

# VRV AHU System



R-410A



# VRV AHU Applications



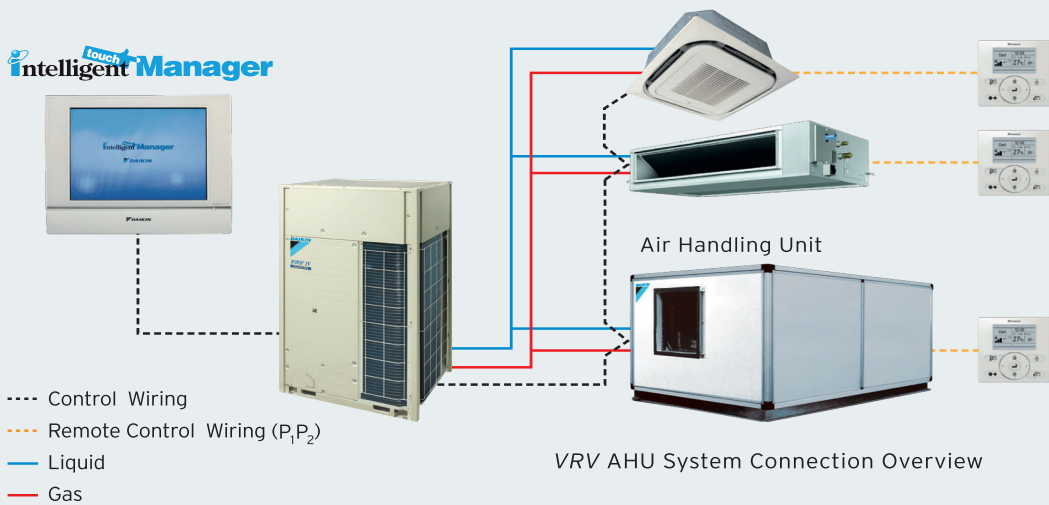


## VRV AHU Introduction

Daikin releases 2 series of VRV AHU unit namely, standard series model AHUR-CBVJ/DBVJ/DBBVJ and outdoor air series model AHUR-CBLJ/DBLJ/DBBLJ. It is a DX AHU system that is specially designed to work with the VRV IV outdoor unit. This new model release is an inlet temperature control type AHU. This enabled the users to reduce maintenance costs and enjoy more space savings.

Daikin VRV AHU improves the indoor air quality caused by haze, pollutants, etc with options of coarse, fine filter & HEPA filter.

This is the only total AHU solutions provided and manufactured completely by Daikin.



## Total Daikin Solutions

(All products manufacture by Daikin Factory)

## What is VRV?

Daikin VRV system is a multi-split type air conditioner for commercial buildings that uses variable refrigerant flow control invented by Daikin.



It enables long piping length up to 165m and maximum level difference (between outdoor and indoor units) of 90m to provide more design flexibility which can match even large-sized buildings.

It allows one touch selection control using intelligent Touch Manager and includes options to link with BACnet® to enhance the Building Management System (BMS).

## VRV AHU Application

From small to large commercial spaces, Daikin offers a range of R-410A inverter condensing units for use in conjunction with Air Handling Units (AHU) from 6HP to 120HP."

AHU provides large air volumes and high ESP (External Static Pressure) enabling the use of extensive ductworks. The refrigerant flows through the copper pipes using R-410A and operates like a large VRV fan coil unit.

Daikin AHU represents the ideal solution for large storage places, atrium, lobby, banquet halls, showrooms, exhibition halls, shopping malls, etc.

It also has the options to customize the specifications such as the filtration type, direction of air in-take and discharge, service access door and blower type (backward or forward curves and plug fan).

The model DBBVJ/DBBLJ is with high quality thermal break aluminum profile which design to meet BS EN1886 , Class TB2 thermal bridging factor. The benefit of Thermal Break Profile are :

- i) Increase energy efficiency - lower heat loss,
- ii) Minimized unit body condensation,
- iii) Improve sound insulation
- iv) Increase AHU life span





## Options

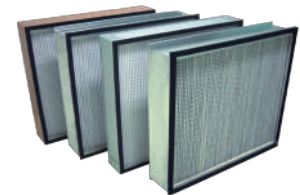
Wide ranges of options are available to meet your design requirement.

Please contact Daikin's sales office regarding below mentioned options:

- Fan type
  - ✓ Backward curved
  - ✓ Airfoil curved
  - ✓ Plug fan - AC/EC Type
- Motor
  - ✓ IE2
  - ✓ IE3
  - ✓ Explosion Proof
- AHU coil fin material
  - ✓ Copper
  - ✓ Blue fin
  - ✓ Heresite coating



- AHU coil frame
  - ✓ Stainless steel SS304/SS316L
- AHU air filter type
  - ✓ Synthetic Panel Filter
  - ✓ Bag Filter
  - ✓ Cartridge
  - ✓ HEPA
  - ✓ Carbon



- Special option
  - ✓ Electric heater
  - ✓ Mixing box
  - ✓ Outdoor roof
  - ✓ Special panel skin option
  - ✓ Heat Pipe
  - ✓ Heat recovery component
  - ✓ VFD for motor



- Customization
  - ✓ Air flow
  - ✓ Capacity
  - ✓ ESP
  - ✓ Discharge direction
  - ✓ Piping outlet
  - ✓ Dimension

## Features of VRV AHU - Inlet Temperature control

- Harnessing VRV IV current and latest technology of VRT
- Inverter controlled system
- Can be easily controlled via standard wired remote control (BRC1E62)
- Comes in double skin panel model
- Easily manage using intelligent Touch Manager central control system
  - ✓ Communication protocol using DIII-Net to communicate with all existing Daikin communication devices and even BMS.
- Can be placed indoor or outdoor\*

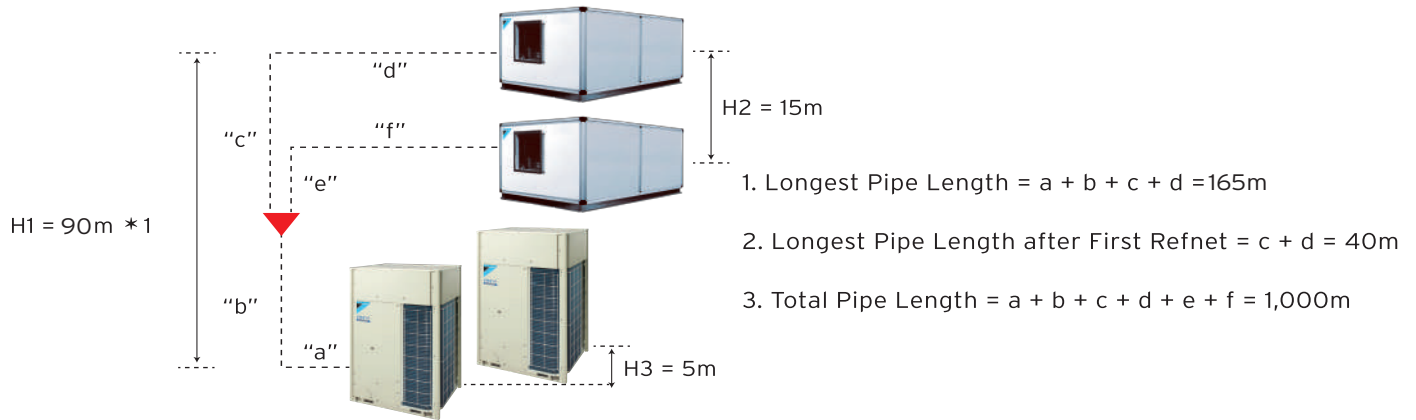
\* Optional items required

## Benefits of using VRV AHU

- Quality and warranty assured
  - ✓ VRV AHU are manufactured by Daikin factory.
- Ease of installation
  - ✓ No additional system such as cooling tower, chiller, and long water piping system are required. This also reduces the total system maintenance costs.
  - ✓ Flexible design of the ducting system.
- Cover large area with different ducting configuration.
- VRV AHU can provide ESP up to 450Pa\* (Standard Model)
- Total solution concept
  - ✓ Integrating an AHU into the total building climate system enables both design and installation procedures to be based on a single common technology. This simplifies project follow-up, installation, commissioning and maintenance since only one party is involved.
- VRV AHU system can be coupled and mixed with other type indoor unit to work together concurrently. (Connection ratio 50% - 110%)

\* For ESP more than 450Pa, please contact Daikin's Sales Office

# VRV AHU System Structure



\*1 When level differences are 50m or more, the diameter of the main liquid piping size must be increased. If the outdoor unit is above the indoor unit, a dedicated setting on the outdoor unit is required. Please contact Daikin's Sale Office for more information.  
 \* Applicable for standard air series

## Comparison Table and Diagram for Conventional AHU System and VRV AHU System

Conventional AHU System	VRV AHU System
Require Frequent Maintenance (Cooling Tower + Chiller)	Easy Maintenance (same as common A/C System)
Higher Cost Due to Frequent Maintenance	No Additional Maintenance Cost
Require Larger Installation Space (AHU, Chiller, Cooling Tower)	Require Small Installation Space (AHU, VRV)
Complex System (HVAC Ducting, Chiller and Water Piping)	Simple System (HVAC Ducting)
Extensive Control (Variable Frequency Device, Variable Air Volume Control)	Simple Control (Remote Control / intelligent Touch Manager)

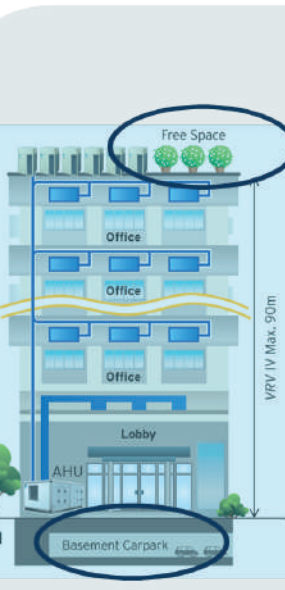
### CONVENTIONAL

1. Frequent Maintenance
2. Higher Cost
3. Larger Installation Space
4. Complex System
5. Extensive Control



### VRV AHU

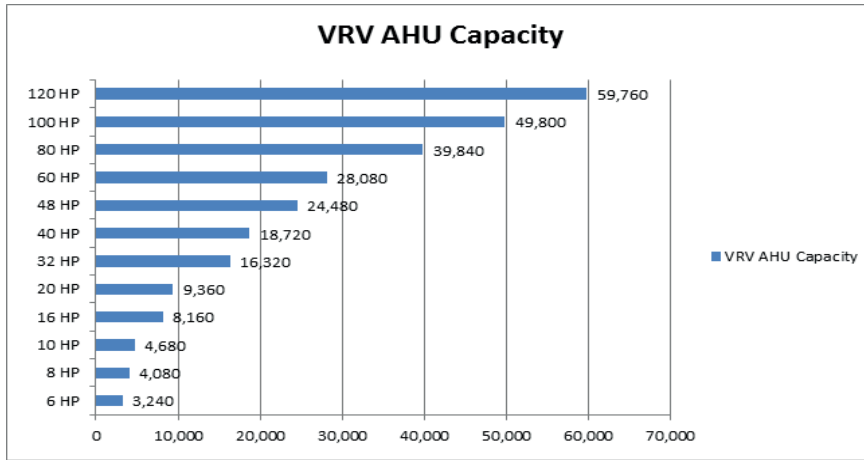
1. Easy Maintenance
2. Free Space
3. Simple System
4. ALL-IN-ONE Control: iTM





## VRV AHU Inlet Temperature Standard Series Range

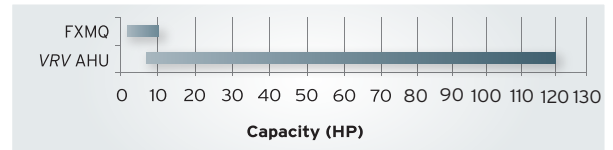
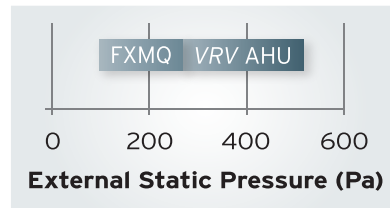
The VRV AHU standard series are available from the capacity range of 6HP to 120HP, also with airflow ranging from 3,240 CMH - 59,760 CMH.



