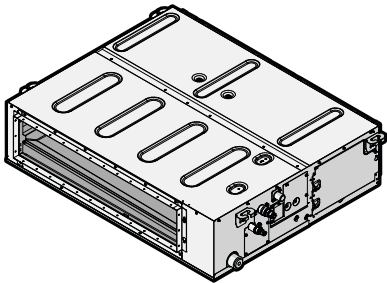


DAIKIN



Operation manual

Split system air conditioners



ADEA35A2VEB
ADEA50A2VEB
ADEA60A2VEB
ADEA71A2VEB
ADEA100A2VEB
ADEA125A2VEB

Operation manual
Split system air conditioners

English

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1 About this document

Thank you for purchasing this product. Please:

- Read the documentation carefully before operating the user interface to ensure the best possible performance.
- Keep the documentation for future reference.

Target audience

End users

i INFORMATION

This appliance is intended to be used by expert or trained users in shops, in light industry, and on farms, or for commercial and household use by lay persons.

Documentation set

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
 - Safety instructions that you must read before operating your system
 - Format: Paper (in the box of the indoor unit)
- **Operation manual:**
 - Quick guide for basic usage
 - Format: Paper (in the box of the indoor unit)

• User reference guide:

- Detailed step-by-step instructions and background information for basic and advanced usage
- Format: Digital files on <http://www.daikineurope.com/support-and-manuals/product-information/>

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your installer.

The original documentation is written in English. All other languages are translations.

2 About the system

i INFORMATION

The sound pressure level is less than 70 dBA.

! WARNING: FLAMMABLE MATERIAL

The R32 refrigerant (if applicable) in this unit is mildly flammable. Refer to the outdoor unit specifications for the type of refrigerant to be used.

! WARNING

- Do NOT modify, disassemble, remove, reinstall or repair the unit yourself as incorrect dismantling or installation may cause an electric shock or fire. Contact your dealer.
- In case of accidental refrigerant leaks, make sure there are no naked flames. The refrigerant itself is entirely safe and non-toxic. R410A is a non-combustible refrigerant, and R32 is a mildly flammable refrigerant, but they will generate a toxic gas when they accidentally leak into a room where combustible air from fan heaters, gas cookers, etc. is present. Always have qualified service personnel confirm that the point of leakage has been repaired or corrected before resuming operation.

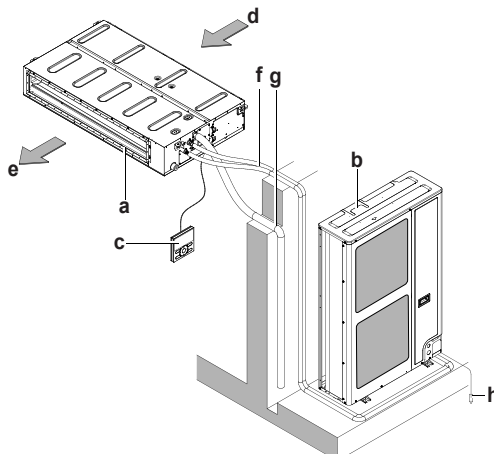
! NOTICE

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Only use accessories, optional equipment and spare parts made or approved by Daikin.

2.1 Components

i INFORMATION

The following illustration is an example and might NOT match your system layout.



- a Indoor unit
- b Outdoor unit
- c User interface
- d Air inlet
- e Air outlet
- f Refrigerant piping and electric wiring
- g Drain pipe
- h Earth wire to ground outdoor unit to prevent electric shocks.

**CAUTION**

Do NOT insert fingers, rods or other objects into the air inlet or outlet. Do NOT remove the fan guard. When the fan is rotating at high speed, it will cause injury.

**CAUTION**

- NEVER touch the internal parts of the controller.
- Do NOT remove the front panel. Some parts inside are dangerous to touch and appliance problems may happen. For checking and adjusting the internal parts, contact your dealer.

**NOTICE**

Do NOT wipe the controller operation panel with benzine, thinner, chemical dust cloth, etc. The panel may get discoloured or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. Wipe it with another dry cloth.

**NOTICE**

NEVER press the button of the user interface with a hard, pointed object. The user interface may be damaged.

**NOTICE**

NEVER pull or twist the electric wire of the user interface. It may cause the unit to malfunction.

3 Operation

3.1 Operation range

Use the system in the following temperature and humidity ranges for safe and effective operation.

