



R32

The Next-Generation Refrigerant

Non Inverter Ceiling Cassette

FCE-A Series





. Air
is our EL

There's more to
feel good about



ement

R32

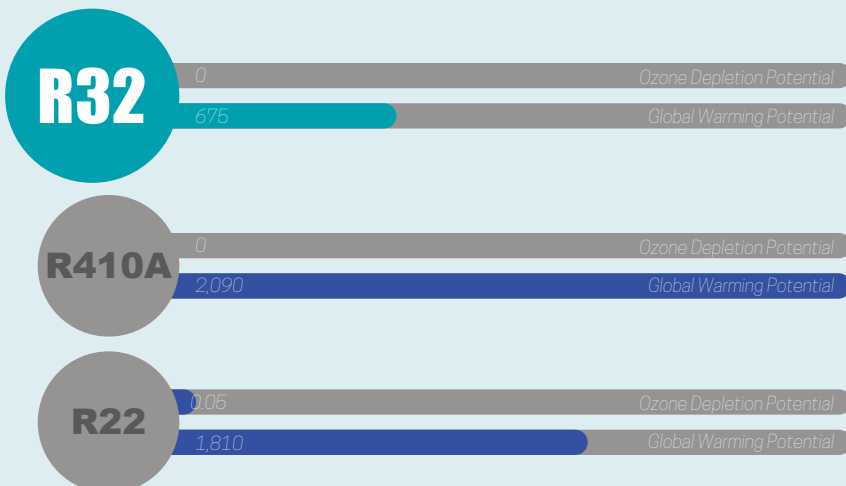
Pentagon of Benefits

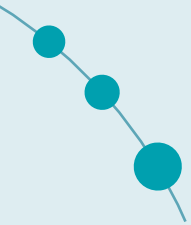
Ozone layer protection

1. R32 does not deplete the ozone layer unlike R22.
2. It is 1/3 lower in global warming potential comparing with R410A.

Economic feasibility

1. R32 refrigerant is now available in high volume globally since it is 50% of R410A composition.
2. R32 has 9 % lower liquid density compared to R410A. In a same system, R32 charge is lesser than R410A.





This game changing refrigerant strikes the perfect balance between energy efficiency, ease of use and environmental sustainability; offering distinct advantages across the board, bringing you comfort and a peace of mind.

Safety

R32 refrigerant is a stable refrigerant. The amount of refrigerant charge deposited into the unit is insufficient to cause ignition.







LCCP

1. Life Cycle Climate Performance (LCCP) is an indicator to evaluate the total global warming impact of refrigerants.
2. Factors included in LCCP are emission during:
 - refrigerant manufacturing.
 - air conditioner manufacturing.
 - air conditioner operating, servicing, and disposal.
3. LCCP of R32 refrigerant is the lowest, which promotes itself as a better substitution for future refrigerant.

Energy efficiency

1. Several factors that contribute to better efficiency of R32 system are:
 - R32 refrigerant has lower vapour density and lower system mass flow rate. Thus, about 50% lower pressure drop can be expected.
 - R32 refrigerant has 43-50% higher latent heat compared to R410A.
 - R32 refrigerant has 41% higher liquid thermal conductivity compared to R410A, which permits better heat transfer at the same mass flux.

Product Line-up

Class	50	71	125
<p>Ceiling Cassette</p> <p>Indoor Unit Panel (Wireless Handset)</p>	 <p>FCE50AV14</p> <p>BC50FA4</p>	 <p>FCE71AV14</p> <p>BC50FA4</p>	 <p>FCE125AV14</p> <p>BC50FA4</p>
<p>Condensing Unit</p> <p>Outdoor Unit (Blue Fin) Power supply</p>	 <p>RE50AV14</p> <p>220-240/1/50 (POD)</p>	 <p>RE71AV14</p> <p>200-240/1/50 (POD)</p>	 <p>RE125AY14</p> <p>380-415/3/50 (POD)</p>

Remark :
POD : Power from Outdoor

The Daikin R32 Next-Generation Refrigerant

Cassette 3x3



High Performance

R32 refrigerant properties boost the capacity of units for selected model to achieve full tonnage.

Capacity (Btu/hr)

Size	R32
50	18,500
71	24,000
125	42,000



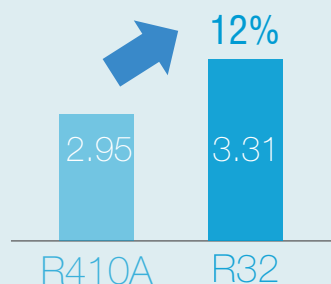
High Air Flow

High air flow ensures the spaces of the room to be cooled down rapidly to the set temperature.



