CO_2 VRV

The low GWP solution

Daikin, your partner

in decarbonising your building

We're there for you!

Let's act now to decarbonise buildings, creating a healthy environment for generations to come.

Every building requires a different solution to match its unique properties. That's why it is important to have an HVAC-R partner with expert knowledge and a product portfolio designed to achieve your objectives while staying within budget.

How will Daikin enable you to lower your carbon footprint?

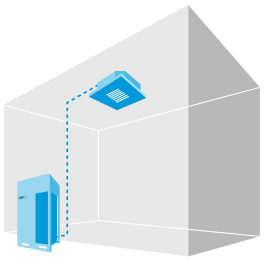
- We continuously develop products with lower CO_2 footprints by using **lower GWP refrigerants** such as R-32, CO_2 etc.
- We reuse materials where possible, even refrigerants through the **LOOP by Daikin programme** aimed at reusing available resources and fully supporting the EU circular economy
- We maximise **real life seasonal efficiencies**, delivered in a transparent and trustworthy way
- Our **team of experts goes beyond product support** to reach your green objectives by providing in-depth knowledge in the use of EPDs, EPDB legislation and green building schemes such as BREEAM, LEED, WELL, etc.
- Via our **Daikin Cloud Plus, we continuously monitor our systems**, ensuring the operate as inteneded, keeping running costs low and maximising uptime.
- We **help customers make the right choice** by offering easy to use tools to select the best solutions for their residential, commercial or industrial building

Contact us here: **https://www.daikin.eu/en_us/about/environmental-responsibility/epd.html**

Benefits of CO_2

- Using so-called natural refrigerant CO_2
- Low GWP value of 1, making it one of the most sustainable refrigerants
- Classified as non-flammable (A1), simplifying system design

Benefits of CO_2 VRV



- Enabling you to tackle projects requesting so-called "natural" refrigerants
- Maximise your BREEAM / LEED refrigerant score, thanks to the low GWP of 1
  - BREEAM V7: 3 of 3 credits in Pollution 01
  - LEED V5: 2 of 2 points in Enhanced Refrigerant Management
- Incorporates all typical VRV benefits
  - Quick and easy to design and install
  - Precise zone control with quick response to changing load
  - Connectable to Daikin's latest controllers such as Daikin Cloud Plus

CO_2 VRV installation example for supermarket

CO_2 VRV outdoor unit overview

Capacity class (HP)

	Model			10
	Cooling Capacity			28.0
	Heating Capacity			31.5
Air-cooled heat pump	NEW CO_2 VRV ▪ The low GWP solution - Using so-called natural refrigerant CO_2 - Low GWP of 1 - Non-flammable (A1) refrigerant		RXYN-B 	•

CO_2 VRV indoor unit overview

Capacity class

Type	Model		Product name	40	50	63	80
Ceiling mounted cassette	NEW Round flow cassette	**360° air discharge for optimum efficiency and comfort** ▪ Auto cleaning function ensures high efficiency ▪ Intelligent sensors save energy and maximise comfort ▪ Flexibility to suit every room layout ▪ Widest choice ever in decoration panel designs and colors	FXFN-B 	•	•	•	•
Concealed ceiling	NEW Concealed ceiling unit with medium ESP	**Slimmest yet most powerfull medium static pressure unit on the market!** ▪ Slimmest unit in class, only 245mm ▪ Low operating sound level ▪ Medium external static pressure up to 120Pa facilitates using flexible ducts of varying lengths ▪ Automatic air flow adjustment function measures the air volume and static pressure and adjusts it towards the nominal air flow, guaranteeing comfort	FXSN-B 	•	•	•	•
Cooling capacity (kW)[1]				4.5	5.6	7.1	9.0
Heating capacity (kW)[2]				5.0	6.3	8.0	10.0

(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

CO_2 VRV

The low GWP solution

- Using the so-called natural refrigerant CO_2 (R-744)
- With a low GWP of 1, CO_2 is one of the most sustainable refrigerants
- Non-flammable (A1) refrigerant, simplifying system design
- Incorporates all typical VRV benefits: quick and easy to design and install, precise zone control with quick response to changing load

RXYN10B

Access all technical data here:

RXYN-B

Outdoor unit				RXYN-B	10B
Capacity range				HP	10
Cooling capacity	Prated,c			kW	28.0
Heating capacity	Prated, h			kW	28.0
	Max.			kW	31.5
Recommended combination					4x FXFN63B
ηs,c				%	189.2
ηs,h				%	137.1
SEER					4.8
SCOP					3.5
Maximum number of connectable indoor units					8
Indoor index connection		Min.			125
		Max.			325
Dimensions	HxWxD			mm	1,680x1,930x765
Weight				kg	564
Sound power level	Cooling			dB(A)	83.5
	Heating			dB(A)	83.5
Sound pressure level	Cooling			dB(A)	61
Operation range	Cooling	Min °C		°CDB	-5~43
	Heating	Max °C		°CWB	-20~15.5
Refrigerant	Type/GWP				R744/1
	Charge	tCO2eq/ kg		kg	0
Piping connections	Liquid OD			mm	9.52
	Gas OD			mm	15.9
	Tot. pip. length	Sys. actual		m	300
Power supply	Phase/Freq./ Voltage			Hz/V	3N~/50/380~415
Current - 50Hz	Max. fuse amps (MFA)			A	40

