

HRV - HEAT RECLAIM VENTILATION

FXMQ-MFV1 - OUTDOOR AIR PROCESSING UNIT

VRV® +EXV-KIT - VRV® AIR HANDLING APPLICATIONS







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A WIDE VARIETY OF DAIKIN SOLUTIONS FOR THE PROVISION OF FRESH AIR AND VENTILATION

DAIKIN EUROPE NV



Daikin has a worldwide reputation based on over 80 years' experience in the successful manufacture of high quality air conditioning equipment for industrial, commercial and residential use.

Daikin Europe N.V.

ENVIRONMENTAL AWARENESS

Enhancing the present - safeguarding the future

Throughout the last 50 years or so the basic building blocks of life - air, water and the earth - have been systematically subjected to increasing levels of pollution with little regard to their potentially devastating effects on future generations.

Recently however, concern has grown regarding climate changes, acid rain, water and air pollution and the constant degradation of Earth's natural resources. The very technology that created these problems is now being harnessed to halt and reverse them. Depletion of the ozone layer and global warming have been highlighted and are now being addressed. Government legislation prohibiting the use of toxic substances and the generation of pollutants has slowed down the destruction of the environment.

Daikin Europe is proud to have been pro active in this respect, closely following its Japanese parent in implementing policies that have often pre-empted official legislative codes and directives. As a result, a culture of "environmental management" has since 2001, played a key role in the company's day to day activities and development strategies.

Top management commitment is reflected in the establishment of a number of action plans, which are now strictly observed and implemented throughout the Daikin Group.









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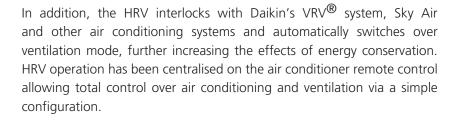


HRV - HEAT RECLAIM VENTILATION

GENERAL (VAM+VKM) FEATURES

HRV helps create a high quality environment by interlocking with the air conditioning system

The Daikin HRV (Heat Reclaim Ventilation) recovers heat energy lost through ventilation and holds down room temperature changes caused by ventilation, thereby maintaining a comfortable and clean environment. This also reduces the load on the air conditioning system and conserves energy.



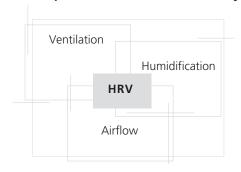
The current line-up includes models with DX coil and/or humidifier - the DX coil helps prevent the direct impact of cold airflow upon personnel during the heating cycle and vice versa. High static pressure enhances design flexibility.



Features of the VKM unit

- > Humidifier
- > DX coil
- > High static pressure

Components of Indoor Air Quality



	LINE-UP									
	Air flow rate (m³/h)	150	250	350	500	650	800	1000	1500	2000
00	VAM-FA Ventilation	X	X	X	X	X	Х	X	X	X
0 0	VKM-GAM: Ventilation, DX coil & humidifier				X		Х	X		
0 0	VKM-GA: Ventilation & DX coil				X		Х	X		

1. ENERGY EFFICIENCY

> Over 30 % Size Reduction

Use of the high efficiency paper (HEP) element and optimized design of the fan and airflow passages have resulted in matchless compactness without detriment to the 28% or so reduction in air conditioning load achieved by previous models. A reduction of up to 40mm in height allows the main unit to fit easily into limited spaces such as ceilings. On average 28% air conditioning load reduction (maximum 40%):

- 20% by operating in total heat exchange mode (in comparison with normal ventilation fans)
- a further 6 % by auto-ventilation mode changeover switching
- a further 2 % by pre-cool, pre-heat control (reduces air conditioning load by not running the HRV while air is still clean soon after the air conditioner is switched on.)

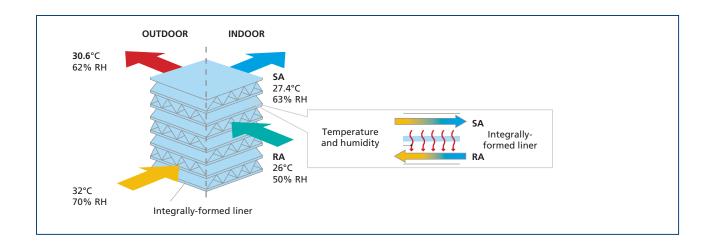
Note: the values mentioned above may vary according to weather and other environmental conditions at the location of the unit's installation

> Proprietary Developed HEP Element

The heat exchange element uses a high efficiency paper (HEP) possessing superior moisture absorption and humidifying properties. The heat exchange unit speedily recovers heat contained in latent heat (vapour). The element is made of a material with flame resistant properties and is treated with an anti-moulding agent.



> Operation of the heat exchanger element



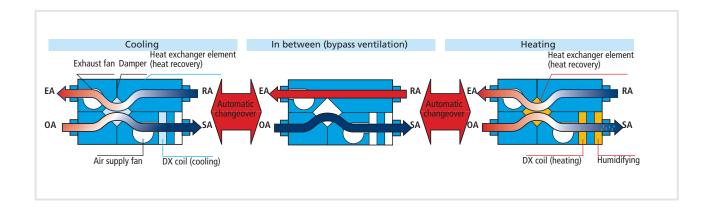






> Automatic Changeover to Efficient Operation Patterns

Operation automatically switches to the optimum pattern to suit prevailing conditions



2. DESIGN FLEXIBILITY

> Outdoor Operation Temperature down to -15°C

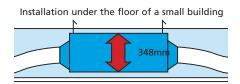
If the outdoor air suction temperature falls below -10°C, the unit switches to intermittent operation to prevent freezing of the heat exchanger element and dew condensation within the unit.

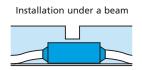
Intermittent operation = a thermistor (standard equipment) within the unit detects the outdoor air temperature. Unit operation varies according to the detected temperature.

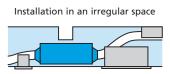
> Slim Design

The slim design of the HRV unit enables it to be mounted in narrow ceiling voids and irregularly shaped spaces.









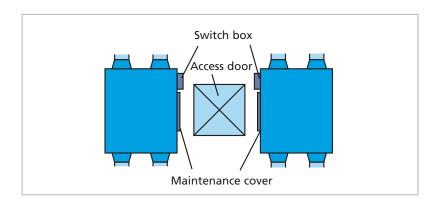






> Simple Design and Construction

The unit can be installed either horizontally or upside down in accordance with the conditions of the location. A 450mm square inspection hatch enables maintenance and heat exchange element replacement to be performed with ease.