Energy Saving

R32 refrigerant properties provide better heat transfer compared to R410A refrigerant. Therefore, the efficiency is tremendously improved by 12%. Average EER increases as shown.



Cassette 3x3



Slim Unit Design

Low height of 246mm designed to fit into tight ceiling as well as saving space.



4 – Way Air Flow Discharge

This unit promotes even air distribution covering every corner of the room by combining 4-ways air discharge and larger discharge area.

ON / OFF Timer

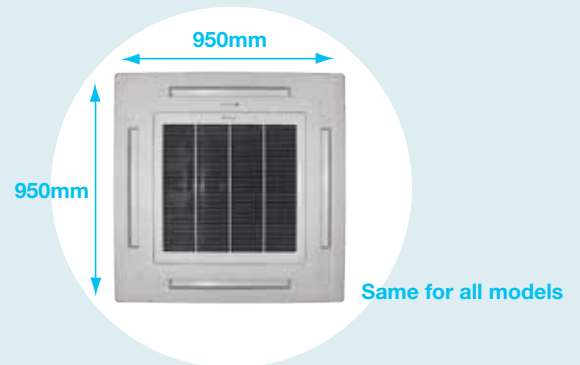
Operation starts when the pre-set time of the ON timer elapses and stops when the pre-set time of the OFF timer elapses. This setting can be set from wireless LCD remote controller or wired LCD remote controller. Based on real time clock

Indoor Unit ON/OFF Switch

Enables to operate the unit even if the remote controller is misplaced or the remote's battery is weak. Pre-set at 24°C cool mode, just press the ON/OFF switch for instant cooling comfort.

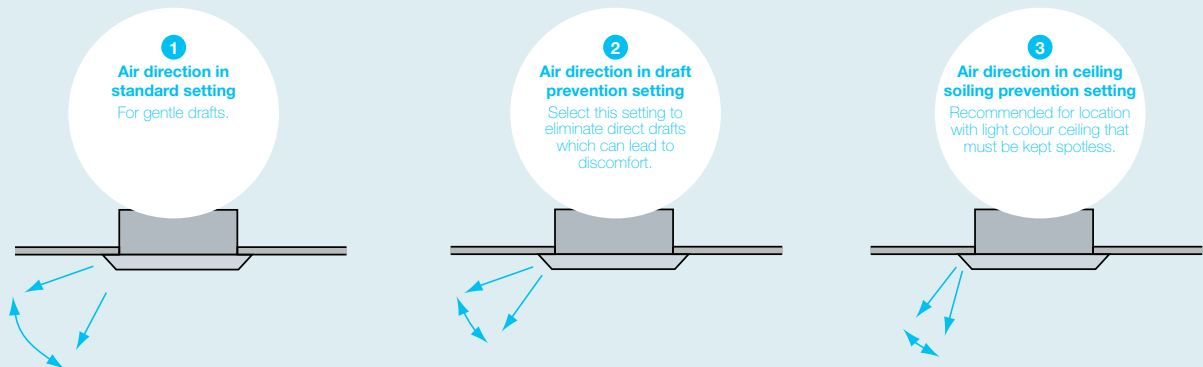
Stronger Air Draft

Motors are designed to boost higher airflow.



Unified Square Panels

Panel size is the same for all models. It is easy to maintain a neat appearance when multiple units are installed in the same room.



Optimal Comfort and Convenience Assured by Air Discharge Modes

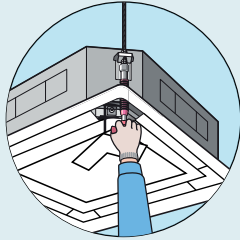
To increase the comfort level of the air conditioned area, the system is built-in with 3 different types of air flow pattern to suit different requirements. Note: The default setting for air swing pattern is 1. The air swing pattern can be selected through the wireless remote control.

Easy Installation and Serviceability



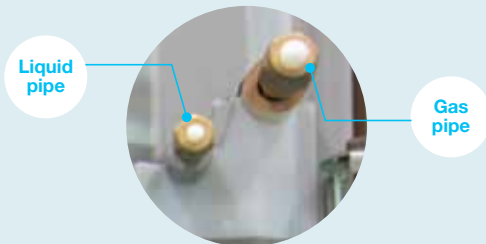
Lightweight

All models can be installed without using a lifter.