## Expanded Line Up for Daikin VRV Indoor Series

### Comparison for External Static Pressure and Capacity between VRV AHU and Duct Typed Unit

VRV AHU offers higher ESP and Capacity as compared to duct typed unit.



	From	To
FXMQ	100 Pa	270 Pa
VRV AHU	250 Pa	450 Pa

	From	To
FXMQ	2 HP	10 HP
VRV AHU	6 HP	120 HP

\*For ESP more than 450Pa, please contact Daikin's Sales Office

## VRV AHU Operation Range

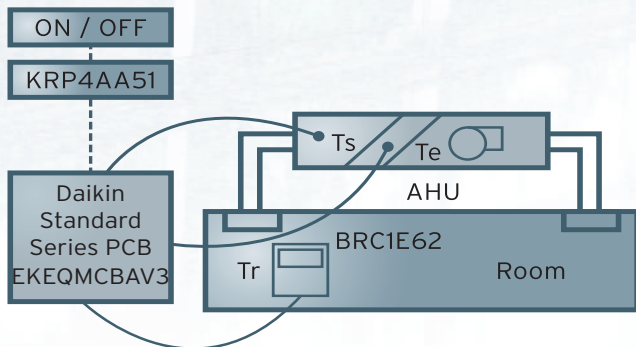
VRV AHU AHUR-CBVJ/DBVJ/DBBVJ operation is similar as other VRV indoor unit. Following table is the list of operation range limit for AHU unit.

		Ambient Temperature	
		Cooling	Heating
Entering Air Temperature On Heat Exchanger AHU	Minimum	14°C WB	14°C DB
	Maximum	35°C DB / 25°C WB	22°C DB
Outdoor Unit	Minimum	-5°C DB	-20°C DB
	Maximum	49°C DB	15.5°C DB
Expansion Valve		Minimum	-5°C DB
		Maximum	46°C DB
Standard Series PCB		Minimum	-10°C DB
		Maximum	40°C DB

### Possibility Z (Ts/Tr control):

Using Daikin wired remote controller (BRC1E62 - optional) Set point can be fixed via standard Daikin wired remote controller. Remote ON/OFF can be achieved by an optional adapter KRP4AA51.

No additional external controller is required. The cooling load is determined from the air suction temperature and set point on the Daikin remote controller.



Ts = Air suction temperature      Te = Evaporating temperature  
Tr = Room temperature              AHU = Air Handling Unit

### VRV AHU Standard Series Evaporator Coil, Expansion Valve and PCB

AHUR-CBVJ/DBVJ/DBBVJ standard series model use DX coil. Each DX coil will be connected to one expansion valve (EKEXV) and controlled by one Standard Series PCB (EKEQMCAV3).

VRV AHU Expansion Valve (EKEXV)

- 5 Types of AHU Expansion Valve
  - EKEXV140 for 6HP Coil
  - EKEXV200 for 8HP Coil
  - EKEXV250 for 10HP Coil
  - EKEXV400 for 16HP Coil
  - EKEXV500 for 20HP Coil



VRV AHU Standard Series PCB (EKEQMCAV3)

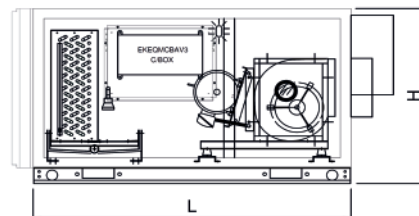


### VRV AHU Expansion Valve

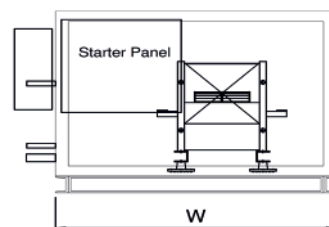
		EKEXV140	EKEXV200	EKEXV250	EKEXV400	EKEXV500
<b>Operation Range</b>	Cooling	Min. ~ Max. °CDB		-5.0 ~ 46.0		
<b>Refrigerant</b>	Type	R-410A				
<b>Piping connections</b>	Liquid	Type	Braze connection			
		OD mm	9.52	12.7	15.9	
	Gas	Type	Braze connection			
		OD mm	9.52			
	Heat Insulation	Both inlet and outlet				

### VRV AHU Standard Series PCB

		EKEQMCAV3
<b>Application</b>		Multi
<b>Outdoor Unit</b>		VRV IV
<b>Casing</b>	Colour	White grey
	Material	Resin
<b>Dimensions</b>	Unit	H x W x D mm
		132 x 400 x 200
<b>Weight</b>	Unit	Kg
		3.6
<b>Operation Range</b>	Cooling	Min. ~ Max. °CDB
		-10.0 ~ 40.0
<b>Power Supply</b>	Phase	1
	Frequency Hz	50/60
	Voltage V	230/220

