DAIKIN

SkyAir

Infrastructure cooling solution

For server rooms, telecom shelters, laboratories, IT applications

Infrastructure cooling

Why is it needed?

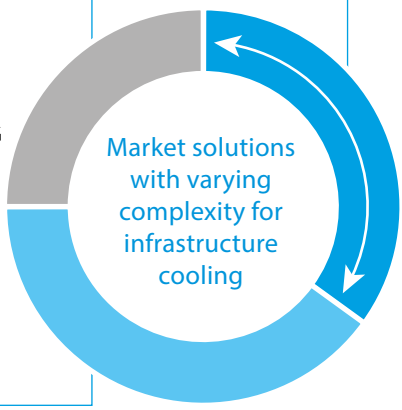
An infrastructure cooling system removes the heat that is constantly generated by IT equipment, servers and business supporting equipment.

- **For rooms and enclosures that require round-the-clock cooling**
- **Where continuous uptime is the absolute requirement for**
  - **server data protection**
  - **equipment protection**

To serve the increasing digital and mobile data requirements of businesses and online consumers, the IT equipment, telecom and server infrastructure have to function round the clock. Unexpected or unplanned downtime is not only costly to businesses but also impacts end-consumers who depend on the continuous access to data connections for day-to-day activities. 24/7 operations of the infrastructure in turn increase the heat loads generated within the IT/server rooms and telecom shelters. Therefore your business infrastructure requires **reliable**, **efficient** and **flexible** cooling to ensure maximum uptime while offering the best return on investment.

25%
BASIC COOLING
Small split systems and Rooftops
» low initial costs
» higher running costs
» limited flexibility

40%
SOPHISTICATED PRECISION COOLING
Closed Control Systems
» high investment cost
» operation down to -20°C
» precise temperature control
± 1°C deviation
» humidity control
» large footprint occupies available rack space
» free cooling and mixed operation



35%
RELIABLE CONTINUOUS COOLING
Sky Air systems
» good return on investment
› low running costs from better energy efficiency
› low upfront costs
› small physical footprint
› free cooling
» proven reliability
› wide operation range down to -15°C and up to +50°C
» high flexibility
› better suited indoor units
› modular build up
› controls (duty rotation)

Infrastructure cooling environments

Telecom shelters

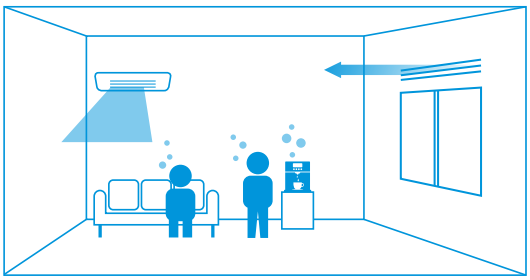
Server rooms

Laboratories

Infrastructure cooling

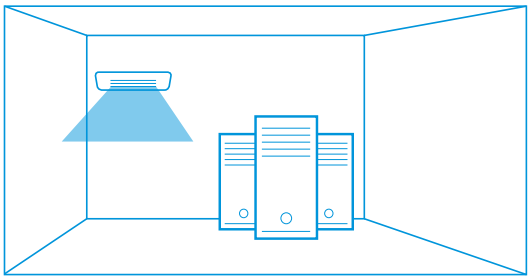
Understanding the mission-critical cooling application environment

Comfort cooling
- Humidity is present
- Balanced sensible and latent capacity



→ 60-70% temperature control
→ 30-40% humidity control

Infrastructure cooling
- No or limited humidity
- Pure sensible capacity



→ 80-90% temperature control
→ 10-20% humidity control

Low humidity levels

Unlike a normal living environment, a typical server room or technology infrastructure environment does not generate or minimally generates humidity and moisture. Continuous cooling of such rooms also removes the humidity. Average relative humidity (RH) levels in server rooms or infrastructure rooms are lower than 30%.

These low humidity levels reduce the ability to transfer heat loads (to cool down the server rooms). Therefore the need **to boost** the cooling capacity of the indoor system.

Constant cooling set at 20-22°C

› Protection of server equipment and back up power supply
› Emergency power supply lifetime is temperature dependant
› There is adequate buffer to compensate a potential rise in temperature
› In general, servers and other equipment infrastructure fluctuate in activity, so have increased flexibility to maintain constant temperature level

Need for a reliable backup system

› When a failure occurs (error or shutdown by the temperature protection function), a dependable backup system should take over instantly
› Flexible control is needed to improve the reliability of the backup system

Correct system selection is critical

› Failure of the cooling system to provide the required capacity at any time can lead to infrastructure downtime and result in business costs
› It is critical to install the right combination of a split cooling system which can guarantee reliable operation 24/7, year-round

Why choose Daikin?

Daikin is the world leader when it comes to heating and cooling. With over 90 years of innovation and engineering expertise in specialised cooling, Daikin offers a Sky Air solution that is **reliable**, **efficient** and **flexible** to meet the demanding needs of infrastructure cooling environments.

Reliable

Guaranteed system operation:
- Oversized indoor units boost cooling capacity and prevent freeze-ups on the indoor side
- Wide operating range envelope: operation range in cooling down to -15°C and up to +50°C

Efficient

Optimum return on investment:
- Lowers running costs by using highly efficient direct expansion cooling systems
- Lower running costs compared to other DX systems and water based chillers.
- Minimises environmental impact with A++ energy labels
- Reduces mechanical cooling and energy consumption with the free cooling option for single phase systems

Flexible

- Scalable in capacity
- Improved infrastructure control and management
- Lower physical footprint since no floor space is occupied
- Wide range of indoor units to suit application preferences (ceiling suspended cassettes, wall mounted indoors, concealed ceiling ducted type indoors)

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Boosted capacity system combinations for high sensible cooling

Benefits

1. Boost the heat transfer capacity of the indoor system
2. Ability to work with higher evaporation temperatures (Te) avoids downtime and enables continuous operation
3. Official energy labels for indoor and outdoor system combinations provide standardized and reliable performance data

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Efficient cooling

Benefits

1. Free cooling: optimum energy efficiency using cold ambient air
2. Widest range of indoor systems with best in class energy efficiency
3. Wide indoor and outdoor operation range, reliable performance even in extreme conditions

PAGE 6 UNIQUE

2-step solution for system selection

Benefits

1. Daikin makes the system selection procedure easy and reliable by providing detailed capacity tables based on extensive testing.
2. Choose the best product combination that meets end-user requirements

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Flexible control

Benefits

1. Optimal backup supported by duty rotation control, automatic backup activation and remote alarms
2. Guaranteed continuous operation from extended compressor limits
3. Controller settings to adapt to specific infrastructure cooling environment conditions
4. Fewer start/stop cycles

Boosted capacity indoor systems

High reliability at lower running costs for infrastructure cooling

Split air conditioning systems for normal comfort cooling applications usually combine indoor systems with matching capacities, or multiple indoor systems with capacities lower than the outdoor system's capacity. This works because the indoor system's cooling capacity is sufficient to handle the higher humidity conditions and varying indoor temperature requirements that are common in a normal living environment.

Applying this design logic to infrastructure cooling environments can lead to risky situations that might compromise overall system reliability and frequent downtimes of 15 minutes.

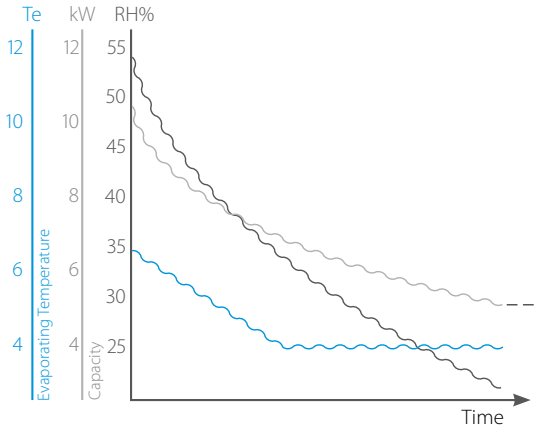
Indoor systems for infrastructure cooling environments need enhanced capabilities for continuous heat transfer because they work harder to extract energy by cooling dry air. Daikin recommends and offers asymmetric combinations (boosted capacity indoor combinations: e.g. 71 class outdoor + 100 class indoor).

With Daikin Sky Air, you benefit from boosted capacity system combinations for infrastructure cooling. **You can now confidently combine indoor systems with higher capacities than the outdoor system.** This will boost heat transfer inside the technology or server room environments.

Infrastructure cooling application system solutions

TRADITIONAL SOLUTION

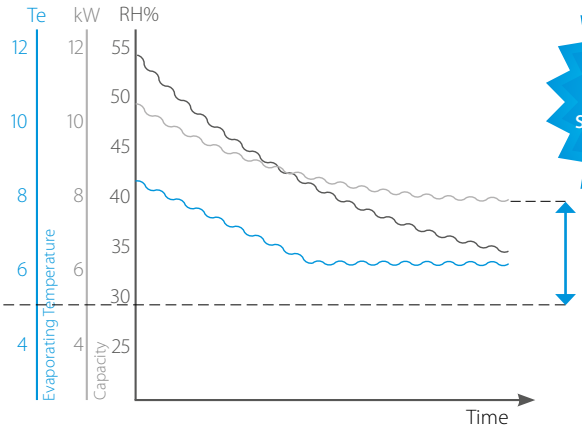
Symmetric indoor-outdoor system combination



Relative Humidity: reduces over time
Capacity: reduced
Evaporating temp: drops to compensate reduced capacity
too low Te can lead to freeze-up prevention, causing system downtime

DEDICATED SOLUTION

Boosted capacity indoor system combination



Between **20-40%** sensible capacity increase

improved solution

- Boosted capacity indoors increase the heat transfer capacity at low relative humidity
- Allows the system to operate with higher Te, guaranteeing continuous operation and reducing unwanted dehumidification

Low humidity + Low ambient environment

18% savings on running cost

Outside temperature Ta	-5 °C
Set-point	22 °C
Humidity	35 %
Indoor wet-bulb temperature	13 °C

EER

TRADITIONAL SOLUTION **100%**

IMPROVED SOLUTION **82%** 18% SAVINGS

traditional solution
RZQG71L9V1 + FAQ71C9

Total Capacity (TC)	5.63 kW
Sensible Heat Capacity (SHC)	4.28 kW
Power Input (PI)	2 kW
Co-efficient of Power Input (CPI)	0.39
Corrected PI	0.78 kW
EER*	5,5

dedicated system combination solution
RZQG71L9V1 + FAQ100C9

Total Capacity (TC)	**6,02 kW**
Sensible Heat Capacity (SHC)	**6,02 kW**
Power Input (PI)	**2 kW**
Co-efficient of Power Input (CPI)	**0,45**
Corrected PI	**0.90 kW**
EER*	**6,7**

Sensible Heat Capacity increases **20-40%** with dedicated system combination.

*EER = (SHC/Corrected PI)

2-Step Solution for System Selection

High reliability for infrastructure cooling

UNIQUE

Select your infrastructure cooling system in 2 steps

No humidity generation in room (eg: Server room)

IT room requires 22°C inside. It will have 7kW of sensible cooling demand, and no latent cooling demand (no humidity generation) throughout the year.

Ceiling suspended indoor unit is the customer's preference for the server room.

Indoor temperature = 22°CDB
Sensible cooling demand (SHC) = 7 kW
Latent cooling demand (LC) = 0 kW*
Total cooling demand (TC) = SHC + LC = 7 kW
Outdoor temperature operating range = -15°C ~ +40°C
Most stringent outdoor unit capacity condition = -15°C

SOLUTION

Boosted capacity indoor combination with 10kW outdoor system.

RZQG100L8Y1/ FHQ140CB
Total capacity = 7.48 kW
Sensible capacity = 7.48 kW
Power input = 0.42 x 2.49 = 1.04 kW

* If there is no latent cooling demand, look for conditions where TC = SHC, since no more dehumidification will occur and thus the indoor environment will stabilize. When TC > SHC and there is no humidity generation, the indoor humidity will gradually decrease.

STEP 1

Determine requested indoor conditions and required cooling demand (Sensible and Total capacity)

STEP 2

Select the system combination from the given table, where the system 's sensible and total capacity meets the cooling demand at the requested indoor and outdoor temperatures.

Some humidity source in room (eg: Laboratory)

Lab requires 22°C inside. It will have 9 kW of sensible cooling demand, and some humidity generation in the room (est. indoor humidity level 42%).

Wall mounted indoor unit is the customer's preference for the laboratory.

Indoor temperature = 22°CDB
Indoor Relative Humidity (RH%) = 42%**
Sensible cooling demand (SHC) = 9 kW
Latent cooling demand (LC) = 0.9 kW
Total cooling demand (TC) = SHC + LC = 9.9 kW
Outdoor temperature operating range = -10°C ~ +40°C
Most stringent outdoor unit capacity condition = -10°C

SOLUTION

Boosted capacity indoor combination with 12.5kW outdoor system.

RZQG125L9V1/ FAQ71C9 x 2
Total capacity = 10.45 kW
Sensible capacity = 9.34 kW
Power input = 0.48 x 3.69 = 1.78 kW

** System capacity at 42%RH (14,2°CWB) can be found by interpolation between 13°CWB (35%) and 15°CWB (48%).

Combination table for boosted capacity indoor systems

Sky Air	Wall mounted		Ceiling suspended unit							Concealed ceiling unit with medium ESP							Concealed ceiling unit			Floor standing unit				4-way blow ceiling mounted cassette			Fully flat cassette			High efficiency round flow cassette				Round flow cassette						
Model	FAQ71C9	FAQ100C9	FHQ35CB	FHQ50CB	FHQ60CB	FHQ71CB	FHQ100CB	FHQ125CB	FHQ140CB	FBQ35D	FBQ50D	FBQ60D	FBQ71D	FBQ100D	FBQ125D	FBQ140D	FDXS35F3	FDXS50F3	FDXS60F3	FVQ71C	FVQ100C	FVQ125C	FVQ140C	FUQ71C	FUQ100C	FUQ125C	FFQ35C	FFQ50C	FFQ60C	FCQHG71F	FCQHG100F	FCQHG125F	FCQHG140F	FCQG35F	FCQG50F	FCQG60F	FCQG71F	FCQG100F	FCQG125F	FCQG140F
RZQG71L9V1B RZQG71L8Y1B		P	3	2			P			3	2			P			3	2			P				P		3	2			P			3	2			P		
RZQG100L9V1B RZQG100L8Y1B	2		4	3		2			P	4	3		2			P	4	3					P	2			4	3		2			P	4	3		2			P
RZQG125L9V1B RZQG125L8Y1B	2		4	3		2			P	4	3		2			P	4	3					P	2			4	3		2			P	4	3		2			P
RZQG140L9V1B(1) RZQG140L7Y1B(1)	2		4	3		2			P	4	3		2			P	4	3					P	2			4	3		2			P	4	3		2			P

Possible combinations: P = Pair 2 = Twin 3 = Triple 4 = Double Twin
Cassette type units are only recommended in specific applications. Refer to product page for more information.

