, and the content of those errors can be monitored from the centralized control equipment and wired remote controller.
3. Run / stop for the centralized control equipment and wireless remote controller, operating mode selection, and the temperature setting can be limited by the centralized control equipment.
4. Zone control can be performed from the centralized control equipment.
5. The unit can remember the operating status of the air conditioner before a power outage and then start operating in the same status when the power comes back on.
6. Card keys, operating control panels, and other constant / instantaneous connection-compatible equipment can be connected.
7. The Operating / error signals can be read.
8. HA JEM-A-compatible equipment can be connected.
9. The indoor temperature can be monitored from the intelligent Touch Manager.

Precaution

1. When reading the Operating / error signals, a separate external power supply (DC 12V) is needed.
2. A separate timer power supply (DC 16V) is needed when using the schedule timer independently, and not in conjunction with other centralized control equipment.
3. The range of temperatures that can be set from the centralized control equipment is 18°C to 32°C in cooling and 14°C to 28°C in heating.
4. Fan operation cannot be selected from the centralized control equipment or wired remote controller.
5. Group control (i.e., control of multiple indoor units with a single remote controller) is not available.
6. Monitoring is not available of the thermo. status, compressor operating status, indoor fan operating status, electric heater, or humidifier operating status.
7. Forced thermo. off, filter sign display and reset, fan direction and speed settings, air conditioning fee management, energy savings instructions, low-noise instructions, and demand instructions cannot be made.

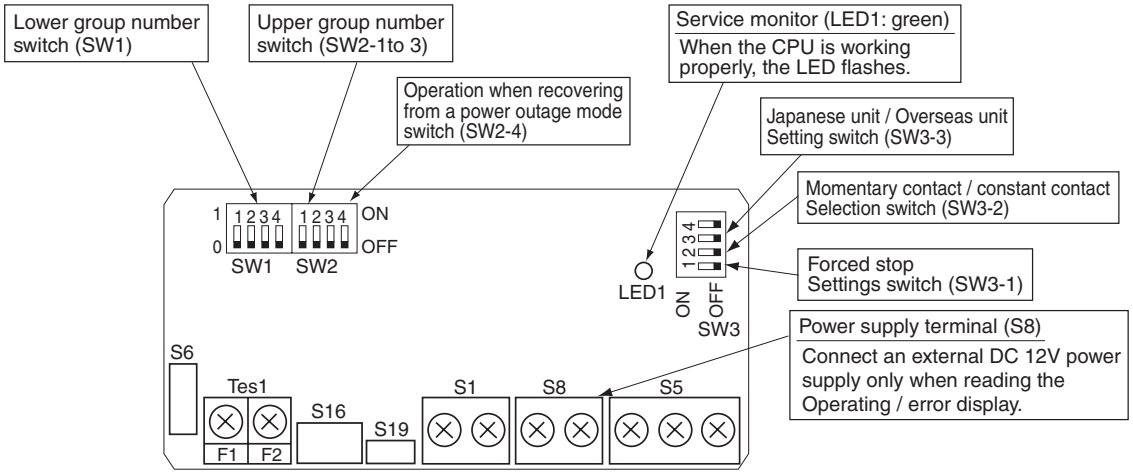
<Component Parts and Separately-Sold Parts which are Required>

This kit includes the following components. Check to ensure that none of these are missing.

Parts	Q'ty	Parts	Q'ty
Kit assy PCB is in the housing.  	1	Connection harness (about 1.6m)	1set
		Mounting screws	3pcs.
		Binding band	1pc.
		Installation manual	1set

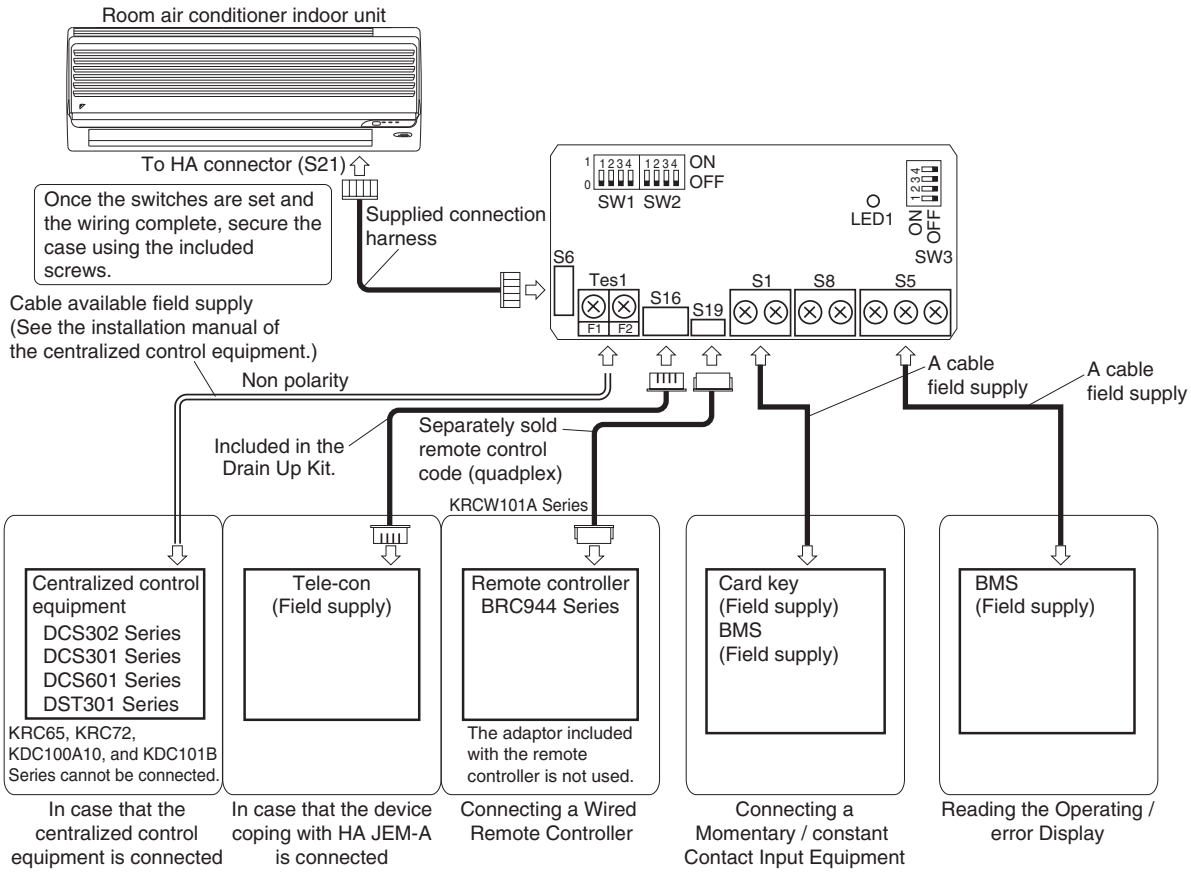
11

1.6.2 Part Names and Functions



1.6.3 Electric Wiring Work and Initial Settings

<Wiring procedure>



<Switch Settings>

NOTE	Turn the power on after all the switches have been set. Settings made while the power is on are invalid.

