

VRV AHU System

STANDARD SERIES AHUR-CAVJ/DAVJ/DABVJ
OUTDOOR AIR SERIES AHUR-CALJ/DALJ/DABLJ





Airport



Lobby



Hospital



Factory

VRV AHU Applications



Shopping Mall



Sports Hall



Showroom



Warehouse

VRV AHU

An industry first, the VRV air handling unit has been designed and engineered by Daikin to create new opportunities for applying VRV into retail, offices, cinemas and commercial applications with large open spaces.

- Available in two types, Standard Series or Outdoor Air Series from 6HP to 60HP
- Daikin's VRV AHU are paired with VRV IV Heat Pump outdoor units for superior EER & COP performance
- Harnesses all features of VRV IV Heat Pump including Variable Refrigerant Technology (VRT)*, Daikin's Inverter Technology and connection to building management systems.
- ESP of up to 500Pa enables flexible ductwork design
- Ultimate installation flexibility
 - Double skin with either 25mm or 50mm thick PU insulated panels with thermal break options.
 - Long pipe runs of up to 165m**
 - Custom configurations are also available to suit site constraints

*Only applies to Standard Series models

**Only applies to Standard Series models, Outdoor Air Series models allow only up to 50m pipe runs



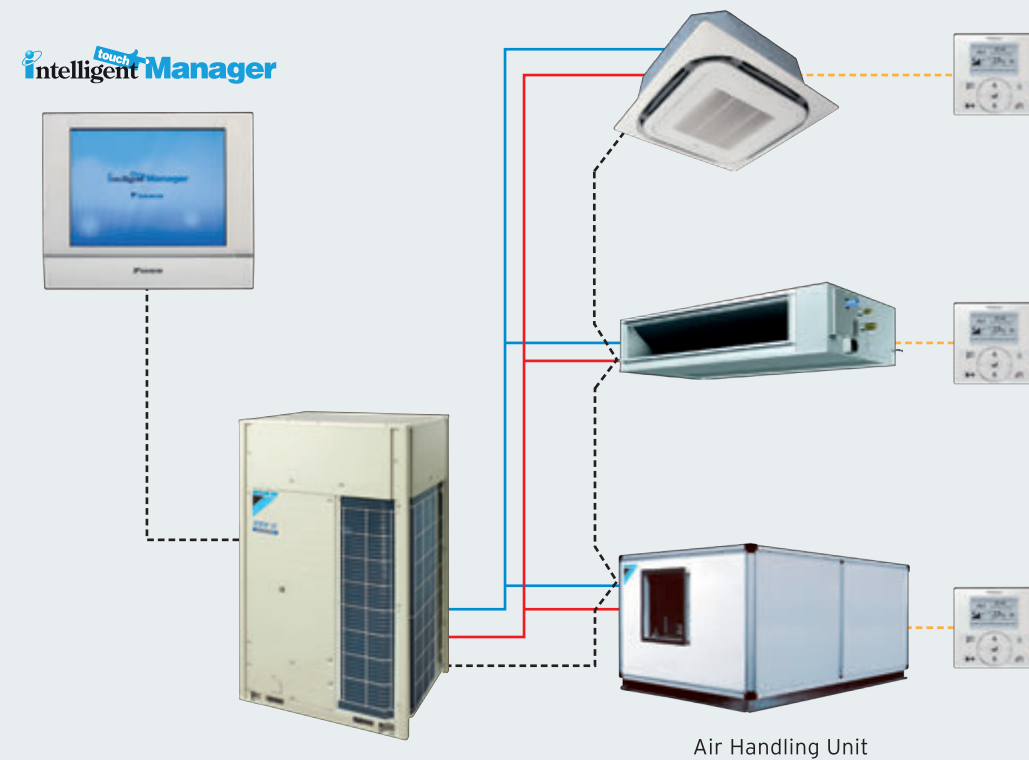
STANDARD SERIES

Airflow Range: 900-7,800 L/s
Capacity Range: 15.4-167.6 kW

OUTDOOR AIR SERIES

Airflow Range: 566-4,550 L/s
Capacity Range: 25.7-202.6 kW

VRV AHU System Connection Overview



- Control Wiring
- Remote Control Wiring (P₁P₂)
- Liquid
- Gas

Total Daikin Solution



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 Dakin communication devices and even BMS.
- Can be placed indoor or outdoor*

* Optional items required

Benefits of using VRV AHU

- Quality 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 500Pa* (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%)

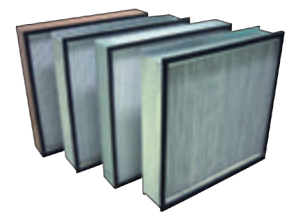
* For ESP more than 500Pa, please contact Daikin's Sales Office

Options

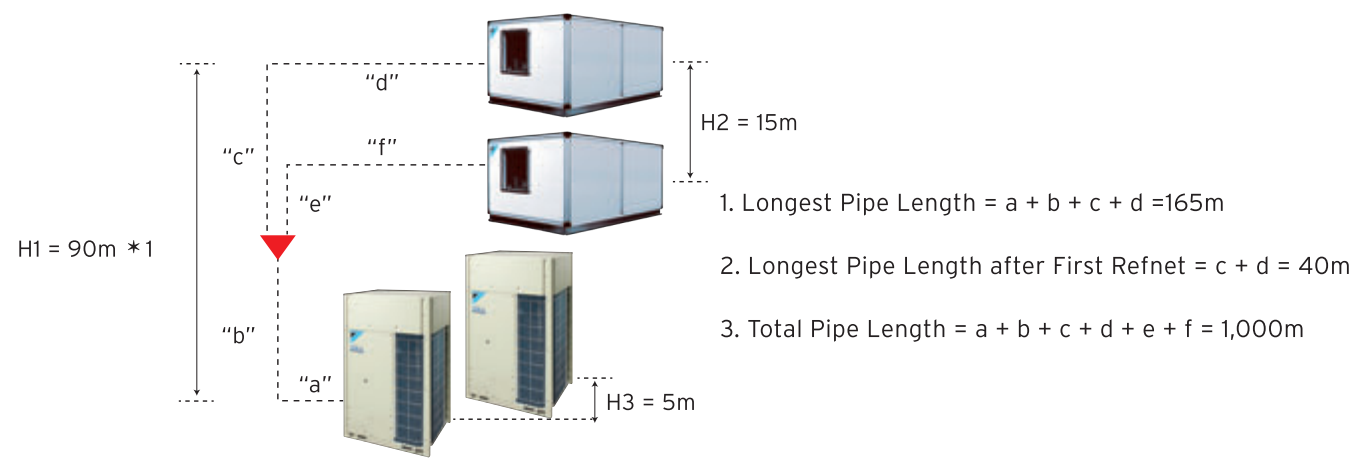
Wide ranges of options are available to meet your design requirement.

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
 - ✓ Flame Proof
- AHU fin material
 - ✓ Copper
 - ✓ Blue fin
 - ✓ Heresite coating
- AHU coil frame
 - ✓ Stainless steel
- AHU drain pan type (G2-HI4)
 - ✓ Powder coated galvanised iron (GI)
- AHU air filter type
 - ✓ Extra filter
 - ✓ Synthetic
 - ✓ Bag
 - ✓ HEPA
 - ✓ Carbon
 - ✓ Cartridge
- Special option
 - ✓ Mixing box
 - ✓ Outdoor roof
 - ✓ Aluminium, stainless steel or GI panels
 - ✓ Heat Pipe
 - ✓ Heat recovery component
 - ✓ Custom paint options on the casing panels
 - ✓ VFD for motor
- Customization
 - ✓ Air flow
 - ✓ Capacity
 - ✓ ESP
 - ✓ Discharge direction
 - ✓ Piping outlet
 - ✓ Dimension