Notes: (1) For more information on combinations with RZQG140* contact your local sales representative
(2) The capacities in the table are combined capacities (multiple units operating simultaneously) and not individual indoor unit capacities. When combining multiple indoor units, designate the master unit as the unit whose remote controller is equipped with the most functions. Refer to the option list when selecting the correct refnet kit required to install a multi-combination.

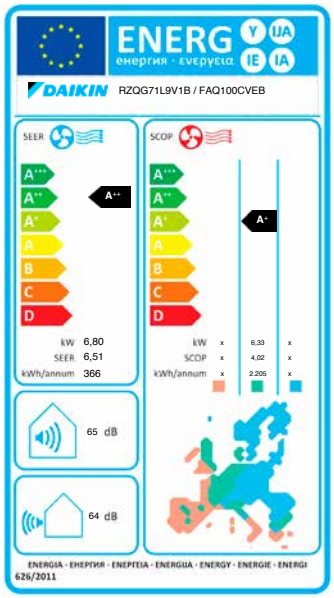
UNIQUE

Seasonal energy labels for boosted capacity indoor system combinations

Sky Air boosted capacity indoor system combinations for infrastructure cooling are now available with **seasonal energy labels**.

Providing seasonal energy labels for any combination below 12kW is a legal requirement (Eco-Design Directive).

With the official seasonal energy labeling, Daikin sets the standard for efficient Sky Air systems for infrastructure cooling applications.



Performance characteristics

1. Standard capacity tables extend down to -15°C Outdoor Temperature (Ta)
2. Dedicated Dry Bulb (°CDB) and Wet Bulb (°CWB) temperature combinations, from 27°C down to 16°C DB set indoor temperature, and from 55% - 21% relative humidity (RH%)
3. Easy interpolation between different conditions (to calculate intermediate RH%, indoor and ambient conditions)

Indoor 2			Outdoor temperature [°C DB]						
			-15 1			...	20		
			TC	SHC	CPI		TC	SHC	CPI
RH [%]	°CWB	°CDB	kW	kW	-		kW	kW	-
55	11	16	4.81	3.98	0.34		4.81	3.98	0.48
42	11	18	4.81	4.67	0.34		4.81	4.67	0.48
... 3	...	...							
22	14	27	6.62	6.62	0.38		6.62	6.62	0.72

Performance characteristics

for boosted capacity indoor combinations

Boosted capacity indoors with 7kW outdoor system
RZQG71L9V1 / RZQG71L8Y1

Indoor			Outdoor temperature [°C DB]																																	
			-15			-10			-5			0			5			10			15			20			25			30			35			40		
			TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI
RH [%]	°CWB	°CDB	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-
54.5	11	16	4.81	3.98	0.34	4.81	3.98	0.36	4.81	3.98	0.37	4.81	3.98	0.39	4.81	3.98	0.41	4.81	3.98	0.43	4.81	3.98	0.46	4.81	3.98	0.48	5.90	5.25	0.98	5.85	5.22	1.09	5.80	5.20	1.19	5.76	5.17	1.30
41.8	11	18	4.81	4.67	0.34	4.81	4.67	0.36	4.81	4.67	0.37	4.81	4.67	0.39	4.81	4.67	0.41	4.81	4.67	0.43	4.81	4.67	0.46	4.81	4.67	0.48	5.90	5.90	0.98	5.85	5.85	1.09	5.80	5.80	1.19	5.76	5.76	1.30
57	13		6.02	5.05	0.37	6.02	5.05	0.41	6.02	5.05	0.45	6.02	5.05	0.50	6.02	5.05	0.52	6.02	5.05	0.55	6.02	5.05	0.57	6.02	5.05	0.64	7.49	5.89	0.99	7.23	5.75	1.10	6.96	5.61	1.20	6.70	5.47	1.31
31.4	11	20	4.81	4.81	0.34	4.81	4.81	0.36	4.81	4.81	0.37	4.81	4.81	0.39	4.81	4.81	0.41	4.81	4.81	0.43	4.81	4.81	0.46	4.81	4.81	0.48	5.90	5.90	0.98	5.85	5.85	1.09	5.80	5.80	1.19	5.76	5.76	1.30
44.9	13		6.02	6.02	0.37	6.02	6.02	0.41	6.02	6.02	0.45	6.02	6.02	0.50	6.02	6.02	0.52	6.02	6.02	0.55	6.02	6.02	0.57	6.02	6.02	0.64	7.49	7.00	0.99	7.23	6.81	1.10	6.96	6.60	1.20	6.70	6.37	1.31
52	14		6.62	5.76	0.38	6.62	5.76	0.44	6.62	5.76	0.50	6.62	5.76	0.55	6.62	5.76	0.58	6.62	5.76	0.60	6.62	5.76	0.63	6.62	5.76	0.72	8.15	6.56	0.99	7.74	6.36	1.10	7.34	6.15	1.20	6.93	5.93	1.31
22.9	11	22	4.81	4.81	0.34	4.81	4.81	0.36	4.81	4.81	0.37	4.81	4.81	0.39	4.81	4.81	0.41	4.81	4.81	0.43	4.81	4.81	0.46	4.81	4.81	0.48	5.90	5.90	0.98	5.85	5.85	1.09	5.80	5.80	1.19	5.76	5.76	1.30
34.8	13		6.02	6.02	0.37	6.02	6.02	0.41	6.02	6.02	0.45	6.02	6.02	0.50	6.02	6.02	0.52	6.02	6.02	0.55	6.02	6.02	0.57	6.02	6.02	0.64	7.49	7.49	0.99	7.23	7.23	1.10	6.96	6.96	1.20	6.70	6.70	1.31
47.6	15		7.22	6.06	0.39	7.22	6.06	0.46	7.22	6.06	0.54	7.22	6.06	0.61	7.22	6.06	0.63	7.22	6.06	0.66	7.22	6.06	0.69	7.22	6.06	0.79	8.41	7.00	1.00	7.99	6.80	1.11	7.58	6.60	1.21	7.16	6.37	1.32
54.3	16		7.82	5.71	0.41	7.82	5.71	0.49	7.82	5.71	0.58	7.82	5.71	0.66	7.82	5.71	0.69	7.82	5.71	0.72	7.82	5.71	0.75	7.82	5.71	0.87	8.68	6.54	1.00	8.25	6.35	1.11	7.83	6.14	1.21	7.40	5.92	1.32
21.2	12	24	5.41	5.41	0.36	5.41	5.41	0.38	5.41	5.41	0.41	5.41	5.41	0.44	5.41	5.41	0.46	5.41	5.41	0.49	5.41	5.41	0.52	5.41	5.41	0.56	6.70	6.70	0.99	6.54	6.54	1.10	6.38	6.38	1.20	6.23	6.23	1.31
32.1	14		6.62	6.62	0.38	6.62	6.62	0.44	6.62	6.62	0.50	6.62	6.62	0.55	6.62	6.62	0.58	6.62	6.62	0.60	6.62	6.62	0.63	6.62	6.62	0.72	8.15	8.15	0.99	7.74	7.74	1.10	7.34	7.34	1.20	6.93	6.93	1.31
43.8	16		7.82	6.57	0.41	7.82	6.57	0.49	7.82	6.57	0.58	7.82	6.57	0.66	7.82	6.57	0.69	7.82	6.57	0.72	7.82	6.57	0.75	7.82	6.57	0.87	8.68	7.45	1.00	8.25	7.26	1.11	7.83	7.04	1.21	7.40	6.82	1.32
50	17		8.10	6.08	0.43	8.10	6.08	0.51	8.10	6.08	0.60	8.10	6.08	0.68	8.10	6.08	0.70	8.10	6.08	0.73	8.10	6.08	0.75	8.10	6.08	0.88	8.96	6.99	1.00	8.53	6.80	1.11	8.09	6.59	1.21	7.66	6.37	1.32
21.5	14	27	6.62	6.62	0.38	6.62	6.62	0.44	6.62	6.62	0.50	6.62	6.62	0.55	6.62	6.62	0.58	6.62	6.62	0.60	6.62	6.62	0.63	6.62	6.62	0.72	8.15	8.15	0.99	7.74	7.74	1.10	7.34	7.34	1.20	6.93	6.93	1.31
26.3	15		7.22	7.22	0.39	7.22	7.22	0.46	7.22	7.22	0.54	7.22	7.22	0.61	7.22	7.22	0.63	7.22	7.22	0.66	7.22	7.22	0.69	7.22	7.22	0.79	8.41	8.41	1.00	7.99	7.99	1.11	7.58	7.58	1.21	7.16	7.16	1.32
31.3	16			7.82	0.41	7.82	7.82	0.49	7.82	7.82	0.58	7.82	7.82	0.66	7.82	7.82	0.69	7.82	7.82	0.72	7.82	7.82	0.75	7.82	7.82	0.87	8.68	8.68	1.00	8.25	8.25	1.11	7.83	7.83	1.21	7.40	7.40	1.32

3D098206A

PAIR	FAQ100C9	FHQ100CB	FBQ100D	FUQ100C	FVQ100C	FCQHG100F	FCQG100F
Cooling	2.00	1.78	1.89	1.67	2.02	1.66	2.01

TWIN	FHQ50CB x 2	FBQ50D x 2	FDXS50F3 x 2	FFQ50C x 2	FCQG50F x 2
Cooling	2.34	2.02	2.23	2.02	2.04

TRIPLE	FHQ35CB x 3	FBQ35D x 3	FDXS35F3 x 3	FFQ35C x 3	FCQG35F x 3
Cooling	2.39	2.11	2.26	2.07	2.06

Boosted capacity indoors with 10kW outdoor system
RZQG100L9V1 / RZQG100L8Y1

Indoor			Outdoor temperature [°C DB]																																	
			-15			-10			-5			0			5			10			15			20			25			30			35			40		
			TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI
RH [%]	°CWB	°CDB	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-
54.5	11	16	6.00	5.63	0.33	6.00	5.63	0.34	6.00	5.63	0.35	6.00	5.63	0.37	6.00	5.63	0.38	6.00	5.63	0.38	6.00	5.63	0.39	6.00	5.63	0.39	8.36	7.11	1.00	7.92	6.83	1.10	7.48	6.53	1.20	7.09	6.28	1.29
41.8	11	18	6.00	6.00	0.33	6.00	6.00	0.34	6.00	6.00	0.35	6.00	6.00	0.37	6.00	6.00	0.38	6.00	6.00	0.38	6.00	6.00	0.39	6.00	6.00	0.39	8.36	7.98	1.00	7.92	7.72	1.10	7.48	7.43	1.20	7.09	7.15	1.29
57	13		7.48	6.37	0.42	7.48	6.37	0.44	7.48	6.37	0.45	7.48	6.37	0.46	7.48	6.37	0.46	7.48	6.37	0.46	7.48	6.37	0.45	7.48	6.37	0.46	9.71	7.67	1.00	9.30	7.42	1.11	8.90	7.16	1.21	8.45	6.88	1.30
31.4	11	20	6.00	6.00	0.33	6.00	6.00	0.34	6.00	6.00	0.35	6.00	6.00	0.37	6.00	6.00	0.38	6.00	6.00	0.38	6.00	6.00	0.39	6.00	6.00	0.39	8.36	8.36	1.00	7.92	7.92	1.10	7.48	7.48	1.20	7.09	7.09	1.29
44.9	13		7.48	7.25	0.42	7.48	7.25	0.44	7.48	7.25	0.45	7.48	7.25	0.46	7.48	7.25	0.46	7.48	7.25	0.46	7.48	7.25	0.45	7.48	7.25	0.46	9.71	8.53	1.00	9.30	8.28	1.11	8.90	8.01	1.21	8.45	7.74	1.30
52	14		8.22	7.18	0.47	8.22	7.18	0.48	8.22	7.18	0.49	8.22	7.18	0.51	8.22	7.18	0.50	8.22	7.18	0.49	8.22	7.18	0.49	8.22	7.18	0.49	10.50	8.45	1.01	10.23	8.31	1.11	9.96	8.17	1.21	9.68	7.94	1.31
22.9	11	22	6.00	6.00	0.33	6.00	6.00	0.34	6.00	6.00	0.35	6.00	6.00	0.37	6.00	6.00	0.38	6.00	6.00	0.38	6.00	6.00	0.39	6.00	6.00	0.39	8.36	8.36	1.00	7.92	7.92	1.10	7.48	7.48	1.20	7.09	7.09	1.29
34.8	13		7.48	7.48	0.42	7.48	7.48	0.44	7.48	7.48	0.45	7.48	7.48	0.46	7.48	7.48	0.46	7.48	7.48	0.46	7.48	7.48	0.45	7.48	7.48	0.46	9.71	9.71	1.00	9.30	9.30	1.11	8.90	8.90	1.21	8.45	8.45	1.30
47.6	15		8.96	7.82	0.52	8.96	7.82	0.53	8.96	7.82	0.54	8.96	7.82	0.55	8.96	7.82	0.54	8.96	7.82	0.53	8.96	7.82	0.52	8.96	7.82	0.52	11.28	9.19	1.01	10.89	8.96	1.11	10.51	8.72	1.22	10.12	8.48	1.32
54.3	16		9.70	7.54	0.56	9.70	7.54	0.58	9.70	7.54	0.59	9.70	7.54	0.60	9.70	7.54	0.59	9.70	7.54	0.57	9.70	7.54	0.55	9.70	7.54	0.56	11.84	8.40	1.01	11.40	8.22	1.11	11.03	8.04	1.22	10.58	7.77	1.32
21.2	12	24	6.74	6.74	0.38	6.74	6.74	0.39	6.74	6.74	0.40	6.74	6.74	0.41	6.74	6.74	0.42	6.74	6.74	0.42	6.74	6.74	0.42	6.74	6.74	0.42	9.04	9.04	1.00	8.61	8.61	1.10	8.19	8.19	1.21	7.77	7.77	1.30
32.1	14		8.22	8.22	0.47	8.22	8.22	0.48	8.22	8.22	0.49	8.22	8.22	0.51	8.22	8.22	0.50	8.22	8.22	0.49	8.22	8.22	0.49	8.22	8.22	0.49	10.50	10.50	1.01	10.23	10.23	1.11	9.96	9.96	1.21	9.68	9.68	1.31
43.8	16		9.70	8.68	0.56	9.70	8.68	0.58	9.70	8.68	0.59	9.70	8.68	0.60	9.70	8.68	0.59	9.70	8.68	0.57	9.70	8.68	0.55	9.70	8.68	0.56	11.84	9.74	1.01	11.40	9.51	1.12	11.03	9.32	1.22	10.58	9.06	1.32
50	17		9.98	7.86	0.58	9.98	7.86	0.59	9.98	7.86	0.60	9.98	7.86	0.61	9.98	7.86	0.60	9.98	7.86	0.60	9.98	7.86	0.60	9.98	7.86	0.60	12.39	9.45	1.02	11.86	9.16	1.12	11.33	8.86	1.22	10.80	8.52	1.33
21.5	14	27	8.22	8.22	0.47	8.22	8.22	0.48	8.22	8.22	0.49	8.22	8.22	0.51	8.22	8.22	0.50	8.22	8.22	0.49	8.22	8.22	0.49	8.22	8.22	0.49	10.50	10.50	1.01	10.23	10.23	1.11	9.96	9.96	1.21	9.68	9.68	1.31
26.3	15		8.96	8.96	0.52	8.96	8.96	0.53	8.96	8.96	0.54	8.96	8.96	0.55	8.96	8.96	0.54	8.96	8.96	0.53	8.96	8.96	0.52	8.96	8.96	0.52	11.28	11.28	1.01	10.89	10.89	1.11	10.51	10.51	1.22	10.12	10.12	1.32
31.3	16		9.70	9.70	0.56	9.70	9.70	0.58	9.70	9.70	0.59	9.70	9.70	0.60	9.70	9.70	0.59	9.70	9.70	0.57	9.70	9.70	0.55	9.70	9.70	0.56	11.84	11.84	1.01	11.40	11.40	1.12	11.03	11.03	1.22	10.58	10.58	1.32

