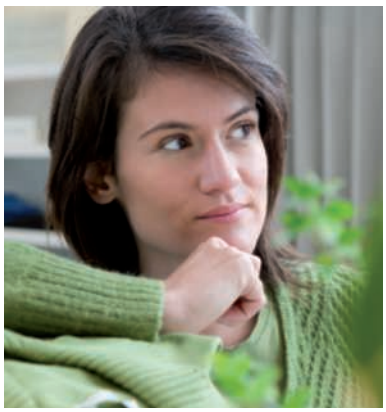
DAIKIN

AIR CONDITIONERS

for the retail market, hotels, restaurants and offices

ROUND FLOW

HIGH COP, ROUNDFLOW CEILING MOUNTED CASSETTE R-410A



www.daikin.eu

FCQH-C

QUALITY RHYMES WITH RELIABILITY

WHEREVER YOU LIVE AND WORK, CHANCES ARE THAT YOU BENEFIT FROM DAIKIN'S CLIMATE COMFORT EVERY DAY. THIS IS BECAUSE DAIKIN DEVELOPS AIR CONDITIONERS FOR ALL THE PLACES WHERE PEOPLE ARE ACTIVE: FROM HOMES, OFFICES AND INDUSTRIAL HALLS TO SHOPS, SPORTS CENTRES AND RESTAURANTS. IN ALL THESE PLACES, OCCUPANTS AND USERS HAVE SPECIFIC DEMANDS REGARDING TEMPERATURE AND AIR QUALITY.

Daikin uses those demands as inspiration to develop integrated air conditiong solutions which guarantee quality and healthy indoor environments and which, over and above that, also provide considerable energy savings.

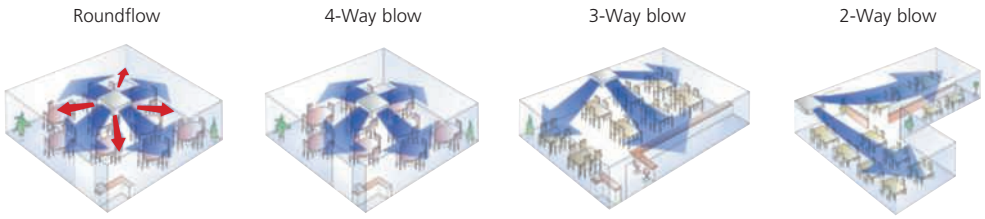
The FCQH Roundflow cassette model which, with its 360° air discharge pattern, provides improved air distribution in large areas with ceiling heights of up to 4.5 metres. The FCQH is compatible with the Daikin Sky Air systems and has one of the highest COP values on the market. The silent Roundflow is an A energy class product and it both cools and heats.

PERFECT CONTROL OF AIR FLOW AND INDOOR CLIMATE

The Roundflow provides comfortable air discharge in all directions. Thanks to the unique **360° radial air distribution pattern**, so-called dead corners - and temperature differences - are definitely something of the past. An incorporated **air filter** traps the smallest dust particles and, in so doing, ensures that there is a constant inflow of pure air. The indoor unit operates in an almost inaudible manner: the noise it makes amounts to barely 27 dB(A), which corresponds to rustling leaves. For even greater comfort, you can choose between various settings by simply using the remote control.

- **Fan speeds**
  You can choose between **two fan speeds**: high or low. The high fan speed enables coverage of a very wide area and the low fan speed limits air distribution to a minimum.
- **Automatic airflow regulation**
  The airflow pattern that was last selected is saved and automatically set again when the air conditioner is started up again. The factory setting is 30° for cooling and 65° for heating.
- **Autoswing**
  The vertical auto swing system makes the outflow louvers move up and down automatically, enabling even distribution of air and temperature in the room. There are three settings to choose from: standard, draught prevention and ceiling soiling prevention. The last-mentioned setting prevents the air from blowing too long in a horizontal position, which in turn prevents the ceiling from being soiled.
- **Draught prevention**
  This setting sees to it that when the heating is turned on, there is an automatic switch to horizontal air flow. This helps prevent draughts.
- **Dry programme function**
  With the intelligent dry programme function, the humidity in an area is reduced without temperature fluctuations.
- **Automatic cooling/heating changeover**
  The Roundflow automatically selects cooling or heating mode to maintain the pre-set temperature.

