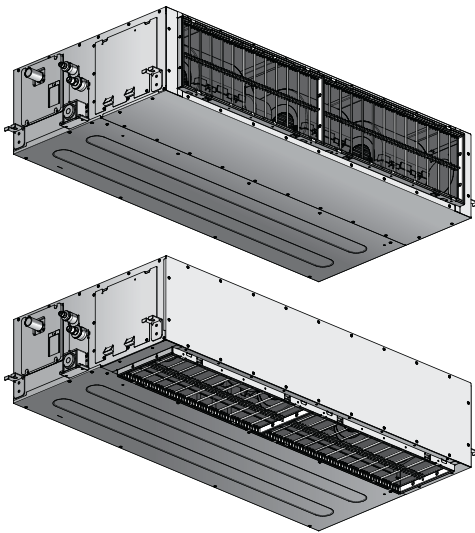


DAIKIN



Installer and user reference guide

Split system air conditioners



FDA125A5VEB

Installer and user reference guide
Split system air conditioners










English




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1	General safety precautions	
1.1	About the documentation	
	<ul style="list-style-type: none"> 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 authorized installer. 	

1 General safety precautions



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: <ul style="list-style-type: none"> • Do NOT rinse the unit. • Do NOT operate the unit with wet hands. • Do NOT place any objects containing water on the unit.
	NOTICE <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 unit's weight and vibration.
- 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 reuse 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.



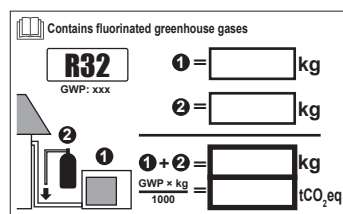
WARNING

If appliances contain R32 refrigerant, then 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 (m²). This applies to:

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

To determine the minimum floor area

- Determine the total refrigerant charge in the system (= factory refrigerant charge ① + ② additional refrigerant amount charged).



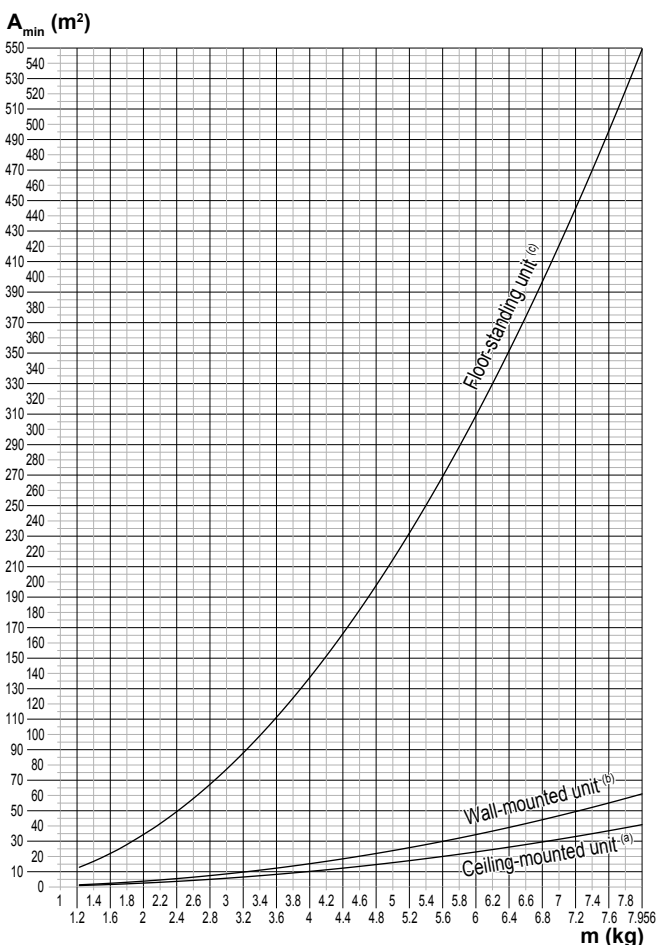
- Determine which graph or table to use.

- 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

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

1 General safety precautions



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 leakage 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 re-charge is required, refer to the nameplate of the unit. It states the type of refrigerant and necessary amount.

Ceiling-mounted unit ^(a)	Wall-mounted unit ^(b)	Floor-standing unit ^(c)
m (kg) — A_{min} (m ²)	m (kg) — A_{min} (m ²)	m (kg) — A_{min} (m ²)
<1.224 — —	<1.224 — —	<1.224 — —
1.225 — 0.956	1.225 — 1.43	1.225 — 12.9
1.4 — 1.25	1.4 — 1.87	1.4 — 16.8
1.6 — 1.63	1.6 — 2.44	1.6 — 22.0
1.8 — 2.07	1.8 — 3.09	1.8 — 27.8
2.0 — 2.55	2.0 — 3.81	2.0 — 34.3
2.2 — 3.09	2.2 — 4.61	2.2 — 41.5
2.4 — 3.68	2.4 — 5.49	2.4 — 49.4
2.6 — 4.31	2.6 — 6.44	2.6 — 58.0
2.8 — 5.00	2.8 — 7.47	2.8 — 67.3
3.0 — 5.74	3.0 — 8.58	3.0 — 77.2
3.2 — 6.54	3.2 — 9.76	3.2 — 87.9
3.4 — 7.38	3.4 — 11.0	3.4 — 99.2
3.6 — 8.27	3.6 — 12.4	3.6 — 111
3.8 — 9.22	3.8 — 13.8	3.8 — 124
4.0 — 10.2	4.0 — 15.3	4.0 — 137
4.2 — 11.3	4.2 — 16.8	4.2 — 151
4.4 — 12.4	4.4 — 18.5	4.4 — 166
4.6 — 13.5	4.6 — 20.2	4.6 — 182
4.8 — 14.7	4.8 — 22.0	4.8 — 198
5.0 — 16.0	5.0 — 23.8	5.0 — 215
5.2 — 17.3	5.2 — 25.8	5.2 — 232
5.4 — 18.6	5.4 — 27.8	5.4 — 250
5.6 — 20.0	5.6 — 29.9	5.6 — 269
5.8 — 21.5	5.8 — 32.1	5.8 — 289
6.0 — 23.0	6.0 — 34.3	6.0 — 309
6.2 — 24.5	6.2 — 36.6	6.2 — 330
6.4 — 26.1	6.4 — 39.1	6.4 — 351
6.6 — 27.8	6.6 — 41.5	6.6 — 374
6.8 — 29.5	6.8 — 44.1	6.8 — 397
7.0 — 31.3	7.0 — 46.7	7.0 — 420
7.2 — 33.1	7.2 — 49.4	7.2 — 445
7.4 — 34.9	7.4 — 52.2	7.4 — 470
7.6 — 36.9	7.6 — 55.1	7.6 — 496
7.8 — 38.8	7.8 — 58.0	7.8 — 522
7.956 — 40.8	7.956 — 61.0	7.956 — 549

m Total refrigerant charge in the system

- 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.

2 About the documentation

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 below.



- 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.

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).

For the installer

3 About the box

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.

It contains information about:

- Unpacking and handling the units
- Removing the accessories from the units

Keep the following in mind:

- At delivery, the unit must be checked for damage. Any damage must be reported immediately to the carrier's claims agent.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.