Open the Kit's case and set the switches on the circuit board.

(1) For Overseas / Japanese unit setting (SW3-3)

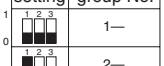
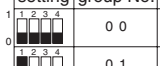
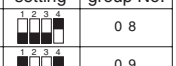
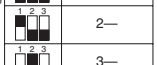
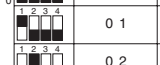
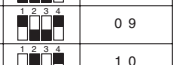
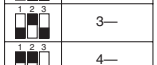
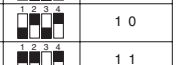
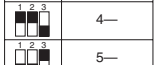
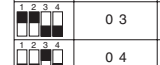
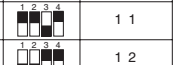
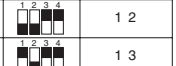
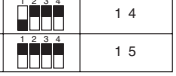
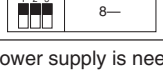
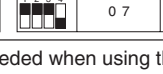
Room air conditioners, different methods are used for setting the temperature in automatic mode, so this switch needs to be set.

Destination	SW3-3 setting	What Happens
Japan	OFF (Factory setting)	● "Automatic" operation is not available from the centralized control equipment. When using "automatic" operation using the wireless remote controller, the centralized control equipment displays automatic cooling (heating) and 25°C. Even if the temperature is changed, it will return to 25°C after a while.
Other countries	ON	● "Automatic" operation is available from the centralized control equipment.

(2) Group number settings (SW1 and SW2-1 to SW2-3)

Set these when using the centralized control equipment. (Set to the ■ side.) Do not set more than one unit to the same number.

However, these settings do not need to be made when using the schedule timer independently.
(The settings are needed when used in conjunction with another DCS Series centralized control equipment.)
In this case, the schedule timer performs an auto address after the power is turned on, so new group numbers are automatically set. Settings made using the switches will be overwritten.

SW2 setting	Upper group No.	SW1 setting	Lower group No.	SW1 setting	Lower group No.
	1—		0 0		0 8
	2—		0 1		0 9
	3—		0 2		1 0
	4—		0 3		1 1
	5—		0 4		1 2
	6—		0 5		1 3
	7—		0 6		1 4
	8—		0 7		1 5

NOTE also that a separate timer power supply is needed when using the schedule timer independently.
Power supply specs: DC 16V, +10%, -15%, 200mA.
Recommended power supply: Omron S82J-01015A. (Should be used with the output voltage adjusted to the center, DC 16V.)

(3) Settings when recovering from a power outage (SW2-4)

This selects whether to restart operation when the power comes back on after a power outage occurred during operation. This setting is given priority in cases where the indoor unit has an auto start ON / OFF jumper. Note also that regardless of whether switch SW2-4 is on or off, the operating mode, set temperature, fan direction and speed settings, and remote control prohibition status are stored.

SW2-4 setting	What Happens
OFF (Factory setting)	Stops after recovering from a power outage
ON	Stops if the unit was stopped before the power outage and runs if it was running.

(4) Contact input function settings (SW3-1 to SW3-2)

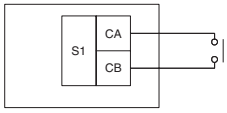
When using contact input (S1), choose one of the following functions.

S1 operating mode	SW3-1 setting	SW3-2 setting	What Happens	Control mode
Instantaneous contact input (factory setting)	OFF	OFF	The operating status of the air conditioner is reversed by an instantaneous input of 100 msec or more.	Last command priority
Constant contact input		ON	Contact - Open to close: air condition runs. Close to open: air conditioner is stopped (NOTE 1.).	ON / OFF control is rejected (operate / stop / timer prohibition) (NOTE 2.).
Forced stop or remote controller permission input	ON	Invalid	Contact - Open to close: air condition stops (forced stop). Close to open: no change in operating status.	During a forced stop, all remote controller actions are prohibited.

Note:

1. Since centralized control equipment and HA JEM-A-compatible equipment both use last command priority, the contact status and operating status of the air conditioner might not match sometimes.
   Example: If the unit is run from the centralized control equipment while the air conditioner is stopped with an open contact, the contact will be open and the unit will be running.
2. Operating mode and fan direction and speed settings can be changed.

KRP928B2S



Run / stop Input
Contact specs
No-voltage minute electric current contact
(Minimum applicable load DC 12V, 1mA or lower)

Total wire length max: 100m

11

<Control Codes>

When using the centralized control equipment, the operating codes can be used to limit operation from wireless remote controllers.

○ : permitted; ×: prohibited

S1 operating mode	Control mode	Control code	Operations from the remote controller								Operations from the centralized control equipment, contact input and HA JEM-A input
			"Run" control from the centralized control equipment				"Stop" control from the centralized control equipment				
			Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	Run / timer	Stop	Operating mode temperaturet	Fan direction and fan speed	
Instantaneous contact mode	ON / OFF control is rejected	0,1,3	×	×	○	○	×	×	○	○	○
		10,11	×	×	×		×	×	×		
	Only OFF control is accepted	2 12–19	×	○	×		×	○	×		
	Central priority	4	○	○	○		×	○	×		
		5	○	○	○		×	×	○		
	Last command priority	6,7	○	○	○		○	○	○		
	Timer operation is accepted by remote controller	8	○ (Only during timer operation)	○	○		×	○	×		
		9	○ (Only during timer operation)	○	○		×	×	○		
Constant contact mode			×	×	○		×	×	○		
Forced stop			×	×	×	×	×	×	×	×	

The remote controller permission / prohibition settings using the intelligent Touch Manager are as follows.

○ : permitted; ×: prohibited

S1 pin operating mode	intelligent Touch Manager settings			Operations from the remote controller				Operations from the centralized control equipment, contact input and HA JEM-A input
	Start / stop	Change operating mode	Change set temperature	Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	
Instantaneous contact mode • Constant contact mode	ON / OFF control is rejected	permitted	permitted	×	×	○	○	○
			prohibited	×	×	○		
		prohibited	permitted	×	×	×		
			prohibited	×	×	×		
	Only OFF control is accepted	permitted	permitted	×	×	○		
			prohibited	×	○	×		
		prohibited	permitted	×	○	×		
			prohibited	×	○	×		
Instantaneous contact mode	Last command priority	permitted	permitted	○	○	○		
			prohibited	○	○	○		
		prohibited	permitted	×	○	×		
			prohibited	×	○	×		
Constant contact mode		permitted	permitted	×	×	○		
			prohibited	×	×	○		
		prohibited	permitted	×	×	×		
			prohibited	×	×	×		
Forced stop	Does not affect settings			×	×	×	×	

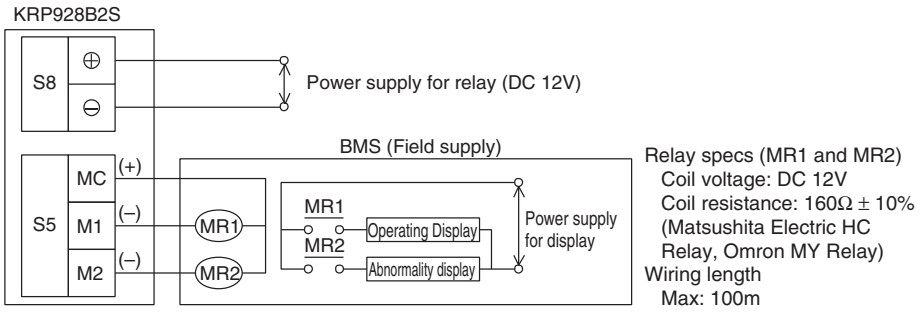
<Read Operating / Error Display Signal>

The Operating / error signals can be read from the contact output (S5).