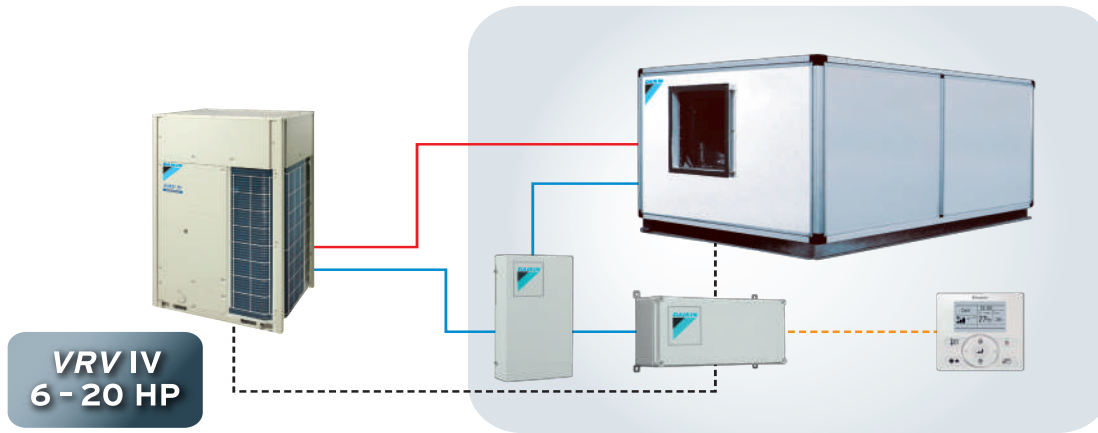


Right View

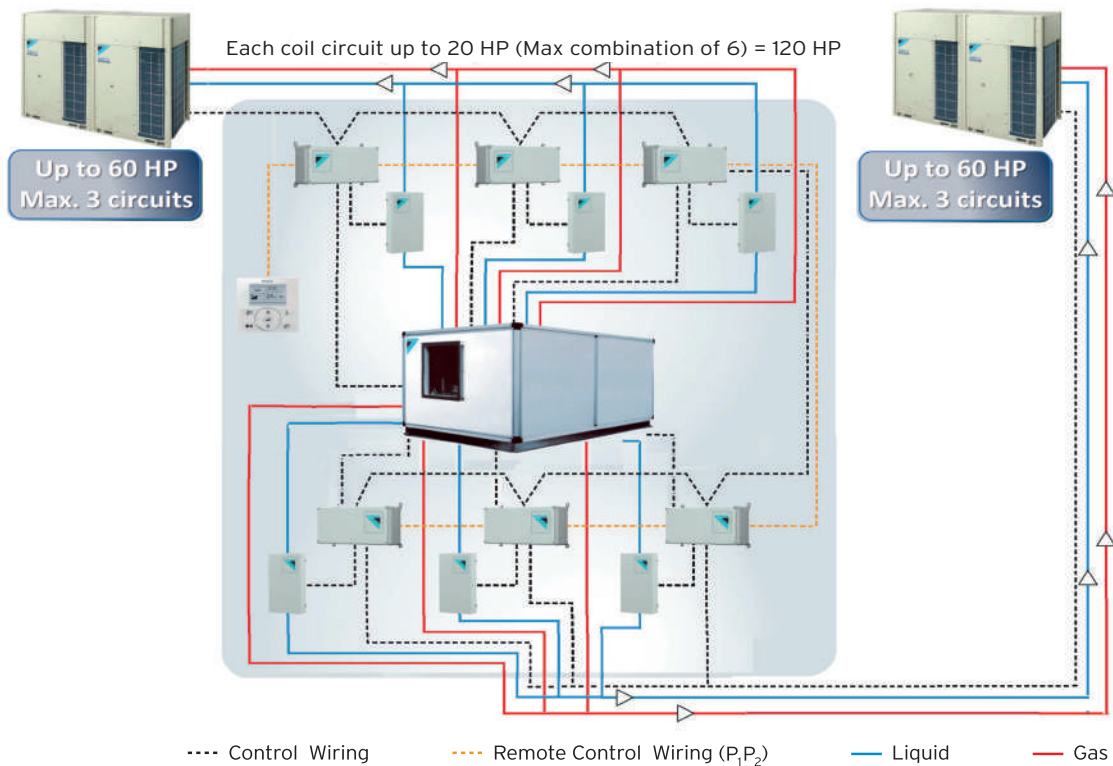


Front View

VRV Connection to AHU Configuration

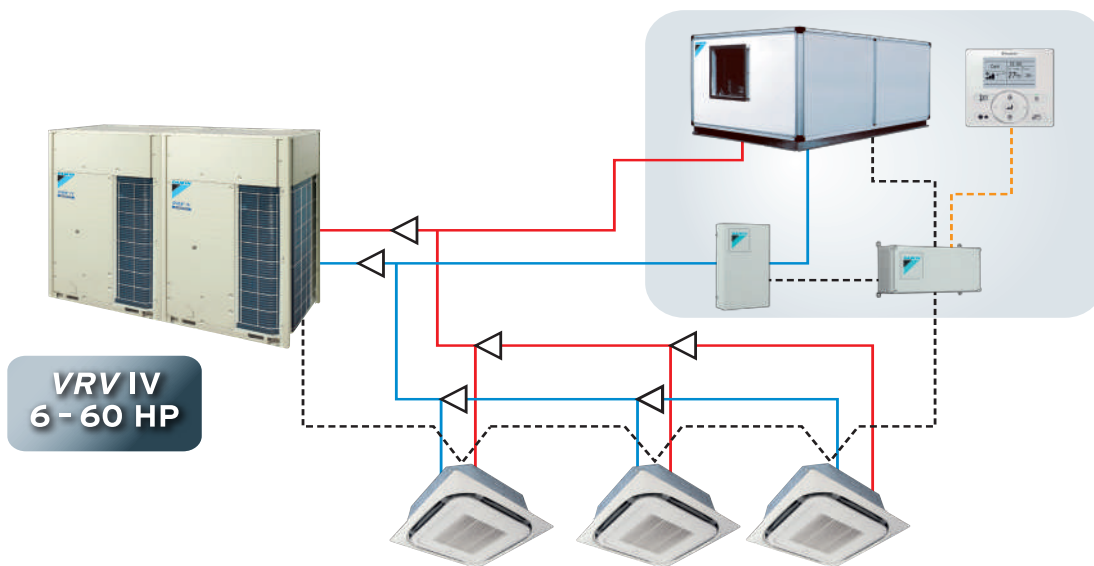


Single VRV System Connection Configuration

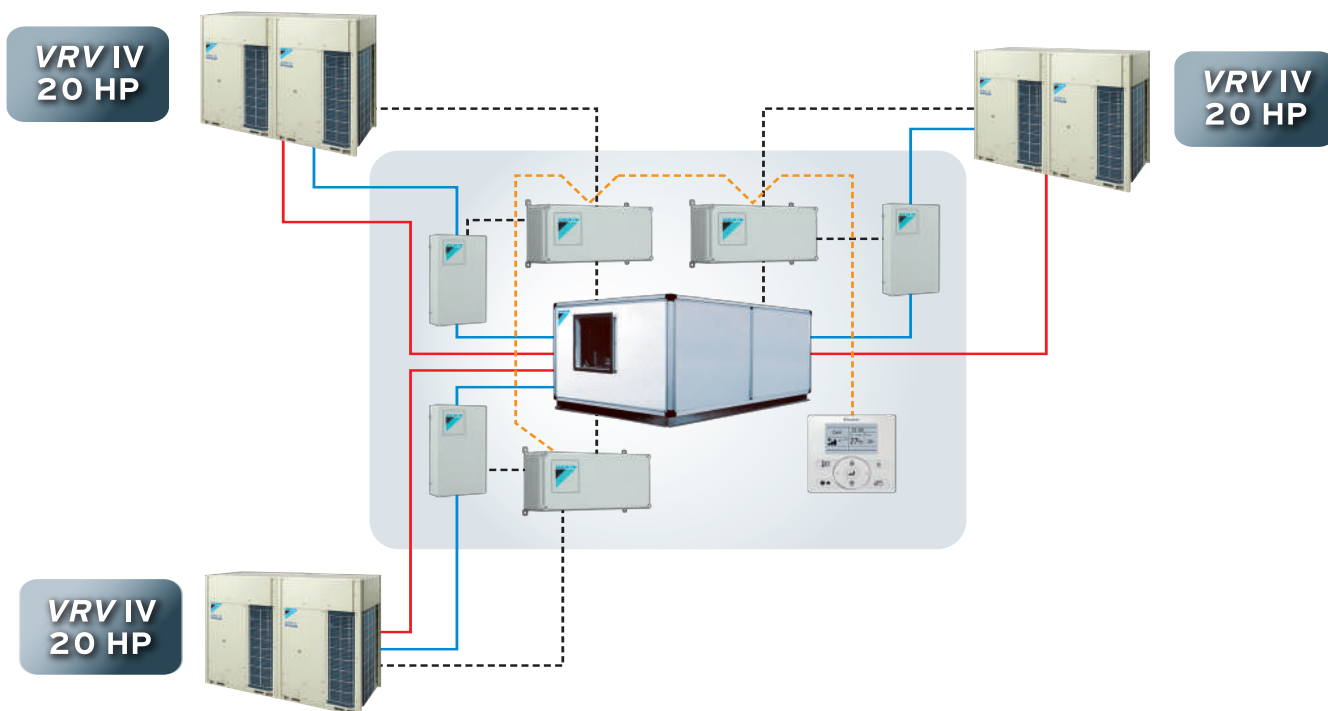




# Standard Series AHUR-CBVJ/DBVJ/DBBVJ



*Multiple Connections with Other Indoor Unit Configuration*  
\* For AHU more than 60 HP capacity, alternative option is available.



*Multiple VRV Systems Connection Configuration*

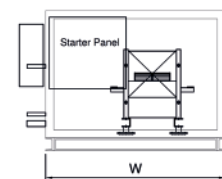
## Standard Series AHUR-CBVJ/DBVJ/DBBVJ

MODEL NAME:		AHUR_CBVJ / AHUR_DBVJ / AHUR_DBBVJ
1	CASING	AHUR_CBVJ : 25mm Thickness Double Skinned Panel AHUR_DBVJ : 50mm Thickness Double Skinned Panel AHUR_DBBVJ : 50mm Thickness Double Skinned Panel (Thermal Break)
	Metal	0.5mm Thickness White Color Bond Galvanized Steel Sheet
	Insulation	25mm / 50mm Thickness Polyurethane Foam 40kg/m <sup>3</sup> Density
2	CASING FRAME	Aluminum Profile Frame (25mm and 50mm) / Aluminium Profile Frame with Nylon (50mm thermal break)
3	COIL	DX Coil
	Tube	Copper Tube
	Fin	Aluminum
	Header	Copper Tube Connect
	Frame	Galvanized Steel
	Working Pressure	41 kg/cm <sup>2</sup> G or below
4	FAN	
	Type	Double Inlet Forward Curved Centrifugal Belt Driven Fan
	Wheel	Galvanized Steel Sheet
	Housing	Galvanized Steel Sheet
5	MOTOR	Three-Phase Induction Motor Totally Enclosed Fan-Cooled Type Protection = IP55, Insulation Class = F, Efficiency: IE1
	VIBRATION ISOLATOR	For fan size 355 and below, rubber mounting For fan size 400 and above, spring isolator
7	DRAIN PAN	1.0mm Stainless Steel 304, external cover with 10mm PE foam
8	AIR FILTER	
	Pre Filter	Type = R29, Class = G3, Synthetic washable
	Size	24"x24"x2", 12"x24"x2"
9	STANDARD SERIES PCB	EKEQMCAV3 & Motor Starter Panel
10	EXPANSION VALVE	EKEXV140, EKEXV200, EKEXV250, EKEXV400, EKEXV500

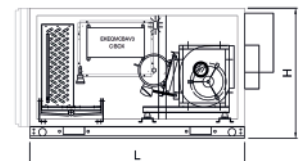
\* For unit to be installed outdoor, roof option (epoxy powder coated) is available, please contact Daikin's Sales Office.

### Drawings and Dimension of AHU

Model	Dimension W x D x H (mm)	Model	Dimension W x D x H (mm)
AHUR06-CBVJ	1100 X 1500 x 880	AHUR06-DBVJ/DBBVJ	1150 X 1550 x 930
AHUR08-CBVJ	1400 X 1500 x 880	AHUR08-DBVJ/DBBVJ	1450 X 1550 x 930
AHUR10-CBVJ	1400 X 1500 x 880	AHUR10-DBVJ/DBBVJ	1450 X 1550 x 930
AHUR16-CBVJ	1400 X 1600 x 1180	AHUR16-DBVJ/DBBVJ	1450 X 1650 x 1230
AHUR20-CBVJ	1400 X 1600 x 1480	AHUR20-DBVJ/DBBVJ	1450 X 1650 x 1530
AHUR32-CBVJ	1900 X 1900 x 1480	AHUR32-DBVJ/DBBVJ	1950 X 1950 x 1530
AHUR40-CBVJ	1900 X 1900 x 1780	AHUR40-DBVJ/DBBVJ	1950 X 1950 x 1830
AHUR48-CBVJ	2300 X 2000 x 1780	AHUR48-DBVJ/DBBVJ	2350 X 2050 x 1830
AHUR60-CBVJ	2500 X 2000 x 1980	AHUR60-DBVJ/DBBVJ	2550 X 2050 x 2030
AHUR80-CBVJ	3400 X 1900 x 1900	AHUR80-DBVJ/DBBVJ	3450 X 1950 x 1950
AHUR100-CBVJ	4200 X 2000 x 1900	AHUR100-DBVJ/DBBVJ	4250 X 2050 x 1950
AHUR120-CBVJ	4200 X 2000 x 2200	AHUR120-DBVJ/DBBVJ	4250 X 2050 x 2250



Front View



Right View

\* Dimension does not include Standard Series PCB, expansion Valve and Pre-filter.

# Standard Series AHUR-CBVJ/DBVJ/DBBVJ

## AHUR-CBVJ/DBVJ/DBBVJ SPECIFICATIONS

Model			AHUR06CBVJ/DBVJ/DBBVJ					AHUR08CBVJ/DBVJ/DBBVJ					AHUR10CBVJ/DBVJ/DBBVJ					AHUR16CBVJ/DBVJ/DBBVJ				
Total Cooling Capacity	*1 Net	kW	15.9	15.8	15.7	15.4	15.2	22.5	22.4	22.3	22.1	22.0	26.7	26.6	26.5	26.3	26.1	44.8	44.6	44.4	43.9	43.7
Total Sensible Cooling Capacity		kW	14.8	14.7	14.6	14.3	14.1	21.3	21.2	21.1	20.8	20.7	25.1	25.0	24.9	24.6	24.5	41.8	41.6	41.4	41.0	40.8
Total Cooling Capacity	*2 Gross	kW	16.9					23.7					28.2					47.5				
Total Sensible Cooling Capacity		kW	11.6					16.3					19.7					32.8				
Total Heating Capacity	*1 Net	kW	20.2	20.3	20.4	20.7	20.9	27.9	28.0	28.1	28.3	28.4	32.3	32.4	32.5	32.8	32.9	55.9	56.1	56.3	56.7	56.9
Total Heating Capacity	*2 Gross	kW	19.2					26.7					30.8					53.1				
Air Flow		cmh/m <sup>3</sup> /min	3240 / 54					4080 / 68					4680/78					8160/136				
On Coil	Cooling	°CDB/°CWB	27 / 19					27 / 19					27 / 19					27/19				
Off Coil		°CDB/°CWB	16.0 / 13.5					14.7 / 12.7					14.1 / 12.5					14.7 / 12.0				
On Coil	Heating	°CDB	20					20					20					20				
Off Coil		°CDB	37.3					39.1					39.3					39.1				
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface									
Coil Face Area		m <sup>2</sup>	0.41					0.56					0.56					0.9				
Coil Face Velocity		m/s	2.19					2.01					2.31					2.52				
Air PD. In Coil		Pa	126					109					138					160				
*3 Air PD. Pre		Pa	115					114					116					121				
*3 Air Filter Size 12"x24"x2"		pcs	1					0					0					2				
*3 Air Filter Size 24"x24"x2"		pcs	1					2					2					2				
ESP. Initial		Pa	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500
Total Static Pressure		Pa	490	540	590	690	740	472	522	572	672	722	504	554	604	704	754	531	581	631	731	781
Fan Type			Forward Curved										Forward Curved									
Model			FDA225CM					FDA250TM					FDA250TM					FDA315TM				
*4 Fan Motor		kW	1.5		2.2			1.5		2.2			2.2		3			4		5.5		
		Pole	4										4									
Power Supply		V/Ph/Hz	380-415/3/50(60)										380-415/3/50(60)									
FLA		Amp.	3.46		5.01			3.46		5.01			5.01		6.25			8.47		11.4		
Machine Weight	CB	kg	248		253			282		290			292		297			361		377		
	DB,DBB	kg	258		266			297		305			307		312			379		395		
Outlet Sound Level (Pressure)	CB	dB(A)	67	68	69	72	73	64	65	66	68	69	64	66	67	69	70	72	73	74	76	77
	DA,DAB	dB(A)	62	64	65	68	69	59	60	61	63	64	59	61	62	64	65	68	69	70	72	72
Standard Series PCB	Model/pcs		EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc				
Expansion Valve	Model/pcs		EKE XV140 / 1pc					EKE XV200 / 1pc					EKE X250 / 1pc					EKE XV400 / 1pc				
Dimension (WxDxH)		m	1.1 x 1.5 x 0.9					1.4 x 1.5 x 0.9					1.4 x 1.5 x 0.9					1.4 x 1.6 x 1.2				
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm									
Piping Connections	Liq. pipe	mm	φ9.5 (Brazeing Connection)					φ9.5 (Brazeing Connection)					φ9.5 (Brazeing Connection)					φ12.7 (Brazeing Connection)				
	Gas pipe	mm	φ19.1 (Brazeing Connection)					φ19.1 (Brazeing Connection)					φ22.2 (Brazeing Connection)					φ28.6 (Brazeing Connection)				
	Drain pipe	mm	φ42 (DN32)					φ42 (DN32)					φ42 (DN32)					φ42 (DN32)				
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve									
Capacity Index			140					200					250					400				