VRV AHU System Structure

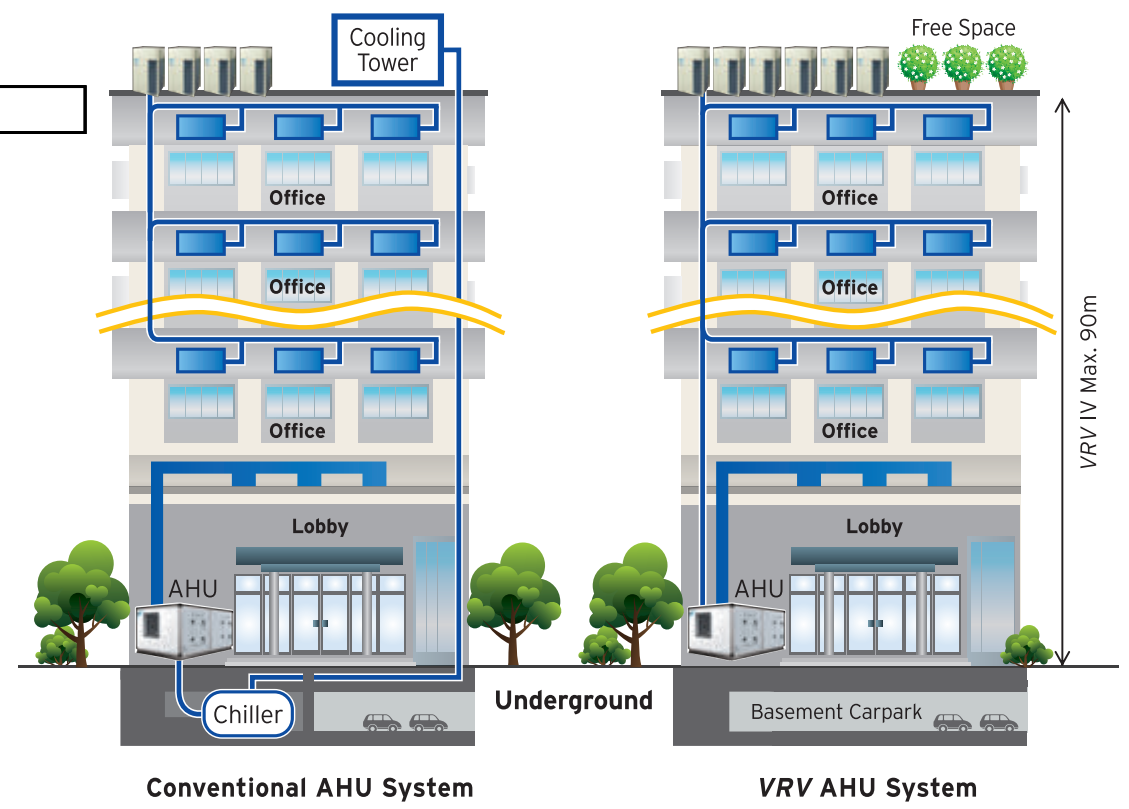


* 1 When level differences are 50m or more, the diameter of the main liquid piping size must be increased. If the outdoor unit is above the indoor unit, a dedicated setting on the outdoor unit is required. Please contact Daikin's Sale Office for more information.

Note: For Outdoor Air Series models, H1 = 30m & Longest Pipe Length = a + b + c + d = 50m

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

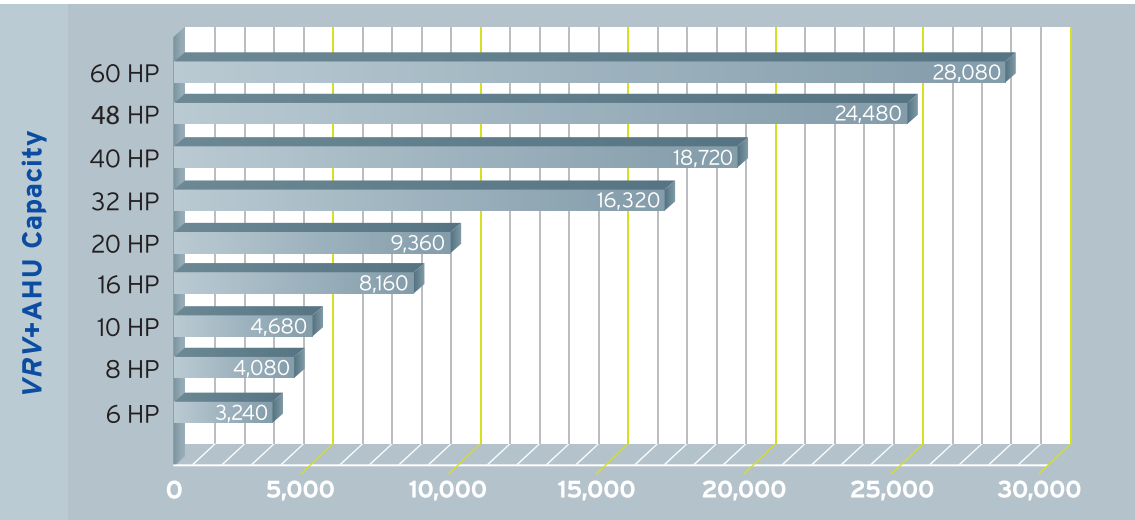
Conventional AHU System	VRV AHU System
Require Frequent Maintenance (Cooling Tower + Chiller)	Easy Maintenance (same as common A/C System)
Higher Cost Due to Frequent Maintenance	No Additional Maintenance Cost
Require Larger Installation Space (AHU, Chiller, Cooling Tower)	Require Small Installation 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)



Standard Series AHUR-CAVJ/DAVJ/DABVJ

VRV AHU Standard Series Range

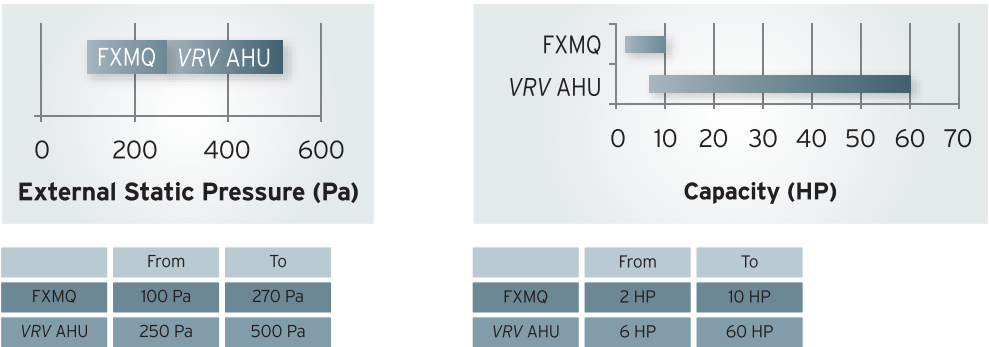
The VRV AHU standard series are available from the capacity range of 6HP to 60HP, also with airflow ranging from 3,240 CMH - 28,080 CMH.



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.



*For ESP more than 500Pa, please contact Daikin's Sales Office

VRV AHU Operation Range

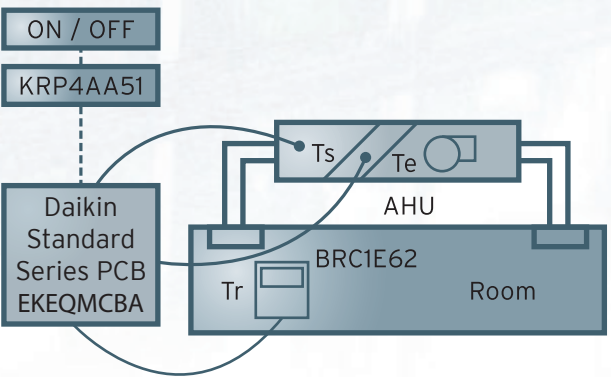
VRV AHU AHUR-CAVJ/DAVJ/DABVJ operation is similar as other VRV indoor unit. Following table is the list of operation range limit for AHU unit.

		Ambient Temperature	
		Cooling	Heating
Entering Air Temperature On Heat Exchanger AHU	Minimum	20°C DB / 14°C WB	14°C DB
	Maximum	32°C DB / 24°C WB	24°C DB
Outdoor Unit	Minimum	-5°C DB	-20°C WB
	Maximum	49°C DB	15.5°C WB
Standard Series PCB	Minimum	-10°C WB	
	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
Tr = Room temperature
Te = Evaporating temperature
AHU = Air Handling Unit

VRV AHU Standard Series Evaporator Coil, Expansion Valve and PCB

AHUR-CAVJ/DAVJ/DABVJ standard series model use DX coil. Each DX coil will be connected to one external expansion valve (EKEXV) and controlled by one Standard Series PCB (EKEQMCBA).