Output specs

M1: Turn MR 1 ON when the air conditioner is running.

M2: Turn MR 2 when a communication error has occurred between the KRP928B2S and the air conditioner, or MR 1 is ON and the unit has stopped after an error.
MR 2 is not turned ON during a warning.



C: 3P157704-2A

Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

MODEL COMPATIBILITY:

Compatible with VRV and VRV Life™ indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ
Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ
Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

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) (without condensation)
Dimensions (WxHxD)	4.72x4.72x0.75 inch (120x120x19 mm)
Weight (Mass)	0.42 lbs. (0.19 kg)

PRODUCT IMAGE:

Notes:
(1) 1 of 3 display options – Detailed display shown

FEATURES:

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

Submittal Data Sheet

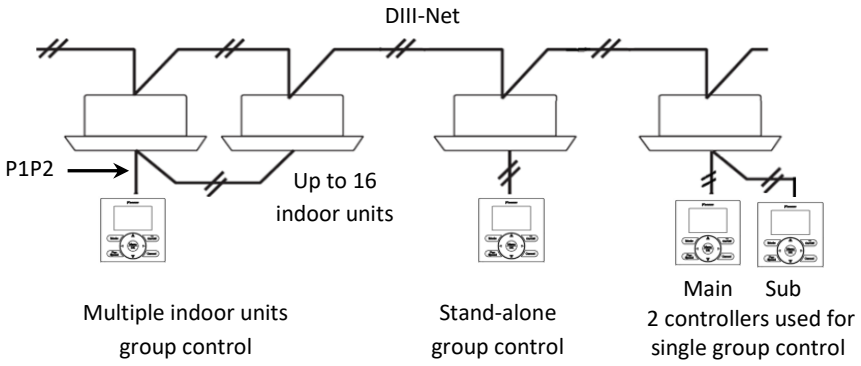
BRC1E73 – Navigation Remote Controller

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

9. Independent cooling and heating setback setpoints (unoccupied period)
10. Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
11. Airflow – Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)*
12. Built-in 7 days, weekdays+weekend, weekdays+Sat+Sun, and 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, FXUQ_PVJU, and FXZQ_TA indoor units
**Available for FXFQ_TVJU indoor units

SYSTEM DIAGRAM:



FACE DECAL OPTIONS:

Face decal options are used to hide unnecessary buttons:
1. The face decal is designed to adhere to the faceplate
2. Hidden buttons can be accessed by service personnel without removing the face decal due to its flexibility

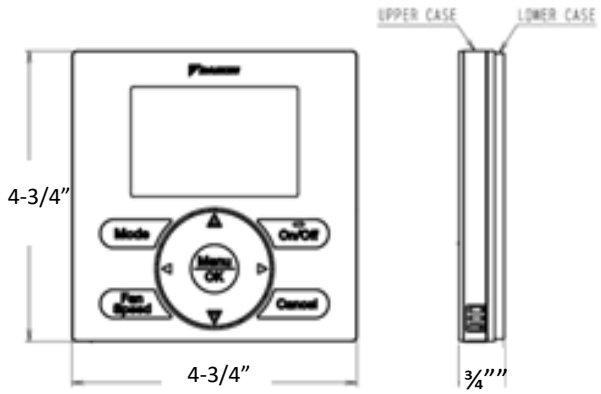
Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

Used with	Single Setpoint mode			Dual Setpoint mode		
Model	BRC1E72RM	BRC1E72RF	BRC1E72RMF	BRC1E72RM2	BRC1E72RF2	BRC1E72RMF2
						
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						

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual

Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

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

- Submittal
- Guide Specifications
- Quick User Guide
- Field Setting Table

Submittal Data Sheet

BRC51D61 – Wired Remote Controller Kit

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

MODEL COMPATIBILITY:

Compatible with Single-Zone system indoor unit models:

Indoor Unit Models	Interface Adaptor
FTKB09AXVJU, FTKB12AXVJU, FTKB18AXVJU, FTKB24AXVJU, FTXB09AXVJU, FTXB12AXVJU, FTXB18AXVJU, FTXB24AXVJU, FTXB09BXVJU, FTXB12BXVJU, FTXB18BXVJU, FTXB24BXVJU	Not needed
CTX07AXVJU, CTX09AXVJU, CTX12AXVJU, FTK09AXVJU, FTK12AXVJU, FTK18AXVJU, FTK24AXVJU, FTX09AXVJU, FTX12AXVJU, FTX18AXVJU, FTX24AXVJU, FTK09BXVJU, FTK12BXVJU, FTK18BXVJU, FTK24BXVJU, FTX09BXVJU, FTX12BXVJU, FTX18BXVJU, FTX24BXVJU	Not needed

SPECIFICATIONS:

Model	BRC51D61
Description	Wired Remote Controller Kit
Maximum Indoor Units	1
Total Wiring Length	32.8ft (10m)
Dimensions	4.72 in x 4.72 in x 0.78 in (120mm x 120mm x 19.5 mm)
Connection Point	CN_WIRED (FTK/XB_AXVJU) CN_NS (FTK/X_AXVJU, FTK/X_BXVJU, FTXB_BXVJU)
Comfort Setpoint Range	60°F – 86°F
Operation	Start / Stop
	Mode (Auto/Heat/Cool/Dry/Fan)
	Set Temperature Setpoint
	Fan Speed
	Airflow Direction
	Feature Selection (SLEEP, ECO+, POWERFUL, QUIET)
	Turn ON/OFF indoor unit LED display
Scheduling	Weekly ON/OFF Timer

PRODUCT IMAGE:

DAIKIN COMFORT TECHNOLOGIES NORTH AMERICA, INC.
19001 Kermier Road, Waller, TX, 77484
www.daikinac.com www.daikincity.com

Rev.0923

Submittal Data Sheet

BRC51D61 – Wired Remote Controller Kit

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

FEATURES:

- The Wired Remote Controller Kit includes a wired remote controller, a 32 ft. connecting cable and mounting screws.
- Selectable auto / cool / heat / dry / fan operation modes with adjustable setpoint and fan speed
- Set temperature setpoint in °F or °C units with 1 degree increments
- Temperature is controlled through indoor unit temperature sensor
- Built in weekly ON/OFF timer functionality with up to 2 ON/OFF cycles per day
- Can be used together with the factory supplied standard wireless remote controller – the system will follow the last command provided by either the handheld remote or BRC51D61.
- Room temperature display available via jumper – readout is return air temp at the indoor unit.
- System maintains a 3° to 5°F temperature correction of the set point, depending on the mode of operation.
- The unit runs based on a 1°C temperature control. The setpoint command will be rounded to °C and sent to the indoor unit. For some setpoints, the indoor unit temperature command may not change as shown in the table below.