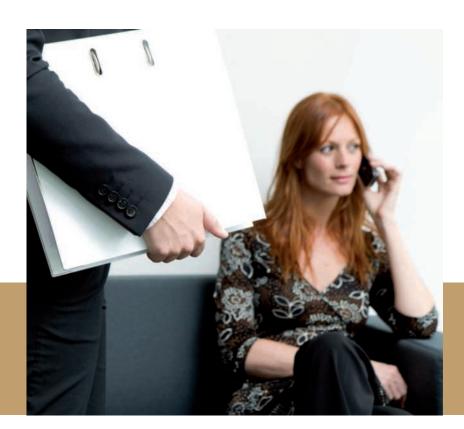


Quiet Operation

Sound pressure levels are remarkable low at 20.5dBA (VAM150FA)

dB(A)	Perceived loudness	Sound
0	Treshold of hearing	-
20	Extremely soft	Rustling leaves
40	Very soft	Quiet room
60	Moderately loud	Normal conversation
80	Very loud	City traffic noise
100	Extremely loud	Symphonic orchestra
120	Threshold of feeling	Jet taking off

Daikin units

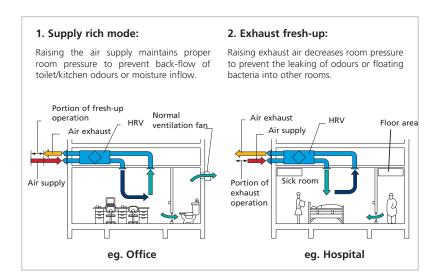




3. CLEAN AIR

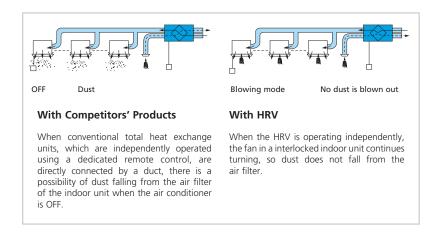
Fresh-Up Operation

The user can select between 2 fresh-up modes via the remote control.



> Dust Prevention

Prevents dust from falling thanks to directly mounted ducts.

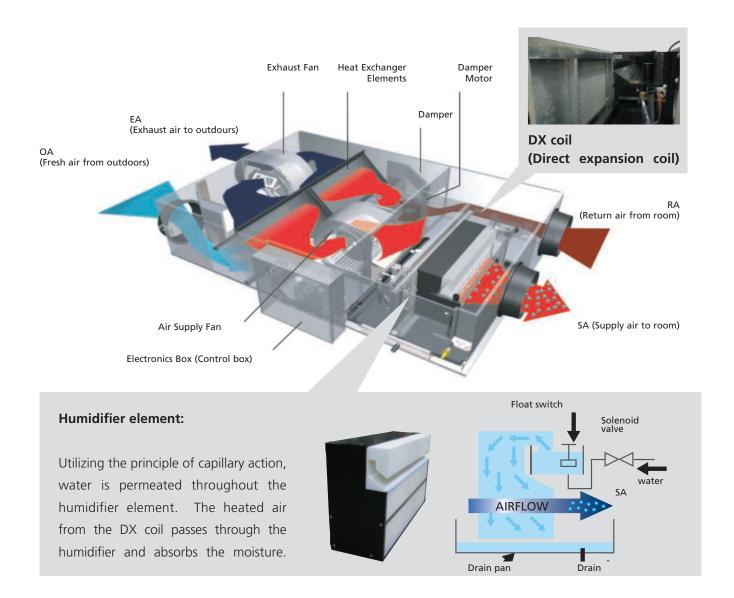


> Filter Cleaning

A signal on the remote control indicates when the air filter needs cleaning.



VKM FFATURES

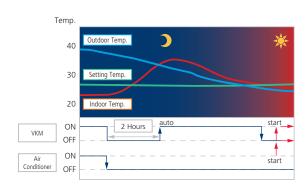


1. ENERGY EFFICIENCY

> Nighttime Free Cooling Operation

Nighttime free Cooling Operation is an energy conserving function operating at night when the air conditioning is switched off. By ventilating rooms containing office equipment that increases room temperature, night purge reduces the cooling load when air conditioning is switched on in the morning.

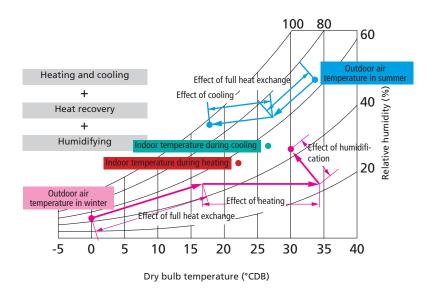
- $\,\,$ Nighttime free cooling operation works only if connected to Multi or VRV $^{\textcircled{\scriptsize R}}$ systems.
- Nighttime free cooling operation is factory set to "off" but can be activated by your Daikin dealer on request.



> Efficient Outdoor Air Introduction with Heat Exchanger and Cooling/Heating Operation

Indoor unit with outdoor air treatment.

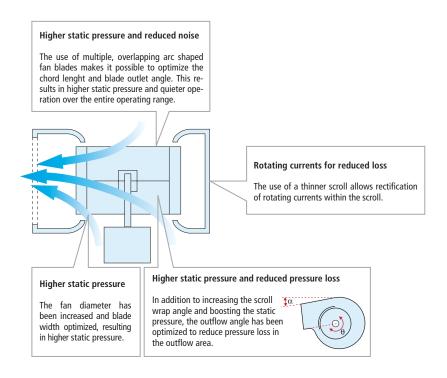
The temperature can be brought close to room temperature with minimal cooling capacity through the use of outdoor air.



2. DESIGN FLEXIBILITY

> High Static Pressure

Modifications to the fan, including the use of multiple arc blades, a thinner scroll and optimized fan scroll angle, help to boost efficiency. Dramatically higher static pressure is achieved due to improved fan performance. This reduces limitations on unit location and allows more flexibility in duct design.



Indoor Unit Connectability

The indoor unit is connectable up to 130% of outdoor unit capacity.