3.2 Indoor unit



WARNING: FLAMMABLE MATERIAL

The R32 refrigerant (if applicable) in this unit is mildly flammable.¹

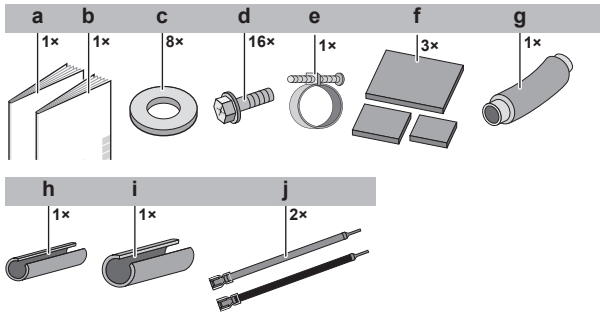
⁽¹⁾ Only for appliances using R32 refrigerant. Refer to the outdoor unit specifications for the type of refrigerant to be used.

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 manual and operation manual
- b General safety precautions
- c Washers for hanger bracket
- d Screws for duct flanges
- e Metal clamp
- f Sealing pads: Large (drain pipe), medium 1 (gas pipe), medium 2 (liquid pipe)
- g Drain hose
- h Insulation piece: Small (liquid pipe)
- i Insulation piece: Large (gas pipe)
- l Wire for common power supply

4 About the units and options

4.1 Overview: About the units and options

This chapter contains information about:

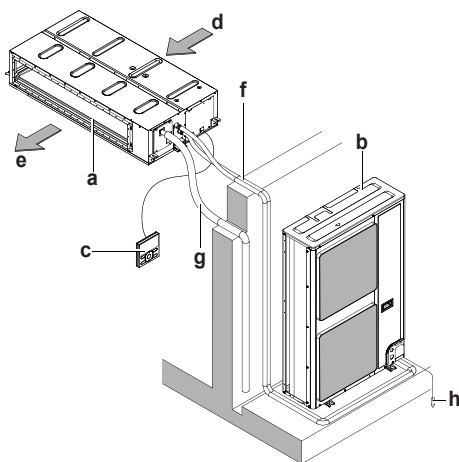
- Combining outdoor and indoor units
- Combining the indoor unit with options



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



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
- Air inlet panel and canvas connection for the air inlet panel (in case of bottom suction).

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 installation site

- Provide sufficient space around the unit for servicing and air circulation.
- Choose the installation location with sufficient place 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.

5 Preparation

- **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. In this condition, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping. This results in fouling or failure of the object which is located beneath the unit.

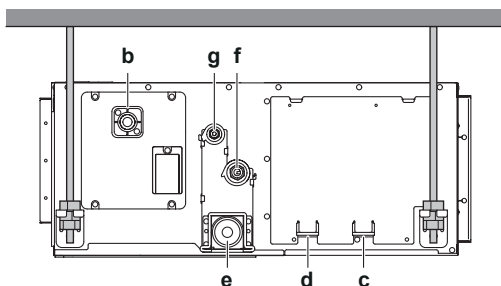
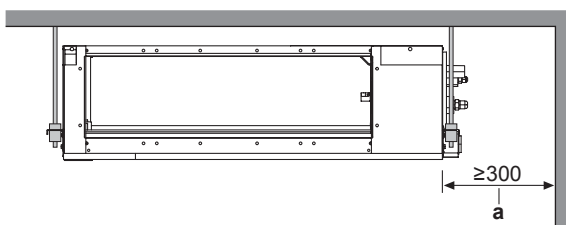
- **Air flow.** Make sure nothing blocks the air flow.
- **Drainage.** Make sure condensation water can be evacuated properly.
- **Ceiling insulation.** When conditions in the ceiling exceed 30°C and a relative humidity of 80%, or when fresh air is inducted into the ceiling, then additional insulation is required (minimum 10 mm thickness, polyethylene foam).
- **Protective guards.** Make sure to install protective guards on the suction and discharge side to prevent somebody from touching the fan blades or heat exchanger.

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.

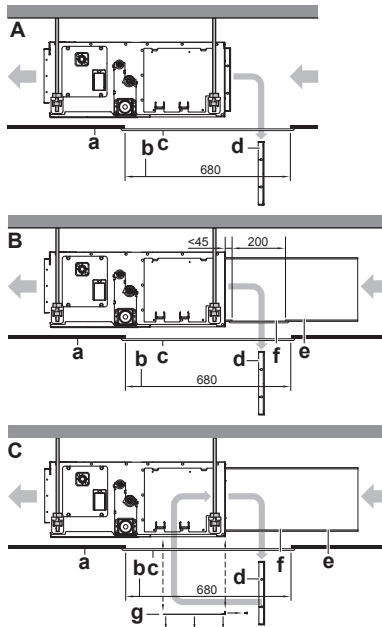
It is NOT recommended to install the unit in the following places because it may shorten the life of the unit:

- 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 Service space
- b Drain pipe
- c Power supply wiring port
- d Transmission wiring port
- e Maintenance drain outlet
- f Gas pipe
- g Liquid pipe

Installation options:



- A Standard rear suction
- B Installation with rear duct and duct service opening
- C Installation with rear duct, no duct service opening
- a Ceiling surface
- b Ceiling opening
- c Service access panel (optional accessory)
- d Air filter
- e Air inlet filter
- f Duct service opening
- g Interchangeable plate

5.3 Preparing refrigerant piping

5.3.1 Refrigerant piping requirements



INFORMATION

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

Refrigerant piping diameter

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

L1 liquid piping	Ø9.5 mm
L1 gas piping	Ø15.9 mm

Refrigerant piping material

- **Piping material:** Phosphoric acid deoxidised seamless copper.
- **Piping temper grade and thickness:**

Outer diameter (Ø)	Temper grade	Thickness (t) ^(a)	
9.5 mm (3/8")	Annealed (O)	≥0.8 mm	
15.9 mm (5/8")	Annealed (O)		

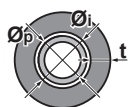
(a) Depending on the applicable legislation and the unit's maximum working pressure (see "PS High" on the unit name plate), larger piping thickness might be required.

- **Flare connections:** Only use annealed material.

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 (\varnothing_p)	Insulation inner diameter (\varnothing_i)	Insulation thickness (t)
9.5 mm (3/8")	10~14 mm	≥13 mm
15.9 mm (5/8")	16~20 mm	≥13 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.

Ambient temperature	Humidity	Minimum thickness
≤30°C	75% to 80% RH	15 mm
>30°C	≥80% RH	20 mm

5.4 Preparing electrical wiring

5.4.1 About preparing electrical wiring

i 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 authorized electrician and must comply with the applicable legislation.
- Make electrical connections to the fixed wiring.
- All components procured on the site and all electrical construction must comply with the applicable legislation.

! WARNING

ALWAYS use multicore cable for power supply cables.

6 Installation

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:

- Mounting the outdoor unit.
- Mounting the indoor unit.
- Connecting the refrigerant piping.
- Checking the refrigerant piping.
- Charging refrigerant.
- Connecting the electrical wiring.
- Finishing the outdoor installation.
- Finishing the indoor installation.

i 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

i INFORMATION

Also read the precautions and requirements in the following chapters:

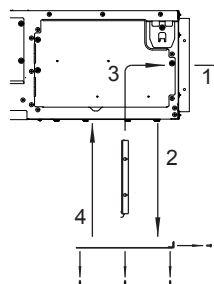
- General safety precautions
- Preparation

6.2.2 Guidelines when installing the indoor unit

i 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.