For combination with **R410A outdoor unit**, refer to the following table:

ARXS35~71	Cooling	Heating
Outdoor temperature	10~46°C DB	-15~18°C WB
Indoor temperature	14~28°C WB	10~30°C DB
Indoor humidity	≤80% ^(a)	—

AZQS71~125	Cooling	Heating
Outdoor temperature	-5~46°C DB	-15~15.5°C WB
Indoor temperature	14~28°C WB	10~27°C DB
Indoor humidity	≤80% ^(a)	—

For combination with **R32 outdoor unit**, refer to the following table:

ARXM35~71	Cooling	Heating
Outdoor temperature	-10~46°C DB	-15~24°C DB -16~18°C WB
Indoor temperature	21~37°C DB 14~28°C WB	10~30°C DB
Indoor humidity	≤80% ^(a)	—

AZAS71~125	Cooling	Heating
Outdoor temperature	-5~46°C DB	-15~21°C DB -15~15.5°C WB
Indoor temperature	20~38°C DB 14~28°C WB	10~27°C DB
Indoor humidity	≤80% ^(a)	—

- (a) To avoid condensation and water dripping out of the unit. If the temperature or the humidity is beyond these conditions, safety devices may be put in action and the air conditioner may not operate.

Setting temperature range of the user interface:

Cooling	Heating
17~32°C	16~31°C

3.2 Operation procedure

- Turn on the power at least 6 hours before operating the unit in order to ensure smoother operation. As soon as the power is turned on, the user interface display appears.
- If there was a power failure during operation, the system automatically restarts immediately after the power supply is recovered.
- The setting temperature range of the user interface is described in chapter "Operation range".
- If you select a function which is not available, the message **NOT AVAILABLE** appears on the user interface.
- The operation procedure depends on the model (heat pump or cooling only). Contact your dealer to confirm which model you are using.
- Read the documentation carefully before operating the user interface to ensure the best possible performance.

4 Energy saving and optimum operation

**CAUTION**

NEVER expose little children, plants or animals directly to the airflow.

**WARNING**

Do NOT place objects below the indoor and/or outdoor unit that may get wet. Otherwise condensation on the unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, and objects under the unit may get dirty or damaged.

**NOTICE**

Do NOT use the system for other purposes. In order to avoid any quality deterioration, do NOT use the unit for cooling precision instruments, food, plants, animals, or works of art.

**CAUTION**


Do NOT operate the system when using a room fumigation-type insecticide. Chemicals could collect in the unit, and endanger the health of people who are hypersensitive to chemicals.

**WARNING**

Do NOT place a flammable spray bottle near the air conditioner and do NOT use sprays. Doing so may result in a fire.

5 Maintenance and service

Observe the following precautions to ensure the system operates properly.

- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate often. Extended use requires special attention to ventilation.
- Keep doors and windows closed. If the doors and windows remain open, air will flow out of your room causing a decrease in the cooling or heating effect.
- Be careful NOT to cool or heat too much. To save energy, keep the temperature setting at a moderate level.
- NEVER place objects near the air inlet or the air outlet of the unit. Doing so may cause a reduced heating/cooling effect or stop operation.
- Turn off the main power supply switch to the unit when the unit is NOT used for longer periods of time. If the main power supply switch is on, the unit consumes electricity. Before restarting the unit, turn on the main power supply switch 6 hours before operation to ensure smooth running.
- When the display shows  (time to clean the air filter), clean the filters (see "5.4.2 To clean the air filter" on page 5).
- Condensation may form if the humidity is above 80% or if the drain outlet gets blocked.
- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling. Notice that it may take some time for the room temperature to reach the set temperature. Consider using the timer setting options.
- Adjust the air flow direction to avoid cool air from gathering on the floor or warm air against the ceiling. (Up during cooling or dry operation to the ceiling and down during heating operation.)
- Avoid direct air flow to room inhabitants.

5 Maintenance and service

5.1 Overview: Maintenance and service

The installer has to perform a yearly maintenance.

About the refrigerant

This product contains fluorinated greenhouse gases. Do NOT vent gases into the atmosphere.

Refrigerant type: R32

Global warming potential (GWP) value: 675

Refrigerant type: R410A

Global warming potential (GWP) value: 2087.5

NOTICE

In Europe, the **greenhouse gas emissions** of the total refrigerant charge in the system (expressed as tonnes CO₂ equivalent) is used to determine the maintenance intervals. Follow the applicable legislation.