SPECIFICATIONS

VAM-FA8

Ventilation



V A M 8 0 0 F A

VAM-FA			150	250	350	500	650	800	1000	1500	2000
Temperature exchange effici	ency (%)	ultra-high	74	72	75	74	74	74	75	75	75
	• • •	high	74	72	75	74	74	74	75	75	75
		low	79	77	80	77	77	76	76.5	78	78
Enthalpy exchange	for heating	ultra-high	64	64	65	62	63	65	66	66	66
efficiency (%)		high	64	64	65	62	63	65	66	66	66
		low	69	68	70	67	66	67	68	68	70
	for cooling	ultra-high	58	58	61	58	58	60	61	61	61
		high	58	58	61	58	58	60	61	61	61
		low	64	62	67	63	63	62	63	64	66
Power supply VE						1 ~,	220~240V, 5	0Hz			
Sound pressure level dB(A)	heat exchange mode	ultra-high	27-28.5	28-29	32-34	33-34.5	34.5-35.5	36-37	36-37	39.5-41.5	40-42.5
		high	26-27.5	26-27	31.5-33	31.5-33	33-34	34.5-36	35-36	38-39	38-41
		low	20.5-21.5	21-22	23.5-26	24.5-26.5	27-28	31-32	31-32	34-36	35-37
	bypass mode	ultra-high	27-28.5	28-29	32-34	33.5-34.5	34.5-35.5	36-37	36-37	40.5-41.5	40-42.5
		high	26.5-27.5	27-28	31-32.5	32.5-33.5	34-35	34.5-36	35.5-36	38-39	38-41
		low	20.5-21.5	21-22	24.5-26.5	25.5-27.5	27-28.5	31-33	31-32	33.5-36	35-37
Casing						Gal	vanised steel p	late			
Insulation material						Self-exting	guishable ureth	nane foam			
Dimensions	HxWxD	mm	269 x 76	50 x 509	285 x 8	12 x 800	348 x 98	38 x 852	348x988x1,140	710x1,498x852	10x1,498x1,140
Weight		kg	2	4	3	13	4	8	61	132	158
Heat exchange system			Air to air cross flow total heat (sensible heat + latent heat) exchange								
Heat exchange element mat	erial					Specially proc	essed non-flar	nmable paper			
Air filter						Multidir	ectional fibrou	s fleeces			
Fan	type						Sirroco fan				
	air flow rate (m³/h)	ultra-high	150	250	350	500	650	800	1,000	1,500	2,000
		high	150	250	350	500	650	800	1,000	1,500	2,000
		low	110	155	230	350	500	670	870	1,200	1,400
	external static pressure (Pa)	ultra-high	69	64	98	98	93	137	157	137	137
		high	39	39	70	54	39	98	98	98	78
		low	20	20	25	25	25	49	78	49	59
Motor output		kW	0.030 x 2	0.09	0 x 2	0.14) x 2	0.23	30 x 2	0.2	30 x 4
Connection duct diameter		mm	Ø 100	Ø	150	Ø 2	200	Ø	250		Ø 350
Unit ambient condition			-15°C ~ +50°CDB, 80% RH or less								

- otes:

 Air flow rate can be changed over to low mode or high mode.

 Sound pressure level is measured at 1.5m below the center of the body.

 Sound pressure level is measured in an anechoic chamber.

 Sound pressure levels generally become higher than this value depending on the operating conditions, reflected sound, and peripheral noise.

 The sound pressure level at the air discharge port is about 8dB higher than the unit's sound level.

 Even when the outdoor temperature is below -15°C, the system is operable down to -20°C with the preheater installed at the outdoor air intake side.



VKM-GAM

Ventilation, DX coil & humidifier



V K M 8 0 - 1 0 0 G A M

					VKM50GAM	VKM80GAM	VKM100GAM		
X coil capacity	cooling			kW	4.71	7.46	9.12		
	heating			kW	5.58	8.79	10.69		
Casing	material					Galvanised steel plate			
Dimensions	height			mm	387	387	387		
	width			mm	1,764	1,764	1,764		
	depth			mm	832	1,214	1,214		
Neight				kg	102	120	125		
an	type					Sirocco fan			
	air flow	heat exchange mode	ultra-high	m³/h	500	750	950		
	rate		high	m³/h	500	750	950		
			low	m³/h	440	640	820		
		bypass mode	ultra-high	m³/h	500	750	950		
			high	m³/h	500	750	950		
			low	m³/h	440	640	820		
	external sta	atic pressure	ultra-high	Pa	160	140	110		
			high	Pa	120	90	70		
			low	Pa	100	70	60		
	motor	output		W	2 x 280	2 x 280	2 x 280		
emperature exch	nange efficie	ncy	ultra-high	%	76	78	74		
		·· -)	high	%	76	78	74		
			low	%	77.5	79	76.5		
nthalpy	cooling		ultra-high	%	64	66	62		
xchange			high	%	64	66	62		
fficiency			low	%	67	68	66		
meieriej	heating ultra-high high		ultra-high	%	67	71	65		
			high	%	67	71	65		
			low	%	69	73	69		
umidifier	system					Natural evaporating type	1		
	amount			kg/h	2.7 4.0				
	feed water	pressure		MPa	0.02~0.49	0.02~0.49	0.02~0.49		
	N° of elem	ents			1	1	2		
peration range	around uni	t			0°C~40°CDB, 80% RH or less				
	outdoor air	ſ			-15°C~40°CDB, 80% RH or less				
	return air					0°C~40°CDB, 80% RH or less			
ound level -	heat	sound pressure	ultra-high	dBA	37.5	39	39.5		
30V	exchange		high	dBA	35.5	37	37.5		
	mode		low	dBA	33	34	34.5		
	bypass	sound pressure	ultra-high	dBA	37.5	39	39.5		
	mode		high	dBA	35.5	37	37.5		
			low	dBA	33	34	34.5		
iping	liquid	type			flare connection	flare connection	flare connection		
onnection		diameter		mm	6.4	6.4	6.4		
	gas	type			flare connection	flare connection	flare connection		
		diameter		mm	12.7	12.7	12.7		
	water supp			mm	6.4	6.4	6.4		
	drain					PT3/4 external thread	1		
sulation materia	al					Self-extinguishable urethane foam			
leat exchange sy	stem				Air to air	cross flow total heat (sensible + latent heat)	exchange		
leat exchange el						Specially processed non-flammable paper	-		
						Multidirectional fibrous fleeces			
Air filter									

- Notes:
 Indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDBIndoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB
 Humidifying capacity is based on: Indoor temperature: 20°CDB, 15°CWB, outdoor temperature: 7°CDB, 6°CWB
 Operation sound is measured at 1.5m below the center of the body.

 Sound values are measured in an anechoic chamber built in accordance with JIS C 1502 condition. Operating sound level generally becomes higher than this value depending on the operating conditions, reflected sound, and peripheral noise.

 The sound level at the air discharge port is about 8dB higher than the unit's operating sound.

 For congretion in a quiet room, it is required to take measures to lower the sound, for example install more than 2m soft duct near the air discharge grill.
- For operation in a quiet room, it is required to take measures to lower the sound, for example install more than 2m soft duct near the air discharge grill. Air flow rate can be changed over to Low mode or High mode.