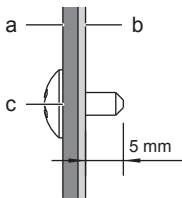
- In case of installation with duct, but no duct service opening.** Modify the position of the air filters.



- Remove the air filter(s) from the outside of the unit.
- Remove the interchangeable plate.
- Install the air filter(s) on the inside of the unit.
- Reinstall the interchangeable plate.

6 Installation

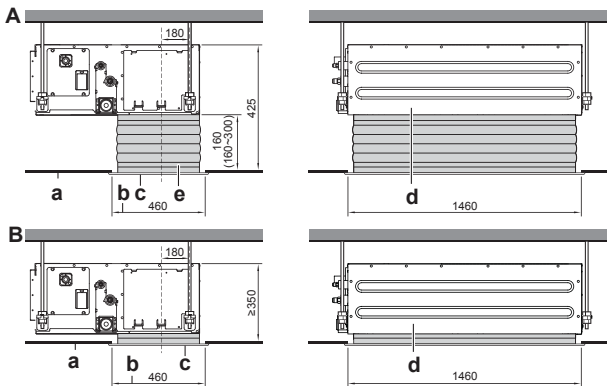
- When installing an air inlet duct, select fixing screws that stick out 5 mm on the inside of the flange to protect the air filter from damage during maintenance of the filter.



- a Air inlet duct
- b Inside of the flange
- c Fixing screw

- 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.

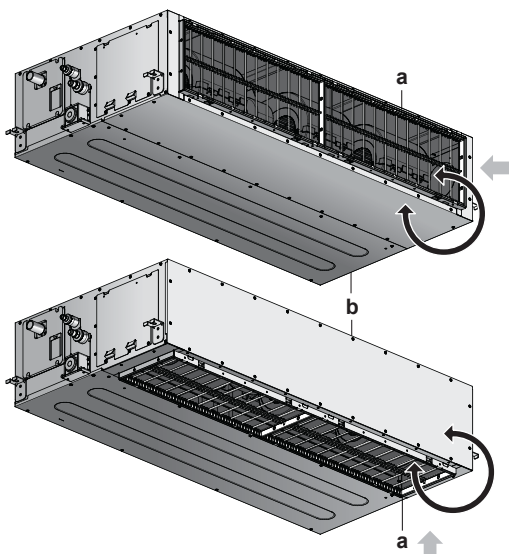
Installation options:



- A Mounting the air inlet with a canvas connection
- B Mounting the air inlet panel directly
- a Ceiling surface
- b Ceiling opening
- c Air inlet panel (optional accessory)
- d Indoor unit (back side)
- e Canvas connection for air inlet panel (optional accessory)

NOTICE

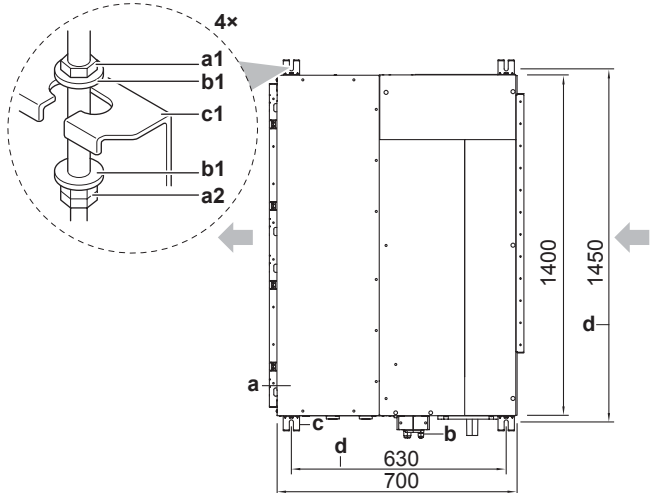
The unit can be used with bottom suction by replacing the interchangeable plate by the air filter holding plate.



- a Air filter holding plate with air filter(s)
- b Interchangeable plate

- 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:

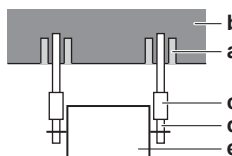


- a1 Nut (field supply)
- a2 Double nut (field supply)
- b1 Washer (accessories)
- c1 Hanger bracket (attached to the unit)
- a Indoor unit
- b Pipe
- c Hanger bracket pitch (suspension)
- d Suspension bolt spacing

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.

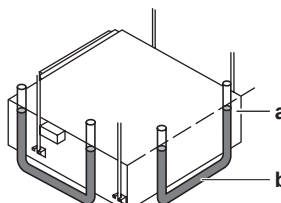
Installation example:



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

Install the unit temporarily.

- Attach the hanger bracket to the suspension bolt.
 - 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

7 Tighten the upper nut.

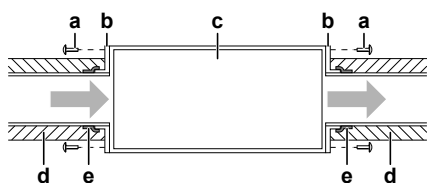
NOTICE

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), the float switch might malfunction and cause water to drip.

6.2.3 Guidelines when installing the ducting

The ducting is to be field supplied.

- **Air inlet side.** Attach the duct and intake-side flange (field supply). For connecting the flange, use 7 accessory screws.



- a Connection screw (accessory)
- b Flange (field supply)
- c Main unit
- d Insulation (field supply)
- e 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 $\geq 50\%$ (gravimetric method). The included filter is not used when the intake duct is attached.
- **Air outlet side.** Connect the duct according to the inside dimension of the outlet-side flange.
- **Air leaks.** Wind aluminium tape around the intake side flange and duct connection. Make sure there are no air leaks at any other connection.
- **Insulation.** Insulate the duct to prevent condensation from forming. Use glass wool or polyethylene foam 25 mm thick.

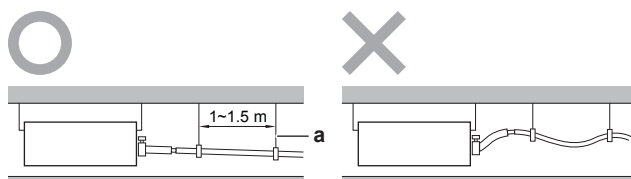
6.2.4 Guidelines when installing the drain piping

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

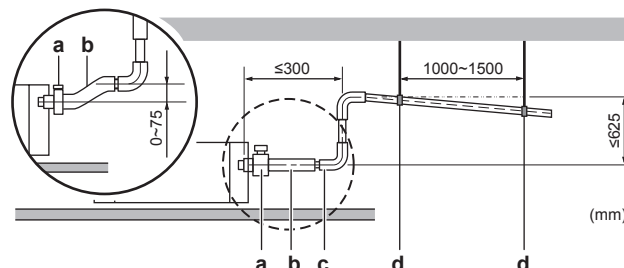
- **Drain pump.** For this "high lift type", the drainage sounds will be reduced when the drain pump is installed in a higher location. Recommended height is 300 mm.
- **Pipe length.** Keep drain piping as short as possible.
- **Pipe size.** Keep the pipe size equal to or greater than that of the connecting 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
- Allowed
- ✗ Not allowed

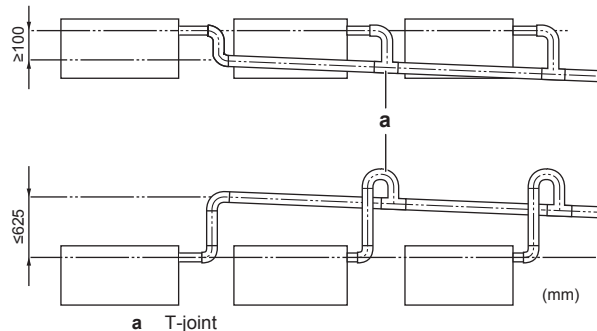
- **Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.

