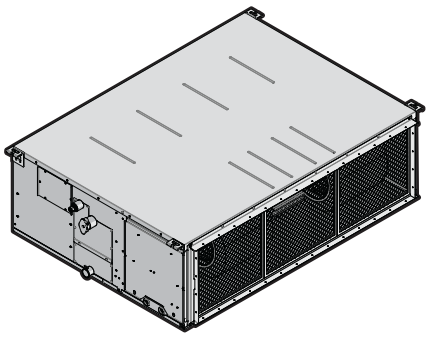
Installer and user reference guide

Split system air conditioners



FDA200AXVEB
FDA250AXVEB

Installer and user reference guide
Split system air conditioners

English

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1 General safety precautions

1.1 About the documentation

- The original documentation is written in English. All other languages are translations.
- The precautions described in this document cover very important topics, follow them carefully.
- The installation of the system, and all activities described in the installation manual and the installer reference guide MUST be performed by an authorised installer.

1.1.1 Meaning of warnings and symbols

DANGER

Indicates a situation that results in death or serious injury.

DANGER: RISK OF ELECTROCUTION

Indicates a situation that could result in electrocution.

DANGER: RISK OF BURNING

Indicates a situation that could result in burning because of extreme hot or cold temperatures.

DANGER: RISK OF EXPLOSION

Indicates a situation that could result in explosion.

WARNING

Indicates a situation that could result in death or serious injury.

WARNING: FLAMMABLE MATERIAL

CAUTION

Indicates a situation that could result in minor or moderate injury.

NOTICE

Indicates a situation that could result in equipment or property damage.

INFORMATION

Indicates useful tips or additional information.

Symbol	Explanation
	Before installation, read the installation and operation manual, and the wiring instruction sheet.
	Before performing maintenance and service tasks, read the service manual.
	For more information, see the installer and user reference guide.

1.2 For the user

- If you are NOT sure how to operate the unit, contact your installer.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall NOT play with the appliance. Cleaning and user maintenance shall NOT be made by children without supervision.

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.

NOTICE

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

- Units are marked with the following symbol:

This means that electrical and electronic products may NOT be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation.
Units must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

- Batteries are marked with the following symbol:

This means that the batteries may NOT be mixed with unsorted household waste. If a chemical symbol is printed beneath the symbol, this chemical symbol means that the battery contains a heavy metal above a certain concentration.
Possible chemical symbols are: Pb: lead (>0.004%).
Waste batteries must be treated at a specialized treatment facility for reuse. By ensuring waste batteries are disposed of correctly, you will help to prevent potential negative consequences for the environment and human health.

1.3 For the installer

1.3.1 General

If you are NOT sure how to install or operate the unit, contact your dealer.

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.

WARNING

Make sure installation, testing and applied materials comply with applicable legislation (on top of the instructions described in the Daikin documentation).

CAUTION

Wear adequate personal protective equipment (protective gloves, safety glasses,…) when installing, maintaining or servicing the system.

WARNING

Tear apart and throw away plastic packaging bags so that nobody, especially children, can play with them. Possible risk: suffocation.

DANGER: RISK OF BURNING

- Do NOT touch the refrigerant piping, water piping or internal parts during and immediately after operation. It could be too hot or too cold. Give it time to return to normal temperature. If you must touch it, wear protective gloves.
- Do NOT touch any accidental leaking refrigerant.

WARNING

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.

CAUTION

Do NOT touch the air inlet or aluminium fins of the unit.

NOTICE

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

NOTICE

Works executed on the outdoor unit are best done under dry weather conditions to avoid water ingress.

In accordance with the applicable legislation, it might be necessary to provide a logbook with the product containing at least: information on maintenance, repair work, results of tests, stand-by periods,…

Also, at least, following information MUST be provided at an accessible place at the product:

- Instructions for shutting down the system in case of an emergency
- Name and address of fire department, police and hospital
- Name, address and day and night telephone numbers for obtaining service

In Europe, EN378 provides the necessary guidance for this logbook.

1.3.2 Installation site

- Provide sufficient space around the unit for servicing and air circulation.
- Make sure the installation site withstands the weight and vibration of the unit.
- Make sure the area is well ventilated. Do NOT block any ventilation openings.
- Make sure the unit is level.

Do NOT install the unit in the following places:

- In potentially explosive atmospheres.
- In places where there is machinery that emits electromagnetic waves. Electromagnetic waves may disturb the control system, and cause malfunction of the equipment.
- In places where there is a risk of fire due to the leakage of flammable gases (example: thinner or gasoline), carbon fibre, ignitable dust.
- In places where corrosive gas (example: sulphurous acid gas) is produced. Corrosion of copper pipes or soldered parts may cause the refrigerant to leak.

Instructions for equipment using R32 refrigerant

If applicable.

WARNING

- Do NOT pierce or burn.
- Do NOT use means to accelerate the defrosting process or to clean the equipment, other than those recommended by the manufacturer.
- Be aware that R32 refrigerant does NOT contain an odour.

WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) and have a room size as specified below.

NOTICE

- Do NOT re-use joints which have been used already.
- Joints made in installation between parts of refrigerant system shall be accessible for maintenance purposes.

WARNING

Make sure installation, servicing, maintenance and repair comply with instructions from Daikin and with applicable legislation (for example national gas regulation) and are executed only by authorised persons.

Installation space requirements

NOTICE

- Pipework shall be protected from physical damage.
- Installation of pipework shall be kept to a minimum.

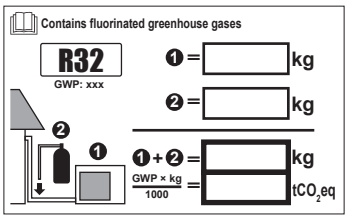
WARNING

If appliances contain R32 refrigerant, the floor area of the room in which the appliances are installed, operated and stored MUST be larger than the minimum floor area defined in table below A (m^2). This applies to:

- Indoor units **without** a refrigerant leakage sensor; in case of indoor units **with** refrigerant leakage sensor, consult the installation manual
- Outdoor units installed or stored indoors (e.g. winter garden, garage, machinery room)
- Pipework in unventilated spaces

To determine the minimum floor area

1 Determine the total refrigerant charge in the system (= factory refrigerant charge ❶ + ❷ additional refrigerant amount charged).

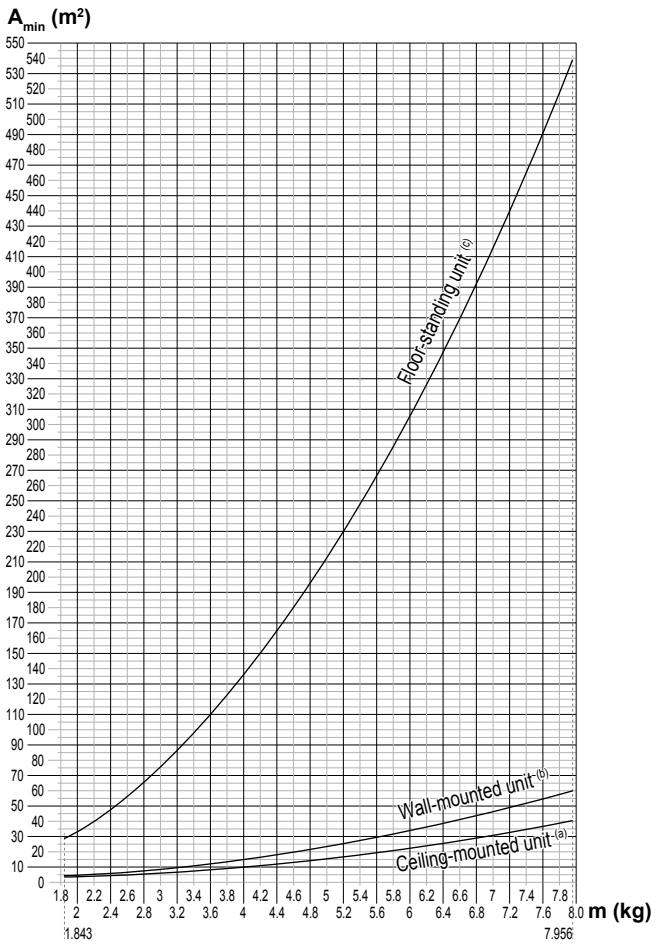


2 Determine which graph or table to use.

- For indoor units: Is the unit ceiling-mounted, wall-mounted or floor-standing?
- For outdoor units installed or stored indoors, and field piping in unventilated spaces, this depends on the installation height:

If the installation height is…	Then use the graph or table for…
<1.8 m	Floor-standing units
1.8≤x<2.2 m	Wall-mounted units
≥2.2 m	Ceiling-mounted units

3 Use the graph or table to determine the minimum floor area.



Ceiling-mounted unit(a)	
m (kg)	A_{min} (m^2)
≤1.842	—
1.843	3.64
2.0	3.95
2.2	4.34
2.4	4.74
2.6	5.13
2.8	5.53
3.0	5.92
3.2	6.48
3.4	7.32
3.6	8.20
3.8	9.14
4.0	10.1
4.2	11.2
4.4	12.3
4.6	13.4
4.8	14.6
5.0	15.8
5.2	17.1
5.4	18.5
5.6	19.9
5.8	21.3
6.0	22.8
6.2	24.3
6.4	25.9
6.6	27.6
6.8	29.3
7.0	31.0
7.2	32.8
7.4	34.7
7.6	36.6
7.8	38.5
7.956	40.1

