Daikin Residential Fresh Air Solution

RAHU Series

A preselected installation package for air handling and outdoor units

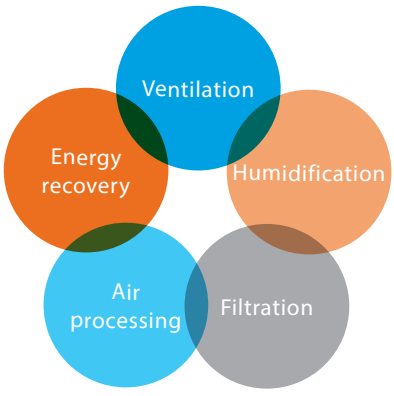
Widest range of DX integrated ventilation in the market

Daikin offers a variety of solutions from small heat recovery ventilation to large-scale air handling units for the provision of fresh air ventilation.

Daikin DX air handling units solutions with matching condensing unit and plug and play controls

Five components of indoor air quality

- **Ventilation:** Ensures the correct amount of fresh air
- **Energy recovery:** Delivers energy savings by transferring heat and moisture between airflows
- **Air processing:** Delivers the right supply temperature to decrease the indoor unit load
- **Humidification:** Ensures relative indoor humidity levels are respected
- **Filtration:** Separates pollen, dust and pollution odours that are harmful to individuals' health



Simplifying business

This unique, total solution approach helps businesses propose better cross-pillar solutions and unmatched product combinations that increase their success ratio with end-users and simplify the life of installers as all products come from only one manufacturer.

Daikin takes pride in not using OEM products in its AHU with DX offer. Having a single interface for your business makes Daikin the right choice.

One-stop shop

Daikin is the only global manufacturer in the market capable of offering a true Plug and Play solution where Eurovent-certified Daikin AHUs, offer off-the-shelf compatibility with Daikin's unique VRV or DX outdoor unit range for the best performance in the market. This unique integration of cross-pillar products under the same umbrella gives the customer both peace of mind and added value when promoting a total solution approach.

Standard Features:

AHU

Frame

› Structure with base frame and aluminium profiles
› Rounded profile as standard, meeting hygiene requirements
› Double chambered profiles type to ensure fixing screws are totally concealed and there are no projections inside the AHU
› Structure is completed with three-way connecting corners made of glass-reinforced nylon

Panels

› 42mm thick double skin step panels with polyurethane foam insulation, insulation density 40-45 Kg/m^3
› Step panels ensures a flat surface inside the unit, ensuring continuity between the panel and the profile
› External skin 0.7mm thick prepainted galvanized steel /internal skin 0.5mm thick galvanized steel
› Flat roof provided for FAHU to enable outdoor installation

Filters

› Class G4 Prefilters for Recirculating AHU
› Combination Filter Class G4 + F7 for FAHU

Coils

› R-410a DX Coils
› Coils made of 3/8" / ½ " diameter copper tubes mechanically expanded in to aluminium fins
› All coils pressure tested at 450 Psi

Heat Wheel (FAHU)

› Rotor matrix made of aluminum substrate with desiccant coating
› High latent recovery
› In-built purge sector to eliminate cross contamination
› The rotor wheel outer edge, intermediate beams and purge sector equipped with adjustable brush seals
› The rotor wheel driven by a belt around the periphery which is connected to a pulley and motor

Heat Pipe (FAHU)

› Heat pipes provided to precool the air and reheat the supply air in a wrap-around configuration
› The tubes made of 1/2" OD copper tubes permanently expanded onto the fin collar to form a firm, rigid, and complete pressure contact at all operating conditions
› The fin surface made of continuous plate type aluminum to provide maximum heat transfer efficiency
› Performance certified by third party in accordance to BS EN305

Fan

› Direct-drive single-inlet centrifugal fan with high-performance airfoil impeller with rotating diffuser
› External rotor motor, and integral variable speed drive and control electronics
› External rotor motor surpasses efficiency class IE4
› Motorized impeller dynamically balanced according to DIN ISO 1940 grade 6.3
› Performance data in accordance with ISO 5801 and AMCA 210, noise measurements as per DIN EN ISO 3745
› Integrated protective devices
  • Alarm signal with floating contacts (250 V AC, 2 A, cos φ = 1)
  • Locked rotor protection
  • Phase failure detection
  • Motor soft start
  • Mains low voltage detection
  • Thermal overload protection for electronics and motor

Certified Characteristics - Mechanical

› Casing strength (CS)
› Casing air leakage (CAL)
› Filter bypass leakage (FBL)
› Thermal transmittance of the casing (TT)
› Thermal bridging factor (TBF)
› Acoustical insulation of casing

Certified Characteristics - Performance

› Air flow - available static pressure - power input
› Octave band in-duct sound power level
› Airborne sound power level
› Heating capacity
› Cooling capacity
› Heat recovery

DX Condensing Units

› High-efficiency scroll compressor with pressure and temperature protection and quiet shut down solution
› Factory-installed filter drier
› Copper tube/aluminum fin coil with herasite fin coating
› Service valves with sweat connections and easy-access gauge ports
› Contactor with lug connection
› Ground lug connection
› Quiet operating top discharge
› Heavy-gauge galvanized-steel cabinet with attractive architectural gray powder-paint finish with steel louver coil guard
› Top and side maintenance access

