



## VRV IV+ Sets the Standard... Again



High Ambient VRV IV+ heat pump and water-cooled systems





## Why choose Daikin?

Our promise is to ensuure that your customers can depend on Daikin for the ultimate in comfort, so that they are free to focus on their own working and home lives.

We promise to dedicate ourselves to technological excellence, a design focus and the highest quality standards so that your customers can trust and rely on the comfort we deliver.

Our promise to the planet is absolute. Our products are at the forefront of low energy consumption and we continuously innovate to reduce the environmental impact of HVAC-R solutions further.

We lead where others follow. We will continue our global leadership in HVAC-R solutions as our specialist expertise in all market sectors combined with 90 years' experience enable us to deliver added value in long-lasting relationships based on trust, respect and credibility.

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# Over 30 years of VRV History



#### 1987 Introduction the original VRV air conditioning system to Europe, invented by Daikin in 1982

> Up to 6 indoor units connected to 1 outdoor unit



**R-407C** 

1998 Launch inverter series with R-407C > Up to 16 indoor units connected to 1 outdoor unit

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 1991
 1994
 1998
 2003

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2004 Expand to light commercial sector with VRVII-S

> Available in 4, 5, 6HP capacities

> 1 system can be installed in up to 9 rooms



2008 Launch of heat pump optimised for heating (VRV III-C)

- Extended operation down to -25C
- 2-stage compressor systems

2005

#### 1991

1 1 1 1987 1 1 1

Introduce VRV heat

#### recovery

 Simultaneous cooling and heating



Awarded ISO9001 certification

1994

Available in cooling, heat pump and heat recovery

 40 units connected to single refrigerant circuit

Introduce VRVII-- the first R-410A

#### **R-410A**

2003

VRF system



#### 2005

, I 2004

Extends VRVII inverter range with water cooled VRV-WIII

 Available in heat pump and heat recovery



### 2006-2007

2006-2007

#### Launch the extensively re-engineered VRVIII

 Available in cooling, heat pump and heat recovery

- Automatic charging and testing
   Up to 64 upits
- > Up to 64 units connected to 1 system





#### 2009

#### Extends VRVIII range with water cooled VRV-WIII

- > Geothermal version available
- > Operate down to -10C in heating mode



#### 2011 Launch total solution concept

- Integrate hot water production and Biddle air curtains into VRV system
   Connectable to Daikin Emura and
- Nexura
- > 400,000 outdoors units sold
- > 2.2 million indoor units sold



#### 2015 Launch of VRV IV S-series > Most compact unit in the market

> Widest range in the market

2019

Launch of VRV IV+

pressure control

> Improved seasonal

> 7th generation of inverter

efficiency (% on average)

compressor with back

## 2008 2009 2009 2010 2011 2011 2012 2015 2019 2019 2020

#### 2010

#### Launch of replacement VRV (VRVIII-Q)

 > Upgrade to replace older VRV units using R-22 refrigerant



#### 2012-2014

## Setting new standards with the launch of VRV IV

- > 28% improved seasonal efficiency
- > Continuous heating on heat pumps
- Available in heat pump, heat recovery, water-cooled and replacement series



#### 2015

#### Launch of VRV IV i-series

- > The invisible VRV
- > Unique product concept





#### R-32 Series for standard ambient market

Launch of VRV 5

2020

## Cooling Seasonal Performance Factor



## Nominal efficiency vs Seasonal efficiency

Currently, the energy efficiency of cooling devices is measured in artificial and standardized conditions. For air conditioners, this is done at a constant temperature of 46°C or 35°C and at full cooling capacity. This results in T1 and T3 energy efficiency (EER), which is representing only two points to conclude on energy performance.

In other markets, , like in the US and Europe, seasonal performance is measured with IPLV, SEER or ESEER calculations based on real-life conditions. However, these calculation methods have not been adopted for high Ambient or hot climates. In order to correct this situation, a more realistic calculation method called Cooling Seasonal Performance Factor for Hot Climate CSPF<sub>T3</sub> has been developed by the ISO Refrigeration and Air-Conditioning Subcommittee (SC6) for the testing and rating of air conditioners and heat pumps. This is the standard ISO 16358 -1 Amendment 1 issued in 2019 for the hot T3 climate zones.

The implementation of the Seasonal Efficiency calculation reflects more realistic energy efficiency value through the entire cooling season at hot climate conditions compared to currently used EER value.

#### The calculation follows the below considerations:

- > Use of a high ambient climate weather bin for cooling instead of one nominal temperature
- > Considering operation at partial capacity instead of full capacity

The adoption of the CSPF<sub>T3</sub> calculation method will result in a better estimation of the equipment's real-life performance over a year.

## What is $CSPF_{T3}$ ?

(Cooling Seasonal Performance Factor for Hot Climate  $\text{CSPF}_{T_3}$ ) is the testing and rating of air conditioners as per the ISO 16358 -1 Amendment 1 issued in 2019 for T3 hot climate zones and takes into consideration the bin hours reflecting high ambient conditions.

## How is $CSPF_{T3}$ expressed?

- > It is expressed as the CSPF $_{_{T3}}$  value (Cooling Seasonal Performance Factor for Hot Climate CSPF $_{_{T2}}$ )
- > It is defined as the ratio of the total annual amount of heat that the equipment can remove from the indoor air when operating for cooling in active mode to the total annual amount of energy consumed by the equipment during the same period.



## Benefits of CSPF

The implementation of seasonal efficiency will provide end users with a fair comparison of different equipment based on realistic year-round efficiency which will lead to:



## Pioneering in innovation and environmental responsibility

For Daikin, seasonal efficiency brings together two core ambitions: pushing for innovation and reducing the environmental footprint of our products. Being the first in the industry to design equipment based on optimal seasonal efficiency values, Daikin is once again pioneering high-performance cooling products that lower the impact on the environment and on your wallet.

### Benefits of Seasonal Efficiency vs. Nominal Efficiency



Energy Efficiency Ratio rating is based on one outdoor Ambient Temperature condition (T1 or T3) Cooling Seasonal Performance Factor is based on the Hot Climate Weather bin as per ISO 16358-1 AMD1



When the new ISO standard for hot climate was published, Daikin has resolutely chosen for early implementation of this new legislation and started testing all products for seasonal efficiency. This commitment to pioneering the implementation of seasonal efficiency is a practice we observe every day.

Today, Daikin leads the way towards more efficient and cost-effective comfort solutions. All Daikin products - residential, commercial, as well as industrial - are seasonal-efficient, reducing energy and costs the smart way.

# VRV IV+ standards and technologies

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DAIKIN

VRV IV

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Our new VRV IV+ systems set pioneering standards in all-around climate comfort performance. Total design simplicity, offering rapid installation, full flexibility as well as absolute efficiency and comfort. Find out about all these revolutionary changes at

www.daikinmea.com.

## VRV IV + =

## 3 revolutionary standards

- > Variable Refrigerant Temperature
- > Refrigerant-cooled PCB
- > VRV configurator

## + unique VRV IV+ core technologies

- Newly developed inverter compressor with back pressure control
- > 4-side heat exchanger
- > Improved SEER and EER
- > Predictive control
- > Outer rotor DC fan motor

## Variable refrigerant temperature

## Customise your VRV for best seasonal efficiency and comfort

Thanks to its revolutionary variable refrigerant temperature technology (VRT), VRV IV IV + continuously adjusts both the inverter compressor speed and the refrigerant temperature, providing the necessary capacity to meet the building load with the highest efficiency at all times!

- Seasonal efficiency increased by 28% (compared to conventional VRF)
- First weather compensating control on the market
- Customer comfort is assured thanks to higher outblow temperatures (preventing cold draughts)

## How does it work?

#### VRF standard

Capacity is controlled only with the variance of the inverter compressor

#### Daikin VRV IV+

Variable Refrigerant Temperature control for energy saving in partial load condition.

The capacity is controlled by the inverter compressor and variation of the evaporating (Te) and condensing (Tc) temperature of the refrigerant in order to achieve the highest seasonal efficiency.







## 8 Different modes to maximise efficiency and comfort



You Tube https://www.youtube.com/ DaikinEurope

Check on

For maximum energy efficiency and customer satisfaction, the outdoor unit needs to adapt the evaporating/condensing temperature at the optimum point for the application.

## How to set the different modes?

Set up the main operation mode of the system	Define how the system reacts to changing loads	
Step 1	Step 2	
Automatic* Evaporating AND condensing temperature automatically selected according to ambient temperature	Powerful	Where Quick r outblo
Quick reaction speed Top efficiency	Quick	Same a
The perfect balance: Achieves top efficiency throughout the year, reacts quickly on the hottest days	Mild *	This me and it i The pe
<b>High sensible</b> Target Te can be selected between 7°Cto 11°C	Powerful	Gives o A quick outblo
Quick reaction speed Top efficiency	Quick	Same a
	Mild	The air Suitabl
Year round top efficiency	Eco	Coil ter Suitabl
Basic Current VRF standard	No submodes	This is applica Suitabl
	<u></u>	-



Where a quick increase of load is expected such as conference rooms. Quick reaction speed to changing load has priority, with temporarily colder outblow as a result.
Same as above but slower response than the powerful mode.
This mode would be suitable for most office applications and it is the factory set mode. The perfect balance: Slower reaction speed with top efficiency
Gives customer choice for fixing coil temperature which avoids cold draughts. A quick reaction speed to changing load has priority, with temporarily colder outblow as a result.
Same as above but slower response.
The air off temperature remains fairly constant. Suitable for low ceiling rooms.
Coil temperature would not change due to fluctuating load. Suitable for computer rooms. Suitable for low ceiling rooms.
This is how most other VRF systems work and can be used for all general type of applications. Suitable for computer rooms. Suitable for low ceiling rooms.

\* Factory setting

# VRV Configurator

Software for simplified commissioning, configuration and customisation

- > Graphical interface
- Manage systems over multiple sites in exactly the same way
- > Retrieve initial settings

## Configurator software for simplified commissioning

The VRV configurator is an advanced software solution that allows for easy system configuration and commissioning:

- less time is required on the roof configuring the outdoor unit
- multiple systems at different sites can be managed in exactly the same way, thus offering simplified commissioning for key accounts
- initial settings on the outdoor unit can be easily retrieved.



Simplified commissioning

Retrieve initial system settings



Check on

https://www.youtube.com/

DaikinEurope

You

User friendly interface instead of push buttons

## 7-segment display for quick and accurate error diagnosis

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.

- > easy-to-read error report
- clear menu indicating quick and easy on-site settings
- indication of basic service parameters to quickly check basic functions: high pressure, low pressure, frequency and operation time history of compressors, temperature of discharge/suction pipe.
- > No need to unmount the big front panel of the unit thanks to the service access



# Unique VRV IV+ core technologies



## NEW scroll Compressor Back-pressure control UNIQUE

- Pressure port increases pressure below the scroll in low load operation, preventing refrigerant leak from the high to low pressure side
- > Increased partial load efficiency



The back pressure control port sends high pressure refrigerant to the back of the scroll, preventing refrigerant leakage







Refrigerant leak at low load with conventional compressor



## Refrigerant-cooled PCB

- Reliable cooling because it is not influenced by ambient air temperature
- Smaller switchbox for smoother air flow through the heat exchanger increasing heat exchange efficiency with 5%

6 pa<u>tents</u>

10

patents



## 4-sided, 3-row heat exchanger

- > Heat exchange surface up to 50% larger
- > (up to 235m<sup>2</sup>), leading to 30% more efficiency



### UNIQUE

## Predictive Control Function (PCF)

> Reaching targets faster

 Reaching targets without overshooting, so there is no waste, resulting in improved efficiency

The large number of Daikin systems already in operation and which are monitored by our i-Net software put us in the unique position of being able to analyse this data and develop the predictive control function.



#### VRV IV: PCF

Compressor works with predictive data for the control

result: quick convergence to the target temperature and reduction of waste operation of the compressor Half time against general VRF

#### General VRF: Pi control

Compressor works with feedback only for the control

result: waste operation and longer time before reaching target set point

## UNIQUE DC fan motor

#### Outer rotor DC motor for higher efficiency

- Larger rotor diameter results in greater force for the same magnetic field, leading to better efficiency
- Better control, resulting in more fan steps to match the actual capacity

#### Sine wave DC inverter

Optimizing the sine wave curve results in smoother motor rotation and improved motor efficiency.

#### DC fan motor

The use of a DC fan motor offers substantial improvements in operating efficiency compared to conventional AC motors, especially during low speed rotation.





## E-Pass heat exchanger

Optimising the heat exchanger's path layout prevents heat being transferred from the overheated gas section to the sub-cooled liquid section which is a more efficient way to use the heat exchanger.

## I-demand function

Limit maximum power consumption. The newly introduced current sensor minimizes the difference between the actual power consumption and the predefined power consumption.





Out 45 °C

## Benefits of a VRV IV+ installation

## Consultants

Daikin's VRV IV+ technology maximises flexibility and leads the way in customisation to match individual building requirements in comfort and energy, with reduced running costs.

- > Technical design support
- > Ecological design meets and exceeds legal requirements
- > Maximum flexibility to meet customer requirements
- > Advanced software tools assist with system design
- Complies with ESMA UAE, Kuwait, SASO-KSA, and QCC Abu Dhabi regulations



VRV IV+

## **Building owners**

VRV IV+ is the ultimate in customised comfort and intelligent control tailored to your individual needs and to maximise energy efficiency. Annual cost savings up to 28% (compared to conventional VRF).