- **Rising piping.** If necessary to make the slope possible, you can install rising piping.
 - Drain hose inclination: 0~75 mm to avoid stress on the piping and to avoid air bubbles.
 - Rising piping: ≤ 300 mm from the unit, ≤ 625 mm perpendicular to the unit.



- a Metal clamp (accessory)
- b Drain hose (accessory)
- c Rising drain piping (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter) (field supply)
- d Hanging bars (field supply)

- **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.



To connect the drain piping to the indoor unit

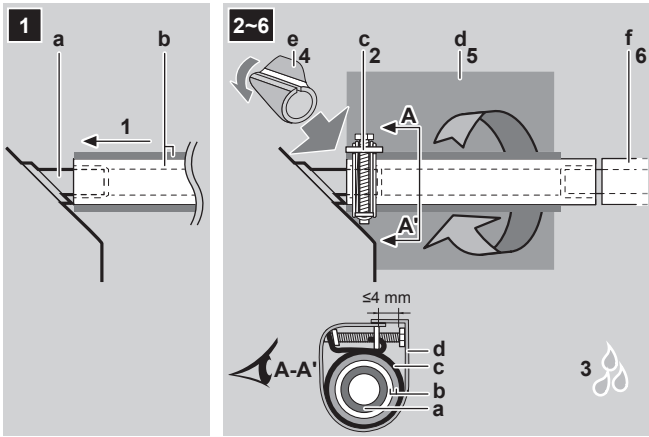


NOTICE

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

- 1 Push the drain hose as far as possible over the drain pipe connection.
- 2 Tighten the metal clamp until the screw head is less than 4 mm from the metal clamp part.
- 3 Check for water leaks (see To check for water leaks).
- 4 Install the insulation piece (drain pipe).
- 5 Wind the large sealing pad (= insulation) around the metal clamp and drain hose, and fix it with cable ties.
- 6 Connect the drain piping to the drain hose.

6 Installation



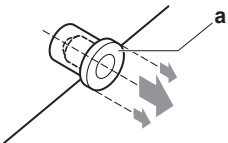
- a Drain pipe connection (attached to the unit)
- b Drain hose (accessory)
- c Metal clamp (accessory)
- d Large sealing pad (accessory)
- e Insulation piece (drain pipe) (accessory)
- f Drain piping (field supply)

NOTICE

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

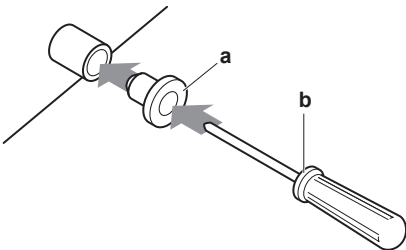
Pull out the plug.

- Do NOT wiggle the plug up and down.



Push in the plug.

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



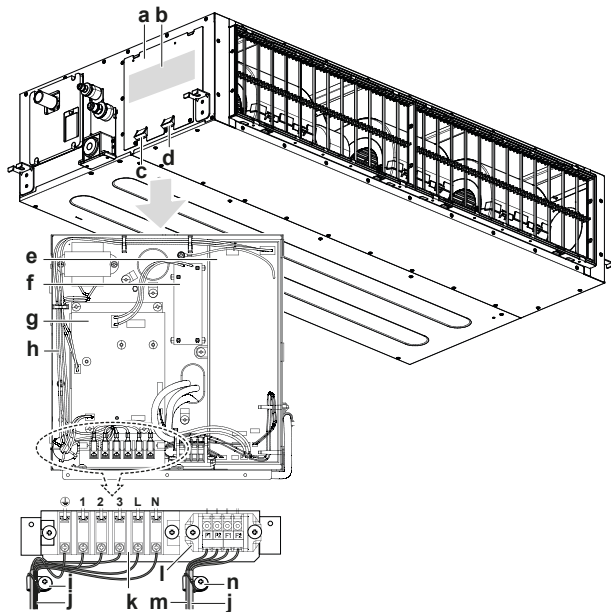
- a Drain plug
- b Phillips screwdriver

To check for water leaks

The procedure differs depending on whether electrical wiring is already finished. When electrical wiring is not finished yet, you need to temporarily connect the user interface and power supply to the unit.

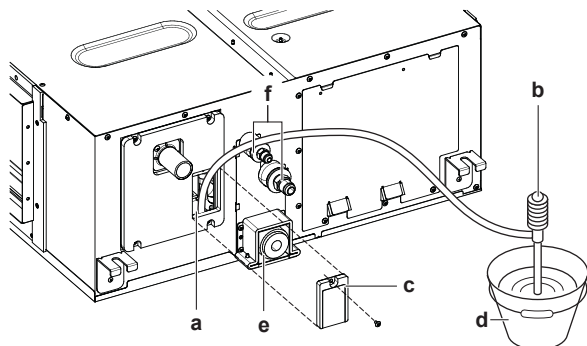
When electrical wiring is not finished yet

- 1 Temporarily connect electrical wiring.
- 2 Remove the switch box cover (a).
- 3 Connect the single-phase power supply (50 Hz, 230 V) to connections No. 1 and No. 2 on the terminal block for power supply and earth.
- 4 Reattach the switch box cover (a).



- a Switch box cover
- b Wiring diagram
- c Power supply wiring port
- d Transmission wiring port
- e Indoor PCB 2
- f Indoor PCB 3
- g Indoor PCB 1
- h Switch box
- i Plastic clamp
- j Power supply wiring
- k Power supply terminal board
- l Terminal board for unit transmission wiring
- m User interface wiring
- n Transmission wiring between units

- 5 Turn ON the power.
- 6 Start cooling operation (see To perform a test run).
- 7 Gradually pour approximately 1 l of water through the air discharge outlet, and check for leaks.



- a Water inlet
- b Portable pump
- c Water inlet cover
- d Bucket (adding water through water inlet)
- e Drain outlet for maintenance
- f Refrigerant pipes

- 8 Turn OFF the power.
- 9 Disconnect the electrical wiring.
- 10 Remove the control box cover.
- 11 Disconnect the power supply and earth.
- 12 Reattach the control box cover.

When electrical wiring is finished already

- 1 Start cooling operation (see To perform a test run).

- Gradually pour approximately 1 l of water through the air discharge outlet, and check for leaks (see When electrical wiring is not finished yet).

6.3 Connecting the refrigerant piping

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

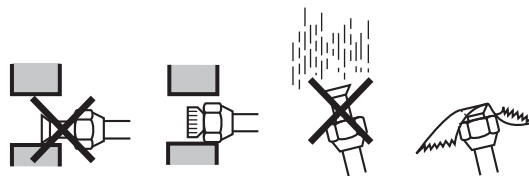
- Do NOT use mineral oil on flared part.
- NEVER install a drier to this unit to guarantee its lifetime. The drying material may dissolve and damage the system.



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 R410A² when adding refrigerant.
- Only use installation tools (e.g. manifold gauge set) that are exclusively used for R32 or R410A² 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	



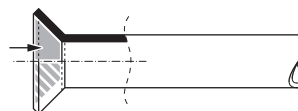
INFORMATION

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.