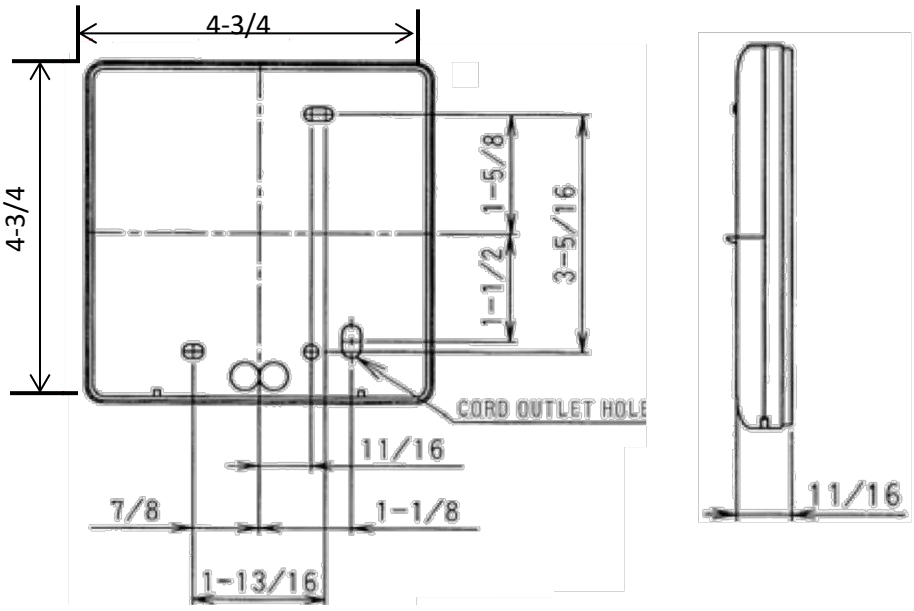
User Setpoint on Controller (°F)	Actual Indoor Unit Setpoint (°F)
68	68
69	68
70	70
71	70
72	72
73	73
74	73
75	75
76	75
77	77
78	77
79	79
80	79
81	81
82	82

Submittal Data Sheet

BRC51D61 – Wired Remote Controller Kit

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

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Submittal
- Operation Manual (including installation instructions)

Submittal Data Sheet
Air Adjustment Grille (Wind Baffle)
KPW063B4

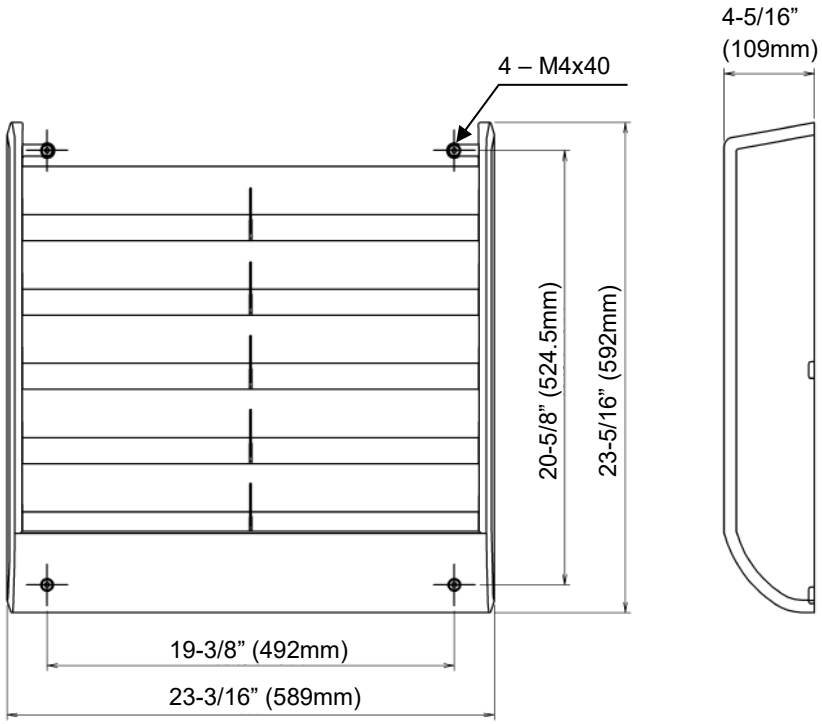
Image for REFERENCE ONLY

DESCRIPTION

Air Adjustment Grille (Wind Baffle) mounts over the standard air grille and allows adjustment in air blow-off direction.

SPECIFICATIONS		
Model No:	KPW063B4	
Unit Compatibility:	RK18NMVJU, RK24NMVJU, RX24NMVJU, RX18NMVJU, RK30NMVJU(A), RK36NMVJU(A), RX30NMVJU(A), RX36NMVJU(A), RX15RMVJU(A), RX18RMVJU(9)(A), RX24RMVJU(A), RXL15QMVJU(A), RXL18UMVJU(A), RXL24UMVJU(A), 2MXS18NMVJU(A), 3MXS24RMVJU(A), 4MXS36RMVJU(A), 2MXL18QMVJU(A), 3MXL24RMVJU(A)	Qty (1)
Unit Names:	Air Adjustment Grille (Wind Baffle)	
Dimensions (WxHxD):	23-3/16” x 23-5/16” x 4-5/16” (589mm x 592mm x 109mm)	
Shipping Unit Weight:	5.75 lb. (2.6 kg)	
Material:	Flame Retardant Grade UL94V-HB	

DIMENSIONAL DRAWING



Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056
www.daikinac.com www.daikincomfort.com

Submittal Data Sheet

DACA-CP1-1

Mini Univolt 100-250 Pump Kit

DACA-CP1-1

Project Information:
Job Name:
Location:
Engineer:
Submitted to:
For: ❑ Reference ❑ Approval ❑ Construction
Submitted by:
Reference:

Submittal Information:
Approval:
Date:
Construction:
Unit #:
Drawing #:

(Sec. I) Product Specifications:

Pump Length - 6.5”
Pump Width - 1.125”
Pump Height - 1.125”
Capacity - 3.2 GPH @ 0’ Head
Max BTUs - 30000
Max Head in Feet - 33
Max Temperature - 104F
Max Suction Lift - 3’.3”
Sound Level - 25dB(A)
Dry Contact Rating - 3A NC
Voltage - 100-250
Amperes - .15 MAX
Watts - 16
Remote Reservoir - Y
Plenum Rated - N
Cable Length - 6’

Pump Selector & Wiring Diagrams Available at
http://www.rectorseal.com//index.php/daikin/

(Sec. II) Ordering Information:

