

Fresh Air Heat Recovery Unit



V 7-025 NW

V 7-035 NW

V 7-050 NW

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1 Your Safety

1.1 Symbols used



Danger!
Direct danger for life and health.



Danger!
Danger of electric shock.



Warning!
Potentially dangerous situation for the product
and the environment.



Note!
Useful information and indications.

1.2 Correct Use of the Unit

This unit has been designed and manufactured for the sole purpose of comfort cooling and heating occupied residential and commercial premises. The use thereof for other domestic or industrial purposes shall be the exclusive responsibility of the persons specifying, installing or using them in that way.

Prior to handling, installing, start up, using or performing maintenance on the unit, the persons assigned to perform these tasks should be familiar with all the instructions and recommendations set forth in the unit's installation manual.



Note!
Keep the manuals throughout the service life of the unit.



Note!
The information relating to this unit is divided between two manuals: installation manual and user manual.

2 Identification of the Unit

This manual is valid for the Split system series. In order to know the specific model of your unit please refer to the unit nameplates.
The nameplates are located on the outdoor and indoor units.

3 Declaration of Conformity

The manufacturer declares that this unit has been designed and constructed in compliance with the standard in force with regard to obtaining the CE Marking.

4 Description of the Unit

4 Description of the Unit

The Fresh Air HR Unit (with heat recovery) is composed of the following elements:

No.	Name	Quant.
1	Heat recovery system	1
2	Fresh Air pipe	1
3	Elbow for Room Air pipe	1
4	Connection cable	1
5	Connection wire	1
6	Screws	3
7	Fastening chain	2

Figure 4.1 shows the elements that make up the unit.

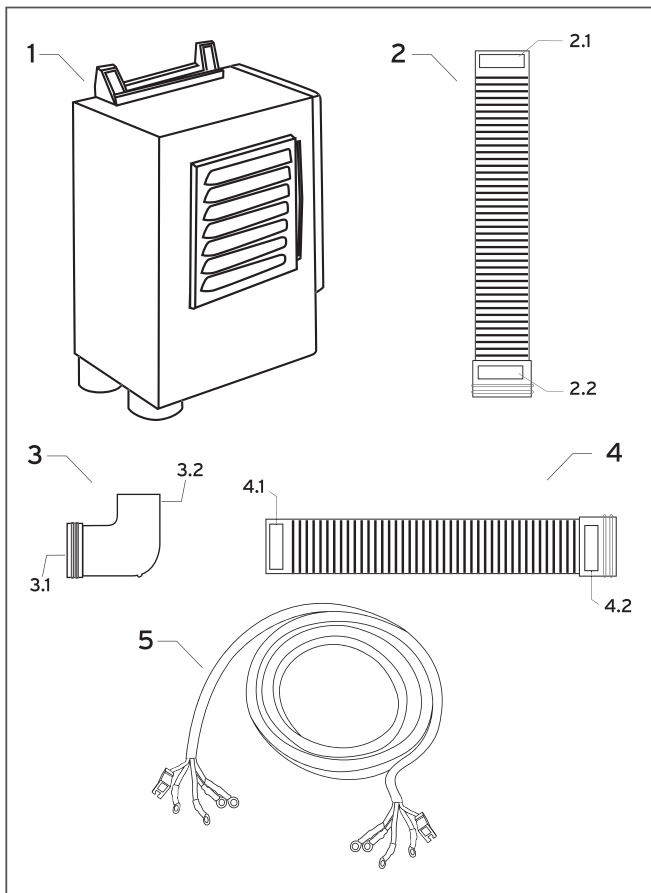


Fig. 4.1 Unit Components.