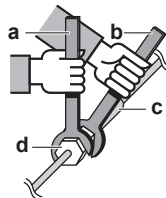
6.3.3 Guidelines when connecting the refrigerant piping

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	
Ø15.9	63~75	19.3~19.7	

6.3.4 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).

⁽²⁾ Refer to the outdoor unit specifications for the type of refrigerant to be used.

6 Installation

6.3.5 To flare the pipe end

CAUTION

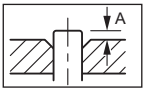
- Incomplete flaring may cause refrigerant gas leakage.
- Do NOT re-use flares. Use new flares to prevent refrigerant gas leakage.
- Use flare nuts that are included with the unit. Using different flare nuts may cause refrigerant gas leakage.

- 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.



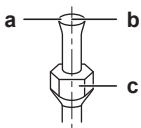
- a Cut exactly at right angles.
- b Remove burrs.

- 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 illustration.



	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.

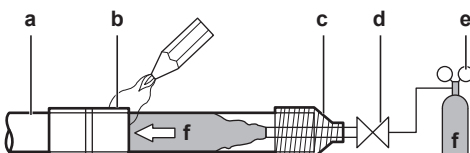


- a Flare's inner surface must be flawless.
- b The pipe end must be evenly flared in a perfect circle.
- c Make sure the flare nut is fitted.

6.3.6 To braze the pipe end

The indoor unit and outdoor unit have flare connections. Connect both ends without brazing. If brazing should be needed, take the following into account:

- When brazing, blow through with nitrogen to prevent creation of large quantities of oxidised 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), which does not require flux. Flux has an extremely harmful influence on refrigerant piping systems. For instance, if chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will deteriorate the refrigerant oil.

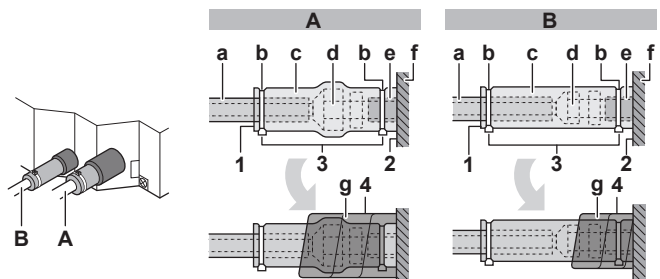
6.3.7 To connect the refrigerant piping to the indoor unit



WARNING: FLAMMABLE MATERIAL

The R32 refrigerant (if applicable) in this unit is mildly flammable.¹

- **Pipe length.** Keep refrigerant piping as short as possible.
- **Flare connections.** Connect refrigerant piping to the unit using flare connections.
- **Insulation.** Insulate the refrigerant piping on the indoor unit as follows:



- A Gas piping
- B Liquid piping

- a Insulation material (field supply)
- b Cable tie (accessory)
- c Insulation pieces: Large (gas pipe), small (liquid pipe) (accessories)
- d Flare nut (attached to the unit)
- e Refrigerant pipe connection (attached to the unit)
- f Unit
- g Sealing pads: Medium 1 (gas pipe), medium 2 (liquid pipe) (accessories)

- 1 Turn up the seams of the insulation pieces.
- 2 Attach to the base of the unit.
- 3 Tighten the cable ties on the insulation pieces.
- 4 Wrap the sealing pad from the base of the unit to the top of the flare nut.



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.

⁽¹⁾ Only for appliances using R32 refrigerant. Refer to the outdoor unit specifications for the type of refrigerant to be used.

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.



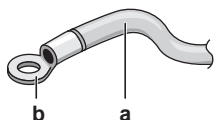
WARNING

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.

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	<p>a Curled single-core wire b Screw c Flat washer</p>
Stranded conductor wire with round crimp-style terminal	<p>a Terminal b Screw c Flat washer O Allowed X Not allowed</p>

6.4.4 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 wiring 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.

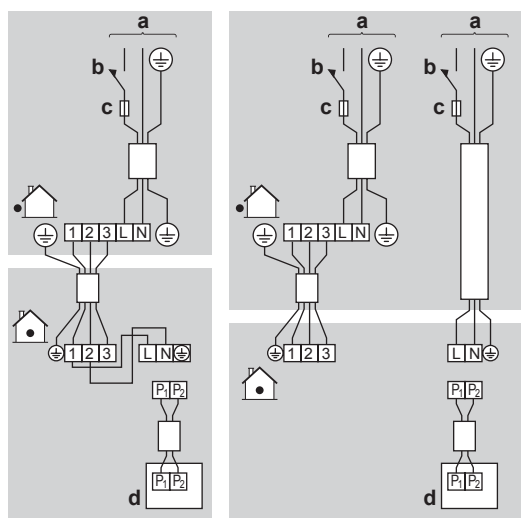
- 1 Remove the service cover.
- 2 **User interface cable:** Route the cable through the frame, connect the cable to the terminal block, and fix the cable with a cable tie.
- 3 **Interconnection cable (indoor↔outdoor):** Route the cable through the frame, connect the cable to the terminal block (make 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 Divide the small sealing (accessory) and wrap it 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.

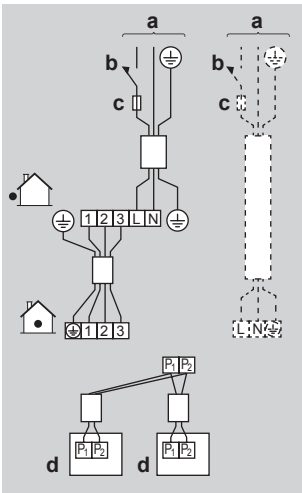
- 5 Reattach the service cover.
- **When using 1 user interface with 1 indoor unit.**



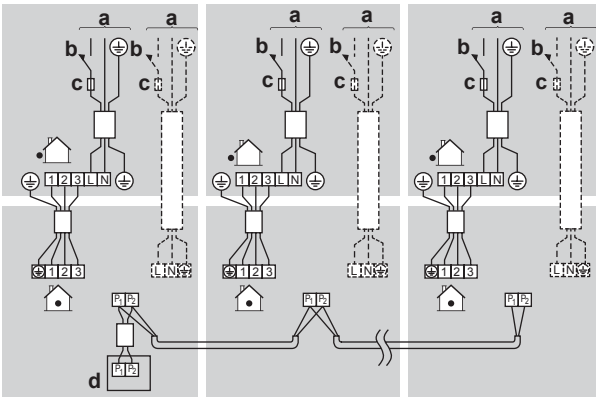
- **When using 2 user interfaces³**

⁽³⁾ Dashed line represents separate power supply.

7 Configuration



• When using group control³

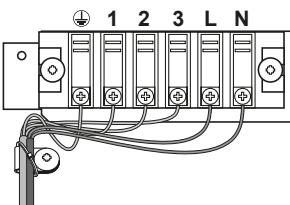


- a Power supply
- b Main switch
- c Fuse
- d User interface

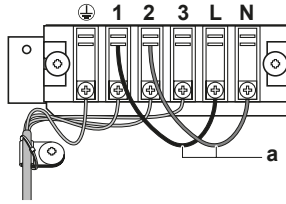
- **Master unit:** Be sure to connect the wiring when combining with a simultaneously operating multi-type in group control.
- **EN/IEC 61000-3-12** provided that the short-circuit power S_{sc} is greater than or equal to the minimum S_{sc} value at the interface point between the user's supply and the public system.
 - EN/IEC 61000-3-12 = 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.
 - It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power S_{sc} greater than or equal to the minimum S_{sc} value.

