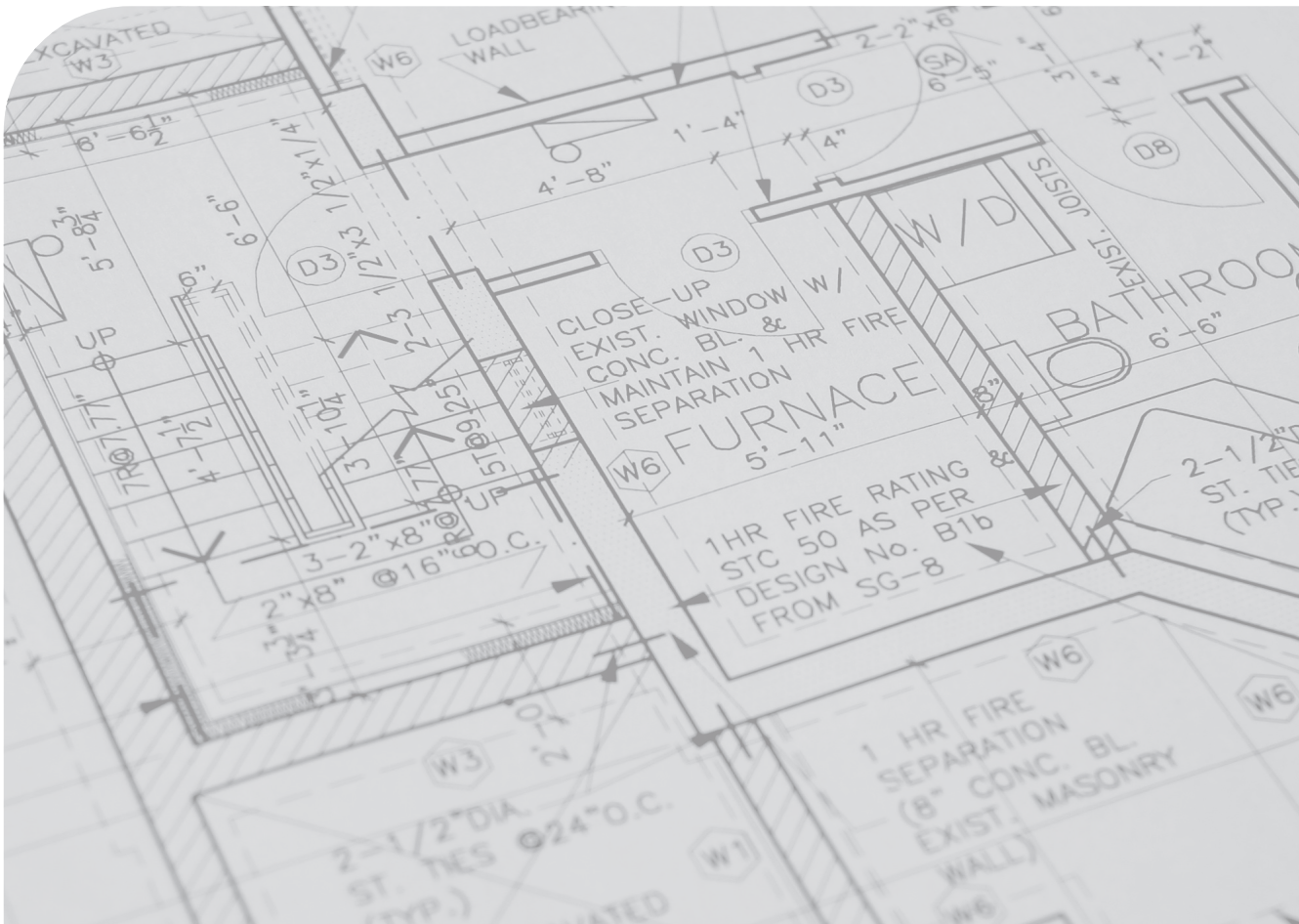
IMMERGAS

USER'S MANUAL

UI CAS 9-12-18

IE

Instructions and recommendations
Installer
Maintenance technician
Technical data



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DEAR CUSTOMER

Congratulations for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas Customer, you can also count on a qualified Authorised Technical After-Sales Centre, prepared and updated to guarantee constant efficiency of your product. Read the following pages carefully: you will be able to draw useful tips on the proper use of the device, compliance with which will confirm your satisfaction with the Immergas product.
For assistance and routine maintenance, contact Authorised Technical Service Centres: they have original spare parts and are specifically trained directly by the manufacturer.

The company **IMMERGAS S.p.A.**, with registered office in via Cisa Ligure 95 42041 Brescello (RE), declares that the design, manufacturing and after-sales assistance processes comply with the requirements of standard **UNI EN ISO 9001:2015**.

For further details on the product CE marking, request a copy of the Declaration of Conformity from the manufacturer, specifying the appliance model and the language of the country.

The manufacturer disclaims all liability due to printing or transcription errors, reserving the right to make any modifications to its technical and commercial documents without forewarning.

GENERAL WARNINGS

This booklet contains important information for the:
Installer;
Maintenance technician.

- The appliance must be installed by qualified and certified personnel.
- The instruction booklet is an integral and essential part of the product and must be given to the new user in the case of transfer or succession of ownership.
- It must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.
- In compliance with legislation in force, the systems must be designed by qualified professionals, within the dimensional limits established by the Law. Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by professionally qualified staff, intended as staff with specific technical skills in the system sector, as envisioned by the Law.
- Improper installation or assembly of the Immergas appliance and/or components, accessories, kits and devices can cause unexpected problems for people, animals and objects. Read the instructions provided with the product carefully to ensure proper installation.
- This instruction manual provides technical information for installing Immergas products. As for the other issues related to the installation of products (e.g. safety at the workplace, environmental protection, accident prevention), it is necessary to comply with the provisions of the standards in force and the principles of good practice.
- All Immergas products are protected with suitable transport packaging.
- The material must be stored in a dry place protected from the weather.
- Damaged products must not be installed.
- Maintenance must be carried out by skilled technical staff. For example, the Authorised Service Centre that represents a guarantee of qualifications and professionalism.
- The appliance must only be destined for the use for which it has been expressly intended. Any other use will be considered improper and therefore potentially dangerous.
- If errors occur during installation, operation and maintenance, due to non-compliance with technical laws in force, standards or instructions contained in this booklet (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damage and the device warranty is invalidated.
- In the event of malfunctions, faults or incorrect operation, turn the appliance off and contact an authorised company (e.g. the Authorised Technical Assistance Centre, which has specifically trained staff and original spare parts). Do not attempt to modify or repair the appliance alone.

SAFETY SYMBOLS USED

GENERIC HAZARD
Strictly follow all of the indications next to the pictogram. Failure to follow the indications can generate hazard situations resulting in possible serious harm to the health of the operator and user in general, and/or serious material damage.

ELECTRICAL HAZARD
Strictly follow all of the indications next to the pictogram. The symbol indicates the appliance's electrical components or, in this manual, identifies actions that can cause an electrical hazard.

MOVING PARTS HAZARD
The symbol indicates the appliance's moving components that can cause hazards.

LOW FLAMMABILITY MATERIAL
The symbol indicates that the appliance contains low flammability material.

INSTALLER RECOMMENDATIONS
Read the instruction booklet carefully before installing the product.

WARNINGS
Strictly follow all of the indications next to the pictogram. Failure to follow the indications can generate hazard situations resulting in possible minor injuries to the health of the operator and user in general, and/or minor material damage.

ATTENTION
Read and understand the appliance's instructions before performing any operation, carefully following the indications provided. Failure to follow the indications can generate appliance malfunctions.

INFORMATION
Indicates useful tips or additional information.

EARTH TERMINAL CONNECTION
The symbol identifies the appliance's earth terminal connection point.

PERSONAL PROTECTIVE EQUIPMENT

SAFETY GLOVES

SAFETY GOGGLES

SAFETY FOOTWEAR

DISPOSAL METHOD

DISPOSAL WARNING
The user must not dispose of the appliance at the end of its service life as municipal waste, but send it to appropriate collection centres.

This marking on the product means that waste electrical and electronic equipment must not be mixed with generic household waste.

Do not dispose of this product as unsorted city waste. Incorrect management of waste has potential negative effects on the environment and on human health.
To dispose of the device, refer to waste electrical and electronic equipment collection centres or contact the dealer that you purchased it from.
Discharged batteries must be taken out of the remote controls and disposed of separately in compliance with local regulations.

INDOOR UNIT FEATURES: CAS

Direct expansion "split" inverter reversible single phase air to air heat pumps, consisting of an outdoor unit and an indoor unit. There is a separate code for the outdoor and indoor unit.

Main components:
- **Cas indoor unit**, consisting of a main structure containing: housing for the electrical box, finned pack heat exchanger, ventilating unit with inverter motor and axial fan, a tank for condensate collection fitted with an evacuation pump of the same. The unit is completed by a thermoplastic grid kit consisting of a frame in which the filter and diverter fins of the air flow are housed, and an intake grid: the directional fins are positioned on each side of the grid and are adjustable by remote control. The intake grid has a practical fastening system that allows it to easily be inspected for maintenance and cleaning of the filter.

Main specifications:
- Standard infrared remote control to control the system;
- Wi-Fi module for remote control via CLIMAsmart app (optional);
- Wide operating range in cooling and central heating mode;
- Back lit pop-up display on indoor unit;
- Possibility of setting a time range, so that air-conditioning automatically switches on and off;
- The Swing function automatically oscillates the horizontal fins of the indoor unit to vertically direct the air flow;
- Dual level energy-saving mode: ECO and GEAR;
- To quickly reach the room setpoint, Turbo mode can be activated to reach the maximum air flow rate;
- Very quiet operation thanks to the Silence function that reduces noise to a minimum;
- Maximum comfort by means of the "Follow Me" function to be able to read the room temperature near the remote control.

UI CAS

0-01

CONTENT OF THE PACKAGING

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<tr><th colspan="4">INDOOR UNIT</th></tr>
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• Safety manual
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<tr><td>3/8” (9,52 mm)</td><td>• UI CAS 9
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1 INSTALLATION

1.1 GENERAL WARNINGS


This air conditioning unit contains fluorinated greenhouse gases.
The appliance operates with R32 refrigerant gas. Do not release R32 into the atmosphere.
Note that the gas is odourless.
R32 refrigerant gas belongs to the low flammability refrigerant category: class A2L according to standard ISO 817.
Strictly follow the instruction handbook before installation and any type of operation on the cooling line.

Operators who install and service the appliance must wear the personal protective equipment required by applicable law.

In case of anomaly, fault, imperfect functioning of the device (e.g. burning smell, release of smoke or excessive noise), immediately switch off unit and disconnect the electrical power supply. Contact the Authorised Technical Service Centre.

Failure to comply with the above implies personal responsibility and invalidates the warranty.


WARNINGS for product use:

- Do not insert fingers or other objects into the air inlet or outlet. This could cause injury.
- Do not run the air conditioner in the vicinity of flammable gases. The emitted gas could collect around the unit and cause a fire. Do not use flammable sprays such as hair spray, spray varnish or paint near the unit.
- Do not run the air conditioner in a humid room, such as a bathroom or laundry room. Excessive exposure to water could cause the electrical components to short circuit.
- Do not expose oneself directly to the air flow for extended periods of time.
- If the air conditioner is installed in a room with burners or other C.H. devices, thoroughly ventilate the room to avoid any lack of oxygen.