› **23 air flow patterns**
The indoor unit blows air out over 360°, but the optional closure kit make it possible to achieve 2-way, 3-way and 4-way flow patterns, which means you can install the Roundflow in a corner, next to a wall or in a confined space. In total, you have no less than 23 different air flow patterns at your disposal. By means of a separate connection (optional) the **indoor** unit can also have a maximum of **20% fresh air intake**.



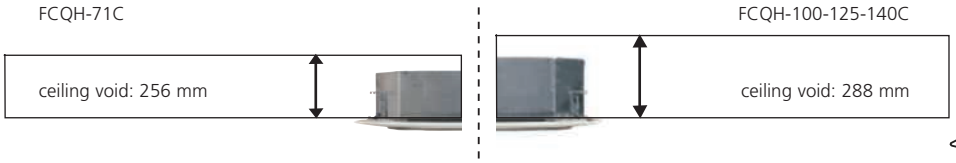
360° radial round flow enables uniform air flow distribution

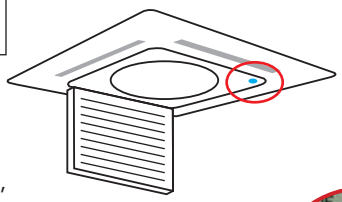
Wired remote control (Optional)

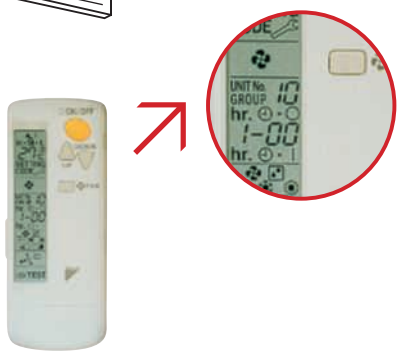
STRAIGHTFORWARD INSTALLATION MEANS LOW COSTS

The **Roundflow cassette** has a stylish, **modern line** and a **new decorative front panel in 'pure white'** (RAL9010). **The grille is also much less visibly integrated** so that the unit is more elegant and blends in **discreetly** with the traditional and contemporary white ceilings.

› The **limited depth** (minimum installation height of 256 mm) enables the indoor unit to fit flush into false ceilings. It is possible to close the flaps so that the unit can be installed in the middle of the room, in a corner or in a confined space.







Infrared remote control (Optional)

› **The condensation channel can be checked effortlessly** via a transparent drain sleeve, plus there is easy access to the drain plug. Checks can be carried out without removing the front panel.

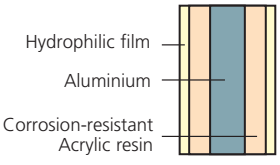
› The indoor unit is easy to operate with the **wired remote control.** This has a programmable timer with which the system can be programmed per day or per week.

› With the **optional ON / OFF function**, the air conditioner can, with a mobile phone, be switched on and off remotely. With this function you can also make the unit switch off automatically, e.g. when someone opens a window.

› The **indoor unit has the D3-net connection as a standard accessory** and can be controlled via a centralised control system (iManager and iTouch Controller).

› The **outdoor unit** can be installed on the roof, terrace or against an outside wall. Thanks to a special **anti-corrosion treatment** of the fan and heat exchanger, the outdoor unit is resistant to acid rain and salt corrosion. A sheet of stainless steel underneath the unit provides additional protection.