NEW FXFN-B

ROUND FLOW

CO_2 VRV

Round flow cassette

360° air discharge for optimum efficiency and comfort

- Optimised design for CO_2 refrigerant (R-744)
- Optional automatic filter cleaning panel results in higher efficiency & comfort and lower maintenance costs
- Two optional intelligent sensors improve energy efficiency and comfort
- Widest choice ever in decoration panels: designer panels in white (RAL9010) and black (RAL9005) and standard panels in white (RAL9010) with grey louvers or full white
- Bigger flaps and unique swing pattern improve equal air distribution
- Individual flap control: flexibility to suit every room layout without changing the location of the unit!
- Optional fresh air intake
- Standard drain pump with 675mm lift increases flexibility and installation speed

FXFN-B

Auto cleaning filter

Floor and presence sensor

Whisper quiet

Individual flap control

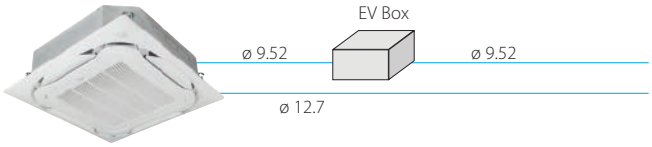
BRC1H52W7

White panel

White auto cleaning panel

Black panel

Black design panel



CO_2 Cassette

Access all technical data here:

FXFN-B

Indoor Unit				FXFN	40B	50B	63B	80B
Cooling capacity	Total capacity	At high fan speed		kW	4.5	5.6	7.1	9
Heating capacity	Total capacity	At high fan speed		kW	5	6.3	8	10
Power input - 50Hz	Cooling	At high fan speed		kW	0.019	0.036	0.067	0.118
	Heating	At high fan speed		kW	0.019	0.036	0.067	0.118
Dimensions	Unit	HeightxWidthxDepth		mm	246x840x840			288x840x840
Weight	Unit			kg	26			29
Casing	Material				Galvanised steel plate			
Decoration panel	Model				Standard panels: BYCQ140E2W1 - white with grey louvers / BYCQ140E2W1W - full white / BYCQ140E2W1B - black Auto cleaning panels: BYCQ140E2GFW1 - white / BYCQ140E2GFW1B - black Designer panels: BYCQ140E2P - white / BYCQ140E2PB - black			
	Dimensions	HeightxWidthxDepth		mm	Standard panels: 65x950x950 / Auto cleaning panels: 148x950x950 / Designer panels: 106x950x950			
	Weight			kg	Standard panels: 5.5 / Auto cleaning panels: 10.3 / Designer panels: 6.5			
Fan	Air flow rate - 50Hz	Cooling - at high fan speed		m^3/min	15.5	21	26.8	35.5
		Heating - at high fan speed		m^3/min	15.5	21	26.8	35.5
Air filter	Type				Resinnet			
Sound power level	Cooling	At high fan speed		dBA	53	57	62	66
Sound pressure level	Cooling	At high fan speed		dBA	35	39	44	48
	Heating	At high fan speed		dBA	36	40	45	49
Refrigerant	Type/GWP				R-744 / 1			
Piping connections	Liquid	OD		mm	9.52			
	Gas	OD		mm	12.7			
	Drain				VP20 (I.D. 20/O.D. 26), drain height 675 mm			
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/60/220-240/220			
Current - 50Hz	Maximum fuse amps (MFA)			A	6			
Control systems	Infrared remote control				BRC7FA532F / BRC7FB532F / BRC7FA532FB / BRC7FB532FB			
	Wired remote control				BRC1H52W7/S7/K7			

Specifications				BEV2N-A	BEV2N112A7V1B
Power supply					1~, 50/60Hz, 220~240/220V
Dimension		Height		mm	207
		Wide		mm	388
		Depth		mm	326
Mass		Unit		kg	12 (Tentative)
Refrigerant Type					R744 (CO_2)
Piping connections	Liquid	Type			Brazing
		OD		mm	ø 9.52