The place of installation of the device and relative Immergas accessories must have suitable features (technical and structural), such as to allow for (always in safe, efficient and comfortable conditions):

- installation (according to the provisions of technical legislation and technical regulations);
- maintenance operations (including scheduled, periodic, routine and special maintenance);
- the removal (to the outside of the designated place for loading and transporting the devices and components) as well a the replacement of them with equivalent devices and/or components.

The unit must be installed according to the spaces described in this manual so as to guarantee that both sides are accessible and to allow for repairs and maintenance to be performed.

The manufacturer cannot be held liable for damage resulting from unauthorised changes or improper connection of the electric and cooling lines.

Installation must be carried out according to UNI and IEC regulation standards, current legislation and in compliance with local technical regulations and the required technical procedures.
In particular, standards UNI EN378 and CEI 64-8 need to be complied with.

Before installing the appliance, ensure it has been delivered in perfect condition; if in doubt, contact the supplier immediately. Packing materials (staples, nails, plastic bags, polystyrene foam, etc.) constitute a hazard and must be kept out of the reach of children.

Check the environmental operating conditions of all parts relevant to installation, referring to the values shown in the technical data table in this booklet.

Make sure to take adequate measures so that the unit is not used to house small animals. Animals that come into contact with electric components could cause operating failures, smoke or fire.
Inform the customer to keep the area around the unit clean.

Children of 8 years or older and people with reduced physical, sensorial or mental capacities can use this device as long as they are under supervision or have been instructed and informed regarding the safe use of this device and the possible risks connected to it.
Children must not play with the appliance.
The appliance must not be cleaned and serviced by children without the supervision of an adult.

- Turn the air conditioner off and cut off power if it is not used for a long period of time.
- Switch off the device during storms.
- Make sure that the water condensate drain can flow out without obstruction from the unit to places where it will not bother or damage people, property or animals.
- Do not start the air conditioner with wet hands. This could cause electric shocks.
- Do not use the device for any other purpose than intended.
- Do not climb onto or place objects on the outdoor unit.
- Do not leave the air conditioner for long periods of time with doors or windows open, or if the humidity is very high.

- This device contains refrigerant gas that must be disposed of as special waste.
- The packaging material must be disposed of in compliance with local regulations.

WARNINGS for cleaning and maintenance:
- Switch off the device and disconnect the power supply before cleaning or before performing maintenance on it. Failure to observe this rule can cause electric shocks.
- Do not clean the air conditioner with excessive amounts of water.
- Do not clean the air conditioner with flammable detergents.

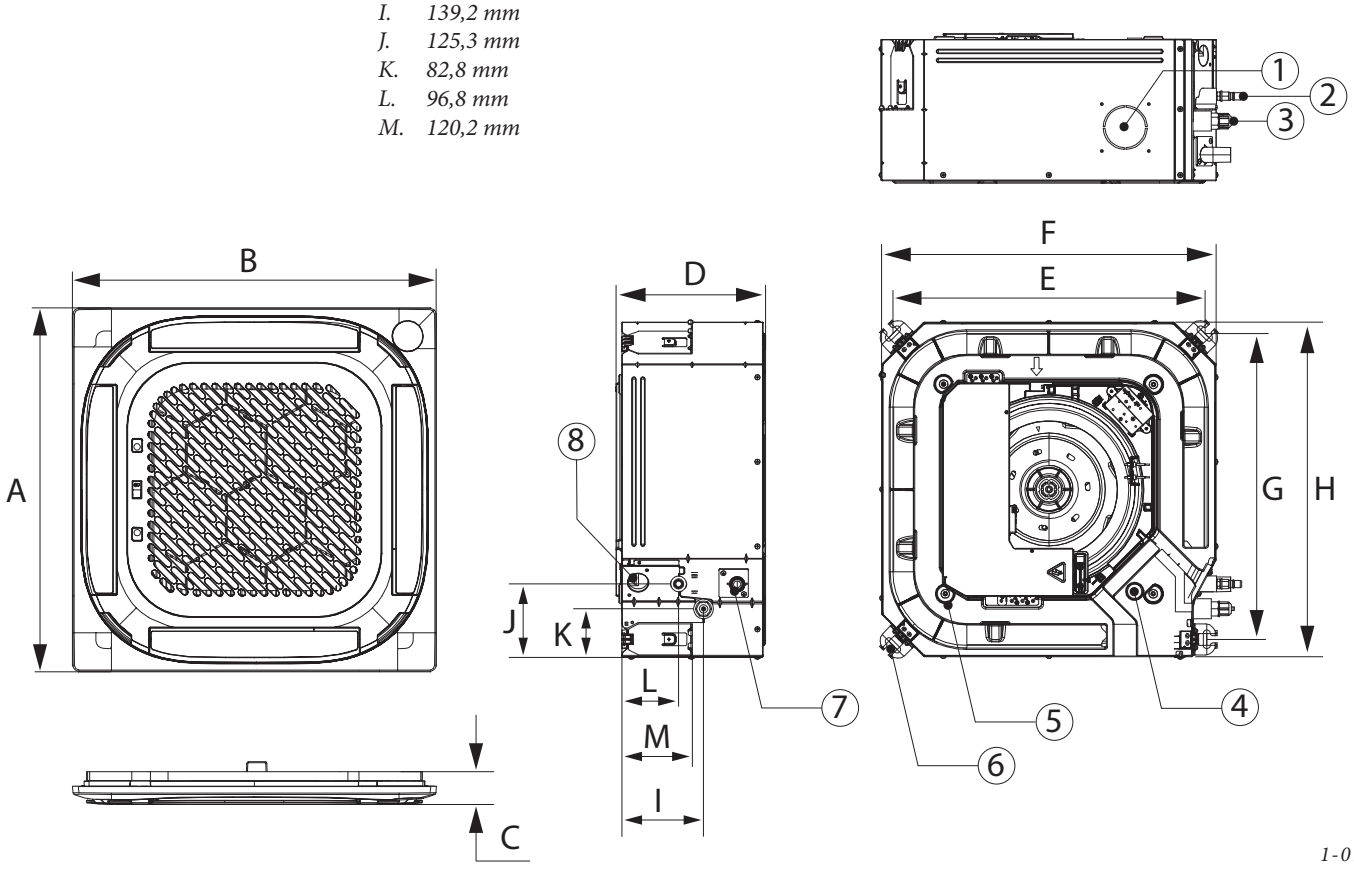
1.2 MAIN DIMENSIONS

KEY:

1. *Air Inlet*
2. *Liquid part connection*
3. *Gas Connection*
4. *Drain hole*
5. *Panel fixing holes*
6. *Installation hooks*
7. *Drain pipe*
8. *Electrical connection*

KEY:

- *A. 620 mm*
- *B. 620 mm*
- *C. 50 mm*
- *D. 245 mm*
- *E. 531 mm*
- *F. 570 mm*
- *G. 521 mm*
- *H. 570 mm*
- *I. 139,2 mm*
- *J. 125,3 mm*
- *K. 82,8 mm*
- *L. 96,8 mm*
- *M. 120,2 mm*



1-01

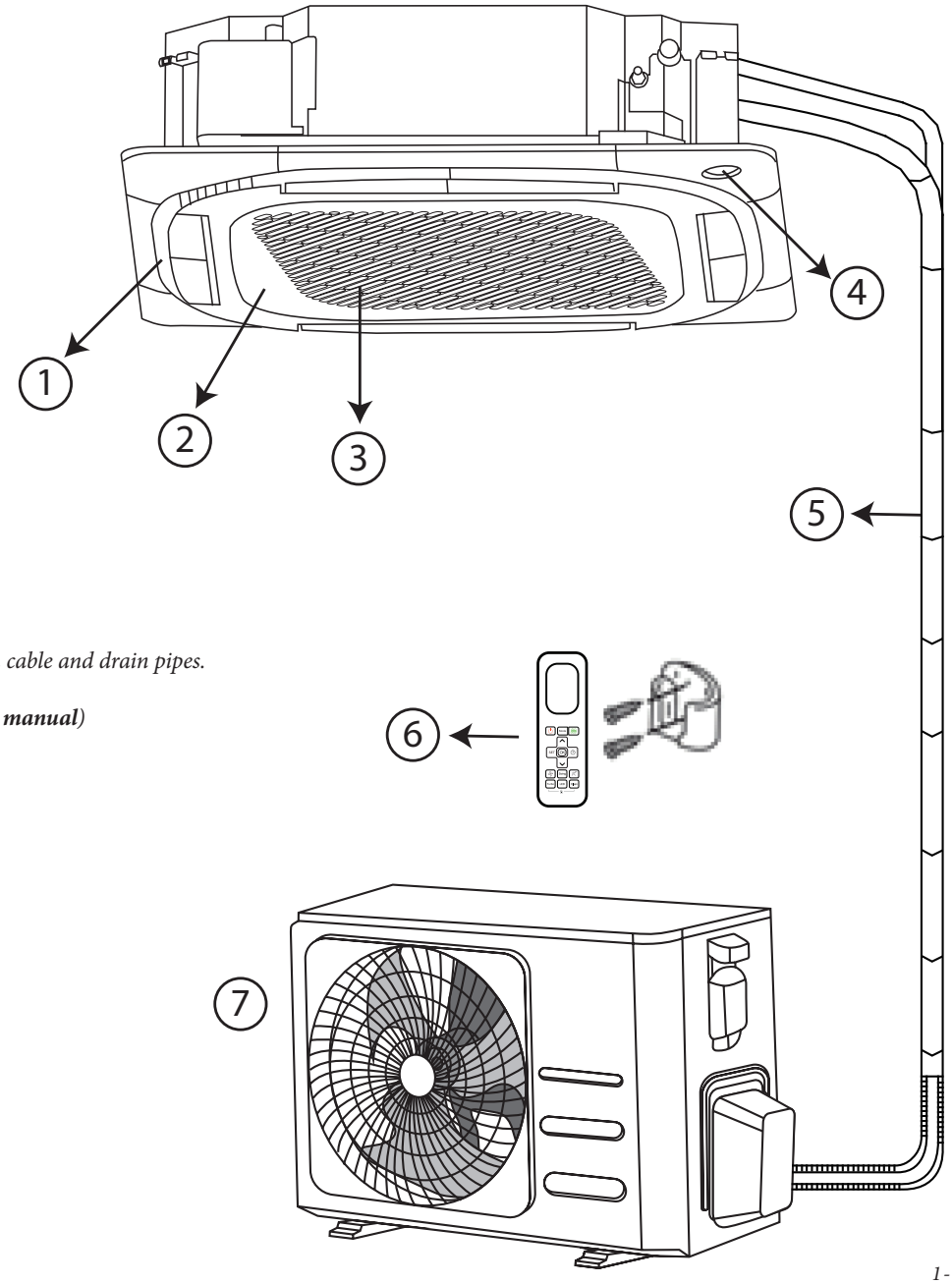
Dimensions

Model	Dimensions (Width mm)	Dimensions (Depth mm)	Dimensions (Height mm)
UI CAS 9	570	245	570
UI CAS 12			
UI CAS 18			
DECORATIVE FRAME	620	50	620