VRV Condensing Units

› Incorporates VRV IV standards and technologies, VRV configurator, 7 segment display and full inverter compressors, 4-side heat exchanger, refrigerant cooled PCB, new DC fan motor, 7th generation of inverter compressor with back pressure control
› VRV Configurator Software for the fastest and most accurate commissioning, configuration and customization
› Outdoor Unit display for quick on-site settings and easy read out of errors together with the indication of service parameters for checking basic functions
› Suitable for outdoor and indoor installation, made possible as a result of high external static pressure of up to 78.4 Pa
› Special anti-corrosion treatment of the heat exchanger provides 5 to 6 times greater resistance against acid rain and salt corrosion. The provision of rust proof steel sheet on the underside of the unit gives additional protection

TECHNICAL SPECIFICATION RECIRCULATING AHU / VRV CONDENSING UNIT

COMBINATION MODEL				RAHU-VR1500	RAHU-VR1750	RAHU-VR2000	RAHU-VR2250	RAHU-VR2500	RAHU-VR2750
AHU	Model Name			740x900	740x1000	750x1100	860x1020	870x1100	870x1180
	Air Flow		CFM	1,500	1,750	2,000	2,250	2,500	2,750
	ESP		Pa	250	250	250	250	250	250
	Motor Power		KW	1.0	1.23	1.23	1.23	1.8	2.95
	Dimension	Width	mm	900	1000	1100	1020	1100	1180
		Height	mm	840	840	850	960	970	970
		Length	mm	1780	1900	1900	1900	1860	1860
	Prefilter			G4	G4	G4	G4	G4	G4
	Total Cooling Capacity (1)		KW	11.3	13.1	15.1	17.3	19	20.8
	Sensible Cooling Capacity		KW	8.9	10.3	11.8	13.3	14.8	16.3
	Fan Type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Condensing Unit	Type			VRV IV CO Series	VRV IV CO Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series
	Manufacturer			Daikin	Daikin	Daikin	Daikin	Daikin	Daikin
	Model			RXQ6ARYFK	RXQ6ARYFK	RXYTQ8U7YF	RXYTQ8U7YF	RXYTQ8U7YF	RXYTQ8U7YF
	Qty			1	1	1	1	1	1
	Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A
	Power Supply			380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
	Cooling Capacity (1)		KW	11.30	13.10	15.10	17.30	19.00	20.80
	Rated Power Input (2)		KW	5.10	5.10	6.75	6.75	6.75	6.75
	Minimum Circuit Amps (MCA) (3)		A	16.1	16.1	16.1	16.1	16.1	16.1
	Maximum Fuse Amps (MFA) (4)		A	20.0	20.0	20.0	20.0	20.0	20.0
	Sound Pressure Level		dBA	56	56	57	57	57	57
	Compressor		Type	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)
			Qty	1	1	1	1	1	1
	Fan		Type	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
			Qty	1	1	1	1	1	1
	Fan Discharge Direction			Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
	Condenser Coil	Type		Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
		Fin Treatment		Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating
	Dimension	Height	mm	1,657	1,657	1,685	1,685	1,685	1,685
		Width	mm	930	930	930	930	930	930
		Depth	mm	765	765	765	765	765	765
	Weight		kg	165	165	198	198	198	198
	Field Refrigerant Pipe Size	Liquid OD	mm	9.52	9.52	9.52	9.52	9.52	9.52
		Gas OD	mm	19.1	19.1	19.1	19.1	19.1	19.1

Notes

1. Cooling Capacity at AHU On Coil 24/17 °C (DB/WB), Off Coil 14°C (DB) and 46 °C ambient, equivalent piping length: 7.5 m (horizontal)
2. Condensing unit Rated Power Input is based on outdoor temp. 46 CDB (as per ISO 15042)
3. MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current
4. MFA is used to select the circuit breaker and the ground fault circuit interruptor (earth leakage circuit breaker)
5. Accesories including Expansion Valve and Control box are Factory fitted and Thermostat or Remote control loose supplied
6. Maximum Piping Horizontal - 50 meters (55 meters equivalent)
7. Maximum Piping Vertical - 40 meters

RAHU-VR3000	RAHU-VR3250	RAHU-VR3500	RAHU-VR3750	RAHU-VR4000	RAHU-VR4250	RAHU-VR4500	RAHU-VR4750	RAHU-VR5000
930x1170	930 X 1240	990x1230	990x1290	1050x1280	1050x1430	1050x1440	1050x1460	1170x1360
3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000
250	250	250	250	250	250	250	250	250
2.95	2.95	2.68	2.5	2.5	2.5	3.35	3.35	3.35
1170	1240	1230	1290	1280	1430	1440	1460	1360
1030	1030	1090	1090	1150	1150	1150	1150	1270
1860	1860	1930	2000	2000	2000	1990	1990	1990
G4	G4	G4	G4	G4	G4	G4	G4	G4
22.8	24.6	26.5	28.2	30.2	32.7	34.4	36.1	37.6
17.7	19.2	20.7	22.2	23.7	25.1	26.6	28.1	29.6
EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series
Daikin	Daikin	Daikin	Daikin	Daikin	Daikin	Daikin	Daikin	Daikin
RXYTQ10U7YF	RXYTQ10U7YF	RXYTQ12U7YF	RXYTQ12U7YF	RXYTQ12U7YF	RXYTQ14U7YF	RXYTQ14U7YF	RXYTQ16U7YF	RXYTQ16U7YF
1	1	1	1	1	1	1	1	1
R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
22.80	24.60	26.50	28.20	30.20	32.70	34.40	36.10	37.60
8.51	8.51	9.80	9.80	9.80	11.33	11.33	12.79	12.79
22.0	22.0	24.0	24.0	24.0	27.0	27.0	31.0	31.0
25.0	25.0	32.0	32.0	32.0	32.0	32.0	40.0	40.0
59	59	61	61	61	61	61	64	64
Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)
1	1	1	1	1	2	2	2	2
Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
2	2	2	2	2	2	2	2	2
Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating
1,685	1,685	1,685	1,685	1,685	1,685	1,685	1,685	1,685
1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240
765	765	765	765	765	765	765	765	765
234	234	234	234	234	283	283	283	283
9.52	9.52	12.7	12.7	12.7	12.7	12.7	12.7	12.7
22.2	22.2	28.6	28.6	28.6	28.6	28.6	28.6	28.6