Wall-mounted unit(b)	
m (kg)	A_{min} (m^2)
≤1.842	—
1.843	4.45
2.0	4.83
2.2	5.31
2.4	5.79
2.6	6.39
2.8	7.41
3.0	8.51
3.2	9.68
3.4	10.9
3.6	12.3
3.8	13.7
4.0	15.1
4.2	16.7
4.4	18.3
4.6	20.0
4.8	21.8
5.0	23.6
5.2	25.6
5.4	27.6
5.6	29.7
5.8	31.8
6.0	34.0
6.2	36.4
6.4	38.7
6.6	41.2
6.8	43.7
7.0	46.3
7.2	49.0
7.4	51.8
7.6	54.6
7.8	57.5
7.956	59.9

Floor-standing unit(c)	
m (kg)	A_{min} (m^2)
≤1.842	—
1.843	28.9
2.0	34.0
2.2	41.2
2.4	49.0
2.6	57.5
2.8	66.7
3.0	76.6
3.2	87.2
3.4	98.4
3.6	110
3.8	123
4.0	136
4.2	150
4.4	165
4.6	180
4.8	196
5.0	213
5.2	230
5.4	248
5.6	267
5.8	286
6.0	306
6.2	327
6.4	349
6.6	371
6.8	394
7.0	417
7.2	441
7.4	466
7.6	492
7.8	518
7.956	539

m Total refrigerant charge in the system
A_{min} Minimum floor area
(a) Ceiling-mounted unit (= Ceiling-mounted unit)
(b) Wall-mounted unit (= Wall-mounted unit)
(c) Floor-standing unit (= Floor-standing unit)

1.3.3 Refrigerant

If applicable. See the installation manual or installer reference guide of your application for more information.

NOTICE

Make sure refrigerant piping installation complies with applicable legislation. In Europe, EN378 is the applicable standard.

NOTICE

Make sure the field piping and connections are NOT subjected to stress.

WARNING

During tests, NEVER pressurize the product with a pressure higher than the maximum allowable pressure (as indicated on the nameplate of the unit).

WARNING

Take sufficient precautions in case of refrigerant leakage. If refrigerant gas leaks, ventilate the area immediately. Possible risks:

- Excessive refrigerant concentrations in a closed room can lead to oxygen deficiency.
- Toxic gas may be produced if refrigerant gas comes into contact with fire.

DANGER: RISK OF EXPLOSION

Pump down – Refrigerant leakage. If you want to pump down the system, and there is a leak in the refrigerant circuit:

- Do NOT use the unit's automatic pump down function, with which you can collect all refrigerant from the system into the outdoor unit. **Possible consequence:** Self-combustion and explosion of the compressor because of air going into the operating compressor.
- Use a separate recovery system so that the unit's compressor does NOT have to operate.

WARNING

ALWAYS recover the refrigerant. Do NOT release them directly into the environment. Use a vacuum pump to evacuate the installation.

NOTICE

After all the piping has been connected, make sure there is no gas leak. Use nitrogen to perform a gas leak detection.

NOTICE

- To avoid compressor breakdown, do NOT charge more than the specified amount of refrigerant.
- When the refrigerant system is to be opened, refrigerant MUST be treated according to the applicable legislation.

WARNING

Make sure there is no oxygen in the system. Refrigerant may only be charged after performing the leak test and the vacuum drying.

- In case recharge is required, see the nameplate of the unit. It states the type of refrigerant and necessary amount.
- The unit is factory charged with refrigerant and depending on pipe sizes and pipe lengths some systems require additional charging of refrigerant.

- Only use tools exclusively for the refrigerant type used in the system, this to ensure pressure resistance and prevent foreign materials from entering into the system.
- Charge the liquid refrigerant as follows:

If	Then
A siphon tube is present (i.e., the cylinder is marked with "Liquid filling siphon attached")	Charge with the cylinder upright. 
A siphon tube is NOT present	Charge with the cylinder upside down. 

- Open refrigerant cylinders slowly.
- Charge the refrigerant in liquid form. Adding it in gas form may prevent normal operation.

CAUTION

When the refrigerant charging procedure is done or when pausing, close the valve of the refrigerant tank immediately. If the valve is NOT closed immediately, remaining pressure might charge additional refrigerant. **Possible consequence:** Incorrect refrigerant amount.

1.3.4 Brine

If applicable. See the installation manual or installer reference guide of your application for more information.

WARNING

The selection of the brine MUST be in accordance with the applicable legislation.

WARNING

Take sufficient precautions in case of brine leakage. If brine leaks, ventilate the area immediately and contact your local dealer.

WARNING

The ambient temperature inside the unit can get much higher than that of the room, e.g. 70°C. In case of a brine leak, hot parts inside the unit can create a hazardous situation.

WARNING

The use and installation of the application MUST comply with the safety and environmental precautions specified in the applicable legislation.

1.3.5 Water

If applicable. See the installation manual or installer reference guide of your application for more information.

NOTICE

Make sure water quality complies with EU directive 98/83 EC.

1.3.6 Electrical

DANGER: RISK OF ELECTROCUTION

- Turn OFF all power supply before removing the switch box cover, connecting electrical wiring or touching electrical parts.
- Disconnect the power supply for more than 1 minute, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage MUST be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram.
- Do NOT touch electrical components with wet hands.
- Do NOT leave the unit unattended when the service cover is removed.

WARNING

If NOT factory installed, a main switch or other means for disconnection, having a contact separation in all poles providing full disconnection under overvoltage category III condition, MUST be installed in the fixed wiring.

WARNING

- ONLY use copper wires.
- Make sure the field wiring complies with the applicable legislation.
- All field wiring MUST be performed in accordance with the wiring diagram supplied with the product.
- NEVER squeeze bundled cables and make sure they do NOT come in contact with the piping and sharp edges. Make sure no external pressure is applied to the terminal connections.
- Make sure to install earth wiring. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earth may cause electrical shock.
- Make sure to use a dedicated power circuit. NEVER use a power supply shared by another appliance.
- Make sure to install the required fuses or circuit breakers.
- Make sure to install an earth leakage protector. Failure to do so may cause electric shock or fire.
- When installing the earth leakage protector, make sure it is compatible with the inverter (resistant to high frequency electric noise) to avoid unnecessary opening of the earth leakage protector.

CAUTION

When connecting the power supply, the earth connection must be made before the current-carrying connections are established. When disconnecting the power supply, the current-carrying connections must be separated before the earth connection is. The length of the conductors between the power supply stress relief and the terminal block itself must be as such that the current-carrying wires are tautened before the earth wire is in case the power supply is pulled loose from the stress relief.

NOTICE

Precautions when laying power wiring:

- Do NOT connect wiring of different thicknesses to the power terminal block (slack in the power wiring may cause abnormal heat).
- When connecting wiring which is the same thickness, do as shown in the figure above.
- For wiring, use the designated power wire and connect firmly, then secure to prevent outside pressure being exerted on the terminal board.
- Use an appropriate screwdriver for tightening the terminal screws. A screwdriver with a small head will damage the head and make proper tightening impossible.
- Over-tightening the terminal screws may break them.

WARNING

- After finishing the electrical work, confirm that each electrical component and terminal inside the electrical components box is connected securely.
- Make sure all covers are closed before starting up the unit.

NOTICE

Only applicable if the power supply is three-phase, and the compressor has an ON/OFF starting method.

If there exists the possibility of reversed phase after a momentary black out and the power goes on and off while the product is operating, attach a reversed phase protection circuit locally. Running the product in reversed phase can break the compressor and other parts.

2 About the documentation

2.1 About this document

INFORMATION

Make sure that the user has the printed documentation and ask him/her to keep it for future reference.

Target audience

Authorised installers + end users

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.

WARNING

Make sure installation, servicing, maintenance, repair and applied materials follow the instructions from Daikin and, in addition, comply with applicable legislation and are performed by qualified persons only. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard.

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 installing
  - Format: Paper (in the box of the indoor unit)
- **Indoor unit installation and operation manual:**
  - Installation and operation instructions
  - Format: Paper (in the box of the indoor unit)
- **Installer and user reference guide:**
  - Preparation of the installation, good practices, reference data,…
  - 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 dealer.

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

Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin extranet (authentication required).

2.2 Installer and user reference guide at a glance

Chapter	Description
General safety precautions	Safety instructions that you must read before installing
About the documentation	What documentation exists for the installer
About the box	How to unpack the units and remove their accessories
About the units and options	▪ System layout ▪ Possible combinations of units and options
Preparation	What to do and know before going on-site
Installation	What to do and know to install the system
Commissioning	What to do and know to commission the system after it is configured
Configuration	What to do and know to configure the system after it is installed
Hand-over to the user	What to give and explain to the user
Disposal	How to dispose of the system
Technical data	Specifications of the system
About the system	▪ Components ▪ Information requirements for fan coil units ▪ User interface
Before operation	What to do before starting operation
Operation	How to operate the system
Energy saving and optimum operation	How to save energy
Maintenance and service	How to maintain and service the units
Troubleshooting	What to do in case of problems
Relocation	How to relocate the system
Disposal	How to dispose of the system

Chapter	Description
Glossary	Definition of terms

For the installer

3 About the box

Following special symbols may appear on the indoor unit packing case. For general symbols, refer to the General safety precaution.

Symbol	Meaning
	Be careful when handling the unit. Indoor unit contains rotating parts.