- > Up to 40% energy consumption saving over conventional AC system
- Single point of contact for the design and maintenance of your climate system
- > Integrated system, combining air conditioning, ventilation, etc.
- > Allows maximum energy efficiency
- Multiple systems can be managed in exactly the same way for the key acounts
- > Dedicated after-sales service to ensure fast on-site support



Water-cooled VRV



VRV IV S-series

## Installers

Daikin VRV IV+ sets the standard with state-of-the-art technology and time-saving commissioning and servicing

- Simplified and time-saving commissioning with VRV configurator
- > Wide range of outdoor units (up to 48HP)
- > One supplier one point of contact
- > Maximum flexibility to meet customer requirements
- > Customised training to maximise expertise

# Anti-Corrosion Treatment

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.

#### Performed tests:

- > VDA Wechseltest
- > Contents of 1 cycle (7 days):
- > 24 hours salt spray test SS DIN 50021
- > 96 hours humidity cycle test KFW DIN 50017
- > 48 hours room temperature and room humidity testing period: 5 cycles

#### Kesternich test (S02)

- Contents of 1 cycle (48 hours) according to DIN50018 (0.21)
- > Testing period: 40 cycles











## The total solution

#### One system - multiple applications for hotels, offices, retail shops and homes.

Typically, many buildings today rely on several separate systems for heating, cooling, air curtain heating and hot water. As a result energy is wasted. To provide a much more efficient alternative, VRV technology has been developed into a total solution managing up to 70% of a buildings energy consumption giving large potential to cost saving.





## Flexible piping design

Total piping length	1000m
Longest length actual (Equivalent)	165m (190m)
Longest length after first branch	90m <sup>1</sup>
Level difference between indoor and outdoor units	90m <sup>1</sup>
Level difference between indoor units	30m

## Free combination of outdoor units

Outdoor units can be used as a single unit or multiple units combines aas a module for larger capacity applications. This allows for maximum optimization for smaller footprints or hightest efficiency.

### Indoor installation

The VRV optimised fan blade shape increases output and reduces pressure loss. Together with the high ESP setting (up to 78.4 Pa), it makes VRV outdoor units ideal for indoor installation using ducts.



## Recommended cable size

Model		RXYTQ8U7YF	RXYTQ10U7YF	RXYTQ12U7YF	RXYTQ14U7YF	RXYTQ16U7YF
Power cable Sq mm		4	4	4	6	6
Control cable size			0.75 to 1.25 sq.n	nm PVC sheathed, non	-shielded, 2-core 17	
Circuit breaker size	Α	20.0	25.0	32.0	32.0	40.0

Note: These are the minimum required values. Refer to local regulations for further information.

## Products overview **VRV**

	Model		Product name
Air cooled - heat pump	VRV IV+ heat pump	<ul> <li>Dakin's solution for comfort and low energy consumption</li> <li>Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units</li> <li>Incorporates VRV IV+ standards and technologies such as Variable Refrigerant Temperature</li> </ul>	RXYTQ-U VRVIV+
Water cooled	Water cooled VRV IV	<ul> <li>Ideal for high rise buildings, using water as heat source</li> <li>Reduced CO2 emissions thanks to the use of geothermal energy as a renewable energy source</li> <li>No need for an external heating or cooling source when used in geothermal mode</li> <li>Compact &amp; lightweight design can be stacked for maximum space saving</li> <li>Incorporates VRV IV standards &amp; technologies such as Variable Refrigerant temperature</li> </ul>	RWEYQ-T9 RWEYV IV W*series



Single Unit

Multi-combination

#### Indoor units

## Products overview **JRJ**

Capacity Class

Туре	Model		Product name					40	50	63	71	80	100	125	140	200	250
ette	UNIQUE Round flow cassette	<ul> <li>360° air discharge for optimum efficiency and comfort</li> <li>Auto cleaning function ensures high efficiency</li> <li>Intelligent sensors save energy and maximize comfort</li> <li>Flexibility to suit every room layout</li> <li>Lowest installation height in the market!</li> </ul>	FXFQ-BVEB					•	•	•		•	•	•		l Black P	NEW designer anels
g mounted casse	UNIQUE Fully flat cassette	Unique design that integrates fully flat into the ceiling > Perfect integration in standard architectural ceiling tiles > Blend of iconic design and engineering excellence > Intelligent sensors save energy and maximize comfort > Small capacity unit developed for small or well-insulated rooms > Flexibility to suit every room layout	FXZQ-A2VEB					•	•								
Ceiling	2-way blow ceiling mounted cassette	Thin, lightweight design installs easily in narrow ceiling spaces         > Depth of all units is 620mm, ideal for narrow ceiling spaces         > Flexibility to suit every room layout         > Reduced energy consumption thanks to DC fan motor         > The flaps close entirely when the unit is not operating         > Optimum comfort with automatic air flow adjustment to the required load	FXCQ-AVEB	4				•	•	•		•		•			
	Slim concealed ceiling unit	Slim design for flexible installation         Compact dimensions enable installation in narrow ceiling voids         Medium external static pressure up to 44Pa         Only grilles are visible         Small capacity unit developted for small of well-insulated rooms         Reduced energy consumption thanks to DC fan motor	FXDQ-A3VEB	Ū				•	•	•		A	NE uto cle ilter o	W eaning	g	м	ulti-zoning option
ling	Concealed ceiling unit with medium ESP	Slimmest yet most powerfull medium static pressure unit on the market! <ul> <li>Slimmest unit in class, only 245mm</li> <li>Low operating sound level</li> <li>Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths</li> <li>Automatic air flow adjustment function measures the air volume and static pressure and adjusts it towards the nominal air flow, guaranteeing comfort</li> </ul>	FXSQ-A2VEB					•	•	•		•	•	•	•	м	ulti-zoning option
Concealed Ceil	Concealed ceiling unit with high ESP	ESP up to 200, ideal for large sized spaces > Optimum comfort guaranteed no matter the length of ductwork or type of grilles, thanks to automatic air flow adjustment > Reduced energy consumption thanks to DC fan motor > Flexible installation as the air suction direction can be altered from rear to bottom suction	FXMQ-P7VEB9	-					•	•		•	•	•			
0	140Pa Concealed ceiling unit with high ESP	<ul> <li>ESP up to 140 Pa, ideal for large sized spaces</li> <li>Optimum comfort guaranteed no matter the length of ductwork or type of grilles, thanks to automatic air flow adjustment</li> <li>Reduced energy consumption thanks to DC fan motor</li> <li>Flexible installation as the air suction direction can be altered from rear to bottom suction</li> </ul>	FXMQ140PVE												•		
	Concealed ceiling unit with high	ESP up to 270, ideal for extra large sized spaces > Only grilles are visible > Large capacity unit: up to 31.5 kW heating capacity	FXMQ-MAVE	1												•	•
Wall mounted	Wall mounted unit	For rooms with no false ceilings nor free floor space <ul> <li>Flat, stylish front panel is more easy to clean</li> <li>Small capacity unit developted for small of well-insulated rooms</li> <li>Reduced energy consumption thanks to DC fan motor</li> <li>The air is comfortably spread up- and downwards thanks to 5 different discharge angles</li> </ul>	FXAQ-PVER1 FXAQ-PVE					•	•	•							
uspended	Ceiling suspended unit	For wide rooms with no false ceilings nor free floor space <ul> <li>Ideal for comfortable air flow in wide rooms thanks to Coanda effect</li> <li>Rooms with ceilings up to 3.8m can be heated or cooled very easily!</li> <li>Can easily be installed in both new and refurbishment projects</li> <li>Can even be mounted in corners or narrow spaces without any problem</li> <li>Reduced energy consumption thanks to DC fan motor</li> </ul>	FXHQ-AVEB							•			•				
Ceiling s	UNIQUE 4-way blow ceiling suspended unit	Unique Daikin unit for high rooms with no false ceilings nor free floor space <ul> <li>Rooms with ceilings up to 3.5m can be heated up or cooled down very easily!</li> <li>Can easily be installed in both new and refurbishment projects</li> <li>Flexibility to suit every room layout</li> <li>Reduced energy consumption thanks to DC fan motor</li> </ul>	FXUQ-AVEB								•		•				
tanding	Concealed floor standing unit	Ideal for installation in offices, hotels and residential applications         > Discretely concealed in the wall, leaving only the suction and discharge grilles visible         > Can even be installed underneath a window         > Requires very little installation space as the depth is only 200mm         > High ESP allows flexible installation	FXNQ-A2VEB					•		•							
Floor stan	Floor standing unit	For perimeter zone air conditioning Can be installed in front of glass walls or free standing as both the front and the back are finished Ideal for installation beneath a window Requires very little installation space Wall mounted installation facilitates cleaning beneath the unit	FXLQ-P2VEB	)					•	•							
Cooling	g capacity (kW	)'		1	.7 2	.2 2.	8 3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0	22.4	28.0
Heatin	g capacity (kW	)2		1	.9 2	.5 3.	2 4.0	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0	25.0	31.5

(1) Nominal cooling capacities are based on: indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal heating capacities are based on: indoor temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m

#### RXYTQ-U7YF

Model			RXYTQ8U7YF	RXYTQ10U7YF	RXYTQ12U7YF	RXYTQ14U7YF	RXYTQ16U7YF			
	Capacity	HP	8	10	12	14	16			
	Capacity	kW	22.4	28.0	33.5	40.0	45.0			
Cooling T1(1) 35°C (Nominal)	Capacity	Btu/h	76,450	95,550	114,350	136,500	153,550			
(	EER	(Btu/h) / W	14.23	14.02	13.24	13.34	12.15			
	PI	kW	5.37	6.81	8.63	10.23	12.64			
	Nom Conscitu	Btu/h	68,950	86,000	97,250	109,200	119,800			
	Nom. Capacity	kW	20.2	25.2	28.5	32.0	35.1			
Cooling T2(2) 46°C	Max. Capacity (3)	kW	21.4	25.7	30.1	35.2	38.6			
Cooling 15(2) 46 C	EER	(Btu/h) / W	10.51	10.82	11.16	10.92	9.90			
	PI	kW	6.56	7.95	8.7	10.00	12.10			
	Plout	kW	6.36	7.70	8.43	9.66	11.71			
Cooling Seasonal Performance Factor for Hot Climate (4)	CSPF T3	(Btu/h) / W	19.82	20.92	20.88	19.31	18.29			
	Capacity	kW	22.4	28.0	33.5	40.0	45.0			
	Capacity	Btu/h	76,450	95,550	114,350	136,500	153,550			
Heating (nominal) (5)	СОР	kW/kW	3.99	3.89	3.64	3.63	3.48			
	PI	kW	5.62	7.20	9.19	11.01	12.92			
Sound level (nominal)	Sound pressure	dBA	57	59	61	61	64			
Dimensions	HxWxD	mm	1685x930x765		1685 x 124	40 x 765				
VRV IV+ Net Weight		kg	198	234	234	283	283			
Operation range cooling	Outdoor				-5~55°CDB					
operation range cooling	Indoor				14~25°CWB					
Operation range beating	Outdoor				-20~15.5°CWB					
operation range neating	Indoor				15~27°CDB					
Refrigerant	Туре				R-410A					
Dine connection	Liquid		Ø 9.52 mm	Ø 9.52 mm	Ø 12.7 mm					
Pipe connection	Gas		Ø 19.1 mm	Ø 22.2 mm	Ø 28.6 mm					
Total Piping Length	System Actual	m	1000							
Max connectable indoor units			64							
Wiring length			Total Wiring Length: 2000m							
Compressors			1 1 1 2 2							
Power supply			"3 Phase/ 380-415V/50Hz 3 Phase/ 400V/60Hz"							







(1) Cooling: Indoor temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, ISO15042:2011, power input of indoor units included

(2) Cooling: Indoor temperature: 29°CDB, 19°CWB, outdoor temperature: 46°CDB, ISO15042:2011, power input of indoor units included

(3) Maximum Cooling: Indoor temperature: 19°CWB, outdoor temperature: 46°CDB, Connection Ratio of Indoor Units 130%; can be used for limited number of hours

(4) Cooling seasonal performance factor for hot climates at T3 condition per ISO 16358-1:2013/AMD 1:2019

(5) Heating: Indoor temperature: 21°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent refrigerant piping: 5m, level difference: 0m. Power input of indoor units included

#### RWEYQ-T9 VRV IV water cooled series

#### Ideal for high rise buildings, using water as heat source

- Unified range for standard and geothermal series simplifies stock.
   Geothermal series reduce CO<sub>2</sub> emmisions thanks to the use of geothermal energy as a renewable energy source
- > No need for an external heating or cooling source when used in geothermal mode
- Covers all thermal needs of a building via a single point of contact: accurate temperature control, ventilation, air handling units, Biddle air curtains and hot water
- > Wide range of indoor units
- Compact & lightweight design can be stacked for maximum space saving
- > Incorporates VRV IV standards & technologies: Variable Refrigerant Temperature and full inverter compressors
- > 2-stage heat recovery: first stage between indoor units, second stage between outdoor units thanks to the storage of energy in the water circuit
- > Available in heat pump and heat recovery version
- > Variable Water Flow control option increases flexibility and control
- > 2 analogue input signals allowing external control
- > Contains all standard VRV features