 Normal amplitude, input, efficiency depend on the other above conditions

VKM-GA

Ventilation & DX coil



V K M 8 0 - 1 0 0 G A

					VKM50GA	VKM80GA	VKM100GA				
DX coil capacity	cooling			kw	4.71	7.46	9.12				
	heating			kW	5.58	8.79	10.69				
Casing	material					Galvanised steel plate					
Dimensions	height			mm	387	387	387				
	width			mm	1,764	1,764	1,764				
	depth			mm	832	1,214	1,214				
Weight				kg	96	109	114				
Fan	type					Sirocco fan					
	air flow	heat exchange mode	ultra-high	m³/h	500	750	950				
	rate		high	m³/h	500	750	950				
			low	m³/h	440	640	820				
		bypass mode	ultra-high	m³/h	500	750	950				
			high	m³/h	500	750	950				
			low	m³/h	440	640	820				
	external sta	tic pressure	ultra-high	ра	180	170	150				
			high	pa	150	120	100				
			low	pa	110	80	70				
	motor	output		W	2 x 280	2 x 280	2 x 280				
Temperature excl	nange efficier	ncy	ultra-high	%	76	78	74				
			high	%	76	78	74				
			low	%	77.5	79	76.5				
Enthalpy	cooling		ultra-high	%	64	66	62				
exchange			high	%	64	66	62				
efficiency			low	%	67	68	66				
	heating ultra-high high		%	67	71	65					
			high	%	67	71	65				
			low	%	69	73	69				
Operation range	around unit					0°C~40°CDB, 80% RH or less					
	outdoor air				-15°C~40°CDB, 80% RH or less						
	return air					0°C~40°CDB, 80% RH or less					
Sound level -	heat	sound pressure	ultra-high	dBA	38.5	41	40.5				
230V	exchange		high	dBA	36.5	38	38.5				
	mode		low	dBA	34.5	36	36				
	bypass	sound pressure	ultra-high	dBA	38.5	41	40.5				
	mode		high	dBA	36.5	38	38.5				
			low	dBA	34.5	36	36				
Piping	liquid	type			flare connection	flare connection	flare connection				
connection		diameter		mm	6.4	6.4	6.4				
	gas	type			flare connection	flare connection	flare connection				
		diameter		mm	12.7	12.7	12.7				
	drain	1				PT3/4 external thread					
nsulation materi	al					Self-extinguishable urethane foam					
Heat exchange sy	rstem				Air to a	ir cross flow total heat (sensible + latent heat) e	xchange				
Heat exchange el						Specially processed non-flammable paper					
Air filter						Multidirectional fibrous fleeces					
Connection duct	diameter			mm	Ø 200	Ø 250	Ø 250				
Power supply				V1	. 222	1~, 50Hz, 220-240V					

- Notes:

 > Cooling: indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB

 > Heating: indoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB

 > Operation sound is measured at 1.5m below the center of the body.

 > Sound values are measured in an anechoic chamber built in accordance with JIS C 1502 condition. Operating sound level generally becomes higher than this value depending on the operating conditions, reflected sound, and peripheral noise.

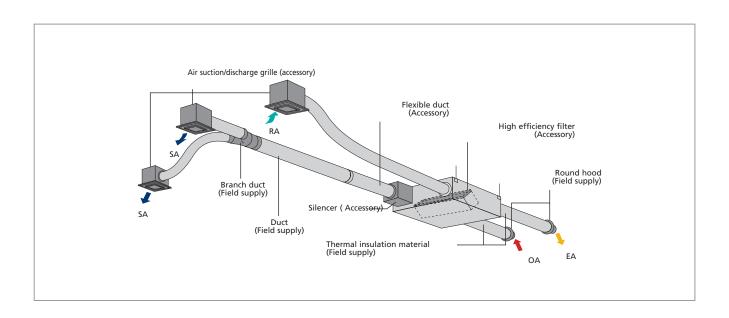
 > The sound level at the air discharge port is about 8dB higher than the unit's operating sound.

 > Air flow rate can be changed over to Low mode or High mode.

 Normal amplitude, input, efficiency depend on the other above conditions



OPTIONS



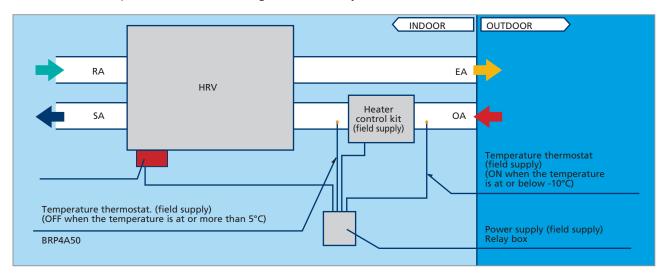
PC board adapter

wiring adapter for electrical appendices			KRP2A61								
for humidifier (running ON signal output)			KRP50-2								
for heater control kit					BRP4	1A50					
for wiring	indoor unit	FXZQ	FXFQ	FXCQ	FXKQ	FXMQ	FXSQ	FXDQ-N	FXHQ	FXAQ	FXLQ/FXNQ
	reference	KRP1B57*	-	KRP1B61*		KRP1D61		KRP1B56	KRP1B3	-	KRP1B61
installation box for adapter PCB		KRP1B101	KRP1H98*	KRP1B96	-	-	KRP4A91	KRP1B101	KRP1C93	KRP4A93	-
	*1/*4	*2/*3	*2/*3			*5	*1/*4	*3	*2/*3		

- Notes
 1. Installation box is necessary for each adapter marked with *
 2. Up to 2 adapters can be fixed per installation box
 3. Only 1 installation box can be installed per indoor unit
 4. Up to 2 installation boxes can be installed per indoor unit
 5. Installation box is necessary for second adapter

1. PC BOARD ADAPTER FOR HEATER CONTROL KIT - BRP4A50

When the installation of an electric heater is required in a cold region, this adapter with an internal timer function eliminates the complicated timer connecting work necessary with conventional heaters.



Notes when installing:

- Examine fully installation location and specification for using the electric heater based on the standards and regulations of each country.
- > Supply the electric heater and safety production devices (such as a relay and a thermostat etc) which meet the on site standards and regulations of each country.
- Use a non-flammable connecting duct to the electric heater. Be sure to allow 2m or more between the electric heater and HRV for safety.
- > For the HRV units, use a different power supply from that of the electric heater and install a circuit breaker for each of them.







Silencer Duct adapter

Description	VAM150FA	VAM250FA	VAM350FA
High efficiency filter	YAFM323F15	YAFM323F25	YAFM323F35
Replacement for air filter	YAFF323F15	YAFF323F25	YAFF323F35

Description		VAM500FA	VAM650FA	VAM800FA	
Silencer	reference	KDDM24A50	KDDM24A100		
	nom. piping diameter	Ø 200mm	Ø 200mm	Ø 250mm	
High efficiency filter		YAFM323F50	YAFM323F65		
Replacement for air filter		YAFF323F50	YAFF323F65		

Description		VAM1000FA	VAM1500FA	VAM2000FA		
Silencer	reference	KDDM24A100	KDDM24	A100 x 2		
	nom. piping diameter	ometer Ø 250mm				
High efficiency	filter	YAFM323F100	YAFM323F65 x 2	YAFM323F100 x 2		
Replacement for air filter		YAFF323F100	YAFF323F65 x 2 YAFF323F10			
Duct adapter reference nom. piping diameter		- YDFA25A1				
		-	Ø 250)mm		

Description		VKM50GA(M)	VKM80GA(M)	VKM100GA(M)			
Silencer reference		-	KDDM24B100				
	nom. piping diameter	-	Ø 250mm				
High efficiency filter		KAF241G80M	KAF241G100M				
Replacement for air filter		KAF242G80M	KAF2420	G100M			







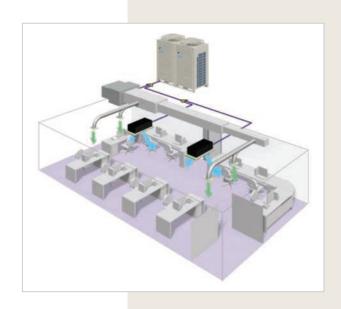


FXMQ-MFV1 OUTDOOR AIR PROCESSING UNIT

FEATURES

Combined fresh air treatment and air conditioning via a single system.