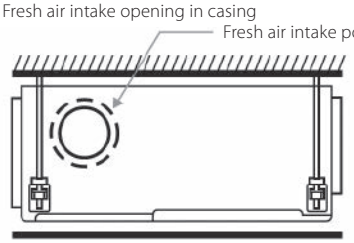
Concealed ceiling unit with medium ESP

Slimmest yet most powerful medium static pressure unit on the market

- Optimised design for CO_2 refrigerant (R-744)
- Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge

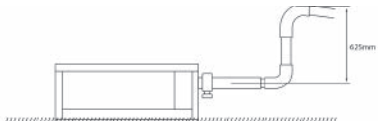
- Medium external static pressure up to 120Pa facilitates using flexible ducts of varying lengths
- Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- Discretely concealed in the wall: only the suction and discharge grilles are visible
- Optional fresh air intake
- Fresh air intake integrated in the same system thus reducing installation cost as no additional ventilation device is required
- Standard built-in drain pump with 625mm lift increases flexibility and installation speed

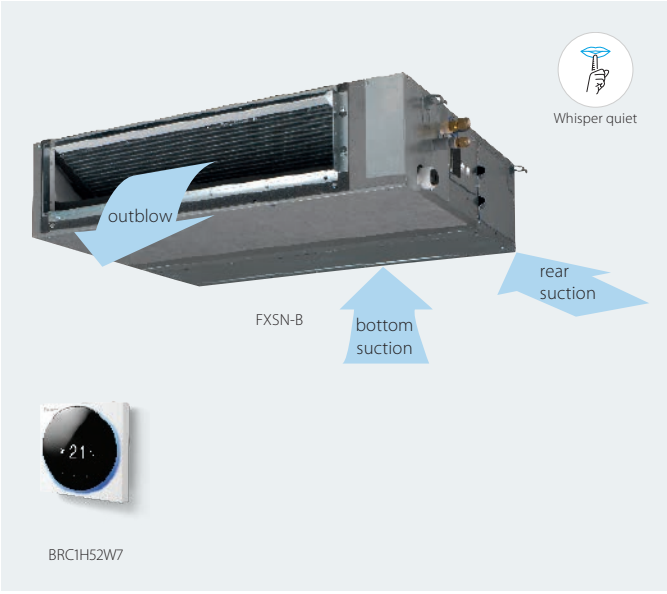
Fresh air intake opening in casing



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

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



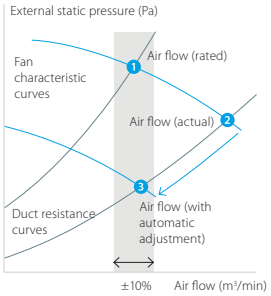


Automatic Airflow Adjustment function

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



Access all technical data here:

FXSN-B

Indoor Unit			FXSN	40B	50B	63B	80B
Cooling capacity	Total capacity	At high fan speed	kW	4.5	5.6	7.1	9
Heating capacity	Total capacity	At high fan speed	kW	5	6.3	8	10
Power input - 50Hz	Cooling	At high fan speed	kW	0.128	0.165	0.148	0.279
	Heating	At high fan speed	kW	0.128	0.179	0.16	0.313
Dimensions	Unit	HeightxWidthxDepth	mm	245x1,000x800		245x1,400x800	
Weight	Unit		kg	40		50	
Casing	Material			Galvanised steel plate			
Fan	Air flow rate - 50Hz	Cooling - at high fan speed	m^3/min	23	25	29.4	37.6
		Heating - at high fan speed	m^3/min	23	27	31.9	41.8
	External static pressure - 50Hz	Factory set / High	Pa	30/120			40/120
Air filter	Type			Resin net			
Sound power level	Cooling	At high fan speed	dBA	61	63	61	66
Sound pressure level	Cooling	At high fan speed	dBA	39	41	39	44
	Heating	At high fan speed	dBA	41	44	44	48
Refrigerant	Type/GWP			R-744 / 1			
Piping connections	Liquid	OD	mm	9.52			
	Gas	OD	mm	12.7			
	Drain			VP20 (I.D. 20/O.D. 26), drain height 625 mm			
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/60/220-240/220			
Current - 50Hz	Maximum fuse amps (MFA)		A	16			
Control systems	Infrared remote control			BRC4C65			
	Wired remote control			BRC1H52W7/S7/K7			

Remain at the forefront of **the HVAC market** with Daikin VRV

Offering flexible, easy to install heat pumps, supporting decarbonisation

R-744

CO_2 VRV

Our CO_2 VRV
- Using HFC free refrigerant CO_2 (R-744)
- With a low GWP of 1, making it one of the most sustainable refrigerants
- Enabling you to tackle projects requesting so called "natural" refrigerants

R-32

VRV 5

Our leading VRV 5 portfolio
- Unparallelled range, offering an R-32 system for every VRV application
- Top sustainability over the entire lifecycle
- Enabling you to decarbonise any building in an easy way, already today

R-410A

VRV IV+

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