To comply with EN/IEC 61000-3-12, following rules must be considered:

- In case of combination of units 2x FDA125A + RZQ250, use separate power supplies.



- Otherwise, refer to the table with S_{sc} values for FDA125A on the extranet.
 - If the S_{sc} value is NOT mentioned in the table for the used combination, use the common power supply wire delivered with the unit.
 - If the S_{sc} value is mentioned in the table, both the common power supply wire or a separate power supply can be used, but a separate power supply is preferred.



a Wire for common power supply (accessory)



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.

6.4.5 Specifications of standard wiring components

Component		FDA125A
Power supply cable	MCA ^(a)	2.1 A
	Voltage	220~240 V
	Phase	1~
	Frequency	50/60 Hz
	Wire sizes	Must comply with applicable legislation
Interconnection cable		Minimum cable section of 2.5 mm ² and applicable for 220~240 V
User interface cable		Vinyl cord with 0.75 to 1.25 mm ² sheath or cables (2 core wires) Maximum 500 m
Recommended field fuse		16 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).

7 Configuration

7.1 Field settings

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 second code number to 03.

⁽³⁾ Dashed line represents separate power supply.

Setting content:	Then ⁴		
	M	C1	C2
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.

User interface

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

Change the second code number according to the external static pressure of the duct to be connected as in table below.

M	C1	C2	External static pressure
13 (23)	6	01	40
		02	50
		03	60
		04	70
		05	80
		06	90
		07	100
		08	110
		09	120
		10	130
		11	140
		12	150
		13	160
		14	180
		15	200

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 ⁴		
	M	C1	C2
±2500 h (light)	10(20)	0	01
±1250 h (heavy)			02
No notification			02

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

8 Commissioning

8.1 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.

8.2 Checklist before commissioning

Do NOT operate the system before the following checks are OK:

<input type="checkbox"/>	You read the complete installation instructions, as described in the installer reference guide .
<input type="checkbox"/>	The indoor units are properly mounted.
<input type="checkbox"/>	In case a wireless user interface is used: The indoor unit decoration panel with infrared receiver is installed.
<input type="checkbox"/>	The outdoor unit is properly mounted.
<input type="checkbox"/>	There are NO missing phases or reversed phases .
<input type="checkbox"/>	The system is properly earthed and the earth terminals are tightened.
<input type="checkbox"/>	The fuses or locally installed protection devices are installed according to this document, and have not been bypassed.
<input type="checkbox"/>	The power supply voltage matches the voltage on the identification label of the unit.
<input type="checkbox"/>	There are NO loose connections or damaged electrical components in the switch box.
<input type="checkbox"/>	The insulation resistance of the compressor is OK.
<input type="checkbox"/>	There are NO damaged components or squeezed pipes on the inside of the indoor and outdoor units.
<input type="checkbox"/>	There are NO refrigerant leaks .
<input type="checkbox"/>	The correct pipe size is installed and the pipes are properly insulated.
<input type="checkbox"/>	The stop valves (gas and liquid) on the outdoor unit are fully open.

8.3 To perform a test run

This task is only applicable when using the BRC1E52 or BRC1E53 user interface. When using any other user interface, see the installation manual or service manual of the user interface.



NOTICE

Do not interrupt the test run.

⁽⁴⁾ Field settings are defined as follows:

- **M:** Mode number – **First number:** for group of units – **Number between brackets:** for individual unit
- **C1:** First code number
- **C2:** Second code number
- **■:** Default

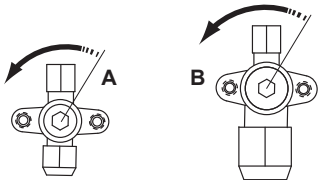
9 Hand-over to the user



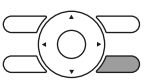
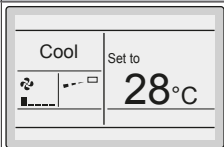
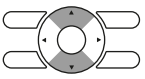

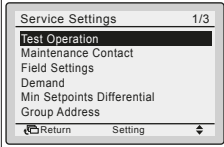

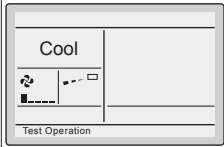
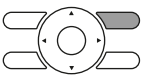
INFORMATION

Backlight. To perform an ON/OFF action on the user interface, the backlight does not need to be lit. For any other action, it needs to be lit first. The backlight is lit for ± 30 seconds when you press a button.

1 Perform introductory steps.

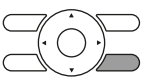
#	Action
1	Open the liquid stop valve (A) and gas stop valve (B) by removing the stem cap and turning counterclockwise with a hex wrench until it stops. 
2	Close the service cover to prevent electric shocks.
3	Turn ON power for at least 6 hours before starting operation to protect the compressor.
4	On the user interface, set the unit to cooling operation mode.

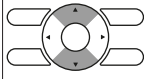
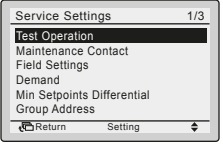
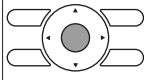
2 Start the test run

#	Action	Result
1	Go to the home menu. 	
2	Press at least 4 seconds. 	The Service Settings menu is displayed.
3	Select Test Operation. 	
4	Press. 	Test Operation is displayed on the home menu. 
5	Press within 10 seconds. 	Test run starts.

3 Check operation for 3 minutes.

4 Stop the test run.

#	Action	Result
1	Press at least 4 seconds. 	The Service Settings menu is displayed.

#	Action	Result
2	Select Test Operation. 	
3	Press. 	The unit returns to normal operation, and the home menu is displayed.

8.4 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:

Error code	Possible cause
Nothing displayed (the currently set temperature is not displayed)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The stop valves are closed. The air inlet or air outlet is blocked.
E7	<p>There is a missing phase in case of three-phase power supply units.</p> <p>Note: Operation will be impossible. Turn OFF the power, recheck the wiring, and switch two of the three electrical wires.</p>
L4	The air inlet or air outlet is blocked.
U0	The stop valves are closed.
U2	<ul style="list-style-type: none"> 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.

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 on the url as earlier described 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 in relation to maintaining the unit.

10 Disposal

**NOTICE**





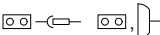











Do not try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, oil and other parts must comply with applicable legislation. Units must be treated at a specialised treatment facility for reuse, recycling and recovery.