TECHNICAL SPECIFICATION RECIRCULATING AHU / DX CONDENSING UNIT

COMBINATION MODEL				RAHU-DR1500	RAHU-DR1750	RAHU-DR2000	RAHU-DR2250	RAHU-DR2500	RAHU-DR2750
AHU	Model Name			740x900	740x1000	750x1100	860x1020	870x1100	870x1180
	Air Flow		CFM	1,500	1,750	2,000	2,250	2,500	2,750
	ESP		Pa	250	250	250	250	250	250
	Motor Power		KW	1.00	1.23	1.23	1.23	1.80	2.95
	Dimension	Width	mm	900	1000	1100	1020	1100	1180
		Height	mm	840	840	850	960	970	970
		Length	mm	1900	2020	2020	2020	1980	1980
	Prefilter			G4	G4	G4	G4	G4	G4
	Total Cooling Capacity (1)		KW	11.2	12.6	14.6	16.8	18.7	20.5
	Sensible Cooling Capacity		KW	8.9	10.3	11.8	13.3	14.8	16.3
	Fan Type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Condensing Unit	Type			DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit
	Manufacturer			Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)
	Model			GSX13**048**5XK	GSX13**048**5XK	GSX13**060**5XK	GSX13**036**2XK	GSX13**036**2XK	GSX13**048**5XK
	Qty			1	1	1	2	2	2
	Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A
	Power Supply			380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	220-240V/50Hz	220-240V/50Hz	380-415V/50Hz
	Cooling Capacity (1)		KW	11.20	12.60	14.60	16.80	18.70	20.50
	Rated Power Input (2)		KW	5.09	5.09	5.90	(3.84) x 2	(3.84) x 2	(5.09) x 2
	Minimum Circuit Amps (MCA) (3)		A	9.3	9.3	11.8	(20.9) x 2	(20.9) x 2	(9.3) x 2
	Maximum Fuse Amps (MFA) (4)		A	15.0	15.0	20.0	(35.0) x 2	(35.0) x 2	(15.0) x 2
	Sound Pressure Level		dBA	75	75	75	77	77	78
	Compressor		Type	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor
			Qty	1	1	1	(1) x 2	(1) x 2	(1) x 2
	Fan		Type	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
			Qty	1	1	1	(1) x 2	(1) x 2	(1) x 2
	Fan Discharge Direction			Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
	Condenser Coil	Type		Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
		Fin Treatment		Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating
	Dimension (per Unit)	Height	mm	921	921	921	730	730	921
		Width	mm	902	902	902	737	737	902
		Depth	mm	902	902	902	737	737	902
	Weight		kg	127.9	127.9	130.6	(70.8) x 2	(70.8) x 2	(127.9) x 2
	Field Refrigerant Pipe Size (5)	Liquid OD	mm	9.52	9.52	9.52	(9.52) x 2	(9.52) x 2	(9.52) x 2
		Gas OD	mm	22.2	22.2	22.2	(19.1) x 2	(19.1) x 2	(22.2) x 2

Notes

1. Cooling Capacity at AHU On Coil 24/17 °C (DB/WB), Off Coil 14°C (DB) and 46 °C ambient, equivalent piping length: 7.5 m (horizontal)
2. Condensing unit Rated Power Input is based on outdoor temp. 46 CDB
3. MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current
4. MFA is used to select the circuit breaker and the ground fault circuit interruptor (earth leakage circuit breaker)
5. Recommended Field Refrigerant Pipe Sizes are based on 7.5 m equivalent length. For long pipe applications, please refer to Table 1, page 12.
6. Accesories including Expansion Valve and Control box are Factory fitted and Thermostat or Remote control loose supplied