Model			AHUR20CBVJ/DBVJ/DBBVJ					AHUR32CBVJ/DBVJ/DBBVJ					AHUR40CBVJ/DBVJ/DBBVJ					AHUR48CBVJ/DBVJ/DBBVJ				
Total Cooling Capacity	*1 Net	kW	56.6	56.4	56.2	55.8	55.5	90.7	90.4	90.0	89.3	88.9	105.2	104.8	104.4	103.6	103.2	133.9	133.4	132.8	131.7	131.1
Total Sensible Cooling Capacity		kW	54.0	53.8	53.6	53.1	52.9	86.1	85.8	85.4	84.6	84.2	99.7	99.3	99.0	98.2	97.8	127.0	126.5	126.0	124.9	124.3
Total Cooling Capacity	*2 Gross	kW	59.0					95.1					110.2					140.2				
Total Sensible Cooling Capacity		kW	39.8					66.4					77.6					99.9				
Total Heating Capacity	*1 Net	kW	63.9	64.1	64.3	64.8	65.1	105.5	105.9	106.2	107.0	107.4	123.5	123.8	124.2	125.0	125.4	159.8	160.3	160.9	162.0	162.6
Total Heating Capacity	*2 Gross	kW	61.5					101.2					118.4					153.5				
Air Flow		cmh/m <sup>3</sup> /min	9360/156					16320/272					18720/312					24480/408				
On Coil	Cooling	°CDB/°CWB	27 / 19					27/19					27 / 19					27/19				
Off Coil		°CDB/°CWB	13.9/12.1					14.5/12.7					14.3/12.7					14.5/12.9				
On Coil	Heating	°CDB	20					20					20					20				
Off Coil		°CDB	39.2					38.1					38.5					38.3				
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface									
Coil Face Area		m <sup>2</sup>	1.24					1.8					2.21					2.76				
Coil Face Velocity		m/s	2.1					2.52					2.36					2.47				
Air PD. In Coil		Pa	117					161					143					155				
*3 Air PD. Pre		Pa	116					120					118					123				
*3 Air Filter Size 12"x24"x2"		pcs	0					0					3					5				
*3 Air Filter Size 24"x24"x2"		pcs	4					6					6					6				
ESP. Initial		Pa	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500
Total Static Pressure		Pa	483	533	583	683	733	531	581	631	731	781	511	561	611	711	761	527	577	627	727	777
Fan Type			Forward Curved										Forward Curved									
Model			FDA355TM					FDA500TM					FDA500TM					FDA630TM				
*4 Fan Motor		kW	4		5.5			7.5		7.5			7.5		11			11		11		
		Pole	4										4									
Power Supply		V/Ph/Hz	380-415/3/50(60)										380-415/3/50(60)									
FLA		Amp.	8.47		11.4			14.6		14.6			14.6		21.0			21.0		21.0		
Machine Weight	CB	kg	414		435			609		784			811		1025			1025		1025		
	DB,DBB	kg	434		455			635		820			841		1058			1058		1058		
Outlet Sound Level (Pressure)	CB	dB(A)	69	70	71	73	74	71	72	73	75	76	72	72	73	75	76	71	72	73	75	77
	DB,DBB	dB(A)	64	65	66	68	69	67	68	69	70	71	67	68	69	70	71	66	67	68	70	72
Standard Series PCB	Model/pcs		EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 2pc					EKEQMCBAV3 / 2pc					EKEQMCBAV3 / 3pc				
Expansion Valve	Model/pcs		EKE X500 / 1pc					EKE XV400 / 2pc					EKE X500 / 2pc					EKE XV400 / 3pc				
Dimension (WxDxH)		m	1.4 x 1.6 x 1.5					1.9 x 1.9 x 1.5					1.9 x 1.9 x 1.8					2.3 x 2.0 x 1.8				
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm									
Piping Connections	Liq. pipe	mm	φ15.9 (Brazeing Connection)					φ12.7 (Brazeing Connection) x2					φ15.9 (Brazeing Connection) x2					φ12.7 (Brazeing Connection) x3				
	Gas pipe	mm	φ28.6 (Brazeing Connection)					φ28.6 (Brazeing Connection) x2					φ28.6 (Brazeing Connection) x2					φ28.6 (Brazeing Connection) x3				
	Drain pipe	mm	φ42 (DN32)					φ42 (DN32)					φ42 (DN32)					φ42 (DN32)				
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve									
Capacity Index			500					800					1000					1200				



## AHUR-CBVJ/DBVJ/DBBVJ SPECIFICATIONS

Model		AHUR60CBVJ/DBVJ/DBBVJ					AHUR80CBVJ/DBVJ/DBBVJ					AHUR100CBVJ/DBVJ/DBBVJ					AHUR120CBVJ/DBVJ/DBBVJ						
Total Cooling Capacity	*1 Net	kW		169.9	169.4	168.8	167.6	167.0	223.9	223.1	222.2	220.5	219.6	278.1	277.1	276.1	274.1	273.1	333.7	332.6	331.5	329.2	328.2
Total Sensible Cooling Capacity		kW		161.9	161.3	160.7	159.5	158.9	210.9	210.0	209.2	207.4	206.5	262.7	261.8	260.8	258.8	257.7	313.8	312.7	311.6	309.3	308.3
Total Cooling Capacity	*2 Gross	kW		177.4					236.1					292.5									
Total Sensible Cooling Capacity		kW		118.9					162.1					206.2									
Total Heating Capacity	*1 Net	kW		181.9	182.5	183.1	184.3	184.9	253.6	254.5	255.3	257.1	258.0	315.1	316.1	317.1	319.1	320.1	330.6	331.7	332.8	335.1	336.1
Total Heating Capacity	*2 Gross	kW		174.4					241.4					300.7									
Air Flow		cmh/m <sup>3</sup> /min		28080/468					39840/664					49800/830									
On Coil	Cooling	*CDB/CWB		27/19					27/19					27/19									
Off Coil		*CDB/CWB		14.0/12.1					14.5/12.6					14.3/12.7									
On Coil	Heating	*CDB		20					20					20									
Off Coil		*CDB		38.2					37.7					37.7									
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface										
Coil Face Area	m <sup>2</sup>		3.21					4.56					5.80										
Coil Face Velocity	m/s		2.43					2.41					2.38										
Air PD. In Coil	Pa		150					149					146										
*3 Air PD. Pre	Pa		122					127					126										
*3 Air Filter Size 12"x24"x2"	pcs		4					5					8										
*3 Air Filter Size 24"x24"x2"	pcs		8					10					12										
ESP. Initial	Pa		250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	
Total Static Pressure	Pa		522	572	622	722	772	526	576	626	726	776	522	572	622	722	772	534	584	634	734	784	
Fan Type			Forward Curved										Forward Curved										
Model			FDA630TM					FDA500T2M					FDA560T2M					FDA560T2M					
*4 Fan Motor	kW		11					15					18.5					22					
	Pole		4					4					4					4					
Power Supply	V/Ph/Hz		380-415/3/50(60)										380-415/3/50(60)										
FLA	Amp.		21.0					28.4					34.8					42					
Machine Weight	CB	kg	1133					1158					1549					1564					
	DB,DBB	kg	1170					1195					1603					1609					
Outlet Sound Level (Pressure)	CB	dB(A)	72	72	73	75	76	77	78	79	80	81	78	78	79	80	81	79	79	80	81	82	
	DB,DBB	dB(A)	67	68	69	70	72	73	73	74	75	76	73	74	75	76	77	74	75	75	76	77	
Standard Series PCB	Model/pcs		EKEQMCBAV3 / 3pcs					EKEQMCBAV3 / 4pcs					EKEQMCBAV3 / 5pcs					EKEQMCBAV3 / 6pcs					
Expansion Valve	Model/pcs		EKEX500 / 3pcs					EKEX500 / 4pcs					EKEX500 / 5pcs					EKEX500 / 6pcs					
Dimension (WxDxH)	m		2.5 x 2.0 x 2.0					3.4 x 1.9 x 2.0					4.2 x 2.0 x 2.0					4.2 x 2.0 x 2.0					
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm										
Piping Connections	Liq. pipe	mm	Ø15.9 (Brazing Connection) x3					Ø15.9 (Brazing Connection) x4					Ø15.9 (Brazing Connection) x5					Ø15.9 (Brazing Connection) x6					
	Gas pipe	mm	Ø28.6 (Brazing Connection) x3					Ø28.6 (Brazing Connection) x4					Ø28.6 (Brazing Connection) x5					Ø28.6 (Brazing Connection) x6					
	Drain pipe	mm	Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve										
Capacity Index			1500					2000					2500					3000					

### Notes:

- \*1. Net capacity includes indoor fan heat
- \*2. Gross capacity does not include indoor fan heat
- \*3. With pre filter, synthetic R29 class G3 (washable)
- \*4. It is necessary to reduce piping size by reducer when connection (19.1 -> 15.9, 22.2 -> 19.1, 28.6 -> 22.2, 34.9 -> 28.6)
- 5. Connection Ratio:

### Connection ratio (Heating & Cooling):

System Pattern	Total CR	VRV Indoor	AHU
VRV DX Indoor unit(s) + AHU	50-110%	0-110% (Cooling) 50-110% (Heating)	0-60%
Only AHU (pair AHU & Multi AHU)	90-110%	-	90-110%

### Connection ratio (Cooling Only):

System Pattern	Total CR	VRV Indoor	AHU
VRV DX Indoor unit(s) + AHU	50-110%	0-110%	0-60%
Only AHU (pair AHU & Multi AHU)	50-110%	-	50-110%

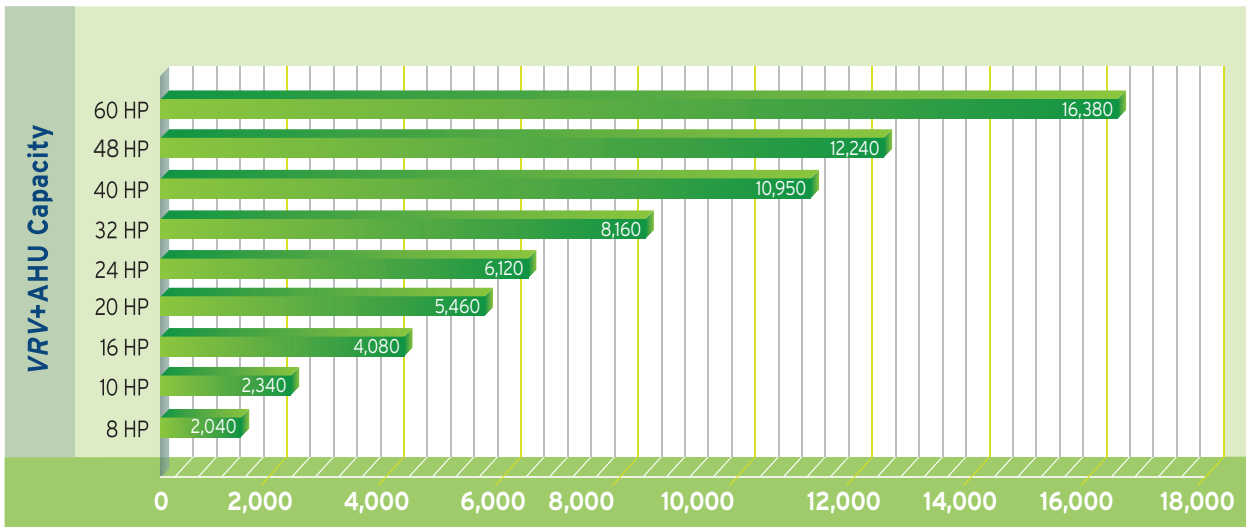
### Conversion formular

kcal/h=kWx860  
Btu/h=kWx3412  
cfm=m<sup>3</sup>/minx35.3

## Outdoor Air Series AHUR-CBLJ/DBLJ/DBBLJ

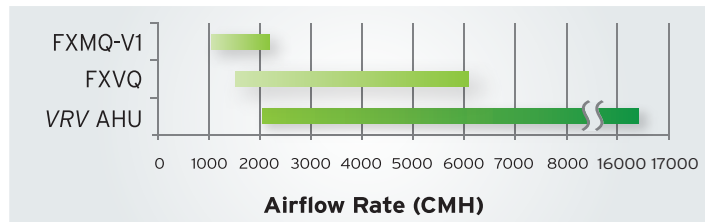
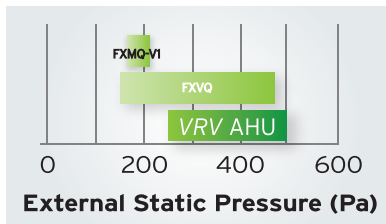
### VRV AHU Inlet Temperature Outdoor Air Series Range

The VRV AHU outdoor air series are available from the capacity range of 8 HP to 60 HP, also with airflow ranging from 2,040 CMH - 16,380 CMH.