An anti-corrosion heat exchanger cutaway view



ENERGY EFFICIENT

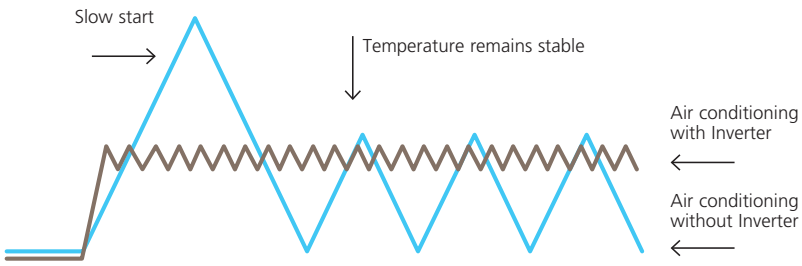
› **Energy label:** up to class A

Not only does the Roundflow cassette operate almost inaudibly and reducing draughts, it is also **exceptionally energy efficient**. The FCQH model is compatible with the Daikin Sky Air systems and has one of highest COP (Coefficient of Performance) values on the market. By applying special techniques, it achieves energy performance coefficients of 4.39. In practice this means that the system supplies as much as 4 kilowatts of cooling or heating capacity for every one kilowatt of electricity. Almost all units in the range have an A label according to the European energy classification.

› The **inverter technology**, developed by Daikin is a true innovation in the area of climate control. The principle is simple: inverters adjust the power used to suit the actual requirement. No more, no less. This technology provides you with two concrete benefits:

1. **Comfort**
   The inverter repays its investment many times over by improving comfort. An air conditioning system with an inverter continuously adjusts its cooling and heating output to suit the temperature in the room. The inverter shortens system start-up time enabling the required room temperature to be reached more quickly. As soon as that temperature is reached, the inverter ensures that it is constantly maintained.

2. **Energy efficient**
   Because an inverter monitors and adjusts ambient temperature whenever needed, energy consumption drops by 30% compared to a traditional on/off system!



› **Round flow air discharge principle**

Another unique benefit is that the **360° air discharge pattern** reduces the air flow and temperature fluctuations, with the result that fewer on/off cycles are required. This round flow air discharge principle therefore provides additional energy savings.

› **Absence function**

In case of extended absence, this function helps to save energy. If there is no one in the area for an extended period, e.g. during holidays or closing days, this function automatically sets the room temperature to a minimum of 10°C. At this point, all connected indoor units will switch over to heating mode. The function will be deactivated as soon as the room temperature reaches 15°C, and it will also have to be switched off when the room is in use again.

THE ROUNDFLOW FCQH-C IS THE IDEAL SOLUTION IF COOLING AND HEATING MUST BE UNOBTRUSIVE, SUCH AS IN SHOPS, RESTAURANTS, OFFICES, SHOWROOMS, MUSEUMS AND SPORTS CENTRES. IT IS THE FIRST CEILING CASSETTE ON THE MARKET THAT CAN DISCHARGE AIR FULL CIRCLE.

DID YOU KNOW *that* ...

in a poorly ventilated room, CO_2 concentrations can rapidly increase as a result of people's presence?

With the aid of the optional fresh-air intake set, Daikin provides purified outdoor air. In this way, every room can be provided with fresh air without opening the windows.

DID YOU KNOW *that* ...

energy savings are increased significantly when you choose an air conditioner that can heat as well as cool? Indeed, with a heat pump, warmth from outdoors is transported indoors for free, even with negative outside temperatures.

APPLICATION POSSIBILITIES

› The FCQH-C comes exclusively with a heat pump, and it is therefore possible to **cool and heat (heat pump)**.

› The indoor unit is suited to **single-split application** (one indoor unit to one outdoor unit) and **twin applications** (maximum of four indoor units in the same space to one outdoor unit).