RAHU-DR3000	RAHU-DR3250	RAHU-DR3500	RAHU-DR3750	RAHU-DR4000	RAHU-DR4250	RAHU-DR4500	RAHU-DR4750	RAHU-DR5000
930x1170	930 X 1240	990x1230	990x1290	1050x1280	1050x1340	1050x1400	1050x1460	1170x1360
3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000
250	250	250	250	250	250	250	250	250
2.95	2.95	2.68	2.50	2.50	2.50	3.35	3.35	3.35
1170	1240	1230	1290	1280	1340	1400	1460	1360
1030	1030	1090	1090	1150	1150	1150	1150	1270
1980	1980	2050	2120	2120	2120	2110	2110	2110
G4	G4	G4	G4	G4	G4	G4	G4	G4
21.9	24.2	26.1	27.8	29.9	31.6	33.3	35.9	37.3
17.7	19.2	20.7	22.2	23.7	25.1	26.6	28.1	29.6
EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit
Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)
GSX13**048**5XK	GSX13**048**5XK	GSX13**060**5XK	GSX13**060**5XK	GSX13**060**5XK	GSX13**048**5XK	GSX13**048**5XK	GSX13**048**5XK	GSX13**048**5XK
2	2	2	2	2	3	3	3	3
R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
21.90	24.20	26.10	27.80	29.90	31.60	33.30	35.90	37.30
(5.09) x 2	(5.09) x 2	(5.9) x 2	(5.9) x 2	(5.9) x 2	(5.09) x 3	(5.09) x 3	(5.09) x 3	(5.09) x 3
(9.3) x 2	(9.3) x 2	(11.8) x 2	(11.8) x 2	(11.8) x 2	(9.3) x 3	(9.3) x 3	(9.3) x 3	(9.3) x 3
(15.0) x 2	(15.0) x 2	(20.0) x 2	(20.0) x 2	(20.0) x 2	(15.0) x 3	(15.0) x 3	(15.0) x 3	(15.0) x 3
78	78	80	80	80	79	79	79	79
Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor
(1) x 2	(1) x 2	(1) x 2	(1) x 2	(1) x 2	(1) x 3	(1) x 3	(1) x 3	(1) x 3
Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
(1) x 2	(1) x 2	(1) x 2	(1) x 2	(1) x 2	(1) x 3	(1) x 3	(1) x 3	(1) x 3
Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating
921	921	921	921	921	921	921	921	921
902	902	902	902	902	902	902	902	902
902	902	902	902	902	902	902	902	902
(127.9) x 2	(127.9) x 2	(130.6) x 2	(130.6) x 2	(130.6) x 2	(127.9) x 3	(127.9) x 3	(127.9) x 3	(127.9) x 3
(9.52) x 2	(9.52) x 2	(9.52) x 2	(9.52) x 2	(9.52) x 2	(9.52) x 3	(9.52) x 3	(9.52) x 3	(9.52) x 3
(22.2) x 2	(22.2) x 2	(22.2) x 2	(22.2) x 2	(22.2) x 2	(22.2) x 3	(22.2) x 3	(22.2) x 3	(22.2) x 3

TECHNICAL SPECIFICATION FRESH AIR HANDLING UNIT / VRV CONDENSING UNIT

COMBINATION MODEL				RAHU-VF750	RAHU-VF1000	RAHU-VF1250	RAHU-VF1500
FAHU	Model Name			620 X 850	620 X 950	680 X 950	690 X 1100
	Supply Air Flow		CFM	750	1,000	1,250	1,500
	Supply Fan ESP		Pa	250	250	250	250
	Supply Fan Motor Power		KW	1.18	1.18	1.80	1.80
	Return Air Flow		CFM	675	900	1125	1350
	Return Fan ESP		Pa	250	250	250	250
	Return Fan Motor Power		KW	0.79	0.79	0.79	1.00
	Dimension	Width	mm	850	950	950	1100
		Height	mm	1340	1340	1460	1480
		Length	mm	3670	3670	3910	3910
	Prefilter & Bag Filter			G4+F7	G4+F7	G4+F7	G4+F7
	Heat Wheel	Rotor Type		SORPTION	SORPTION	SORPTION	SORPTION
		Rotor Dia	mm	500	600	600	700
		Motor Power	Kw	0.4	0.4	0.4	0.4
		Efficiency	%	61.7	63.9	59.4	62.5
	Heat Pipe Rows			2	2	2	2
	Total Cooling Capacity (1)		KW	14.4	18.8	26.0	29.0
	Sensible Cooling Capacity		KW	4.7	6.2	8.6	9.6
	Fan Type			EC FAN	EC FAN	EC FAN	EC FAN
Condensing Unit	Type			VRV IV CO Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series
	Manufacturer			Daikin	Daikin	Daikin	Daikin
	Model			RXQ6ARYFK	RXYTQ8U7YF	RXYTQ10U7YF	RXYTQ10U7YF
	Qty			1	1	1	1
	Refrigerant			R410A	R410A	R410A	R410A
	Power Supply			380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
	Cooling Capacity (1)		KW	14.40	23.50	26.00	29.00
	Rated Power Input (4)		KW	5.10	6.75	8.51	8.51
	Minimum Circuit Amps (MCA) (5)		A	16.1	16.1	22.0	22.0
	Maximum Fuse Amps (MFA) (6)		A	20.0	20.0	25.0	25.0
	Sound Pressure Level		dBA	56	57	59	59
	Compressor		Type	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)
			Qty	1	1	1	1
	Fan		Type	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
			Qty	1	1	2	2
	Fan Discharge Direction			Vertical	Vertical	Vertical	Vertical
	Condenser Coil	Type		Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
		Fin Treatment		Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating
	Dimension	Height	mm	1,657	1,685	1,685	1,685
		Width	mm	930	930	1,240	1,240
		Depth	mm	765	765	765	765
	Weight		kg	165	198	234	234
	Field Refrigerant Pipe Size	Liquid OD	mm	9.52	9.52	9.52	9.52
		Gas OD	mm	19.1	19.1	22.2	22.2

Notes

1. Declared Cooling Capacity considering Recovery from Heat Wheel and Precool effect of Heat Pipe,equivalent piping length: 7.5 m (horizontal)
2. Fresh Air Temperature On Heat Wheel : 34 °C / 32 °C (DB/WB) , Return Air Temperature On Heat Wheel: 25 °C / 17.9 °C (DB/WB)
3. Air off Heat Pipe Reheat : 19-20 °C / 15-15.3 °C (DB/WB)
4. Condensing unit Rated Power Input is based on outdoor temp. 46 CDB (as per ISO 15042)
5. MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current
6. MFA is used to select the circuit breaker and the ground fault circuit interruptor (earth leakage circuit breaker)
7. Accesories including Expansion Valve and Control box are Factory fitted and Thermostat or Remote control loose supplied
8. Maximum Piping Horizontal - 50 meters (55 meters equivalent)
9. Maximum Piping Vertical - 40 meters