#### **Main Benefits**

- > Minimal technical room space required
- > Indoor installation makes units invvisible from
- the outside



#### **Stacked configuration**



Outdoor unit				RWEYQ	8T9	10T9	12T9	14T9				
Capacity range				HP	8	10	12	14				
Cooling capacity	Prated,c			kW	22.4	28.0	33.5	40.0				
Heating capacity	Prated,h			kW	25.0	31.5	37.5	45.0				
	Max.	6°CWB		kW	25.0	31.5	37.5	45.0				
ηs,c				%	326.8	307.8	359.0	330.7				
ηs,h				%	524.3	465.9	436.0	397.1				
SEER					8.4	7.9	9.2	8.5				
SCOP					13.3	11.8	11.1	10.1				
Maximum number	of connectable	indoor uni	ts			64	(1)					
Indoor index	Min.				100.0	125.0	150.0	175.0				
connection	Nom.					-						
	Max.				300.0	375.0	450.0	525.0				
Dimensions	Unit	HeightxV	VidthxDepth	mm		980x76	67x560					
Weight	Unit			kg	195 197							
Sound power level	Cooling	Nom.		dBA	65.0	71.0	72.0	74.0				
Sound pressure level	Cooling	Nom.		dBA	48.0	50.0	56.0	58.0				
Operation range	Inlet water	Cooling	Min.~Max.	°CDB								
	temperature	Heating	Min.~Max.	°CWB		10~	-45					
	Temperature aroun	d Max.		°CDB		40						
	casing											
	Humidity around	Cooling~Heati	ng Max.	%	80~80							
	casing											
Refrigerant	Type/GWP					R-410A/	/2,087.5					
-	Charge			kg/TCO2Eq	7.9/	16.5	9.6/	20.0				
Piping connections	Liquid	OD		mm	95	52	12	27				
	Gas	OD		mm	19.1 (2)	22.2 (2)	28.6	5 (2)				
	HP/LP gas	OD		mm	15.9 (3) / 19.1 (4)	19.1 (3) / 22.2 (4)	19.1 (3) / 28.6 (4)	22.2 (3) / 28.6 (4)				
	Drain	Size			14mm OD/ 10mm ID							
	Water	Inlet/Outle	et Size			ISO 228-G1 1/4 B/	'ISO 228-G1 1/4 B					
	Total piping lengt	h System	Actual	m		50	0					
Power supply	Phase/Freque	ncy/Voltag	e	Hz/V		3N~/50/	380-415					
Current - 50Hz	Maximum fuse amps (MFA) A 20 25						25					

(1) Actual number of connectable indoor units depends on the indoor unit type (VRV indoor, Hydrobox, RA indoor, etc.) and the connection ratio restriction for the system (50% <=CR <=130%) (2) In case of heat pump system gas pipe is not used.

(3) In case of heat recovery system.

(4) In case of heat pump system.

# Round flow cassette

#### 360° air discharge for improved comfort

> Industry-first and proven design.
 NEW > Wider flaps to even further improve

equal temperature distribution

## More energy efficient and user-friendly than any other cassette

- Running costs can be reduced down to 50% compared with standard solutions
- > Automatic filter cleaning.
- Less time is required to maintain the filter: dust can be removed easily with a vacuum cleaner without opening the unit.

## Intelligent sensors improve efficiency and comfort even more

 The presence sensor adjusts the set point if no one is detected in the room leading to up to 27% savings. It also automatically directs air



presence floor sensor sensor

flow away from any person to avoid draught. The infrared floor sensor detects the average floor temperature and ensures even temperature distribution between ceiling and floor to prevent cold feet.

Dust can simply be removed using a vacuum cleaner without opening the unit.

\* Available as an option

#### Auto cleaning filter



#### **Flexible installation**

 Flaps can be individually controlled or closed using the wired remote control, to suit room configuration. Optional closure kits are also available.





## **Round flow cassette**

#### 360° air discharge for optimum efficiency and comfort

- Automatic filter cleaning results in higher efficiency & comfort and lower maintenance costs. 2 filters available: standard filter and finer mesh filter (for fine dust applications e.g. clothing shops)
- Two optional intelligent sensors improve energy efficiency and comfort
- NEW > Widest choice ever in decoration panels: Designer, standard and autocleaning panels in white (RAL9010) and black (RAL9005)
- **NEW** > Bigger flaps improve equal air distribution
  - Individual flap control: flexibility to suit every room layout without changing the location of the unit!
  - Lowest installation height in the market: 214mm for class 20-63
     Optional fresh air intake
  - Optional tresh air intake
     Branch duct discharge allow
  - Branch duct discharge allows to optimize air distribution in irregular shaped rooms or to supply air to small adjacent rooms



 Standard drain pump with 675mm lift increases flexibility and installation speed



maoorum				FAFQ	200	230	320	400	500	030	OVD	IUUD	1230		
Cooling capacity	Total capacity	Nom.		kW	2.20	2.80	3.60	4.50	5.60	7.10	9.00	11.20	14.00		
Heating capacity	Total capacity	Nom.		kW	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0		
Power input - 50Hz	Cooling	Nom.		kW		0.	04		0.05	0.06	0.09	0.12	0.19		
	kW		0.	04		0.05	0.06	0.09	0.11	0.18					
Dimensions	Unit	HeightxV	VidthxDepth	mm			204x84	40x840			246x84	40x840	288x840x840		
Weight	Unit			kg		19		20	2	21	2	4	26		
Casing	Material							Galva	anised steel	plate					
Decoration panel	Model				Standard	d panels: BY	'CQ140E - wl	hite with gre	ey louvers /	BYCQ140EW	/ - full white	/ BYCQ140E	B - black		
					1	Auto cleani	ng panels (F	= fine mesł	n): BYCQ140	EG(F) - whit	e / BYCQ140	EGFB - blac	k		
		Designer panels: BYCQ140EP - white / BYCQ140EPB - black													
	Dimensions	HeightxV	VidthxDepth	mm	Standard panels: 50x950x950 / Auto cleaning panels: 130x950x950 / Designer panels: 50x950x950										
	Weight			kg		Stand	lard panels:	5.4 / Auto cl	eaning pan	els: 10.3 / De	esigner pan	els: 5.4			
Fan	Air flow rate -	Cooling	Low/High	m³/min		8.8/12.5		9.5/13.6	10.5/15.0	10.5/16.5	12.4/22.8	12.4/26.5	19.9/33.0		
	50Hz	Heating	Low/High	m³/min		8.8/12.5		9.5/13.6	10.5/15.0	10.5/16.5	12.4/22.8	12.4/26.5	19.9/33.0		
Air filter	Туре								Resin net						
Sound power level	Cooling	High		dBA		49		5	51	53	55	60	61		
Sound pressure	Cooling	Low/Nom	n./High	dBA	2	8.0/29.0/31.	.0	29.0/31	1.0/33.0	30.0/33.0/35.0	30.0/34.0/38.0	30.0/37.0/43.0	36.0/41.0/45.0		
level	Heating	Low/Nom	n./High	dBA	2	8.0/29.0/31.	.0	29.0/31	1.0/33.0	30.0/33.0/35.0	30.0/34.0/38.0	30.0/37.0/43.0	36.0/41.0/45.0		
Refrigerant	Type/GWP							R	-410A/2,087	.5					
Piping connections	Liquid	OD		mm			6.35				9.	52			
	Gas	OD		mm			12.70				15.	.90			
	Drain				VP25 (O.D. 32 / I.D. 25)										
Power supply	Phase/Frequer	ncy/Voltage	e	Hz/V	1~/50/60/220-240/220										
Current - 50Hz	Maximum fuse	amps (MF	A)	A	16										
Control systems	Infrared remot	e control			BRC7FA532F*										
	Wired remote control				BRC1H81/82W/S/K / BRC1D52*										

\*Not applicable for UAE

In da an colt

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m













White panel

220







White design panel

40P

----

----

000

100B

Black panel Bla

Black design panel

2	-
2	1

## Fully flat cassette

## Unique design in the market that integrates fully flat into the ceiling

- Fully flat integration in standard architectural ceiling tiles, leaving only 8mm
- Remarkable blend of iconic design and engineering excellence with an elegant finish in white or a combination of silver and white
- > Two optional intelligent sensors improve energy efficiency and comfort
- > 15 class unit especially developed for small or well-insulated rooms, such as hotel bedrooms, small offices, etc.
- Individual flap control: flexibility to suit every room layout without changing the location of the unit!



- > Optional fresh air intake
- Standard drain pump with 630mm lift increases flexibility and installation speed



Indoor unit			FXZQ	15A	20A	25A	32A	40A	50A				
Cooling capacity	Total capacity	Nom.	kW	1.70	2.20	2.80	3.60	4.50	5.60				
Heating capacity	Total capacity	Nom.	kW	1.90	2.50	3.20	4.00	5.00	6.30				
Power input - 50Hz	Cooling	Nom.	kW		0.043		0.045	0.059	0.092				
	Heating	Nom.	kW		0.036		0.038	0.053	0.086				
Dimensions	Unit	HeightxWidthxDepth	mm	260x575x575									
Weight	Unit		kg	15.5 16.5 18.5									
Casing	Material					Galvanised	steel plate						
Decoration panel	Model					BYFQ60	C2W1W						
	Colour					White	(N9.5)						
	Dimensions	HeightxWidthxDepth	mm			46x62	0x620						
	Weight		kg			2.	8						
Decoration panel 2	Model					BYFQ60	C2W1S						
	Colour					SIL	/ER						
	Dimensions	HeightxWidthxDepth	mm			46x62	0x620						
	Weight		kg			2.	8						
Decoration panel 3	Model			BYFQ60B2W1									
	Colour			White (RAL9010)									
	Dimensions	HeightxWidthxDepth	mm	55x700x700									
	Weight		kg	2.7									
Decoration panel 4	Model					BYFQ6	0B3W1						
	Colour			WHITE (RAL9010)									
	Dimensions	HeightxWidthxDepth	mm	55x700x700									
	Weight		kg			2	7						
Fan	Air flow rate -	Cooling Low/High	m³/min	6.5/8.5	6.5/8.7	6.5/9.0	7.0/10.0	8.0/11.5	10.0/14.5				
	50Hz	Heating Low/High	m³/min	6.5/8.5	6.5/8.7	6.5/9.0	7.0/10.0	8.0/11.5	10.0/14.5				
Air filter	Туре					Resir	n net						
Sound power level	Cooling	High	dBA	4	9	50	51	54	60				
Sound pressure	Cooling	Low/Nom./High	dBA	25.5/28.0/31.5	25.5/29.5/32.0	25.5/30.0/33.0	26.0/30.0/33.5	28.0/32.0/37.0	33.0/40.0/43.0				
level	Heating	Low/Nom./High	dBA	25.5/28.0/31.5	25.5/29.5/32.0	25.5/30.0/33.0	26.0/30.0/33.5	28.0/32.0/37.0	33.0/40.0/43.0				
Refrigerant	Type/GWP					R-410A	/2,087.5						
Piping connections	Liquid	OD	mm			6.	35						
	Gas	OD	mm	12.7									
	Drain			VP20 (I.D. 20/O.D. 26)									
Power supply	Phase/Frequen	icy/Voltage	Hz/V	/V 1~/50/60/220-240/220									
Current - 50Hz	Maximum fuse	amps (MFA)	A			1	6						
Control systems	Infrared remote	e control		BRC7EB530W (standard panel)* / BRC7F530W (white panel)* / BRC7F530S (grey panel)*									
	Wired remote of	control				BRC1H81/82W/	5/K / BRC1D52*						

\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m



BRC7F530W-S\*

BRC1H82W

FXZQ-A









## 2-way blow ceiling mounted cassette

#### Thin, lightweight design installs easily in narrow corridors

- > Depth of all units is 620mm, ideal for narrow spaces
- Individual flap control: flexibility to suit every room layout without changing the location of the unit!