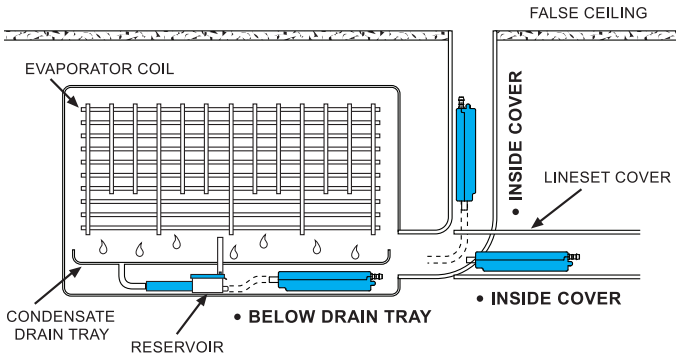
Product Code - DACA-CP1-1
Model - DACA-CP1-1
Carton Qty - 1
Carton Weight - 1.5

(Sec. III) Carton Contents:

Pump Assembly
Inline Reservoir
8”x5/8” i.d. Inlet Tube
5’x1/4” i.d. Vinyl Discharge Tube
Installation Manual
6”x1/4” i.d. Vinyl Breather Tube
Drain Hose Adaptor
Inline Fuse
Cable Ties (6)
Self Adhesive Velcro Strips (2)
Anti-siphon (1)

(Fig. I) Product Image:

(Fig. II) Typical Pump Locations:



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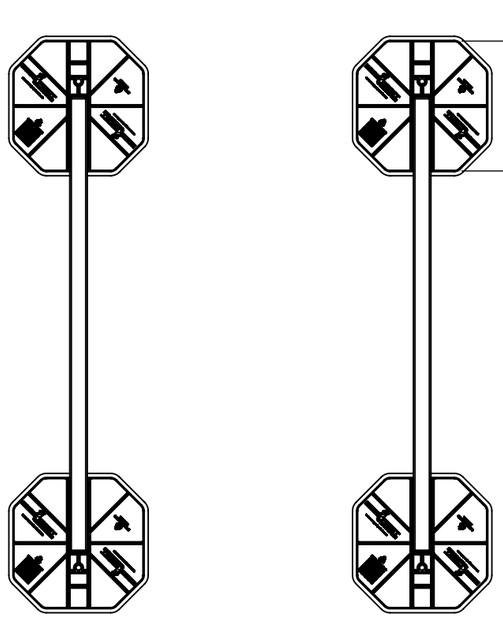
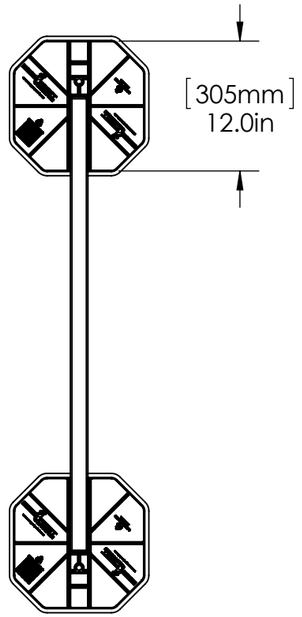
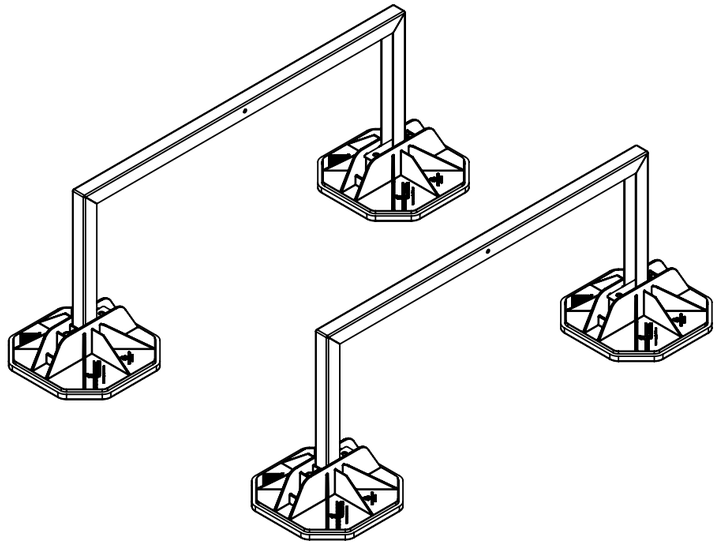
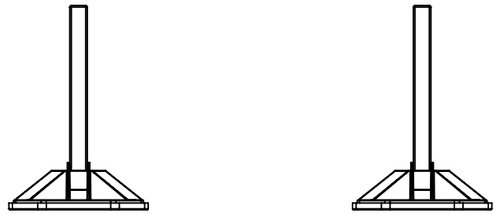
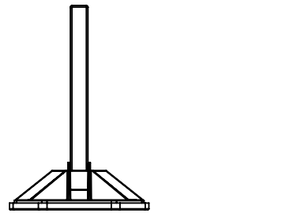
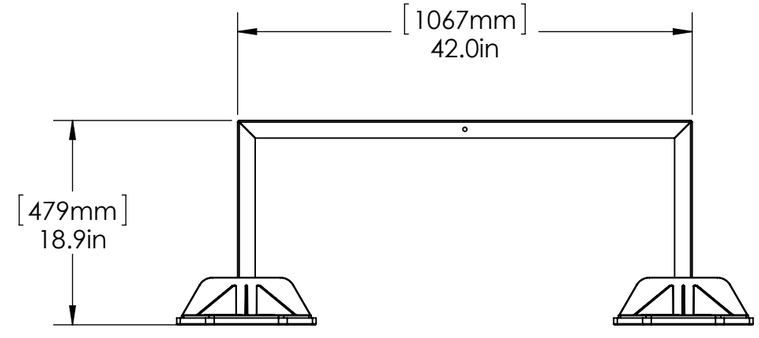


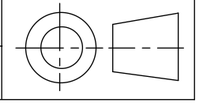








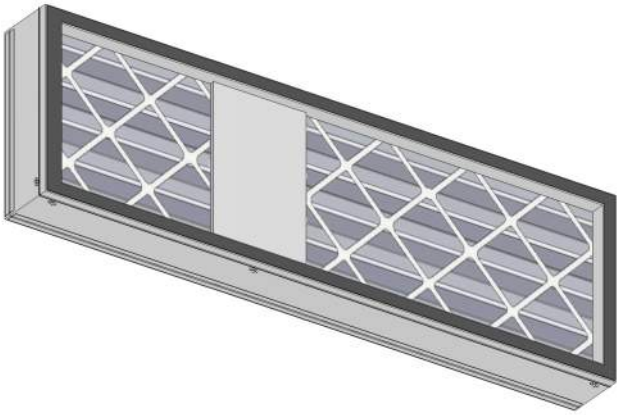


ECOFOOT THIS FOOT IS GREEN	DESCRIPTION: MF-120	DATE:	APPROVED:	REVISION: A	
				ECOFOOT.CA	

Submittal Data Sheet

Details

Air Filter Cabinet Model No.	FFRS30
Air Filter Dimensions (HxWxD):	10"x12" + 10"x24"
Cabinet Dimensions (HxWxD):	9-5/8" x 39-3/8" x 4"