Legend

- 1 Full energy recovery exchanger
- 2 Fresh air pipe
 - 2.1 Indoor side of fresh air pipe
 - 2.2 Outdoor side of fresh air pipe
- 3 Bend connector
 - 3.1 Connect to outdoor side of room air pipe
 - 3.2 Connect to full energy recovery exchanger's pipe
- 4 Room air pipe
 - 4.1 Indoor side of room air pipe
 - 4.2 Outdoor side of room air pipe
- 5 Connecting wire

4.1 Components of the Total Energy Recovery Exchanger

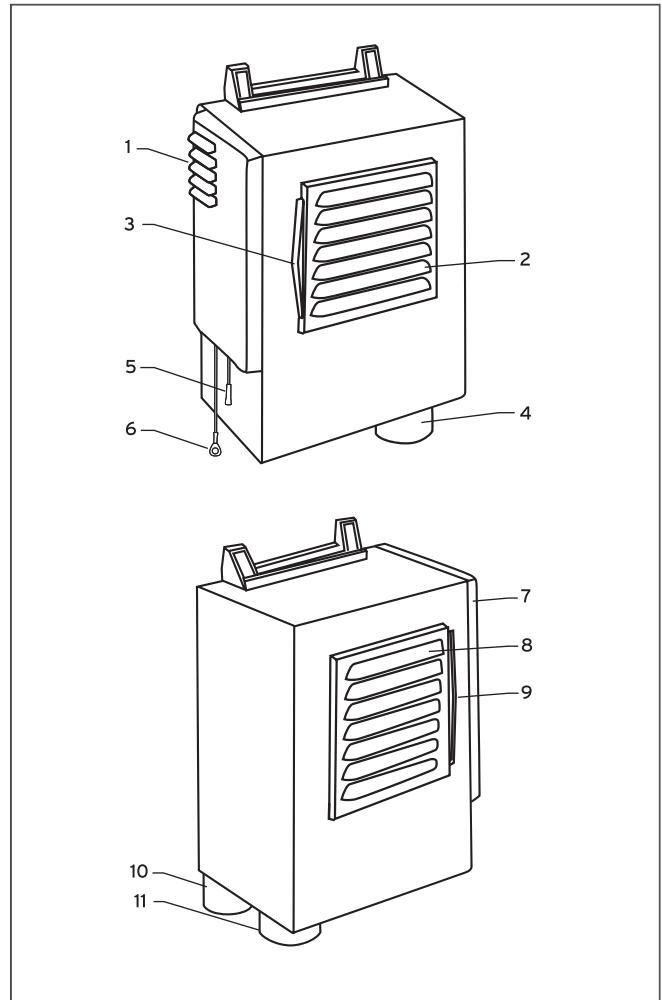


Fig. 4.2 Components of the Total Energy Recovery Exchanger.

Legend

- 1 Room Air outlet
- 2 Fresh Air inlet
- 3 Fresh Air filter
- 4 Room Air inlet, Room Air pipe connection
- 5 Power pack and control block with pyro-contractible sleeve
- 6 Earth block
- 7 Room Air Outlet
- 8 Fresh Air Inlet
- 9 Fresh Air Filter
- 10 Fresh Air Outlet
- 11 Room Air Inlet, Room Air pipe connection

5 Technical Specifications

Parameter	Units	Value
Net Weight	kg	2.05
Gross Weight	kg	2.59
Net Dimension	mm	245 x 142 x 88
Package dimension	mm	305 x 290 x 280
Heating exchanging efficiency	%	50
Air tube diameter	mm	32
Standard air tube length	m	2
Max. air tube length	m	3,2
Air exchanging volume	m ³ /h	30
Power input	w	15
Power supply (v/ph)	v/ph	~230 / 1
Cores of connecting wire		2
Diameter of wire cores	mm ²	0,75
Standard wire length	m	4

Table 5.1 Technical Specifications.

6 Unpacking

7 Installation

6 Unpacking

Unpack the unit and check that:

- All parts have been supplied with the system.
- All the parts and accessories are in perfect condition.

If parts are damaged or missing please contact your supplier immediately.

Warning!
Protect the environment. Dispose of the packaging following the local environmental standards in force. Do not dispose of packaging irresponsibly, recycle where possible.