Connections

Model	Net weight (kg)	Condensate drain Ø (mm)	Flow pipe internal Ø (liquid)	Return pipe internal Ø (gas)
UI CAS 9	14.5	25	1/4" (6.35 mm)	3/8" (9.52 mm)
UI CAS 12	16.1			
UI CAS 18	16.2			1/2" (12.7 mm)
DECORATIVE FRAME	2.7	-	-	-

1.3 MAIN COMPONENTS



KEY:

1. *Air outlet*
2. *Air inlet*
3. *Front grid*
4. *Display*
5. *Wrapping containing connection cable and drain pipes.*
6. *Remote control*
7. *Outdoor Unit (**see the reference manual**)*

1-02

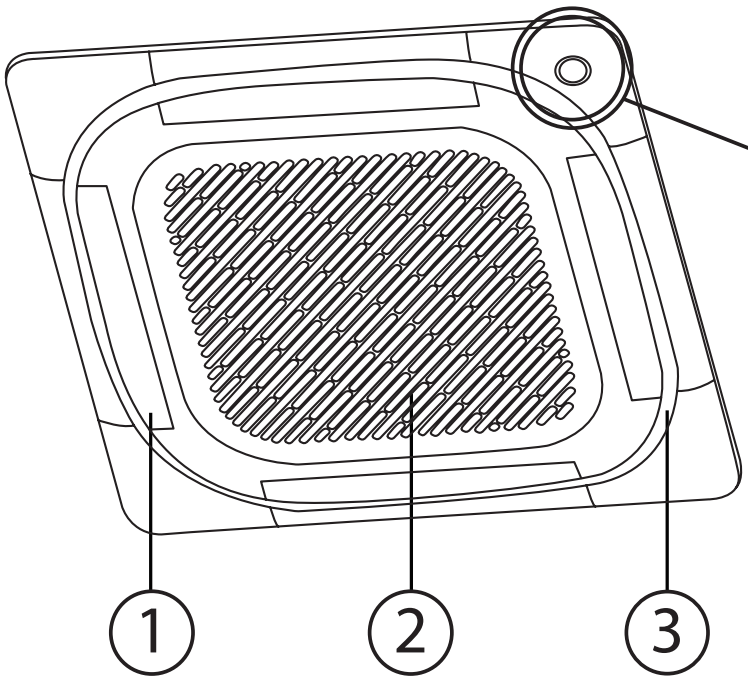
ATTENTION
See the reference manual for the specifications and installation of the outdoor unit.

NOTE:

- The illustrations are provided by way of example, the actual products could be slightly different
- Installation must be carried out in compliance with local and national standards.

The air conditioner is made of two (or more) units connected together by pipes (duly insulated) and by a power supply cable. The Indoor Unit needs to be installed on the ceiling in the room being air conditioned. The Outdoor Unit must be installed on the floor or wall, on specific brackets or supports (sold separately).
With monosplit installation, the outdoor unit is only connected to the indoor unit, whereas with multisplit installation to a single outdoor unit, multiple indoor units are connected.

1.4 MAIN FEATURES



KEY:

1. *Slot*
2. *Air inlet*
3. *Air outlet*
4. *Display*
5. *Temperature Indicator*
6. *Timer Indicator*
7. *Operation Indicator*
8. *Pre-Def Indicator (Pre-heating or Defrosting)*
9. *Wireless function on indicator(Optional)*
10. *Alarm Indicator*

1-03

1.4.1 OPERATING TEMPERATURE

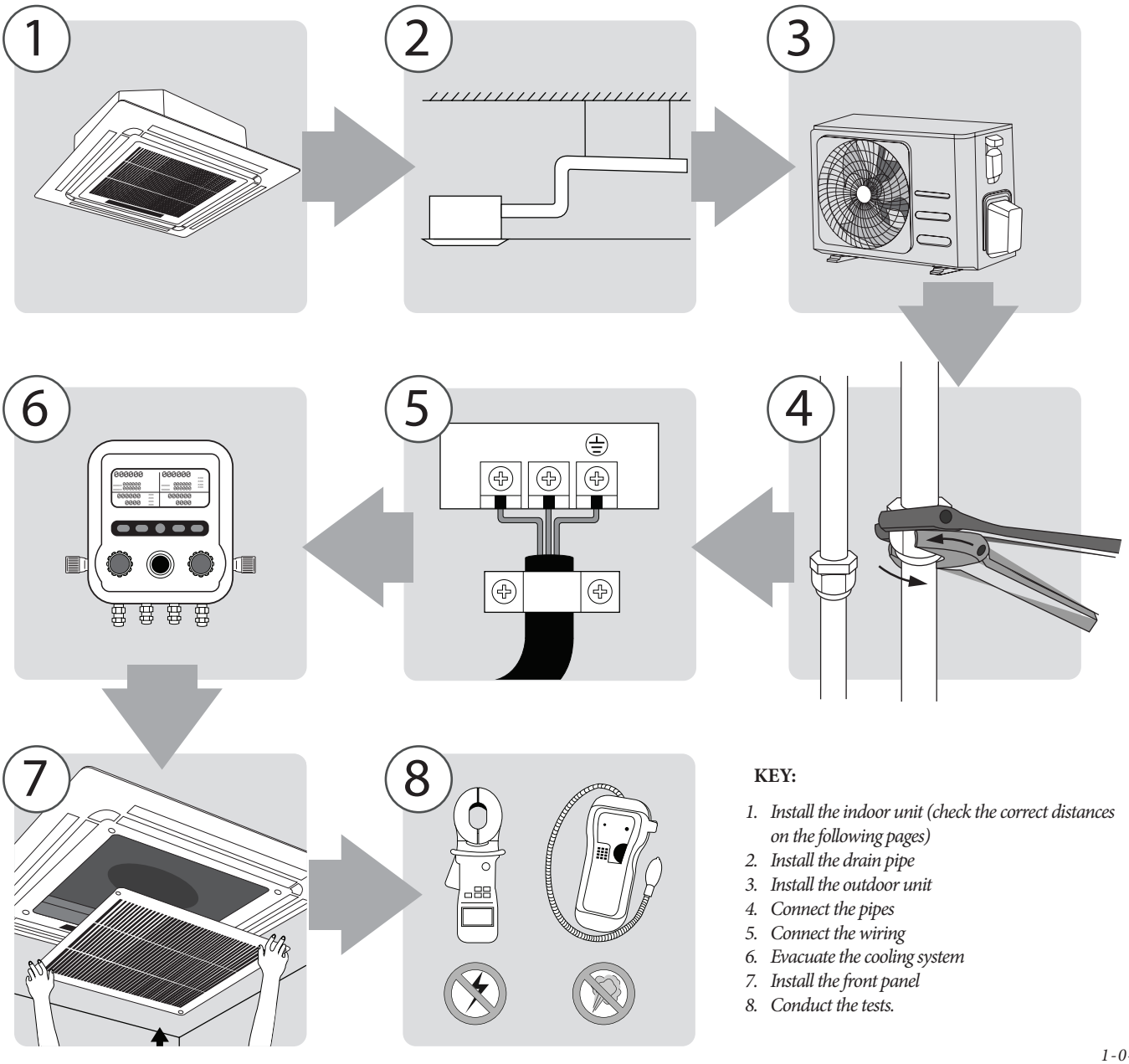
When your air conditioner is used outside of the temperature ranges indicated below, some protection and safety functions could be activated and cause non-optimal performance of the unit.

	Cooling	Central heating	Dehumidification
Room Temperature	16°C ÷ 32°C	0°C ÷ 30°C	10°C ÷ 32°C
External Temperature	-15°C ÷ +50°C	-15°C ÷ +24°C	0°C ÷ 50°C

To further optimise the performance of your unit, do the following:

- Keep doors and windows closed.
- Limit energy consumption with TIMER ON and TIMER OFF functions.
- Do not block the air intakes and outlets.
- Check and clean the air filters on a regular basis.

1.5 OVERVIEW OF INSTALLATION



KEY:

1. *Install the indoor unit (check the correct distances on the following pages)*
2. *Install the drain pipe*
3. *Install the outdoor unit*
4. *Connect the pipes*
5. *Connect the wiring*
6. *Evacuate the cooling system*
7. *Install the front panel*
8. *Conduct the tests.*

1-04

ATTENTION
See the reference manual for the specifications of the outdoor unit.

1.6 INSTALLATION

STEP 1: Choosing the place of installation.

Before installing the indoor unit, choose a place for correct installation. The following guidelines will help you to choose the most appropriate place to install the unit:

- The unit must be at least 100cm from the nearest wall.
- There is sufficient clearance space for installation and maintenance.
- There is sufficient clearance space for the cooling pipes and for the condensate drain pipe.
- The ceiling is horizontal and its structure is capable of bearing the weight of the Indoor Unit.
- The air inlet and outlet are clear of obstacles.
- The air flow reaches the entire room.
- There is no direct radiation from radiators.

DO NOT install the unit in the following places:

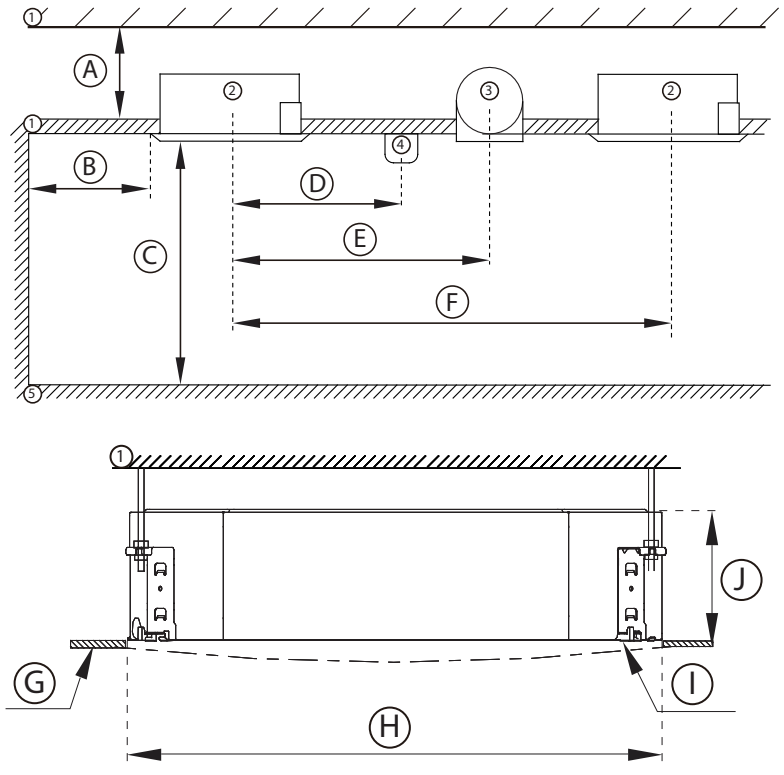
- **In areas where hydraulic drilling or fracturing are carried out.**
- **In coastal areas, with a high content of salt in the air.**
- **In areas with gas in the air, such as thermal power plants.**
- **In areas with power surges, such as factories.**
- **In confined spaces, such as closets.**
- **In kitchens that use natural gas.**
- **In areas with strong electromagnetic waves.**
- **In areas where flammable materials or gases are stored.**
- **In rooms with a high moisture content, such as bathrooms or laundries.**

Recommended distances for correct installation

KEY:

1. *Ceiling*
2. *Indoor Unit*
3. *Fan*
4. *Lighting*
5. *Floor*

A. *>29 cm*
B. *>150 cm(Recommended 200)*
C. *>230 cm*
D. *>150 cm*
E. *>200 cm*
F. *>400 cm*
G. *Ceiling panel*
H. *60 cm*
I. *Front Panel*
J. *26 cm*



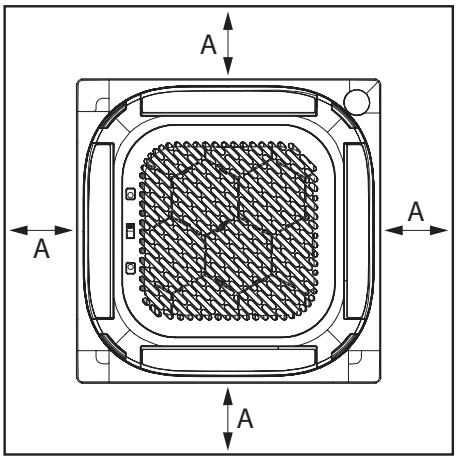
1-05

STEP 2: Hanging the Indoor Unit

1. Use the cardboard installation template to make an opening in the ceiling, leaving at least 100 cm of space on all sides. The opening must measure 60cmx60cm. Mark the spots where holes must be drilled for the hooks/tie rods on the ceiling

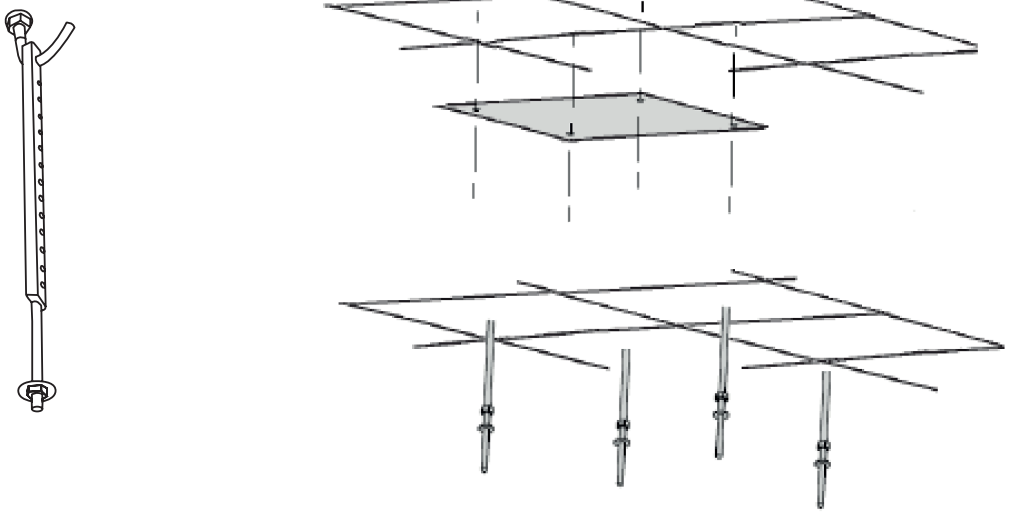
KEY:

A. 100 cm



1-06

2. Drill 4 holes in the ceiling, in the positions marked for the hooks on the cardboard template. Hold the drill bit at a right angle with respect to the ceiling
3. Use a hammer to insert the ceiling hooks (purchased separately) into the drilled holes. N.B. Tie rods or threaded metric parts can also be used. Buy the appropriate fastening systems depending on the type of ceiling and the weight of the unit to be installed (see previous table)
4. Install nuts/lock nuts and washers (purchased separately) on the threaded part of each hook/tie rod (example image of installation with hooks on the left and with threaded bars on the right).



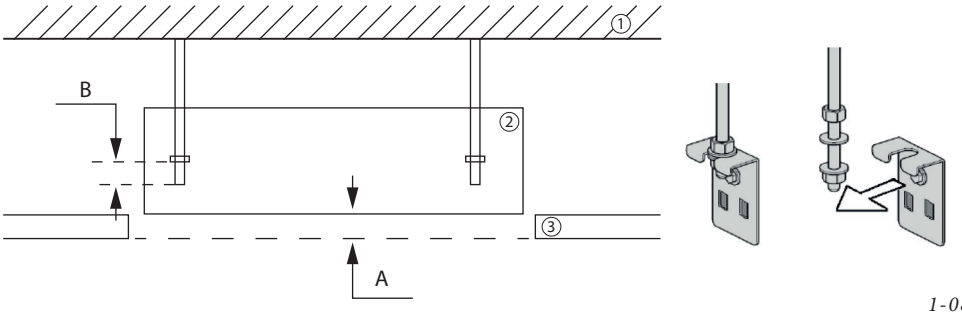
1-07

5. Install the indoor unit. Two persons are needed to safely lift and secure the unit. Hang the support brackets incorporated in the unit to the tie rods coming out of the ceiling, taking care to keep them a certain distance from the false ceiling. Screw the nut and lock nut by hand without tightening them. Level the unit and tighten nuts and lock nuts.

KEY:

1. *Wall*
2. *Main body*
3. *False ceiling*

A. *24 mm*
B. *It should measure half of the suspension bolt or be long enough that the nuts do not protrude.*



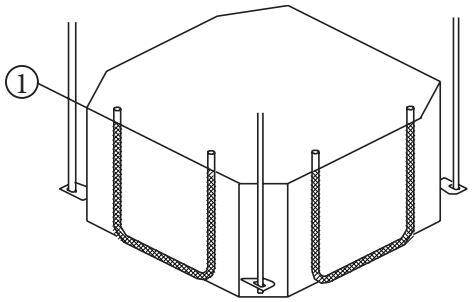
1-08

NOTE:

- The lower side of the unit must be positioned approximately 24 mm higher than the false ceiling. In general, measurement B should measure half of the suspension bolt or be long enough that the nuts do not protrude.
- Make sure that the unit is perfectly level. The unit is fitted with a drain pump and a float switch. If the unit is inclined in the direction opposite that of the condensate flow (with the side of the drain pipe raised), the flow switch might not work properly and cause water leaks.

KEY:

1. *Water level*



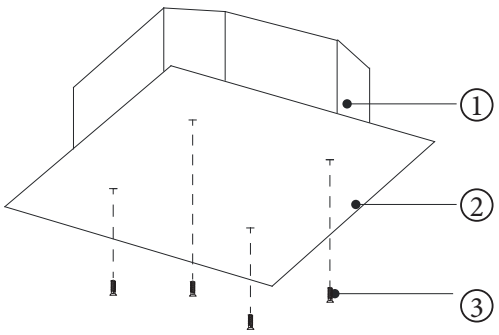
1-09

NOTE: INSTALLATION IN NEWLY CONSTRUCTED BUILDINGS

- When the unit must be installed in a newly constructed building, the hooks can previously be recessed in the ceiling. In this case, make sure that the hooks do not loosen due to contraction of the concrete. After having installed the indoor unit, fasten the installation template on the unit (with the M5X14 metric screws included in the CASSETTE FRAME kit) to determine the size and positions of the opening to be made in the ceiling. For the rest of the installation, follow the instructions given above.

KEY:

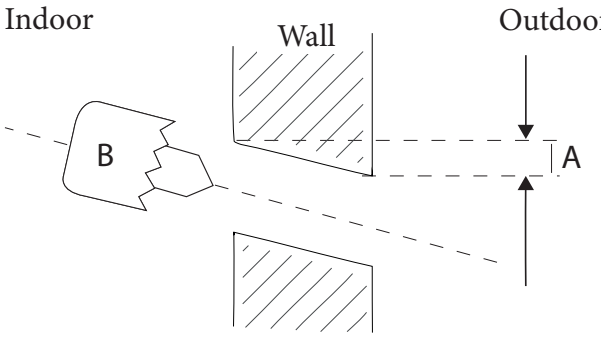
1. *Installation template*
2. *Main body*
3. *M5x14 screws*



1-10

STEP 3: Drilling holes for connection pipes

1. Drill a hole in the wall for the cooling pipes, the drain pipe and the signal cable that will connect the indoor unit to the outdoor unit. (The cooling pipes are located inside an insulated sleeve connected to the back of the indoor unit. The pipes must be prepared before threading them through the hole in the wall).
2. Using a minimum 65mm size cutter bit for the drill, drill a hole in the wall, ensuring that it is angles slightly downwards, so that the outer end is about 12 mm lower than the inner end.



KEY:
A. 12 mm
B. Cutter bit

1-11

3. Install a protective wall sealing plate (sold separately) on the newly drilled hole; this protects the edges of the hole and helps seal it at the end of installation

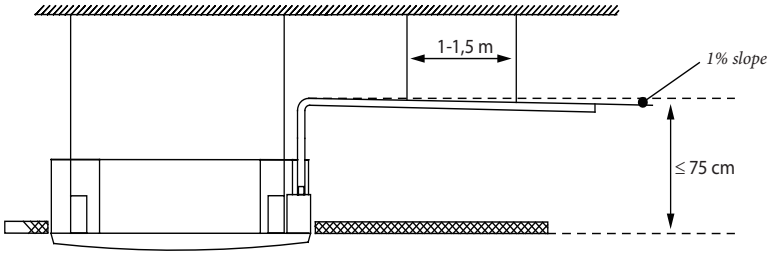
ATTENTION
Make sure to avoid cables, pipes and other sensitive components when drilling the hole in the wall.

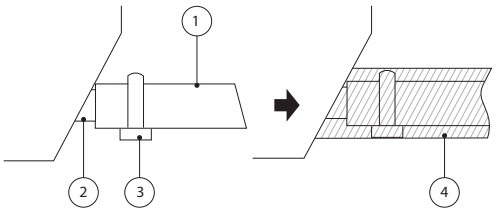
STEP 4: Installing the drain pipes

The drain pipe has the task of draining water from the unit. Incorrect installation can cause damage to the unit and other material damage. A polyethylene pipe is required, not supplied as per standard.

ATTENTION
- Insulate all the pipes to prevent the formation of condensate which could cause damage due to water.
- If the drain pipe is bent or installed improperly, water could leak and cause the float switch to malfunction.
- In HEAT mode, the outdoor unit drains water. Check that the drain pipe is in an appropriate area to avoid damage due to water and slipping hazards owing to freezing of the drained water.
- Do NOT pull strongly on the drain pipe as this could cause it to detach.

1. Cover the drain pipe with thermal-insulation material to prevent the formation of condensate and possible water leaks.
2. Connect the end of the drain pipe to the outlet pipe of the unit. Wrap the end of the pipe and firmly secure it with a pipe clamp.