Both fresh air treatment and air conditioning can be achieved successfully in a single system via heat pump technology without the usual design problems associated with balancing air supply and discharge. Air conditioning fan coil units and an outdoor air treatment unit can be connected to the same refrigerant line, resulting in enhanced design flexibility and a significant reduction in total system costs.



Line-up



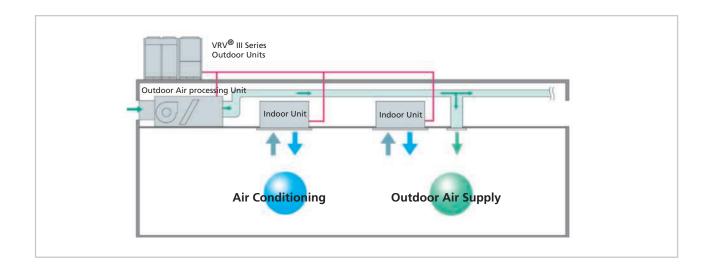
Air flow rate (m³/h)	1,080	1,680	2,100
FXMQ125MFV1	X		
FXMQ200MFV1		X	
FXMQ250MFV1			X

1. AIR CONDITIONING AND FRESH AIR TREATMENT CAN BE ACCOMPLISHED VIA A SINGLE SYSTEM.

Connection Conditions

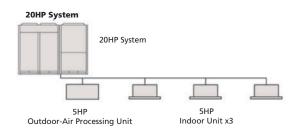
The following restrictions must be observed in order to maintain the indoor units' connection to the same system.

- > The total connected capacity of the standard indoor units and fresh air treatment units must be between 50% and 100% of the capacity of the air conditioning outdoor units. The connected capacity of the fresh air treatment units must not exceed 30% of the capacity of the air conditioning outdoor units.
- A fresh air treatment unit can also be used exclusively. The connected capacity of the fresh air treatment unit must be between 50% and 100% of the capacity of the air conditioning outdoor unit.
- > Connectable outdoor units: VRV[®] and systems.



System Example

Check that system connected capacity is within the appropriate range.



- > Total connected capacity of standard indoor units and fresh air treatment unit does not exceed 100%.
- > System capacity of 20 HP = indoor unit capacity of 20 HP.
- Connected capacity of fresh air treatment unit does not exceed 30% of this.
- Since system capacity of 20 HP x 0.3 = 6 HP > fresh air treatment unit capacity = 5 HP.

2. 100% FRESH AIR INTAKE POSSIBLE

By introducing outdoor air into the room and adjusting the outdoor air temperature via fixed discharge temperature control, the system reduces the load on the air conditioner.

SPECIFICATIONS

FXMQ-MFV1

Ventilation



F X M Q 2 0 0 - 2 5 0 M F V 1

					FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1
Capacity	cooling	poling kW		14.0	22.4	28.00	
	heating			kW	8.9	13.9	17.40
Power Input	cooling			kW	0.359	0.548	0.638
	heating			kW	0.359	0.548	0.638
Casing	material				Galvanised steel	Galvanised steel	Galvanised steel
Dimensions	unit	height		mm	470	470	470
		width		mm	744	1380	1380
		depth		mm	1100	1100	1100
Veight	unit			kg	86	123	123
leat Exchanger	dimensions	nr of rows			3	3	3
		fin pitch		mm	2.00	2.00	2.00
		face area		m²	0.28	0.65	0.65
		nr of stages			26	26	26
	fin	fin type			Cross fin coil	Cross fin coil	Cross fin coil
an	type				Sirocco fan	Sirocco fan	Sirocco fan
	air flow rate	cooling	medium	m³/min	18.0	28.0	35.0
		heating medium		m³/min	18.0	28.0	35.0
	external static pressure	standard	dard Pa		185	225	205
	motor model		I		D13/4G2DA1	D13/4G2DA1	D13/4G2DA1
		output (high) W		W	380	380	380
		drive type			Direct drive	Direct drive	Direct drive
Piping	liquid (OD)				Flare connection	Flare connection	Flare connection
connections		diameter mm		mm	9.5	9.5	9.5
	gas	type	ype		Flare connection	Brazing/Brazing connection	Brazing/Brazing connection
		diameter		mm	15.9	19.1	22.2
	drain	diameter		mm	PS1B	PS1B	PS1B
	heat insulation				Glass fiber	Glass fiber	Glass fiber
ir Filter					As option	As option	As option
efrigerant cont	rol				Electronic expansion valve	Electronic expansion valve	Electronic expansion valve
emperature cor	ntrol				Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
afety devices					Fuse	Fuse	Fuse
afety devices					Fan motor thermal protector	Fan motor thermal protector	Fan motor thermal protector
ower Supply	frequency			Hz	50	50	50
	voltage			V	220-240	220-240	220-240
urrent	minimum circuit amp			А	1.90	3.30	3.80
	maximum fuse amps	(MFA)		А	15	15	15
	full load amps (FLA))		А	1.50	2.60	3.00
/oltage range	minimum			V	-10%	-10%	-10%
	maximum			V	10%	10%	10%

- otes:

 Nominal cooling capacities are based on: outdoor temperature: 33°CDB, 28°CWB (68%RH), discharge set temperature: 18°CDB, equivalent piping length 7.5m (horizontal)

 Nominal heating capacities are based on: outdoor temperature: 0°CDB, -2.9°CWB (50%RH), discharge set temperature: 25°CDB, equivalent piping length 7.5m (horizontal)

 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

 Air filter is not standard accessory, but please mount it in the duct system of the suction side. Select its colorimetric method(gravity method) 50% or more.

 Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.

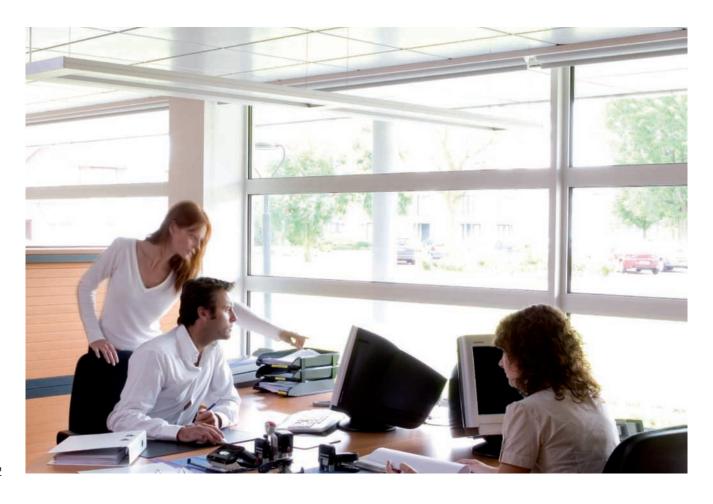
 Maximum allowable voltage range variation between phases is 2%.