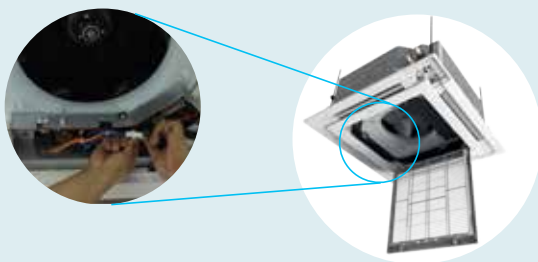
Easy Height Adjustment

Each corner of the unit has an adjuster pocket that allows you to easily adjust the unit's suspended height.



Position of Connecting Pipe and Drain Hose

In order to create more space for installer to work on connection pipe of indoor unit, the connection pipe of gas and liquid are located further from each other and purposely not aligned to hanging hook. To enhance the convenience of installation by relocating drain hose location to another side of cassette unit (not same side with connection pipe).



Easy Accessible to Control Box Location

The control box is now located in a more convenient and accessible space. Without adjusting the panel, control box can be directly accessed from the intake grille. Extra time saving on installation or servicing.

Washer fixing plate



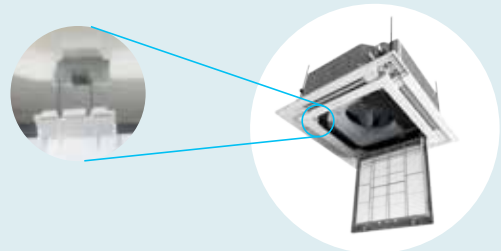
Easy Hanging

Washer fixing plates secure washers in place and prevent washers from falling for easy installation.



Easy Removal of Corner Cover

It is possible to easily remove without use of screws or tools.



Panel Hook Mechanism

This feature enables the installer to work with both hands as the panel can be hung on the unit.

Drain plug
Drain outlet
(with rubber plug)

Just open the intake grille!

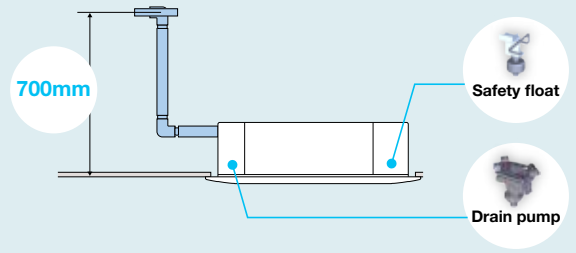
Condition of the Drain Pan and Drain Water

Can be checked by removing the suction grille and drain plug.



Flexible Drain Hose (Supplied together with cassette indoor unit)

Flexible drain hose of 200mm is provided as standard. Ensure the height of drain pipe from ceiling is $\leq 700\text{mm}$ to prevent water leak.



Drain Pump is Equipped as Standard

The unit comes with high head drain pump of 700mm* pressure head as standard. Drainage Protection: Safety Float incorporated in drain pump. Its function is to monitor water level and trigger drain pump to cut in when drainage water reached certain level.

*700mm calculated from drain pipe outlet to highest elevation point

Cleanliness



Saranet Filters

Functions as standard dust filtration with 55% efficiency. Supplied as standard with Cassette 3x3 panel.



Non-Flocking Flaps

Flaps can be detached without the use of tools. Condensation does not easily form and dirt does not cling to non-flocking flaps. They are easy to clean.

Outdoor



RE50/71A



RE125A



High Performance R32 Compressor

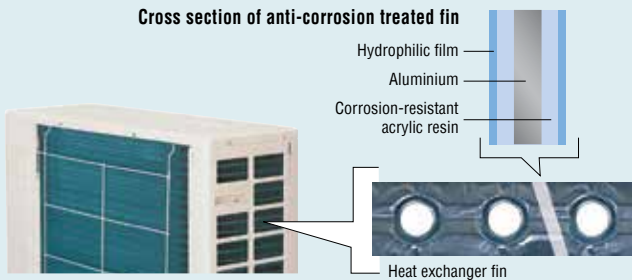
R32 Non-Inverter SkyAir is utilizing high performance compressors to achieve higher EER.

Longer Piping Length

Improved piping length to provide installation flexibility.