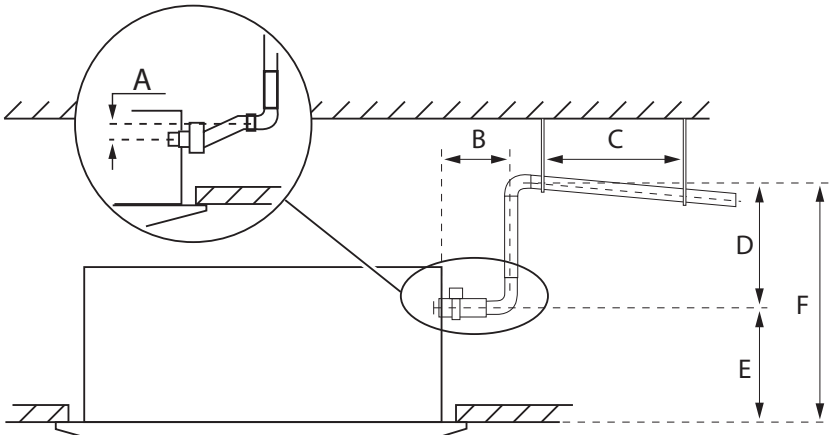
KEY:
1. Drain pipe
2. Drain pipe connection port
3. Metal pipe clamp
4. Insulation Tube

1-12

NOTE:
- When using an extension for the drain pipe, tighten the connection on the inside of the additional protection pipe to keep it from loosening.
- The drain pipe must slope at least 1% to prevent water from back-flowing into the air conditioner.
- Install suspension elements every 1-1,5 m so that the pipe does not bend. (See image below)
- If the outlet of the drain pipe is higher than the pump fitting located on the body of the unit, apply a lifting pipe for the drain outlet of the indoor unit. The lifting pipe must be installed no higher than 75 cm from the false ceiling.
- An incorrect installation can cause water backflow into the unit.

KEY:

A. 0 - 75 mm
B. ≤ 30 cm
C. 1 - 1,5 m.
D. ≤ 53 cm
E. 22 cm
F. ≤ 75 cm

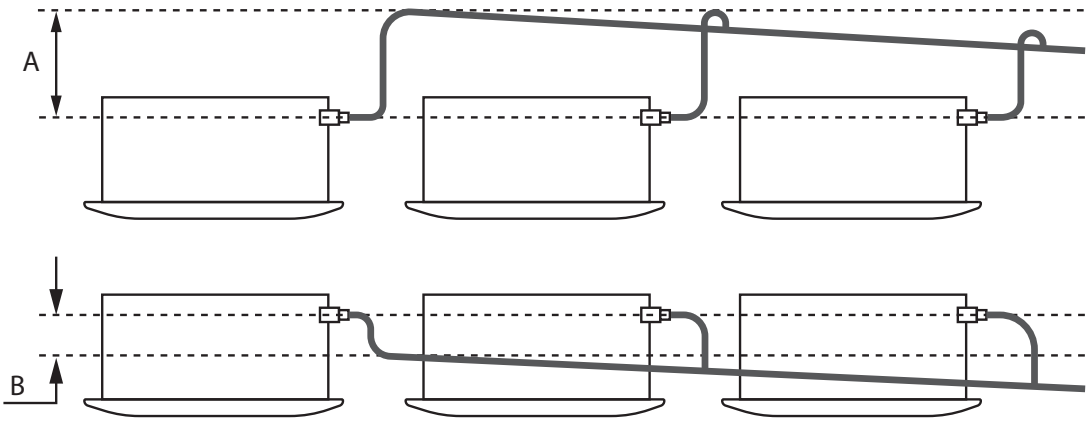


1-13

When connecting more than one drain pipe, install them as shown in the figure below.

KEY:

A. 0 - 53 cm
B. ≥ 10 cm



1-14

3. Thread the drain pipe through the hole in the wall. Check that the water flows out to a safe place, without causing damage or slipping hazards.

NOTE:

- The outlet of the drain pipe must be at a height of at least 5 cm from the ground.
- Were the drain pipe outlet to come into contact with the ground, the unit could block and malfunction.
- If the water is drained directly into the sewer system, use a U or S-shaped drain pipe to prevent odours from back-flowing inside.

STEP 5: Signal and power supply cables connection

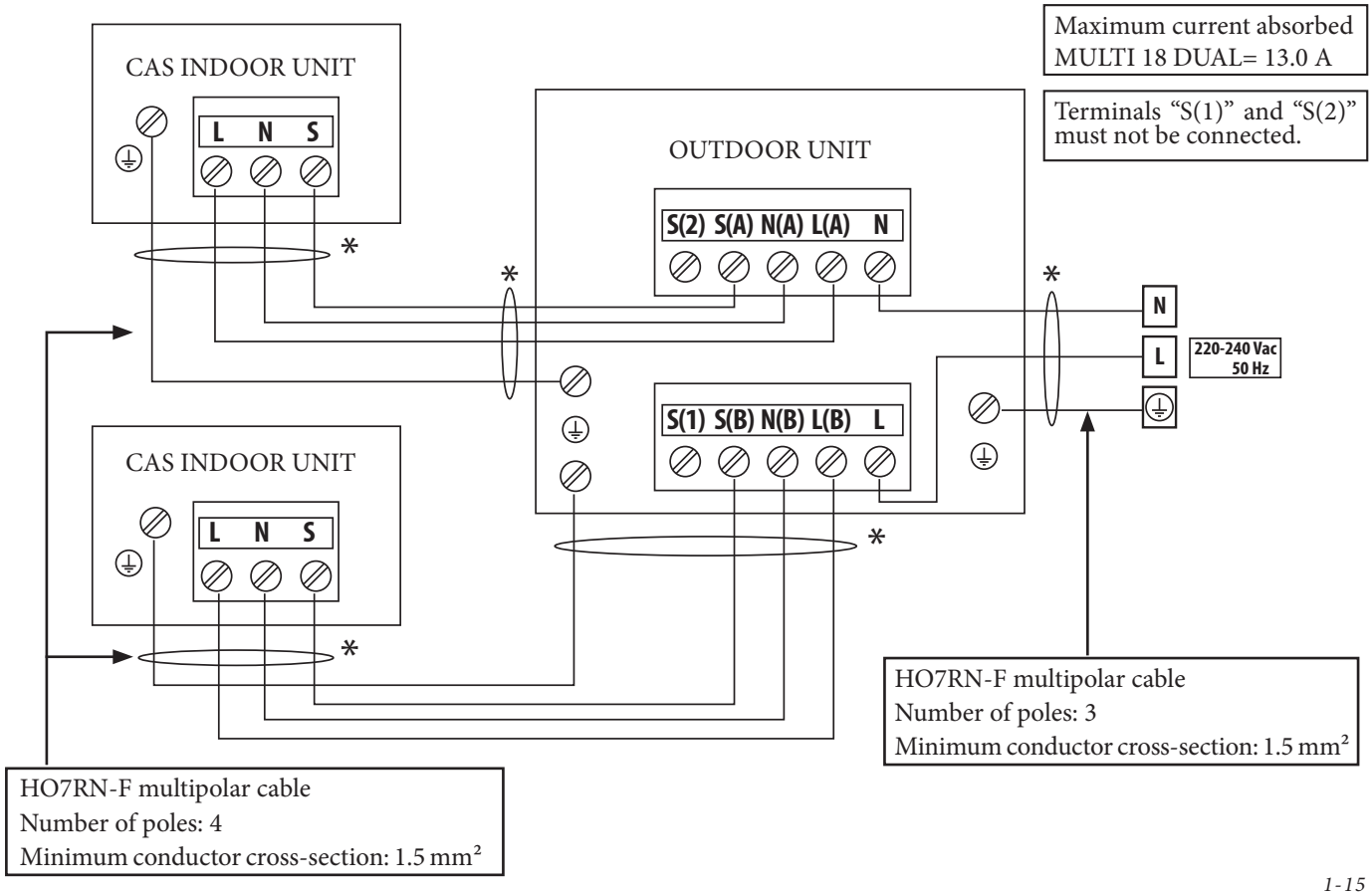
The connection cable between the indoor and outdoor unit serves for power supply and communication.
The type of cable and relative dimensions to be used are indicated in the wiring diagram below.
All electrical connections must be made strictly complying with the wiring diagram sticker applied on the top of the electric compartments cover and checking the connection wiring diagram in this manual.
The maximum absorbed current of the Unit is stated in the data nameplate, located on the Unit's electric compartments cover.
The P.C.B. of the indoor unit is designed with a fuse to protect against power overload (the specifications of the fuse are stamped on the P.C.B.).

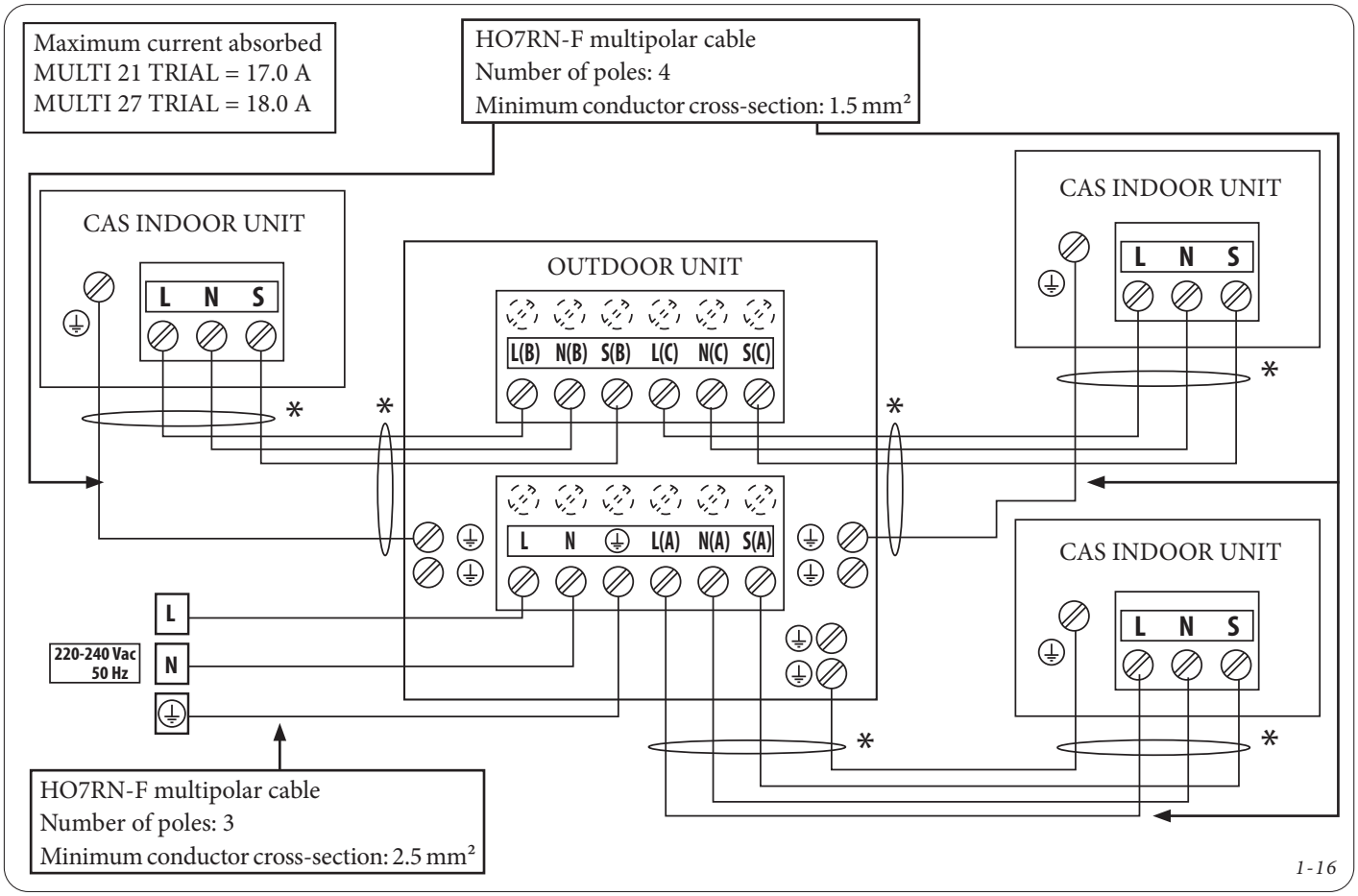
ATTENTION
Before doing any electrical work, read the warnings at the beginning of this manual.