3.1 Overview: About the box

This chapter describes what you have to do after the box with the indoor unit is delivered on-site.

Keep the following in mind:

- At delivery, the unit MUST be checked for damage. Any damage MUST be reported immediately to the claims agent of the carrier.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.
- Prepare the path along which you want to bring the unit inside in advance.

3.2 Indoor unit

INFORMATION

The following figures are just examples and may NOT completely match your system layout.

WARNING: FLAMMABLE MATERIAL

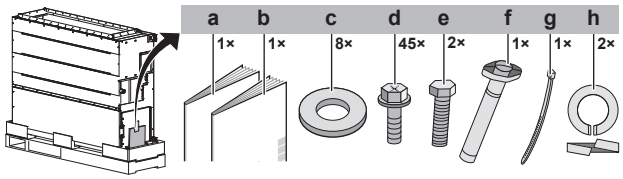
The R32 refrigerant (if applicable) in this unit is mildly flammable. Refer to the outdoor unit specifications for the type of refrigerant to be used.

3.2.1 To unpack and handle the unit

Use a sling of soft material or protective plates together with a rope when lifting the unit. This to avoid damage or scratches to the unit.

Lift the unit by holding on to the hanger brackets without exerting any pressure on other parts, especially on refrigerant piping, drain piping and other resin parts.

3.2.2 To remove the accessories from the indoor unit



a Installation and operation manual
b General safety precautions
c Washers for hanger bracket
d Screws for duct flanges (M5×12)
e Hexagon head bolt (M10×40)
f Attached piping with sealing
g Tie wrap
h Spring washer

4 About the units and options

4.1 Overview: About the units and options

This chapter contains information about:

- Combining outdoor and indoor units
- Combining the indoor unit with options

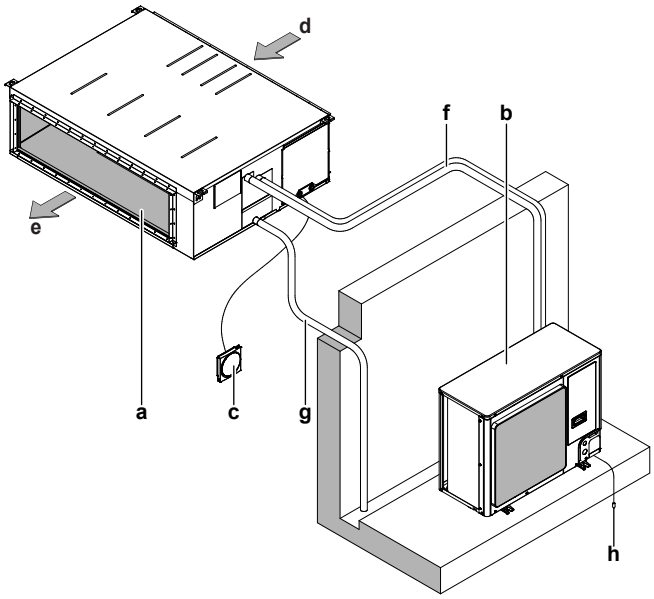
WARNING

NEVER use a flammable spray such as hair spray, lacquer or paint near the unit. It may cause a fire.

4.2 System layout

INFORMATION

The following figures are just examples and may NOT completely match your system layout.



a Indoor unit
b Outdoor unit
c User interface
d Suction air
e Discharge air
f Refrigerant piping + interconnection cable
g Drain pipe
h Earth wiring

4.3 Combining units and options

4.3.1 Possible options for the indoor unit

Make sure you have the following mandatory options:

- User interface: Wired or wireless (refer to catalogues and technical literature for selecting a suitable user interface)

5 Preparation

5.1 Overview: Preparation

This chapter describes what you have to do and know before going on-site.

It contains information about:

- Preparing the installation site
- Preparing the refrigerant piping
- Preparing the electrical wiring

5.2 Preparing the installation site

- Provide sufficient space around the unit for servicing and air circulation.
- Choose the installation location with sufficient space for carrying the unit in and out of the site.

WARNING

Do NOT install the air conditioner at any place where flammable gas may leak out. If the gas leaks out and stays around the air conditioner, a fire may break out.

5.2.1 Installation site requirements of the indoor unit

INFORMATION

Also read the following requirements:

- General installation site requirements. See the "General safety precautions" chapter.
- Refrigerant piping requirements (length, height difference). See further in this "Preparation" chapter.

INFORMATION

The sound pressure level is less than 70 dBA.

NOTICE

The equipment described in this manual may cause electronic noise generated from radio-frequency energy. The equipment complies to specifications that are designed to provide reasonable protection against such interference. However, there is no guarantee that interference will not occur in a particular installation.

It is therefore recommended to install the equipment and electric wires keeping proper distances away from stereo equipment, personal computers, etc.

- **Fluorescent lights**. When installing a wireless user interface in a room with fluorescent lights, mind the following to avoid interference:
  - Install the wireless user interface as close as possible to the indoor unit.
  - Install the indoor unit as far as possible from the fluorescent lights.
- Take care that in the event of a water leak, water cannot cause any damage to the installation space and surroundings.
- Choose a location where the hot/cold air discharged from the unit or the operation noise, will NOT disturb anyone.

WARNING

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

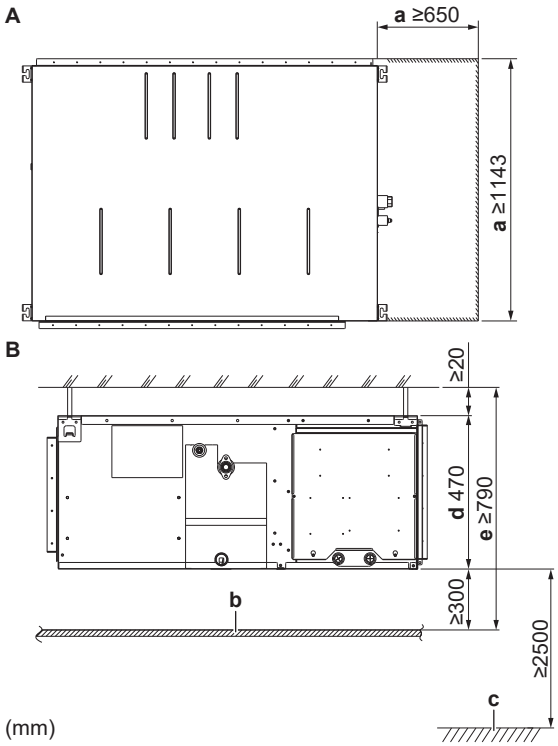
- **Air flow.** Make sure nothing blocks the air flow.
- **Drainage.** Make sure condensation water can be evacuated properly.
- **Ceiling insulation**. When conditions in the ceiling exceed 30°C and a relative humidity of 80%, or when fresh air is inducted into the ceiling, then additional insulation is required (minimum 10 mm thickness, polyethylene foam).

Do NOT install the unit in the following places:

- In places where a mineral oil mist, spray or vapour may be present in the atmosphere. Plastic parts may deteriorate and fall off or cause water leakage.

It is NOT recommended to install the unit in the following places because it may shorten the life of the unit:

- Where the voltage fluctuates a lot
- In vehicles or vessels
- Where acidic or alkaline vapour is present
- Use **suspension bolts** for installation.
- **Spacing**. Mind the following requirements:



A Top view
B Side view
a Service space
b Ceiling
c Floor surface
d Minimum required space of installation
e Space needed to maintain a downward slope of at least 1/100. "6.2.3 Guidelines when installing the drain piping" on page 11.

5.3 Preparing refrigerant piping

5.3.1 Refrigerant piping requirements

INFORMATION

Also read the precautions and requirements in the "General safety precautions" chapter.

NOTICE

The piping and other pressure-containing parts shall be suitable for refrigerant. Use phosphoric acid deoxidised seamless copper for refrigerant.

- Foreign materials inside pipes (including oils for fabrication) must be ≤30 mg/10 m.

Refrigerant piping diameter

Use the same diameters as the connections on the outdoor units:

Class	L1 liquid piping	L1 gas piping
200	Ø9.5 mm	Ø19.1 mm
250	Ø9.5 mm	Ø22.2 mm

Refrigerant piping material

- **Piping material:** Phosphoric acid deoxidised seamless copper.
- **Flare connections:** Only use annealed material.
- **Piping temper grade and thickness:**

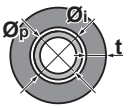
Outer diameter (Ø)	Temper grade	Thickness (t)[a]	
9.5 mm (3/8")	Annealed (O)	≥0.8 mm	
19.1 mm (3/4")			
22.2 mm (7/8")			

(a) Depending on the applicable legislation and the unit's maximum working pressure (see "PS High" on the unit name plate), larger piping thickness might be required.

5.3.2 Refrigerant piping insulation

- Use polyethylene foam as insulation material:
  - with a heat transfer rate between 0.041 and 0.052 W/mK (0.035 and 0.045 kcal/mh°C)
  - with a heat resistance of at least 120°C
- Insulation thickness

Pipe outer diameter ($Ø_p$)	Insulation inner diameter ($Ø_i$)	Insulation thickness (t)
9.5 mm (3/8")	10~14 mm	≥13 mm
19.1 mm (3/4")	20~24 mm	
22.2 mm (7/8")	23~27 mm	



If the temperature is higher than 30°C and the humidity is higher than RH 80%, the thickness of the insulation materials should be at least 20 mm to prevent condensation on the surface of the insulation.