### Comparison for ESP and Capacity between VRV AHU, Ceiling Mounted Duct Type and Floor Standing Duct Type.

VRV AHU offers higher ESP and airflow rate as compared to duct type units.



	From	To
FXMQ-V1	185 Pa	205 Pa
FXVQ	150 Pa	480 Pa
VRV AHU	250 Pa	450 Pa

	From (CMH)	To (CMH)
FXMQ-V1	1,080	2,100
FXVQ	1,518	6,072
VRV AHU	2,040	16,380

\*For ESP more than 450Pa, please contact Daikin's Sales Office

### VRV AHU Operation Range

VRV AHU AHUR CBLJ/DBLJ/DBBLJ operation is similar as other VRV indoor unit. Following table is the list of operation range limit for AHU unit.

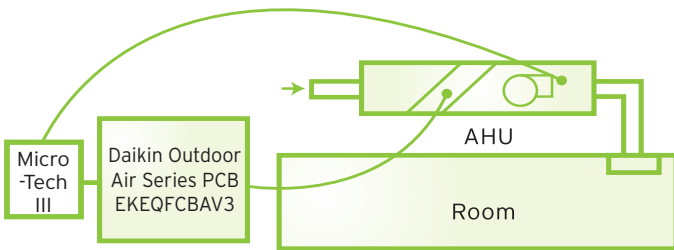
		Ambient Temperature	
		Cooling	Heating
Entering Air Temperature On Heat Exchanger AHU	Minimum	14°C WB	-5°C DB
	Maximum	32°C WB	15°C DB
Outdoor Unit	Minimum	-5°C DB	-20°C DB
	Maximum	49°C DB	15.5°C DB
Expansion Valve	Minimum	-5°C DB	
	Maximum	46°C DB	
Outdoor Air Series PCB	Minimum	-10°C DB	
	Maximum	40°C DB	

# Outdoor Air Series AHUR-CBLJ/DBLJ/DBBLJ

## Possibility X (Td/Tr control):

Precise air temperature control via MicroTech III controller. Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The MicroTech III controller translates the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a reference voltage (0-10V) which is transferred to the Daikin Outdoor Air Series PCB (EKEQFCBAV3).

This reference voltage is used as the main input valve for capacity control through automatic adjustment of Te (Cooling) or Tc (Heating).



Td = Air discharge temperature (13°C ~ 28°C)      Te = Evaporating temperature  
AHU = Air Handling Unit

## Outdoor Air Series Evaporator Coil, Expansion Valve and PCB

AHUR CBLJ/DBLJ/DBBLJ outdoor air series are using DX coil. Each DX coil will be connected to one expansion valve (EKEXV) and controlled by one Outdoor Air Series PCB (EKEQFCBAV3).

VRV AHU Expansion Valve (EKEXV)

- 4 Type AHU Expansion Valve
  - EKEXV200 for 8HP Coil
  - EKEXV250 for 10HP Coil
  - EKEXV400 for 16HP Coil
  - EKEXV500 for 20HP Coil



VRV AHU Outdoor Air Series PCB (EKEQFCBAV3)



Installation of AHU Outdoor Air Series PCB should be positioned under a shaded area. Alternatively, a panel should be provided at the Outdoor Air Series PCB to block off direct sunlight.

Direct sunlight will increase the temperature inside the Outdoor Air Series PCB and may reduce its lifetime and influence its operation.

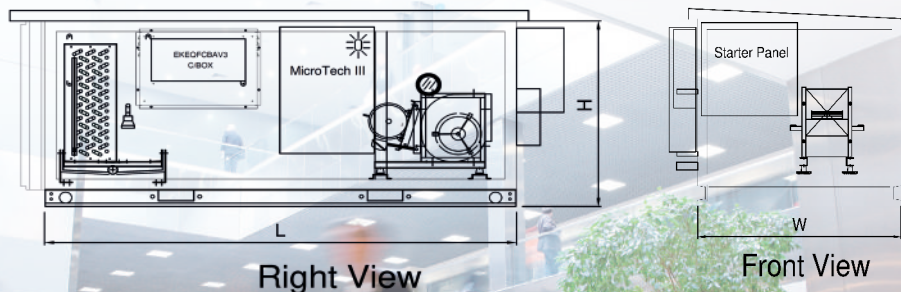
Operating temperature of the Outdoor Air Series PCB is between -10°C and 40°C.

## VRV AHU Expansion Valve

		EKEXV200	EKEXV250	EKEXV400	EKEXV500
<b>Operation Range</b>	Cooling	Min. ~ Max. °CDB		-5.0 ~ 46.0	
<b>Refrigerant</b>	Type	R-410A			
<b>Piping connections</b>	Liquid	Type	Braze connection		
		OD mm	9.52	12.7	15.9
	Gas	Type	Braze connection		
		OD mm	9.52		
	Heat Insulation	Both inlet and outlet			

## VRV AHU Outdoor Air Series PCB

		EKEQFCBAV3
<b>Application</b>		Multi
<b>Outdoor Unit</b>		VRV IV
<b>Casing</b>	Colour	White grey
	Material	Resin
<b>Dimensions</b>	Unit	H x W x D mm
		132 x 400 x 200
<b>Weight</b>	Unit	Kg
		3.9
<b>Operation Range</b>	Cooling	Min. ~ Max. °CDB
		-10.0 ~ 40.0
<b>Power Supply</b>	Phase	1
	Frequency	Hz
		50/60
	Voltage	V
		230/220



Right View

Front View



# Outdoor Air Series AHUR-CBLJ/DBLJ/DBBLJ

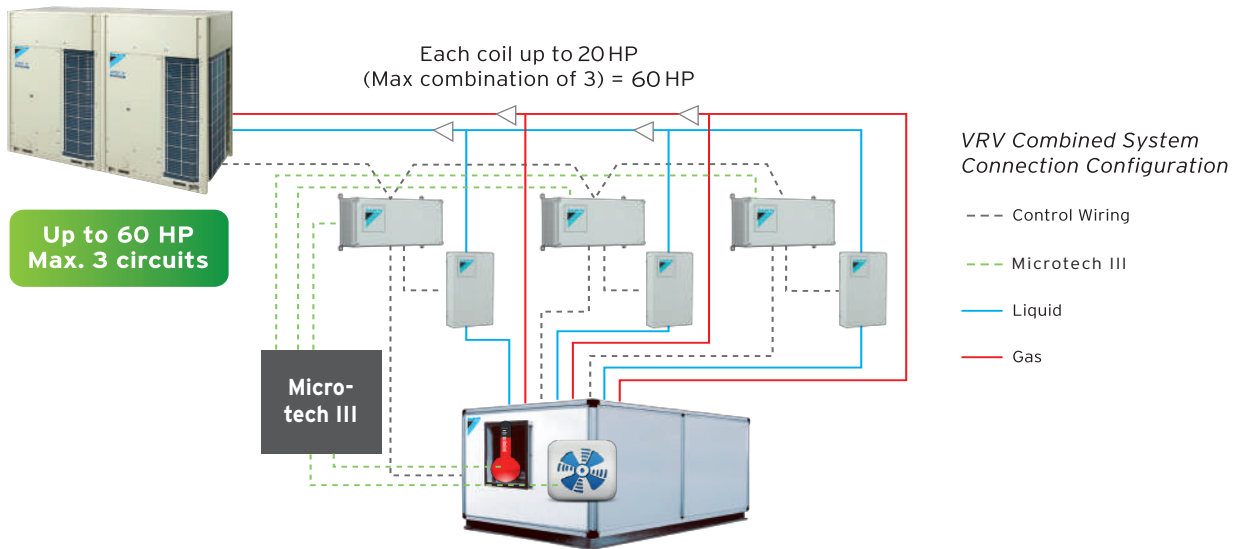
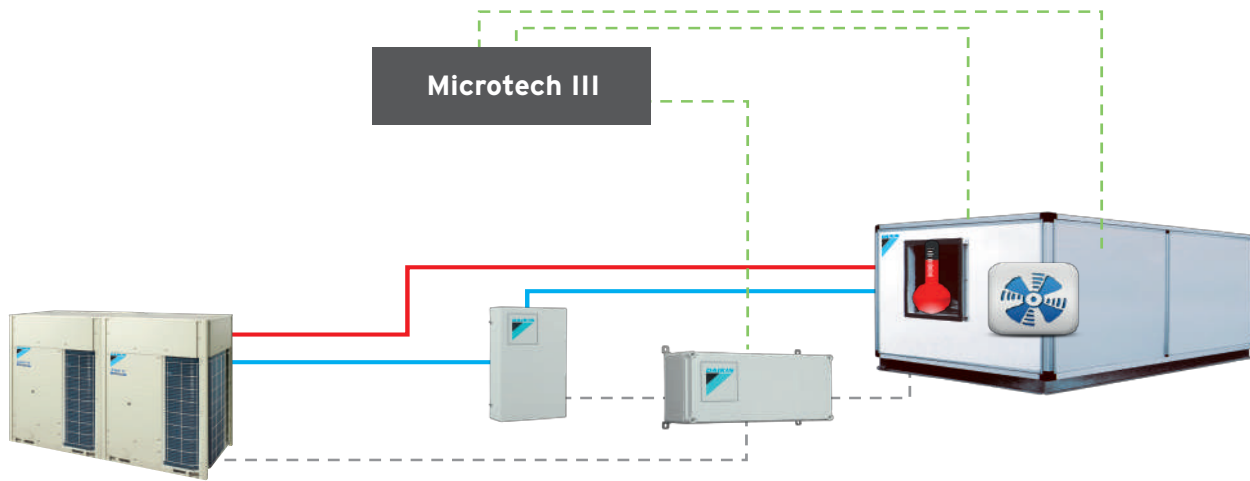
## MicroTech III Controller (Option)



- MT III controller is recommended for Outdoor air series AHU controlling, switching and monitoring functions.
- This controller is programmed to optimize the performance and efficiency of VRV AHU automatically.
- It can also communicate with Daikin's intelligent Touch Manager via BACnet protocol easily.