7 Installation

7.1 Qualification of the Installation Staff

Ensure that this unit is installed by suitable qualified personnel.

All installers must hold a suitable safe handling of refrigerants qualification.

7.2 General Precautions to be considered before Installation

Danger of injury and physical damage!
The unit should be installed in accordance with the Regulations and Standards for refrigeration, electrical and mechanical installation pertaining to the country in which the installation is being undertaken.

Danger!
Danger of electric shock. All appliances must be earthed.
Connect the earth cable to the correct earthing point (do not connect to the gas pipe, water pipe, lightning conductor or telephone line).

Danger!
Danger of electric shock.
Ensure the appliance is protected by a correctly rated circuit breaker.

Warning!
Danger of breakdowns or malfunction.
Only use the pipework specifically intended for refrigerant R410A for the air conditioning installation. Never use plumbing pipes.

7.3 Installing the Fresh Air HR Unit

7.3.1 Installing the Heat Recovery System

There are two possible locations when installing the Fresh Air HR unit:

A. Installing on the Façade

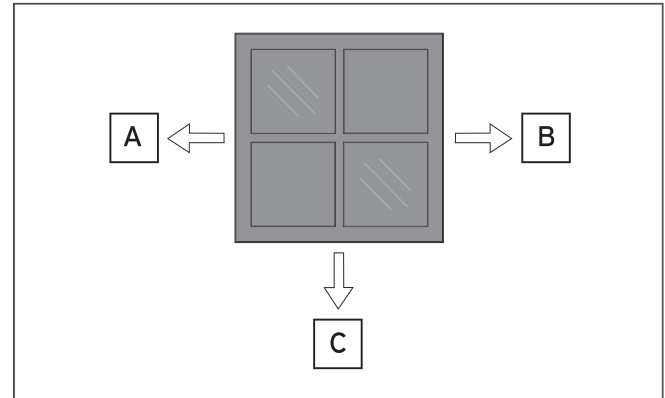


Fig. 7.1 Installing on the Façade.

Legend

- A To the left of the window
- B To the right of the window
- C Under the window

Warning!
A minimum separation of 15 cm must be left between the Fresh Air HR unit and the window.

B. Installing in the holes for this purpose on the back of the outdoor unit, using the screws provided.

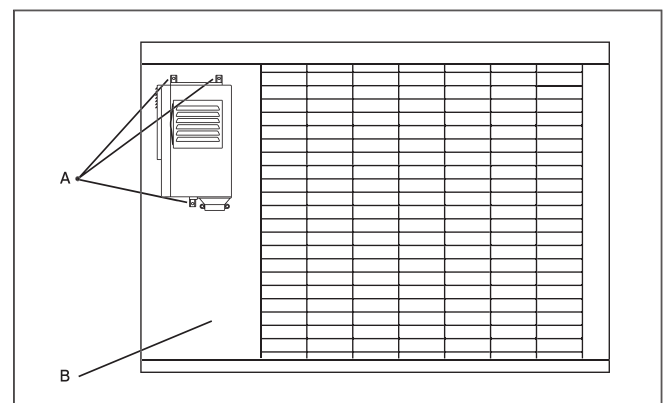


Fig. 7.2 Installing on the back of the outdoor unit.

Legend

- A Fixing screw
- B Outdoor unit

7.3.2 Installing the Pipes

7.3.2.1 Installing the Pipes in the Heat Recovery System

Insert the fresh air and indoor air pipes in the correct holes on the heat recovery system, as shown in the following images.