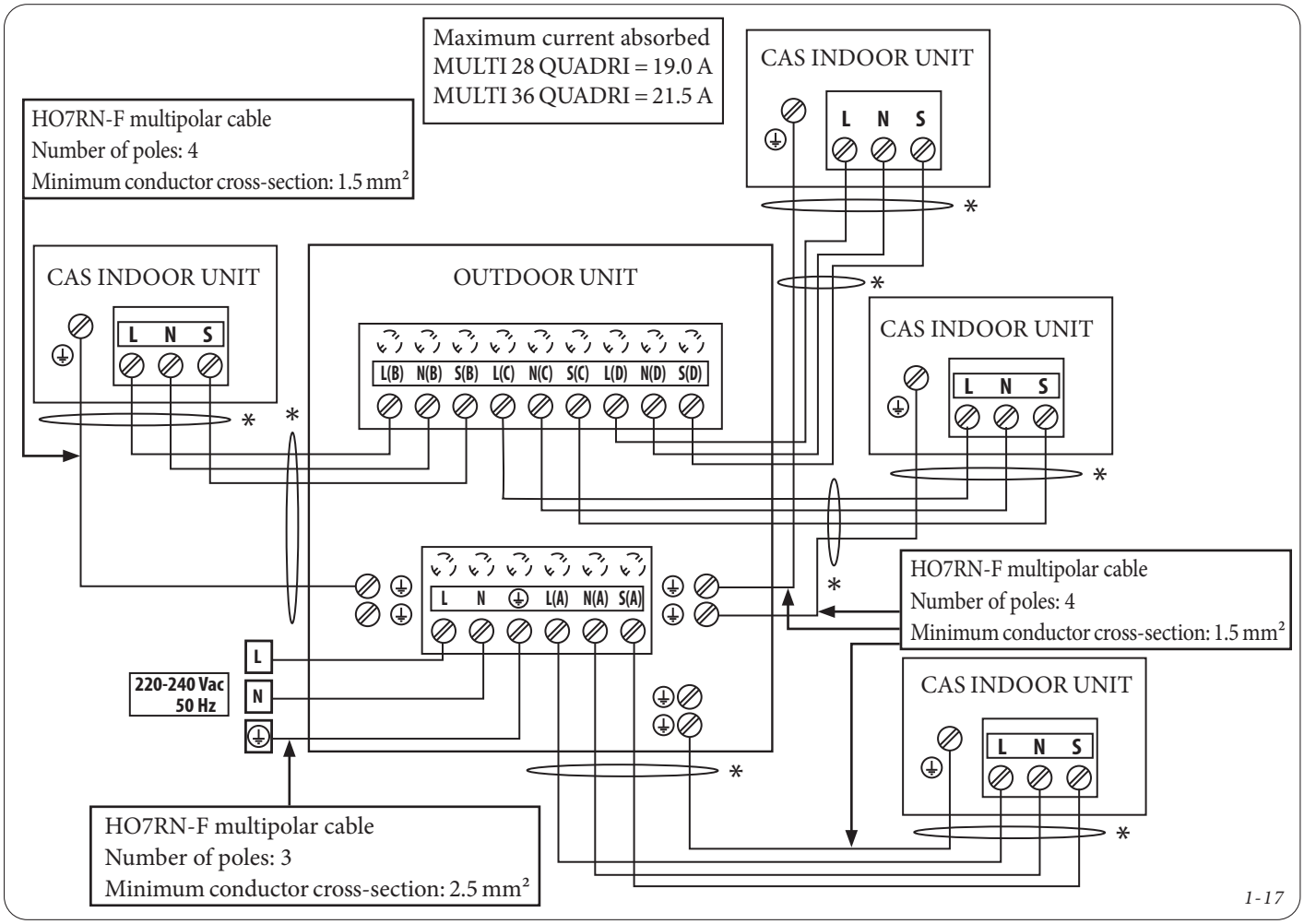
Wiring Diagrams

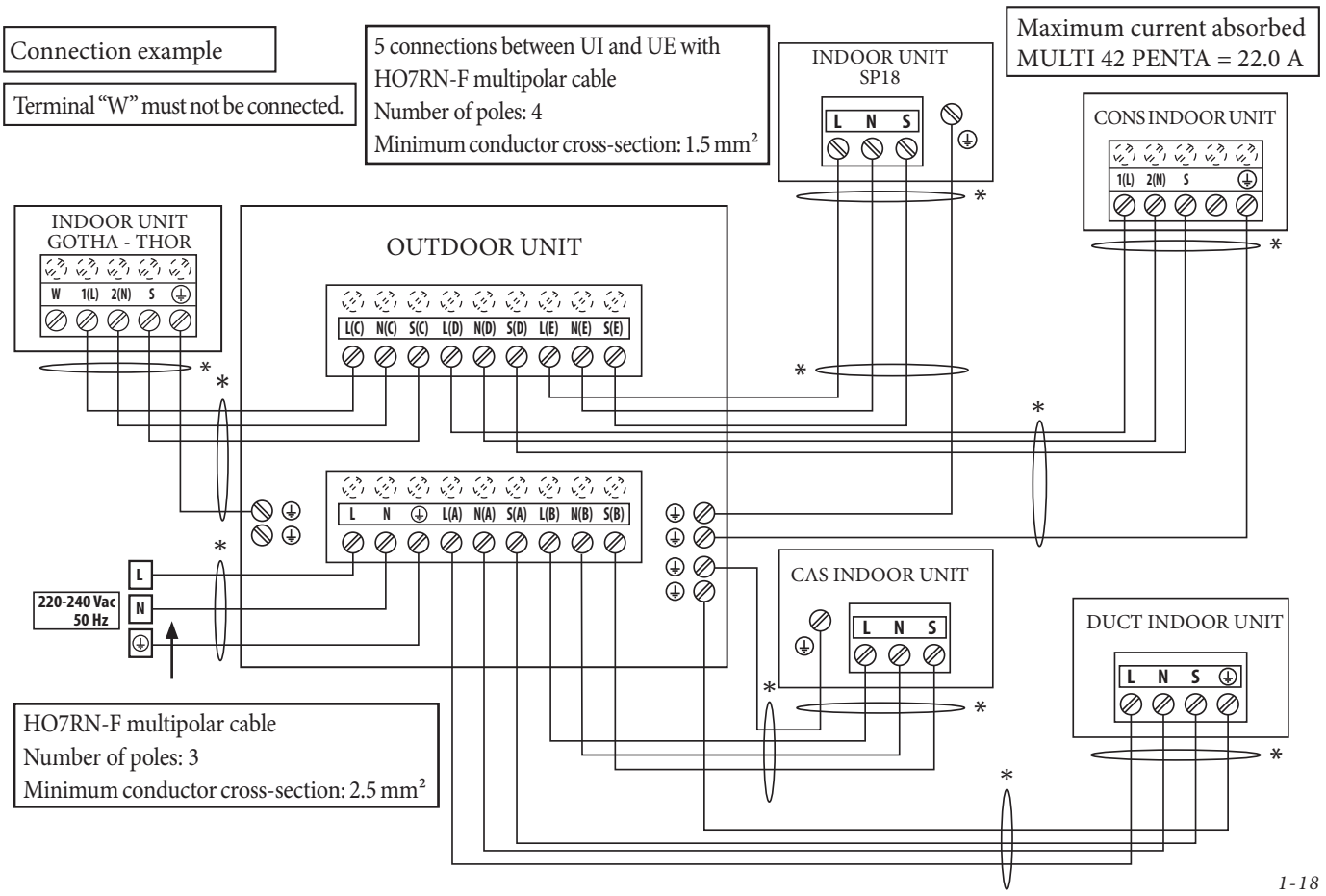
NOTE:
- The ferrite needs to be positioned around the cable, before the cable tie (outer side). The ferrite is installed by the installer, the ferrites must be applied where the "∗"symbol appears on the wiring diagram.
- Secure the multipolar cables to the relative cable ties.
- Each earthing wire needs to be connected to the closest earthing terminal (only one wire per terminal); do not use the mount's fastening screws.

ATTENTION
See the reference manual for the specifications of the outdoor unit.




Maximum current absorbed
MULTI 21 TRIAL = 17.0 A
MULTI 27 TRIAL = 18.0 A
HO7RN-F multipolar cable
Number of poles: 4
Minimum conductor cross-section: 1.5 mm²
CAS INDOOR UNIT
L N S
OUTDOOR UNIT
L(B) N(B) S(B) L(C) N(C) S(C)
L N L(A) N(A) S(A)
CAS INDOOR UNIT
L N S
CAS INDOOR UNIT
L N S
L
N
220-240 Vac
50 Hz
HO7RN-F multipolar cable
Number of poles: 3
Minimum conductor cross-section: 2.5 mm²
1-16


Maximum current absorbed
MULTI 28 QUADRI = 19.0 A
MULTI 36 QUADRI = 21.5 A
CAS INDOOR UNIT
L N S
HO7RN-F multipolar cable
Number of poles: 4
Minimum conductor cross-section: 1.5 mm²
CAS INDOOR UNIT
L N S
OUTDOOR UNIT
L(B) N(B) S(B) L(C) N(C) S(C) L(D) N(D) S(D)
CAS INDOOR UNIT
L N S
L N L(A) N(A) S(A)
HO7RN-F multipolar cable
Number of poles: 4
Minimum conductor cross-section: 1.5 mm²
CAS INDOOR UNIT
L N S
L
N
220-240 Vac
50 Hz
HO7RN-F multipolar cable
Number of poles: 3
Minimum conductor cross-section: 2.5 mm²
1-17



Attention

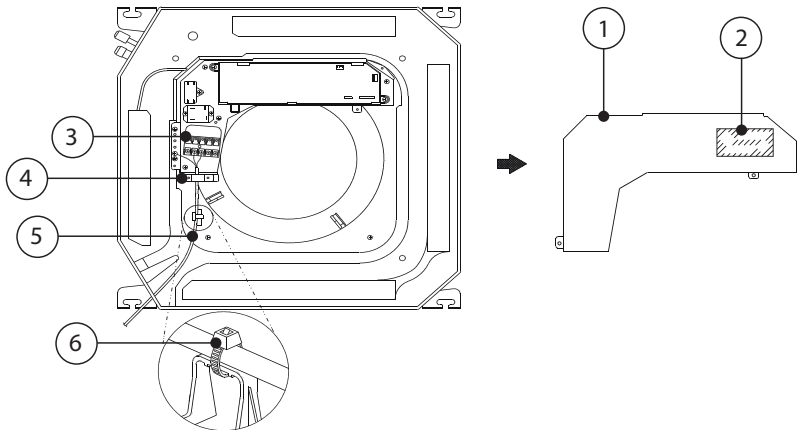
When stripping the wires, be sure to clearly identify the "L" phase cable.