- > Stylish unit blends easily with any interior. The flaps close entirely when the unit is not operating and there are no air intake grilles visible
- Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation device is required
   Fresh air intake opening in casing



\* Brings in up to 10% of fresh air into the room

- > Optimum comfort guaranteed with automatic air flow adjustment to the required load
- > Maintenance operations can be performed by removing the front panel







BRC1H82W BRC7F5C52\*

 Branch duct discharge allows to optimize air distribution in irregular shaped rooms or to supply air to small adjacent rooms



 Standard drain pump with 580mm lift increases flexibility and installation speed



to de comunité			EVCO	204	054	22.4	40.4	504	(24	008	1054	
Indoor unit			FXCQ	20A	25A	32A	40A	50A	63A	80A	125A	
Cooling capacity	Total capacity	Nom.	kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	14.0	
Heating capacity	Total capacity	Nom.	kW	2.5	3.2	4.0	5.0	6.3	8.0	10.0	16.0	
Power input - 50Hz	Cooling	Nom.	kW	0.031	0.0	)39	0.041	0.059	0.063	0.090	0.149	
	Heating	Nom.	kW	0.028	0.0	035	0.037	0.056	0.060	0.086	0.146	
Dimensions	Unit	HeightxWidthxDepth	mm		305x7	75x620		305x990x620 305x1,4			45x620	
Weight	Unit		kg		1	9		22 25 33			38	
Casing	Material						Galvanised	steel plate				
Decoration panel	Model				BYBCQ	40HW1		BYBCQ	63HW1	BYBCQ	125HW1	
	Colour						Fresh white	(6.5Y 9.5/0.5)				
	Dimensions	HeightxWidthxDepth	mm	n 55x1,070x700				55x1,2	85x700	55x1,74	40x700	
	Weight		kg		1	0		11			13	
Fan	Air flow rate - 50Hz	z Cooling Low/High	m³/min	7.5/10.5	8/	11.5	8.5/12	10.5/15	11.5/16	18.5/26	22.5/32	
Air filter	Туре					Re	sin net with r	mold resistar	ice			
Sound power level	Cooling	Nom./High	dBA	46/48	47/50	48/50	49/52	51/53	53/55	54/58	58/62	
Sound pressure	Cooling	Low/Nom./High	dBA	28.0/30.0/32.0	29.0/31.0/34.0	30.0/32.0/34.0	31.0/33.0/36.0	31.0/35.0/37.0	32.0/37.0/39.0	33.0/38.0/42.0	38.0/42.0/46.0	
level	Heating	Low/Nom./High	dBA	28.0/30.0/32.0	29.0/31.0/34.0	30.0/32.0/34.0	31.0/33.0/36.0	31.0/35.0/37.0	32.0/37.0/39.0	33.0/38.0/42.0	38.0/42.0/46.0	
Refrigerant	Type/GWP						R-410A	/2,087.5				
Piping connections	Liquid	OD	mm			6.35				9.52		
	Gas	OD	mm			12.7				15.9		
	Drain						VP25 (O.D.	32 / I.D. 25)				
Power supply	Phase/Frequer	ncy/Voltage	Hz/V				1~/50/2	220-240				
Current - 50Hz	Maximum fuse	amps (MFA)	А	A 16								
Control systems	Infrared remot	e control					BRC7	′C52*				
	Wired remote	control				B	RC1H81/82W/	S/K / BRC1D5	2*			
****												

\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m

## Slim concealed ceiling unit

#### Slim design for flexible installation

> Compact dimensions, can easily be mounted in a ceiling void of only 240mm SERIE A (15, 20, 25, 32)



- > Medium external static pressure up to 44Pa facilitates unit use with flexible ducts of varying lengths
- > Discretely concealed in the wall: only the suction and discharge grilles are visible
- > 15 class unit especially developed for small or well-insulated rooms, such as hotel bedrooms, small offices, etc.
- > Auto cleaning filter option ensures maximum efficiency, comfort and reliability by regular filter cleaning
- > Multi zoning kit allows multiple individually-controlled climate zones to be served by one indoor unit
- > Flexible installation, as the air suction direction can be altered from rear to bottom suction



> Standard drain pump with 750mm lift increases flexibility and installation speed















Auto cleaning filter option

Indoor unit			FXDQ	15A3	20A3	25A3	32A3	40A3	50A3	63A3
Cooling capacity	Total capacity	Nom.	kW	1.70	2.20	2.80	3.60	4.50	5.60	7.10
Heating capacity	Total capacity	Nom.	kW	1.90	2.50	3.20	4.00	5.00	6.30	8.00
Power input - 50Hz	Cooling	Nom.	kW		0.	071		0.078	0.099	0.110
	Heating	Nom.	kW		0.0	068	0.075	0.096	0.107	
Required ceiling vo	mm				240					
Dimensions	Unit	HeightxWidthxDepth	mm		200x7	50x620		200x9	50x620	200x1,150x620
Weight	Unit		kg		22	2.0		26	5.0	29.0
Casing	Material					(	Galvanised ste	el		
Fan	Air flow rate - 50Hz	Cooling Low/High	m³/min	6.4/7.5		6.4/8.0		8.5/10.5	10.0/12.5	13.0/16.5
	External static	Nom./High	Pa		10/30.0				15/44.0	
	pressure - 50Hz	2								
Air filter	Туре					Ren	novable / wash	able		
Sound power level	Cooling	High	dBA	50		51		52	53	54
Sound pressure level	Cooling	Low/Nom./High	dBA	27.0/31.0/32.0		27.0/31.0/33.0		28.0/32.0/34.0	29.0/33.0/35.0	30.0/34.0/36.0
Refrigerant	Type/GWP						R-410A/2,087.5	5		
Piping connections	Liquid	OD	mm			6.	35			9.52
	Gas	OD	mm			12	.7			15.9
	Drain					VP	20 (I.D. 20/O.D.	26)		
Power supply	Phase/Frequen	icy/Voltage	Hz/V	/V 1~/50/60/220-240/220						
Current - 50Hz	Maximum fuse	amps (MFA)	A				16			
Control systems	Infrared remote	e control				BRO	4C65* / BRC40	266*		
	Wired remote of	control	BRC1H81/82W/S/K / BRC1D52*							

\*Not applicable for UAE

(1) Nonzijal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m



## The unique automatic cleaning filter achieves higher efficiency and comfort with lower maintenance costs

#### Reduce running costs

> Automatic filter cleaning ensures low maintenance costs because the filter is always clean



#### Minimal time required for filter cleaning

- > The dust box can be emptied with a vacuum cleaner for fast and easy cleaning
- > No more dirty ceilings

#### Improved indoor air quality

> Optimum airflow eliminates draft and insulates sound

#### Superb reliability

> Prevents clogged filters for seamless operation

by the Daikin auto cleaning cassette

#### Unique technology

> Unique and innovative filter technology inspired

nue i

#### **Combination table**

				VRV								
	FXDQ-A3											
	15	20	25	32	40	50	63					
BAE20A62	•	•	•	•								
BAE20A82					•	•						
BAE20A102							•					



#### How does it work?

- **Scheduled automatic filter** cleaning
- Dust collects in a dust box that's
- integrated into the unit
- The dust can easily be removed with a vacuum cleaner

## You Tube



www.youtube.com/DaikinEurope

	BAE20A62	BAE20A82	BAE20A102
Heigth (mm)		212	
Width (mm)	764	964	1164
Width (mm) (incl. hanger bracket)	984	1094	1294
Depth (mm)		201	



The multi-zoning system is a room-by-room controller. It is fitted with motorised dampers, which immediately adapt using Daikin ducted solutions. This system supports control of up to 8 zones via a centralised thermostat

#### Increased comfort

- Increases comfort levels by allowing more individual zone control
  - Up to 8 individual zones can be served thanks to separate modulating dampers
  - Individual thermostat for room-by-room or zone-by-zone control

#### Easy to install

- > Automatic air flow adjustment according to the demand
- > Easy to install, integrates with the Daikin indoor units and system controls
- > Time saving as plenum comes fully pre-assembled with dampers, and control boards
- > Reduces the amount of refrigerant required in the installation



## How does it work?





Zoning box: fully pre-assembled plenum with dampers

#### Blueface - Airzone Main Thermostat > Color graphic interface

for controlling zones
Wired communication



AZCE6BLUEFACECB

#### Airzone Zone Thermostat

 Graphic interface with low-energy e-ink screen for controlling zones
 Radio communication



for controlling the temperature

Airzone Zone

Thermostat



> Thermostat with buttons

AZCE6LITERB\*

													君	]	1							
						FX	DQ-	A3								FXS	Q-A					
moto	Number of rised dampers	Reference	Dimensions H x W x D (mm)	15	20	25	32	40	50	63	15	20	25	32	40	50	63	71	80	100	125	140
	2	AZEZ6DAIST07XS2	200 020 454								•	•	•	•								
	2	AZEZ6DAIST07S2	500 X 950 X 454												•	•						
	2	AZEZ6DAIST07XS3	200 - 020 - 454								•	•	•	•								
	3	AZEZ6DAIST07S3	300 x 930 x 454												•	•						
		AZEZ6DAIST07S4	300 x 930 x 454												•	•						
	4	AZEZ6DAIST07M4	300 x 1,140 x 454														•		•			
Standard Ceiling Void	_	AZEZ6DAIST07M5	200 - 1 425 - 454														•		•			
	5	AZEZ6DAIST07L5	300 X 1,425 X 454																	•	•	
	6	AZEZ6DAIST07M6	200 1 620 454														•		•			
and the pas	0	AZEZ6DAIST07L6	500 x 1,058 x 454																	•	•	
	7	AZEZ6DAIST07L7	515 v 1 425 v 454																	•	•	
	/	AZEZ6DAIST07XL7	515 X 1,425 X 454																			•
		AZEZ6DAIST07L8	515 v 1 425 v 454																	•	•	
	0	AZEZ6DAIST07XL8	515 X 1,425 X 454																			•
Compact Ceiling Void	2	AZEZ6DAISL01S2	210 x 720 x 444	•	•	•	•															
	3	AZEZ6DAISL01S3	210 x 720 x 444	•	•	•	•															
	4	AZEZ6DAISL01M4	210 x 930 x 444					•	•													
	5	AZEZ6DAISL01L5	210 x 1,140 x 444							•												

## **Concealed ceiling unit** with medium ESP

#### Slimmest yet most powerful medium static pressure unit on the market

> Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge



- > Quiet operation: down to 25dBA sound pressure level
- > Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths
- > Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- > Discretely concealed in the wall: only the suction and discharge grilles are visible
- > 15 class unit especially developed for small or well-insulated rooms, such as hotel bedrooms, small offices, etc.
- > Multi zoning kit allows multiple individually-controlled climate zones to be served by one indoor unit
- > Optional fresh air intake
- > Flexible installation: air suction direction can be altered from rear to bottom suction and choice between free use or connection to optional suction grilles



ceiling







> Standard built-in drain pump with 625mm lift increases flexibility and installation speed



Fair clause provide Carves	Airß Airß Airß	low (rated) w (actual) (a w (with auto- adjustment)	
	±10%	Air flow (m?/min)	

Automatic	Airflow	\diuctmont	function
Automatic		<i>Aujustinent</i>	TUTICUO

Automatically selects the most appropriate fan curve to achieve the units' nominal air flow within ±10%

#### Why?

After installation the real ducting will frequently differ from the initially calculated air flow resistance \* the real air flow may be much lower or higher than

nominal, leading to a lack of capacity or uncomfortable air temperature Automatic Airflow Adjustment function will adapt the unit's fan speed to any ducting automatically (10 or more fan curves are available on every model), making installation much faster

Indoor unit			FXSQ	15A	20A	25A	32A	40A	50A	63A	80A	100A	125A	140A
Cooling capacity	Total capacity	Nom.	kW	1.70	2.20	2.80	3.60	4.50	5.60	7.10	9.00	11.20	14.00	16.00
Heating capacity	Total capacity	Nom.	kW	1.90	2.50	3.20	4.00	5.00	6.30	8.00	10.0	12.5	16.0	18.0
Power input - 50Hz	Cooling	Nom.	kW	0.090		0.096	0.151	0.154	0.188	0.213	0.290	0.331	0.386	
	Heating	Nom.	kW		0.086		0.092	0.147	0.150	0.183	0.209	0.285	0.326	0.382
Dimensions	Unit	HeightxWidthxDepth	mm	245x550x800 245x700x800			245x1,0	245x1,000x800 245x1,4			245x1,550x800			
Weight	Unit		kg		23.5		24.0	28.5	28.5 29.0		36.5	46.0	47.0	51.0
Casing	Material							Galvar	nised stee	el plate				
Fan	Air flow rate -	Cooling Low/High	m³/min	6.5/8.7	6.5	/9.0	7.0/9.5	11.0/15.0	11.0/15.2	15.0/21.0	16.0/23.0	23.0/32.0	26.0/36.0	28.0/39.0
	50Hz	Heating Low/High	m³/min	6.5/8.7	6.5	/9.0	7.0/9.5	11.0/15.0	11.0/15.2	15.0/21.0	16.0/23.0	23.0/32.0	26.0/36.0	28.0/39.0
	External static	Nom./High	Pa				30/150				40/	150	50/	150
	pressure - 50Hz	2												
Air filter	Туре								Resin net					
Sound power level	Cooling	High	dBA		54		55	6	0	59	6	51	6	4
Sound pressure	Cooling	Low/Nom./High	dBA	25.0/28.0/29.5	25.0/28	3.0/30.0	26.0/29.0/31.0	29.0/32	.0/35.0	27.0/30.0/33.0	29.0/32.0/35.0	31.0/34.0/36.0	33.0/36.0/39.0	34.0/38.0/41.5
level	Heating	Low/Nom./High	dBA	26.0/29.0/31.5	26.0/29	9.0/32.0	27.0/30.0/33.0	29.0/34	1.0/37.0	28.0/32.0/35.0	30.0/34.0/37.0	31.0/34.0/37.0	33.0/37.0/40.0	34.0/38.5/42.0
Refrigerant	Type/GWP							R-	410A/2,08	37.5				
Piping connections	Liquid	OD	mm			6	.35					9.52		
	Gas	OD	mm			1.	2.7					15.9		
	Drain						VP20 (	I.D. 20/O.D	. 26), drai	n height 6	525 mm			
Power supply	Phase/Frequer	icy/Voltage	Hz/V					1~/50/	60/220-24	40/220				
Current - 50Hz	Maximum fuse	amps (MFA)	Α	A 16										
Control systems	Infrared remot	e control							BRC4C65	*				
	Wired remote of	control						BRC1H81/8	32W/S/K /	BRC1D52	*			