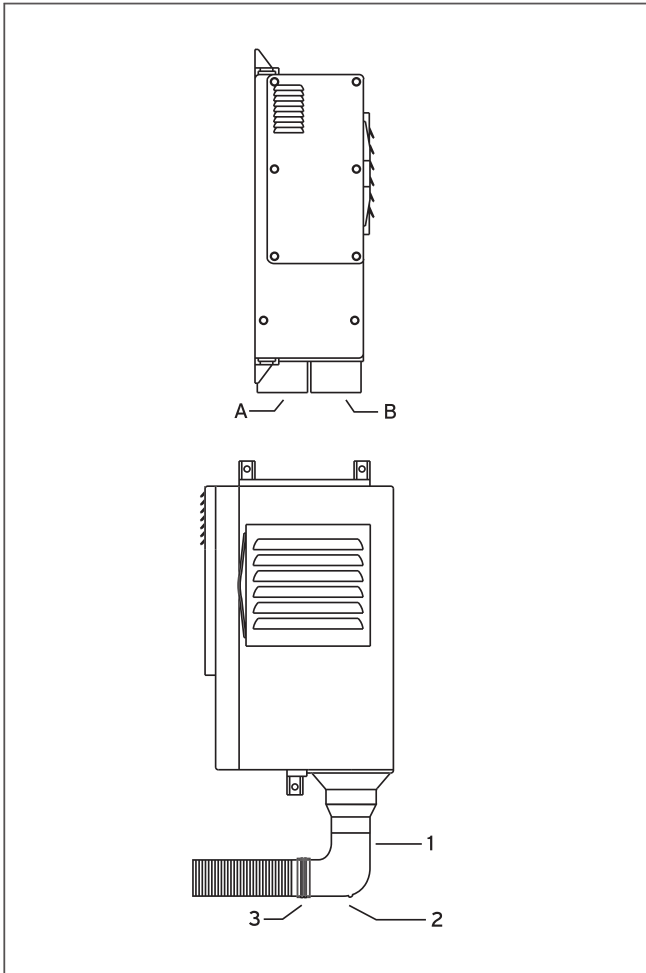


Fig. 7.3 Installing the Pipes in the Heat Recovery System.

Legend

- A Fresh Air outlet, connection with outside of the Fresh Air pipe
- B Indoor Air inlet, connection with elbow
- 1 Elbow
- 2 Drainage hole
- 3 Outside of Room Air pipe



Warning!

The maximum installation distance between the Fresh Air HR unit and the indoor unit must never exceed three metres.

The inlet for the pipes through the wall can be made in two different ways:

- A. Drill two holes in the wall with a diameter of 63 mm, with a distance between the centres of both circles of 40 mm.
- B. Drill one hole in the wall with a diameter of 80 mm.

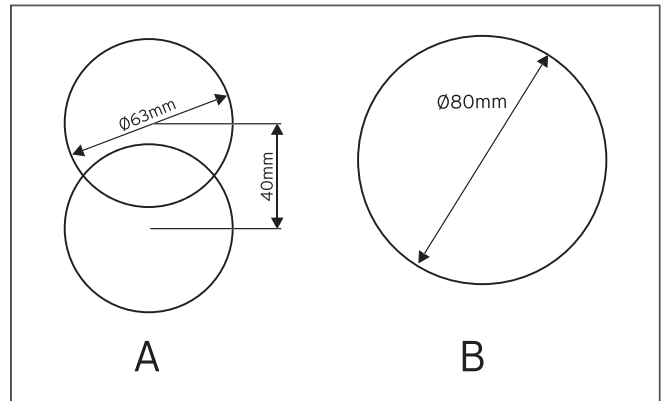


Fig. 7.4 Inlet Holes for the Pipes.

7 Installation

7.3.2.2 Installing the Pipes on the Indoor Unit

There are two possible options to carry out the installation and to lay the Fresh Air and Room Air pipes in the indoor unit. In both cases, the electrical connection of the Fresh Air HR unit must be completed first (see Chapter 8).

- A. Installing both pipes through the back of the indoor unit, laying the Room Air pipe to the left of the unit and the Fresh Air pipe to the right.
- B. Installing both pipes through the side of the indoor unit.