Size	50	71	125
Max Piping Length (m)	35	35	50
Max Piping Elevation (m)	20	20	30

Cross section of anti-corrosion treated fin

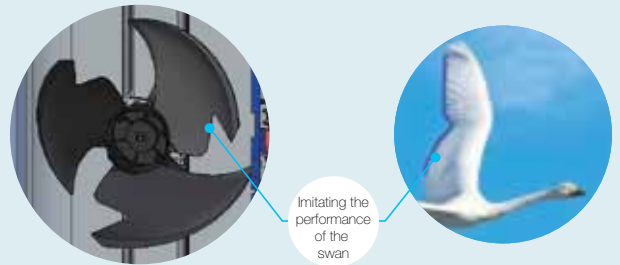


Anti-Corrosion Treatment of Outdoor Heat Exchanger

The outdoor unit's heat exchanger fins are processed using a special anti-corrosion treatment. The surface is covered with a thin acrylic resin layer to provide enhanced resistance to salt corrosion.

High Durability

Outdoor Casing : Adopted zinc coated heavy gauge galvanized steel, with exterior surfaces finished with a weather resistant polyester powder casing, painted with ivory white colour to increase durability.



V-Cut Propeller Fan

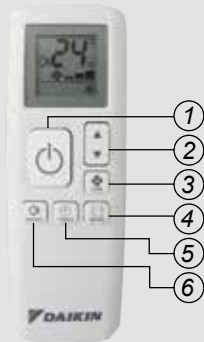
Through the use of a V-cut propeller fan that imitates the efficiency of the swan, a migratory bird, airflow becomes smooth as friction loss is reduced. Therefore, performance increases tremendously. Furthermore, it reduces the sound pressure level as shown below.

Quiet Operation

Sound Pressure Level (dBA)	50	71	125
R32	52	52	58

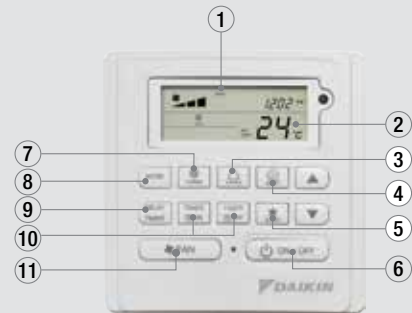
Controllers

Wireless Controller ARC487A1 (Cooling Only)



- ① On/Off
- ② Temperature Setting
- ③ Fan Speed
- ④ Mode
- ⑤ Timer
- ⑥ Swing

Wired Controller BRC51A62 (Cooling Only)



- ① Real time clock and day display
- ② Temperature operate in °C and °F
- ③ Swing function
- ④ Quiet function
- ⑤ Sleep function
- ⑥ ON/OFF switch
- ⑦ Turbo function
- ⑧ Cool, Dry, Fan mode
- ⑨ Delay timer (1 or 2 hours)
- ⑩ 7-days programmable timer
- ⑪ Low, Medium, High, Auto fan speed

Wired Controller (Optional Accessory)



BRC51D61

- ① Temperature Setting
- ② ON/OFF Button
- ③ Mode: Press to select operating mode: COOL, DRY or FAN
- ④ Quiet Operation
- ⑤ Timer
- ⑥ Features Selection (Sleep, Quiet and Powerful)
- ⑦ Fan Operation
- ⑧ Powerful Operation
- ⑨ Swing

Remark : Refer Function Overview for applicable model

Built-in Temperature Sensor in Wired Controllers

All wired controllers has a built-in temperature sensor that enables temperature sensing closer to target area for improved comfort. It can be connected directly to the unit's main board to start operating without extra settings or modifications. This feature can be set by installers during the commissioning.

Product Features

Reliability



Flexible Piping

Designed for your convenience, this series come with piping lengths up to 30m & 50m, for high flexibility in system design and installation.



Auto-Restart with Surge Protection

If there is a sudden power failure, the unit will automatically restart with 64 different recovery patterns according to its last settings. This also prevents a sudden surge of electricity to your power source.

Lifestyle Convenience



Quiet Mode

Reduce background noise with Quiet Mode, which decreases the sound pressure level to as low as 35dBA.



Countdown Timer

The countdown timer setting caters for both On-Timer and Off-Timer settings. Timer setting is with an hourly basis interval up to 12 hours. The On-Timer and Off-Timer can be used in combination.

Serviceability Friendly



Self-Diagnosis Function

This intelligent feature helps to detect faults of malfunctioning in the system.

Warning can be found through display error code in wired LCD remote controller. This information can be found in Installation Manual.

Cleaner Environment



Clean Air

The Saranet Air Filter and Micron-level fiber traps airborne dust particles in the air. The filters can be easily accessed or replaced without tools via the detachable front panel.