RAHU-VF1750	RAHU-VF2000	RAHU-VF2250	RAHU-VF2500	RAHU-VF2750	RAHU-VF3000
740 X 1040	750 X 1150	690 X 1360	690 X 1430	750 X 1450	820 X 1550
1,750	2,000	2,250	2,500	2,750	3,000
250	250	250	250	250	250
2.95	2.95	2.95	2.95	2.95	2.95
1575	1800	2025	2250	2475	2700
250	250	250	250	250	250
1.18	1.23	1.23	1.80	1.80	1.80
1040	1150	1360	1430	1450	1550
1580	1600	1480	1480	1600	1680
3910	4070	4070	4120	3880	3880
G4+F7	G4+F7	G4+F7	G4+F7	G4+F7	G4+F7
SORPTION	SORPTION	SORPTION	SORPTION	SORPTION	SORPTION
700	800	900	1000	1100	1200
0.4	0.4	0.4	0.4	0.4	0.4
59.2	62.3	64.6	66.5	68	69.4
2	2	2	2	2	2
36.9	39.2	40.6	42.4	44.9	45.8
12.2	12.9	13.8	14.4	15.3	16.0
EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series	VRV IV+ Series
Daikin	Daikin	Daikin	Daikin	Daikin	Daikin
RXYTQ12U7YF	RXYTQ14U7YF	RXYTQ14U7YF	RXYTQ14U7YF	RXYTQ16U7YF	RXYTQ16U7YF
1	1	1	1	1	1
R410A	R410A	R410A	R410A	R410A	R410A
380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
36.90	39.20	40.60	42.40	44.90	45.80
9.80	11.33	11.33	11.33	12.79	12.79
24.0	27.0	27.0	27.0	31.0	31.0
32.0	32.0	32.0	32.0	40.0	40.0
61	61	61	61	64	64
Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)	Hermetically Sealed Scroll Compressor (Inverter)
1	2	2	2	2	2
Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
2	2	2	2	2	2
Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating	Blue Fin Coating
1,685	1,685	1,685	1,685	1,685	1,685
1,240	1,240	1,240	1,240	1,240	1,240
765	765	765	765	765	765
234	283	283	283	283	283
12.7	12.7	12.7	12.7	12.7	12.7
28.6	28.6	28.6	28.6	28.6	28.6

TECHNICAL SPECIFICATION FRESH AIR HANDLING UNIT / DX CONDENSING UNIT

COMBINATION MODEL				RAHU-DF750	RAHU-DF1000	RAHU-DF1250	RAHU-DF1500
AHU	Model Name			620x850	620x950	680x950	690x1100
	Supply Air Flow		CFM	750	1,000	1,250	1,500
	Supply Fan ESP		Pa	250	250	250	250
	Supply Fan Motor Power		KW	1.18	1.18	1.8	1.8
	Return Air Flow		CFM	675	900	1125	1350
	Return Fan ESP		Pa	250	250	250	250
	Return Fan Motor Power		KW	0.79	0.79	0.79	1
	Dimension	Width	mm	850	950	950	1100
		Height	mm	1340	1340	1460	1480
		Length	mm	3900	3900	4010	4010
	Prefilter & Bag Filter			G4+F7	G4+F7	G4+F7	G4+F7
	Heat Wheel	Rotor Type		SORPTION	SORPTION	SORPTION	SORPTION
		Rotor Dia	mm	500	600	600	700
		Motor Power	Kw	0.4	0.4	0.4	0.4
		Efficiency	%	61.7	63.9	59.4	62.5
	Heat Pipe Rows			2	2	2	2
	Total Cooling Capacity (1)		KW	13.9	18.1	25.4	28.3
	Sensible Cooling Capacity		KW	5.0	6.5	8.8	10.0
	Fan Type			EC FAN	EC FAN	EC FAN	EC FAN
Condensing Unit	Type			DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit
	Manufacturer			Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)
	Model			GSX13**048**5XK	GSX13**060**5XK	GSX13**048**5XK	GSX13**048**5XK
	Qty			1	1	2	2
	Refrigerant			R410A	R410A	R410A	R410A
	Power Supply			380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
	Cooling Capacity (1)		KW	13.90	18.10	25.40	28.30
	Rated Power Input (4)		KW	5.09	5.90	(5.09) x 2	(5.09) x 2
	Minimum Circuit Amps (MCA) (5)		A	9.3	11.8	(9.3) x 2	(9.3) x 2
	Maximum Fuse Amps (MFA) (6)		A	15.0	20.0	(15.0) x 2	(15.0) x 2
	Sound Pressure Level		dBA	75	77	78	78
	Compressor		Type	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor
			Qty	1	1	(1) x 2	(1) x 2
	Fan		Type	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
			Qty	1	1	(1) x 2	(1) x 2
	Fan Discharge Direction			Vertical	Vertical	Vertical	Vertical
	Condenser Coil	Type		Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
		Fin Treatment		Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating
	Dimension	Height	mm	921	921	921	921
		Width	mm	902	902	902	902
		Depth	mm	902	902	902	902
	Weight		kg	127.9	130.6	(127.9) x 2	(127.9) x 2
	Field Refrigerant Pipe Size (5)	Liquid OD	mm	9.52	9.52	(9.52) x 2	(9.52) x 2
		Gas OD	mm	22.2	22.2	(22.2) x 2	(22.2) x 2