\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m

## **Concealed ceiling unit** with high ESP

#### Ideal for large sized spaces FXMQ-P7: ESP up to 200 Pa

- > Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- > High external static pressure up to 200Pa facilitates extensive duct and grille network
- > Discretely concealed in the wall: only the suction and discharge grilles are visible
- > Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation device is required



Brings in up to 10% of fresh air into the room

> Flexible installation, as the air suction direction can be altered from rear to bottom suction



#### Automatic Airflow Adjustment function

Automatically selects the most appropriate fan curve to achieve the units' nominal air flow within ±10%

#### Whvi

Fan

- After installation the real ducting will frequently differ from the initially calculated air flow resistance \* the real air flow may be much lower or higher than nominal , leading to a lack of capacity or uncomfortable air temperature
- Automatic Airflow Adjustment function will adapt the unit's fan speed to any ducting automatically (10 or more fan curves are available on every model). making installation much faster

FXMQ 50P7 63P7 80P7 100P7 125P7 140P 200MA 250MA Indoor unit Cooling capacity Total capacity Nom. kW 28.0 5.6 7.1 9.0 11.2 14.0 16 22.4 10.0 Heating capacity Total cap Power input - 50Hz Cooling Total capacity 6.3 8.0 12.5 16.0 18 25.0 Nom. kW 0.461 Nom. kW 0.110 0.120 0.171 0.176 0.241 1.294 1.465 Heating 0.098 0.108 0.159 0.164 0.229 0.449 1.294 Nom. kW 1.465 Required ceiling void > mm 350 300x1,400x700 300x1,000x700 470x1.380x1.100 Dimensions Unit HeightxWidthxDepth mm Weight Unit kg 35 46 47 137 Galvanised steel plate Casing Material Decoration panel BYBS71DJW1 BYBS125DJW1 Model Colour White (10Y9/0.5) 55x1,500x500 Dimensions HeightxWidthxDepth mm 55x1.100x500 -x-x-Weight kg 45 6.5 m³/min 15.0/18.0 23.0/32.0 28.0/39.0 Air flow rate -Cooling Low/High 16.0/19.5 20.0/25.0 32/39 50/58 62/72 50Hz Heating Low/High m³/min 15.0/18.0 16.0/19.5 20.0/25.0 23.0/32.0 28.0/39.0 -/-External static Nom./High Pa 100/200 100/140 132/221 191/270 pressure - 50Hz Air filter Resin net Type Low/High dBA 38/42 40/44 45/48 Sound pressure Cooling 37/41 39/43 43/45 Low/High dBA 37/41 38/42 39/43 40/44 level Heating -/-Type/GWP R-410A/-2.087.5 Refrigerant 6.35 Piping connections Liquid OD mm 9.52 15.9 15.9 Gas OD 12.7 19.1 22.2 mm VP25 (I.D. 25/O.D. 32) PS1B Drain Phase/Frequency/Voltage Hz/V 1~/50/60/220-240/220 Power supply Current - 50Hz Maximum fuse amps (MFA) A 16 BRC4C62\* / BRC4C64\* BRC4C62\* / BRC4C62\* / BRC4C64\* Control systems Infrared remote control

\*Not applicable for UAE

Wired remote control

(1) Noming cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m



BRC1H82W BRC4C65\*

> Standard built-in drain pump with 625mm lift increases flexibility and installation speed



External static pressure (Pa)
For characterian cores the core the core of the core of the core of the core of the core of the core the core of the core of the core of the core of the core of the core of t
+ Whi Air flow (rollinio)

BRC4C64\*

BRC1H81/82W/S/K

31.5

## Wall mounted unit

#### For rooms with no false ceilings nor free floor space

- > Flat, stylish front panel blends easily within any interior décor and is easier to clean
- > Can easily be installed in both new and refurbishment projects
- The air is comfortably spread up- and downwards thanks to 5 different discharge angles that can be programmed via the remote control
- Maintenance operations can be performed easily from the front of the unit



FXAQ-A







BRC1H82W BRC7EA628\*

Indoor unit			FXAQ	15A	20A	25A	32A	40A	50A	6		
Cooling capacity	Total capacity	Nom.	kW	1.7	2.2	2.8	3.6	4.5	5.6	7		
Heating capacity	Total capacity	Nom.	kW	1.9	2.5	3.2	4.0	5.0	6.3	8		
Power input - 50Hz	Cooling	Nom.	kW	0.	02	0.0	03	0.02	0.03	0.		
	Heating	Nom.	kW		0.03 0.04			0.02	0.04	0.		
Dimensions	Unit	HeightxWidthxDepth	mm	290x795x266 290x1,050x269								
Weight	Unit		kg 12 15						15			
Fan	Air flow rate - 50Hz	Cooling Low/High	m³/min	7.0/8.4	7.0/9.1	7.0/9.4	7.0/9.8	9.7/12.2	11.5/14.4	13.5		
Air filter	Туре					W	ashable resin n	et				
Sound power level	Cooling	High	dBA	51.0	52.0	53.0	55	.0	58.0	6		
Sound pressure	Cooling	Low/High	dBA	28.5/32.0	28.5/33.0	28.5/35.0	28.5/37.5	33.5/37.0	35.5/41.0	38.5		
level	Heating	Low/High	dBA	28.5/33.0	28.5/34.0	28.5/36.0	28.5/38.5	33.5/38.0	35.5/42.0	38.5		
Refrigerant	Type/GWP			R-410A/2,087.5								
Piping connections	Liquid	OD	mm	6.35								
	Gas	OD	mm			12	.7			15		
	Drain					VP	913 (I.D. 15/O.D.	18)				
Power supply	Phase/Frequer	icy/Voltage	Hz/V				1~/50/220-240					
Current - 50Hz	50Hz Maximum fuse amps (MFA) A 16											
Control systems	Infrared remot	e control				BRC7E	A628* / BRC7E	A629*				
	Wired remote of	control				BRC1H8	81/82W/S/K /BR	C1D52*				

## **Ceiling suspended unit**

#### For wide rooms with no false ceilings nor free floor space

> Ideal for comfortable air flow in wide rooms thanks to Coanda effect: up to 100° discharge angle



- Even rooms with ceilings up to 3.8m can be heated up or cooled down very easily without capacity loss
- Can easily be installed in both new and refurbishment projects
   Can easily be mounted in corners and narrow spaces, as it only
- needs 30mm lateral service space



 Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation device is required Fresh air intake opening in casing



\* Brings in up to 10% of fresh air into the room

- Reduced energy consumption thanks to specially developed DC fan motor and drain pump
- Stylish unit blends easily with any interior. The flaps close entirely when the unit is not operating and there are no air intake grilles visible

Indoor unit			FXHQ	32A	63A	100A			
Cooling capacity	Total capacity	Nom.	kW	3.6	7.1	11.2			
Heating capacity	Total capacity	Nom.	kW	4.0	8.0	12.5			
Power input - 50Hz	Cooling	Nom.	kW	0.107	0.111	0.237			
	Heating	Nom.	kW	0.107	0.111	0.237			
Dimensions	Unit	HeightxWidthxDepth	mm	235x960x690	235x1,270x690	235x1,590x690			
Weight	Unit		kg	24	33	39			
Casing	Material				Resin				
Fan	Air flow rate -	Cooling Low/High	m³/min	10.0/14.0	14.0/20.0	19.0/29.5			
	50Hz	Heating Low/High	m³/min	10.0/14.0	14.0/20.0	19.0/29.5			
Air filter	Туре			Resin net with mold resistance					
Sound power level	Cooling	Nom./High	dBA	52/54	53/55	55/62			
Sound pressure	Cooling	Low/Nom./High	dBA	31.0/34.0/36.0	34.0/35.0/37.0	34.0/37.0/44.0			
level	Heating	Low/Nom./High	dBA	31.0/34.0/36.0	34.0/35.0/37.0	34.0/37.0/44.0			
Refrigerant	Type/GWP				R-410A/2,087.5				
Piping connections	Liquid	OD	mm	6.35	9.1	52			
	Gas	OD	mm	12.7	15	.9			
	Drain				VP20 (I.D. 20/O.D. 26)				
Power supply	Phase/Frequer	icy/Voltage	Hz/V		1~/50/220-240				
Current - 50Hz	Maximum fuse	amps (MFA)	A	A 16					
Control systems Infrared remote control			BRC7G53*						
Wired remote control			BRC1H81/82W/S/K / BRC1D52*						
****									

\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m



FXHQ63A



BRC1H82W BRC7G53\*

## 4-way blow ceiling suspended unit

## Unique Daikin unit for high rooms with no false ceilings nor free floor space

- Even rooms with ceilings up to 3.5m can be heated up or cooled down very easily without capacity loss
- > Can easily be installed in both new and refurbishment projects
- > Individual flap control: flexibility to suit every room layout without changing the location of the unit!



- > Stylish unit blends easily with any interior. The flaps close entirely when the unit is not operating and there are no air intake grilles visible
- > Optimum comfort guaranteed with automatic air flow adjustment to the required load
- > 5 different discharge angles between 0 and 60°can be programmed via the remote control



 Standard drain pump with 500mm lift increases flexibility and installation speed







BRC1H82W BRC7C58\*

Indoor unit			FXUQ	71A	100A				
Cooling capacity	Total capacity	Nom.	kW	8.0	11.2				
Heating capacity	Total capacity	Nom.	kW	9.0	12.5				
Power input - 50Hz	Cooling	Nom.	kW	0.090	0.200				
	Heating	Nom.	kW	0.073	0.179				
Dimensions	Unit	HeightxWidthxDepth	mm	198x95	0x950				
Weight	Unit		kg	26	27				
Casing	Material			Re	sin				
Fan	Air flow rate -	Cooling Low/High	m³/min	16.0/22.5	21.0/31.0				
	50Hz	Heating Low/High	m³/min	16.0/22.5	21.0/31.0				
Air filter	Туре	Resin net with mold resistance							
Sound power level	Cooling	Nom./High	dBA	56/58	62/65				
Sound pressure	Cooling	Low/Nom./High	dBA	36.0/38.0/40.0	40.0/44.0/47.0				
level	Heating	Low/Nom./High	dBA	36.0/38.0/40.0	40.0/44.0/47.0				
Refrigerant	Type/GWP			R-410A	/2,087.5				
Piping connections	s Liquid	OD	mm	9.	52				
	Gas	OD	mm	15	.9				
	Drain			I.D. 20/	O.D. 26				
Power supply	Phase/Frequer	ncy/Voltage	Hz/V	Hz/V 1~/50/60/220-240/220-230					
Current - 50Hz	Maximum fuse	amps (MFA)	А	A 16					
Control systems Infrared remote control				BRC7C58*					
Wired remote control				BRC1H81/82W/S/K / BRC1D52*					
*** P 11 C 1145									

\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m

## Floor standing unit

#### For perimeter zone air conditioning

- > Unit can be installed as free standing model by use of optional back plate
- > Its low height enables the unit to fit perfectly beneath a window
- > Stylish modern casing finished in pure white (RAL9010) and iron grey (RAL7011) blends easily with any interior
- > Requires very little installation space



Floor standing



Wall mounted

> Wall mounted installation facilitates cleaning beneath the unit where dust tends to accumulate



> Wired remote control can easily be integrated in the unit







Indoor unit			FXLQ	20P	25P	32P	40P	50P	63P	
Cooling capacity	Total capacity	Nom.	kW	2.2	2.8	3.6	4.5	5.6	7.1	
Heating capacity	Total capacity	v Nom.	kW	2.5	3.2	4.0	5.0	6.3	8.0	
Power input - 50Hz	Cooling	Nom.	kW	0.05		0	.09	0	.11	
	Heating	Nom.	kW	0.0	05	0	.09	0	.11	
Dimensions	Unit	HeightxWidthxDepth	mm	600x1,000x232		600x1,140x232		600x1,4	420x232	
Weight	Unit		kg	27		32		3	8	
Fan	Air flow rate - 50Hz	Cooling Low/High	m³/min	6.0/7		6.0/8	8.5/11	11.0/14	12.0/16	
Air filter	Туре					Resi	Resin net			
Sound power level	Cooling	High	dBA		54		57	58	59	
Sound pressure	Cooling	Low/High	dBA		32/35		33/38	34/39	35/40	
level	Heating	Low/High	dBA		32/35		33/38	34/39	35/40	
Refrigerant	Type/GWP	)				R-410A	/2,087.5			
Piping connections	Liquid	OD	mm	6.35 9						
	Gas	OD	mm			12.7	15.9			
	Drain					O.D. 21 (Vir	nyl chloride)			
Power supply	Phase/Free	quency/Voltage	Hz/V			1~/50/60/2	220-240/220			
Current - 50Hz	Maximum	fuse amps (MFA)	A				15			
Control systems	Infrared re	mote control		BRC4C65*						
	Wired rem	ote control				BRC1H81/82W/	/S/K / BRC1D52*			
*Not applicable for LIAE										

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m

## Concealed floor standing unit

#### Designed to be concealed in walls

- > Discretely concealed in the wall: only the suction and discharge grilles are visible
- > Requires very little installation space as the depth is only 200mm



- > Its low height (620 mm) enables the unit to fit perfectly beneath a window
- > High ESP allows flexible installation



\*Not applicable for UAE

(1) Nominal cooling capacities are based on: indoor temperature: 27 °CDB, 19 °CWB, outdoor temperature: 35 °CDB, equivalent refrigerant piping: 5m, level difference: 0m (2) Nominal cooling capacities are based on: indoor temperature: 20 °CDB; outdoor temperature: 7°CDB, 6°CWB equivalent refrigerant piping: 5m, level difference: 0m



FXNQ-A





## Ventilation Range

## Why use VRV and ERQ condensing units for connection to air handling units?

#### **High Efficiency**

For most of the time, the AHU will be in cooling mode. By combining a heat wheel with the AHU, energy bills can be reduced by recovering the cool air exhausted to the atmosphere. When heating is required in winter conditions, we can simply package it with Daikin heat pumps which are renowned for their high efficiency. Fresh air can be heated in cases when the air is too cold to be supplied untreated.