Signal and power supply cables connection procedure:

1. Preparing connection cable;
   a. Using the wire stripper, remove insulation at both ends of the signal/power cable exposing about 15 mm of inner wires.
   b. Remove the insulating sheathing from the ends of the wires.
   c. Using the wire-stripper, bend the tabs on the ends of the wire into a U shape.
2. Using a screwdriver, remove the electric compartments cover inside the indoor unit. This allows you to access the terminal block below.
3. Thread the power and signal cable through the cable outlet.
4. Connect the U-shaped lugs to the terminals.
5. Match the colours/labels of the cables to those of the terminal block, then firmly screw the U-shaped lug of each cable to the corresponding terminal. Refer to the above wiring diagram and to the diagram applied on the electric compartments cover.
6. Secure the cable with the cable clamp. The cable must not be loosened or pull the U-shaped lugs.
7. Refit the electric compartments cover and tighten the screws.

KEY:

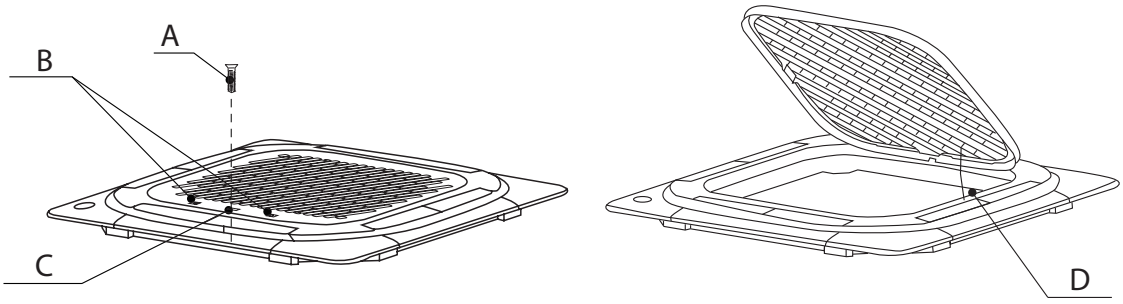
1. *Cover of electrical connections*
2. *Wiring diagram sticker*
3. *Power supply terminal block*
4. *Cable clamp*
5. *Signal cable*
6. *Cable tie (not supplied)*



1-19

STEP 6: Installation of Display Frame panel

1. Remove the middle grid of the frame. Press the snap-on plastic cover in the middle of the grid to expose the underlying screw.
2. Remove the screw with a screwdriver.
3. Push the 2 tabs on the side of the screw seat towards the middle simultaneously to release the hooks on the grid.
4. Hold the grid at approximately a 45°angle, lift it slightly and detach it from the central body.

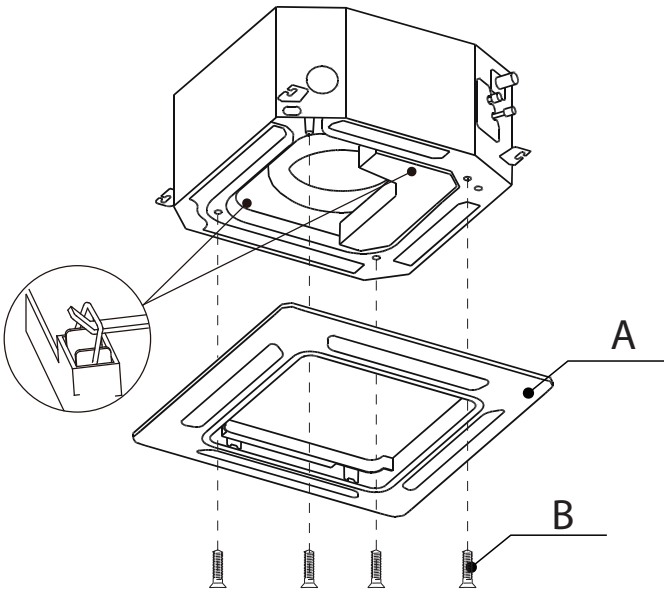


KEY:

A. Screw
B. Locking Tabs
C. Screw cover
D. 45°

1-20

5. Install the frame: have the corner of the frame reading “PIPING SIDE” (inner side) match the pipe connections.
6. Fit the 2 steel mechanical stops on the plastic hooks of the Unit as shown in the figure
7. Secure the frame to the indoor unit with the 4 M5x14 screws supplied as shown in the figure.



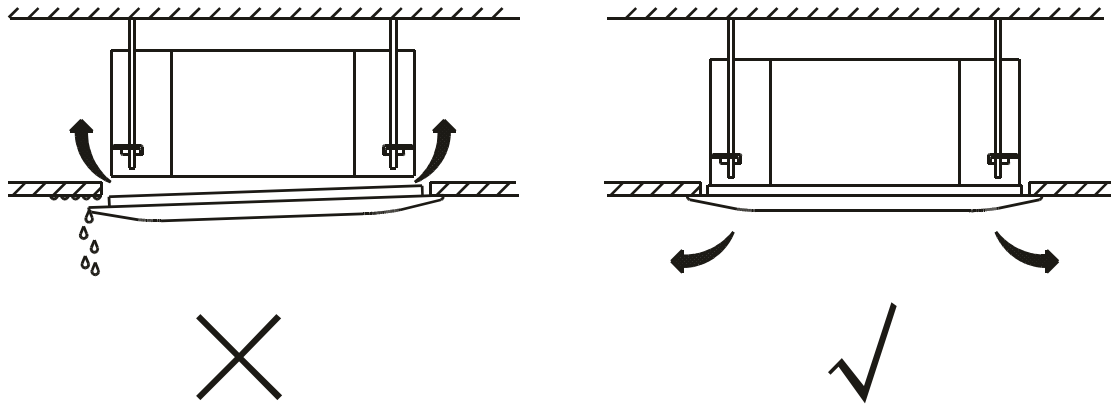
KEY:

A. Frame Panel
B. M5 x 14 screw

1-21

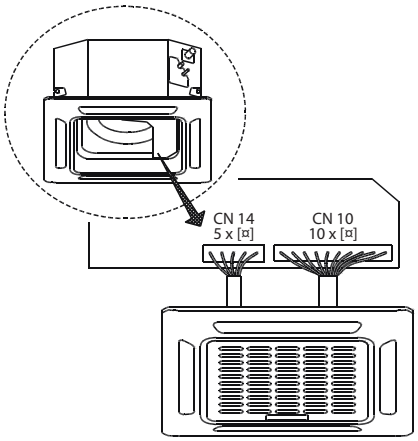
NOTE:

- After having installed the frame, make sure that it adheres perfectly to the body of the unit. Otherwise, air could pass through the slot and cause condensate to form.
- If the frame does not adhere perfectly to the body of the unit, loosen or tighten the bolt/hooks to level the machine.



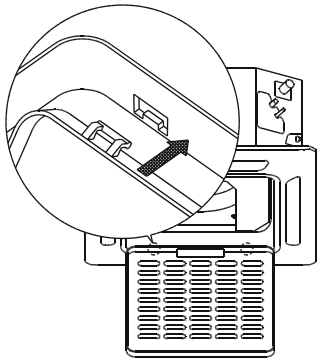
1-22

8. Undo the 3 screws and open the electrical cover inside the unit. Then insert the 2 cables of the frame panel (display connection) through the specific slot. The two cables will be connected to the motherboard: the cable with 5-pin connector in the port called CN14, the cable with the 10-pin connector in the port called CN10.



1-23

9. Arrange the cables just connected in the dedicated slots to guide them, then re-close the electric cover with the 3 screws.
10. Install the grid in the middle of the panel, securing it with the 2 plastic hooks and turning it to position it horizontally.



1-24

11. Tighten the middle screw securing the grid to the panel.

Do not insert fingers or other objects into the air inlet or outlet.

1.7 CONDUCTING THE TESTS

Before performing the test:

The test can be performed once the entire system has been completely installed. Confirm the following points before running the test:

- The indoor and outdoor units are correctly installed.
- Pipes and cables are correctly connected.
- No obstacle near the infeed and at the unit outlet that could cause poor performance or malfunctioning of the product.
- The cooling circuit does not leak.
- The draining system has no impediments and the drain is in a safe place.
- Thermal insulation was installed correctly.
- The earthing wires are connected correctly.
- The length of the pipes and the additional capacity of the refrigerant are measured.
- The power voltage is correct for the air conditioner.

Attention:
Failure to run the test can cause damage to the units, damage to the property or personal injury

How to run the test:

1. Open the liquid and gas shut-off valves.
2. Turn on the main power supply switch and let the unit heat up.
3. Set the air conditioner on COOL.
4. For the indoor unit;
   - Make sure that the remote control and relative buttons are working correctly.
   - Make sure that the louvres move correctly and can be modified from the remote control.
   - Check whether the room temperature is measured correctly.
   - Make sure that the indicators on the remote control and on the view panel on the indoor unit are working correctly.
   - Make sure that the manual keys on the indoor unit are working correctly.
   - Check that the draining system is not obstructed and that it drains freely.
   - Make sure there are no anomalous vibrations or noise during operation.
5. For the outdoor unit:
   - Check whether the cooling circuit is leaking.
   - Make sure there are no anomalous vibrations or noise during operation.
   - Make sure that the wind, noise and water generated by the unit do not bother the neighbours or pose a safety hazard.
6. Drain trial;
   - Check that the drain pipe allows water to flow out correctly. In newly constructed buildings, this test should be carried out before finishing the ceiling.
   - Remove the cover. Pour 2lt of water into the tank through the connected pipe.
   - Switch on and activate the air conditioner in cooling mode.
   - Make sure that the drain pump makes no strange noises.
   - Check that the water is emptied. Depending on the pipe, a minute may elapse before the water starts to drain.
   - Check that the piping has no leaks.
   - Stop the air conditioner by pressing the main power switch and refit the cover.

NOTE:
If the unit is not working correctly or is not working as expected, refer to the Troubleshooting section of the User Manual for the Indoor Unit before calling customer service.

2 INSTRUCTIONS FOR MAINTENANCE

2.1 GENERAL WARNINGS

If additional documentation needs to be consulted for extraordinary maintenance, contact the Authorised After-Sales Service.

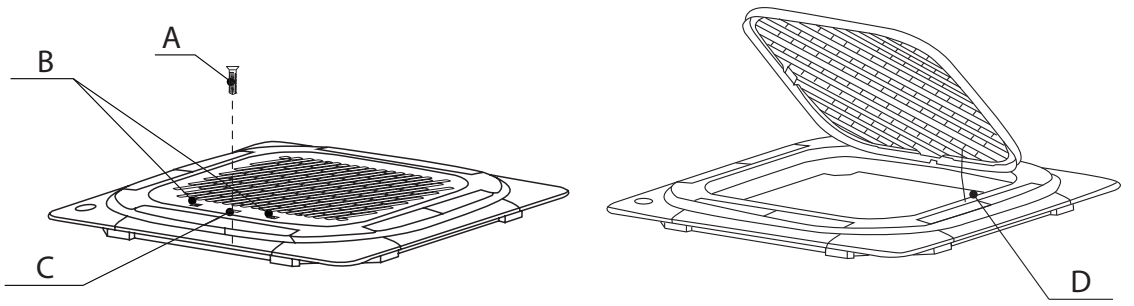
Supply of spare parts
The device's warranty shall be rendered null and void if unapproved or unsuitable parts are used for maintenance or repairs. These will also compromise the product's compliance, and the said product may no longer be valid and fail to meet the current regulations. In regard to the above, only use original Immergas spare parts when replacing components.