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 (EKEQMCBA)

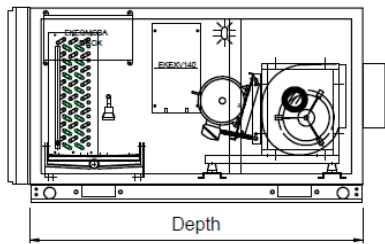


VRV AHU Expansion Valve

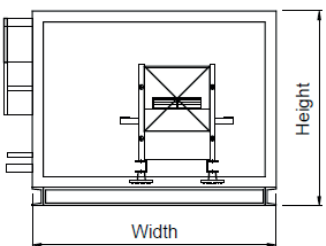
			EKEXV140	EKEXV200	EKEXV250	EKEXV400	EKEXV500
Casing	Colour		Ivory white				
	Material		Metal				
Dimensions	Unit	H x W x D mm	401 x 215 x 78				
Weight	Unit	Kg	2.9				
Operation Range	Cooling	Min. ~ Max. °CDB	-5.0 ~ 46.0				
Refrigerant	Type		R-410A				
Piping connections	Liquid	Type	Braze connection				
		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

		EKEQMCBA
Application		Multi
Outdoor Unit		VRV IV
Casing	Colour	White grey
	Material	Resin
Dimensions	Unit	H x W x D mm
Weight	Unit	Kg
Operation Range	Cooling	Min. ~ Max. °CDB
Power Supply	Phase	1
	Frequency Hz	50/60
	Voltage V	230/220