CAPACITY AND POWER INPUT

HEAT PUMP - INVERTER CONTROLLED (air cooled)				FCQH71C	FCQH100C	FCQH125C	FCQH140C
				RZQS71CV1	RZQS100CV1	RZQS125CV1	RZQS140CV1
Cooling capacity		nominal	kW	7.1	10.0	12.5	14.0
Heating capacity		nominal	kW	8.0	11.2	14.0	16.0
Nominal input	cooling	nominal	kW	2.36	3.56	3.88	4.98
	heating	nominal	kW	2.34	3.28	4.11	4.98
EER				3.01	2.81	3.22	2.81
COP				3.41	3.41	3.41	3.21
Energy label	cooling			B	C	A	C
	heating			B	B	B	C
Annual energy consumption	cooling		kWh	1,180	1,780	1,940	2,490

HEAT PUMP - INVERTER CONTROLLED (air cooled)				FCQH71C	FCQH100C	FCQH100C	FCQH125C	FCQH125C	FCQH140C	FCQH140C
				RZQ71CV1	RZQ100CV1	RZQ100BW1	RZQ125CV1	RZQ125BW1	RZQ140CV1	RZQ140BW1
Cooling capacity		nominal	kW	7.1	10.0	10.0	12.5	12.5	14.0	14.0
Heating capacity		nominal	kW	8.0	11.2	11.2	14.0	14.0	16.0	16.0
Nominal input	cooling	nominal	kW	1.98	2.66	2.44	3.70	3.54	4.64	4.65
	heating	nominal	kW	1.97	2.55	2.56	3.57	3.59	4.43	4.52
EER				3.59	3.76	4.10	3.38	3.53	3.02	3.01
COP				4.06	4.39	4.38	3.92	3.90	3.61	3.54
Energy label	cooling			A	A	A	A	A	B	B
	heating			A	A	A	A	A	A	B
Annual energy consumption	cooling		kWh	990	1,329	1,220	1,849	1,770	2,319	2,325

Notes:
1) Energy label: scale from A (most efficient) to G (less efficient).
2) Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions).

TWIN/TRIPLE/DOUBLE TWIN APPLICATION	FCQH71C	FCQH100C	FCQH125C	FCQH140C
RZQ(S)140	2			

Height	246 mm
Width	840 mm
Depth	840 mm

Height	770 mm
Width	900 mm
Depth	320 mm

SPECIFICATIONS INDOOR UNITS

COOLING ONLY / HEAT PUMP				FCQH71C	FCQH100C	FCQH125C	FCQH140C
Dimensions	HxWxD	unit	mm	246x840x840	288x840x840		
		decoration panel	mm	50x950x950			
Weight		unit	kg	23	25		
		decoration panel	kg	5.5			
Colour		decoration panel		Pure White (RAL 9010)			
Air flow rate	cooling	H/L	m³/min	20.0/12.0	32.5/18.0	32.5/21.5	32.5/21.5
	heating	H/L	m³/min	20.0/12.0	32.5/18.0	32.5/21.5	32.5/21.5
Fresh Air	Max. fresh air intake		%	20.0	13.0	12.7	12.7
	Max. fresh air intake		m³/min	4.3	4.3	4.3	4.3
Fan speed			steps	2			
Sound pressure level	cooling	H/L	dB(A)	34/28	43/32	43/36	43/38
	heating	H/L	dB(A)	34/28	43/32	43/36	43/38
Sound power level	cooling	H	dB(A)	52.0	60.0		
Piping connections		liquid	mm	9.52 (flare connection)			
		gas	mm	15.9 (flare connection)			
		drain (VP25)	ID mm	25			
			OD mm	32			
Heat insulation				Foamed Polystyrene / Foamed Polyethylene			

SPECIFICATIONS OUTDOOR UNITS

HEAT PUMP - INVERTER CONTROLLED				RZQS71CV1	RZQS100CV1	RZQS125CV1	RZQS140CV1
Dimensions	HxWxD		mm	770x900x320		1,170x900x320	
Weight			kg	68		103	
Casing colour				Ivory White			
Sound pressure level	cooling	H/L	dB(A)	49 (47)	51(49)		52(50)
(night quiet mode)	heating	H/L	dB(A)	51	55	53.0	54.0
Sound power level	cooling	H	dB(A)	65	67		68
Compressor			type	Hermetically sealed swing type		Hermetically sealed scroll type	
Refrigerant type				R-410A			
Refrigerant charge			kg/m	2.75		3.70	
Maximum piping length			m	30 (equiv. length 40)	50 (equiv. length 70)	50 (equiv. length 95)	
Maximum level difference			m	15	30		
Operation range	cooling	from ~ to	°CDB	-5 ~ 46			
	heating	from ~ to	°CWB	-15 ~ 15.5			