## Fast response to changing loads resulting in high comfort levels

Daikin VRV units respond rapidly to fluctuations in supply air temperature, resulting in a steady indoor temperature and resultant high comfort levels for the end user. The ultimate package is the VRV range combined with an AHU that is designed to provide the perfect indoor conditions for the year round cooling demand in the Middle East, while reducing running cost.

#### Daikin Fresh air package



Fresh air supplied at 21°C. The temperature difference with the outdoor air is precooled by the heat wheel.

#### Easy Design and Installation

The system is easy to design and install since no additional water systems such as boilers, chillers, buffer, tankds and gas connections etc. are required. This also reduces both the total system investment and running cost.



#### Product range

Туре	Product name		0	200	400	600	800	1,000	2,00	0 4,00	00 6,00	0 8,0	00	32,00	0000	Components of good indoor air quality
	VAM-FC	201														<ul> <li>Ventilation</li> <li>Heat recovery</li> </ul>
Air handling units	DX Total Fresh Air Package															<ul> <li>&gt; Ventilation</li> <li>&gt; Heat recovery</li> <li>&gt; Air processing</li> <li>&gt; Humidification</li> <li>&gt; Filtration</li> </ul>

## In order to maximise installation flexibility, 4 types of control systems are offered

**W control:** Off the shelf control of air temperature (discharge temperature, suction temperature, room temperature) via any DDC controller using a proportional 0-10V algorithm for capacity control

X control: Precise control of air temperature (discharge temperature, suction temperature, room temperature) requiring

a preprogrammed DDC controller (for special applications) using a proportional 0-10V algorithm for capacity control

**Y control:** Control of refrigerant (Te/Tc) temperature via Daikin control (no DDC controller needed) with 3rd party thermostat (Daikin control for field settings and error indication)

Z control: Control of air temperature (suction temperature, room temperature) via Daikin control (no DDC controller needed)

#### Possibility W (Td/Tr control):

#### Air temperature control via DDC controller

Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a proportional 0-10V signal which is transferred to the Daikin control box (EKEQFCBA). This voltage controls the compressor frequency.



#### Possibility Y control (Te/Tc control):

#### By fixed evaporating /condensing temperature

A fixed target evaporating temperature of between 3°C and 12°C can be set by the customer. In this case, room temperature is only indirectly controlled. The cooling load is determined from the actual evaporating temperature (i.e. load to the heat exchanger). A Daikin infrared remote control (BRC1D52\*\* or BRC1H81/82W/S/K - optional) can be connected for error indication.



#### Precise air temperature control via DDC controller

Room temperature is controlled as a function of the air handling unit suction or discharge air (customer selection). The DDC controller is translating the temperature difference between set point and air suction temperature (or air discharge temperature or room temperature) into a reference voltage (0-10V) which is transferred to the Daikin control box (EKEQFCBA). This reference voltage will be used as the main input value for the compressor frequency control.



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

## **Control your AHU just like a VRV indoor unit with 100% fresh air** (BRC1D52\*\* or BRC1H81/82W/S/K - optional)

Set point can be fixed via standard Daikin infrared remote control. Remote ON/OFF can be achieved by an optional adapter KRP4A51. No external DDC controller should be connected. The cooling load is determined from the air suction temperature and set point on the Daikin controller.



	Option kit	Features				
Dessibility W/		DDC controller is required				
Possibility W		temperature control using air suction or air discharge temperature				
Describellity of	EKEQFCBA	DDC and Microtech controller is required				
Possibility X		Precise temperature control using air suction or air discharge temperature				
Possibility Y		Using fixed evaporating temperature, no set point can be set using remote control				
Possibility Z	ibility Z EKFQMCBA* Using Daikin infrared remote control BRC1D52** or BRC1H81/82W/S/K Te temperature					

\* EKEQMCB (for 'multi' application) \*\*Not applicable in UAE



# Control Systems

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## **Control solutions summary**

#### Daikin offers various control solution adapted to the requirements of even the most demanding commercial application.

- > Basic control solutions for those customers with few requirements and limited budget
- > Integrating control solutions for those customers that would like to integrate Daikin units into their existing BMS system
- > Advanced control solutions for those customers that expect Daikin to deliver a mini BMS solution, including advance energy management

Shop	Unit Control		Int	egrating contr	Advanced control		
	BRC1H*	RTD-20	RTD-Net	KLIC-DI	EKMBDXA	DCC601A51	DCM601A51
	- 21	The second					-
	User-friendly wired remote control	Retail economiser	Modbus inferface for monitoring & control	KNX interface	DIII-net modbus interface	Intelligent Controller	Intelliger Manager
	1 remote controller for 1 indoor unit (group)	1 gateway for 1 indoor unit (group)	1 gateway for 1 indoor unit (group)	1 gateway for 1 indoor unit	1 gateway for max. 64 indoor unit(s) (groups) & 10 outdoors	1 unit for 32 indoor unit(s)	1 iTM for 64 indoor unit(s) (groups) (1)
Automatic control of A/C	•	٠	•	•	•	•	•
Limit control possibilities for shop staff	•	٠	•	•	•	•	•
Create zones within the shop		•				•	•
Interlock with eg. Alarm, PIR sensor		•				(limited)	•
Integrate Daikin units into existing BMS via Modbus			•		•		
Integrate Daikin units into existing BMS via KNX				•			
Integrate Daikin units into existing BMS via HTTP							•
Monitor energy consumption	• (4)					• (2)	•
Advanced energy management						• (2)	•
Allows free cooling							•
Integrate Daikin products cross pillars into Daikin BMS							•
Integrate third party products into Daikin BMS						•	•
Online control						• (2)	• (3)
Manage multiple sites						• (2)	• (3)

(1) 7 iTM plus adapters (DCM601A52) can be added to have 512 indoor groups and 80 outdoor (systems) (2) Via Daikin cloud service (3) Through own IT set-up (not Daikin cloud server) (4) Not available on all indoors \*BRC1H81/82W/S/K

Hotel	Unit control	Integratin	Advanced control	
				Interference Interference Intelligier Manager
	BRC1H8*	RTD-HO	KLIC-DI	DCM601A51
• •	1 remote controller for 1 indoor unit (group)	1 gateway for 1 indoor unit (group)	1 gateway for 1 indoor unit	1 iTM for 64 indoor unit(s) (groups) (1)
Hotel guest can control & monitor basic functionalities from his room	•	•	(3)	•
Limit control possibilities for hotel guests	•			•
Interlock with window contact	(2)	•		•
Interlock with key-card	(2)	•		•
Integrate Daikin units into existing BMS via Modbus		•		
Integrate Daikin units into existing BMS via KNX			•	
Integrate Daikin units into existing BMS via HTTP				•
Monitor energy consumption				•
Advanced energy management				•
Integrate Daikin products cross pillars into Daikin BMS				•
Integrate third party products into Daikin BMS				•
Online control				•

(1) : 7 iTM plus adapters (DCM601A52) can be added to have 512 indoor groups and 80 outdoor (systems) (2) Via BRP7A51 adapter (3) requires KNX compatible controller \*BRC1H81/82W/S/K

Office	Unit control		Integrating control		Advance	d control
	•21		LonWorks	Preserve and pre		The second second
	DDC1U0*	FKAADDVA	Interface	Interface		
	BRC1H8*	EKMBDXA	DMS504B51	DMS502A51	DCC601A51	DCM601A51
	1 remote controller for 1 indoor unit (group)	1 gateway for max. 64 indoor unit(s) (groups) & 10 outdoors	1 gateway for 64 indoor unit(s) (groups)	1 gateway for 128 indoor unit(s) (groups), 20 out- doors (2)	1 unit for 32 indoor unit(s) (groups) (5)	1 iTM for 64 indoor unit(s) (groups) (1)
Automatic control of A/C	•	•	•	•	•	•
Centralised control for management		•	•	•	•	•
Local control for office staff	•				(4)	through Web Remote management
Limit control possibilities for office staff		•	•	•		•
Integrate Daikin units into existing BMS via Modbus		•				
Integrate Daikin units into existing BMS via HTTP						
Integrate Daikin units into existing BMS via LonTalk			•			
Integrate Daikin units into existing BMS via BACnet				•		
Energy consumption read out	(3)					
Monitor energy consumption					(4)	•
Advanced energy management					(4)	•
Integrate Daikin cross pillar products into Daikin BMS						•
Integrate third party products into Daikin BMS						
Online control					(4)	•
Manage multiple sites					(4)	(5)

(1) 7 iTM plus adapters (DCM601A52) can be added to have 512 indoor groups and 80 outdoor (systems) (2) extension (DAM411B51) needed to have up to 256 indoor unit(s) (groups), 40 outdoors (3) Not available on all indoor units (4) Via Daikin cloud service (5) Through own IT set-up (not Daikin cloud sever) (5) Up to 10 DCC601A51 can be combined as a single site on Daikin Cloud Service \*BRC1H81/82W/S/K

Home automation	Unit	Integrating	Advanced control	
	·21 ·	The second second		Intelligent Controller
	BRC1H8*	RTD-Net	KLC-DI	DCM601A51
	1 remote controller for 1 indoor unit (group)	1 gateway for 1 indoor unit (group)	1 gateway for 1 indoor unit	1 unit for 32 indoor unit(s) (3)
Automatic control of A/C	•	•	•	•
Limit ontrol possibilities for children	•	•	•	•
Create zones within the home				•
Interlock with eg. Alarm, PIR sensor				🔵 (limited)
Integrate Daikin units into existing BMS via Modbus		•		
Integrate Daikin units into existing BMS via KNX			•	
Monitor energy consumption	• (1)			Via WAGO I/O

(1) : Not available for all indoors (2) via Daikin cloud service (3) Up to 10 DCC601A51 can be combined as a single site on Daikin Cloud Service \*BRC1H81/82W/S/K 40

# Madoka The beauty of simplicity.



BRC1H81S/BRC1H82S



BRC1H82K



# User-friendly wired remote controller with premium design

## A complete redesigned controller focused on enhancing user experience

- > Sleek and elegant design
- > Intuitive touch-button control
- > Three colours to match any interior
- > Compact, measures only 85 x 85 mm
- > Advanced settings and commissioning via smartphone



reddot award 2018 winner





## Madoka Assistant





App Store

Simplifies the advanced settings such as schedule or set point limitation

✓ Visual interface simplifies advanced settings such as schedule setting,

energy saving activation, setting restrictions, etc.

- ✓ Easy and quick commissioning
- Featuring Bluetooth<sup>®</sup> low energy technology

#### Easy setting of schedules



#### Advanced user settings

Corridor

Image: Corridor

## Installer settings

Display		>
Clock and cal	endar	>
Lock function	ality	>
Language		>
System settin	gs	>

#### Field settings



## Individual control systems

#### BRC1H81/82W / BRC1H81/82S / BRC1H82K

## Madoka wired remote controller for Sky Air and VRV



BRC1H81/82W



A complete redesigned controller focussed to enhance user experience

- > Sleek and elegant design
- > Intuitive touch-button control
- > Two display options: standard and detailed
- > Direct access to basic functions
  - (on/off, set point, mode, target values, fan speed, louvres, filter icon & reset (4), error & code)
- > Three colours to match any interior
- > Compact, measures only 85 x 85 mm
- > Real time clock with auto update to daylight saving time
- > Equipped with a buzzer

to ensure guest comfort

#### Hotel application features

- > Energy saving through key card, window contact integration and set point limitation (BRP7A\*)
- > Flexible setback function ensures room temperature remains within comfortable limits

Key card and window contact P1 P2 Adaptor integration (BRP7A\*) Key card (field supply) F Window contact (field supply)

**#** (# 0 0 D. . 生し 0 14 2

### Madoka Assistant: Advanced settings can be easily done via your smartphone

#### A range of energy-saving functions that can be selected individually

- > Temperature range restriction
- > Setback function
- > Presence and floor sensor setting (available on the Round Flow and Fully Flat Cassettes)
- > Set temperature auto reset
- > Off timer

#### Temperature range restriction means no excessive heating/cooling

Save on energy by constraining the lower temperature limit in cooling and upper temperature limit in heating mode.

Note: Also available in auto cooling/heating change over mode.