3D098207A

PAIR	FHQ140CB	FBQ140D	FVQ140C	FCQHG140F	FCQG140F
Cooling	2.49	2.49	2.49	2.15	2.45

TWIN	FAQ71C9 x 2	FHQ71CB x 2	FBQ71D x 2	FUQ71C x 2	FCQHG71F x 2	FCQG71F x 2
Cooling	2.64	2.94	2.83	2.34	2.14	2.35

TRIPLE	FHQ50CB x 3	FBQ50D x 3	FDXS50F3 x 3	FFQ50C x 3	FCQG50F x 3
Cooling	2.98	2.96	2.54	2.70	2.33

DOUBLE TWIN	FHQ35CB x 4	FBQ35D x 4	FDXS35F3 x 4	FFQ35C x 4	FCQG35F x 4
Cooling	3.03	3.05	2.58	2.75	2.35

Symbols

TC Maximum total cooling capacity [kW]
SHC Sensible heat capacity [kW]
CPI Coefficient of the power input
PI Power input [kW]
compressor + indoor and outdoor fan motors
RH Relative humidity [%]

Boosted capacity indoors with 12.5kW outdoor system

RZQG125L9V1 / RZQG125L8Y1

Indoor			Outdoor temperature [°C DB]																																			
			-15			-10			-5			0			5			10			15			20			25			30			35			40		
			TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI
RH [%]	°CWB	°CDB	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-
54.5	11	16	7.49	6.72	0.33	7.49	6.72	0.34	7.49	6.72	0.35	7.49	6.72	0.36	7.49	6.72	0.37	7.49	6.72	0.38	7.49	6.72	0.38	7.49	6.72	0.38	10.25	8.55	0.98	9.71	8.21	1.08	9.17	7.86	1.18	8.69	7.55	1.27
41.8	11	18	7.49	7.49	0.33	7.49	7.49	0.34	7.49	7.49	0.35	7.49	7.49	0.36	7.49	7.49	0.37	7.49	7.49	0.38	7.49	7.49	0.38	7.49	7.49	0.38	10.25	9.60	0.98	9.71	9.28	1.08	9.17	8.94	1.18	8.69	8.60	1.27
57	13		9.34	7.60	0.42	9.34	7.60	0.43	9.34	7.60	0.44	9.34	7.60	0.45	9.34	7.60	0.45	9.34	7.60	0.45	9.34	7.60	0.45	9.34	7.60	0.45	11.91	9.22	0.99	11.41	8.92	1.09	10.91	8.61	1.19	10.37	8.28	1.28
31.4	11	20	7.49	7.49	0.33	7.49	7.49	0.34	7.49	7.49	0.35	7.49	7.49	0.36	7.49	7.49	0.37	7.49	7.49	0.38	7.49	7.49	0.38	7.49	7.49	0.38	10.25	10.25	0.98	9.71	9.71	1.08	9.17	9.17	1.18	8.69	8.69	1.27
44.9	13		9.34	8.65	0.42	9.34	8.65	0.43	9.34	8.65	0.44	9.34	8.65	0.45	9.34	8.65	0.45	9.34	8.65	0.45	9.34	8.65	0.45	9.34	8.65	0.45	11.91	10.27	0.99	11.41	9.96	1.09	10.91	9.64	1.19	10.37	9.31	1.28
52	14		10.27	8.56	0.46	10.27	8.56	0.47	10.27	8.56	0.49	10.27	8.56	0.50	10.27	8.56	0.49	10.27	8.56	0.49	10.27	8.56	0.48	10.27	8.56	0.48	12.88	10.16	0.99	12.54	10.00	1.09	12.21	9.83	1.19	11.87	9.55	1.29
22.9	11	22	7.49	7.49	0.33	7.49	7.49	0.34	7.49	7.49	0.35	7.49	7.49	0.36	7.49	7.49	0.37	7.49	7.49	0.38	7.49	7.49	0.38	7.49	7.49	0.38	10.25	10.25	0.98	9.71	9.71	1.08	9.17	9.17	1.18	8.69	8.69	1.27
34.8	13		9.34	9.34	0.42	9.34	9.34	0.43	9.34	9.34	0.44	9.34	9.34	0.45	9.34	9.34	0.45	9.34	9.34	0.45	9.34	9.34	0.45	9.34	9.34	0.45	11.91	11.91	0.99	11.41	11.41	1.09	10.91	10.91	1.19	10.37	10.37	1.28
47.6	15		11.20	9.34	0.51	11.20	9.34	0.52	11.20	9.34	0.53	11.20	9.34	0.55	11.20	9.34	0.54	11.20	9.34	0.52	11.20	9.34	0.51	11.20	9.34	0.51	13.83	11.06	0.99	13.36	10.78	1.09	12.88	10.49	1.20	12.41	10.20	1.29
54.3	16		12.12	9.00	0.55	12.12	9.00	0.57	12.12	9.00	0.58	12.12	9.00	0.59	12.12	9.00	0.58	12.12	9.00	0.56	12.12	9.00	0.54	12.12	9.00	0.55	14.51	10.10	1.00	13.98	9.89	1.10	13.52	9.67	1.20	12.98	9.35	1.30
21.2	12	24	8.42	8.42	0.37	8.42	8.42	0.38	8.42	8.42	0.39	8.42	8.42	0.41	8.42	8.42	0.41	8.42	8.42	0.41	8.42	8.42	0.41	8.42	8.42	0.41	11.08	11.08	0.98	10.56	10.56	1.08	10.04	10.04	1.19	9.53	9.53	1.27
32.1	14		10.27	10.27	0.46	10.27	10.27	0.47	10.27	10.27	0.49	10.27	10.27	0.50	10.27	10.27	0.49	10.27	10.27	0.49	10.27	10.27	0.48	10.27	10.27	0.48	12.88	12.88	0.99	12.54	12.54	1.09	12.21	12.21	1.19	11.87	11.87	1.29
43.8	16		12.12	10.35	0.55	12.12	10.35	0.57	12.12	10.35	0.58	12.12	10.35	0.59	12.12	10.35	0.58	12.12	10.35	0.56	12.12	10.35	0.54	12.12	10.35	0.55	14.51	11.71	1.00	13.98	11.44	1.10	13.52	11.21	1.20	12.98	10.90	1.30
50	17		12.47	9.38	0.57	12.47	9.38	0.58	12.47	9.38	0.59	12.47	9.38	0.60	12.47	9.38	0.59	12.47	9.38	0.59	12.47	9.38	0.59	12.47	9.38	0.59	15.20	11.36	1.00	14.54	11.02	1.10	13.89	10.66	1.20	13.24	10.25	1.31
21.5	14	27	10.27	10.27	0.46	10.27	10.27	0.47	10.27	10.27	0.49	10.27	10.27	0.50	10.27	10.27	0.49	10.27	10.27	0.49	10.27	10.27	0.48	10.27	10.27	0.48	12.88	12.88	0.99	12.54	12.54	1.09	12.21	12.21	1.19	11.87	11.87	1.29
26.3	15		11.20	11.20	0.51	11.20	11.20	0.52	11.20	11.20	0.53	11.20	11.20	0.55	11.20	11.20	0.54	11.20	11.20	0.52	11.20	11.20	0.51	11.20	11.20	0.51	13.83	13.83	0.99	13.36	13.36	1.09	12.88	12.88	1.20	12.41	12.41	1.29
31.3	16		12.12	12.12	0.55	12.12	12.12	0.57	12.12	12.12	0.58	12.12	12.12	0.59	12.12	12.12	0.58	12.12	12.12	0.56	12.12	12.12	0.54	12.12	12.12	0.55	14.51	14.51	1.00	13.98	13.98	1.10	13.52	13.52	1.20	12.98	12.98	1.30

3D098208A

PAIR	FHQ140CB	FBQ140D	FVQ140C	FCQHG140F	FCQG140F
Cooling	3.58	3.63	3.74	3.00	3.22

TWIN	FAQ71C9 x 2	FHQ71CB x 2	FBQ71D x 2	FUQ71C x 2	FCQHG71F x 2	FCQG71F x 2
Cooling	3.69	3.67	4.10	3.44	2.97	3.17

TRIPLE	FHQ50CB x 3	FBQ50D x 3	FDXS50F3 x 3	FFQ50C x 3	FCQG50F x 3
Cooling	3.66	3.97	3.45	3.23	3.17

DOUBLE TWIN	FHQ35CB x 4	FBQ35D x 4	FDXS35F3 x 4	FFQ35C x 4	FCQG35F x 4
Cooling	3.64	3.74	3.94	3.01	3.23

Combinations with 14kW outdoor system

RZQG140L9V1 / RZQG140L7Y1

Indoor			Outdoor temperature [°C DB]																																			
			-15			-10			-5			0			5			10			15			20			25			30			35			40		
			TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI	TC	SHC	CPI
RH [%]	°CWB	°CDB	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-	kW	kW	-
54.5	11	16	8.24	7.27	0.32	8.24	7.27	0.33	8.24	7.27	0.34	8.24	7.27	0.35	8.24	7.27	0.37	8.24	7.27	0.37	8.24	7.27	0.37	8.24	7.27	0.38	10.95	8.87	0.96	10.37	8.51	1.06	9.79	8.15	1.16	9.28	7.83	1.25
41.8	11	18	8.24	8.24	0.32	8.24	8.24	0.33	8.24	8.24	0.34	8.24	8.24	0.35	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.38	10.95	9.96	0.96	10.37	9.62	1.06	9.79	9.27	1.16	9.28	8.92	1.25
57	13		10.28	8.22	0.41	10.28	8.22	0.42	10.28	8.22	0.43	10.28	8.22	0.45	10.28	8.22	0.45	10.28	8.22	0.44	10.28	8.22	0.44	10.28	8.22	0.44	12.72	9.56	0.97	12.18	9.25	1.07	11.65	8.93	1.17	11.07	8.58	1.26
31.4	11	20	8.24	8.24	0.32	8.24	8.24	0.33	8.24	8.24	0.34	8.24	8.24	0.35	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.38	10.95	10.95	0.96	10.37	10.37	1.06	9.79	9.79	1.16	9.28	9.28	1.25
44.9	13		10.28	9.35	0.41	10.28	9.35	0.42	10.28	9.35	0.43	10.28	9.35	0.45	10.28	9.35	0.45	10.28	9.35	0.44	10.28	9.35	0.44	10.28	9.35	0.44	12.72	10.64	0.97	12.18	10.33	1.07	11.65	10.00	1.17	11.07	9.65	1.26
52	14		11.30	9.26	0.45	11.30	9.26	0.47	11.30	9.26	0.48	11.30	9.26	0.49	11.30	9.26	0.49	11.30	9.26	0.48	11.30	9.26	0.47	11.30	9.26	0.47	13.75	10.53	0.97	13.40	10.36	1.07	13.04	10.19	1.17	12.68	9.90	1.27
22.9	11	22	8.24	8.24	0.32	8.24	8.24	0.33	8.24	8.24	0.34	8.24	8.24	0.35	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.37	8.24	8.24	0.38	10.95	10.95	0.96	10.37	10.37	1.06	9.79	9.79	1.16	9.28	9.28	1.25
34.8	13		10.28	10.28	0.41	10.28	10.28	0.42	10.28	10.28	0.43	10.28	10.28	0.45	10.28	10.28	0.45	10.28	10.28	0.44	10.28	10.28	0.44	10.28	10.28	0.44	12.72	12.72	0.97	12.18	12.18	1.07	11.65	11.65	1.17	11.07	11.07	1.26
47.6	15		12.32	10.10	0.50	12.32	10.10	0.51	12.32	10.10	0.52	12.32	10.10	0.54	12.32	10.10	0.53	12.32	10.10	0.51	12.32	10.10	0.50	12.32	10.10	0.50	14.77	11.47	0.98	14.26	11.18	1.08	13.76	10.88	1.18	13.25	10.57	1.27
54.3	16		13.33	9.73	0.54	13.33	9.73	0.56	13.33	9.73	0.57	13.33	9.73	0.58	13.33	9.73	0.57	13.33	9.73	0.55	13.33	9.73	0.53	13.33	9.73	0.54	15.50	10.47	0.98	14.93	10.25	1.08	14.44	10.03	1.18	13.86	9.69	1.28
21.2	12	24	9.26	9.26	0.37	9.26	9.26	0.38	9.26	9.26	0.39	9.26	9.26	0.40	9.26	9.26	0.41	9.26	9.26	0.41	9.26	9.26	0.41	9.26	9.26	0.41	11.83	11.83	0.97	11.28	11.28	1.07	10.72	10.72	1.17	10.17	10.17	1.25
32.1	14		11.30	11.30	0.45	11.30	11.30	0.47	11.30	11.30	0.48	11.30	11.30	0.49	11.30	11.30	0.49	11.30	11.30	0.48	11.30	11.30	0.47	11.30	11.30	0.47	13.75	13.75	0.97	13.40	13.40	1.07	13.04	13.04	1.17	12.68	12.68	1.27
43.8	16		13.33	11.20	0.54	13.33	11.20	0.56	13.33	11.20	0.57	13.33	11.20	0.58	13.33	11.20	0.57	13.33	11.20	0.55	13.33	11.20	0.53	13.33	11.20	0.54	15.50	12.14	0.98	14.93	11.86	1.08	14.44	11.62	1.18	13.86	11.30	1.28
50	17		13.72	10.15	0.56	13.72	10.15	0.57	13.72	10.15	0.58	13.72	10.15	0.58	13.72	10.15	0.59	13.72	10.15	0.58	13.72	10.15	0.58	13.72	10.15	0.58	16.23	11.78	0.98	15.53	11.43	1.08	14.83	11.06	1.18	14.14	10.63	1.29
21.5	14	27	11.30	11.30	0.45	11.30	11.30	0.47	11.30	11.30	0.48	11.30	11.30	0.49	11.30	11.30	0.49	11.30	11.30	0.48	11.30	11.30	0.47	11.30	11.30	0.47	13.75	13.75	0.97	13.40	13.40	1.07	13.04	13.04	1.17	12.68	12.68	1.27
26.3	15		12.32	12.32	0.50	12.32	12.32	0.51	12.32	12.32	0.52	12.32	12.32	0.54	12.32	12.32	0.53	12.32	12.32	0.51	12.32	12.32	0.50	12.32	12.32	0.50	14.77	14.77	0.98	14.26	14.26	1.08	13.76	13.76	1.18	13.25	13.25	1.27
31.3	16		13.33	13.33	0.54	13.33	13.33	0.56	13.33	13.33	0.57	13.33	13.33	0.58	13.33	13.33	0.57	13.33	13.33	0.55	13.33	13.33	0.53	13.33	13.33	0.54	15.50	15.50	0.98	14.93	14.93	1.08	14.44	14.44	1.18	13.86	13.86	1.28