5.4 Preparing electrical wiring

5.4.1 About preparing electrical wiring

INFORMATION

Also read the precautions and requirements in the "General safety precautions" chapter.

WARNING

- If the power supply has a missing or wrong N-phase, equipment might break down.
- Establish proper earthing. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earthing may cause electrical shock.
- Install the required fuses or circuit breakers.
- Secure the electrical wiring with cable ties so that the cables do NOT come in contact with sharp edges or piping, particularly on the high-pressure side.
- Do NOT use taped wires, stranded conductor wires, extension cords, or connections from a star system. They can cause overheating, electrical shock or fire.
- Do NOT install a phase advancing capacitor, because this unit is equipped with an inverter. A phase advancing capacitor will reduce performance and may cause accidents.

WARNING

- All wiring MUST be performed by an authorised electrician and MUST comply with the applicable legislation.
- Make electrical connections to the fixed wiring.
- All components procured on-site and all electrical construction MUST comply with the applicable legislation.

WARNING

ALWAYS use multicore cable for power supply cables.

6 Installation

WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

6.1 Overview: Installation

This chapter describes what you have to do and know on-site to install the system.

Typical workflow

Installation typically consists of the following stages:

1 Mounting the outdoor unit.
2 Mounting the indoor unit.
3 Connecting the refrigerant piping.
4 Checking the refrigerant piping.
5 Charging refrigerant.
6 Connecting the electrical wiring.
7 Finishing the outdoor installation.
8 Finishing the indoor installation.

INFORMATION

This chapter only describes installation instructions specific to the indoor unit. For the other instructions, see:

- The installation manual of the outdoor unit
- The installation manual of the user interface
- The installation manual of the optional accessories

6.2 Mounting the indoor unit

6.2.1 Precautions when mounting the indoor unit

INFORMATION

Also read the precautions and requirements in the following chapters:

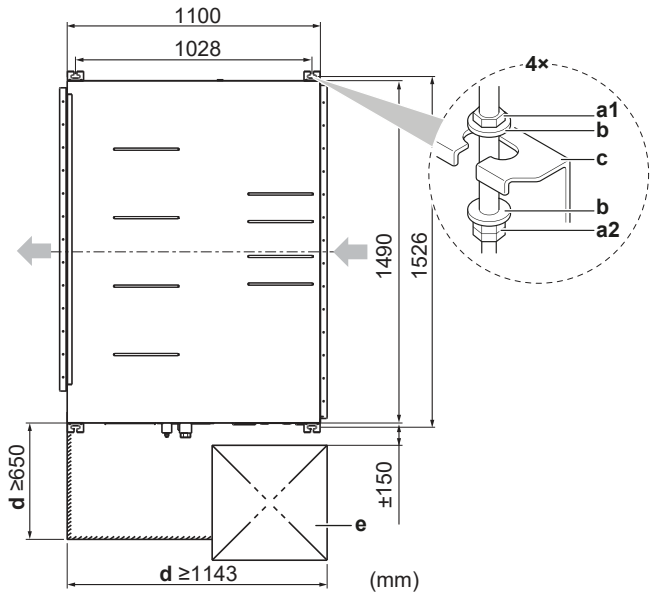
- General safety precautions
- Preparation

6.2.2 Guidelines when installing the indoor unit

INFORMATION

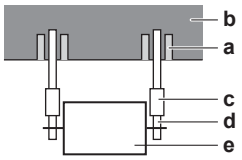
Optional equipment. When installing optional equipment, also read the installation manual of the optional equipment. Depending on the field conditions, it might be easier to install the optional equipment first.

- **Ceiling strength**. Check whether the ceiling is strong enough to support the weight of the unit. If there is a risk, reinforce the ceiling before installing the unit.
- **Suspension bolts.** Use M10 suspension bolts for installation. Attach the hanger bracket to the suspension bolt. Fix it securely using a nut and washer from the upper and lower sides of the hanger bracket.
- **Ceiling opening size.** Make sure the ceiling opening is within the following limits:



a1 Nut (field supply)
a2 Double nut (field supply)
b Washer (accessories)
c Hanger bracket (attached to the unit)
d Service space
e Inspection hatch (600×600 mm)

- **Installation example:**



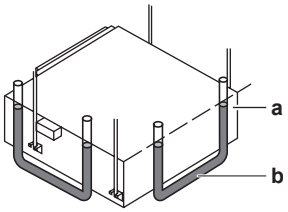
a Anchor
b Ceiling slab
c Long nut or turn-buckle
d Suspension bolt
e Indoor unit

- **Install the unit temporarily.**

1 Attach the hanger bracket to the suspension bolt.

2 Fix it securely.

- **Level**. Make sure the unit is level at all four corners using a level or a water-filled vinyl tube.



a Water level
b Vinyl tube

3 Tighten the upper nut.

NOTICE

Do NOT install the unit tilted. **Possible consequence:** If the unit is tilted against the direction of the condensate flow (the drain piping side is raised), water may drip.

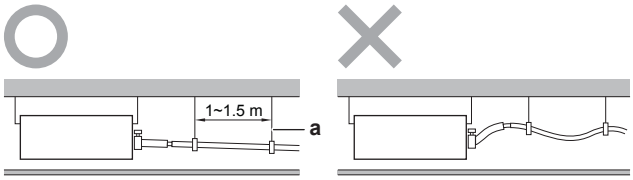
6.2.3 Guidelines when installing the drain piping

Make sure condensation water can be evacuated properly. This involves:

- General guidelines
- Connecting the drain piping to the indoor unit
- Checking for water leaks

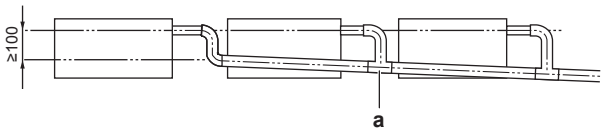
General guidelines

- **Pipe length.** Keep drain piping as short as possible.
- **Pipe size.** Keep the pipe size equal to or greater than that of the connecting pipe (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter).
- **Slope.** Make sure the drain piping slopes down (at least 1/100) to prevent air from being trapped in the piping. Use hanging bars as shown.



a Hanging bar
O Allowed
X Not allowed

- **Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.
- **Combining drain pipes.** You can combine drain pipes. Make sure to use drain pipes and T-joints with the correct gauge for the operating capacity of the units.



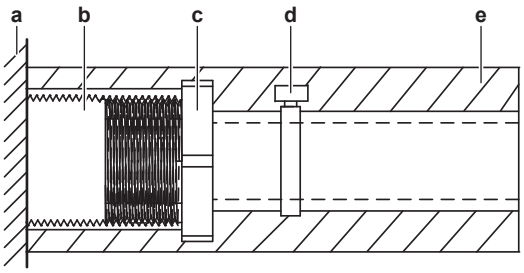
a T-joint

To connect the drain piping to the indoor unit

NOTICE

Incorrect connection of the drain hose might cause leaks, and damage the installation space and surroundings.

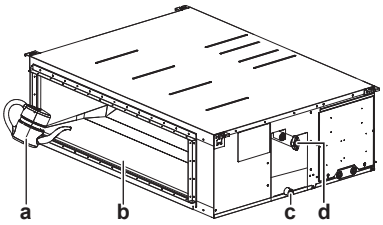
1. Pull out the drain plug.
2. Install the adapter for the drain hose (field supply).
3. Push the drain hose as far as possible over the adapter for the drain hose.
4. Tighten the metal clamp until the screw head is less than 4 mm from the metal clamp part.
5. Check for water leaks (see "To check for water leaks" on page 12).
6. Install the insulation piece (drain pipe).



a Indoor unit
b BSP 1" internal thread
c Adapter (field supply)
d Metal clamp (field supply)
e Insulation material for drain pipe (field supply)

To check for water leaks

Gradually pour approximately 1 l of water in the drain pan, and check for water leaks.



a Container with water
b Drain pan
c Drain outlet
d Refrigerant pipes

6.2.4 Guidelines when installing the ducting

WARNING

If one or more rooms are connected to the unit using a duct system, make sure:

- there are no operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) in case the floor area is less than A_{min} specified in the General safety precautions;
- no auxiliary devices, which may be a potential ignition source, are installed in the duct work (example: hot surfaces with a temperature exceeding 700°C and electric switching device);
- only auxiliary devices approved by the manufacturer are used in the duct work;
- an air inlet or outlet is connected directly with a room by ducting. Do NOT use spaces such as a false ceiling as a duct for the air inlet or outlet.

WARNING

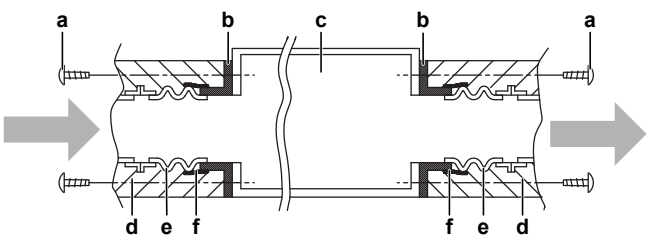
Do NOT install operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) in the duct work.