#### **Other functions**

- > Up to three independent schedules can be programmed, allowing you to switch easily between them throughout the year (e.g. summer/winter/ mid-season)
- > Possibility to individually restrict menu functions

#### BRC2E52C\* / BRC3E52C\*

## Simplified wired remote control developed for hotel applications



With operation mode selector

- > Symbol driven interface for intuitive control
- Functions restricted to basic customer needs
- Energy saving through key card, window contact integration and set point limitation (BRP7A\*)
- Flexible setback function ensures room temperature remains within comfortable limits to

ensure guest comfort

- > Flat backpanel for easy installation
- > Easy commissioning: intuitive interface
- for advanced menu settings
- > 2 versions available:
  - BRC3E52C: temperature, fan speed, ON/OFF
  - BRC2E52C: temperature, mode, fan speed, ON/OFF



### BRC1D52\* Wired remote control



- > Schedule timer: Five day actions can be set
- > Home leave (frost protection): during absence, the indoor temperature can be maintained at a certain level. This function can also switch the unit ON/OFF
- > User friendly HRV function, thanks to
- the introduction of a button for ventilation mode and fan speed
- > Immediate display of fault location and condition
- > Reduction of maintenance time and costs

#### ARC4\*/BRC4\*/BRC7\*

### Infrared remote control



Operation buttons: ON/OFF, timer mode start/stop, timer mode on / off, programme time, temperature setting, air flow direction (1), operating mode, fan speed control, filter sign reset (2), inspection (2)/test indication (2) Display: Operating mode, battery change, set

Display: Operating mode, battery change, set temperature, air flow direction (1), programmed time, fan speed, inspection / test operation (2)

BRC4\*/BRC7\*

1. Not applicable for FXDQ, FXSQ, FXNQ

2. For all features of the remote control, refer to the operation manual

\*Not applicable for UAE

## **Centralised control systems**

A centralised remote control is ideal for use in tenanted commercial buildings subject to random occupation, enabling indoor units to be classified in groups per tenant (zoning).

The schedule timer programmes the schedule and operation conditions for each tenant and the control can easily be reset according to varying requirements.

#### DCS303A51\*\*

## Residential central remote controller



Maximum 16 groups of indoor units can be easily controlled with the large LCD panel

- > Max. 16 groups (128 indoor units) controllable
- > Backlight and large LCD panel for easy readability
- > ON/OFF, temperature settings and scheduling can be controlled indiidually for indoor units
- > All indoor units can be turned on or off at once with "ALL" button
- > Each group has a dedicated button for conenience
- > Outside temperature display

### DCS302C51 Centralised remote control

STIC DO
Pressent and a second s

#### Providing individual control of 64 groups (zones) of indoor units.

- > 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
- > zone control
- > group control
- > malfunction code display
- > maximum wiring length of 1,000m (total: 2,000m)
- > air flow direction and air flow rate of HRV can be controlled
- > expanded timer function

#### DST301B51 Schedule timer

#### Enabling 64 groups to be programmed.

- > a maximum of 128 indoor units can be controlled
- > 8 types of weekly schedule
- > a maximum of 48 hours back up power supply
- > a maximum wiring length of 1,000m (total: 2,000m)

### DCS301B51 Unified ON/OFF control



## Providing simultaneous and individual control of 16 groups of indoor units.

- > a maximum of 16 groups (128 indoor units) can be controlled
- > 2 remote controls in separate locations can be used
- operating status indication (normal operation, alarm)
- centralised control indication
- > maximum wiring length of 1,000m (total: 2,000m)

\*\*For residential use only. Cannot be used with other centralised ontrol equipment.



#### Detailed & easy monitoring and operation of VRV systems (max. 64 indoor units groups).



#### Languages

- > English
- › French
- › German
- › Italian
- > Spanish
- > Dutch
- › Portuguese

#### System layout

- > Up to 64 indoor units can be controlled
- Touch panel (full colour LCD via icon display)

#### Control

- Individual control (set point, start/stop, fan speed)
- fan speed) (max. 64 groups/indoor units)
- > Set back shedule
- Enhanced scheduling function (8 schedules, 17 patterns)
- > Flexible grouping in zones
- Yearly schedule
- > Fire emergency stop control
- Interlocking control
- Increased HRV monitoring and control function
- Automatic cooling / heating change-over
- > Heating optimization
- > Temperature limit
- Password security: 3 levels (general, administration & service)
- Quick selection and full control
- > Simple navigation

#### Monitoring

- > Visualisation via Graphical User Interface (GUI)
- Icon colour display change function
- > Indoor units operation mode
- > Indication filter replacement

#### **Cost performance**

- Free cooling function
   Labour saving
  - Easy installation
  - Compact design: limited installation space
  - Overall energy saving

#### Open interface

 Communication to any third party controller (domotics, BMS, etc.) is possible via open interface (http option DCS007A51)

#### **Connectable to**

- > VRV
- > HRV
- > Sky Air
- > Split (via interface adapter)



#### DCC601A51

## Advanced centralised controller with Cloud connection

- Intuitive and user-friendly interface
- Flexible concept for stand alone and multi site applications
- Total solution thanks to integration of 3rd party equipment
- Monitor & control your small commercial building, no matter where you are

#### 2 solutions:

- Local solution
- Offline centralised control
- > Stylish optional screen fits any interior
- **Cloud solution**
- Flexible online control from any device (Laptop, tablet...)
- > Monitor & control one or multiple sites
- Benchmark the energy consumption of different installations (1)
- > Energy consumption follow-up to comply with local regulations



#### System layout

#### Centralised control systems

#### **Total solution**

- Total solution thanks to a large integration of Daikin products and 3rd party equipment
- Connect a wide range of units (Split, Sky Air, VRV, Ventilation, Biddle air curtains)
- > Simply control your entire building centrally
- Increased customer shopping experience by better management of your shop comfort level

#### **Daikin Cloud Services**

- > Control your building no matter where you are
- > Monitor and control multiple sites
- > Installer or technical manager can remotely login to the cloud for first troubleshooting
- Benchmark the energy consumption of different installations (1)
- > Manage & track your energy use

#### User friendly touch control

- Stylish Daikin supplied optional screen for local control fits any interior
- Intuitive and user-friendly interface
- Full solution with simple control
- Full solution with simple cor
   Easy commissioning

#### Flexible

- Inputs via digital and pulse input for 3rd party equipment such as kWh meters, emergency input, window contact, ...
- Modular concept allows your cloud to grow
- with your business
- Control up to 32 indoor unit (groups)



From one to ∞ sites





Easy follow up of energy consumption



#### **Functions overview**

		Local solution	Cloud solution
Languages		Depends on local device	EN, DE, FR, NL, ES, IT, EL, PT, RU, TR, DA, SV, NO, FI, CS, HR, HU, PL, RO, SL, BG, SK
System layout	N° of connectable indoor units	32	32
	Multiple sites control		•
Monitoring & control	Basic control functions (ON/OFF, mode, filter sign, setpoint, fan speed, ventilation mode, room temperature,)	•	•
	Remote control prohibition	•	•
	All devices ON/OFF	•	•
	Zone control		•
	Group control	•	•
	Weekly schedule	•	•
	Yearly schedule		•
	Interlock control	•	•
	Set point limitation		•
	Visualisation of energy use per operation mode		•
Connectable to	DX split, Sky Air, VRV	•	•

(1) only available in combination with certain indoor units

\*For available Daikin Cloud Service options refer to the option list

# Mini BMS

## with full integration across all product pillars





#### **User friendliness**

- > Intuitive user interface
- > Visual lay out view and direct access to indoor unit main funtions
- > All functions direct accessible via touch screen or via web interface

#### Smart energy management

- > Monitoring if energy use is according to plan
- > Helps to detect origins of energy waste
- > Powerful schedules guarantee correct operation throughout the year
- > Save energy by interlocking A/C operation with other equipment such as heating

#### Flexibility

- > Cross-pillar integration (heating, air conditioning, applied systems, refrigeration, air handling units)
- > BACnet protocol for 3rd party products integration
- > I/O for integration of equipment such as lights, pumps... on WAGO modules
- > Modular concept for small to large applications > Control up to 512 indoor unit groups via one ITM
- and combine multiple ITM via web interface

#### Easy servicing and commissioning

- > Remote refrigerant containment check reducing on site visit
- > Simplified troubleshooting
- > Save time on commissioning
- thanks to the pre-commissioning tool
- > Auto registration of indoor units

### **Functions** overview

#### Languages

- > English
- > French
- › German
- > Italian
- Spanish
- > Dutch
- › Portuguese

#### Control

- > Individual control (512 groups)
- > Schedule setting (Weekly schedule, yearly calender, seasonal schedule)
- > Interlock control
- > Setpoint limitation
- > Temperature limit

#### Management

- > Web access Power Proportional
- Distribution (option)
- Operational history
- (malfunctions, ...) > Smart energy management
- monitor if energy use is according to plan
- detect origins of energy waste
- Setback function > Sliding temperature
- System layout
- > Up to 512 unit groups can be controlled (ITM + 7 iTM Plus adapters)

#### WAGO Interface

- › Modular integration of 3rd party equipment - WAGO coupler (interface
- between WAGO and iTM)
- Di module
- Do module

#### **Open http interface**

> Communication to any third party controller (domotics, BMS, etc.) is possible via http open interface (http option DCM007A51)

#### **DALI** integration

> Control and monitor the lights > Easier facility management: receive error signal when

light or light controller has

- Chillers (via MT3-EKMBACIP
  - controller)

**Connectable to** 

- DX Split, Sky Air, VRV

- Daikin AHU
- Fan coils
- Daikin Altherma Flex type
- LT and HT hydroboxes
- Biddle Air curtains
- WAGO I/O
- BACnet/IP protocol

Sky⁄ir УRУ Fan coils Chillers and AHU

Flexibility in size 64 up to 512 groups







- a malfunction **NEW** > Flexible approach and less wiring needed, compared
  - to classic light scheme > Easier to make groups and

IP interface

control scenes > Connection between intelligent Touch Manager and

DALI through WAGO BACnet

#### - Ai module - Ao module

- Thermistor module
- Pi module





Month

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## **Standard Protocol Interfaces**

## **Modbus Interface**

RTD

#### **RTD-NET**

 Modbus interface for monitoring and control of Sky Air, VRV, VAM and VKM

#### RTD-10

- > Advanced integration into BMS of Sky Air, VRV, VAM and VKM through either:
- Modbus
- Voltage (0-10V)
- Resistance
- > Duty/standby function for server rooms

#### RTD-20

- Advanced control of Sky Air, VRV, VAM/VKM and air curtains
- > Clone or independent zone control
- > Increased comfort with integration of CO<sub>2</sub> sensor for fresh air volume control
- > Save on running costs via
- pre/post and trade mode
- set point limitation
- overall shut down
- PIR sensor for adaptive deadband

#### **RTD-HO**

- Modbus interface for monitoring and control of Sky Air, VRV, VAM and VKM
- > Intelligent hotel room controller

#### **Overview functions**





Main functions	RTD-NET	RTD-10	RTD-20	RTD-HO
Dimensions H x W x D mm		100 x1	00 x 22	
Key card + window contact				√
Set back function				✓
Prohibit or restrict remote control functions (setpoint limitation,)	√	✓	✓**	✓
Modbus (RS485)	√	✓	✓	✓
Group control	√	✓	✓	✓
0 - 10 V control		✓	✓	
Resistance control		✓	✓	
IT application		✓		
Heating interlock		✓	√	
Output signal (on/defrost, error)		✓	✓****	✓
Retail application			√	
Partitioned room control			√	
Air curtain	✓***	✓***	✓	

(1): By combining RTD-RA devices

Control functions	RTD-NET	RTD-10	RTD-20	RTD-HO
On/Off	M	M,V,R	M	M*
Set point	M	M,V,R	M	M*
Mode	M	M,V,R	M	M*
Fan	M	M,V,R	M	M*
Louver	M	M,V,R	M	M*
HRV Damper control	M	M,V,R	M	
Prohibit/Restrict functions	M	M,V,R	M	M*
Forced thermo off				
Monitoring functions	RTD-NET	RTD-10	RTD-20	RTD-HO
On/Off	M	M	M	M
Set point	M	M	M	M
Mode	M	M	M	M
Fan	M	M	M	M
Louver	M	M	M	M
RC temperature	M	M	M	M
RC mode	M	M	M	M
nbr units	M	M	M	M
Fault	M	M	M	M
Fault code	M	M	M	M
Return air temperature (Average /Min/Max)	M	M	M	M
Filter alarm	M	M	M	M
Termo on	M	M	M	M
Defrost	M	M	M	M
Coil In/Out temperature	M	M	M	M

## **DIII-net Modbus interface**

#### EKMBDXA

## Integrated control system for seamless connection between Split, Sky Air, VRV and small inverter chillers and BMS systems

- › Communication via Modbus RS485 protocol
- $\,$  > Detailed monitoring and control of the VRV total solution
- > Easy and fast installation via DIII-net protocol
- > As the Daikin DIII-net protocol is being used, only one modbus interface is needed for a group of Daikin systems (up to 10 outdoor units systems).



Additional centralized controller might be required. For more information contact your local dealer.