3D098209A

PAIR	FHQ140CB	FBQ140D	FVQ140C	FCQHG140F	FCQG140F
Cooling	4.05	4.00	4.17	4.00	4.17

TWIN	FAQ71C9 x 2	FHQ71CB x 2	FBQ71D x 2	FUQ71C x 2	FCQHG71F x 2	FCQG71F x 2
Cooling	3.81	3.59	3.75	3.35	3.94	4.11

TRIPLE	FHQ50CB x 3	FBQ50D x 3	FDXS50F3 x 3	FFQ50C x 3	FCQG50F x 3
Cooling	4.25	3.75	4.26	4.15	4.12

DOUBLE TWIN	FHQ35CB x 4	FBQ35D x 4	FDXS35F3 x 4	FFQ35C x 4	FCQG35F x 4
Cooling	4.23	3.75	5.38	3.83	4.18

Notes

1. The ratings shown are net capacities and include a deduction for indoor fan motor heat.
2. The capacities are based on the following conditions:
   › Outdoor air: 85% RH
   › Corresponding refrigerant piping length: 5.0 m
   › Level difference: 0m
3. CPI is a percentage value compared to the rated value of 1.00
4. For infrastructure cooling applications, it is recommended to use remote controller setting 16(26)-2-03
5. The error rate for this value is less than 5% and depends on the indoor unit type
6. The rated power inputs (PI) for each model are listed in the table above

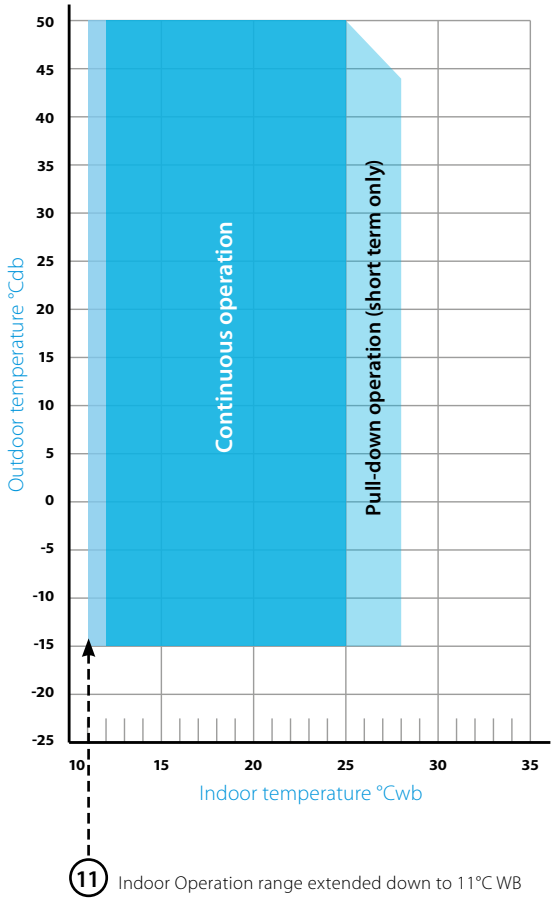
Efficient cooling

Wide operating range

Leader in air conditioning

Because infrastructure cooling systems must perform continuous cooling operations and may be required to run in demanding outdoor conditions, a flexible operating temperature map is critical. Daikin Sky Air infrastructure cooling systems offer reliable performance during extreme conditions.

- ☑ Outdoor cooling operation down to -15°C Ta
- ☑ Continuous cooling operation in outdoor temperatures as high as 50°C
- ☑ Extended indoor operation range from 12°C to 11°C Wet Bulb allows the indoor unit to operate at lower humidity



Cooling operation

Infrastructure cooling applications have minimal relative humidity, which results in a low indoor Wet Bulb temperature. The units may operate close to, or just outside, their official operating range. Sky Air Seasonal Smart can be set to widen the indoor cooling operation range down to 11°C Wet Bulb temperature.

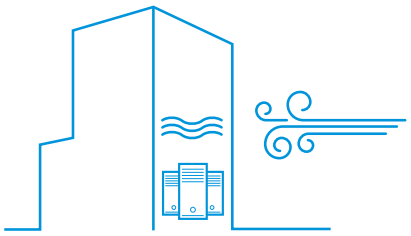
Typical IT or infrastructure room

Set point: 20°C
Humidity: 30% RH
Indoor Wet bulb temperature: 11°CWB

By setting the controller from factory default 16 (26) - 2 - 01 to infrastructure cooling 16 (26) - 2 - 03, the indoor operation range increases from 12°C to 11°C Wet Bulb.

Free cooling

Lower energy consumption



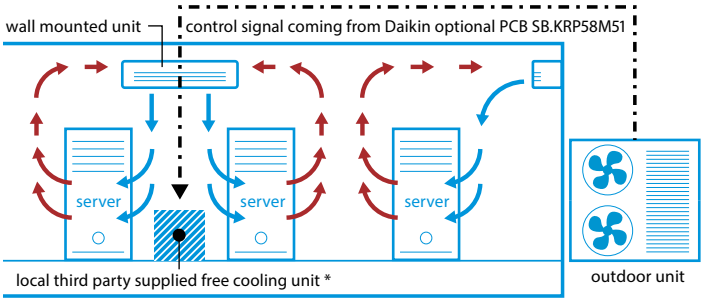
Ensuring uptime for infrastructure cooling applications comes at the cost of higher energy consumption than in comfort cooling applications. Daikin Sky Air infrastructure cooling systems offer you a leading solution for year-round efficiency, while decreasing your running costs.

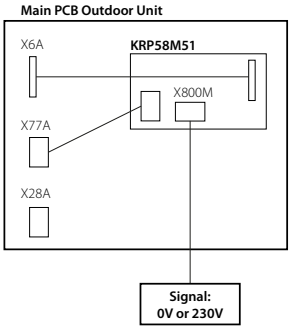
The energy savings potential of operating in free cooling mode in certain climates is an attractive proposition for continuous cooling environments.

Operating in free cooling mode saves energy by using outdoor air during colder months, which allows refrigerant-based cooling components such as compressors to be shut off or to operate at a reduced capacity.

Daikin Sky Air Seasonal Smart single phase outdoor series provides a control signal that is intelligently based on:
› the indoor set temperature
› the actual indoor temperature
› the outdoor temperature

Typical Server room installation with a free cooling unit





* The free cooling unit should be installed opposite to the indoor unit, in such a way that there is no recirculation of cold air blowing from the free cooling unit.

With the free cooling 230 V signal supplied through optional control board SB.KRP58M51 **available only for RZQG single phase outdoor systems**, you can control a field supplied free cooling unit.

Daikin recommends outdoor unit setting 2-53-02. It is important to make setting 26-7-02 in case of the use of free cooling. This to guarantee that the free cooling will start up before the outdoor unit.

Energy efficiency benefits from free cooling

Estimated Annual Savings Potential for a typical small IT room operating 24/7/365
Boosted capacity indoor unit: FHQ100C, outdoor unit: RZQG-L7V1

› Cooling load: 6.8 kW
› Set point: 20°C
› RH indoor: 30%
› Free cooling if $\Delta T_a > 5°C$

ΔT_a = difference between indoor and outdoor temperature

	ESTIMATED ANNUAL SAVINGS (EURO)				
AIR FLOW (M³/H)	United Kingdom London	Germany Berlin	Poland Warsaw	Austria Vienna	Czech Republic Prague
500	212	275	158	142	185
1000	376	458	267	256	318
1500	436	516	307	313	370
2000	464	550	325	342	392

The savings depend greatly on climate, (ΔT_a), air flow volume and local electricity prices

Flexible control

Flexible and reliable operation of the IT, server or data support infrastructure requires a scalable and redundant cooling infrastructure. Operators of infrastructure cooling environments also need easy means of controlling and pre-programming the cooling systems. Daikin Sky Air solution for infrastructure cooling offers control choices to address the demanding operational needs.

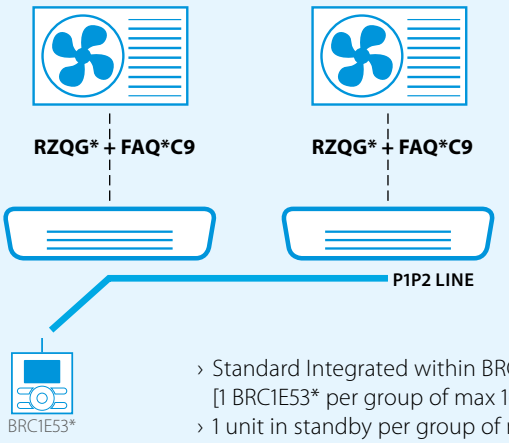
Standard integrated duty rotation and standby control

Standard control solution for most installations

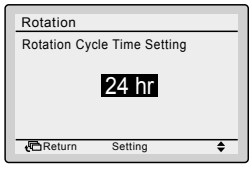
1. Add **redundancy** for critical IT applications
2. Increased **lifetime** of the sytem by altering operating units
3. **Back-up** operation: If one unit fails, the other unit will automatically start.

› Duty rotation: After a certain period* of time, the operating unit will go in standby and the standby unit will take over.
*** Rotation interval can be set from 6h, 12h, 24h, 72h, 96h, weekly**
› Possibility to lock on/off and lock the mode button on the Remote Controller
› Possibility to limit the setpoint range

Integrated Duty/Standby control



› Standard Integrated within BRC1E53* [1 BRC1E53* per group of max 16 systems]
› 1 unit in standby per group of max 16



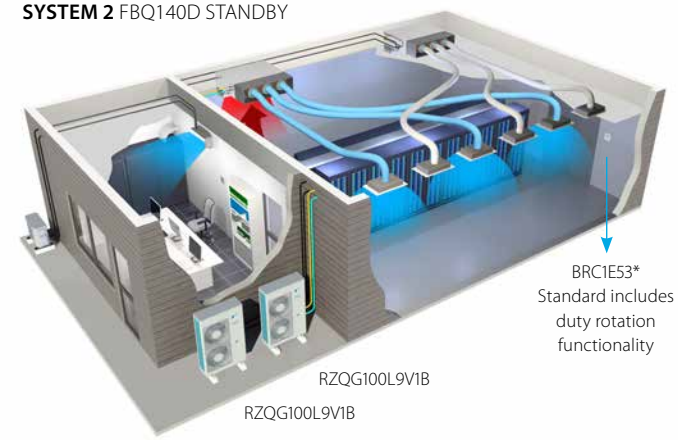
BRC1E53

Typical infrastructure cooling units	Modelname
Wired remote control	BRC1E53*
Conceiled ceiling system	FBQ-D*
Wall mounted system	FAQ-C9*
Ceiling suspended system	FHQ-CB*

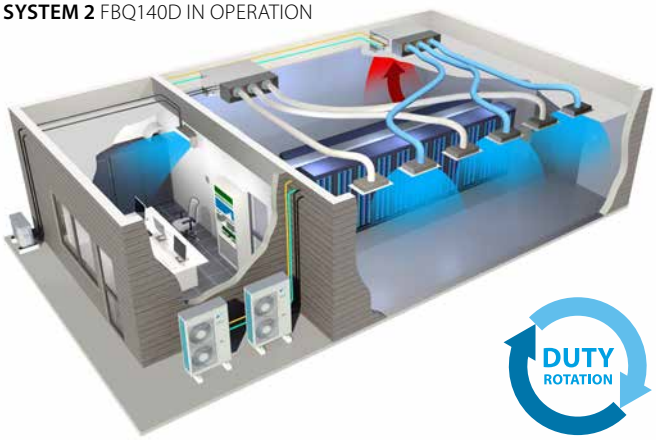
Duty rotation available on all Sky Air indoor units.
Refer to combination table for detailed information on page 6.