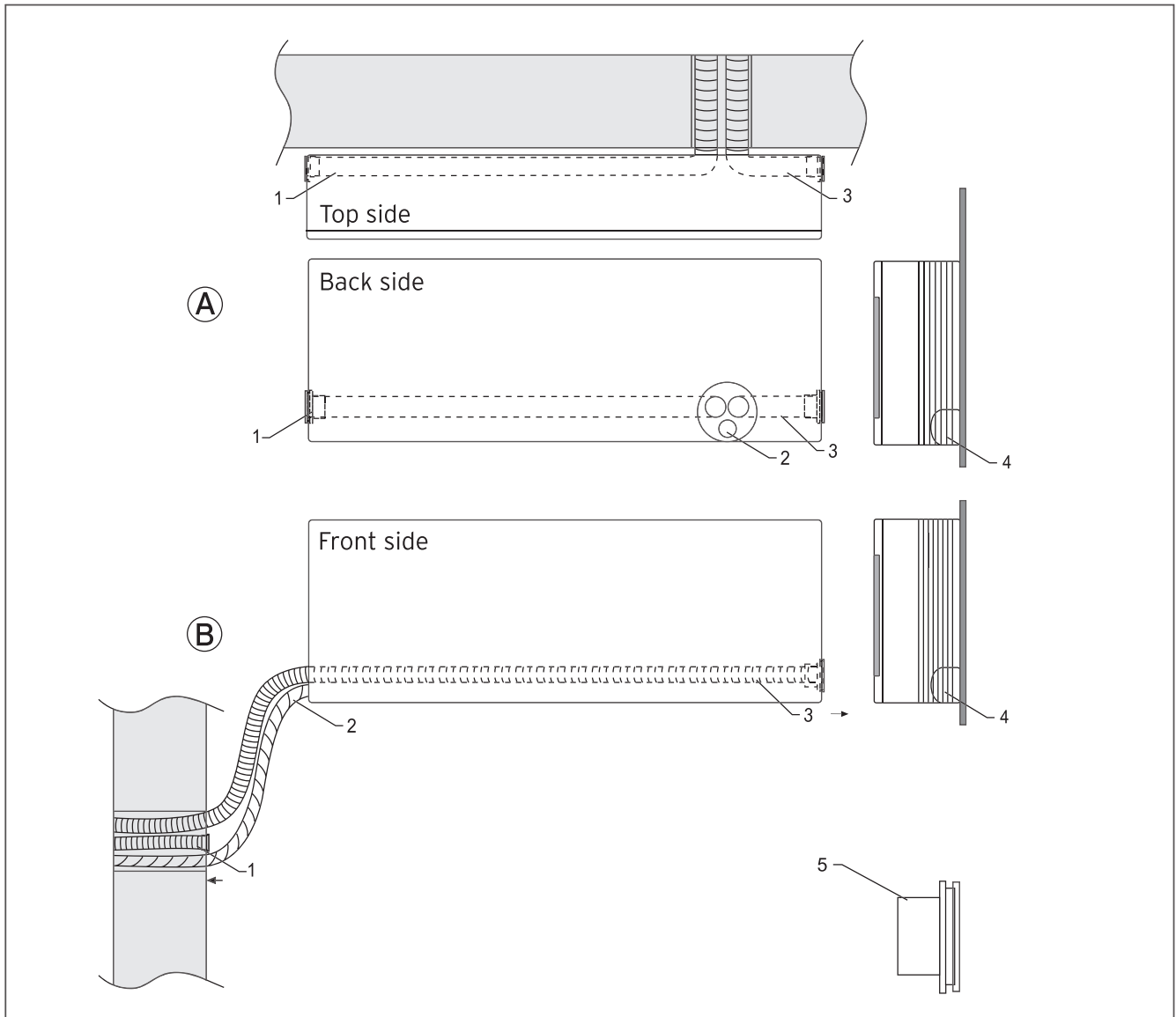


Fig. 7.5 Installing the Pipes in the Indoor Unit.

Legend

- A Installing through the back
- B Installing through the side

- 1 Room air pipe
- 2 Connection pipe
- 3 Fresh air pipe
- 4 Fresh Air pipe fastening unit for the indoor unit (packed in the indoor unit's box)
- 5 Connection with Fresh Air pipe

8 Electric Wiring

8.1 Safety Precautions



Danger!