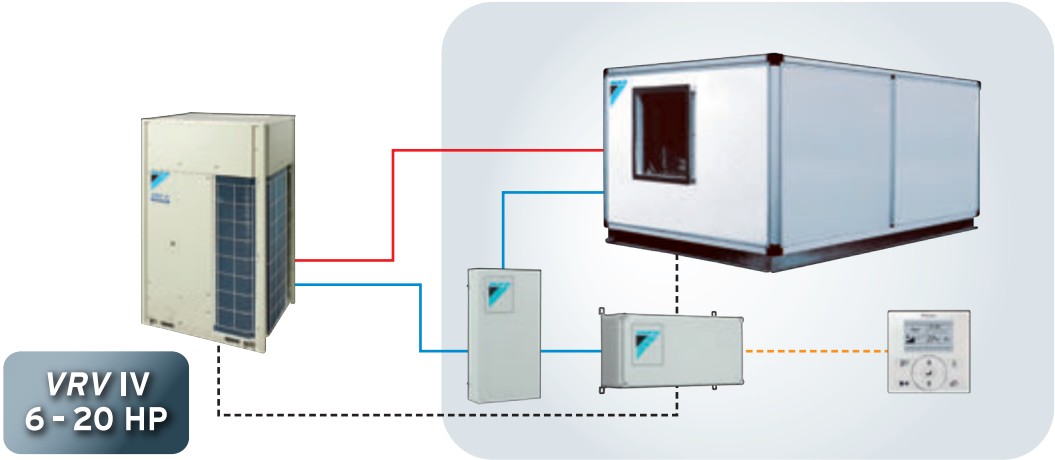
Right View



Front View

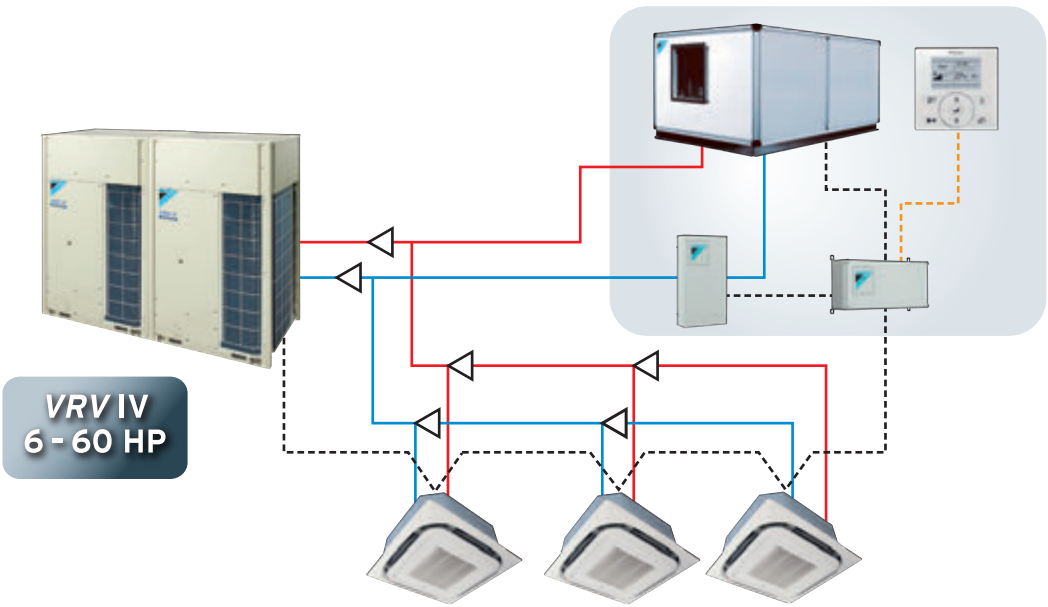
Standard Series AHUR-CAVJ/DAVJ/DABVJ

VRV Connection to AHU Configuration

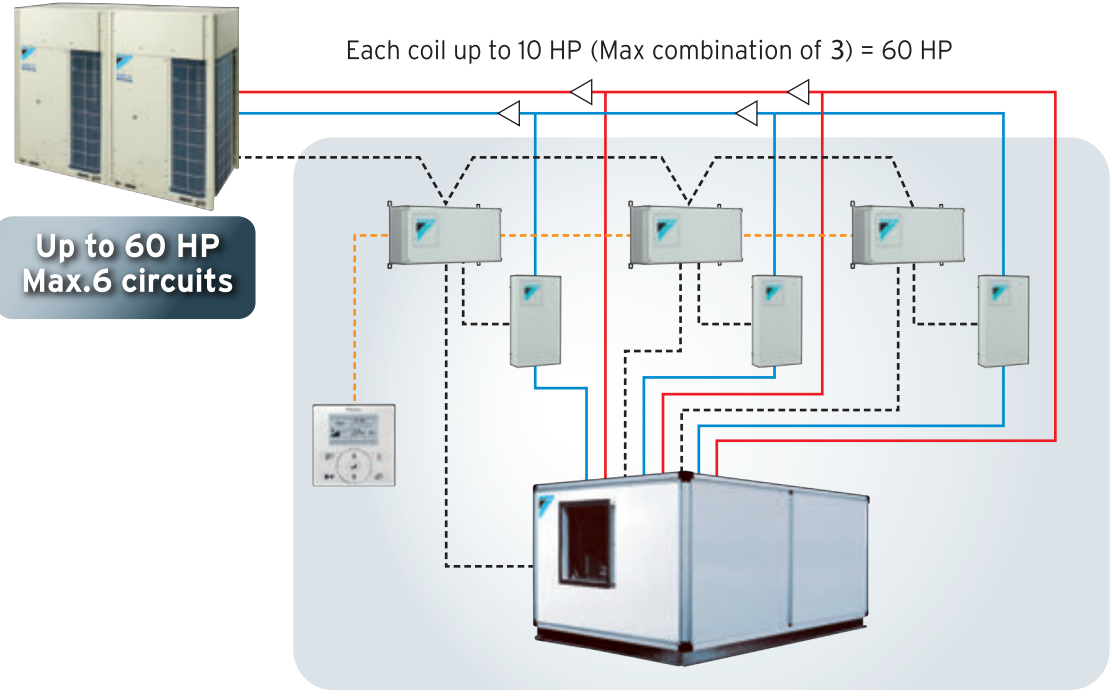


Single VRV System Connection Configuration

Standard Series AHUR-CAVJ/DAVJ/DABVJ



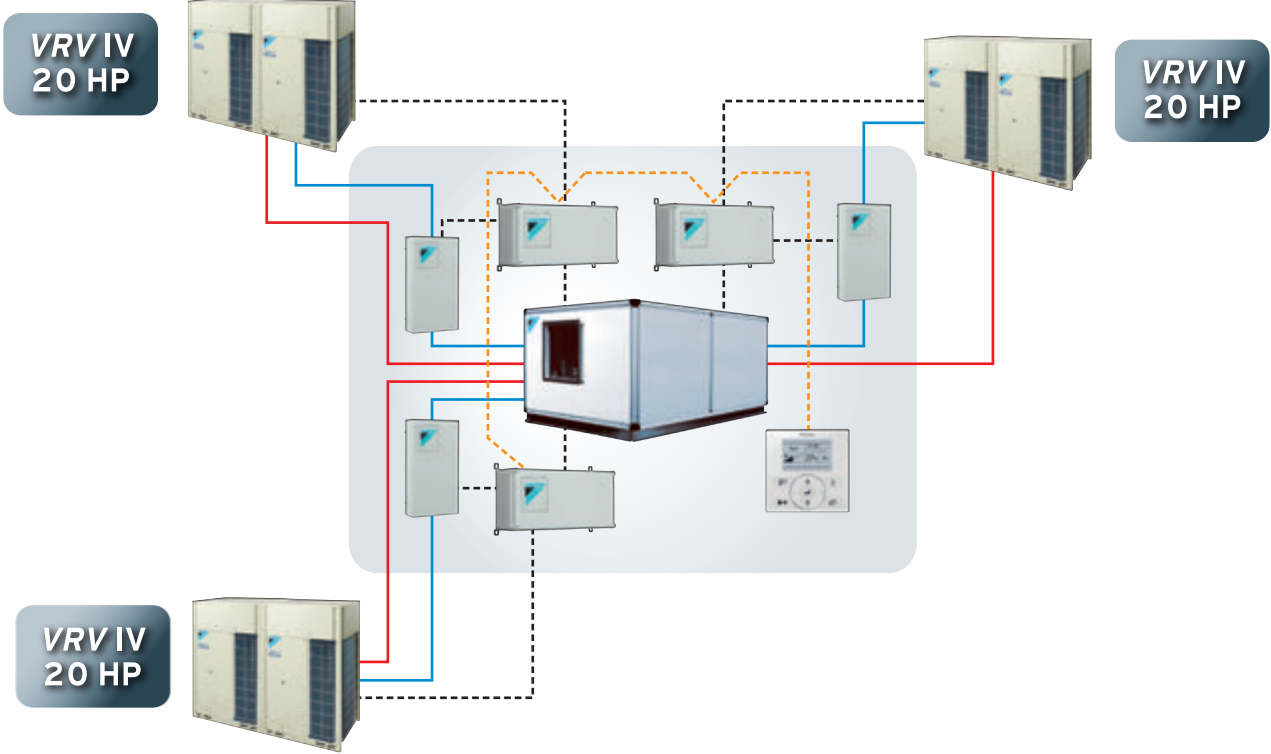
Multiple Connections with Other Indoor Unit Configuration
* For AHU more than 60 HP capacity, alternative option is available.



VRV Combined System Connection Configuration

* In case of more than 60 HP system, connection is multiple VRV system.

..... Control Wiring Remote Control Wiring (P₁P₂) — Liquid — Gas



Multiple VRV Systems Connection Configuration

Standard Series AHUR-CAVJ/DAVJ/DABVJ

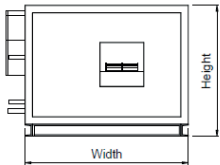
MODEL NAME:		AHUR_CAVJ / AHUR_DAVJ / AHUR_DABVJ
1	CASING	AHUR_CAVJ : 25mm Thickness Double Skinned Panel
		AHUR_DAVJ : 50mm Thickness Double Skinned Panel
		AHUR_DABVJ : 50mm Thickness Double Skinned Panel (Thermal Break)
	Metal	0.5mm Thickness White Color Bond Galvanized Steel Sheet
	Insulation	25mm / 50mm Thickness Polyurethane Foam 40kg/m ³ 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 ² G or below
4	FAN	
	Type	Double Inlet Forward Curved Centrifugal Belt Driven Fan
	Wheel	Galvanized Steel Sheet
	Housing	Galvanized Steel Sheet
	Frame	Galvanized Angular Bars
5	MOTOR	Three-Phase Induction Motor Totally Enclosed Fan-Cooled Type Protection = IP55, Insulation Class = F, Efficiency: IE3
6	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	EKEQMCBAV3 & 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.

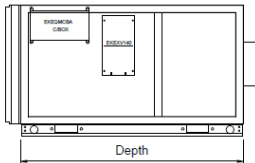
Drawings and Dimension of AHU

Model	Dimension W x D x H (mm)	Model	Dimension W x D x H (mm)
AHUR06-CAVJ	1100 X 1500 x 880	AHUR06-DAVJ/DABVJ	1150 X 1550 x 930
AHUR08-CAVJ	1400 X 1500 x 880	AHUR08-DAVJ/DABVJ	1450 X 1550 x 930
AHUR10-CAVJ	1400 X 1500 x 880	AHUR10-DAVJ/DABVJ	1450 X 1550 x 930
AHUR16-CAVJ	1400 X 1600 x 1180	AHUR16-DAVJ/DABVJ	1450 X 1650 x 1230
AHUR20-CAVJ	1400 X 1600 x 1480	AHUR20-DAVJ/DABVJ	1450 X 1650 x 1530
AHUR32-CAVJ	1900 X 1900 x 1480	AHUR32-DAVJ/DABVJ	1950 X 1950 x 1530
AHUR40-CAVJ	1900 X 2000 x 1780	AHUR40-DAVJ/DABVJ	1950 X 2050 x 1830
AHUR48-CAVJ	2300 X 2000 x 1780	AHUR48-DAVJ/DABVJ	2350 X 2050 x 1830
AHUR60-CAVJ	2500 X 2000 x 1980	AHUR60-DAVJ/DABVJ	2550 X 2050 x 2030