Application Example

SYSTEM 1 FBQ140D IN OPERATION
SYSTEM 2 FBQ140D STANDBY



SYSTEM 1 FBQ140D STANDBY
SYSTEM 2 FBQ140D IN OPERATION



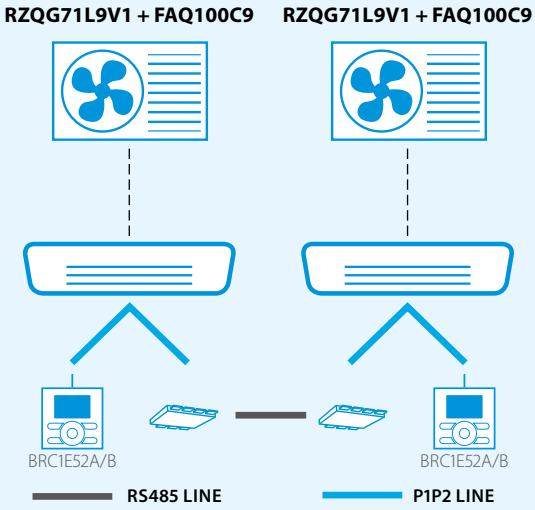
Maximum reliability and flexibility for continuous operation

Advanced and scalable control

Modbus gateway RTD-10 option

- **Automatic control** of indoor temperature
- **Guaranteed cooling operation mode**
- **Backup operation:**
  - If one unit fails, the other unit will automatically take over
  - When the temperature overshoots the standby unit will start operating
- **Duty rotation:** After a certain period of time, the operating unit will go into standby mode and the standby unit will take over
- **Rotation interval** can be set for 1 day, 1 week, 2 weeks or 4 weeks
- **Remote alarm signal**

Wiring scheme

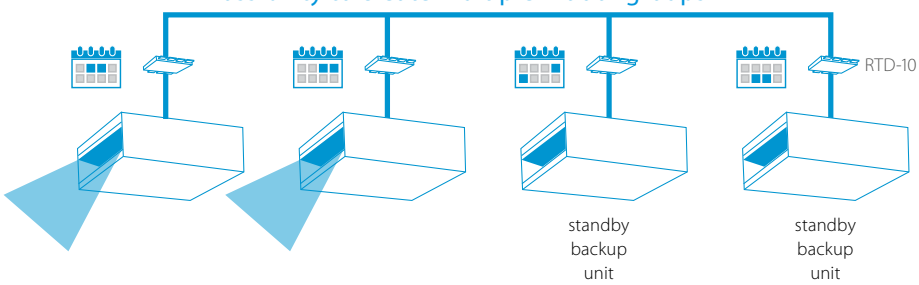


Example: 2 operating units, 2 standby units

Dedicated duty / standby control

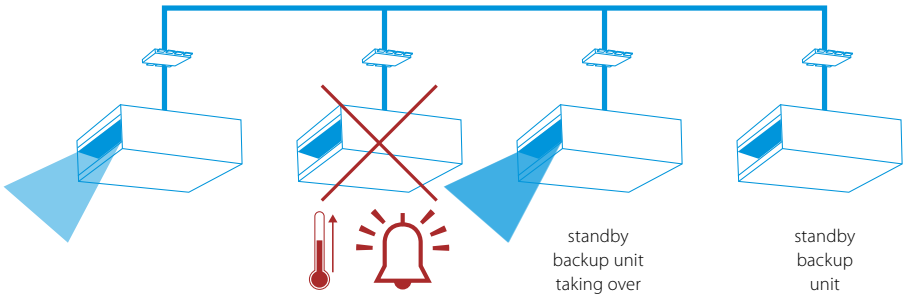
- RTD-10
  [1 gateway for 1 indoor unit (group)]
- Up to 8 RTD-10 units can be combined in RS485 network
- 1 or 2 standby units per group

Possibility to create multiple indoor groups



Backup operation

The failure of a unit initiates a safety procedure where the standby backup unit takes over automatically and a repair alarm is sent.



Dedicated field settings

adapted to the specific needs of infrastructure cooling

Overview of all settings

	Function	Description	Setting	Where	Note
Field settings	**Infrastructure Cooling Setting (EDP)**	Low Humidity application	16(26)-2-03	Indoor Unit - Remote Controller	Continuous cooling operation for low humidity applications
	EDP Setting + Avoid unit OFF time	Slow Start + Increased Hysteresis	16(26)-7-02	Indoor Unit - Remote Controller	Only on Single Phase outdoor units
	Maximize airflow	Set airflow high + ceiling soiling prevention	13(23)-0-03	Indoor Unit - Remote Controller	All indoor units except FAQ
	Free cooling	To set optimal unit start in free cooling mode	2-53-02	Outdoor unit – PCB setting	Only on Single Phase outdoor units

	Function	Option	Note
Options	Backup operation, Duty Rotation, Additional unit comes in to deliver capacity, Visual Alarm Signal, I/O BMS connection - Forced On/Off operation + Alarm Monitoring	RTD-10	High end solution up to 8 indoors (1 per indoor unit)
	Backup operation, Duty Rotation, I/O BMS connection - Forced On/Off operation, Sequential start control, Minimum Guaranteed units for Operation	DTA113B51	Basic solution up to 4 indoors (1 per group of 4 indoors)
	Free cooling	SB.KRP58M51	Only for single phase units (including the mounting plate to install KRP* on single phase outdoor models)
	Above-mentioned+ mini-BMS connection and energy management	DCM601A51	iTM solution

Continuous cooling operation

Avoid downtimes with specific system settings:

In low humidity environments indoor unit freeze-up is less likely. The setting 16(26)-2-03 allows you to boost the indoor capacity and enables quick restart conditions in case of freeze-up prevention.

Daikin recommends to enable 16(26)-2-03 for infrastructure cooling applications

Built-in settings for improved operational reliability

When using standard AC systems for infrastructure cooling, frequent start / stop cycles of the compressor can occur due to:

1. incorrect selection / sizing of equipment
The typical solution:
- oversizing the air conditioning equipment to allow flexibility in server room occupancy
- oversizing by building in some spare, 'safety' capacity
- using rules of thumb as calculation method

2. installation/application related difficulties
- restricted air circulation
- blockage of air distribution from top blow server racks

Compressor and thermostat control are therefore optimized for infrastructure cooling

The new setting available on the Seasonal Smart* L9 single-phase series allows the outdoor system to gradually start. This prevents the outdoor system from going into thermo-off while still in start-up mode. This setting limits frequent on/off operation. By lowering the frequency of the compressor (and subsequently the capacity), the system modulates and avoids early thermo-off 16(26)-7-02 (setting).

ON/OFF differential prevents the output from making fast, continuous switches. Using the 16-7-02 setting activates a larger thermo on/off hysteresis to **enhance continuous operation**.

16 (26)-7-01: DEFAULT (Comfort cooling)
16 (26)-7-02: enhanced slow start + increased hysteresis
This setting must always be combined with the EDP setting 16(26)-2-03.

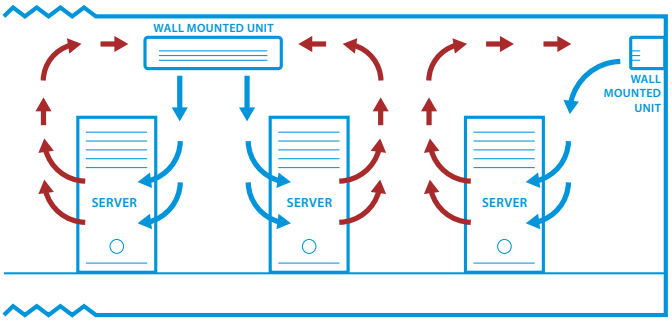
Best practices for planning and design

how to set-up cooling systems in server rooms

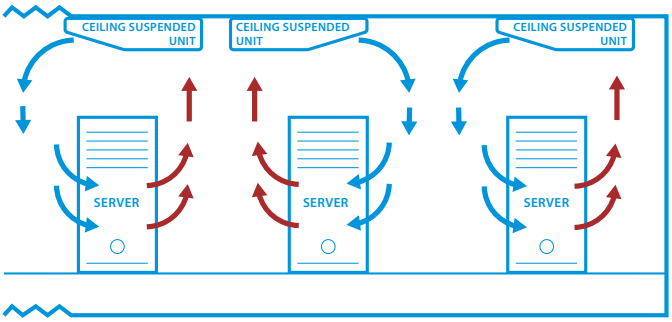
Flat floor or double floor not used for air distribution

Hot-isle / Cold-isle principles must be closely adhered to and the server orientation monitored.

With wall mounted units

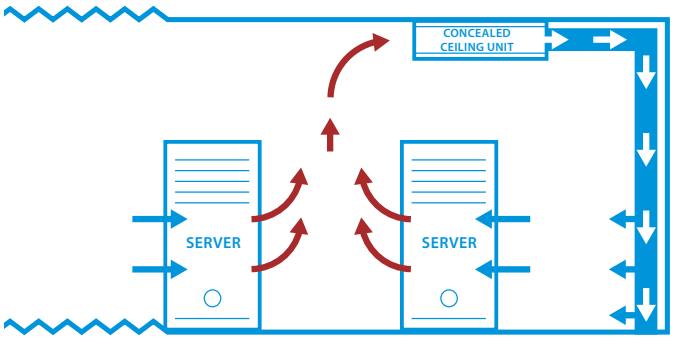


With ceiling suspended units



Install the ceiling suspended units in the opposite direction of the rack orientation

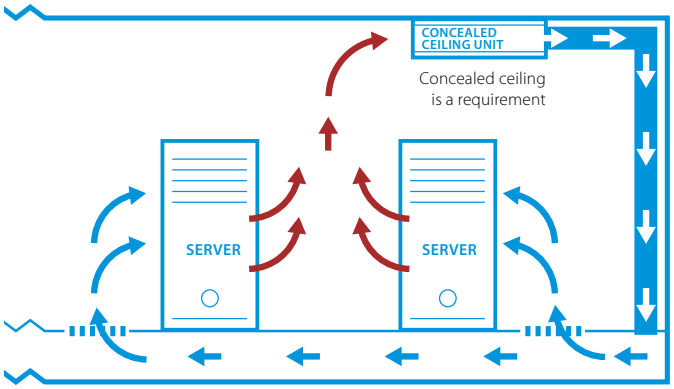
With concealed ceiling units



Use concealed ceiling units to distribute cold air where needed (down and to the suction side of the servers).

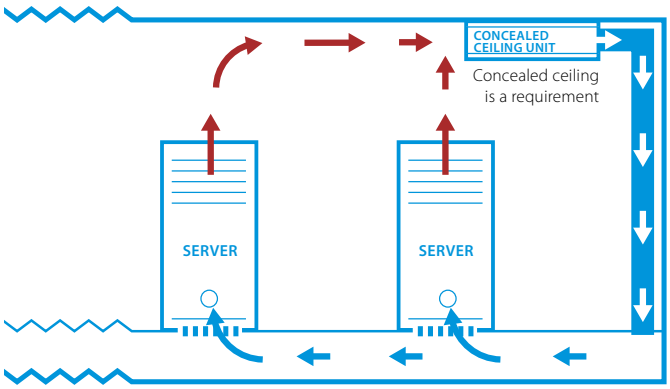
Flat floor or double floor used for air distribution

Hot-isle / Cold-isle set-up



Best match for double floor server rooms with concealed ceiling units

Throughflow racks



Seasonal Smart

Wall mounted unit

For rooms lacking false ceilings or free floor space

Combined with Seasonal Smart ensures best in class quality, efficiency and performance.

- Suitable for air circulation for infrastructure cooling rooms (air suction is located at the top, where the hot air tends to be)
- Long throw of air for optimal coverage
- No floor occupancy
- Air is equally distributed upwards and downwards due to 5 different discharge angles that are programmable via remote control
- Maintenance operations are easily controlled from the front of the unit.

FAQ100C9

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A/B/C, BRC7EB518

Efficiency data				FAQ + RZQG	100C9 + 71L9V1	71C9 + 71C9 + 100L9V1	71C9 + 71C9 + 125L9V1	100C9 + 71L8Y1	71C9 + 71C9 + 100L8Y1	71C9 + 71C9 + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy label			A++	B		A++	B	
		Pdesign		kW	6.80	9.50	12.00	6.80	9.50	12.00
		SEER			6.51	5.10		6.51	5.10	
		Annual energy consumption		kWh	366	652	824	366	652	824
	Heating (Average climate)	Energy label			A+	A		A+	A	
		Pdesign		kW	6.33	11.30	12.71	6.33	11.30	12.71
		SCOP			4.02	3.80		4.02	3.80	
		Annual energy consumption		kWh	2,205	4,164	4,683	2,205	4,164	4,683

Indoor unit				FAQ	71C9	100C9
Casing	Colour				Fresh White	
Dimensions	Unit	HeightxWidthxDepth		mm	290x1,050x238	340x1,200x240
Weight	Unit			kg	13	17
Fan - Air flow rate	Cooling	High/Nom./Low		m^3/min	18/16/14	26/23/19
	Heating	High/Nom./Low		m^3/min	18/16/14	26/23/19
Sound power level	Cooling			dBA	61	65
	Heating			dBA	61	65
Sound pressure level	Cooling	High/Nom./Low		dBA	45/42/40	49/45/41
	Heating	High/Nom./Low		dBA	45/42/40	49/45/41
Control systems	Infrared remote control				BRC7EB518	
	Wired remote control				BRC1D52 / BRC1E53A/B/C	
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50/60 / 220-240/220	

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	71L8Y1	100L8Y1	125L8Y1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320		990x940x320	1,430x940x320	
Weight	Unit			kg	69	95		80	101	
Sound power level	Cooling			dBA	64	66	67	64	66	67
Sound pressure level	Cooling	Nom.		dBA	48	50	51	48	50	51
	Heating	Nom.		dBA	50	52	53	50	52	53
	Night quiet mode	Level 1		dBA	43	45		43	45	
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50					
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5					
Refrigerant	Type/Charge/GWP			kg/TCO_2eq	R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5		R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5	
Piping connections	Liquid	OD		mm	9.52					
	Gas	OD		mm	15.9					
	Piping length	OU - IU	Max.	m	50	75		50	75	
		System	Equivalent	m	70	90		70	90	
			Chargeless	m	30					
	Additional refrigerant charge			kg/m	See installation manual					
	Level difference	IU - OU	Max.	m	30.0					
		IU - IU	Max.	m	0.5					
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240			3N~ / 50 / 380-415		
Current - 50Hz	Maximum fuse amps (MFA)			A	-			16	20	25

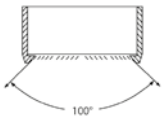
Contains fluorinated greenhouse gases

Seasonal Smart

Ceiling suspended unit

For wide rooms lacking false ceilings nor free floor space

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance



- Perfect air distribution for wide rooms due to the Coanda effect: up to 100° discharge angle
- Rooms with ceilings up to 3.8m can be cooled easily and without capacity loss
- No floor occupancy
- Can be mounted in corners and narrow spaces, because it only requires 30mm of lateral service space.