Notes

1. Declared Cooling Capacity considering Recovery from Heat Wheel and Precool effect of Heat Pipe,equivalent piping length: 7.5 m (horizontal)
2. Fresh Air Temperature On Heat Wheel : 34 °C / 32 °C (DB/WB) , Return Air Temperature On Heat Wheel: 25 °C / 17.9 °C (DB/WB)
3. Air off Heat Pipe Reheat : 19-20 °C / 15-15.3 °C (DB/WB)
4. Condensing unit Rated Power Input is based on outdoor temp. 46 CDB
5. MCA must be used to select the correct field wiring size. The MCA can be regarded as the maximum running current
6. MFA is used to select the circuit breaker and the ground fault circuit interruptor (earth leakage circuit breaker)
7. Recommended Field Refrigerant Pipe Sizes are based on 7.5 m equivalent length. For long pipe applications, please refer to Table 1, page 12.
8. Accesories including Expansion Valve and Control box are Factory fitted and Thermostat or Remote control loose supplied

RAHU-DF1750	RAHU-DF2000	RAHU-DF2250	RAHU-DF2500	RAHU-DF2750	RAHU-DF3000
740x1040	750x1150	690x1360	690x1430	750x1450	820x1550
1,750	2,000	2,250	2,500	2,750	3,000
250	250	250	250	250	250
2.95	2.95	2.95	2.95	2.95	2.95
1575	1800	2025	2250	2475	2700
250	250	250	250	250	250
1.18	1.23	1.23	1.8	1.8	1.8
1040	1150	1360	1430	1450	1550
1580	1600	1480	1480	1600	1680
4010	4050	4050	4010	4010	3980
G4+F7	G4+F7	G4+F7	G4+F7	G4+F7	G4+F7
SORPTION	SORPTION	SORPTION	SORPTION	SORPTION	SORPTION
700	800	900	1000	1100	1200
0.4	0.4	0.4	0.4	0.4	0.4
59.2	62.3	64.6	66.5	68	69.4
2	2	2	2	2	2
36.1	38.5	39.6	41.3	44.4	44.7
12.4	13.5	14.2	15.0	16.2	16.4
EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit	DX Condensing Unit
Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)	Goodman (Daikin Group)
GSX13**060**5XK	GSX13**048**5XK	GSX13**048**5XK	GSX13**048**5XK	GSX13**048**5XK	GSX13**048**5XK
2	3	3	3	3	3
R410A	R410A	R410A	R410A	R410A	R410A
380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz	380-415V/50Hz
36.10	38.50	39.60	41.30	44.40	44.70
(5.9) x 2	(5.09) x 3	(5.09) x 3	(5.09) x 3	(5.09) x 3	(5.09) x 3
(11.8) x 2	(9.3) x 3	(9.3) x 3	(9.3) x 3	(9.3) x 3	(9.3) x 3
(20.0) x 2	(15.0) x 3	(15.0) x 3	(15.0) x 3	(15.0) x 3	(15.0) x 3
80	79	79	79	79	79
Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor	Hermetically Sealed Scroll Compressor
(1) x 2	(1) x 3	(1) x 3	(1) x 3	(1) x 3	(1) x 3
Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan	Propeller Fan
(1) x 2	(1) x 3	(1) x 3	(1) x 3	(1) x 3	(1) x 3
Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating	Heresite Coating
921	921	921	921	921	921
902	902	902	902	902	902
902	902	902	902	902	902
(130.6) x 2	(127.9) x 3	(127.9) x 3	(127.9) x 3	(127.9) x 3	(127.9) x 3
(9.52) x 2	(9.52) x 3	(9.52) x 3	(9.52) x 3	(9.52) x 3	(9.52) x 3
(22.2) x 2	(22.2) x 3	(22.2) x 3	(22.2) x 3	(22.2) x 3	(22.2) x 3

Technical Recommendations

Table 1: Recommended Field Refrigerant Pipe Sizes for DX Condensing Units

Model	REFRIGERANT LINE LENGTH (METERS)					
	0-7.5		7. 6-15.1		15.2-22.6	
	Line Diameter OD (mm)					
	Suct	Liq	Suct	Liq	Suct	Liq
GSX130362XK	19.1	9.52	22.2	9 .52	22.2	12 .7
GSX130485XK	22.2	9.52	28.6	9 .52	28.6	12 .7
GSX130605XK	22.2	9.52	28.6	9 .52	28.6	12 .7