- MCA/MFA : MCA = 1.25 x FLA MFA <= 4 x FLA
- Next lower standard fuse rating minimum 15A Select wire size based on the MCA
- Instead of a fuse, use a circuit breaker

OPTIONS

Description			FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1	
Filters Long-life replacement filter High-efficiency filter 65%		KAFJ371L140	KAFJ371L280			
		KAFJ372L140	KAFJ372L280			
		90%	KAFJ373L140	KAFJ3	73L280	
Filter chamber *1			KDJ3705L140	KDJ3705L280		
Drain pump kit			KDU30L250VE			
Adapter for wiring			KRP1B61			

Notes:
*1 Filter chamber has a suction-type flange. (Main unit does not).
Dimensions and weight of the equipment may vary depending on the options used.
Some options may not be usable due to the equipment installation conditions. Please confirm prior to ordering.
Some options may not be used in combination.
Operating sound may increase somewhat depending on the options used.



CONTROL SYSTEMS

HRV / FXMQ-MFV1 can also be connected to

DS-net

ntelligent Controller

Intelligent Manager

BACnet Gateway

SMS-IF

1. "SUPER WIRING" SYSTEM

A Super Wiring system is used to enable the shared use of wiring between indoor units, outdoor units and the centralised remote control.

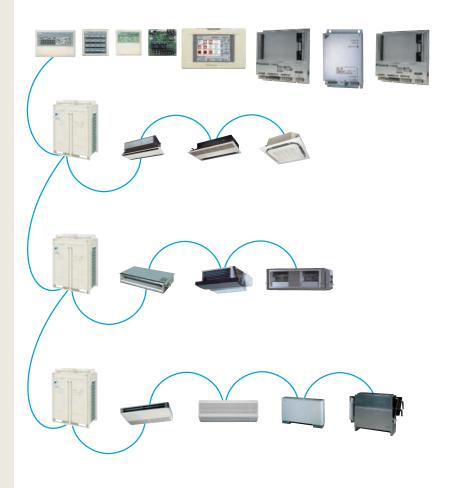
This system makes it easy for the user to retrofit the existing system with a centralised remote control, simply by connecting it to the outdoor units.

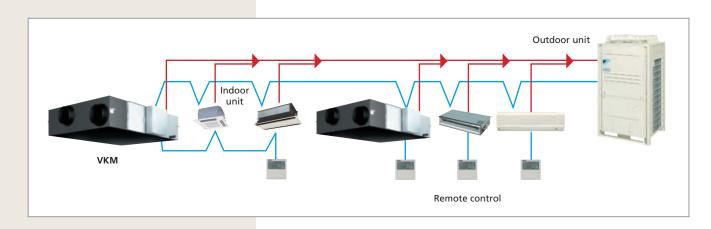
Thanks to a non polarity wiring system, incorrect connections become impossible and installation time is reduced.

Note:

Linked control of FXMQ-MFV1 and HRV is not supported.

Operation of the air conditioner using the remote control is interlocked with HRV operation, greatly simplifying overall system control. The same remote control centralizes air conditioning and ventilation operations, obviating any need for ventilation remote control installation work. Using a centralized remote control also frees the user to choose from a wide range of control systems that integrate air conditioning and ventilation. By incorporating a variety of centralized control equipment, the user can build a large, high grade centralized control system.





5 individual control systems give the user control over the VRV^{\circledR} system and the combined ventilation.

BRC1D52 is a wired remote controller giving access to room temperature settings, schedule timer, ... Next to that it also has got user friendly HRV functions.

BRC301B61 is a wired controller especially designed for VAM units.

BRC2C51 and BRC3A61 are compact, easy to use remote controllers, ideal for use in hotel bedrooms.

The BRC4*/BRC7* infrared remote controllers combine the comfort of an infrared controller with the possibilities of a wired remote controller.

Description	HRV	FXMQ125MFV1	FXMQ200MFV1	FXMQ250MFV1			
VAM remote control	BRC301B61	_	_	_			
Air conditioner remote control / Operation remote control		BRC1D52					
Centralised remote control	DC\$302C51						
Unified on/off control	DCS301B51						
Schedule timer		DST30					
Wiring adapter for electrical appendices (1)	KRP2A61						
Wiring adapter for electrical appendices (2)	— KRP4A51						



VAM remote control



Air conditioner remote control



Centralised remote control



Unified ON/OFF control



Schedule timer







2. INDIVIDUAL CONTROL SYSTEMS

- > Simultaneous ON/OFF of HRV and air conditioner (BRC1D52)
- > Airflow rate switching (initial setting)
- > Ventilation mode switching (initial setting)
- > Self diagnostic functions
- > Filter sign display and reset
- > Timer settings, simultaneous control with air conditioner (BRC1D52)
- > ON/OFF of VAM (BRC301B61)
- > Independent operation of HRV
- > Timer settings (BRC301B61)
- > Fresh-up mode switching (HRV only)(Selectable: supply rich mode, exhaust rich mode; initial setting)

Notes:

> The remote control wired to the FXMQ-MFV1 cannot be set as master remote control. Otherwise, when set to 'auto', the operation mode will switch according to outdoor air conditions, regardless of indoor temperature.



BRC1D52

air conditioner remote control



BRC301B61

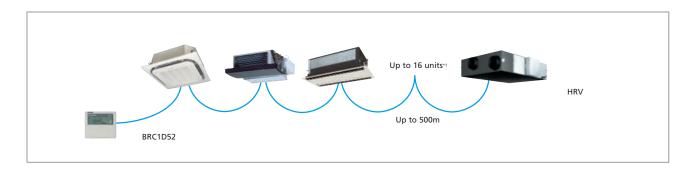
VAM remote control



A variety of control systems can be controlled using only the BRC1D52 (HRV only)

> Group Control

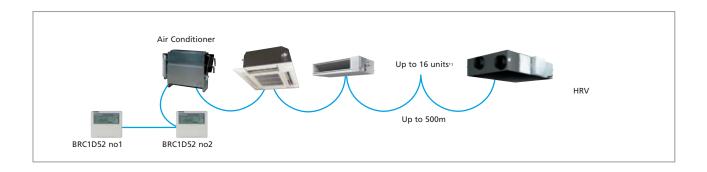
One air conditioner remote control simultaneously controls up to 16 air conditioning and HRV units.



^{*1:} Count VKM unit as two air conditioners. For details, see Table 1 on page 15.