FHQ60-71CB

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A/B/C, BRC7GA53

Efficiency data			FHQ + RZQG	50CB + 50CB + 71L9V1	100CB + 71L9V1	35CB + 35CB + 35CB + 71L9V1	140CB + 100L9V1	71CB + 71CB + 100L9V1	71CB + 71CB + 125L9V1	50CB + 50CB + 50CB + 100L9V1	35CB + 35CB + 35CB + 35CB + 100L9V1	140CB + 125L9V1	50CB + 50CB + 50CB + 125L9V1	35CB + 35CB + 35CB + 35CB + 125L9V1
Seasonal efficiency (according to EN14825)	Cooling	Pdesign	kW	6.80			9.50		12.00	9.50		12.00		
		SEER		5.10	6.95	5.10	6.11	5.10				6.01	5.10	
		Annual energy consumption	kWh	467	343	467	545	652	824	652		699	824	
	Heating (Average climate)	Pdesign	kW	6.00	7.60	6.00	11.30		12.71	11.30		14.13	12.71	
		SCOP		3.80	4.32	3.80	4.61	3.80				4.23	3.80	
		Annual energy consumption	kWh	2,211	2,463	2,211	3,432	4,164	4,683	4,164		4,677	4,683	

Efficiency data			FHQ + RZQG	50CB + 50CB + 71L8Y1	100CB + 71L8Y1	35CB + 35CB + 35CB + 71L8Y1	140CB + 100L8Y1	71CB + 71CB + 100L8Y1	71CB + 71CB + 125L8Y1	50CB + 50CB + 50CB + 100L8Y1	35CB + 35CB + 35CB + 35CB + 100L8Y1	140CB + 125L8Y1	50CB + 50CB + 50CB + 125L8Y1	35CB + 35CB + 35CB + 35CB + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Pdesign	kW	6.80			9.50		12.00	9.50		12.00		
		SEER		5.10	6.95	5.10	6.11	5.10				6.01	5.10	
		Annual energy consumption	kWh	467	343	467	545	652	824	652		699	824	
	Heating (Average climate)	Pdesign	kW	6.00	7.60	6.00	11.30		12.71	11.30		14.13	12.71	
		SCOP		3.80	4.32	3.80	4.61	3.80				4.23	3.80	
		Annual energy consumption	kWh	2,211	2,463	2,211	3,432	4,164	4,683	4,164		4,677	4,683	

Indoor unit			FHQ	35CB	50CB	71CB	100CB	140CB
Dimensions	Unit	HeightxWidthxDepth	mm	235x960x690		235x1,270x690	235x1,590x690	
Weight	Unit		kg	24	25	32	38	
Air filter	Type			Resin net with mold resistance				
Fan - Air flow rate	Cooling	High/Nom./Low	m^3/min	14/11.5/10	15/12/10	20.5/17/14	28/24/20	34/29/24
	Heating	High/Nom./Low	m^3/min	14/11.5/10	15/12/10	20.5/17/14	28/24/20	34/29/24
Sound power level	Cooling		dBA	53	54	55	60	64
	Heating		dBA	53	54	55	60	64
Sound pressure level	Cooling	High/Nom./Low	dBA	36/34/31	37/35/32	38/36/34	42/38/34	46/42/38
	Heating	High/Nom./Low	dBA	36/34/31	37/35/32	38/36/34	42/38/34	46/42/38
Control systems	Infrared remote control			BRC7G53				
	Wired remote control			BRC1D52 / BRC1E53A/B/C				
Power supply	Phase / Frequency / Voltage		Hz / V	1~ / 50/60 / 220-240/220				

Outdoor unit					RZQG	71L9V1	100L9V1	125L9V1	140L9V1	71L8Y1	100L8Y1	125L8Y1	140LY1
Dimensions	Unit	HeightxWidthxDepth			mm	990x940x320	1,430x940x320			990x940x320	1,430x940x320		
Weight	Unit				kg	77	99			80	101		
Sound power level	Cooling				dBA	64	66	67	69	64	66	67	69
Sound pressure level	Cooling	Nom.			dBA	48	50	51	52	48	50	51	52
	Heating	Nom.			dBA	50	52	53		50	52	53	
	Night quiet mode	Level 1			dBA	43	45			43	45		
Operation range	Cooling	Ambient	Min.~Max.		°CDB	-15~50							
	Heating	Ambient	Min.~Max.		°CWB	-20~15.5							
Refrigerant	Type/Charge/GWP				kg	R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5			R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5		
	Charge				TCO_2Eq	6.1	8.4			6.1	8.4		
Piping connections	Liquid	OD			mm	9.52							
	Gas	OD			mm	15.9							
	Piping length	OU - IU	Max.		m	50	75			50	75		
		System	Equivalent		m	70	90			70	90		
			Chargeless		m	30							
	Additional refrigerant charge				kg/m	See installation manual							
	Level difference	IU - OU	Max.		m	30.0							
		IU - IU	Max.		m	0.5							
Power supply	Phase / Frequency / Voltage				Hz / V	1~ / 50 / 220-240				3N~ / 50 / 380-415			
Current - 50Hz	Maximum fuse amps (MFA)				A	-				16	25		

Contains fluorinated greenhouse gases

Seasonal Smart

Concealed ceiling unit with medium ESP

Combination with Seasonal Smart ensures best in class quality, and high efficiency and performance

- Top efficiency in market
- Compact unit can easily be mounted in a ceiling of only 285mm, leaving only suction and discharge grilles visible
- Sound levels lower than 29 dBA
- Medium external static pressure up to 150Pa allows the use of flexible ducts with varying lengths
- Flexible installation, the air suction direction can be altered from rear to bottom suction
- Standard built-in drain pump increases flexibility and installation speed
- No floor occupancy

FBQ-D

RZQG140L9V1/L(8)Y1

BRC1E53A/B/C, BRC4C65

Efficiency data				FBQ + RZQG	100D + 71L9V1	50D + 50D + 71L9V1	35D + 35D + 35D + 71L9V1	140D + 100L9V1	71D + 71D + 100L9V1	35D + 35D + 35D + 35D + 100L9V1	50D + 50D + 50D + 50D + 100L9V1	50D + 50D + 50D + 50D + 125L9V1	35D + 35D + 35D + 35D + 125L9V1	140D + 125L9V1	71D + 71D + 125L9V1
Seasonal efficiency (according to EN14825)	Cooling	Energy label			A++	A		A+	A					A++	A
		Pdesign		kW	6.80			9.50				12.00			
		SEER			6.16	5.10		5.87	5.10					6.11	5.10
		Annual energy consumption		kWh	386	466		566	652			824		687	824
	Heating (Average climate)	Energy label			A+	A		A++	A					A+	A
		Pdesign		kW	6.00			11.30				12.71		12.70	12.71
		SCOP			4.31	3.80		4.78	3.80					4.28	3.80
		Annual energy consumption		kWh	1,949	2,210		3,310	4,163			4,683		4,154	4,683

Efficiency data				FBQ + RZQG	100D + 71L8Y1	50D + 50D + 71L8Y1	35D + 35D + 35D + 71L8Y1	140D + 100L8Y1	71D + 71D + 100L8Y1	35D + 35D + 35D + 35D + 100L8Y1	50D + 50D + 50D + 50D + 100L8Y1	50D + 50D + 50D + 50D + 125L8Y1	35D + 35D + 35D + 35D + 12L8Y1	140D + 125L8Y1	71D + 71D + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy label			A++	A		A+	A					A++	A
		Pdesign		kW	6.80			9.50				12.00			
		SEER			6.16	5.10		5.87	5.10					6.11	5.10
		Annual energy consumption		kWh	386	466		566	652			824		687	824
	Heating (Average climate)	Energy label			A+	A		A++	A					A+	A
		Pdesign		kW	6.00			11.30				12.71		12.70	12.71
		SCOP			4.31	3.80		4.78	3.80					4.28	3.80
		Annual energy consumption		kWh	1,949	2,210		3,310	4,163			4,683		4,154	4,683

Indoor unit				FBQ	35D	50D	71D	100D	140D
Dimensions	Unit	HeightxWidthxDepth		mm	245x700x800		245x1,000x800	245x1,400x800	
Weight	Unit			kg	28		35	46	
Air filter	Type				Resin net with mold resistance				
Fan - Air flow rate	Cooling	High/Nom./Low		m^3/min	15/12.5/10.5		18/15/12.5	29/26/23	34/29/23.5
	Heating	High/Nom./Low		m^3/min	15/12.5/10.5		18/15/12.5	29/26/23	34/29/23.5
Fan - External static pressure	High/Nom./Maximum available/High			Pa	150/30/-			150/40/-	150/50/-
Sound power level	Cooling			dBA	60		56	58	62
Sound pressure level	Cooling	High/Nom./Low		dBA	35/32/29		30/28/25	34/32/30	37/35/32
	Heating	High/Nom./Low		dBA	37/34/29		31/28/25	36/33/30	38/35/32
Control systems	Infrared remote control				BRC4C65				
	Wired remote control				BRC1E53A/B/C / BRC1D528				
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240				

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	140L9V1	71L8Y1	100L8Y1	125L8Y1	140LY1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320			990x940x320	1,430x940x320		
Weight	Unit			kg	77	99			80	101		
Sound power level	Cooling			dBA	64	66	67	69	64	66	67	69
Sound pressure level	Cooling	Nom.		dBA	48	50	51	52	48	50	51	52
	Heating	Nom.		dBA	50	52	53		50	52	53	
	Night quiet mode	Level 1		dBA	43	45			43	45		
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50							
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5							
Refrigerant	Type/Charge/GWP			kg	R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5			R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5		
	Charge			TCO_2Eq	6.1	8.4			6.1	8.4		
Piping connections	Liquid	OD		mm	9.52							
	Gas	OD		mm	15.9							
	Piping length	OU - IU	Max.	m	50	75			50	75		
		System	Equivalent	m	70	90			70	90		
			Chargeless	m	30							
	Additional refrigerant charge			kg/m	See installation manual							
	Level difference	IU - OU	Max.	m	30.0							
		IU - IU	Max.	m	0.5							
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240				3N~ / 50 / 380-415			
Current - 50Hz	Maximum fuse amps (MFA)			A	-				16	25		

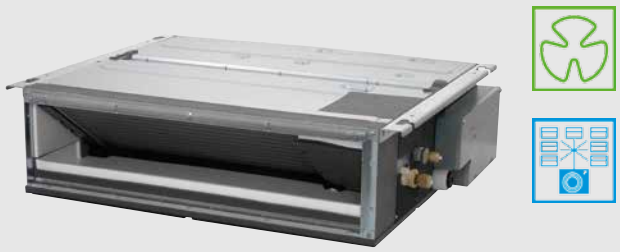
Contains fluorinated greenhouse gases

Seasonal Smart

Concealed ceiling unit

Compact concealed ceiling unit, with a height of only 200mm

- Compact dimensions, can easily be mounted in a ceiling void of only 240mm
- Medium external static pressure up to 40Pa facilitates unit use with flexible ducts of varying lengths
- Standard built-in drain pmup increases flexibility and installation speed
- No floor occupancy



FDXS25-35F3

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A-B-C, BRC4C65

Efficiency data			FDXS + RZQG	35F3 + 35F3 + 35F3 + 71L9V1	35F3 + 35F3 + 35F3 + 35F3 + 100L9V1	35F3 + 35F3 + 35F3 + 35F3 + 125L9V1	50F3 + 50F3 + 71L9V1	50F3 + 50F3 + 50F3 + 100L9V1	50F3 + 50F3 + 50F3 + 125L9V1
Power input	Cooling	Nom.	kW	0.036			0.060		
	Heating	Nom.	kW	0.036			0.060		
Seasonal efficiency (according to EN14825)	Cooling	Energy efficiency class		B					
		Pdesign	kW	6.80	9.50	12.00	6.80	9.50	12.00
		SEER		4.80	5.10		4.80	5.10	
		Annual energy consumption	kWh	496	652	824	496	652	824
	Heating (Average climate)	Energy efficiency class		A					
		Pdesign	kW	6.00	10.74	11.30	6.00	11.30	12.71
		SCOP/A		3.80					
		Annual energy consumption	kWh	2,211	3,957	4,164	2,211	4,164	4,683

Efficiency data			FDXS + RZQG	35F3 + 35F3 + 35F3 + 71L8Y1	35F3 + 35F3 + 35F3 + 35F3 + 100L8Y1	35F3 + 35F3 + 35F3 + 35F3 + 125L8Y1	50F3 + 50F3 + 71L8Y1	50F3 + 50F3 + 50F3 + 100L8Y1	50F3 + 50F3 + 50F3 + 125L8Y1
Power input	Cooling	Nom.	kW	0.036			0.060		
	Heating	Nom.	kW	0.036			0.060		
Seasonal efficiency (according to EN14825)	Cooling	Energy efficiency class		B					
		Pdesign	kW	6.80	9.50	12.00	6.80	9.50	12.00
		SEER		4.80	5.10		4.80	5.10	
		Annual energy consumption	kWh	496	652	824	496	652	824
	Heating (Average climate)	Energy efficiency class		A					
		Pdesign	kW	6.00	10.74	11.30	6.00	11.30	12.71
		SCOP/A		3.80					
		Annual energy consumption	kWh	2,211	3,957	4,164	2,211	4,164	4,683

Indoor unit			FDXS	35F3	50F3
Dimensions	Unit	HeightxWidthxDepth	mm	200x750x620	200x1,150x620
Weight	Unit		kg	21	30
Air filter	Type			Removable / washable / mildew proof	
Fan - Air flow rate	Cooling	High/Low	m^3/min	8.7/7.3	12.0/10.0
	Heating	High/Low	m^3/min	8.7/7.3	16.0/13.5
Fan - External static pressure	Nom./Maximum available/High		Pa	30/-	40/-
Sound power level	Cooling		dBA	53	55
	Heating		dBA	53	55
Sound pressure level	Cooling	High/Low	dBA	35/27	38/30
	Heating	High/Low	dBA	35/27	38/30
Control systems	Infrared remote control			BRC4C65	
	Wired remote control			BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52	
Power supply	Phase / Frequency / Voltage		Hz / V	1~ / 50 / 230	1~ / 50 / 220-240

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	71L8Y1	100L8Y1	125L8Y1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320		990x940x320	1,430x940x320	
Weight	Unit			kg	69	95		80	101	
Sound power level	Cooling			dBA	64	66	67	64	66	67
Sound pressure level	Cooling	Nom.		dBA	48	50	51	48	50	51
	Heating	Nom.		dBA	50	52	53	50	52	53
	Night quiet mode	Level 1		dBA	43	45		43	45	
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50					
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5					
Refrigerant	Type / GWP				R-410A / 2,087.5					
	Charge			kg / TCO_2eq	2.9 / 6.1	4.0 / 8.4		2.9 / 6.1	4.0 / 8.4	
Piping connections	Liquid	OD		mm	9.52					
	Gas	OD		mm	15.9					
	Piping length	OU - IU	Max.	m	50	75		50	75	
		System	Equivalent	m	70	90		70	90	
			Chargeless	m	30					
	Additional refrigerant charge			kg/m	See installation manual					
	Level difference	IU - OU	Max.	m	30.0					
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240			3N~ / 50 / 380-415		
Current - 50Hz	Maximum fuse amps (MFA)			A	25	40		16	25	

Contains fluorinated greenhouse gases

Seasonal Smart

Floor standing unit

For commercial spaces with high ceilings

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance.