2.2 CARE AND MAINTENANCE

ATTENTION:
Always switch off the air conditioning system and disconnect power before cleaning and maintenance.

A clogged air conditioner can reduce the cooling efficiency of your unit and be harmful to your health. It is recommended to clean the filter once every two weeks.

1. Remove the middle grid of the frame. Press the snap-on plastic cover in the middle of the grid to expose the underlying screw.
2. Remove the screw with a screwdriver.
3. Push the 2 tabs on the side of the screw seat towards the middle simultaneously to release the hooks on the grid.
4. Hold the grid at approximately a 45° angle, lift it slightly and detach it from the central body.



KEY:

A. Screw
B. Locking Tabs
C. Screw cover
D. 45°

2-01

5. Remove the air filter behind the grid.
6. Clean the air filter with a vacuum cleaner or wash it with lukewarm water and mild detergent.

2-02

NOTE:
- If using a vacuum cleaner, vacuum the filter by placing the side of the air inlet facing upwards.
- If using water, the side of the air inlet must face the direction opposite the water flow.

7. Rinse the filter with clean water and have a dry in the open air.
8. Refit the filter on the grid.
9. Reinstall the front grid and tighten the screw back onto the main body.

ATTENTION:
Use only a soft dry cloth to clean the unit. If the unit is particularly dirty, you may use a cloth soaked in warm water to clean it.

- **Do not clean the unit using chemical products or chemically treated rags**
- **Do not use benzene, paint thinner, dust polisher or other solvents to clean the unit. They can cause the plastic surface to break or deform.**
- **Do not use water hotter than 40°C to clean the front panel. This could deform or fade the panel.**

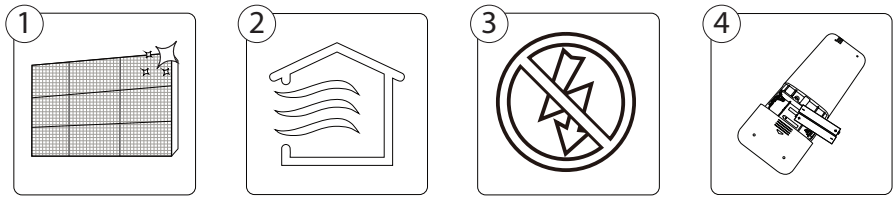
ATTENTION:
Before changing the filter and cleaning it, switch the unit off and disconnect power.
When removing the filter, pay attention as the sharp metal edges could cut you.
Do not clean the inside of the indoor unit with water. This could damage the insulation and cause electric shocks or short circuit.
Do not expose the filter to direct sunlight when drying as it could shrink.

ATTENTION:

- **Any maintenance or cleaning operation on the unit must be carried out by an authorised technician.**
- **Any repair on the unit must be carried out by an authorised technician.**
- **Operators who install and service the appliance must wear the personal protective equipment required by applicable law.**

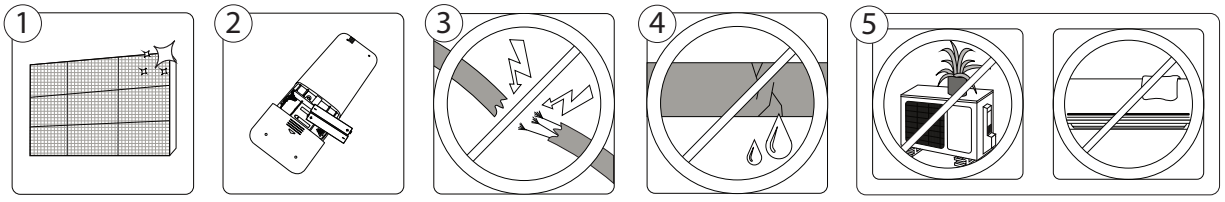
Long idle period: *2-03*

1. *Clean all Filters*
2. *Switch on the FAN function until the unit is completely dried*
3. *Switch off the unit and disconnect power*
4. *Take the batteries out of the remote control*



Switching back on after a Long Idle Period:

1. *Clean all Filters*
2. *Replace the batteries*
3. *Check for any damaged cables*
4. *Check for any leaks*
5. *Make sure that nothing is blocking the air vents and outlets*



2.3 TROUBLESHOOTING

ATTENTION:
If ONE of the following conditions occurs, switch the unit off immediately!

- **The power cable is damaged or excessively hot.**
- **There is a burning smell.**
- **The unit emits strong or anomalous noise.**
- **When the circuit breaker trips often or when there are blown fuses.**
- **Water or other objects fall inside or outside the unit.**

DO NOT TRY TO ADDRESS THE PROBLEM ON YOUR OWN! IMMEDIATELY CONTACT AN AUTHORISED TECHNICAL SERVICE CENTRE!

Problem	Possible causes
The unit does not switch on when the ON/OFF button is pressed	The unit has a 3-minute protection function that prevents it from overloading. The unit cannot be switched back on within three minutes from shutdown. Unit not powered up.
The unit switches from COOL/ HEAT mode to FAN mode	The unit can modify the settings to keep frost from forming on it. When the temperature rises, the unit resumes operation in the previously selected mode.
	The set temperature has been reached and at that point the unit switches the compressor off. The unit keeps running when the temperature fluctuates again.
The indoor unit emits white mist	In moist regions, a large temperature difference between ambient air and conditioned air can cause white mist.
Both the indoor unit and outdoor unit emit white mist	When the unit restarts in HEAT mode after defrosting, white mist could be emitted due to the humidity generated by the defrosting process.
The indoor unit makes noise	When the fin goes back to its position, a strong noise could occur.
	A squeaking noise can occur after having started the unit in HEAT mode due to the expansion and contraction of the plastic parts of the unit.
	You can hear a creaking noise when the system stops or when Cooling mode is activated. You can also hear this noise when the drain pump is switched on.
Both the indoor unit and outdoor unit make noise	Low hissing noise during operation: this is normal and is caused by the refrigerant gas flowing through the indoor and outdoor units.
	Low hissing noise when the system starts up, has just stopped operating or is defrosting: this noise is normal and is caused by the stopping or change of direction of refrigerant gas.
	Squeaking noise: the normal expansion and contraction of plastic and metal parts caused by temperature excursions during operation can cause squeaking noise.
The outdoor unit makes noise	The unit makes different types of noise based on its current operating mode.
Dust is emitted from the indoor or outdoor unit	Dust is emitted from the indoor or outdoor unit. The unit could accumulate dust during long idle periods, which is then emitted when it is switched on. This can be mitigated by covering the unit when idle for a long time.
The unit emits a bad smell	The unit can absorb odours from the environment (such as furniture, kitchen, cigarettes, etc.) which are then emitted during operation.
	The filters of the unit are mouldy and need to be cleaned.
The outdoor unit's fan does not work	During operation, the fan speed is controlled to optimise operation of the product.
Operation is irregular, unpredictable or the unit does not respond	Disturbance of cell phone antennas/repeaters can cause the unit to malfunction. In this case, try the following: • Disconnect power, then reconnect. • Press the ON/OFF button on the remote control to restart operation.

NOTE:

If the problems persists, contact the nearest authorised technical service centre. Give them a detailed description of the malfunction and the model number of the unit.

Problem	Possible causes	Solution
Poor cooling performance	The set temperature may be higher than the room temperature.	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is soiled	Clean the concerned heat exchanger
	The air filter is dirty	Remove the filter and clean it as instructed
	The air inlet or outlet of one of the units is blocked	Switch the unit off, remove the obstruction and switch it back on
	Doors and windows are open	Make sure that all doors and windows are closed during operation of the unit
	Sunlight generates excessive heat	Close the windows and curtains during periods with intense heat or bright sun
	Too many heat sources in the room (people, computers, electronics, etc.)	Reduce the amount of heat sources
	Low refrigerant level due to leaks or long-term use	Check for any leaks, seal again if necessary and top up the refrigerant
The unit does not work	Power failure	Wait for the supply voltage to be restored
	Power is off	Switch power on
	The fuse is blown	Replace the fuse
	The batteries in the remote control are flat	Replace the batteries
	The 3-minute protection of the unit has been activated	Wait three minutes after restarting the unit
	The timer is on	Turn the timer off
The unit starts and stops frequently	There is too much or too little refrigerant in the system	Check whether there are leaks and recharge the system with refrigerant.
	Incompressible gas or moisture have entered the system.	Evacuate the system and recharge with refrigerant
	The compressor is broken	Replace the compressor
	Voltage too high or too low	Checked the input mains voltage
Poor central heating performance	The outdoor temperature is extremely low	Use an auxiliary heating device
	Cold air enters through doors and windows	Make sure that all doors and windows are closed during use
	Low refrigerant level due to leaks or long-term use	Check for any leaks, top up the refrigerant if necessary
The indicator lights keep flashing	The unit could interrupt operation or continue operating in safety. If the indicator lights keep flashing or error codes appear, wait about 10 minutes. The problem could be settled on its own. Otherwise, turn power off and back on. Switch on the unit. If the problem persists, disconnect power and contact your nearest customer assistance centre.	
The error code appears and starts with the letters as follows in the display of the window of the indoor unit: •E(x), P(x), F(x) •EH(xx), EL(xx), EC(xx) •PH(xx), PL(xx), PC(xx)		

NOTE:

If the problem persists after having carried out the above checks and diagnostics, immediately switch the unit off and contact an authorised assistance centre.

3 TECHNICAL DATA

3.1 CAS TECHNICAL DATA

UI CAS		9	12	18
Heating performance				
Rated output power	Btu/h (kW)	10,000 (2.93)	13,000 (3.81)	19,000 (5.57)
Rated absorbed power	W	45	45	45
Rated absorbed current	A	0.5	0.5	0.5
Room temperature	°C	0-30	0-30	0-30
Cooling performance				
Rated output power	Btu/h (kW)	9.000(2,64)	12.000(3,52)	18.000(5,28)
Rated absorbed power	W	45	45	45
Rated absorbed current	A	0.5	0.5	0.5
Room temperature	°C	16-32	16-32	16-32
General data				
Air flow rate (max-med-min)	m³/h	580-500-300	620-520-300	660-540-300
Sound pressure (max. - med. - min.)	dB(A)	39-37-35	41-38-35	43-39.5-35.5
Sound power	dB(A)	55	58	60
Dimensions (H x L x D)	mm	245x570x570	245x570x570	245x570x570
Net/gross weight	kg	14.5/16.5	16.1/18.8	16.2/19
Liquid/gas refrigerant connections	mm (inch)	6,35(1/4) 9,52(3/8)	6,35(1/4) 9,52(3/8)	6,35(1/4) 12,7(1/2)

THE REPORTED NOMINAL DATA REFERS TO THE FOLLOWING CONDITIONS (in compliance with EN 14511)		
ENVIRONMENT	COOLING (°C)	CENTRAL HEATING (°C)
INDOOR AIR-OUTDOOR AIR Temp. (db/wb)	27/19 - 35/24	20/15 - 7/6

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immergas.com

Code 1.049322ENG - ST.07772/005 - 01/25

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