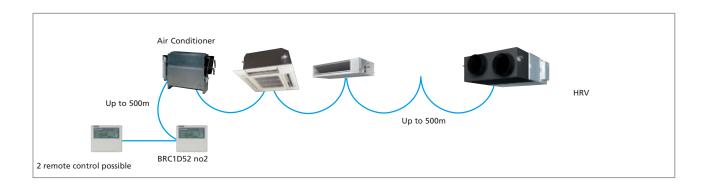
> Control using 2 remote controls

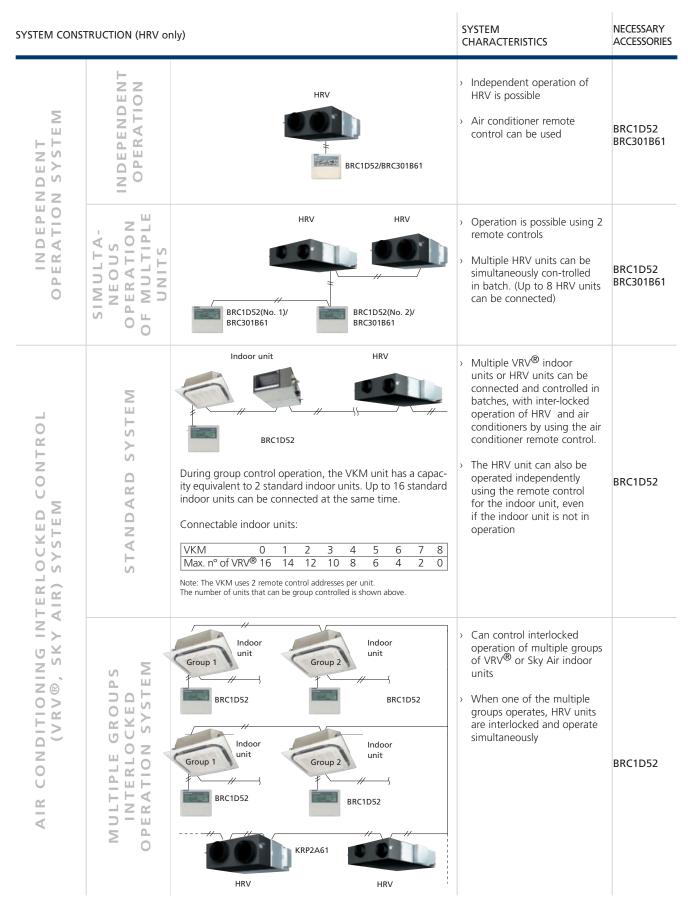
Allows control of air conditioning and HRV units from two locations by connecting two air conditioner remote controls. (group control is possible)



> Long-distance Remote Control

Remote operation control - from a distant control room for example, is possible thanks to wiring of up to 500 m. (2 remote control control possible)





BRC301B61 only available for VAM-FA

Note:

- Group control is not possible between FXMQ-MFV1 and standard type indoor units. Connect remote controllers to each unit
- each unit.

 Not all FXMQ-MFV1 functions are available when using centralised control. Please refer to your local installer for detailed information.
- The remote control wired to the FXMQ-MFV1 cannot be set as master remote control. Otherwise, when set to 'auto', the operation mode will switch according to outdoor air conditions, regardless of indoor temperature.
 Temperature setting and PPD are not
- Temperature setting and PPD are not possible, even when Intelligent Touch Controller or Intelligent Manager are installed.

DCS302C51



DCS301B51



DST301B51



3. CENTRALISED CONTROL SYSTEMS

By combining the (optional) centralised control equipment listed below, the user can achieve a wide range of comprehensive centralised control systems for air conditioning and ventilation.

Centralised remote control - DCS302C51

- A maximum of 64 groups (128 indoor units, max. 10 outdoor units) can be controlled
- A maximum of 128 groups (128 indoor units, max. 10 outdoor units) can be controlled via 2 centralised remote controls in separate locations
- > Group control (up and down buttons are added for group selection)
- > Zone control
- Malfunction code display
- > Max. wiring length 1,000 m (total: 2,000 m)
- Combination with unified ON/OFF control, schedule timer and BMS system
- Airflow volume and direction can be controlled individually for indoor units in each group operation.
- > Ventilation volume and mode can be controlled for Heat Reclaim Ventilation (VKM).
- > Up to 4 'operation/stop' pairs can be set per day by connecting a schedule timer.

Unified ON/OFF control - DCS301B51

Enabling 64 groups to be programmed

- One unit can turn ON/OFF up to 16 groups (128 units) of HRV and air conditioner units individually or in a batch.
- > Lamps display operation and failure status of the connected HRV and air conditioner units.
- > 2 remote controls in separate locations can be used
- > centralised control indication
- > Maximum wiring length of 1,000m (total: 2,000m)

Schedule timer - DST301B51

- One unit can control the operation of up to 128 HRV and air conditioner units on a weekly schedule.
- Can set two ON/OFF operations per day for a period of one week.
- > 8 types of weekly schedule
- A maximum of 48 hours back-up power supply
- > Maximum wiring length of 1,000m (total: 2,000m)

Number of HRV units that can be connected per system					
Centralised remote control	2 units				
Unified on/off control	8 units				
Schedule timer	1 unit				

independently



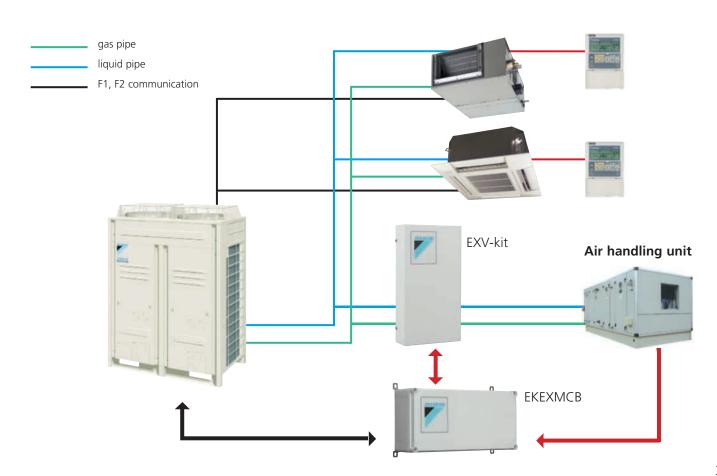
VRV®+EXV-KIT VRV® AIR HANDLING APPLICATION

FEATURES

Daikin has introduced a new range of R-410A inverter condensing units to provide ventilation and air conditioning for air handling installations in medium and large commercial spaces. This system is unique because it combines the flexibility of Daikin VRV® units with Air Handling Applications. Because of the simplicity of the system, it is very easy to design the air conditioning system.