Formula to calculate the greenhouse gas emissions:
GWP value of the refrigerant × Total refrigerant charge [in kg] / 1000

Please contact your installer for more information.



WARNING

R410A is a non-combustible refrigerant, and R32 is a mildly flammable refrigerant; they normally don't leak. If the refrigerant leaks in the room and comes into contact with fire from a burner, a heater, or a cooker, this may result in a fire (in case of R32), or the formation of a harmful gas.

Turn off any combustible heating devices, ventilate the room, and contact the dealer from where you purchased the unit.

Do not use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.



WARNING

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.



NOTICE

Maintenance MUST be done by an authorized installer or service agent.

We recommend performing maintenance at least once a year. However, applicable legislation might require shorter maintenance intervals.



CAUTION

Before accessing terminal devices, make sure to interrupt all power supply.



DANGER: RISK OF ELECTROCUTION

To clean the air conditioner or air filter, be sure to stop operation and turn all power supplies off. Otherwise, an electric shock and injury may result.



WARNING

To prevent electric shocks or fire:

- Do NOT rinse the unit.
- Do NOT operate the unit with wet hands.
- Do NOT place any objects containing water on the unit.



CAUTION

After a long use, check the unit stand and fitting for damage. If damaged, the unit may fall and result in injury.



CAUTION

Do NOT touch the heat exchanger fins. These fins are sharp and could result in cutting injuries.



NOTICE

When cleaning the heat exchanger, make sure to remove the switch box and fan motor. Water or detergent might deteriorate the insulation of electronic components and result in burnout of these components.



WARNING

Be careful with ladders when working in high places.

5.2 To clean the drain pan

Clean the drain pan so that it does NOT become clogged and dusty.

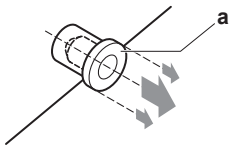
5.3 To handle the drain pipe plug

NOTICE

- Do NOT remove the drain pipe plug. Water might leak out.
- Use the drain outlet only to discharge the water if the drain pump is not used or before maintenance.
- Insert and remove the drain plug gently. Excessive force may deform the drain socket of the drain pan.

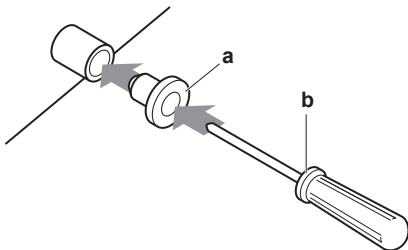
1 Pull out the plug.

- Do NOT wiggle the plug up and down.



2 Push in the plug.

- Set the plug and push it in using a Phillips screwdriver.



- a Drain plug
b Phillips screwdriver

5.4 Cleaning the air filter, suction grille, air outlet and outside panels

5.4.1 To clean the air outlet and outside panels



WARNING

Do NOT let the indoor unit get wet. **Possible consequence:** Electric shock or fire.

NOTICE

- Do NOT use gasoline, benzene, thinner polishing powder or liquid insecticide. **Possible consequence:** Discoloration and deformation.
- Do NOT use water or air of 50°C or higher. **Possible consequence:** Discoloration and deformation.
- Do NOT scrub firmly when washing the blade with water. **Possible consequence:** The surface sealing peels off.

Clean with a soft cloth. If it is difficult to remove stains, use water or neutral detergent.

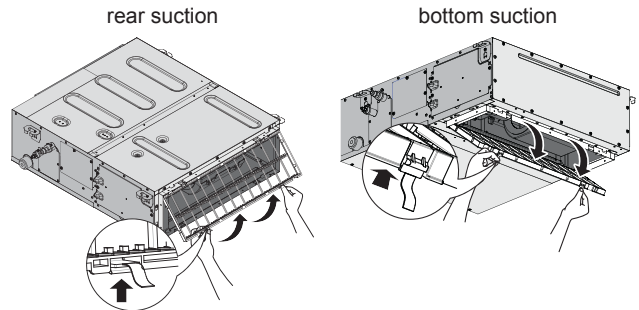
5.4.2 To clean the air filter

When to clean the air filter:

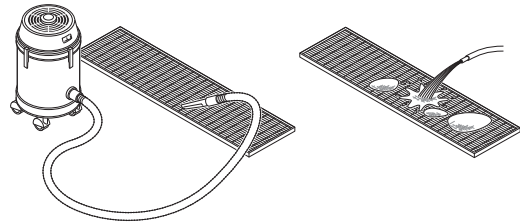
- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **TIME TO CLEAN AIR FILTER** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

How to clean the air filter:

- Remove the air filters by pulling their cloth upward (in case of rear suction) or backward (in case of bottom suction).