Functions Overview



Category	Functions	FCE-A
Basic Function	Inverter	-
	Operation Limit for Cooling (°CDB)(O/D)	19~46
	Operation Limit for Cooling (°FDB)(O/D)	66.2~114.8
Compressor	Rotary Compressor	•
	Scroll Compressor	-
Comfortable Airflow	4-Way Airflow Operation	•
	8-Way Airflow Operation	-
Comfort Control	Auto Fan Speed	•
	Indoor Unit Quiet Operation	•
Operation	Programme Dry Function	•
	Fan Only	•
Lifestyle Convenience	Indoor Unit ON/OFF Button	•
	Signal Receiving Sign *1	•
	R/C with Backlight *2	•*
	Room Temperature Display *2	•*
Health & Clean	Saranet Filter	•
	Ionizer	-
	Washable Grille	•
Timer	Weekly Timer Operation *3	•*
	Countdown ON/OFF Timer (R/C) *1	•
Worry Free (Reliability & Durability)	Auto Restart (after Power Failure)	•
	Self-diagnosis	•
	Wiring Error Check Function	12.5kW (3 phase only)
	Anti-corrosion Treatment of Outdoor Heat Exchanger	Blue Fin
	R32 Refrigerant Gas Leak Sensor	-
Flexibility	ESP Selection	-
	Water Pump (Water Drainage Pipe Flexibility)	•
	°F/°C Changeover R/C Temperature Display (Factory setting: °C)	-
	Pre-charged Piping Length	7.5m
Remote Control	NIM Adaptor	-
	Sequential NIM Adaptor	-
	BAG	-
Remote Controller	Wireless (ARC487A1)	•
	Wired (BRC51A62)	•*
	Wired (BRC51D61) (SHIRO)	•*

Note:

• : Available

- : Not Available

* : Optional (Refer to DAMA Spare Part team for more details on optional items.)

*1: Applicable when wireless R/C ARC487A1 is used.

*2: Applicable when BRC51D61 is used.

*3: Applicable when BRC51A62 and BRC51D61 are used.

Specifications

R32 Non-Inverter Ceiling Cassette Specifications

Model		Indoor unit	FCE50AV14	FCE71A	FCC125A	
		Outdoor unit	RE50AV14	RE71A	RC125A	
Operating Limit		°C	19~46	19~46	19~46	
Cooling Capacity		Btu/h	18500	24000	42000	
		kW	5.42	7.03	12.31	
EER		W/W	3.23	3.30	3.40	
Total Power Input		W	1680	2130	3620	
Total Current		A	7.46	9.45	6.78	
Power supply		V/Ph/ Hz	220-240/1/50	220-240/1/50	380-415/3/50	
		Power from Outdoor				
Indoor	Airflow (H/M/L/Q)		CFM	840/700/560/440	890/760/620/490	1120/1030/890/760
	External Static Pressure (Std/High)		Pa	-	-	-
	Sound Pressure Level (H/M/L/Q)		dBA	42/39/37/35	44/40/37/35	48/46/43/40
	Unit Dimension (H x W x D)		Unit	246 X 840 X 840		288 X 840 X 840
			Packaging	324 X 922 X 922		370 X 922 X 922
	Panel Dimension (H x W x D)		Panel	69 X 950 X 950		
			Packaging	147 X 1008 X 970		
	Machine Weight		Unit	22	22	25
Panel Weight		Panel	5	5	5	
Outdoor	Sound Pressure Level		dBA	52	52	58
	Dimension (H x W x D)		Unit	615 X 845 X 300	615 X 845 X 300	852 X 1030 X 400
			Packaging	679 X 992 X 414	679 X 992 X 414	995 X 1136 X 516
	Machine Weight		kg	40	46	79
Pipe Connection		Liquid	mm	6.4	6.4	9.5
		Gas	mm	12.7	12.7	15.9
Maximum Piping Length		m	35	35	50	
Maximum Piping Elevation		m	20	20	30	
Heat Insulation		Both Liquid and Gas Piping				

Remarks:

1. Due to product innovation, all specifications are subjected to change by the manufacturer without prior notice.
2. All units are being tested and comply to ISO5151.
3. Nominal cooling capacity are based on the conditions: 27°C DB / 19°C WB indoor and 35°C DB outdoor.
4. Sound pressure levels are measured in anechoic chamber. During actual operation, sound pressure level will be higher as a result of room specification condition.

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