Indoor unit Compatibility

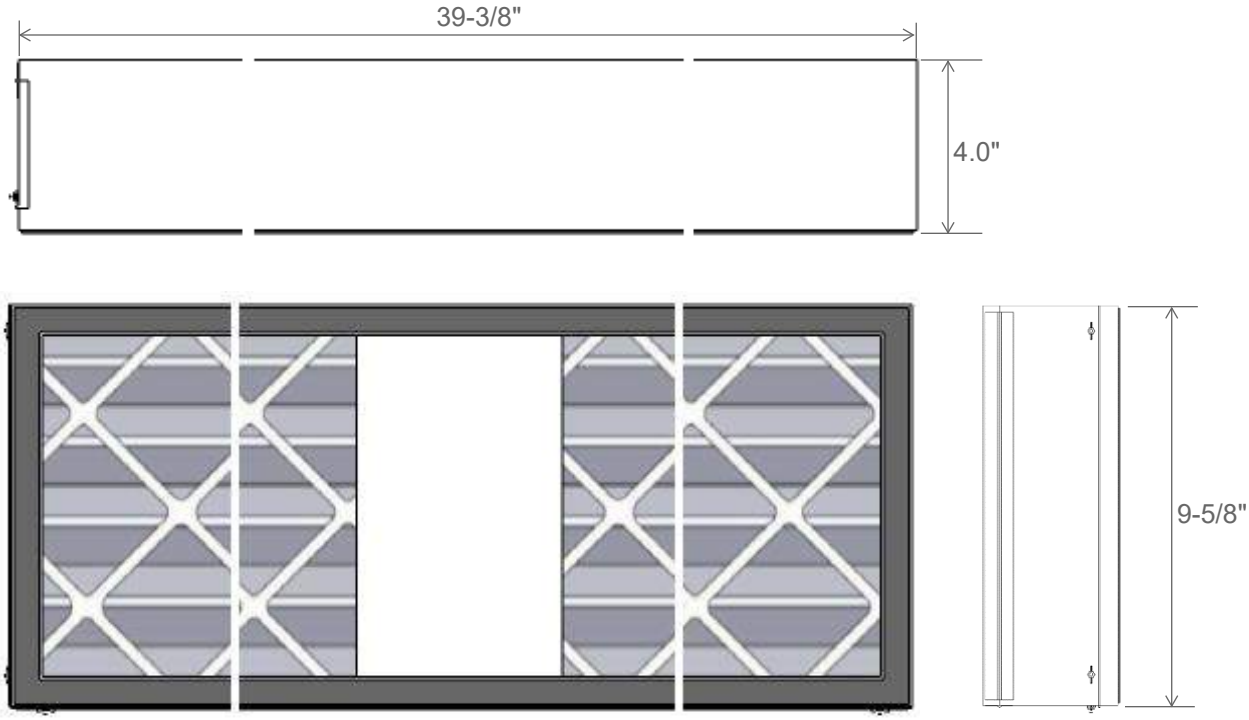
Model No.

FXSQ18, FXSQ24, FXSQ30

FDMQ15, FDMQ18, FDMQ24

Dimensional Drawing – FFRS30 Air Filter and Cabinet Kit

Hinged access doors (service side & bottom)



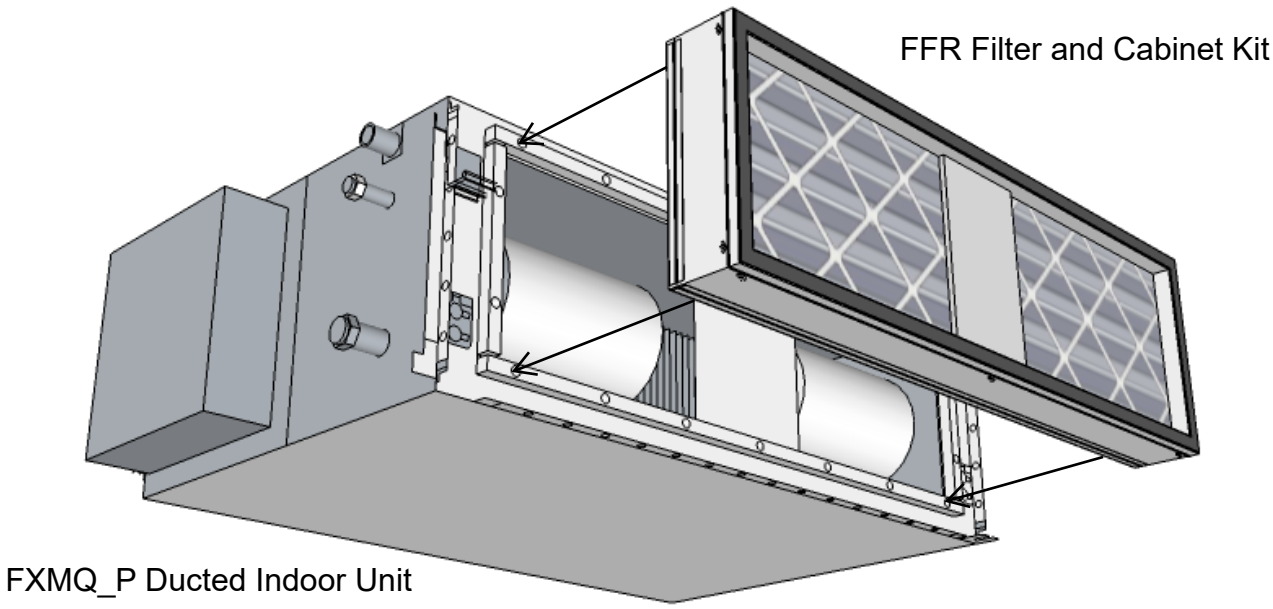
Direct Expansion Solutions

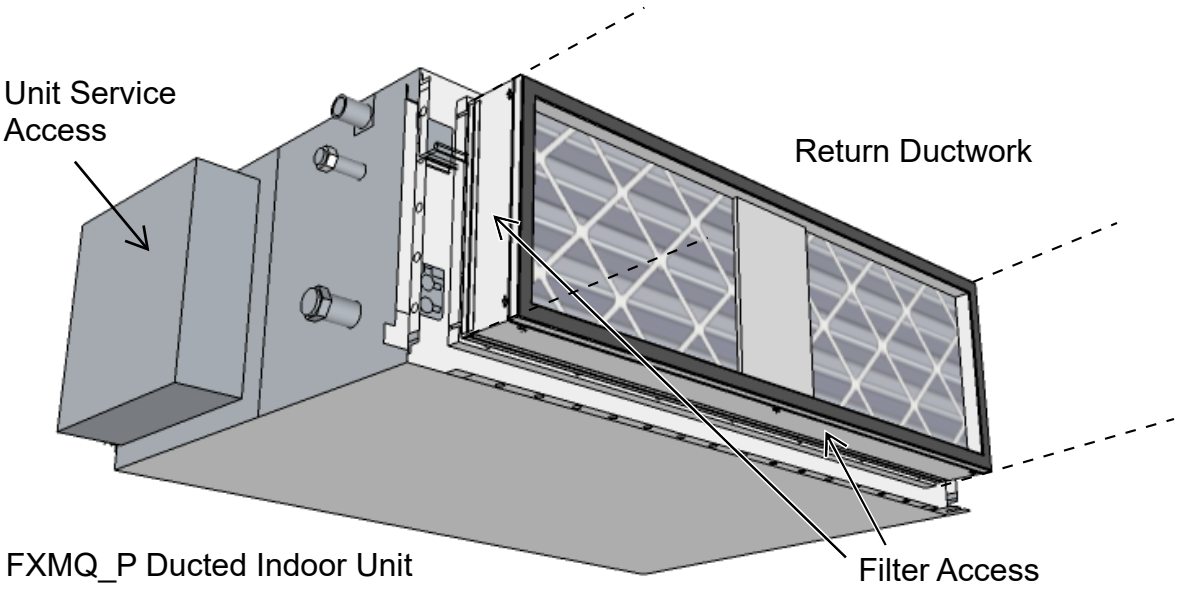
Submittal Data Sheet

FFR Filter and Cabinet Kit Installation Guide

Model No.