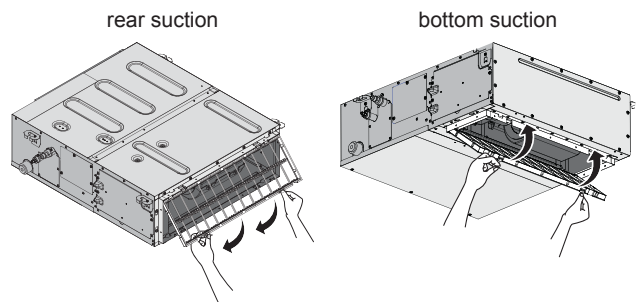


- Clean the air filter. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



- Dry the air filter in the shadow.

- Reattach the air filter. Align the 2 hanger brackets and push the 2 clips in their place and pull the cloth if necessary.



- Confirm that 4 hangers are fixed.
- In case of bottom suction, close the air inlet grille.
- Turn ON the power.
- Press the **FILTER SIGN RESET** button.

Result: The **TIME TO CLEAN AIR FILTER** notification disappears from the user interface.

5.5 Maintenance before a long stop period

E.g., at the end of the season.

- Let the indoor units run in fan only operation for about half a day in order to dry the interior of the units.
- Turn off the power. The user interface display disappears. When the main power is turned on, the air conditioner will use some power, even if it is not operating.
- Clean air filters and casings of indoor units. Contact your installer or maintenance person to clean air filters and casings of the indoor unit. Maintenance tips and procedures for cleaning are provided in the installation/operation manuals of dedicated indoor units. Make sure to install cleaned air filters back in the same position.

6 Troubleshooting

5.6 Maintenance after a long stop period

E.g., at the beginning of the season.

- Check and remove everything that might be blocking inlet and outlet vents of indoor units and outdoor units.
- Check if the earth is connected properly.
- Check if there is somewhere a broken wire. Contact your dealer in case of problems.
- Clean air filters and casings of indoor units. Contact your installer or maintenance person to clean air filters and casings of the indoor unit. Maintenance tips and procedures for cleaning are provided in the installation/operation manuals of dedicated indoor units. Make sure to install cleaned air filters back in the same position.
- Turn on the power at least 6 hours before operating the unit in order to ensure smoother operation. As soon as the power is turned on, the user interface display appears.

6 Troubleshooting

If one of the following malfunctions occur, take the measures shown below and contact your dealer.



WARNING

Stop operation and shut off the power if anything unusual occurs (burning smells etc.).

Leaving the unit running under such circumstances may cause breakage, electric shock or fire. Contact your dealer.

The system **MUST** be repaired by a qualified service person.

Malfunction	Measure
If a safety device such as a fuse, a breaker or an earth leakage breaker frequently actuates or the ON/OFF switch does NOT properly work.	Turn OFF the main power switch.
If water leaks from the unit.	Stop the operation.
The operation switch does NOT work well.	Turn OFF the power supply.
If the user interface display indicates the unit number, the operation lamp flashes and the malfunction code appears.	Notify your installer and report the malfunction code.

If the system does NOT properly operate except for the above mentioned cases and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

Malfunction	Measure
If the system does not operate at all.	<ul style="list-style-type: none"> • Check if there is no power failure. Wait until power is restored. If a power failure occurs during operation, the system automatically restarts immediately after power is restored. • Check if no fuse has blown or breaker is activated. Change the fuse or reset the breaker if necessary.
The system stops immediately after starting operation.	<ul style="list-style-type: none"> • Check if air inlet or outlet of outdoor or indoor unit is not blocked by obstacles. Remove any obstacles and make sure the air can flow freely. • Check if the air filter is clogged. Contact your dealer to clean the air filter.