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



Front View



Right View

Standard Series AHUR-CAVJ/DAVJ/DABVJ

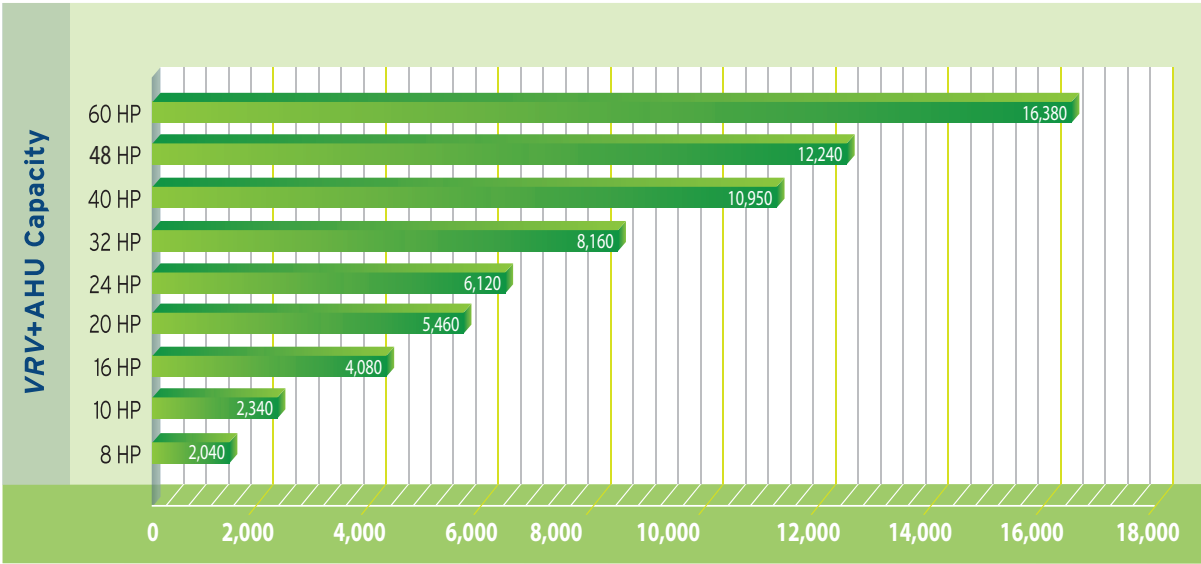
AHUR-CAVJ/DAVJ/DABVJ SPECIFICATIONS

Model			AHUR06CAVJ/DAVJ/DABVJ					AHUR08CAVJ/DAVJ/DABVJ					AHUR10CAVJ/DAVJ/DABVJ					AHUR16CAVJ/DAVJ/DABVJ					AHUR20CAVJ/DAVJ/DABVJ																								
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	56.6	56.4	56.2	55.8	55.5																				
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	54.0	53.8	53.6	53.1	52.9																				
Total Cooling Capacity	*2 Gross	kW	16.9					23.7					28.2					47.5					59.0																								
Total Sensible Cooling Capacity		kW	11.6					16.3					19.7					32.8					39.8																								
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	63.9	64.1	64.3	64.8	65.1																				
Total Heating Capacity	*2 Gross	kW	19.2					26.7					30.8					53.1					61.5																								
Air Flow		cmh/m ³ /min	3240 / 54					4080 / 68					4680 / 78					8160 / 136					9360 / 156																								
On Coil (Rated)	Cooling	°CDB/°CWB	27 / 19					27 / 19					27 / 19					27 / 19					27 / 19																								
On Coil (Rated)	Heating	°CDB	20					20					20					20					20																								
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface															DX.Coil (R410A) φ9.52 mm. Wave surface															DX.Coil (R410A) φ9.52 mm. Wave surface														
Coil Face Area		m ²	0.41					0.56					0.56					0.9					1.24																								
Coil Face Velocity		m/s	2.19					2.01					2.31					2.52					2.1																								
Air PD. In Coil		Pa	126					109					138					160					117																								
*3 Air PD. Pre		Pa	115					114					116					121					116																								
*3 Air Filter Size 12"x24"x2"		pcs	1					0					0					2					0																								
*3 Air Filter Size 24"x24"x2"		pcs	1					2					2					2					4																								
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	490	540	590	690	740	472	522	572	672	722	504	554	604	704	754	531	581	631	731	781	483	533	583	683	733																				
Fan Type			Forward Curved															Forward Curved															Forward Curved														
Model			FDA225CM					FDA250TM					FDA250TM					FDA315TM					FDA355TM																								
*4 Fan Motor		kW	1.5		2.2		1.5		2.2		2.2		3		4		5.5		4		5.5		4		5.5																						
		Pole	4															4															4														
Power Supply		V/Ph/Hz	380-415/3/50(60)															380-415/3/50(60)															380-415/3/50(60)-415/3/50(60)														
FLA		Amp.	3.46		5.01		3.46		5.01		5.01		6.25		8.47		11.4		8.47		11.4		8.47		11.4																						
Machine Weight (25mm / 50mm panel)		kg	248 / 258		253 / 266		282/297		290 / 305		292 / 307		297 / 312		361 / 379		377 / 395		414 / 434		435/455		414 / 434		435/455																						
Outlet Sound Level Pressure (25mm / 50mm)		dB(A)	67/62	68/64	69/65	72/68	73/69	64/59	65/60	66/61	68/63	69/64	64/59	66/61	67/62	69/64	70/65	72/68	73/69	74/70	76/72	77/72	69/64	70/65	71/66	73/68	74/69																				
Standard Series PCB		Model/pcs	EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc					EKEQMCBAV3 / 1pc																								
Expansion Valve		Model/pcs	EKEXV140 / 1pc					EKEXV200 / 1pc					EKEXV250 / 1pc					EKEXV400 / 1pc					EKEXV500 / 1pc																								
Dimension (WxDxH)		m	1.1 x 1.5 x 0.9					1.4 x 2.0 x 0.9					1.4 x 1.5 x 0.9					1.4 x 1.6 x 1.2					1.4 x 1.6 x 1.5																								
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm															Sandwich Panel Thickness 25mm / 50mm / 50mm															Sandwich Panel Thickness 25mm / 50mm / 50mm														
Piping Connections		Liq. pipe	mm	Ø9.5 (Brazing Connection)					Ø9.5 (Brazing Connection)					Ø9.5 (Brazing Connection)					Ø12.7 (Brazing Connection)					Ø15.9 (Brazing Connection)																							
		Gas pipe	mm	Ø19.1 (Brazing Connection)					Ø19.1 (Brazing Connection)					Ø22.2 (Brazing Connection)					Ø28.6 (Brazing Connection)					Ø28.6 (Brazing Connection)																							
		Drain pipe	mm	Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)																							
Refrigerant Control			Electronic Expansion Valve															Electronic Expansion Valve															Electronic Expansion Valve														
Capacity Index			140					200					250					400					500																								

Outdoor Air Series AHUR-CALJ/DALJ/DABLJ

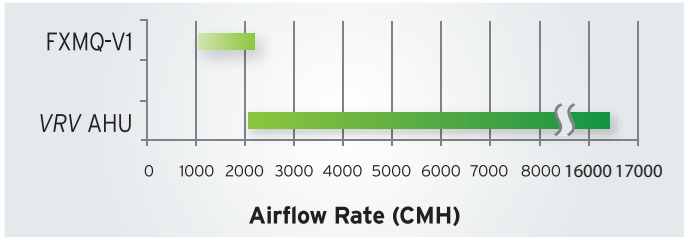
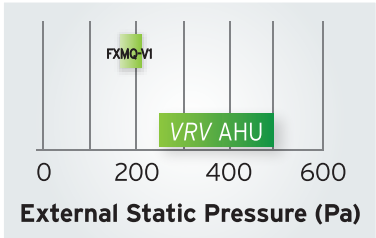
VRV AHU Outdoor Air Series Range

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 and Ceiling Mounted Duct Type.

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



	From	To
FXMQ-V1	185 Pa	205 Pa
VRV AHU	250 Pa	500 Pa

*For ESP more than 500Pa, please contact Daikin's Sales Office

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

VRV AHU Operation Range

VRV AHU AHUR CALJ/DALJ/DABLJ operation is similiar as other VRV indoor unit. Following table is the list of operation range limit for AHU unit.

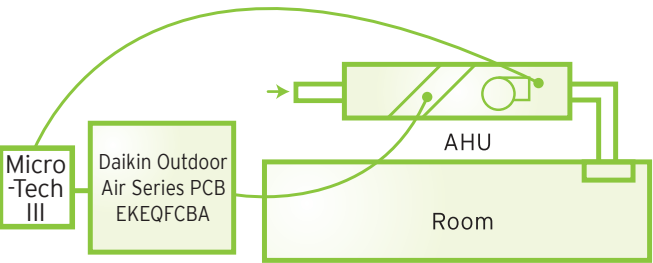
		Ambient Temperature	
		Cooling	Heating
Entering Air Temperature On Heat Exchanger AHU	Minimum	19°C DB	-5°C DB
	Maximum	43°C DB	15°C DB
Outdoor Unit	Minimum	-5°C DB	-20°C WB
	Maximum	49°C DB	15.5°C WB
Outdoor Air Series PCB	Minimum	-10°C WB	
	Maximum	40°C DB	

Outdoor Air Series AHUR-CALJ/DALJ/DABLJ

Possibility X (Td control):

Precise air temperature control via MicroTech III controller. The MicroTech III controller translates the temperature difference between set point and air suction temperature into a reference voltage (0-10V) which is transferred to the Daikin Outdoor Air Series PCB (EKEQFCBA).

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 CALJ/DALJ/DABLJ outdoor air series are using DX coil. Each DX coil will be connected to one external expansion valve (EKEXV) and controlled by one Outdoor Air Series PCB (EKEQFCBA).

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 (EKEQFCBA)



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.