CAUTION

- Make sure the installation of the duct does NOT exceed the setting range of the external static pressure for the unit. Refer to the technical datasheet of your model for the setting range.
- Make sure to install the canvas duct so vibrations are NOT transmitted to the duct or ceiling. Use a sound-absorbing material (insulation material) for the lining of the duct and apply vibration insulation rubber to the hanging bolts.
- When welding, make sure NOT to spatter onto the drain pan or the air filter.
- If the metal duct passes through a metal lath, wire lath or metal plate of the wooden structure, separate the duct and wall electrically.
- Install the outlet grille in a position where the airflow will not come into direct contact with people.
- Do NOT use booster fans in the duct. Use the function to adjust the fan rate setting automatically (see "8.1 Field setting" on page 17).

The ducting is to be field supplied.

1. Attach the flange (located on the unit) using 45 screws for duct flanges (accessory).
2. Connect the canvas duct to the inside of the flange.
3. Connect the duct to the canvas duct.
4. Wind aluminium tape around the flange and duct connection. Make sure there are no air leaks at any other connection.
5. Insulate the duct to prevent condensation from forming. Use glass wool or polyethylene foam 25 mm thick.



a Screws for duct flanges (accessory)
b Flange (located on the unit)
c Main unit

d Insulation (field supply)
e Canvas duct (field supply)
f Aluminium tape (field supply)

- **Filter.** Be sure to attach an air filter inside the air passage on the intake side. Use an air filter with dust collecting efficiency ≥50% (gravimetric method). The included filter is not used when the intake duct is attached.

6.3 Connecting the refrigerant piping

INFORMATION

- For **liquid piping**, use a flare connection.
- For **gas piping**, use the attached piping (accessory) and fix it with the hexagon head bolts and spring washers (accessory)

6.3.1 About connecting the refrigerant piping

Before connecting the refrigerant piping

Make sure the outdoor and indoor unit are mounted.

Typical workflow

Connecting the refrigerant piping involves:

- Connecting the refrigerant piping to the outdoor unit
- Connecting the refrigerant piping to the indoor unit
- Insulating the refrigerant piping
- Keeping in mind the guidelines for:
  - Pipe bending
  - Flaring pipe ends
  - Brazing
  - Using the stop valves

6.3.2 Precautions when connecting the refrigerant piping

INFORMATION

Also read the precautions and requirements in the following chapters:

- General safety precautions
- Preparation

DANGER: RISK OF BURNING

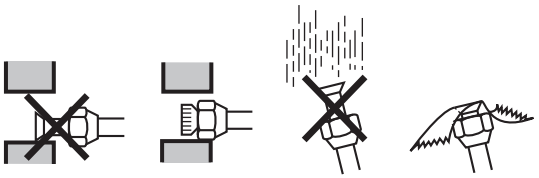
CAUTION

- Do NOT use mineral oil on flared part.
- NEVER install a drier to this unit to guarantee its lifetime. The drying material may dissolve and damage the system.

NOTICE

Take the following precautions on refrigerant piping into account:

- Avoid anything but the designated refrigerant to get mixed into the refrigerant cycle (e.g. air).
- Only use R32 or R410A when adding refrigerant. Refer to the outdoor unit specifications for the type of refrigerant to be used.
- Only use installation tools (e.g. manifold gauge set) that are exclusively used for R32 or R410A installations to withstand the pressure and to prevent foreign materials (e.g. mineral oils and moisture) from mixing into the system.
- Install the piping so that the flare is NOT subjected to mechanical stress.
- Protect the piping as described in the following table to prevent dirt, liquid or dust from entering the piping.
- Use caution when passing copper tubes through walls (see figure below).



Unit	Installation period	Protection method
Outdoor unit	>1 month	Pinch the pipe
	<1 month	Pinch or tape the pipe
Indoor unit	Regardless of the period	

INFORMATION

Do NOT open the refrigerant stop valve before checking the refrigerant piping. When you need to charge additional refrigerant it is recommended to open the refrigerant stop valve after charging.

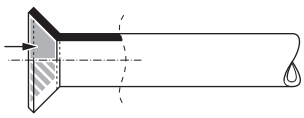
6.3.3 Guidelines when connecting the liquid piping

INFORMATION

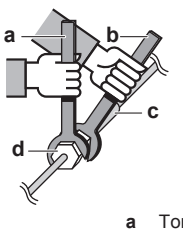
To connect the liquid piping use flare connection.

Take the following guidelines into account when connecting pipes:

- Coat the flare inner surface with ether oil or ester oil when connecting a flare nut. Tighten 3 or 4 turns by hand, before tightening firmly.

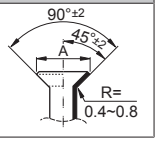


- ALWAYS use 2 wrenches together when loosening a flare nut.
- ALWAYS use a spanner and torque wrench together to tighten the flare nut when connecting the piping. This to prevent nut cracking and leaks.



a Torque wrench

b Spanner
c Piping union
d Flare nut

Piping size (mm)	Tightening torque (N•m)	Flare dimensions (A) (mm)	Flare shape (mm)
Ø9.5	33~39	12.8~13.2	

Pipe bending guidelines

Use a pipe bender for bending. All pipe bends should be as gentle as possible (bending radius should be 30~40 mm or larger).

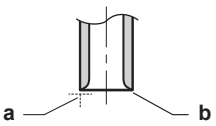
To flare the pipe end

CAUTION

- Incomplete flaring may cause refrigerant gas leakage.
- Do NOT re-use flares. Use new flares to prevent refrigerant gas leakage.
- Use flare nuts that are included with the unit. Using different flare nuts may cause refrigerant gas leakage.

1 Cut the pipe end with a pipe cutter.

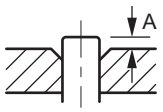
2 Remove burrs with the cut surface facing down so that the chips do NOT enter the pipe.



a Cut exactly at right angles.
b Remove burrs.

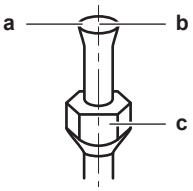
3 Remove the flare nut from the stop valve and put the flare nut on the pipe.

4 Flare the pipe. Set exactly at the position as shown in the following figure.



	Flare tool for R410A or R32 (clutch type)	Conventional flare tool	
		Clutch type (Ridgid-type)	Wing nut type (Imperial-type)
A	0~0.5 mm	1.0~1.5 mm	1.5~2.0 mm

5 Check that the flaring is properly made.



a Flare's inner surface MUST be flawless.
b The pipe end MUST be evenly flared in a perfect circle.
c Make sure the flare nut is fitted.

6.3.4 Guidelines when connecting the gas piping

INFORMATION

To connect the gas piping use the attached piping (accessory).

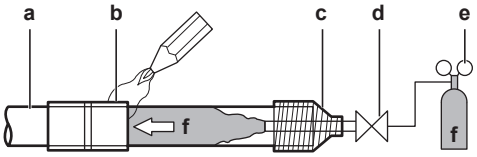
NOTICE

- Join the attached piping (accessory) and the field refrigerant piping (field supply) by brazing before fixing the attached piping to the unit.
- Do NOT braze the refrigerant piping directly to the indoor unit.

Mind following guidelines for brazing:

To braze the field piping to the attached piping

- When brazing, blow through with nitrogen to prevent creation of large quantities of oxidized film on the inside of the piping. This film adversely affects valves and compressors in the refrigerating system and prevents proper operation.
- Set the nitrogen pressure to 20 kPa (0.2 bar) (just enough so it can be felt on the skin) with a pressure-reducing valve.



a Refrigerant piping
b Part to be brazed
c Taping
d Manual valve
e Pressure-reducing valve
f Nitrogen

- Do NOT use anti-oxidants when brazing pipe joints. Residue can clog pipes and break equipment.
- Do NOT use flux when brazing copper-to-copper refrigerant piping. Use phosphor copper brazing filler alloy (BCuP-2: JIS Z 3264/, BCu 93P-710/795: ISO3677), which does not require flux. Flux has an extremely harmful influence on refrigerant piping systems. E.g., if a chlorine-based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will deteriorate the refrigerant oil.

6.3.5 To connect the refrigerant piping to the indoor unit

CAUTION

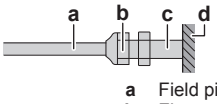
Install the refrigerant piping or components in a position where they are unlikely to be exposed to any substance which may corrode components containing refrigerant, unless the components are constructed of materials that are inherently resistant to corrosion or are suitably protected against corrosion.

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.

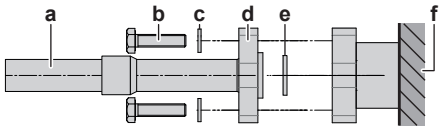
- **Pipe length**. Keep refrigerant piping as short as possible.

1 Connect the **liquid piping** to the unit using the flare connections.



a Field piping
b Flare nut (attached to the unit)
c Refrigerant pipe connection (attached to the unit)
d Indoor unit

2 Connect the **gas piping** using the attached piping (accessory). Fix it to the unit using hexagon head bolts (M10×40) (accessory) and spring washers (accessory). Place sealing (on the attached piping) between the connection.

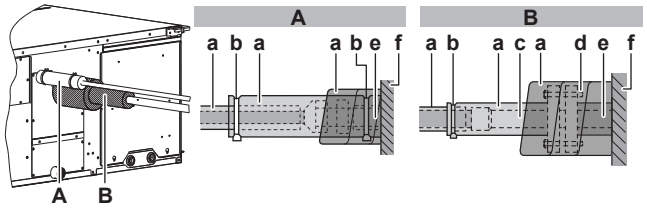


a Field piping
b Hexagon head bolt (M10×40)
d Attached piping
e Sealing (on the attached piping)
f Indoor unit

CAUTION

Do NOT reuse sealing (on the attached piping). Always use new sealing to prevent refrigerant gas leaks.