Danger of electric shock.

All electrical works should be completed by an electrician or a similarly qualified person.



Danger!

Danger of electric shock.

Ensure that the power line is equipped with a bipolar or tetrapolar switch according to the model, (single phase or three-phase) with a distance of at least 3 mm between contacts (Standard EN-60335-2-40).



Danger!

Danger of electric shock.

Equip the installation with protection against short-circuits to avoid electric shocks. This is a legal requirement.



Danger!

Danger of electric shock.

Use wiring in accordance with the respective local, national and international wiring standards regarding installation in technical electrics.



Warning!

Danger of breakdowns or malfunction.

All electrical wiring must be of suitable size and rating for the appliance and should only be installed by suitably qualified personnel.



Warning!

Danger of breakdowns or malfunction.

Compliance with the Standard EN 61000-3-11: Check that the nominal power of the main phase current connection is > 100.



Warning!

Danger of breakdowns or malfunction.

Ensure that the supplied power voltage is in the range of 90% to 110% of the rated voltage.

8.2 Remark with regard to Directive 89/336/EEC

In order to prevent electromagnetic interference during the start up of the compressor (technical process), the following installation conditions must be adhered to.

- Make the air conditioning unit power supply connection at the main power distribution. Carry out the distribution with low impedance. Normally the required impedance is reached at a 32 A fusing point.
- Check that no other equipment is connected to this power supply line.



Note!

For more detailed information on the electric installation, please consult the Technical Connection Conditions applied by your electricity supply board.



Note!

In order to obtain more information with regard to power details of the air conditioner consult the unit rating plate.

8 Electric Wiring

8.3 Electric Wiring

There are two terminal strips, F and G, in the total energy recovery exchanger (see Figure 8.1).

Strip F is a control and power phase chain block, which connects to the indoor unit's communications wire.

Strip G is the earth connection block, which connects the end of the zero chain to the indoor unit's terminal box.

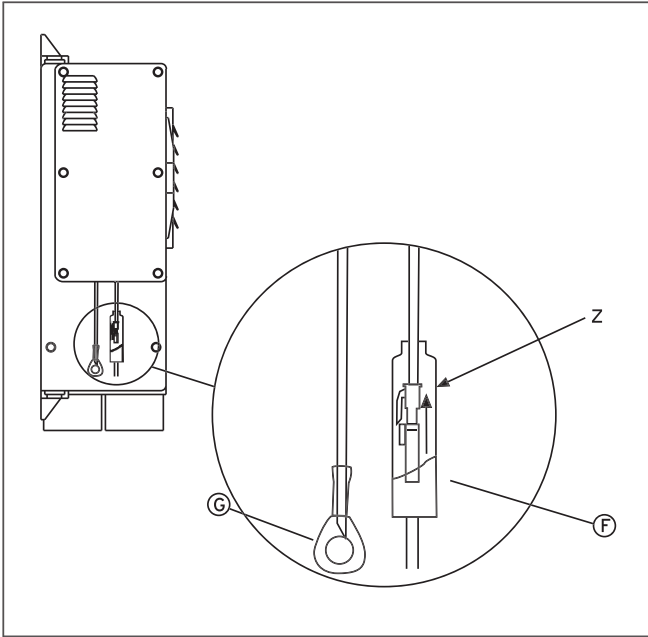


Fig. 8.1 Terminal Strips F and G.

Legend

- G Earth block
- F Control and power phase chain block
- Z Pyro-contractible insulating sleeve

- Remove the lower right-hand cover from the back of the indoor unit.
- Insert the electrical conduction in the corresponding hole and make the connections on the strip (see Figure 8.2).