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 Technical data

11.1 Wiring diagram

Unified Wiring Diagram Legend			
For applied parts and numbering refer to the wiring diagram sticker supplied on the unit. Part numbering is realized by Arabic numbers in ascending order for each part and is represented in the overview below by symbol **n** in the part code.			
	: CIRCUIT BREAKER		: PROTECTIVE EARTH
	: CONNECTION		: PROTECTIVE EARTH (SCREW)
	: CONNECTOR		: RECTIFIER
	: EARTH		: RELAY CONNECTOR
	: FIELD WIRING		: SHORT CIRCUIT CONNECTOR
	: FUSE		: TERMINAL
	: INDOOR UNIT		: TERMINAL STRIP
	: OUTDOOR UNIT		: WIRE CLAMP
BLK : BLACK	GRN : GREEN	PNK : PINK	WHT : WHITE
BLU : BLUE	GRY : GREY	PRP,PPL : PURPLE	YLW : YELLOW
BRN : BROWN	ORG : ORANGE	RED : RED	
A*P : PRINTED CIRCUIT BOARD	PS : SWITCHING POWER SUPPLY	BS* : PUSH BUTTON ON / OFF, OPERATION SWITCH	PTC* : THERMISTOR PTC
BZ, H*O : BUZZER	Q* : INSULATED GATE BIPOLAR TRANSISTOR (IGBT)	C* : CAPACITOR	Q*DI : EARTH LEAK CIRCUIT BREAKER
AC*, CN*, E*, HA*, HE, HL*, HN*, HR*, MR*_A, MR*_B, S*, U, V, W, X*A : CONNECTION, CONNECTOR	Q*L : OVERLOAD PROTECTOR	D*, V*D : DIODE	Q*M : THERMO SWITCH
DB* : DIODE BRIDGE	R* : RESISTOR	DS* : DIP SWITCH	R*T : THERMISTOR
E*H : HEATER	RC : RECEIVER	F*U, FL* (FOR CHARACTERISTICS REFER TO PCB INSIDE YOUR UNIT) : FUSE	S*C : LIMIT SWITCH
FG* : CONNECTOR (FRAME GROUND)	S*L : FLOAT SWITCH	H* : HARNESS	S*NPH : PRESSURE SENSOR (HIGH)
H*P, LED*, V*L : PILOT LAMP, LIGHT EMITTING DIODE	S*NPL : PRESSURE SENSOR (LOW)	HAP : LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	S*PH, HPS* : PRESSURE SWITCH (HIGH)
HIGH VOLTAGE : HIGH VOLTAGE	S*PL : PRESSURE SWITCH (LOW)	IES : INTELLIGENT EYE SENSOR	S*T : THERMOSTAT
IPM* : INTELLIGENT POWER MODULE	S*W, SW* : OPERATION SWITCH	K*R, KCR, KFR, KHuR : MAGNETIC RELAY	SA* : SURGE ARRESTOR
L : LIVE	SR*, WLU : SIGNAL RECEIVER	L* : COIL	SS* : SELECTOR SWITCH
L*R : REACTOR	SHEET METAL : TERMINAL STRIP FIXED PLATE	L*R : REACTOR	T*R : TRANSFORMER
M* : STEPPER MOTOR	TC, TRC : TRANSMITTER	M*C : COMPRESSOR MOTOR	V*, R*V : VARISTOR
M*F : FAN MOTOR	V*R : DIODE BRIDGE	M*P : DRAIN PUMP MOTOR	WRC : WIRELESS REMOTE CONTROLLER
M*S : SWING MOTOR	X* : TERMINAL	MR*, MRCW*, MRM*, MRN* : MAGNETIC RELAY	X*M : TERMINAL STRIP (BLOCK)
N : NEUTRAL	Y*E : ELECTRONIC EXPANSION VALVE COIL	n=* : NUMBER OF PASSES THROUGH FERRITE CORE	Y*R, Y*S : REVERSING SOLENOID VALVE COIL
PAM : PULSE-AMPLITUDE MODULATION	Z*C : FERRITE CORE	PCB* : PRINTED CIRCUIT BOARD	ZF, Z*F : NOISE FILTER
PM* : POWER MODULE			

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.¹



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.



WARNING

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



NOTICE

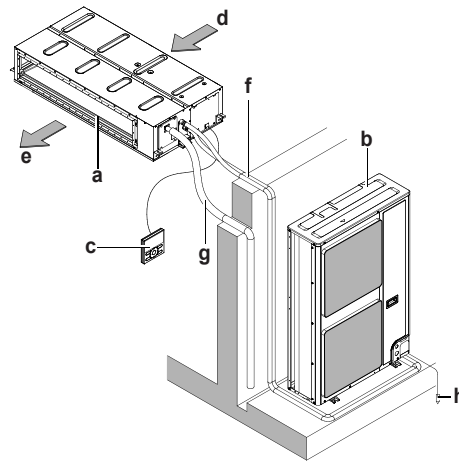
Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Only use accessories, optional equipment and spare parts made or approved by Daikin.

12.1 Components



INFORMATION

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



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



CAUTION

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



CAUTION

Never touch the internal parts of the controller.

Do not remove the front panel. Some parts inside are dangerous to touch and appliance problems may happen. For checking and adjusting the internal parts, contact your dealer.



NOTICE

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



NOTICE

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



NOTICE

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

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

⁽¹⁾ Only for appliances using R32 refrigerant. Refer to the outdoor unit specifications for the type of refrigerant to be used.

13 User interface

Item	Symbol	Value	Unit		
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
FDA125A	7.83	4.27	13.50	0.35	66

13 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.

This operation manual will give 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.

14 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. This could cause the chemicals to become deposited in the unit, which could endanger the health of those 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.

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.

15 Operation

15.1 Operation range

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

Outdoor units		Cooling	Heating
RR125	Outdoor temperature	-15~46°C DB	—
	Indoor temperature	18~37°C DB 12~28°C WB	—
RQ125	Outdoor temperature	-5~46°C DB	-9~21°C DB -10~15°C WB
	Indoor temperature	18~37°C DB 12~28°C WB	10~27°C DB
RZQG125	Outdoor temperature	-15~50°C DB	-19~21°C DB -20~15.5°C WB
	Indoor temperature	18~37°C DB 12~28°C WB	10~27°C DB
RZQSG125	Outdoor temperature	-15~46°C DB	-14~21°C DB -15~15.5°C WB
	Indoor temperature	20~37°C DB 14~28°C WB	10~27°C DB

16 Energy saving and optimum operation

Outdoor units		Cooling	Heating
RZQ250	Outdoor temperature	-5~46°C DB	-14~21°C DB -15~15°C WB
	Indoor temperature	20~37°C DB 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
RZAG125	Outdoor temperature	-20~52°C DB	-19.5~21°C DB -20~15.5°C WB
	Indoor temperature	18~37°C DB 12~28°C WB	10~27°C DB
RZASG125	Outdoor temperature	-15~46°C DB	-14~21°C DB -15~15.5°C WB
	Indoor temperature	20~37°C DB 14~28°C WB	10~27°C DB
Indoor humidity		≤80% ^(a)	

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

15.2 Operation procedure

- Turn on the power at least 6 hours before operating the unit in order to ensure smoother operation. As soon as the power is turned on, the user interface display appears.
- If there was a power failure during operation, the system automatically restarts immediately after the power supply is recovered.
- The setting temperature range of the user interface is described in chapter "Operation range".
- If you select a function which is not available, the message NOT AVAILABLE appears on the user interface.
- Read the documentation carefully before operating the user interface to ensure the best possible performance.

16 Energy saving and optimum operation



CAUTION

Never expose little children, plants or animals directly to the air flow.



WARNING

Do NOT place objects below the indoor and/or outdoor unit that may get wet. In this condition, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping. This results in fouling or failure of the object which is located beneath the unit.



NOTICE

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



CAUTION


Do not operate the system when using a room fumigation-type insecticide. This could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.



WARNING

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

Observe the following precautions to ensure the system operates properly.

- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Ventilate often. Extended use requires special attention to ventilation.
- Keep doors and windows closed. If the doors and windows remain open, air will flow out of your room causing a decrease in the cooling or heating effect.
- Be careful not to cool or heat too much. To save energy, keep the temperature setting at a moderate level.
- Never place objects near the air inlet or the air outlet of the unit. It may cause deterioration in the effect or stop the operation.
- Turn off the main power supply switch to the unit when the unit is not used for longer periods of time. If the switch is on, it consumes electricity. Before restarting the unit, turn on the main power supply switch 6 hours before operation to ensure smooth running.
- When the display shows  (time to clean the air filter), clean the filters (see "17.2.2 To clean the air filter" on page 26).
- 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.

17 Maintenance and service

17.1 Overview: Maintenance and service

The installer has to perform a yearly maintenance.

About the refrigerant

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

Refrigerant type: R32

Global warming potential (GWP) value: 675

Refrigerant type: R410A

Global warming potential (GWP) value: 2087.5

17 Maintenance and service

NOTICE

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

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

Please contact your installer for more information.

WARNING

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

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

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

WARNING

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

NOTICE

Maintenance must be done by an authorised installer or service agent.

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

CAUTION

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

DANGER: RISK OF ELECTROCUTION

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

WARNING

To prevent electric shocks or fire:

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

CAUTION

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

CAUTION

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

NOTICE

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

WARNING

Be careful with ladders when working in high places.

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

17.2.1 To clean the air outlet and outside panels

WARNING

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

NOTICE

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

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

17.2.2 To clean the air filter

When to clean the air filter:

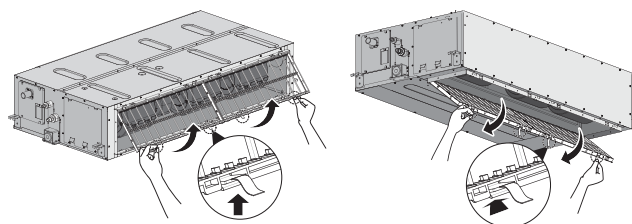
- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **TIME TO CLEAN AIR FILTER** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes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

How to clean the air filter:

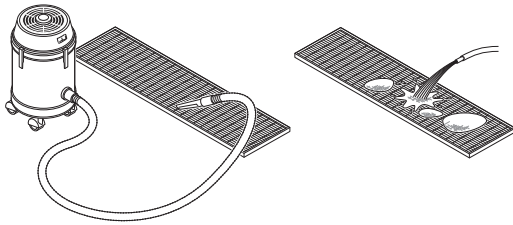
- Remove the air filters by pulling their cloth upward (in case of rear suction) or backward (in case of bottom suction).

rear suction

bottom suction



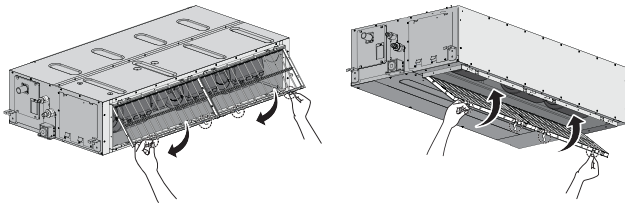
- Clean the air filter. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



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

rear suction

bottom suction



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

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

17.3 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 air filters and casings of indoor units. Contact your installer or maintenance person to clean air filters and casings of the indoor unit. Maintenance tips and procedures for cleaning are provided in the installation/operation manuals of dedicated indoor units. Make sure to install cleaned air filters back in the same position.
- Remove the batteries from the user interface.

17.4 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 air filters and casings of indoor units. Contact your installer or maintenance person to clean air filters and casings of the indoor unit. Maintenance tips and procedures for cleaning are provided in the installation/operation manuals of dedicated indoor units. Make sure to install cleaned air filters back in the same position.

- Turn on the power at least 6 hours before operating the unit in order to ensure smoother operation. As soon as the power is turned on, the user interface display appears.

18 Troubleshooting

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



WARNING

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

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

The system must be repaired by a qualified service person:

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

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

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

18 Troubleshooting

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


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

18.1 Symptoms that are NOT system malfunctions

The following symptoms are NOT system malfunctions:

18.1.1 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.

18.1.2 Symptom: Air blow direction is not as specified

Actual air blow direction is not as shown on the user interface. Automatic swing setting does not work.

Refer to the manual of the user interface.

18.1.3 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.

18.1.4 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.

18.1.5 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.

18.1.6 Symptom: The units can give off odours

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

18.1.7 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.

18.1.8 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.

18.1.9 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.

18.1.10 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.

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.

19 Relocation

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

20 Disposal

**NOTICE**

Do not try to dismantle the system yourself: the 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.

21 Glossary

Dealer

Sales distributor for the product.

Authorized 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

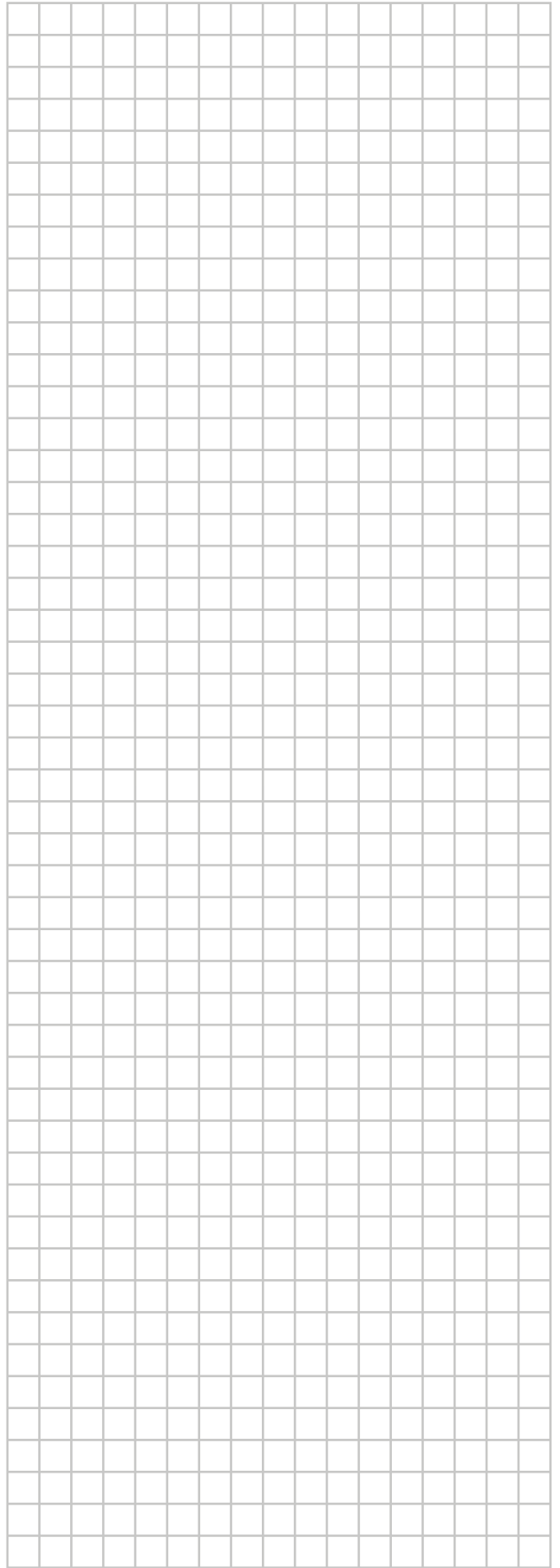
All international, European, national and local directives, laws, regulations and/or codes that are relevant and applicable for a certain product or domain.

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.





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