FFR09 - FFR96





- Attach filter cabinet to the return of the FXMQ_P ducted unit
- Orient filter cabinet so that filter access matches the electrical access panel of the unit
- Filters are accessible from the bottom and side

Interfaz INBACDAI001R000

Instrucciones de seguridad

⚠ ATENCIÓN

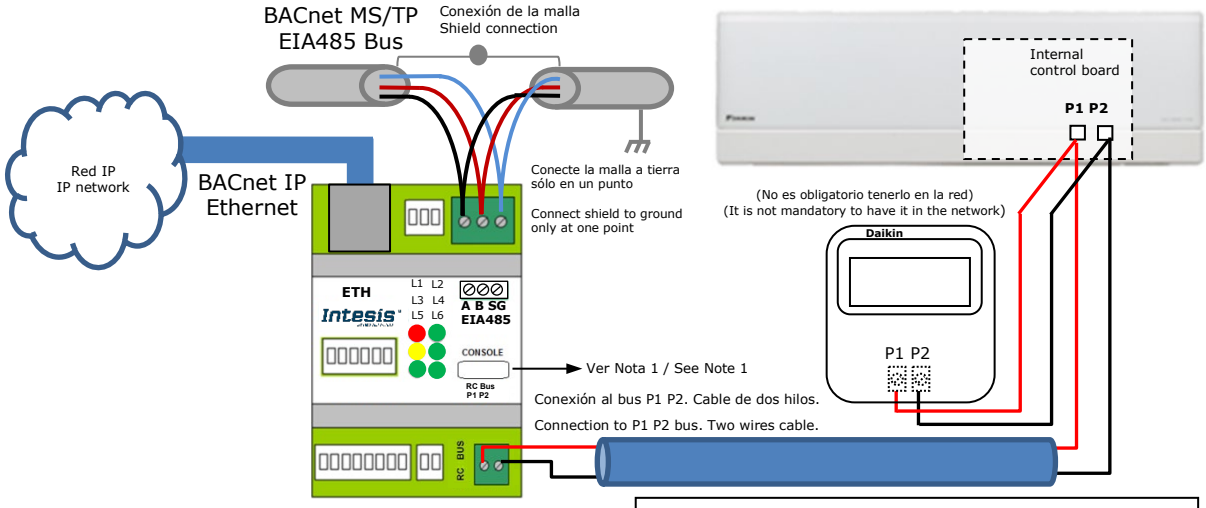
Siga atentamente estas instrucciones de seguridad e instalación. Un manejo inadecuado puede ocasionar daños graves para su salud y daños irreparables en el interfaz y/o en la unidad interna del aire acondicionado.

- Esta interfaz debe ser instalada por personal técnico acreditado (electricista, instalador, o personal técnico cualificado) y siguiendo las instrucciones de seguridad.
- Antes de manipular en el interior del aire acondicionado, asegúrese de que está completamente desconectado de la red eléctrica.
- En caso de instalación mural junto a la unidad interior del aire acondicionado, fije la interfaz de forma segura siguiendo las instrucciones del diagrama de abajo.
- La interfaz debe ser instalada en una ubicación con acceso restringido.

Instrucciones de instalación

- Desconecte el sistema Daikin de la red eléctrica.
- Fije el interfaz a la pared junto a la unidad interior del aire acondicionado siguiendo las instrucciones del diagrama de abajo (respete las instrucciones de seguridad anteriores).
- Conecte la interfaz al bus P1 P2 en cualquier punto del mismo. El bus P1 P2 es el bus que conecta la unidad interior de aire acondicionado y el mando por cable, es un par de hilos que se conectan los terminales P1 P2, este bus no tiene polaridad.
- Conecte el bus EIA485 al conector *EIA485* de la interfaz (para conexión MS/TP) o el cable RJ45 al conector ETH (para conexión IP).
- Tape la unidad interior del aire acondicionado y vuelva a conectarlo a la red eléctrica.
- Siga las instrucciones del manual de usuario para la configuración y puesta en servicio del interfaz.
- Siga las instrucciones de la página siguiente para configurar la interfaz a través de los Micro Interruptores.

IMPORTANTE: El cable para la conexión de INBACDAI001R000 al bus P1 P2 puede ser cualquiera de dos hilos, la distanccia máxima para el bus P1 P2 es de 500 metros, consulte el manual del aire acondicionado para más detalles.
IMPORTANTE: Si se conecta el mando del fabricante al mismo bus, la comunicación puede perderse. Si esto ocurre, utilice el puerto USB para alimentar el dispositivo.



***Default static IP address:** 192.168.100.246
***Dirección IP estática por defecto:** 192.168.100.246

NOTA 1: En caso de tener la necesidad de realizar pruebas y no tener acceso al sistema de AA, el Puerto USB se puede utilizar para alimentar el equipo, junto con un alimentador externo USB.

Interface INBACDAI001R000

Safety instructions

⚠ WARNING

Follow carefully this safety and installation instructions. Improper work may lead to serious harmful for your health and also may damage seriously the interface and/or the AC indoor unit.

- This interface must be installed by accredited technical personnel (electrician, installer, or technical personnel) and following all the safety instructions.
- Before manipulating the AC indoor unit be sure it is completely disconnected from Mains power.
- In case of wall mounting of the interface beside the AC indoor unit, fix the interface safely following the instructions of the diagram below.
- This interface must be installed in an access restricted location.

Installation instructions

- Disconnect the Daikin system from Mains Power.
- Fix the interface beside the AC indoor unit (wall mounting) following the instructions in the diagram below (respect the safety instructions given above).

- Connect the interface to P1 P2 bus in any point of the bus. The P1 P2 bus is the bus that connects the AC indoor unit and the wired remote controller, is a two-wire bus connecting terminals P1 P2 of both, this P1 P2 connection has no specific polarity.
- Connect the EIA485 bus to the connector *EIA485* of the interface (for MS/TP connection) or the RJ45 cable to the ETH connector (for IP connection).
- Close the AC indoor unit and reconnect it to Mains Power.
- Follow the instructions on the user manual for configuring and commissioning the interface.
- Follow the instructions of the next page to configure the interface through on-board DIP-switches.