HEAT PUMP - INVERTER CONTROLLED				RZQ71CV1	RZQ100CV1	RZQ100BW1	RZQ125CV1	RZQ125BW1	RZQ140CV1	RZQ140BW1
Dimensions	HxWxD		mm	770x900x320	1,170x900x320	1,345x900x320	1,170x900x320	1,345x900x320	1,170x900x320	1,345x900x320
Weight			kg	68	103	106	103	106	103	106
Casing colour				Ivory White						
Sound pressure level	cooling	H/L	dB(A)	47 (43)	49 (45)		50 (45)		50 (46)	50 (45)
(night quiet mode)	heating	H/L	dB(A)	49	51		52			
Sound power level	cooling	H	dB(A)	63	65		66		67	66
Compressor			type	Hermetically sealed swing type	Hermetically sealed scroll type					
Refrigerant type				R-410A						
Refrigerant charge			kg/m	2.75	3.7	4.3	3.7	4.3	3.7	4.3
Maximum piping length			m	50 (equiv. length 70)	75 (equiv. length 95)					
Maximum level difference			m	30						
Operation range	cooling	from ~ to	°CDB	-15 ~ 50						
	heating	from ~ to	°CWB	-20 ~ 15.5						

ACCESSORIES: CONTROL SYSTEMS

INDOOR UNITS		FCQH71C	FCQH100C	FCQH125C	FCQH140C
Wired remote control		BRC1D52			
Infrared remote control	cooling only	BRC7F533F			
	heat pump	BRC7F532F			
Centralised remote control		DCS302C51			
Unified ON/OFF control		DCS301B51			
Schedule timer		DST301B51			
Wiring adapter for electrical appendices		KRP1B57 / KRP4A53			
Wiring adapter (hour meter)		EKRP1C11			
Installation box for adapter PCB		KRP1H98			
Remote ON/OFF		EKRORO2			
Remote sensor		KRCS01-4			
Fixing box		KJB212A			

ACCESSORIES: INDOOR UNITS

INDOOR UNITS	FCQH71C	FCQH100C	FCQH125C	FCQH140C
Decoration panel	BYCQ140C			
Replacement long-life filter	KAFP551K160			
Fresh air intake kit (min. 20% fresh air)	KDDQ55C140			
Sealing member of air discharge outlet	KDBHQ55C140			

ACCESSORIES: OUTDOOR UNITS

OUTDOOR UNITS		RZQ(S)71C	RZQ(S)100B/C	RZQ(S)125B/C	RZQ(S)140B/C	RZQ200C	RZQ250C
Central drain plug		KKPJ5F180				KWC26B280	
Refrigerant branch piping	for twin	KHRQ22M20TA (KHRQ58T) (1)				KHRQ22M20TA	
Demand adapter kit		KRP58M51				KRP58M51	

Note:
1) For RZQ100-140BW1 in combination with FCQH71C, use the refrigerant branch piping mentioned between brackets.

Notes:
1) V1 = 1~, 230V, 50Hz; V3 = 1~, 230V, 50Hz
2) Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB • outdoor temperature 35°CDB • refrigerant piping length 7.5m • level difference 0m.
3) Nominal heating capacities are based on: indoor temperature 20°CDB • outdoor temperature 7°CDB/6°CWB • refrigerant piping length 7.5m • level difference 0m.
4) Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
5) Units should be selected on nominal capacity. Max. capacity is limited to peak periods.
6) The sound pressure level is measured via a microphone at a certain distance from the unit (for measuring conditions: please refer to the technical data books).
7) The sound power level is an absolute value indicating the "power" which a sound source generated.

Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues.
For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment.
This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

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

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

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

Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory. Multi units are Eurovent certified for combinations up to 2 indoor units.

Daikin products are distributed by:

DAIKIN EUROPE N.V.

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