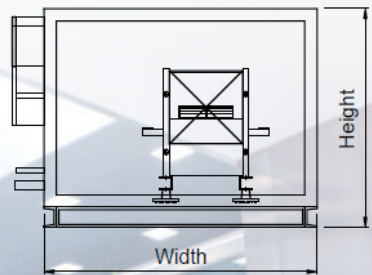
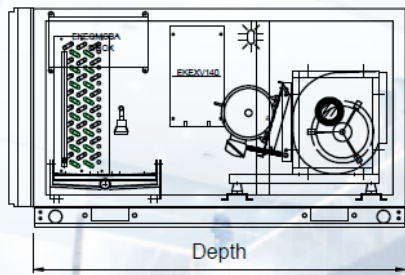
Operating temperature of the Outdoor Air Series PCB is between -10°C and 40°C.

VRV AHU Expansion Valve

			EKEXV200	EKEXV250	EKEXV400	EKEXV500
Casing	Colour		Ivory white			
	Material		Metal			
Dimensions	Unit	H x W x D mm	401 x 215 x 78			
Weight	Unit	Kg	2.9			
Operation Range	Cooling	Min. ~ Max. °CDB	-5.0 ~ 46.0			
Refrigerant	Type		R-410A			
Piping connections	Liquid	Type	Brazed connection			
		OD mm	9.52	12.7	15.9	
	Gas	Type	Brazed connection			
		OD mm	9.52			
	Heat Insulation		Both inlet and outlet			

VRV AHU Outdoor Air Series PCB

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

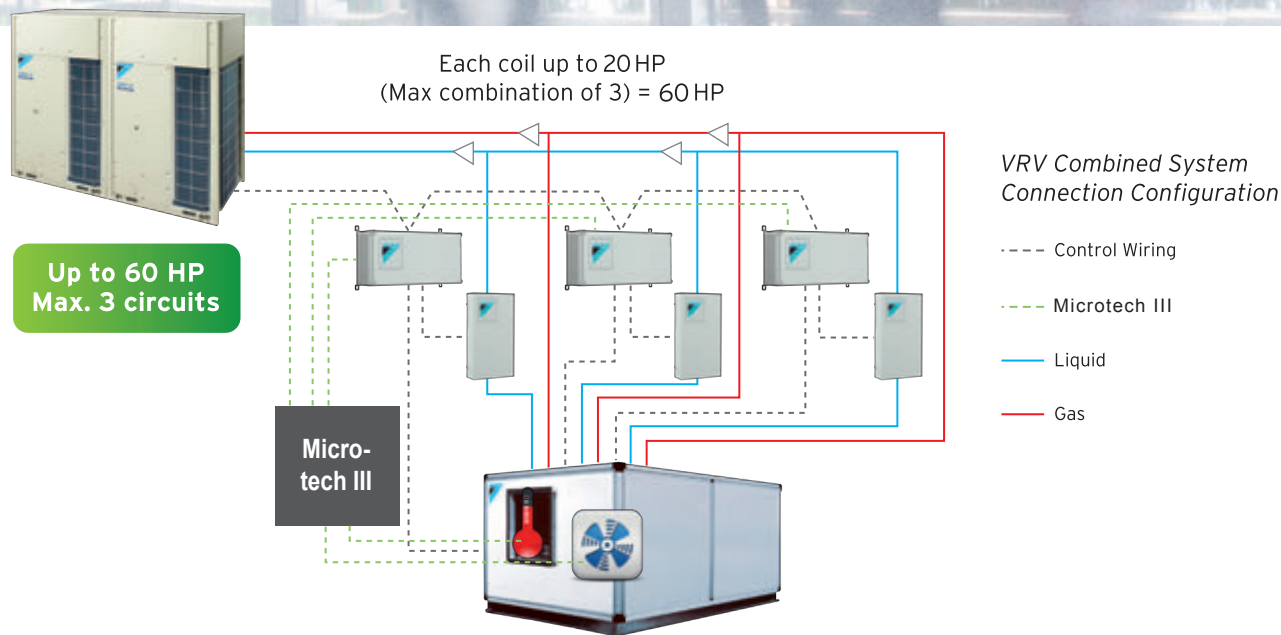
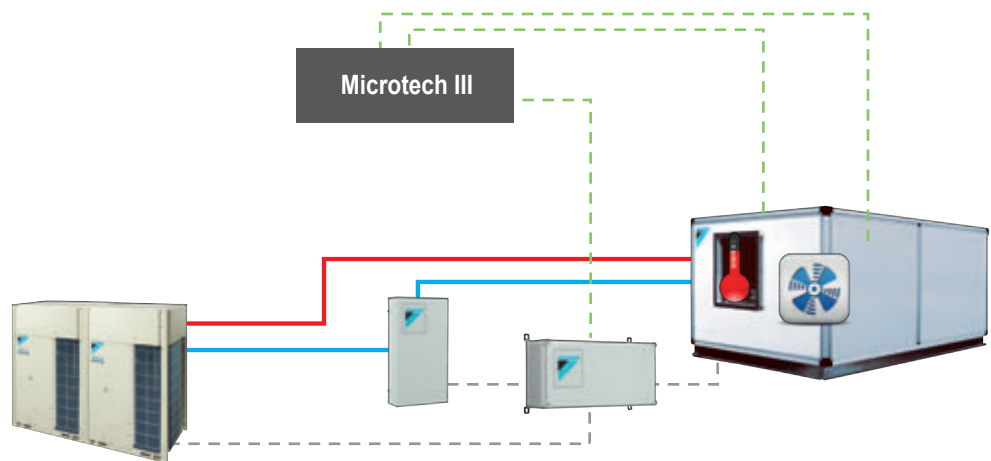


Right View

Front View

Outdoor Air Series AHUR-CALJ/DALJ/DABLJ

VRV Connection to AHU Configuration



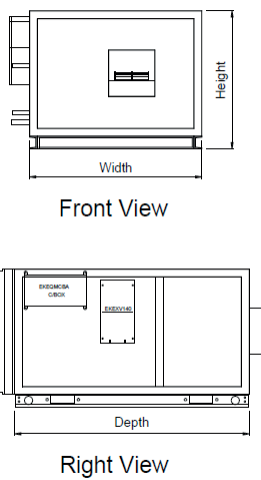
Outdoor Air Series AHUR-CALJ/DALJ/DABLJ

MODEL NAME:		AHUR_CALJ / AHUR_DALJ / AHUR_DABLJ
1 CASING		AHUR_CALJ : 25mm Thickness Double Skinned Panel
		AHUR_DALJ : 50mm Thickness Double Skinned Panel
		AHUR_DABLJ : 50mm Thickness Double Skinned Panel (Thermal Break)
	Metal	0.5mm Thickness White Color Bond Galvanized Steel Sheet
2 CASING FRAME	Insulation	25mm / 50mm Thickness Polyurethane Foam 40kg/m ³ Density
		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 ² G or below
4 FAN		Double Inlet Forward Curved Centrifugal Belt Driven Fan
	Type	
	Wheel	Galvanized Steel Sheet
	Housing	Galvanized Steel Sheet
5 MOTOR	Frame	Galvanized Angular Bars
		Three-Phase Induction Motor Totally Enclosed Fan-Cooled Type
6 VIBRATION ISOLATOR		Protection = IP55, Insulation Class = F, efficiency: IE3
		For fan size 355 and below, rubber mounting
7 DRAIN PAN		For fan size 400 and above, spring isolator
		1.0mm Stainless Steel 304, external cover with 10mm PE foam
8 AIR FILTER		
	Pre Filter	Type = R29, Class = G3, Synthetic washable
9 WEATHER PROOF ROOF	Size	24"x24"x2", 12"x24"x2"
		Epoxy Powder Coated Steel
10 OUTDOOR AIR SERIES PCB		EKEQFCBAV3 & Motor Starter Panel
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-CALJ	1100 X 2000 x 880	AHUR08-DALJ/DABLJ	1150 X 2050 x 930
AHUR10-CALJ	1400 X 2000 x 880	AHUR10-DALJ/DABLJ	1450 X 2050 x 930
AHUR16-CALJ	1400 X 1900 x 1180	AHUR16-DALJ/DABLJ	1450 X 1950 x 1230
AHUR20-CALJ	1700 X 1900 x 1180	AHUR20-DALJ/DABLJ	1750 X 1950 x 1230
AHUR24-CALJ	1700 X 2800 x 1180	AHUR24-DALJ/DABLJ	1750 X 2850 x 1230
AHUR32-CALJ	1900 X 2400 x 1480	AHUR32-DALJ/DABLJ	1950 X 2450 x 1530
AHUR40-CALJ	1900 X 2000 x 1780	AHUR40-DALJ/DABLJ	1950 X 2050 x 1830
AHUR48-CALJ	1900 X 2400 x 1780	AHUR48-DALJ/DABLJ	1950 X 2450 x 1830
AHUR60-CALJ	2300 X 2000 x 1980	AHUR60-DALJ/DABLJ	2350 X 2050 x 2030