## VRV AHU System Structure

### VRV Connection to AHU Configuration



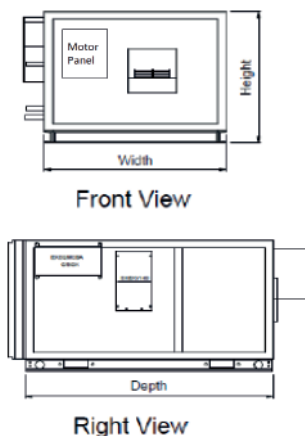
## Outdoor Air Series AHUR-CBLJ/DBLJ/DBBLJ

MODEL NAME:		AHUR_CBLJ / AHUR_DBLJ / AHUR_DBBLJ
1	CASING	AHUR_CBLJ : 25mm Thickness Double Skinned Panel AHUR_DBLJ : 50mm Thickness Double Skinned Panel AHUR_DBBLJ : 50mm Thickness Double Skinned Panel (Thermal Break)
	Metal	0.5mm Thickness White Color Bond Galvanized Steel Sheet
	Insulation	25mm / 50mm Thickness Polyurethane Foam 40kg/m <sup>3</sup> Density
2	CASING FRAME	Aluminum Profile Frame (25mm and 50mm) / Aluminium Profile Frame with Nylon (50mm thermal break)
3	COIL	DX Coil
	Tube	Copper Tube
	Fin	Aluminum
	Header	Copper Tube Connect
	Frame	Galvanized Steel
	Working Pressure	41 kg/cm <sup>2</sup> G or below
4	FAN	
	Type	Double Inlet Forward Curved Centrifugal Belt Driven Fan
	Wheel	Galvanized Steel Sheet
	Housing	Galvanized Steel Sheet
5	MOTOR	Three-Phase Induction Motor Totally Enclosed Fan-Cooled Type Protection = IP55, Insulation Class = F, efficiency: IE1
	VIBRATION ISOLATOR	For fan size 355 and below, rubber mounting For fan size 400 and above, spring isolator
7	DRAIN PAN	1.0mm Stainless Steel 304, external cover with 10mm PE foam
8	AIR FILTER	
	Pre Filter	Type = R29, Class = G3, Synthetic washable
	Size	24"x24"x2", 12"x24"x2"
9	WEATHER PROOF ROOF	Epoxy powder coated steel
10	OUTDOOR AIR SERIES PCB	EKEQFCBAV3 & motor starter panel, MicroTech III
11	EXPANSION VALVE	EKEXV200, EKEXV250, EKEXV400, EKEXV500

### Drawings and Dimension of AHU

Model	Dimension W x D x H (mm)	Model	Dimension W x D x H (mm)
AHUR08-CBLJ	1100 X 2000 x 880	AHUR08-DBLJ/DBBLJ	1150 X 2050 x 930
AHUR10-CBLJ	1400 X 2000 x 880	AHUR10-DBLJ/DBBLJ	1450 X 2050 x 930
AHUR16-CBLJ	1400 X 1900 x 1180	AHUR16-DBLJ/DBBLJ	1450 X 1950 x 1230
AHUR20-CBLJ	1700 X 1900 x 1180	AHUR20-DBLJ/DBBLJ	1750 X 1950 x 1230
AHUR24-CBLJ	1700 X 2800 x 1180	AHUR24-DBLJ/DBBLJ	1750 X 2850 x 1230
AHUR32-CBLJ	1700 X 2300 x 1480	AHUR32-DBLJ/DBBLJ	1750 X 2350 x 1530
AHUR40-CBLJ	1900 X 1900 x 1780	AHUR40-DBLJ/DBBLJ	1950 X 1950 x 1830
AHUR48-CBLJ	1900 X 2400 x 1780	AHUR48-DBLJ/DBBLJ	1950 X 2450 x 1830
AHUR60-CBLJ	2300 X 2000 x 1980	AHUR60-DBLJ/DBBLJ	2350 X 2050 x 2030

\* Dimension does not include Outdoor Air Series PCB, expansion Valve and Pre-filterer.



# Outdoor Air Series AHUR-CBLJ/DBLJ/DBBLJ

## AHUR-CBLJ/DBLJ/DBBLJ SPECIFICATIONS

Model			AHUR08CBLJ/DBLJ/DBBLJ					AHUR10CBLJ/DBLJ/DBBLJ					AHUR16CBLJ/DBLJ/DBBLJ					AHUR20CBLJ/DBLJ/DBBLJ					AHUR24CBLJ/DBLJ/DBBLJ				
Total Cooling Capacity	*1 Net	kW	26.0	25.9	25.9	25.7	25.7	29.8	29.7	29.7	29.5	29.4	51.4	51.3	51.2	51.0	50.9	68.1	68.0	67.9	67.7	67.5	78.5	78.4	78.2	78.0	77.8
Total Sensible Cooling Capacity		kW	8.6	8.5	8.5	8.3	8.3	9.8	9.7	9.7	9.5	9.4	17.2	17.1	17.0	16.8	16.7	22.6	22.5	22.4	22.1	22.0	26.0	25.9	25.7	25.5	25.3
Total Cooling Capacity	*2 Gross	kW	26.6					30.5					52.4					69.8									
Total Sensible Cooling Capacity		kW	9.2					10.5					18.2					24.3									
Total Heating Capacity	*1 Net	kW	18.0	18.1	18.1	18.3	18.3	20.7	20.8	20.9	21.0	21.1	35.9	36.0	36.1	36.3	36.4	48.4	48.5	48.6	48.9	49.0	53.9	54.1	54.2	54.4	54.6
Total Heating Capacity	*2 Gross	kW	17.4					20.0					34.9					46.7									
Air Flow		cmh/m <sup>3</sup> /min	2040/34					2340/39					4080/68					5460/91									
On Coil	Cooling	*CDB/°CWB	33/28					33/28					33/28					33/28									
Off Coil		*CDB/°CWB	19.0/17.6					19.0/17.6					19.1/17.8					19.2/17.9									
On Coil	Heating	*CDB	0					0					0					0									
Off Coil		*CDB	25.0					25.0					25.0					25.0									
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface														
Coil Face Area		m <sup>2</sup>	0.41					0.56					0.92					1.16									
Coil Face Velocity		m/s	1.38					1.15					1.24					1.30									
Air PD. In Coil		Pa	42					31					36					39									
*3 Air PD. Pre		Pa	109					108					109					110									
*3 Air Filter Size 12"x24"x2"		pcs	1					0					2					3									
*3 Air Filter Size 24"x24"x2"		pcs	1					2					2					2									
ESP. Initial		Pa	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500
Total Static Pressure		Pa	401	451	501	601	651	389	439	489	589	639	395	445	495	595	645	400	450	500	600	650	409	459	509	609	659
Fan Type			Forward Curved										Forward Curved														
Model			FDA180CM					FDA180CM					FDA250TM					FDA250TM					FDA280TM				
*4 Fan Motor		kW	0.75	1.1	1.5	1.1	1.5	1.5	2.2	2.2	2.2	3	2.2	3	3	3	3	2.2	3	3	3	3	2.2	3	3	3	3
		Pole	4										4														
Power Supply		V/Ph/Hz	380-415/3/50(60)										380-415/3/50(60)														
FLA		Amp.	1.95	2.68	3.46	2.68	3.46	3.46	5.01	5.01	5.01	6.25	5.01	6.25	6.25	6.25	6.25	5.01	6.25	6.25	6.25	6.25	5.01	6.25	6.25	6.25	6.25
Machine Weight		kg	280	285	287	324	326	363	371	429	434	429	434	434	434	434	429	434	434	434	434	429	434	434	434	434	
		kg	298	303	305	341	343	385	393	453	458	453	458	458	458	458	453	458	458	458	458	453	458	458	458	458	
Outlet Sound Level (Pressure)		dB(A)	64	65	66	68	69	65	66	67	68	69	61	63	64	67	68	63	64	65	67	67	64	65	65	67	68
		dB(A)	59	60	61	63	64	60	61	62	64	65	56	58	59	62	63	58	59	60	62	63	60	61	61	63	63
Standard Series PCB		Model/pcs	EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 3pc									
Expansion Valve		Model/pcs	EKEX200 / 1pc					EKEX250 / 1pc					EKEX400 / 1pc					EKEX500 / 1pc									
Dimension (WxDxH)		m	1.1 x 2.0 x 0.9					1.4 x 2.0 x 0.9					1.4 x 1.9 x 1.2					1.7 x 1.9 x 1.2									
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm														
Piping Connections		Liq. pipe	mm φ9.5 (Brazeing Connection)					mm φ9.5 (Brazeing Connection)					mm φ12.7 (Brazeing Connection)					mm φ15.9 (Brazeing Connection)									
		Gas pipe	mm φ19.1 (Brazeing Connection)					mm φ22.2 (Brazeing Connection)					mm φ28.6 (Brazeing Connection)					mm φ28.6 (Brazeing Connection)									
		Drain pipe	mm φ42 (DN32)					mm φ42 (DN32)					mm φ42 (DN32)					mm φ42 (DN32)									
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve														
Capacity Index			200					250					400					500									

Model			AHUR32CBLJ/DBLJ/DBBLJ					AHUR40CBLJ/DBLJ/DBBLJ					AHUR48CBLJ/DBLJ/DBBLJ					AHUR60CBLJ/DBLJ/DBBLJ					
Total Cooling Capacity	*1 Net	kW	104.4	104.2	104.0	103.7	103.5	140.1	139.9	139.7	139.2	138.9	156.8	156.6	156.3	155.9	155.6	203.9	203.6	203.3	202.6	202.2	
Total Sensible Cooling Capacity		kW	34.5	34.3	34.1	33.8	33.6	46.8	46.6	46.4	45.9	45.6	52.3	52.1	51.8	51.4	51.1	68.5	68.2	67.9	67.2	66.8	
Total Cooling Capacity	*2 Gross	kW	106.7					142.5					159.7					207.4					
Total Sensible Cooling Capacity		kW	36.8					49.2					55.2					72.0					
Total Heating Capacity	*1 Net	kW	72.0	72.2	72.4	72.8	73.0	95.7	95.9	96.1	96.6	96.9	107.5	107.7	108.0	108.4	108.7	143.5	143.8	144.1	144.8	145.2	
Total Heating Capacity	*2 Gross	kW	69.7					93.3					104.6					140.0					
Air Flow		cmh/m <sup>3</sup> /min	8160/136					10920/182					12240/204					16380/273					
On Coil	Cooling	*CDB/°CWB	33/28					33/28					33/28					33/28					
Off Coil		*CDB/°CWB	19.0/17.6					19.0/17.6					19.0/17.6					19.4/18.0					
On Coil	Heating	*CDB	0					0					0					0					
Off Coil		*CDB	25.0					25.0					25.0					25.0					
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface										
Coil Face Area		m <sup>2</sup>	1.61					2.25					2.25					3.06					
Coil Face Velocity		m/s	1.41					1.35					1.51					1.49					
Air PD. In Coil		Pa	46					42					51					48					
*3 Air PD. Pre		Pa	111					110					111					113					
*3 Air Filter Size 12"x24"x2"		pcs	2					3					3					5					
*3 Air Filter Size 24"x24"x2"		pcs	4					6					6					6					
ESP. Initial		Pa	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	250	300	350	450	500	
Total Static Pressure		Pa	406	456	506	606	656	402	452	502	602	652	412	462	512	612	662	411	461	511	611	661	
Fan Type			Forward Curved										Forward Curved										
Model			FDA315TM					FDA400TM					FDA400TM					FDA500TM					
*4 Fan Motor		kW	3	4	4	3	4	5.5	4	5.5	5.5	5.5	7.5	4	5.5	5.5	5.5	7.5	4	5.5	5.5	5.5	7.5
		Pole	4										4										
Power Supply		V/Ph/Hz	380-415/3/50(60)										380-415/3/50(60)										
FLA		Amp.	6.25	8.47	8.47	6.25	8.47	11.4	8.47	11.4	11.4	11.4	14.6	8.47	11.4	11.4	11.4	14.6	8.47	11.4	11.4	11.4	14.6
Machine Weight		kg	543	555	555	717	729	752	772	795	795	795	968	772	795	795	795	968	772	795	795	795	968
		kg	573	585	585	749	761	784	807	830	830	830	1006	807	830	830	830	1006	807	830	830	830	1006
Outlet Sound Level (Pressure)		dB(A)	70	71	72	74	74	70	71	71	73	74	71	71	72	73	73	69	70	71	73	73	
		dB(A)	66	67	68	69	70	66	66	67	68	69	66	67	67	68	69	65	66	67	68	69	
Standard Series PCB		Model/pcs	EKEQFCBAV3 / 2pc					EKEQFCBAV3 / 2pc					EKEQFCBAV3 / 3pc					EKEQFCBAV3 / 3pc					
Expansion Valve		Model/pcs	EKEX400 / 2pc					EKEX500 / 2pc					EKEX400 / 3pc					EKEX500 / 3pc					
Dimension (WxDxH)		m	1.7 x 2.3 x 1.5					1.9 x 1.9 x 1.8					1.9 x 2.4 x 1.8					2.3 x 2.0 x 2.0					
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm										
Piping Connections		Liq. pipe	mm φ12.7 (Brazeing Connection)					mm φ15.9 (Brazeing Connection)					mm φ12.7 (Brazeing Connection)					mm φ15.9 (Brazeing Connection) x3					
		Gas pipe	mm φ28.6 (Brazeing Connection)					mm φ28.6 (Brazeing Connection)					mm φ28.6 (Brazeing Connection)					mm φ28.6 (Brazeing Connection) x3					
		Drain pipe	mm φ42 (DN32)					mm φ42 (DN32)					mm φ42 (DN32)					mm φ42 (DN32)					
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve										
Capacity Index			800					1000					1200					1500					