Table 2: Refrigerant Connection Size for DX Condensing Units

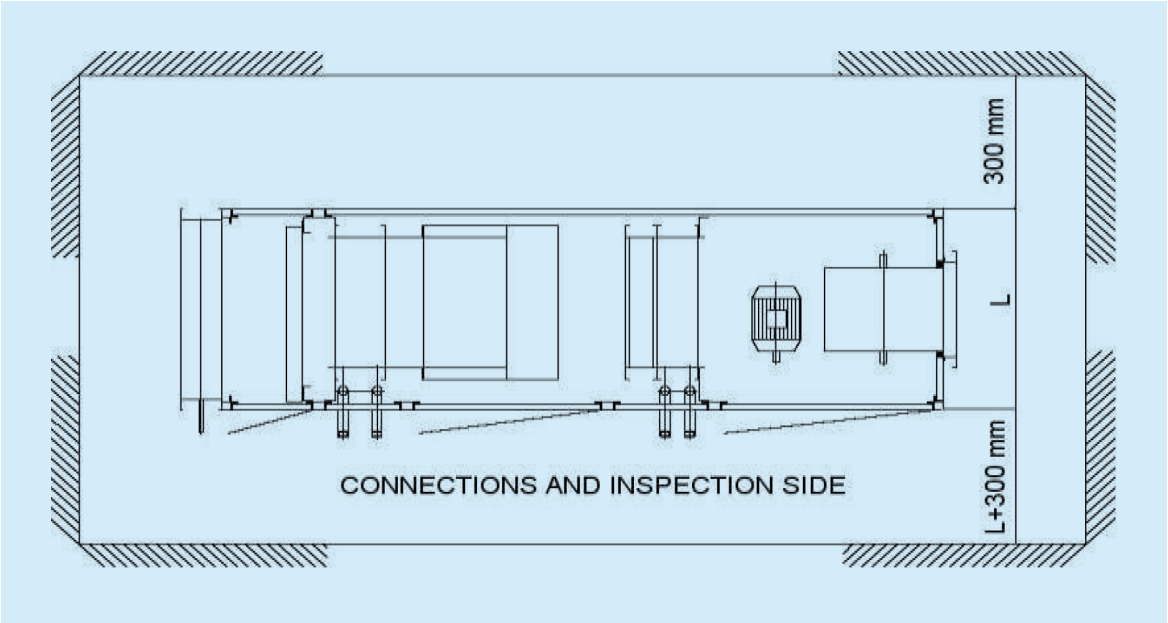
Model	GSX130362XK	GSX130485XK	GSX130605XK
Liquid Valve Size OD, mm	9.52	9.52	9.52
Suction Valve Size OD, mm	19.1	22.2	22.2

Table 3: Minimal Pipe Thickness for R410A Refrigerant

Pipe Ø (mm)	Minimal thickness t (mm)
6.4/9.5/12.7	0.80
15.9	0.99
19.1/22.2	0.80
28.6	0.99
34.9	1.21
41.3	1.43

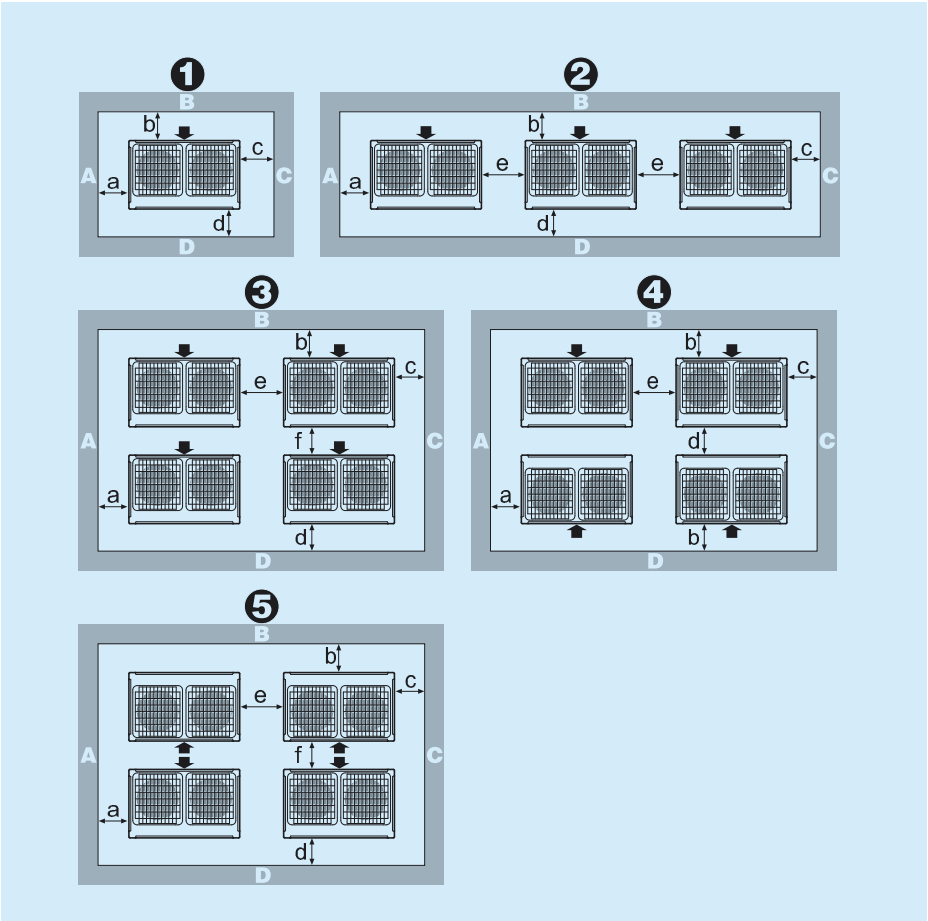
INSTALLATION RECOMMENDATIONS FOR AHU

The area chosen for installation must allow for enough space around the unit for comfortably and safely carrying out installation and successive maintenance operations, including the replacement of any internal component (e.g. removal of the heat exchange coils, the filters, …) see figure.