			EKMBDXA7V1	
Maximum number of connectable indoor units Maximum number of connectable outdoor units			64	
			10	
Communication	DIII-NET - Remark		DIII-NET (F1F2)	
	Protocol - Remark		2 wire; communication speed: 9600 bps or 19200 bps	
	Protocol - Type		RS485 (modbus)	
	Protocol - Max. Wiring m		500	
Dimensions	HeightxWidthxDepth	mm	124x379x87	
Weight		kg	2.1	
Ambient temperature - operation	Max.	°C	60	
	Min.	°C	0	
Installation			Indoor installation	
Power Supply	Frequency	Hz	50	
	Voltage	V	220-240	



## **KNX** interface

**KLIC-DI** 

Integration of VRV in HA/BMS systems

Connect Sky Air / VRV indoor units to KNX interface for BMS integration



#### KNX interface line-up

The integration of Daikin indoor units through the KNX interface allows monitoring and control of several devices, such as lights and shutters, from one central controller. One particularly important feature is the ability to programme a 'scene' - such as "Home leave" - in which the end-user selects a range of commands to be executed simultaneously once the scenario is selected. For instance in "Home leave", the air conditioner is off, the lights are turned off, the shutters are closed and the alarm is on.

	KLIC-DI Size 90x60x35mm
	VRV
Basic control	1
On/Off	•
Mode	Auto, heat, dry, fan, cool
Temperature	•
Fan speed levels	2 or 3
Swing	Swing or fixed positions (5)
Advanced functionalities	
Error management	
Scenes	•
Auto switch off	
Temperature limitation	
Initial configuration	•
Master and slave configuration	

#### KNX interface for

## **BACnet Interface**

#### DMS502A51

Integrated control system for seamless connection between VRV, applied systems, air handling units and BMS systems



## **LonWorks Interface**



## Daikin Configurator Software

#### **EKPCCAB3**

Simplified commissioning: graphical interface to configure, commission and upload system settings

#### Simplified commissioning

The Daikin configurator for Daikin Altherma and VRV is an advanced software solution that allows for easy system configuration and commissioning:

- Less time is required on the roof configuring the outdoor unit
- Multiple systems at different sites can be managed in exactly the same way, thus offering simplified commissioning for key accounts
- Initial settings on the outdoor unit can be easily retrieved



Simplified commissioning



Retrieve initial system settings





## Daikin Cloud Service to achieve optimal operation



Daikin Cloud Service is a cloud-based remote control and monitoring solution for DX systems. Using enhanced control, monitoring and predictive logic, Daikin Cloud Service provides real-time data and support from Daikin experts to help you identify costsaving opportunities, increase the lifetime of your equipment and reduce the risk of unexpected issues.

## Monitor & control<sup>\*</sup> your system no matter where you are while teaming up with Daikin experts

## Remote control and energy visualisation

#### Puts you in the driving seat of your energy management

- Control and monitor your premises, wherever you are
- Centralised control and monitoring of all your premises
- Check errors remotely without having to go on site
- Visualise energy consumption and reduce energy waste by comparing different premises



## Remote support and diagnostics Daikin specialist supervision, so you can focus on your core business

- Early warning of system deviations to maximise system uptime and avoid emergency repairs\*\*
- Service providers have access to operational data so they arrive on site prepared
- Remote expert assistance in case of errors



## Advice and optimisation

#### Get the best out of your system through expert advice

- Periodical analysis and optimisation report by experts
- Personalised actions to maximise energy efficiency and comfort
- Increased system lifetime as the system runs as it should

Daikin Cloud Service requires a subscription. Contact your local sales representative for more information.

#### **Daikin Cloud Service**

## Daikin Cloud Service nackages

Durkin cloud Schnee puckages	Control and monitoring	Remote support and diagnostics	Advice and optimisation
Remote control, scheduling and interlocking	(DCC601A51 only)	(DCC601A51 only)	(DCC601A51 only)
Energy monitoring	✓	$\checkmark$	$\checkmark$
Multi-site benchmark	✓	~	$\checkmark$
Alarm history and e-mail notifications**	×	$\checkmark$	$\checkmark$
Predictions and e-mail notifications**	×	~	$\checkmark$
Operational data access	×	$\checkmark$	✓
Indoor use analysis	×	$\checkmark$	✓
Outdoor use analysis	×	$\checkmark$	✓
Remote diagnostic and support from Daikin	×	$\checkmark$	$\checkmark$
Periodical analysis and optimisation advice from Daikin	×	X	$\checkmark$
Can be combined with maintenance programmes: - Technical inspection - Preventive Maintenance Plan - Comprehensive Maintenance Plan	×	×	~

Packages subject to local availability Daikin Cloud Service replaces VRV Cloud and i-Net services.

#### Flexible solution

Manage your premises according to your needs, using a local control or remotely via Daikin Cloud Service, or a combination of both.

#### Control\*, no matter where you are

Daikin Cloud Service gives you full control of one or more premises wherever you are, using your PC, tablet or smartphone.

#### Predictive logic for VRV to prevent breakdowns

The operational data is continuously analysed by Daikin algorithms to predict potential failures and avoid unexpected costs.

#### Compatible with:

- > Intelligent Tablet Controller (DCC601A51)
- > Intelligent Touch Manager (DCM601A51) + IoT gateway
- > LC8 + IoT gateway





4. Detailed energy consumption follow up



Compare	enerav	use	with	target
Compare	energy	use	VVILII	larger

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## Wireless room temperature sensor

#### Flexible and easy installation

- > Accurate temperature measurement thanks to flexible
- placement of the sensor
- > No need for wiring
- > No need to drill holes
- > Ideal for refurbishment



#### Connection diagram Daikin indoor unit PCB (FXSQ example)



#### Specifications

			Wireless room temperat	ture sensor kit (K.RSS)	
			Wireless room temperature receiver	Wireless room temperature sensor	
Dimensions		mm	50 x 50	ø 75	
Weight		g	40	60	
Power supply			16VDC, max. 20 mA	N/A	
Battery life			N/A	+/- 3 years	
Battery type			N/A	3 Volt Lithium battery	
Maximum range		m	10		
Operation range		°C	0~5	0	
Communication	Туре		RF		
Communication	Frequency	MHz	Hz 868 3		

> Room temperature is sent to the indoor unit every 90 seconds or if the temperature difference is 0.2°C or larger.

Wired room temperature sensor

KRCS01-1B KRCS01-4B



> Accurate temperature measurement, thanks to flexible placement of the sensor

#### **Specifications**

Dimensions (HxW)	mm	60 x 50
Weight	g	300
Length of branch wiring	m	12

## **ADAPTER PCBs**

## Simple solutions for unique requirements Concept and benefits

Low cost option to satisfy simple control requirements

Deployed on single or multiple units				Connectable to:		
			Split	VRV		
	(E)KRP1B* adapter for wiring	<ul> <li>Facilitates integration of auxiliary heating apparatus, humidifiers, fans, damper</li> <li>Powered by and installed at the indoor unit</li> </ul>		~		
	KRP2A*/KRP4A* Wiring adapter for electrical appendices	<ul> <li>Remotely start and stop up to 16 indoor units (1 group) (KRP2A* via P1 P2)</li> <li>Remotely start and stop up to 128 indoor units (64 groups) (KRP4A* via F1 F2)</li> <li>Alarm indication/ fire shut down</li> <li>Remote temperature setpoint adjustment</li> <li>Cannot be used in combination with a central controller</li> </ul>		~		
	<b>DTA104A*</b> Outdoor Unit External Control Adapter	<ul> <li>Individual or simultaneous control of VRV system operating mode</li> <li>Demand control of individual or multiple systems</li> <li>Low noise option for individual or multiple systems</li> </ul>		~		
	DC5302A52 Unification adapter for computerized control	<ul> <li>Enables unified display (operation/malfunction) and unified control (ON/OFF) from BMS system</li> <li>Must be used together with Intelligent Touch Controller or intelligent Touch Manager</li> <li>Cannot be combined with KRP2/4*</li> <li>Can be used for all VRV indoor models</li> </ul>		~		
	KRP928 Interface adapter for DIII-net	Allows integration of split units to Daikin central controls	$\checkmark$			
	DTA113B51 Basic solution for control of Sky Air and VRV	<ul> <li>Rotation/backup operation function for Sky Air and VRV (up to 4 units can be connected to one adaptor)</li> </ul>		~		

### **Accessories**

EKRORO	O	<ul> <li>External ON/OFF or forced off</li> <li>Example: door or window contact</li> </ul>
EKRORO 3		<ul> <li>External ON/OFF or forced off</li> <li>F1/F2 contact</li> <li>Example: door or window contact</li> </ul>
KRC19-26A		<ul> <li>Mechanical cool/heat selector</li> <li>Allows switching over an entire system between cooling/heating/fan only</li> <li>Connects to the A/B/C terminals of the unit</li> </ul>
BRP2A81		Cool/heat selector PCB     Required to connect KRC19-26A to a VRV IV outdoor unit

## **Anti-Corrosion Treatment**



Heavy corrosion protection coating option is available to provide special treatment for the most severe coastal application.

For further details, please contact your Daikin Sales representative.

## Supporting tools, software and apps

## New web based Xpress selection software

#### Making selection easy, anythime, anywhere

- > Web & cloudbased, access to your projects from anywhere, anyplace...
- > Platform (Windows, Mac, ...) and hardware (laptop, desktop, tablet) independent
- > Re-engineered GUI for maximum easy of use
- > No need to do local installation
- › No tool updates required
- (always latest version available)
- › Possibility to copy / share projects

## vrvxpress. daikin.eu



Easy selection, anytime, anywhere

## Other selection software

#### **VRV** Pro

Enables VRV air conditioning systems to be engineered in a precise and economical way, taking into account the complex piping rules. Moreover, it ensures optimum operating cycles and maximum energy efficiency.

- > Accurate heat load calculation
- > Precize selection based on peak loads
- > Energy consumption indication



#### Ventilation Xpress

Selection tool for ventilation devices (VAM, VKM). The selection is based on given supply/extract airflows (including fresh up and given ESP of supply/extract ducting:

- > Determines size of electrical heaters
- > Visualisation of psychrometric chart
- > Visualisation of selected configuration
- > Required field settings mentioned in the report



## Webbased ASTRA selection NEW for air handling units

A powerful tool to select the right Air Handling Units for your needs.

- › 3D interface
- > quick selection procedures
- > new print-out possibilities and report shapes



#### WAGO selection tool NEW

The WAGO Selection Tool is specifically designed to select the optimal WAGO I/O system for your needs.

- > Easy selection of WAGO materials
- > Material list creation
- > Time saving
- Includes wiring schemes
- Contains commissioning/preset data for



## Plugins and third-party software tools

#### Building Information Modelling (BIM) support

- > BIM improves efficiency of design and build phase
- Daikin is among the first to supply a full library of BIM objects for its VRV products

#### VRV CAD 2D

- Displays VRV pipe design on a Autocad 2D floorplan
- > Improves project management
- Accurately calculates the pipe dimensions and refnets
- > Determines the outdoor unit size
- > Validates VRV pipe rules
- > Accounts for the extra refrigerant charge, including a max room concentration check



## bim.daikin.eu



## Energy simulation and design aid tools

#### Seasonal simulator

- The Seasonal Simulator is an innovative software tool that calculates and compares potential seasonal efficiency ratings.
- This user-friendly tool compares various Daikin systems, annual power consumption, CO<sub>2</sub> emissions, and much more, to present an accurate ROI calculation in a matter of minutes.

#### Psychrometrics diagram NEW

- > The Psychrometrics Diagram Viewer demonstrates the changing properties of moist air.
- With this tool, users can choose two points with specific conditions, plot them on the diagram and select actions to change the conditions, i.e. heat, cool and mix air.





#### Error code app

Quickly know the meaning of fault codes, for each product family and the potential cause

#### **D-Checker**

D-checker is a software application used to record and monitor operation data of Daikin applied, split, Multi-split, Sky-air units, Daikin Altherma LT, ground source heat pump, Hybrid, ZEAS, Conveni-pack &

#### VRV Service-Checker

- Connected via F1/F2 bus to check multiple systems at the same time
- > Connection of external pressure sensors possible





## Online support

#### **NEW** Business portal

- Experience our new extranet that thinks with you at my.daikinmea.com
- Find information in seconds via a powerful search
- > Customise the options so you see only info relevant for you
- > Access via mobile device or desktop



## Internet



Find our solution for different applications:

- Get more commercial details on our flagship products via our dedicated minisites
- > See our references

https://www.daikinmea.com/en\_US/ about/case-studies.html





#### Online VRV selection software vrvxpress.daikin.eu

## We're here to help you online and offline!



Independently Tested by Intertek



FIDAR KARA Tel: +98 21 8868 3538 , +98 21 8859 6153 Web: fidarkaraco.com

No. 157, Darya Blvd., Saadat-Abad, Tehran, Iran







يئۃ الإم rt فجلس أيتوظينى للتجودة والتقطايت Emirates Authority For Standardization & Metrology ABU DHABI QUALITY & CONFORMITY COUNCIL

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#### DAIKIN MIDDLE EASTAN AFRICA FZE

P.O. Box 18674, Plot MO0426, JAFZA North, Jebel Ali Free Zone, Dubai, UAE | Tel: +971 (0) 4 815 9300 | Fax: +971 (0) 4 815 9311 E-mail: info@daikinmea.com



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Web: www.daikinmea.com Toll Free: 800-DAIKIN (324546)