### Conversion formular

$$kcal/h = kW \times 860$$

$$Btu/h = kW \times 3412$$

$$cfm = m^3/min \times 35.3$$

### Notes:

- \*1. Net capacity includes indoor fan heat
- \*2. Gross capacity does not include indoor fan heat
- \*3. With pre filter, synthetic R29 class G3 (washable)
- \*4. It is necessary to reduce piping size by reducer when connection (19.1 -> 15.9, 22.2 -> 19.1, 28.6 -> 22.2, 34.9 -> 28.6)
5. Air temperature control via an external MicroTech III controller
6. Connection Ratio:

### Connection ratio (Heating & Cooling):

System Pattern	Total CR	VRV indoor	AHU
Only AHU (Pair AHU & Multi AHU)	90-110%	-	90-110%

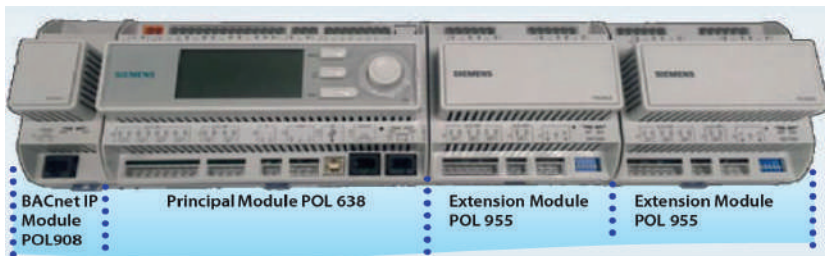
### Connection ratio (Cooling Only):

System Pattern	Total CR	VRV indoor	AHU
Only AHU (Pair AHU)	50-110%	-	50-110%



## MicroTech III information

### MicroTech III Controller (Option)



#### Features of MicroTech III

- BACnet IP Module for integration of MicroTech III AHU Controller in networks featuring the BACnet Protocol. Compatible with Daikin intelligent Touch Manager (iTM) or 3rd party BMS.
- Principal Module POL 638 and Extension Module POL 955 have selected analog and digital I/O contacts programmed for control and monitoring of sensors and other related devices in a VRV Outdoor Air Series AHU.
- HMI screen on the Principal Module POL 638 allows easy testing and commissioning and even without a centralised controller or 3rd party BMS.

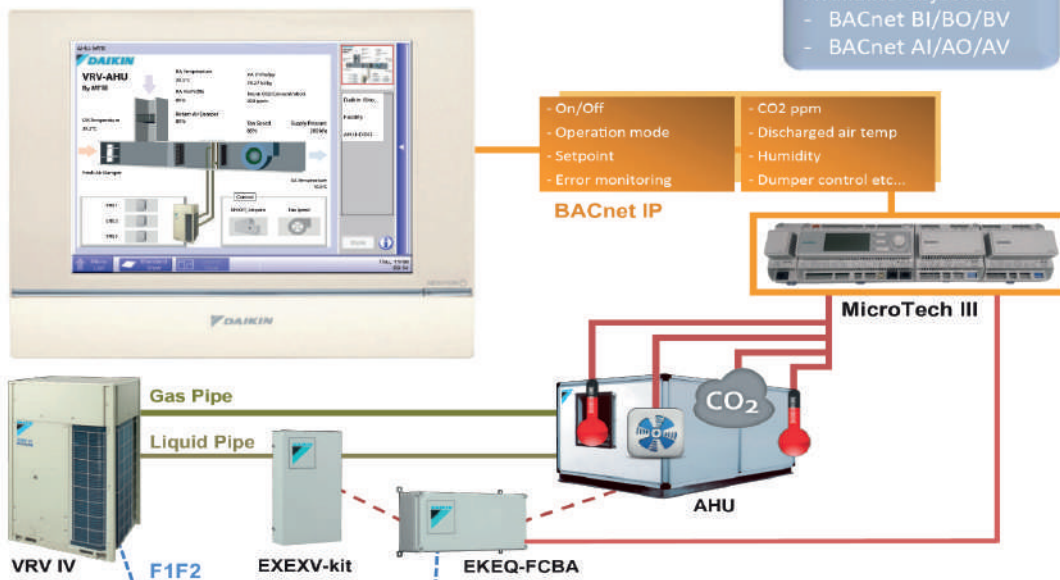
#### Functions of MicroTech III

1. Leaving temperature control using supply air sensor
2. Air quality control (CO2 Levels) by controlling mixing damper depending on CO2 set point that defined by user.
3. Fan airflow control by controlling fan speed through
  - i. Direct (w/o inverters).
  - ii. DirectVar (with inverters).
  - iii. Analog controlled variable speed drive with digital release.
  - iv. Pressure control to meet the pressure set points in the duct.
4. Monitoring points for other features
  - i. Room humidity
  - ii. Electric heating coil
  - iii. Outside, room and return temperature
  - iv. VRV alarm

#### MicroTech III can connect to intelligent Touch Manager.

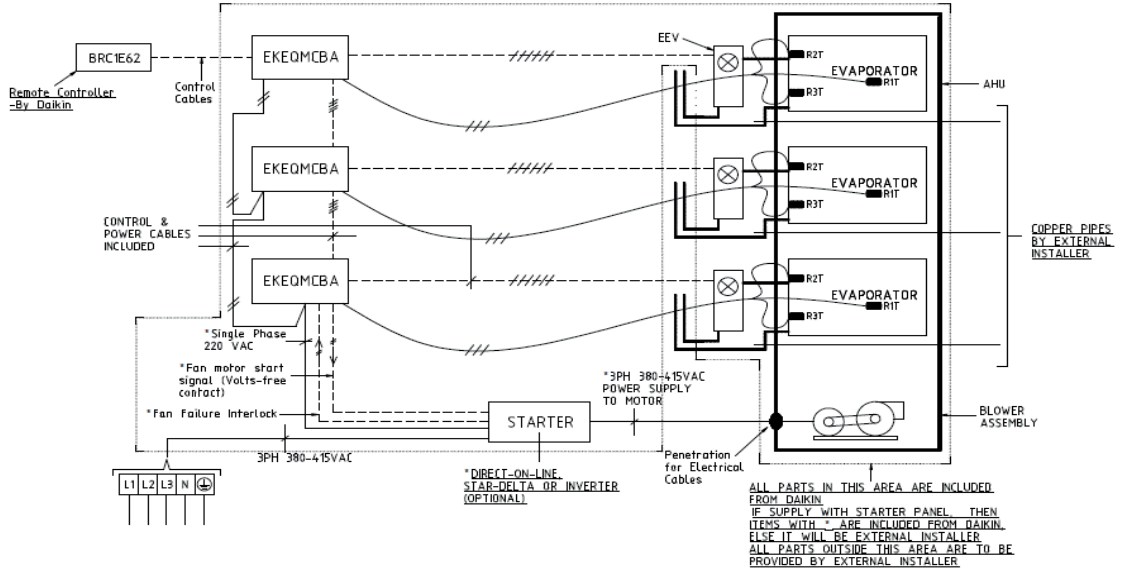
Monitor and control devices related to AHU such as Fan, sensors, and damper

Available object list  
 - BACnet BI/BO/BV  
 - BACnet AI/AO/AV

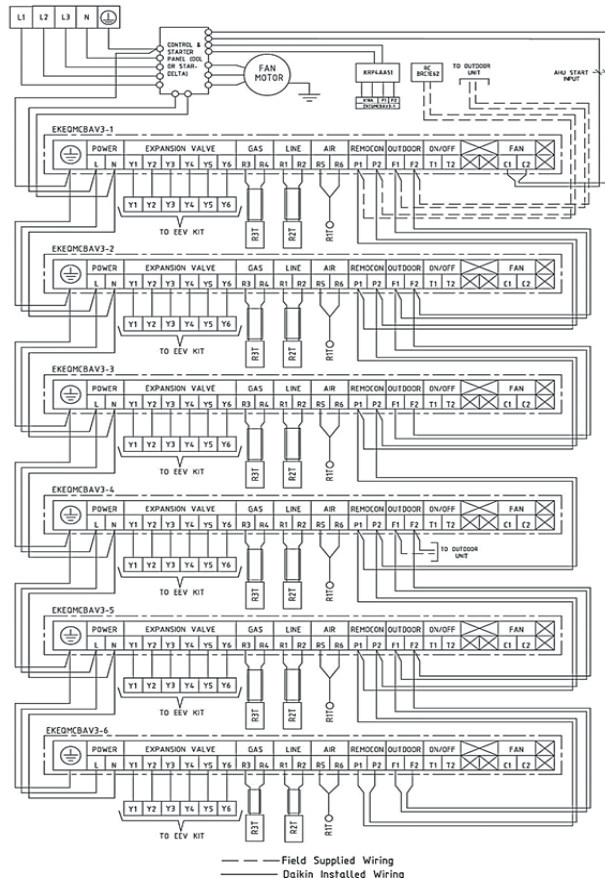


## VRV AHU Standard Series Schematic Diagram

Schematic Diagram of Standard Series to Show Line of Responsibility of Daikin & External Installer