3 Insulate the refrigerant piping on the indoor unit as follows:



A Liquid piping
B Gas piping

a Insulation material (field supply)
b Cable tie (field supply)
c Attached piping (accessory)
d Hexagon head bolt and spring washer (accessory)
e Refrigerant pipe connection (attached to the unit)
f Unit

NOTICE

Make sure to insulate all refrigerant piping. Any exposed piping might cause condensation.

6.4 Connecting the electrical wiring

6.4.1 About connecting the electrical wiring

Typical workflow

Connecting the electrical wiring typically consists of the following stages:

1 Making sure the power supply system complies with the electrical specifications of the units.
2 Connecting the electrical wiring to the outdoor unit.
3 Connecting the electrical wiring to the indoor unit.
4 Connecting the main power supply.

6.4.2 Precautions when connecting the electrical wiring

INFORMATION

Also read the precautions and requirements in the following chapters:

- General safety precautions
- Preparation

DANGER: RISK OF ELECTROCUTION

WARNING

ALWAYS use multicore cable for power supply cables.

WARNING

Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provide full disconnection under overvoltage category III.

WARNING

If the supply cord is damaged, it MUST be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

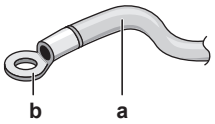
WARNING

Prevent hazards due to inadvertent resetting of the thermal cut-out: power to this appliance MUST NOT be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly turned ON and OFF by the utility.

6.4.3 Guidelines when connecting the electrical wiring

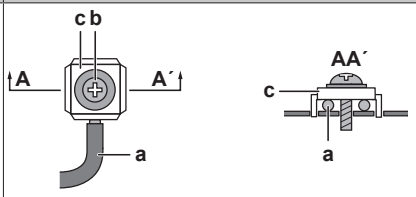
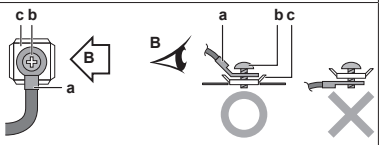
Keep the following in mind:

- If stranded conductor wires are used, install a round crimp-style terminal on the end of the wire. Place the round crimp-style terminal on the wire up to the covered part and fasten the terminal with the appropriate tool.

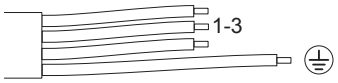


a Stranded conductor wire
b Round crimp-style terminal

- Use the following methods for installing wires:

Wire type	Installation method
Single-core wire	 **a** Curled single-core wire **b** Screw **c** Flat washer
Stranded conductor wire with round crimp-style terminal	 **a** Terminal **b** Screw **c** Flat washer **O** Allowed **X** NOT allowed

- If single-core wires are used, be sure to curl the end of the lead. Improper work may cause heat or fire.
- The earth wire between the wire retainer and the terminal must be longer than the other wires.



6.4.4 Specifications of standard wiring components

Component		FDA200	FDA250
Power supply cable	MCA(a)	4 A	4.3 A
	Voltage	220~240 V	
	Phase	1~	
	Frequency	50/60 Hz	
	Wire sizes	Must comply with applicable legislation	
Interconnection cable (indoor↔outdoor)		4-core cable 1.5 mm²~2.5 mm² and applicable for 220~240 V H07RN-F (60245 IEC 66)	
User interface cable		Vinyl cord with 0.75 to 1.25 mm² sheath or cables (2 core wires) Maximum 500 m H03VV-F (60227 IEC 52)	
Recommended circuit breaker		6 A	
Earth leakage circuit breaker		Must comply with applicable legislation	

(a) MCA=Minimum circuit ampacity. Stated values are maximum values (see electrical data of combination with indoor units for exact values).

Electrical equipment must comply with EN/IEC 61000-3-12, the European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase.

6.4.5 To connect the electrical wiring on the indoor unit

NOTICE

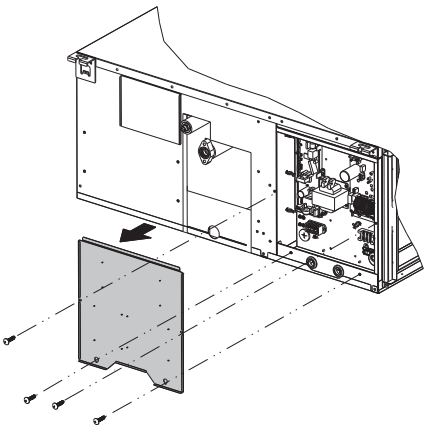
- Follow the wiring diagram (delivered with the unit, located on the switch box cover).
- Make sure the electrical wiring does NOT obstruct proper reattachment of the service cover.

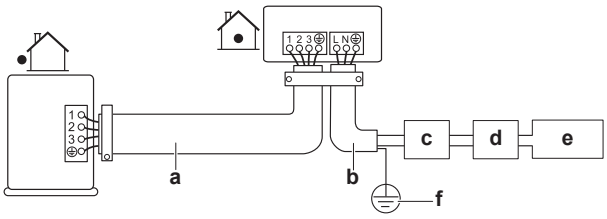
It is important to keep the power supply and the transmission wiring separated from each other. In order to avoid any electrical interference the distance between both wirings should ALWAYS be at least 50 mm.

NOTICE

Be sure to keep the power line and transmission line apart from each other. Transmission wiring and power supply wiring may cross, but may NOT run parallel.

1 Remove the service cover.





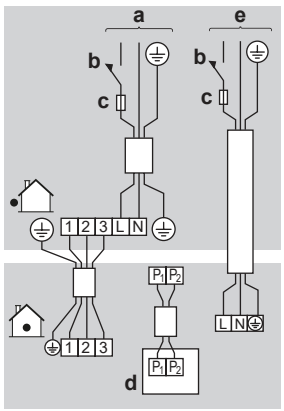
a Interconnection cable
b Power supply cable
c Circuit breaker
d Earth leakage circuit breaker
e Power supply
f Earth

2 **User interface cable**: Route the cable through the frame, connect the cable to the terminal block, and fix the cable with a cable tie.

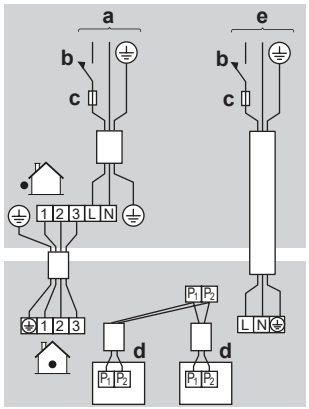
3 **Interconnection cable** (indoor↔outdoor): Route the cable through the frame, connect the cable to the terminal block (make sure the numbers match with the numbers on the outdoor unit, and connect the earth wire), and fix the cable with a cable tie.

4 **Power supply cable:** The unit MUST be connected to a separate power supply in addition to the interconnection cable to ensure correct function. When servicing the unit interrupt all power supply.

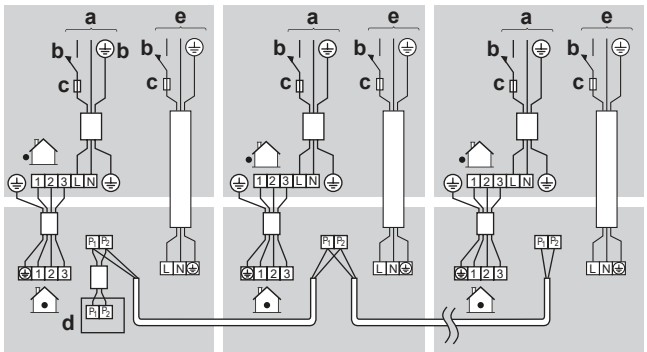
When using 1 user interface with 1 indoor unit.



When using 2 user interfaces



When using group control



a Power supply
b Main switch
c Fuse
d User interface
e Separate power supply

5 Wrap the sealing (field supply) around the cables to prevent water from entering the unit. Seal all gaps to prevent small animals from entering the system.

WARNING

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.

6 Reattach the service cover.

- **Master unit:** Be sure to connect the wiring when combining with a simultaneously operating multi-type in group control.

INFORMATION

In case of group control it is not necessary to assign an address to the indoor unit. The address is automatically set when the power is activated.

7 Commissioning

7.1 Overview: Commissioning

This chapter describes what you have to do and know to commission the system after it is installed.

Typical workflow

Commissioning typically consists of the following stages:

1 Checking the "Checklist before commissioning".

2 Performing a test run for the system.

7.2 Checklist before commissioning

After the installation of the unit, first check the following items. Once all below checks are fulfilled, the unit MUST be closed, ONLY then can the unit be powered up.

☐	You read the complete installation and operation instructions, as described in the **installer and user reference guide**.
☐	The **indoor unit** is properly mounted.
☐	The **outdoor unit** is properly mounted.
☐	Make sure **drain piping** is properly installed, insulated and drainage flows smoothly. Check for water leaks. **Possible consequence:** Condensate water might drip.
☐	The **ducting** is properly installed and insulated.
☐	The **refrigerant pipes** (gas and liquid) are installed correctly and thermally insulated.
☐	There are NO **refrigerant leaks**.
☐	There are NO **missing phases** or **reversed phases**.
☐	The system is properly **earthed** and the earth terminals are tightened.
☐	The **fuses** or locally installed protection devices are installed according to this document, and have NOT been bypassed.
☐	The **power supply voltage** matches the voltage on the identification label of the unit.
☐	There are NO **loose connections** or damaged electrical components in the switch box.
☐	There are NO **damaged components** or **squeezed pipes** on the inside of the indoor and outdoor units.
☐	The **stop valves** (gas and liquid) on the outdoor unit are fully open.