- Ideal solution for commercial spaces without or with narrow false ceilings
- Easy installation in new and refurbishment projects
- Very efficient for use in rooms with high ceilings
- Decreases temperature variation with an automatic fan speed selection and freely selectable 3-step fan speed.
- Selectable horizontal out blow better suits the layout of your room (via BRC1E52)
- Reduced energy consumption due to specially developed DC fan motor

FVQ-C

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A/B/C

Efficiency data				FVQ + RZQG	100C + 71L9V1	140C + 100L9V1	140C + 125L9V1	140C + 140L9V1	100C + 71L8Y1	140C + 100L8Y1	140C + 125L8Y1	140C + 140L8Y1
Power input	Cooling	Nom.		kW	0.238	0.276		4.17	0.238	0.276		4.17
	Heating	Nom.		kW	0.238	0.276		4.30	0.238	0.276		4.30
Seasonal efficiency (according to EN14825)	Cooling	Energy label			A++	A+		-	A++	A+		-
		Pdesign		kW	6.80	9.50	12.00	-	6.80	9.50	12.00	-
		SEER			6.31	5.61		-	6.31	5.61		-
		Annual energy consumption		kWh	378	593	749	-	378	593	749	-
	Heating (Average climate)	Energy label			A+		A	-	A+		A	-
		Pdesign		kW	6.33	11.30		-	6.33	11.30		-
		SCOP			4.05	4.20	3.87	-	4.05	4.20	3.87	-
		Annual energy consumption		kWh	2,189	3,767	4,088	-	2,189	3,767	4,088	-
Nominal efficiency	EER				-			3.21	-			3.21
	COP				-			3.61	-			3.61
	Annual Enery consumption			kWh	-			2,085	-			2,085
	Energy label	Cooling/Heating			-/-							

Indoor unit				FVQ	100C	140C
Casing	Colour				Fresh White	
Dimensions	Unit	HeightxWidthxDepth		mm	1,850x600x350	
Weight	Unit			kg	47	
Air filter	Type				Resin net with mold resistance	
Fan - Air flow rate	Cooling	High/Nom./Low		m^3/min	28/25/22	30/28/26
	Heating	High/Nom./Low		m^3/min	28/25/22	30/28/26
Sound power level	Cooling			dBA	62	65
	Heating			dBA	62	65
Sound pressure level	Cooling	High/Nom./Low		dBA	50/47/44	53/51/48
	Heating	High/Nom./Low		dBA	50/47/44	53/51/48
Control systems	Wired remote control				BRC1D52 / BRC1E53A/B/C	
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50/60 / 220-240/220	

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	140L9V1	71L8Y1	100L8Y1	125L8Y1	140LY1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320			990x940x320	1,430x940x320		
Weight	Unit			kg	77	99			80	101		
Sound power level	Cooling			dBA	64	66	67	69	64	66	67	69
Sound pressure level	Cooling	Nom.		dBA	48	50	51	52	48	50	51	52
	Heating	Nom.		dBA	50	52	53		50	52	53	
	Night quiet mode	Level 1		dBA	43	45			43	45		
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50							
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5							
Refrigerant	Type/Charge/GWP			kg	R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5			R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5		
	Charge			TCO_2Eq	6.1	8.4			6.1	8.4		
Piping connections	Liquid	OD		mm	9.52							
	Gas	OD		mm	15.9							
	Piping length	OU - IU	Max.	m	50	75			50	75		
		System	Equivalent	m	70	90			70	90		
			Chargeless	m	30							
	Additional refrigerant charge			kg/m	See installation manual							
	Level difference	IU - OU	Max.	m	30.0							
		IU - IU	Max.	m	0.5							
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240				3N~ / 50 / 380-415			
Current - 50Hz	Maximum fuse amps (MFA)			A	-				16	25		

Contains fluorinated greenhouse gases

Best practice for cassette units

how to apply cassette type cooling systems in laboratories and other technical facilities

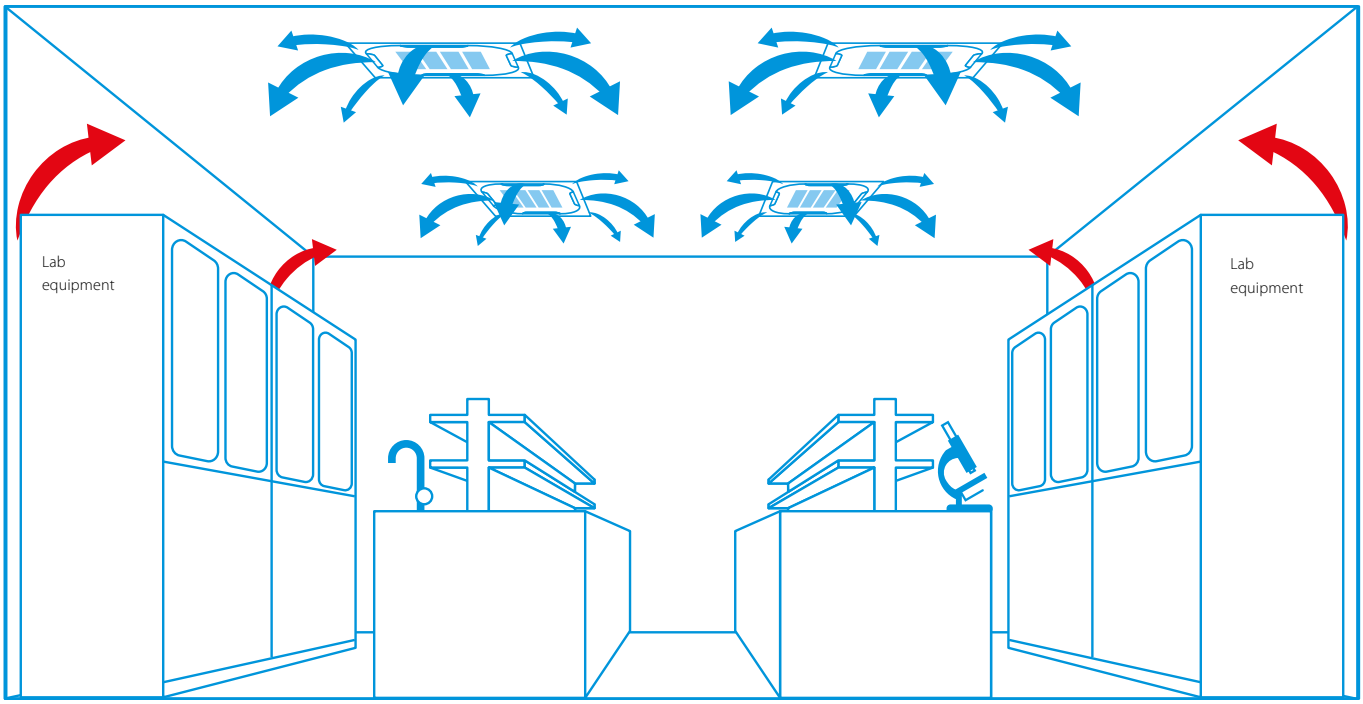
Flat floor or double floor not used for air distribution

Cassette type systems should only be used for specific room configurations where central ceiling installation is most suited for hot aisle/ cold aisle arrangements.

In a laboratory environment for example, when the cassette system is placed centrally on the ceiling and above the aisles, it will allow maximum uniform air distribution around the room.

It is not recommended to install cassette units right above a server or machine.

With cassette units



Seasonal Smart

4-way blow ceiling suspended unit

Unique Daikin unit for rooms with high ceilings that lack false ceilings or free floor space

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance.

- Rooms with ceilings up to 3.5m can be cooled easily without capacity loss
- Can be installed in both new and refurbishment projects
- Flexibility to suit every room layout without changing the location of the unit. The wired remote controller allows you to control and close each flap individually.
- Reduced energy consumption as a result of the specially developed small tube heat exchanger, DC fan motor and drain pump
- 5 different discharge angles between 0 and 60°can be programmed via remote control
- Standard drain pump with 500mm lift increases flexibility and installation speed

Cassette units should only be used for specific room configurations where central installation is most suited for hot aisle/ cold aisle arrangements.
Refer to page 21 for more information

Efficiency data			FUQ + RZQG	100C + 71L9V1	71C + 71C + 100L9V1	71C + 71C + 125L9V1	100C + 71L8Y1	71C + 71C + 100L8Y1	71C + 71C + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy label		A++	B		A++	B	
		Pdesign	kW	6.80	9.50	12.00	6.80	9.50	12.00
		SEER		6.50	5.10		6.50	5.10	
		Annual energy consumption	kWh	367	652	824	367	652	824
	Heating (Average climate)	Energy label		A+	A		A+	A	
		Pdesign	kW	7.60	11.30	12.71	7.60	11.30	12.71
		SCOP		4.20	3.80		4.20	3.80	
		Annual energy consumption	kWh	2,534	4,164	4,683	2,534	4,164	4,683

Indoor unit				FUQ	71C	100C
Casing	Colour				Fresh White	
Dimensions	Unit	HeightxWidthxDepth		mm	198x950x950	
Weight	Unit			kg	25	26
Air filter	Type				Resin net with mold resistance	
Fan - Air flow rate	Cooling	High/Nom./Low		m^3/min	23/19.5/16	31/25.5/20
	Heating	High/Nom./Low		m^3/min	23/19.5/16	31/25.5/20
Sound power level	Cooling			dBA	59	64
	Heating			dBA	59	64
Sound pressure level	Cooling	High/Nom./Low		dBA	41/38/35	46/42/39
	Heating	High/Nom./Low		dBA	41/38/35	46/42/39
Control systems	Infrared remote control				BRC7C58	
	Wired remote control				BRC1D52 / BRC1E53A/B/C	
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50/60 / 220-	

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	71L8Y1	100L8Y1	125L8Y1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320		990x940x320	1,430x940x320	
Weight	Unit			kg	69	95		80	101	
Sound power level	Cooling			dBA	64	66	67	64	66	67
Sound pressure level	Cooling	Nom.		dBA	48	50	51	48	50	51
	Heating	Nom.		dBA	50	52	53	50	52	53
	Night quiet mode	Level 1		dBA	43	45		43	45	
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50					
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5					
Refrigerant	Type/Charge/GWP			kg/TCO_2eq	R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5		R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5	
Piping connections	Liquid	OD		mm	9.52					
	Gas	OD		mm	15.9					
	Piping length	OU - IU	Max.	m	50	75		50	75	
		System	Equivalent	m	70	90		70	90	
			Chargeless	m	30					
	Additional refrigerant charge			kg/m	See installation manual					
	Level difference	IU - OU	Max.	m	30.0					
		IU - IU	Max.	m	0.5					
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240			3N~ / 50 / 380-415		
Current - 50Hz	Maximum fuse amps (MFA)			A	-			16	20	25

Contains fluorinated greenhouse gases

Seasonal Smart

Fully flat cassette

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance.

- Fully flat integration in standard architectural ceiling tiles
- Remarkable blend of iconic design and engineering excellence with an elegant finish in white or a combination of silver and white
- Less energy consumption as a result of the specially developed small tube heat exchanger, DC fan motor and drain pump
- Fresh air intake integrated in the same system reduces installation costs because additional ventilation is not required
- Standard drain pump with 850mm lift increases flexibility and installation speed
- No adapter needed for DIII-connection; link your unit into the wider building management system.

FFQ-C

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A/B/C BRC7F530W_S

Cassette units should only be used for specific room configurations where central installation is most suited for hot aisle/ cold aisle arrangements.
Refer to page 21 for more information

Efficiency data				FFQ + RZQG	35C + 35C + 35C + 71L9V1	50C + 50C + 71L9V1	35C + 35C + 35C + 100L9V1	50C + 50C + 50C + 100L9V1	35C + 35C + 35C + 125L9V1	50C + 50C + 50C + 125L9V1	50C + 50C + 71L8Y1	35C + 35C + 35C + 71L8Y1	35C + 35C + 35C + 100L8Y1	50C + 50C + 50C + 100L8Y1	35C + 35C + 35C + 125L8Y1	50C + 50C + 50C + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy label			B											
		Pdesign		kW	6.80		9.50		12.00		6.80		9.50		12.00	
		SEER			5.10											
		Annual energy consumption		kWh	467		652		824		467		652		824	
	Heating (Average climate)	Energy label			A											
		Pdesign		kW	6.00		11.30		12.71		6.00		11.30		12.71	
		SCOP			3.80											
		Annual energy consumption		kWh	2,211		4,164		4,683		2,211		4,164		4,683	

Indoor unit				FFQ	35C	50C
Dimensions	Unit	HeightxWidthxDepth		mm	260x575x575	
Weight	Unit			kg	16	17.5
Decoration panel	Model				BYFQ60CW/ BYFQ60CS/ BYFQ60B3W1	
	Colour				White (N9.5)/ White (N9.5) + Silver/ White (RAL9010)	
	Dimensions	HeightxWidthxDepth		mm	46x620x620 / 46x620x620/ 55x700x700	
	Weight			kg	2.8/ 2.8/ 2.7	
Air filter	Type				Resin net with mold resistance	
Fan - Air flow rate	Cooling	High/Nom./Low		m^3/min	10/8.5/6.5	12/10/7.5
	Heating	High/Nom./Low		m^3/min	10/8.5/6.5	12/10/7.5
Sound power level	Cooling			dBA	51	56
Sound pressure level	Cooling	High/Nom./Low		dBA	34/30.5/25	39/34/27
	Heating	High/Nom./Low		dBA	34/30.5/25	39/34/27
Control systems	Infrared remote control				BRC7EB530 (standard panel) / BRC7F530W (white panel) / BRC7F530S (grey panel)	
	Wired remote control				BRC1D52 / BRC1E53A/B/C	
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240	

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	71L8Y1	100L8Y1	125L8Y1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320		990x940x320	1,430x940x320	
Weight	Unit			kg	69	95		80	101	
Sound power level	Cooling			dBA	64	66	67	64	66	67
Sound pressure level	Cooling	Nom.		dBA	48	50	51	48	50	51
	Heating	Nom.		dBA	50	52	53	50	52	53
	Night quiet mode	Level 1		dBA	43	45		43	45	
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50					
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5					
Refrigerant	Type/Charge/GWP			kg/TCO_2eq	R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5		R-410A/2.9/6.1/2,087.5	R-410A/4.0/8.4/2,087.5	
Piping connections	Liquid	OD		mm	9.52					
	Gas	OD		mm	15.9					
	Piping length	OU - IU	Max.	m	50	75		50	75	
		System	Equivalent	m	70	90		70	90	
			Chargeless	m	30					
	Additional refrigerant charge			kg/m	See installation manual					
	Level difference	IU - OU	Max.	m	30.0					
		IU - IU	Max.	m	0.5					
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240			3N~ / 50 / 380-415		
Current - 50Hz	Maximum fuse amps (MFA)			A	-			16	20	25

Dimensions do not include control box | Contains fluorinated greenhouse gases

Round flow cassette

360° air discharge for optimum efficiency and comfort

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance.