IMPORTANT: The cable used for connection of INBACDAI001R000 to P1 P2 bus can be any two-wire cable, the maximum distance for bus P1 P2 is 500 meters, consult the manual of the AC indoor unit for more details.
IMPORTANT: If a wired remote controller of the AC manufacturer is connected in the same bus, communication may shut down. In case this happens, please use the USB connector to power the device to overcome this situation.

FCC: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) This device may not cause harmful interference
2) This device must accept any interference received, including interference that may cause undesired operation.

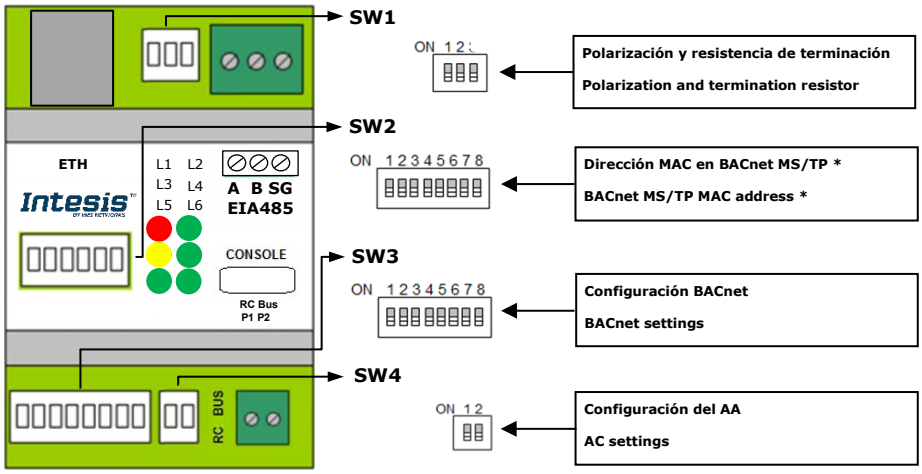
NOTE 1: USB port can be used, along with an external USB power converter, to power the device for testing purposes if the AC unit is not present.

Interfaz INBACDAI001R000

Interface INBACDAI001R000

Configuración por Micro Interruptores

Configuration through DIP - switches



SW1 – Polarización y terminación – Polarization and termination

Valor binario Binary value $B_0…b_2$	Valor decimal Decimal value	Interruptores Switches 1 2 3	Descripción Description
0xx	0	↓ x x	Bus EIA485 sin resistencia de terminación. La pasarela no está en un extremo del bus EIA485 (valor por defecto) EIA485 bus without termination resistor. The gateway is not at one end of the EIA485 bus (default value)
1xx	1	↑ x x	Resistencia de terminación de 120 Ω activa. La pasarela está en un extremo del bus EIA485. 120 Ω termination resistor active. The gateway is at one end of the EIA485 bus
x00	0	x ↓ ↓	Sin polarización en el bus No bus polarization
x11	3	x ↑ ↑	Con polarización en el bus Bus polarization active

SW2 - Dirección MAC en BACnet MS/TP – BACnet MS/TP MAC address

Valor binario Binary value $b_0…b_7$	Valor decimal Decimal value	Interruptores *Switches* 1 2 3 4 5 6 7 8	Dirección MAC MAC address
0000000x	0	↓ ↓ ↓ ↓ ↓ ↓ ↓ x	0
1000000x	1	↑ ↓ ↓ ↓ ↓ ↓ ↓ x	1
0100000x	2	↓ ↑ ↓ ↓ ↓ ↓ ↓ x	2
1100000x	3	↑ ↑ ↓ ↓ ↓ ↓ ↓ x	3
....	....	... .	.....
1011111x	125	↑ ↓ ↑ ↑ ↑ ↑ ↑ x	125
0111111x	126	↓ ↑ ↑ ↑ ↑ ↑ ↑ x	126
1111111x	127	↑ ↑ ↑ ↑ ↑ ↑ ↑ x	127

* NOTA: La dirección MAC seleccionada puede afectar el Device Instance. Consulte el manual para más información. – * NOTE: The MAC address selected my affect on the Device Instance. Check the manual for more information.

SW3 – Configuración BACnet – BACnet settings

Valor binario Binary value $b_0…b_7$	Valor decimal Decimal value	Interruptores Switches 1 2 3 4 5 6 7 8	Descripción Description
0xxxxxxx	0	↓ x x x x x x x	BACnet MS/TP active BACnet MS/TP activo (valor por defecto - default value)
1xxxxxxx	1	↑ x x x x x x x	BACnet IP active BACnet IP activo
x000xxxx	0	x ↓ ↓ ↓ x x x x	Autobaudrate (valor por defecto - default value)
x100xxxx	1	x ↑ ↓ ↓ x x x x	9600 bps
x010xxxx	2	x ↓ ↑ ↓ x x x x	19200 bps
x110xxxx	3	x ↑ ↑ ↓ x x x x	38400 bps
x001xxxx	4	x ↓ ↓ ↑ x x x x	57600 bps
x101xxxx	5	x ↑ ↓ ↑ x x x x	76800 bps
x011xxxx	6	x ↓ ↑ ↑ x x x x	115200 bps
x111xxxx	7	x ↑ ↑ ↑ x x x x	Reserved - Reservado
xxxx0xxx	0	x x x x ↓ x x x	Grados Celsius Celsius Degrees
xxxx1xxx	1	x x x x ↑ x x x	Grados Farenheit Farenheit Degrees

SW4 – Configuración del AA – AC settings

Valor binario Binary value $b_0…b_1$	Valor decimal Decimal value	Interruptores Switches 1 2	Descripción Description
0x	0	↓ x	Esclavo del bus P1 P2 P1P2 bus Slave (valor por defecto - default value)
1x	1	↑ x	Maestro del bus P1 P2 Master in P1 P2 bus
x0	0	x ↓	Referencia temp. Unidad Interior Reference temp. Indoor Unit (valor por defecto - default value)
x1	1	x ↑	Referencia temp. Mando Daikin Reference temp. Daikin Controller

LED – Información porporcionada por los LEDs – LED information

LED	Comportamiento Behaviour	Descripción Description
L1 (red)	ON steady	Error de comunicación con el AA AC communication error
	Blinking	Error en el AA AC error
	Off	Funcionamiento normal No errors present

LED	Comportamiento Behaviour	Descripción Description
L5 (green)	ON steady	Link con BACnet MS/TP BACnet MS/TP Link
	Blinking	Actividad en el bus MS/TP Activity on the MS/TP bus

LED	Comportamiento Behaviour	Descripción Description
L6 (green)	ON steady	Link con BACnet IP BACnet IP Link
	Blinking	Actividad en el bus BACnet IP Activity ont he BACnet IP bus

NOTA: Para más información acerca de otros modos de operación de los leds consulte el manual – NOTE: Check the manual for more information about other LED operation modes

El manual de usuario está disponible en - The user manual is available at:
https://intesis.com/products/ac-interfaces/daikin-gateways/daikin-bacnet-vrv-dk-rc-bac-1

This marking on the product, accessories, packaging or literature (manual) indicates that the product contains electronic parts and they must be properly disposed of by following the instructions at https://intesis.com/weee-regulation