1. SYSTEM OVERVIEW

In order to maximise combination potential, Daikin offers different expansion kits and an own control system. BRC1D52 is used to set the set joint temperature (connected to the EKEXMCB)



2. LARGE RANGE OF EXPANSION VALVE KITS (EXV) POSSIBLE

	Capacity Class	Allowed I	•	Allowed Heat Exchanger Capacity (Kw)			
		min		max	min	std	max
EKEXV	50	0.76	-	0.96	5.0	5.6	6.2
EKEXV	63	0.96	-	1.22	6.4	7.1	7.8
EKEXV	80	1.22	-	1.53	8.1	9.0	9.9
EKEXV	100	1.53	-	1.91	10.1	11.2	12.3
EKEXV	125	1.91	-	2.14	12.6	14.0	15.4
EKEXV	140	2.14	-	3.06	14.4	16.0	17.6
EKEXV	200	3.06	-	3.82	20.2	22.4	24.6
EKEXV	250	3.82	-	4.78	25.2	22.0	30.8

SPECIFICATIONS

1. SYSTEM SPECIFICATIONS

RXQ-P(A)

Cooling only										
RXQ-P(A)				5	8	10	12	14	16	18
Capacity range			HP	5	8	10	12	14	16	18
Capacity	cooling		kw	14.0	22.4	28.0	33.5	40.0	45.0	49.0
Power input (Nominal)	cooling		kw	3.52	5.56	7.42	9.62	12.4	14.2	16.2
Dimensions	HxWxD		mm	1,680x635x765	1,680x930x765	1,680x930x765	1,680x930x765	1,680x1,240x765	1,680x1,240x765	1,680x1,240x76
Weight			kg	157	185	238	238	315	315	323
Sound Level	sound pow	er cooling	dBA	72	78	78	80	80	80	83
	sound pres	sure cooling	dBA	54	57	58	60	60	60	63
Air Flow Rate (nominal at 230V)	cooling		m/min	95	171	185	196	233	233	239
Operation Range	cooling	min~max	°CDB				-5.0~43.0			
Refrigerant			_	R-410A						
Power Supply				3N~/400V/50Hz						
Max n° of indoor units to be connected				8	13	16	19	23	26	29
Piping connections	liquid (OD)	/gas	mm	9.5 / 15.9	9.5 / 19.1	9.5 / 22.2	12.7 / 22.2	12.7 / 28.6	12.7 / 28.6	15.9 / 28.6





2. COMBINATION TABLE

Combination table										
		CONTROL BOX	CONTROL BOX EXPANSION VALVE KIT							
Outdoor unit		CONTROL Z	CLASS 50	CLASS 63	CLASS 80	CLASS 100	CLASS 125	CLASS 140	CLASS 200	CLASS 250
		EKEXMCB	EKEXV50	EKEXV63	EKEXV80	EKEXV100	EKEXV125	EKEXV140	EKEXV200	EKEXV250
	RXQ5P	х	Х	Х	х	Х	Х	Х	Х	Х
	RXQ8P	х	Х	Х	х	х	Х	Х	Х	Х
3ph	RXQ10P	Х	Х	Х	Х	Х	Х	Х	Х	Х
	RXQ12P	х	Х	Х	х	х	Х	Х	Х	х
	RXQ14PA	Х	Х	Х	х	х	Х	Х	Х	х
	RXQ16PA	х	Х	х	х	х	Х	Х	х	х
	RXQ18PA	х	Х	Х	х	х	х	Х	Х	Х

X = Quantity determined by connection ratio or maximum number of indoor units (the EKEVX-kit is considered as one of the indoor units

3. EXPANSION VALVE KIT (EXV)



Expansion valve kit				
Casing	colour			Ivory White
Dimensions	unit	height	mm	401
	width	mm	215	
	depth	mm	78	
Weight	unit		kg	2.9
Piping Connection	liquid		mm	9.52
Sound Pressure Level	nominal dB(A)		dB(A)	45 (max. at 10cm from motor)
Operation Range	cooling	min	°CDB	-5.0
		max	°CDB	46.0

4. CONTROL BOX

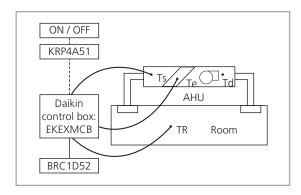


Control box						
Casing	colour			White grey		
Dimensions	unit	height	mm	132		
		width	mm	400		
		depth	mm	200		
Weight	unit		kg	3.5		
Operation Range	cooling	min	°CDB	-5.0		
		max	°CDB	46.0		
Power Supply	name	name				
	phase			1		
	frequency		Hz	50		
	voltage		V	230		
	voltage range	minimum	V	-10%		
		maximum	V	10%		

Control box			
Wiring connections	for power supply	quantity	3
		remark	Earth wire included
	for connection with indoor	quantity	2
		remark	F1-F2
	for remote control	quantity	2
		remark	P1,P2
	for expansion valve kit	quantity	6
		remark	Y1 ~ Y6
	thermistors liquid pipe	quantity	2
		remark	R1,R2
	thermistors gas pipe	quantity	2
		remark	R3,R4
	thermistor air	quantity	2
		remark	R5,R6
	ON/OFF	remark	T1,T2
Power Supply Intak		Bottom	

CONTROL SYSTEMS

1. CONTROL OF AIR TEMPERATURE VIA DAIKIN CONTROL



Set point can be fixed via standard Daikin wired remote controller. Remote ON/OFF can be achieved by an optional adapter KRP4A51. No external DDC controller should be connected. BRC1D52 is used to set the set point temperature (connected to the EKEXMCB).

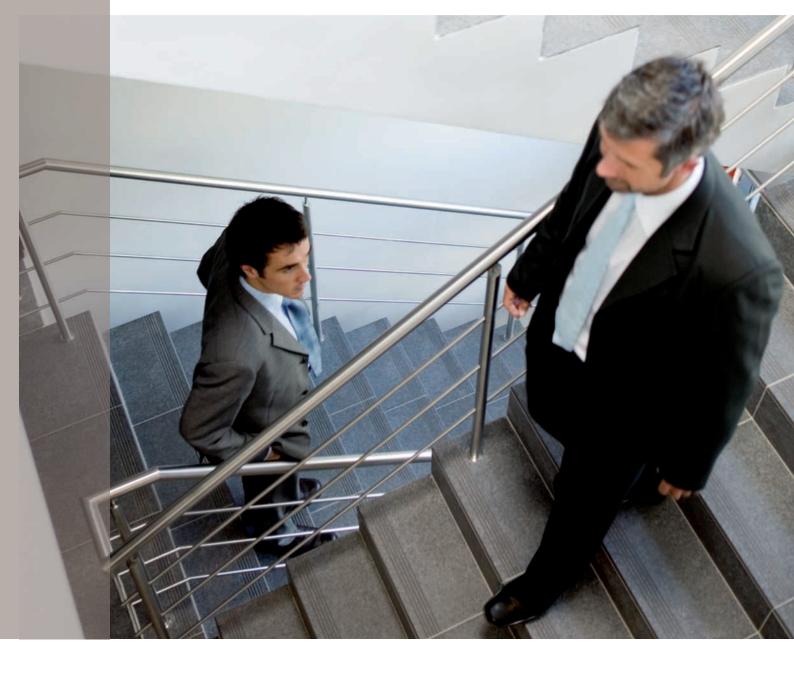
Caution: Do not connect the system to DIII-net devices (Intelligent Controller, Intelligent Manager, DMS-IF, BACnet Gateway ...) This could result in a malfunction or breakdown of the total system.

OPTIONS

EKEXMCB	
Wired remote control	BRC1D52
Wiring adapter for electrical appendices	KRP4A51
Valve kits	EKEXV 50, 63, 80, 100, 125, 140, 200, 250

Caution: Only use this system in combination with a field supplied air handling unit. Do not connect this system to other indoor units.

NOTES





Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues.

For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment.

This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin units comply with the European regulations that guarantee the safety of the product.

VRV[®] products are not within the scope of the Eurovent certification programme

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