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



Outdoor Air Series AHUR-CALJ/DALJ/DABLJ

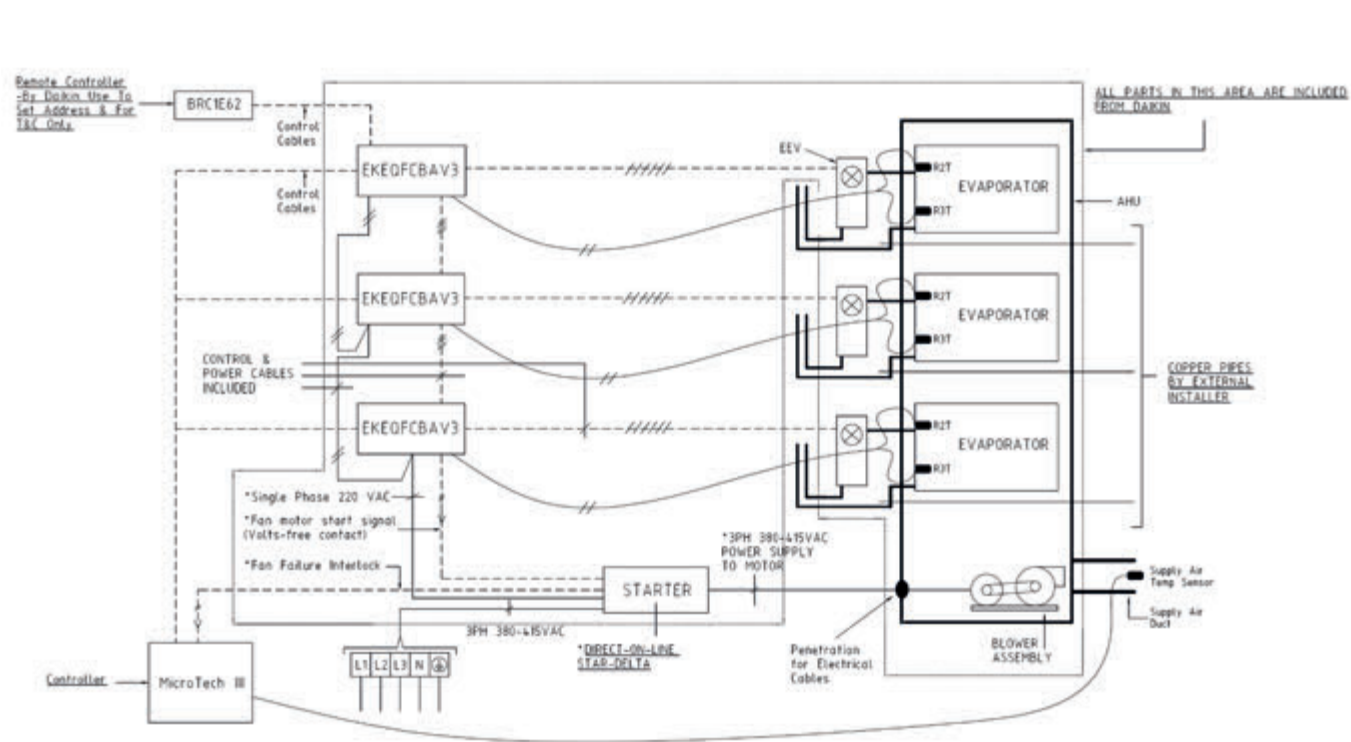
AHUR-CALJ/DALJ/DABLJ

Model	AHUR08CALJ/DALJ/DABLJ							AHUR10CALJ/DALJ/DABLJ					AHUR16CALJ/DALJ/DABLJ					AHUR20CALJ/DALJ/DABLJ					AHUR24CALJ/DALJ/DABLJ					
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					80.1					
Total Sensible Cooling Capacity		kW	9.2					10.5					18.2					24.3					27.6					
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					52.3					
Air Flow		cmh/ m³/min	2040 / 34					2340 / 39					4080 / 68					5460 / 91					6120 / 102					
On Coil (Rated)	Cooling	°CDB/°CWB	33 / 28					33 / 28					33 / 28					33 / 28					33 / 28					
On Coil (Rated)		Heating	°CDB	0					0					0					0									
Coil Type			DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface										DX.Coil (R410A) φ9.52 mm. Wave surface					
Coil Face Area			0.41					0.56					0.92					1.16					1.16					
Coil Face Velocity		m/s	1.38					1.15					1.24					1.30					1.46					
Air PD. In Coil		Pa	42					31					36					39					48					
*3 Air PD. Pre		Pa	109					108					109					110					111					
*3 Air Filter Size 12"x24"x2"		pcs	1					0					2					3					3					
*3 Air Filter Size 24"x24"x2"		pcs	1					2					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										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		3		3		2.2		3		3		
Pole			4										4										4					
Power Supply		V/Ph/Hz	380-415/3/50(60)										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		6.25		6.25		5.01		6.25		6.25		
Machine Weight (25mm / 50mm panel)		kg	280/298	285 / 303		287/305		324 / 341		326/343		363 / 385		371 / 393		429 / 453		434 / 458		525 / 556		530 / 561		525 / 556		530 / 561		
Outlet Sound Level Pressure (25mm / 50mm)		dB(A)	64/59	65/60	66/61	68/63	69/64	65/60	66/61	67/62	68/64	69/65	61/56	63/58	64/59	67/62	68/63	63/58	64/59	65/60	67/62	67/63	64/60	65/60	65/61	67/63	68/63	
Outdoor Air Series PCB		Model/pcs	EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 1pc					EKEQFCBAV3 / 3pc					
Expansion Valve		Model/pcs	EKEKV200 / 1pc					EKEKV250 / 1pc					EKEKV400 / 1pc					EKEKV500 / 1pc					EKEKV200 / 3pc					
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					1.7 X 2.8 X 1.2					
Panel Type			Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm										Sandwich Panel Thickness 25mm / 50mm / 50mm					
Piping Connections	Liq. pipe	mm	Ø9.5 (Brazing Connection)					Ø9.5 (Brazing Connection)					Ø12.7 (Brazing Connection)					Ø15.9 (Brazing Connection)					Ø9.5 (Brazing Connection)					
	Gas pipe	mm	Ø19.1 (Brazing Connection)					Ø22.2 (Brazing Connection)					Ø28.6 (Brazing Connection)					Ø28.6 (Brazing Connection)					Ø19.1 (Brazing Connection)					
	Drain pipe	mm	Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					Ø42 (DN32)					
Refrigerant Control			Electronic Expansion Valve										Electronic Expansion Valve										Electronic Expansion Valve					
Capacity Index			200					25 0					400					500					600					