7.3 To perform a test run

INFORMATION

For the test run procedure, see the reference guide or the service manual of the used user interface.

NOTICE

Do not interrupt the test run.

7.4 Error codes when performing a test run

If the installation of the outdoor unit has NOT been done correctly, the following error codes may be displayed on the user interface:

INFORMATION

To display error codes, refer to the reference guide of the user interface.

Error code	Possible cause
Nothing displayed (the currently set temperature is not displayed)	▪ The wiring is disconnected or there is a wiring error (between power supply and outdoor unit, between outdoor unit and indoor units, between indoor unit and user interface). ▪ The fuse on the outdoor or indoor unit PCB has blown.
E3, E4 or L8	▪ The stop valves are closed. ▪ The air inlet or air outlet is blocked.
E7	There is a missing phase in case of three-phase power supply units. **Note:** Operation will be impossible. Turn OFF the power, recheck the wiring, and switch two of the three electrical wires.
L4	The air inlet or air outlet is blocked.
U0	The stop valves are closed.
U2	▪ There is a voltage imbalance. ▪ There is a missing phase in case of three-phase power supply units. **Note:** Operation will be impossible. Turn OFF the power, recheck the wiring, and switch two of the three electrical wires.
U4 or UF	The inter-unit branch wiring is not correct.
UA	The outdoor and indoor unit are incompatible.

8 Configuration

8.1 Field setting

Make the following field settings so that they correspond with the actual installation setup and with the needs of the user:

- External static pressure setting using:
  - Airflow automatic adjustment setting
  - User interface
- Time to clean air filter

To set airflow automatic adjustment

- When the air conditioning unit is running in fan operation mode:

1 Stop the air conditioning unit.

2 Set value number (—) to 03.

Setting content:	Then[1]		
	M	SW	—
Airflow adjustment is OFF	11(21)	7	01
Press ON/OFF to return to normal operating mode. **Possible consequence:** The operation lamp will light up and the unit will start the fan operation for airflow automatic adjustment.			03
Operation stops after 1 to 8 minutes. **Possible consequence:** Setting is finished and the operation lamp will be off.			02

If there is no change after airflow adjustment, perform the setting again.

INFORMATION

- The fan speed of the indoor unit is preset to ensure the standard external static pressure.
- To set a higher or lower external static pressure, reset the initial setting with the user interface.

User interface

Check the indoor unit setting: the value number (—) of mode 11(21) must be set to 01.

Change the value number (—) in accordance with the external static pressure of the duct to be connected as in the table below.

Setting[1]			External static pressure
M	SW	—	
13(23)	6	01	62
		02	70
		03	80
		04	90
		05	100
		06	115
		07	130
		08	145
		09	160
		10	175
		11	190
		12	205
		13	220
		14	235
		15	250

Time to clean air filter

This setting must correspond with the air contamination in the room. It determines the interval at which the **TIME TO CLEAN AIR FILTER** notification is displayed on the user interface. When using a wireless user interface, you must also set the address (see the installation manual of the user interface).

If you want an interval of… (air contamination)	Then[1]		
	M	SW	—
±2500 h (light)	10(20)	0	01
±1250 h (heavy)			02
No notification		3	02

- **2 user interfaces:** When using 2 user interfaces, one must be set to "MAIN" and the other to "SUB".

9 Hand-over to the user

Once the test run is finished and the unit operates properly, please make sure the following is clear for the user:

- Make sure that the user has the printed documentation and ask him/her to keep it for future reference. Inform the user that he can find the complete documentation at the URL mentioned earlier in this manual.
- Explain the user how to properly operate the system and what to do in case of problems.
- Show the user what to do for the maintenance of the unit.

10 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.

11 Technical data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin extranet (authentication required).

11.1 Wiring diagram

11.1.1 Unified wiring diagram legend

For applied parts and numbering, refer to the wiring diagram on the unit. Part numbering is by Arabic numbers in ascending order for each part and is represented in the overview below by "*" in the part code.

Symbol	Meaning	Symbol	Meaning
	Circuit breaker		Protective earth
	Connection		Protective earth (screw)
	Connector	Ⓐ	Rectifier
	Earth		Relay connector
	Field wiring		Short-circuit connector
	Fuse		Terminal
INDOOR	Indoor unit		Terminal strip
OUTDOOR	Outdoor unit		Wire clamp

Symbol	Colour	Symbol	Colour
BLK	Black	ORG	Orange

(1) Field settings are defined as follows:
- **M**: Mode number – **First number**: for group of units – **Number between brackets**: for individual unit
- **SW**: Setting number
- —: Value number
- ▭: Default

Symbol	Colour	Symbol	Colour
BLU	Blue	PNK	Pink
BRN	Brown	PRP, PPL	Purple
GRN	Green	RED	Red
GRY	Grey	WHT	White
		YLW	Yellow

Symbol	Meaning
A*P	Printed circuit board
BS*	Pushbutton ON/OFF, operation switch
BZ, H*C	Buzzer
C*	Capacitor
AC*, CN*, E*, HA*, HE*, HL*, HN*, HR*, MR*_A, MR*_B, S*, U, V, W, X*A, K*R_*	Connection, connector
D*, V*D	Diode
DB*	Diode bridge
DS*	DIP switch
E*H	Heater
FU*, F*U, (for characteristics, refer to PCB inside your unit)	Fuse
FG*	Connector (frame ground)
H*	Harness
H*P, LED*, V*L	Pilot lamp, light emitting diode
HAP	Light emitting diode (service monitor green)
HIGH VOLTAGE	High voltage
IES	Intelligent eye sensor
IPM*	Intelligent power module
K*R, KCR, KFR, KHuR, K*M	Magnetic relay
L	Live
L*	Coil
L*R	Reactor
M*	Stepper motor
M*C	Compressor motor
M*F	Fan motor
M*P	Drain pump motor
M*S	Swing motor
MR*, MRCW*, MRM*, MRN*	Magnetic relay
N	Neutral
n=*, N=*	Number of passes through ferrite core
PAM	Pulse-amplitude modulation
PCB*	Printed circuit board

Symbol	Meaning
PM*	Power module
PS	Switching power supply
PTC*	PTC thermistor
Q*	Insulated gate bipolar transistor (IGBT)
Q*DI	Earth leak circuit breaker
Q*L	Overload protector
Q*M	Thermo switch
R*	Resistor
R*T	Thermistor
RC	Receiver
S*C	Limit switch
S*L	Float switch
S*NPH	Pressure sensor (high)
S*NPL	Pressure sensor (low)
S*PH, HPS*	Pressure switch (high)
S*PL	Pressure switch (low)
S*T	Thermostat
S*RH	Humidity sensor
S*W, SW*	Operation switch
SA*, F1S	Surge arrester
SR*, WLU	Signal receiver
SS*	Selector switch
SHEET METAL	Terminal strip fixed plate
T*R	Transformer
TC, TRC	Transmitter
V*, R*V	Varistor
V*R	Diode bridge
WRC	Wireless remote controller
X*	Terminal
X*M	Terminal strip (block)
Y*E	Electronic expansion valve coil
Y*R, Y*S	Reversing solenoid valve coil
Z*C	Ferrite core
ZF, Z*F	Noise filter
A*P	Printed circuit board
BS*	Pushbutton ON/OFF, operation switch
BZ, H*C	Buzzer
C*	Capacitor
AC*, CN*, E*, HA*, HE*, HL*, HN*, HR*, MR*_A, MR*_B, S*, U, V, W, X*A, K*R_*	Connection, connector

For the user

12 About the system

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.

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.

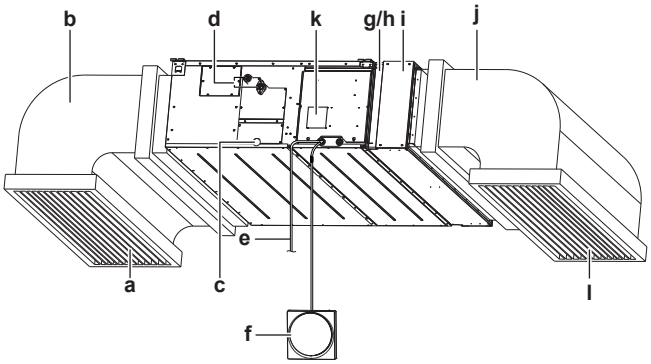
NOTICE

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.

12.1 Components

INFORMATION

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



a Discharge grille (field supply)
b Exhaust duct (field supply)
c Drain pipe
d Refrigerant piping
e Interconnection wiring
f User interface (option)
g Filter cover
h Air filter
i Suction filter chamber (option)
j Suction duct (field supply)
k Machine nameplate
l Suction grille (field supply)

CAUTION

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

12.2 Information requirements for fan coil units

Item	Symbol	Value	Unit
Cooling capacity (sensible)	$P_{rated,c}$	A	kW
Cooling capacity (latent)	$P_{rated,c}$	B	kW
Heating capacity	$P_{rated,h}$	C	kW
Total electric power input	P_{elec}	D	kW
Sound power level (per speed setting, if applicable)	L_{WA}	E	dB
Contact details: DAIKIN INDUSTRIES CZECH REPUBLIC s.r.o. U Nové Hospody 1/1155, 301 00 Plzeň Skvrňany, Czech Republic			

	A	B	C	D	E
FDA200	14.6	4.4	22.4	0.73	69
FDA250	16.6	5.4	24	0.79	71

12.3 User interface

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.