- 360° air discharge ensures uniform air flow and temperature distribution
- Automatic filter cleaning yields higher efficiency and lower maintenance costs. Dust can easily be removed with a vacuum cleaner, without opening the unit
- Flexibility to suit every room layout without changing the location of the unit. The wired remote controller allows you to control and close each flap individually.

Cassette units should only be used for specific room configurations where central installation is most suited for hot aisle/ cold aisle arrangements.
Refer to page 21 for more information

FCQG100-125-140F

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A-B-C, BRC7FA532F

Efficiency data			FCQG + RZQG	100F+71L9V1	35F+35F+35F+71L9V1	50F+50F+71L9V1	140F+100L9V1	35F+35F+35F+35F+100L9V1	71F+71F+100L9V1	50F+50F+50F+100L9V1	50F+50F+50F+125L9V1	35F+35F+35F+35F+125L9V1	140F+125L9V1	71F+71F+125L9V1
Seasonal efficiency (according to EN14825)	Cooling	Energy efficiency class		A++	-		A++	B					A+	B
		Pdesign	kW	6.80			9.50				12.00			
		SEER		6.80	5.10		6.80	5.10					6.00	5.10
		Annual energy consumption	kWh	350	467		489	652			824		700	824
	Heating (Average climate)	Energy efficiency class		A+	-		A++	A					A+	A
		Pdesign	kW	6.33	6.00		11.30				12.71		12.66	12.71
		SCOP/A		4.20	-		4.61	3.80					4.10	3.80
		Annual energy consumption	kWh	2,110	2,211		3,432	4,164			4,683		4,323	4,683

Efficiency data			FCQG + RZQG	100F+71L8Y1	50F+50F+71L8Y1	35F+35F+35F+71L8Y1	140F+100L8Y1	71F+71F+100L8Y1	35F+35F+35F+35F+100L8Y1	50F+50F+50F+100L8Y1	50F+50F+50F+125L8Y1	35F+35F+35F+35F+125L8Y1	140F+125L8Y1	71F+71F+125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy efficiency class		A++	-		A++	B					A+	B
		Pdesign	kW	6.80			9.50				12.00			
		SEER		6.80	5.10		6.80	5.10					6.00	5.10
		Annual energy consumption	kWh	350	467		489	652			824		700	824
	Heating (Average climate)	Energy efficiency class		A+	-		A++	A					A+	A
		Pdesign	kW	6.33	6.00		11.30				12.71		12.66	12.71
		SCOP/A		4.20	-		4.61	3.80					4.10	3.80
		Annual energy consumption	kWh	2,110	2,211		3,432	4,164			4,683		4,323	4,683

Indoor unit			FCQG	35F	50F	71F	100F	140F
Dimensions	Unit	HeightxWidthxDepth	mm	204x840x840			246x840x840	
Weight	Unit		kg	18	19	21	24	24
Decoration panel	Model			BYCQ140D7GFW1 - auto cleaning panel with fine mesh filter / BYCQ140D7GW1 - auto cleaning panel/BYCQ140D7W1W - full white/BYCQ140D7W1 - white with grey louvers				
	Colour			Pure White (RAL 9010)				
	Dimensions	HeightxWidthxDepth	mm	130x950x950 / 130x950x950 / 50x950x950 / 50x950x950				
	Weight		kg	10.3 / 10.3 / 5.4 / 5.4				
Air filter	Type			Resin net with mold resistance				
Fan - Air flow rate	Cooling	High/Low	m^3/min	12.5/8.7	12.6/8.7	15.0/9.1	22.8/12.4	26.0/12.4
	Heating	High/Low	m^3/min	12.5/8.7	12.6/8.7	15.0/9.1	22.8/12.4	26.0/12.4
Sound power level	Cooling		dBA	49		51	54	58
	Heating		dBA	49		51	54	58
Sound pressure level	Cooling	High/Low	dBA	31/27		33/28	37/29	41/29
	Heating	High/Low	dBA	31/27		33/28	37/29	41/29
Control systems	Infrared remote control			BRC7FA532F				
	Wired remote control			BRC1D52 / BRC1E53A / BRC1E53B / BRC1E53C				
Power supply	Phase / Frequency / Voltage		Hz / V	1~ / 50 / 220-240				

Outdoor unit					RZQG	71L9V1	100L9V1	125L9V1	71L8Y1	100L8Y1	125L8Y1
Dimensions	Unit	HeightxWidthxDepth			mm	990x940x320	1,430x940x320		990x940x320	1,430x940x320	
Weight	Unit				kg	69	95		80	101	
Sound power level	Cooling				dBA	64	66	67	64	66	67
Sound pressure level	Cooling	Nom.			dBA	48	50	51	48	50	51
	Heating	Nom.			dBA	50	52	53	50	52	53
	Night quiet mode	Level 1			dBA	43	45		43	45	
Operation range	Cooling	Ambient	Min.~Max.		°CDB	-15~50					
	Heating	Ambient	Min.~Max.		°CWB	-20~15.5					
Refrigerant	Type / GWP					R-410A / 2,087.5					
	Charge				kg / TCO_2eq	2.9 / 6.1	4.0 / 8.4		2.9 / 6.1	4.0 / 8.4	
Piping connections	Liquid	OD			mm	9.52					
	Gas	OD			mm	15.9					
	Piping length	OU - IU	Max.		m	50	75		50	75	
		System	Equivalent		m	70	90		70	90	
			Chargeless		m	30					
	Additional refrigerant charge				kg/m	See installation manual					
	Level difference	IU - OU	Max.		m	30.0					
Power supply	Phase / Frequency / Voltage				Hz / V	1~ / 50 / 220-240			3N~ / 50 / 380-415		
Current - 50Hz	Maximum fuse amps (MFA)				A	25	40		16	25	

Contains fluorinated greenhouse gases

ROUND FLOW

Seasonal Smart

High efficiency round flow cassette

360° air discharge for optimum efficiency and comfort

Combination with Seasonal Smart ensures best in class quality, highest efficiency and performance.

- High efficiency cassette provides top performance, great savings in energy consumption
- 360° air discharge ensures uniform air flow and temperature distribution
- Automatic filter cleaning yields higher efficiency and lower maintenance costs. Dust can easily be removed with a vacuum cleaner, without opening the unit
- Flexibility to suit every room layout without changing the location of the unit. The wired remote controller allows you to control and close each flap individually.

FCGHQ-F

RZQG100-125-140L9V1/L(8)Y1

BRC1E53A/B/C BRC7FA532F

Cassette units should only be used for specific room configurations where central installation is most suited for hot aisle/ cold aisle arrangements.
Refer to page 21 for more information

Efficiency data			FCQHG + RZQG	100F + 71L9V1	140F + 100L9V1	140F + 125L9V1	140F + 140L9V1	100F + 71L8Y1	140F + 100L8Y1	140F + 125L8Y1	140F + 140L8Y1	71F + 71F + 100L9V1	71F + 71F + 125L9V1	71F + 71F + 100L8Y1	71F + 71F + 125L8Y1
Seasonal efficiency (according to EN14825)	Cooling	Energy label		A++			-	A++				B			
		Pdesign	kW	6.80	9.50	12.00	-	6.80	9.50	12.00		9.50	12.00	9.50	12.00
		SEER		7.00		6.61	-	7.00		6.61		5.10			
		Annual energy consumption	kWh	340	475	636	-	340	475	636		652	824	652	824
	Heating (Average climate)	Energy label		A+	A++		-	A+	A++			A			
		Pdesign	kW	7.60	11.30	12.66	-	7.60	11.30	12.66		11.30	12.71	11.30	12.71
		SCOP		4.54	4.80	4.63	-	4.54	4.80	4.63		3.80			
		Annual energy consumption	kWh	2,344	3,296	3,829	-	2,344	3,296	3,829		4,164	4,683	4,164	4,683

Indoor unit			FCQHG	71F	100F	140F
Dimensions	Unit	HeightxWidthxDepth	mm	288x840x840		
Weight	Unit		kg	25	26	
Decoration panel	Model			BYCQ140D7W1 - white with grey louvers/BYCQ140D7W1W - full white/BYCQ140D7GW1 - auto cleaning panel		
	Colour			Pure White (RAL 9010)/Pure White (RAL 9010)/Pure White (RAL 9010)		
	Dimensions	HeightxWidthxDepth	mm	50x950x950/50x950x950/130x950x950		
	Weight		kg	5.4/5.4/10.3		
Air filter	Type			Resin net with mold resistance		
Fan - Air flow rate	Cooling	High/Nom./Low	m^3/min	21.2/16.7/12.2	32.3/25.7/19.0	33.5/27.3/21.1
	Heating	High/Nom./Low	m^3/min	21.2/16.7/12.2	32.3/25.7/19.0	33.5/27.3/21.1
Sound power level	Cooling		dBA	53	61	
	Heating		dBA	53	61	
Sound pressure level	Cooling	High/Nom./Low	dBA	36/33/29	44/39/33	45/41/37
	Heating	High/Nom./Low	dBA	36/33/29	44/39/33	45/41/37
Control systems	Infrared remote control			BRC7FA532F		
	Wired remote control			BRC1D52 / BRC1E53A/B/C		
Power supply	Phase / Frequency / Voltage		Hz / V	1~ / 50 / 220-240		

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	140L9V1	71L8Y1	100L8Y1	125L8Y1	140LY1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320			990x940x320	1,430x940x320		
Weight	Unit			kg	77	99			80	101		
Sound power level	Cooling			dBA	64	66	67	69	64	66	67	69
Sound pressure level	Cooling	Nom.		dBA	48	50	51	52	48	50	51	52
	Heating	Nom.		dBA	50	52	53		50	52	53	
	Night quiet mode	Level 1		dBA	43	45			43	45		
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50							
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5							
Refrigerant	Type/Charge/GWP			kg	R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5			R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5		
	Charge			TCO_2Eq	6.1	8.4			6.1	8.4		
Piping connections	Liquid	OD		mm	9.52							
	Gas	OD		mm	15.9							
	Piping length	OU - IU	Max.	m	50	75			50	75		
		System	Equivalent	m	70	90			70	90		
			Chargeless	m	30							
	Additional refrigerant charge			kg/m	See installation manual							
	Level difference	IU - OU	Max.	m	30.0							
		IU - IU	Max.	m	0.5							
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240				3N~ / 50 / 380-415			
Current - 50Hz	Maximum fuse amps (MFA)			A	-				16	25		

The BYCQ140D7W1W has white insulations. Be informed that formation of dirt on white insulation is visibly stronger and that it is consequently not advised to install the BYCQ140D7W1W decoration panel in environments exposed to high levels of dirt. | BYCQ140D7W1: pure white standard panel with grey louvers; BYCQ140D7W1W: pure white standard panel with white louvres; BYCQ140D7GW1: pure white auto cleaning panel. | Contains fluorinated greenhouse gases

RZQG-L9V1/L(8)Y1

Pair, Twin, Triple, Double Twin

Industry leading technology for commercial applications and infrastructure cooling

› Best in class efficiency:
- Daikin designed and manufactured swing compressor that ensures high reliability in continuous operation
- control logic that optimises efficiency for the most frequently encountered operating conditions and auxiliary modes (when the unit is not active)
- heat exchangers that optimise the refrigerant flow at the most frequent operating conditions (temperature and load)

› Variable Refrigerant Temperature: top seasonal efficiency throughout the year and quick reaction speed to deliver required cooling capacity in hot temperatures

Variable Refrigerant Temperature

› Re-use of existing pipework of R-22 or R-407C systems

› Reliable cooling is guaranteed with gas cooled PCB because it is not influenced by ambient temperatures

› Maximum piping length of 75m, minimum piping length of 5m

RZQG100-125-140L9V1/L(8)Y1

› Daikin outdoor units are neat, sturdy and can easily be mounted on a roof or terrace, or placed against an outside wall

› Compatible with D-BACS

› Possible for integration in BMS systems.

Outdoor unit				RZQG	71L9V1	100L9V1	125L9V1	140L9V1	71L8Y1	100L8Y1	125L8Y1	140LY1
Dimensions	Unit	HeightxWidthxDepth		mm	990x940x320	1,430x940x320			990x940x320	1,430x940x320		
Weight	Unit			kg	77	99			80	101		
Sound power level	Cooling			dBA	64	66	67	69	64	66	67	69
Sound pressure level	Cooling	Nom.		dBA	48	50	51	52	48	50	51	52
	Heating	Nom.		dBA	50	52	53		50	52	53	
	Night quiet mode	Level 1		dBA	43	45			43	45		
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-15~50							
	Heating	Ambient	Min.~Max.	°CWB	-20~15.5							
Refrigerant	Type/Charge/GWP			kg	R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5			R-410A / 2.9 / 2,087.5	R-410A / 4 / 2,087.5		
	Charge			TCO_2Eq	6.1	8.4			6.1	8.4		
Piping connections	Liquid	OD		mm	9.52							
	Gas	OD		mm	15.9							
	Piping length	OU - IU	Max.	m	50	75			50	75		
		System	Equivalent	m	70	90			70	90		
			Chargeless	m	30							
	Additional refrigerant charge			kg/m	See installation manual							
	Level difference	IU - OU	Max.	m	30.0							
		IU - IU	Max.	m	0.5							
Power supply	Phase / Frequency / Voltage			Hz / V	1~ / 50 / 220-240				3N~ / 50 / 380-415			
Current - 50Hz	Maximum fuse amps (MFA)			A	-				16	25		

Notes

Reliable, efficient and flexible infrastructure cooling 24/7/365 with Sky Air from Daikin

- Boosted capacity indoor systems with official energy labels
- Efficient cooling with widest indoor system range and free cooling option
- 2-step solution for system selection
- Flexible control with guaranteed cooling mode, backup operation and duty rotation

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