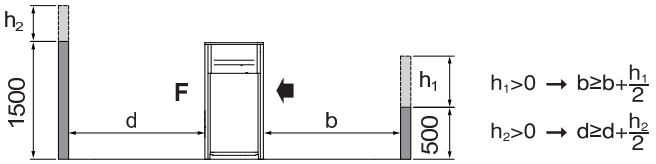
INSTALLATION RECOMMENDATIONS FOR VRV CONDENSING UNITS

Make sure the space around the unit is adequate for servicing and the minimum space for air inlet and air outlet is available (refer to the figure below and choose one of the possibilities).



Layout	A+B+C+D		A+B
	Possibility 1	Possibility 2	
1	a≥10 mm b≥300 mm c≥10 mm d≥500 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm	a≥200 mm b≥300 mm
2	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm	a≥200 mm b≥300 mm e≥400 mm
3	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm f≥600 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm f≥500 mm	—
4	a≥10 mm b≥300 mm c≥10 mm d≥500 mm e≥20 mm	a≥50 mm b≥100 mm c≥50 mm d≥500 mm e≥100 mm	

Layout	A+B+C+D		A+B
	Possibility 1	Possibility 2	
5	a≥10 mm b≥500 mm c≥10 mm d≥500 mm e≥20 mm f≥900 mm	a≥50 mm b≥500 mm c≥50 mm d≥500 mm e≥100 mm f≥600 mm	—



(mm)

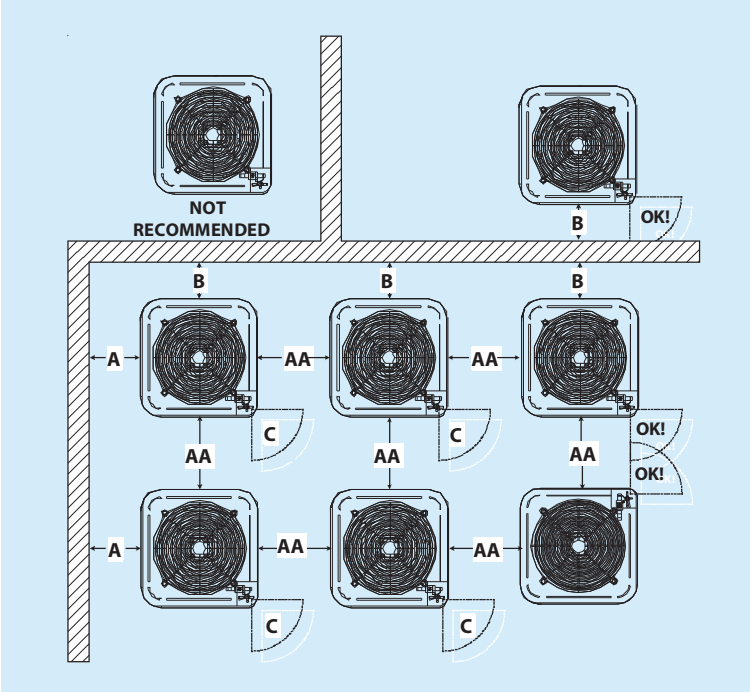
ABCD Sides along the installation site with obstacles
F Front side
Suction side

› In case of an installation site where sides A+B+C+D have obstacles, the wall heights of sides A+C have no impact on service space dimensions. Refer to the figure above for impact of wall heights of sides B+D on service space dimensions.
› In case of installation site where only the sides A+B have obstacles, the wall heights have no influence on any indicated service space dimensions

INSTALLATION RECOMMENDATIONS FOR DX CONDENSING UNITS

Special consideration must be given to location of the condensing unit(s) in regard to structures, obstructions, other units, and any/all other factors that may interfere with air circulation. Where possible, the top of the unit should be completely unobstructed; however, if vertical conditions require placement beneath an obstruction there should be a minimum of 1.5 meters between the top of the unit and the obstruction(s). The specified dimensions meet requirements for air circulation only. Consult all appropriate regulatory codes prior to determining final clearances.

Another important consideration in selecting a location for the unit(s) is the angle to obstructions. Either side adjacent the valves be placed toward the structure provided the side away from the structure maintains minimum service clearance. Corner installations are strongly discouraged.



Minimum Airflow Clearance, mm			
A	B	C	AA
300	300	450	600

Controls

The main components of a Daikin AHU are:

› Supply and return fast: Supply and return fans are used to regulate the air volume.
› Air filters: pre-filter and bag filter: Every AHU unit can be equipped with several types of filters used to clean the air from little particles of dust etc.
› Device for heat recovery: These devices are used to recover cooling or heating from the return air.
› DX coils: These are the devices used for air temperature conditioning.
› Electrical and Control Section: The AHU is equipped with electrical and controls section for the power input to the supply fan, return fan and the controllers including the switchgear, control components, relays, etc.
› Field Sensors: To control the air handling units the required temperature and pressure sensors will be provided.

Controller:

Daikin offers maximum flexibility in the control and monitoring of AHU unit. Comprehensive system functions such as alarm management, time scheduling to cover all requirements associated with the operation of an air handling system.

- Main controller
- I/O modules
- Integration by BMS (Modbus RTU/RS485) Optional

The main controller provides the following functions
- Control functions
- Onboard I/O's

I/O Modules:

The I/O modules provide additional I/O points by connecting to the main controller. The types of I/O points include the following.

- Analog Outputs: 0-10VDC
- Analog Inputs: NTC 10K
- Digital Outputs: Potential free contacts (Non-Voltage)
- Digital Inputs are: Potential free / Potential contacts (Voltage)

The number of I/O modules needed varies depending on the system configuration.

Sensors:

To control the Air Handling units the below sensors will be installed as part of AHU.

- Temperature sensor
- Pressure sensor

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