This operation manual offers a non-exhaustive overview of the main functions of the system.

For more information about the user interface, see the operation manual of the installed user interface.

13 Before operation

WARNING

Ask your dealer for improvement, repair, and maintenance. Incomplete improvement, repair, and maintenance may result in water leakage, electric shock and fire.

WARNING

Ask your dealer to move and reinstall the air conditioner. Incomplete installation may result in a water leakage, electric shock, and fire.

WARNING

NEVER let the indoor unit or the user interface get wet. It may cause an electric shock or a fire.

WARNING

Do NOT place objects in direct proximity of the outdoor unit and do NOT let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.

WARNING

Avoid placing the user interface in a place where it can be splashed with water. Water entering the machine may cause an electric leak or may damage the internal electronic parts.

WARNING

This unit contains electrical and hot parts.

WARNING

Before operating the unit, be sure the installation has been carried out correctly by an installer.

WARNING

NEVER use a flammable spray such as hair spray, lacquer or paint near the unit. It may cause a fire.

CAUTION

It is not good for your health to expose your body to the air flow for a long time.

CAUTION

To avoid oxygen deficiency, ventilate the room sufficiently if equipment with burner is used together with the system.

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.

NOTICE

Do NOT place the user interface in a place exposed to direct sunlight. The LCD display may get discoloured or fail to display the data.

NOTICE

Do NOT place items which might be damaged by moisture under the indoor unit. Condensation may form if the humidity is above 80%, if the drain outlet is blocked or the filter is polluted.

NOTICE

Arrange the drain hose to ensure smooth drainage. Incomplete drainage may cause the building, furniture, etc. to get wet.

NOTICE

Be sure to turn on the power 6 hours before operation in order to have power running to the crankcase heater and to protect the compressor.

This operation manual is for the following systems with standard control. Before initiating operation, contact your dealer for the operation that corresponds to your system type and mark. If your installation has a customised control system, ask your dealer for the operation that corresponds to your system.

14 Operation

14.1 Operation range

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

Outdoor units		Cooling	Heating
RZQ200+250	Outdoor temperature	–5~46°C DB	–15~15°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:

Outdoor units		Cooling	Heating
RZA200+250	Outdoor temperature	–15~46°C DB	–15~15°C WB
	Indoor temperature	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 activated and the air conditioner may not operate.

DB: Dry bulb

WB: Wet bulb

14.2 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".
- Read the documentation carefully before operating the user interface to ensure the best possible performance.

15 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.

WARNING

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

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.
- Make sure the area is well ventilated. Do NOT block any ventilation openings.
- 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 all the main power supply switches to the unit when the unit is NOT used for longer periods of time. If any of the main power supply switch is on, the unit consumes electricity. Before restarting the unit, turn on all the main power supply switches 6 hours before operation to ensure smooth running.
- When the display shows  (time to clean the air filter), clean the filters (see "16.2.2 To clean the air filter" on page 22).
- 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.

16 Maintenance and service

16.1 Overview: Maintenance and service

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.

NOTICE

Never inspect or service the unit by yourself. Ask a qualified service person to perform this work. However, as end user, you may clean the air filter, suction grille, air outlet and outside panels.

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.

WARNING

Be careful with ladders when working in high places.

16.2 Cleaning the air filter and air outlet

16.2.1 To clean the air outlet

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.

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

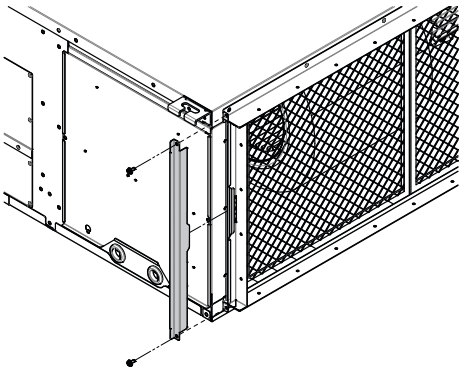
16.2.2 To clean the air filter

When to clean the air filter:

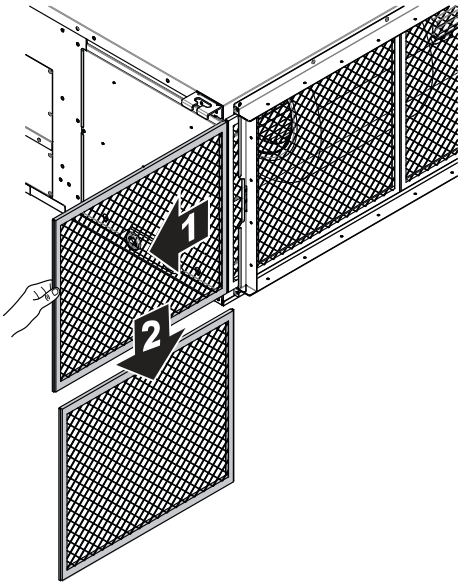
- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter.

How to clean the air filter:

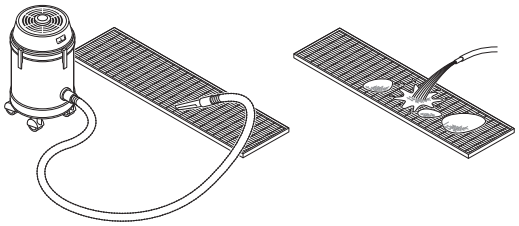
1 Remove the screws on the filter cover using screwdriver.



2 Slowly pull out the air filter (composed of 3 equal parts).



3 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.



4 Dry the air filter in the shadow.

5 Re-attach the air filter. Partially re-insert the first part of the air filter, align the middle part of the air filter with first part and push the 2 clips in place to lock the filter parts together. Repeat the procedure for the last part of the filter.

6 Place the filter cover back. Fix the filter cover with screws.

7 Turn ON the power.

8 To remove warning screens, see the reference guide of the user interface.

16.3 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 the air filter and the casing of the indoor unit (see "16.2 Cleaning the air filter and air outlet" on page 22). Make sure to install cleaned air filters back in the same position.
- Remove the batteries from the user interface (if applicable).

16.4 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 the air filter and the casing of the indoor unit (see "16.2 Cleaning the air filter and air outlet" on page 22). 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.
- Insert batteries in the user interface (if applicable).

16.5 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

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO_2 equivalent.

Formula to calculate the quantity in CO2 equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg] / 1000

Please contact your installer for more information.

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 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.

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.

17 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 function properly.	Turn OFF all main power supply switches to the unit.
If water leaks from the unit.	Stop operation.
The operation switch does NOT function properly.	Turn OFF the power supply.
If the user interface displays ⚠.	Notify your installer and report the error code. To display an error code see the reference guide of the user interface.

If the system does NOT operate properly 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.	▪ 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.	▪ 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 (see "16.2.2 To clean the air filter" on page 22).
The system operates but cooling or heating is insufficient.	▪ 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 (see "16.2.2 To clean the air filter" on page 22). ▪ 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.)	▪ Check if the air filter is clogged (see "16.2.2 To clean the air filter" on page 22). ▪ 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.	▪ 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).

17.1 Symptoms that are NOT system malfunctions

The following symptoms are NOT system malfunctions:

17.1.1 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.

17.1.2 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.

17.1.3 Symptom: Noise of air conditioners (indoor unit)

- A "ringing" sound is heard after the unit is started. This sound is generated by the temperature regulator working. It will quiet down after about a minute.
- A continuous low "hissing" sound is heard when the system is in cooling or defrost operation. This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- A hissing sound which is heard at the start or immediately after stopping operation or defrost operation. This is the noise of refrigerant caused by flow stop or flow change.
- A "squeaking" sound is heard when the system is in operation or after the stop of operation. Expansion and contraction of plastic parts caused by temperature change makes this noise.

17.1.4 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.

17.1.5 Symptom: The units can give off odours

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

17.1.6 Symptom: The display shows "88"

This is the case immediately after the main power supply switch is turned on and means that the user interface is in normal condition. This continues for 1 minute.

17.1.7 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.

17.1.8 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.

17.1.9 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.

18 Relocation

Contact your dealer for removing and reinstalling the total unit. Moving units requires technical expertise.

19 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.

20 Glossary

Dealer
Sales distributor for the product.

Authorised installer
Technical skilled person who is qualified to install the product.

User
Person who is owner of the product and/or operates the product.

Applicable legislation
All international, European, national and local directives, laws, regulations and/or codes that are relevant and applicable for a certain product or domain.

Service company
Qualified company which can perform or coordinate the required service to the product.

Installation manual
Instruction manual specified for a certain product or application, explaining how to install, configure and maintain it.

Operation manual
Instruction manual specified for a certain product or application, explaining how to operate it.

Maintenance instructions
Instruction manual specified for a certain product or application, which explains (if relevant) how to install, configure, operate and/or maintain the product or application.

Accessories
Labels, manuals, information sheets and equipment that are delivered with the product and that need to be installed according to the instructions in the accompanying documentation.

Optional equipment
Equipment made or approved by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

Field supply
Equipment NOT made by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

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DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

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