Malfunction	Measure
The system operates but cooling or heating is insufficient.	<ul style="list-style-type: none"> • Check if air inlet or outlet of outdoor or indoor unit is not blocked by obstacles. Remove any obstacles and make sure the air can flow freely. • Check if the air filter is clogged. Contact your dealer to clean the air filter (refer to "Maintenance" in the indoor unit manual). • Check the temperature setting. Refer to the manual of the user interface. • Check if the fan speed setting is set to low speed. Refer to the manual of the user interface. • Check if the air flow angle is proper. Refer to the manual of the user interface. • Check for open doors or windows. Close doors and windows to prevent wind from coming in. • Check if direct sunlight enters the room. Use curtains or blinds. • Check if there are too many occupants in the room during cooling operation. Check if the heat source of the room is excessive. • If the heat source of the room is excessive (when cooling). Cooling effect decreases if heat gain of the room is too large.
Operation stops suddenly. (Operation lamp blinks.)	<ul style="list-style-type: none"> • Check if the air filter is clogged. Contact your dealer to clean the air filter (refer to "Maintenance" in the indoor unit manual). • Check if air inlet or outlet of outdoor or indoor unit is not blocked by obstacles. Remove any obstacles, turn the breaker OFF and back ON. If the lamp still blinks, contact your dealer. • Check if all indoor units connected to outdoor unit in the multi-system are operating in the same mode.
An abnormal function happens during operation.	<ul style="list-style-type: none"> • The air conditioner may malfunction because of lightning or radio waves. Turn the breaker OFF and back ON.


If after checking all above items, it is impossible to fix the problem yourself, contact your installer and state the symptoms, the complete model name of the unit (with manufacturing number if possible) and the installation date (possibly listed on the warranty card).

6.1 Symptoms that are NOT system malfunctions

The following symptoms are NOT system malfunctions:

6.1.1 Symptom: The system does not operate

- The air conditioner does not start immediately after the ON/OFF button on the user interface is pressed. If the operation lamp lights, the air conditioner is in normal condition. It does not restart immediately because one of its safety devices actuates to prevent the air conditioner from being overloaded. The air conditioner will turn on again automatically after 3 minutes.
- The air conditioner does not start immediately after the power supply is turned on. Wait 1 minute until the microcomputer is prepared for operation.

- The air conditioner does not restart immediately when the temperature setting button is returned to its former position after pushing. It does not restart immediately because one of its safety devices actuates to prevent the air conditioner from being overloaded. The air conditioner will turn on again automatically after 3 minutes.
- The outdoor unit has stopped. This is because the room temperature has reached the set temperature. The unit switches to fan operation. "  " (external control icon) is displayed on the user interface and the actual operation is different from the user interface setting. For multi-split models, the microcomputer executes the following control depending on the operation mode of other indoor units.
- The fan speed is different from the setting. Pressing the fan speed control button does not change the fan speed. When the room temperature reaches the set temperature in heating mode or the unit's maximum capacity is reached, the outdoor unit will stop operation and the indoor unit will operate in fan only mode (low fan speed). In case of multi-split, the indoor unit alternately operates in fan stop mode and fan only mode (LL= low fan speed). This is to prevent the cool air from being blown directly onto anyone present in the room.

6.1.2 Symptom: White mist comes out of a unit (Indoor unit)

- When humidity is high during cooling operation (in oily and dusty places). If the interior of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the interior of the indoor unit. Ask your dealer for details on cleaning the unit. This operation requires a qualified service person.
- When the air conditioner is changed over to heating operation after defrost operation. Moisture generated by defrost becomes steam and exits.

6.1.3 Symptom: Dust comes out of the unit

When the unit is used for the first time in a long time. This is because dust has gotten into the unit.

6.1.4 Symptom: The units can give off odours

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

6.1.5 Symptom: The operation stopped suddenly (Operation lamp is on)

The air conditioner may stop for system protection due to large voltage fluctuation. It automatically resumes operation after about 3 minutes.

6.1.6 Symptom: The outdoor fan rotates while the air conditioner is not in operation

- **After operation has stopped.** The outdoor fan continues to rotate for another 30 seconds for system protection.
- **While the air conditioner is not in operation.** When the outdoor temperature is very high, the outdoor fan starts to rotate for system protection.

6.1.7 Symptom: The heating operation stops suddenly and a flowing sound is heard

The system is removing frost on the outdoor unit. You should wait for about 3 to 8 minutes.

7 Disposal



NOTICE

Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts **MUST** comply with applicable legislation. Units **MUST** be treated at a specialised treatment facility for reuse, recycling and recovery.



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