## VRV AHU Standard Series Wiring Diagram (AHUR120CBVJ/DBVJ/DBBVJ)

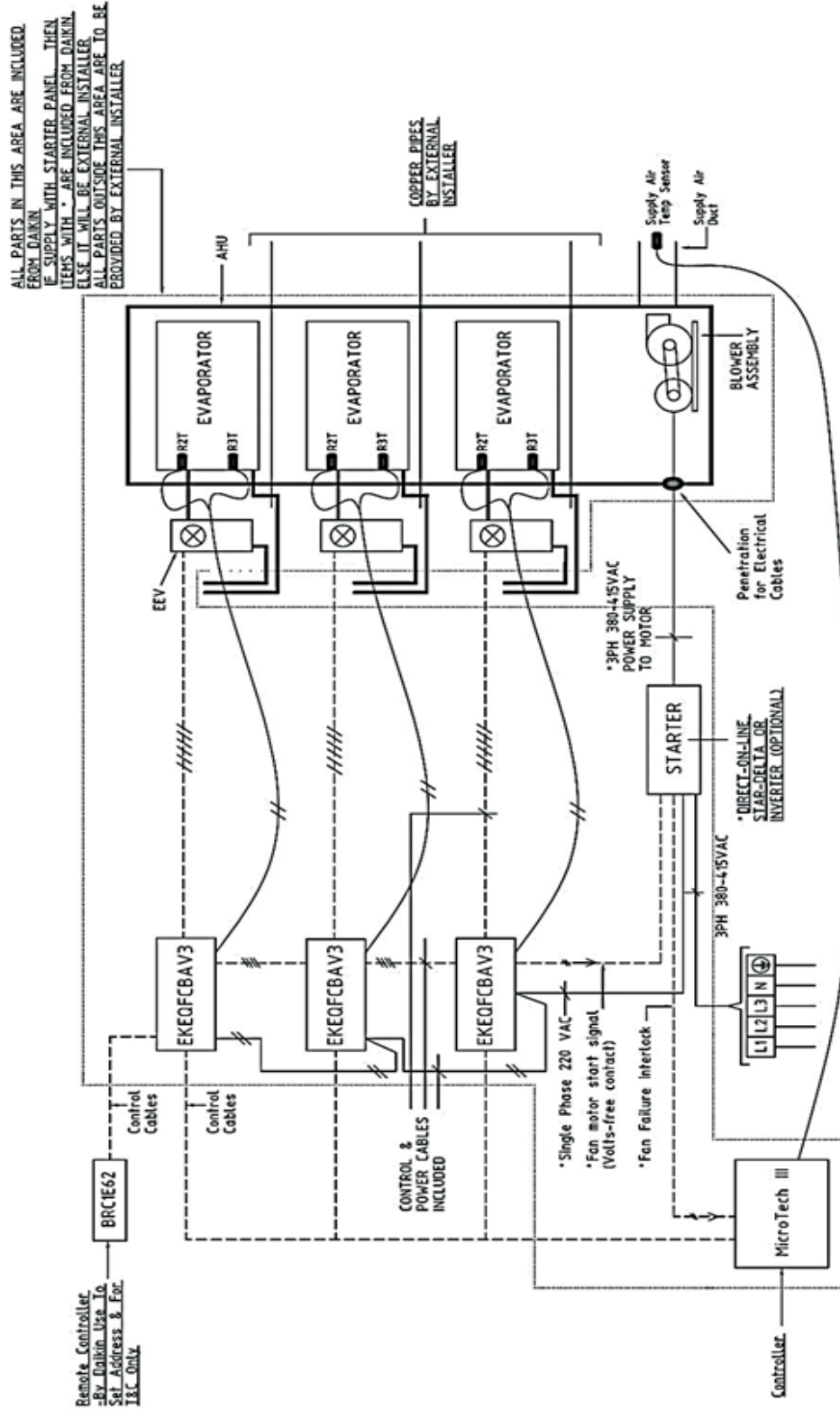


Note:

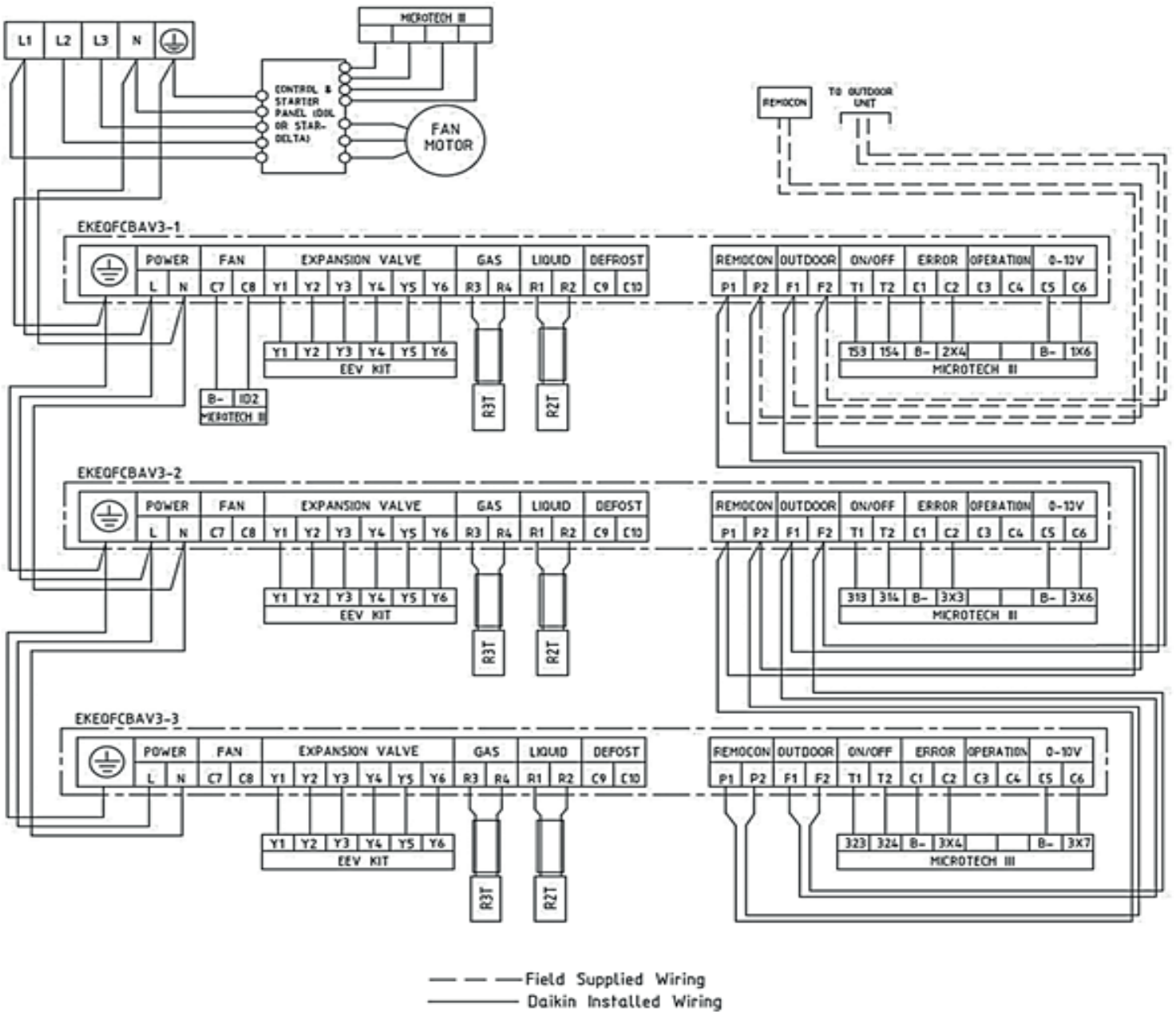
For unit without starter panel/kits, the connected wiring to the part will not be supplied respectively

## VRV AHU Outdoor Air Series Schematic Diagram

Schematic Diagram of Outdoor Air Series to Show Line of Responsibility of Daikin & External Installer



VRV AHU Outdoor Air Series Wiring Diagram (CBLJ/DBLJ/DBBLJ)

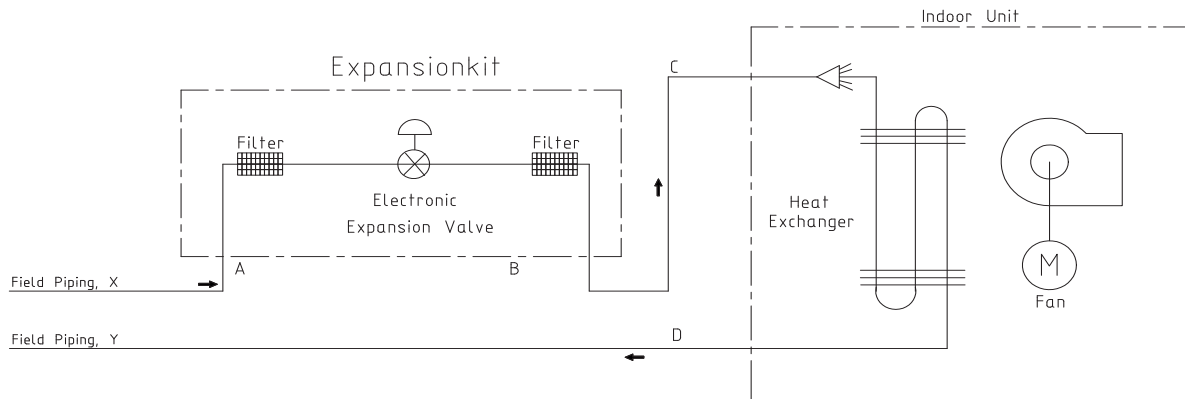


Note :

For unit without starter panel/kits/ MicroTech III control panel, the connected wiring to the part will not be supplied respectively



### Refrigerant Pipe Diameter for VRV AHU



#### VRV AHU Series

AHUR xx CBVJY1/ DBVJY1/ DBBVJY1	( Standard, 380-415V/ 3Φ/ 50Hz)
AHUR xx CBLJY1/ DBLJY1/ DBBLJY1	( OA, 380-415V/ 3Φ/ 50Hz)
AHUR xx CBVJY2/ DBVJY2/ DBBVJY2	( Standard, 380V/ 3Φ/ 60Hz)
AHUR xx CBLJY2/ DBLJY2/ DBBLJY2	( OA, 380V/ 3Φ/ 60Hz)
AHUR xx CBVJY3/ DBVJY3/ DBBVJY3	( Standard, 460V/ 3Φ/ 60Hz)
AHUR xx CBLJY3/ DBLJY3/ DBBLJY3	( OA, 460V/ 3Φ/ 60Hz)
AHUR xx CBVJY4/ DBVJY4/ DBBVJY4	( Standard, 230V/ 3Φ/ 60Hz)
AHUR xx CBLJY4/ DBLJY4/ DBBLJY4	( OA, 230V/ 3Φ/ 60Hz)



VRV AHU HP	Standard Series	Outdoor Air Series	Field Pipe	Daikin Supplied	Connection by Daikin		Daikin Supplied	Field Pipe
			X	A	B	C	D	Y
6	●		9.5	9.5	9.5	9.5	19.1	19.1
8	●	●	9.5	9.5	9.5	9.5	19.1	19.1
10	●	●	9.5	9.5	9.5	9.5	22.2	22.2
16	●	●	12.7	12.7	12.7	12.7	28.6	28.6
20	●	●	15.9	15.9	15.9	15.9	28.6	28.6
24		●	9.5	9.5	9.5	9.5	19.1	19.1
32	●	●	12.7	12.7	12.7	12.7	28.6	28.6
40	●	●	15.9	15.9	15.9	15.9	28.6	28.6
48	●	●	12.7	12.7	12.7	12.7	28.6	28.6
60	●	●	15.9	15.9	15.9	15.9	28.6	28.6
80	●		15.9	15.9	15.9	15.9	28.6	28.6
100	●		15.9	15.9	15.9	15.9	28.6	28.6
120	●		15.9	15.9	15.9	15.9	28.6	28.6

**NOTES**

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### Warning



- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorized parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

### Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the seashore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the seashore, contact your local distributor.

### Dealer

#### PT. DAIKIN AIRCONDITIONING INDONESIA

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**Daikin Contact Center : 0800 1 081 081 (Toll Free)**



**0800 1 081 081**  
BEBAS PULSA

**365**  
hari/tahun

**Jam Beroperasi :**  
Senin - Jumat :  
07:00 - 19:00 WIB  
Sabtu - Minggu & Libur Nasional :  
08:00 - 17:00 WIB