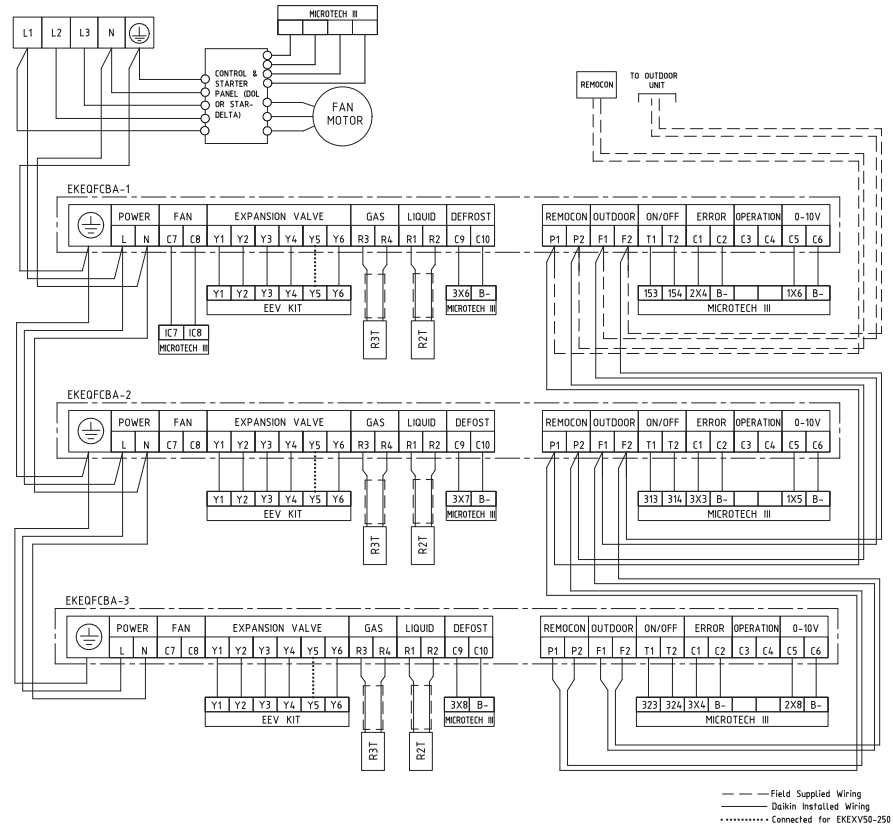
Model		AHUR32CAL/DALI/DABU						AHUR40CAL/DALI/DABU						AHUR48CAL/DALI/DABU						AHUR60CAL/DALI/DABU																												
Total Cooling Capacity		*1 Net	kW	104.4	104.2	104.0	103.7	103.5	140.1	139.9	139.7	139.2	138.9	156.8	156.6	156.3	155.9	155.6	203.9	203.6	203.3	202.6	202.2																									
Total Sensible Cooling Capacity			kW	34.5	34.3	34.1	33.8	33.6	46.8	46.6	46.4	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/ m³/min	8160 / 136						10920 / 182						12240 / 204						16380 / 273																										
On Coil (Rated)		Cooling	**CDB/°CWB	33 / 28						33 / 28						33 / 28						33 / 28																										
On Coil (Rated)		Heating	**CDB	0						0						0						0																										
Coil Type			DX.Coil (R410A) Ø9.52 mm. Wave surface									DX.Coil (R410A) Ø9.52 mm. Wave surface									DX.Coil (R410A) Ø9.52 mm. Wave surface																											
Coil Face Area			1.61									2.25									2.25									3.06																		
Coil Face Velocity			m/s									1.35									1.51									1.49																		
Air PD. In Coil			Pa									42									51									48																		
*3 Air PD. Pre			Pa									111									111									113																		
*3 Air Filter Size 12"x24"x2"			pcs									3									3									5																		
*3 Air Filter Size 24"x24"x2"			pcs									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	403	452	502	602	652	412	462	512	612	662	411	461	511	611	661																	
Fan Type			Forward Curved									Forward Curved									Forward Curved																											
Model			FDA31STM									FDA400TM									FDA400TM									FDA500TM																		
*4 Fan Motor			kW									3	4				3	4			5.5	4				5.5	4			7.5																		
			Pole									4									4									4																		
Power Supply			V/Ph/Hz									415/3/50(60)									380-415/3/50(60)									380-415/3/50(60)																		
FLA			Amp.									6.25	8.47				6.25	8.47			11.4	8.47				11.4	14.6																					
Machine Weight (25mm / 50mm panel)			kg									543 / 573	555 / 585			717/749	729 / 761			752/784	772 / 807			795 / 830	957 / 995			968 / 1006																				
Outlet Sound Level Pressure (25mm / 50mm)			dB(A)									70/66	71/67	72/68	74/69	74/70	70/66	70/66	71/67	73/68	74/69	71/66	71/67	72/67	73/68	73/69	69/65	70/66	71/67	73/68	73/69																	
Outdoor Air Series PCB			Model/pcs									EKEQFCBAV3 / 2pc									EKEQFCBAV3 / 2pc									EKEQFCBAV3 / 3pcs																		
Expansion Valve			Model/pcs									EKEXV400 / 2pc									EKEXV500 / 2pc									EKEXV400 / 3pc									EKEXV500 / 3pcs									
Dimension (WxDxH)			m									1.7 x 2.4 x 1.5									1.9 x 2.0 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									Sandwich Panel Thickness 25mm / 50mm / 50mm									Sandwich Panel Thickness 25mm / 50mm / 50mm																		
Piping Connections			Liq. pipe	mm									Ø12.7 (Brazing Connection)									Ø15.9 (Brazing Connection)									Ø12.7 (Brazing Connection)									Ø15.9 (Brazing Connection) x3								
			Gas pipe	mm									Ø28.6 (Brazing Connection)									Ø28.6 (Brazing Connection)									Ø28.6 (Brazing Connection)									Ø28.6 (Brazing Connection) x3								
			Drain pipe	mm									Ø42 (DN32)									Ø42 (DN32)									Ø42 (DN32)									Ø42 (DN32)								
Refrigerant Control			Electronic Expansion Valve									Electronic Expansion Valve									Electronic Expansion Valve									Electronic Expansion Valve																		
Capacity Index			800									1000									1200									1500																		

VRV AHU Outdoor Air Series Schematic Diagram

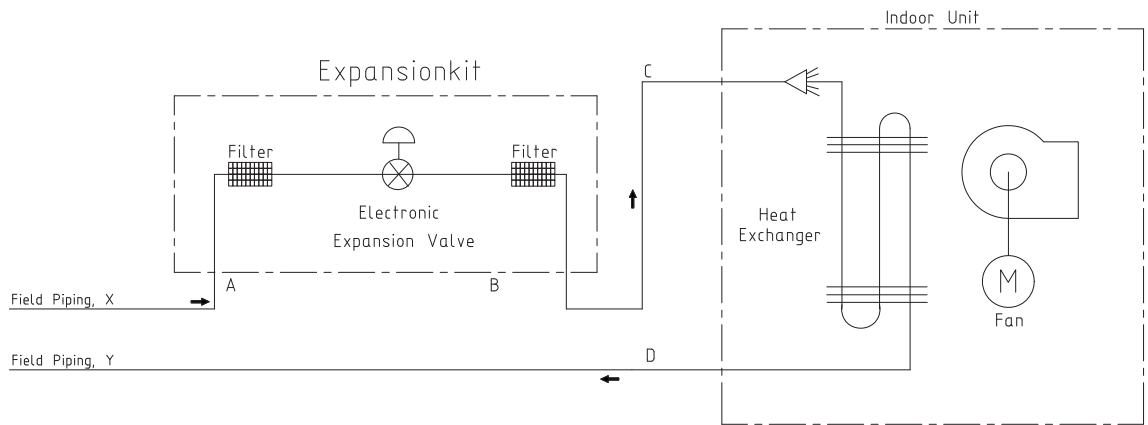
Schematic Diagram of Outdoor Air Series to Show Line of Responsibility of Daikin & External Installer



VRV AHU Outdoor Air Series Wiring Diagram (CALJ/DALJ/DABLJ)



Refrigerant Pipe Diameter for VRV AHU



VRV AHU Series
AHUR xx CAVJY1/ DAVJY1/ DABVJY1 (Standard, 380-415V/ 3Ø/ 50Hz)
AHUR xx CALJY1/ DALJY1/ DABLJY1 (OA, 380-415V/ 3Ø/ 50Hz)

VRV AHU HP	Standard Series	Outdoor Air Series	Field Pipe	Daikin Supplied	Connection by Daikin		Daikin Supplied	Field Pipe
			X		B	C		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

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.