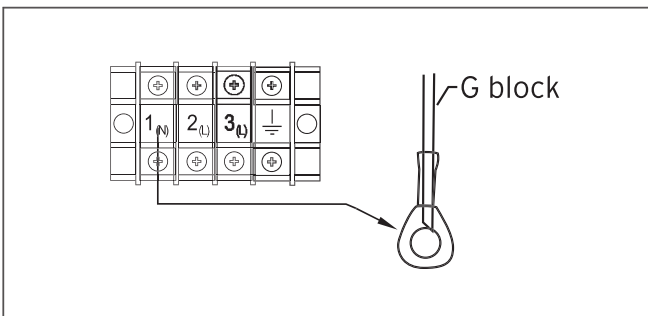


Fig. 8.2 Electric wiring.

9 Starting up the Fresh Air HR Unit

To start the Fresh Air HR unit with the remote control:

- Switch off the air-conditioning device by pressing the OFF button on the remote control
- Press the Fresh button on the remote control (see Figure 9.1)

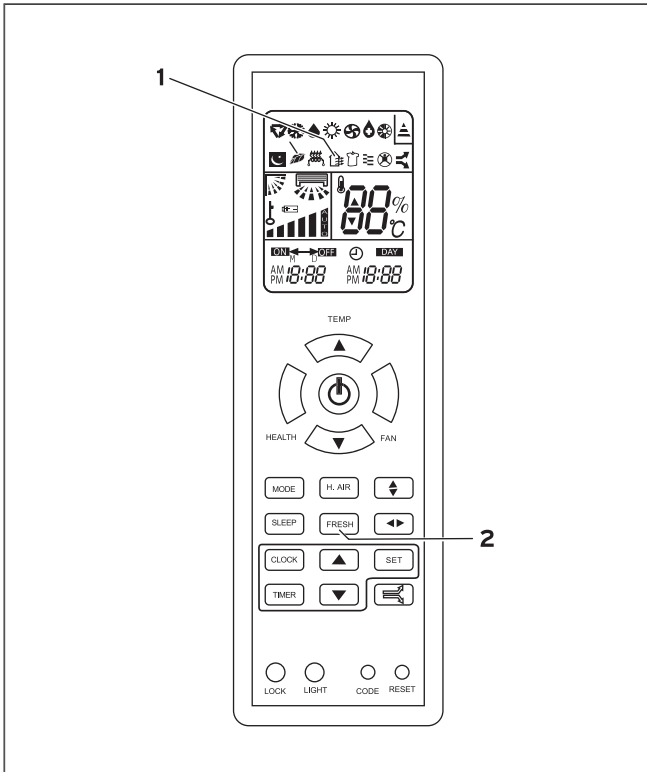


Fig. 9.1 Remote Control.

Legend

- 1 Fresh Indicator
- 2 Fresh Button

The display on the indoor unit will show the following (see Figure 9.2)



Fig. 9.2 Indoor Unit Display

Note!

Whilst the Fresh Air HR unit is operating, the temperature of the air-conditioning device will remain constant at 26°C.



Note!

Whilst the Fresh Air HR unit is operating, the air-conditioning device will go into Fan Only mode and the fan speed will remain at Low.

10 Product Decommissioning



Danger of injury and physical damage!

When disposing of the product, ensure that is done safely and in accordance with local by-laws and regulations. In order to do so follow the steps described in the installation manual in reverse order and use the necessary tools and protection equipment.

Ensure that the disassembly is carried out by qualified, technically competent individuals.



Warning!

Danger of environmental contamination when disposing of the unit. To avoid this, follow the instructions described in this section.



Fig. 10.1 Recycling symbol.

Your product is marked with the recycling symbol (see Figure 10.1), which means that the following must be taken into account during the disposal:

- Do not mix the unit with other domestic, unclassified waste.
- Dispose of the equipment in accordance with the relevant local and national standards, correctly and in an environmentally-friendly way.
- Hand in the unit to a waste management company that is authorised by the local authorities to transport it to a proper treatment plant.
- If the product is being replaced with a new product destined for the same use, hand in the old product to the distributor of the new unit for waste management as appropriate.
- Contact local authorities for more information.

