UHB EN 1841-2
331433

USER MANUAL

Exhaust air module NIBE F135

Table of Contents

1 Important information

Installation data

Product	*F135*
Serial number	
Installation date	
Installer	

No.	*Name*	*Fact. sett.*	*Set*
5.1.5	Exhaust air installation (fan sp. exhaust air, normal)	70%	
5.3.14	Pump speed	70%	

Serial number must always be given

Certification that the installation is carried out according to instructions in the accompanying installer manual and applicable regulations.

Date _____ Signed _____

Safety information

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.

If the supply cable is damaged, only NIBE, its service representative or similar authorised person may replace it to prevent any danger and damage.

SYMBOLS

NOTE

This symbol indicates danger to person or machine .

Caution

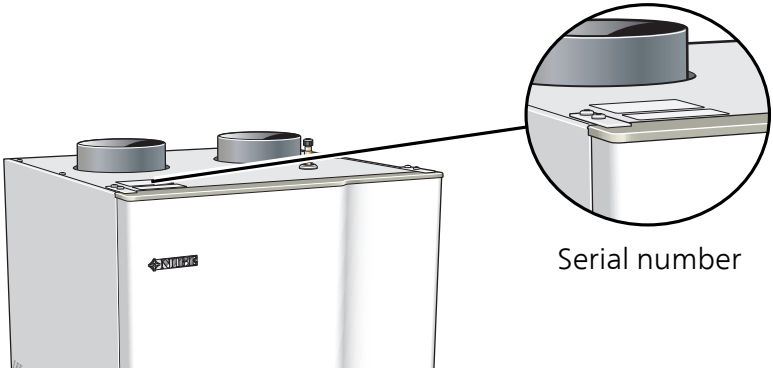
This symbol indicates important information about what you should observe when maintaining your installation.

TIP

This symbol indicates tips on how to facilitate using the product.

Serial number

The serial number can be found to the left, on top of F135.



Caution

You need the product's (14 digit) serial number for servicing and support.

F135 – An excellent choice

F135 is an accessory that makes it possible to combine an air/water heat pump with mechanical exhaust air. The heat in the building's ventilation air is utilised by F135 and used to heat the building and the hot water at the same time as ventilating the building. F135 is connected between the indoor module and the air/water heat pump, and all control of F135 takes place from the indoor module.

EXCELLENT PROPERTIES FOR F135:

- *DC fan*

  An energy efficient DC fan (Class A) is integrated in the exhaust air module.

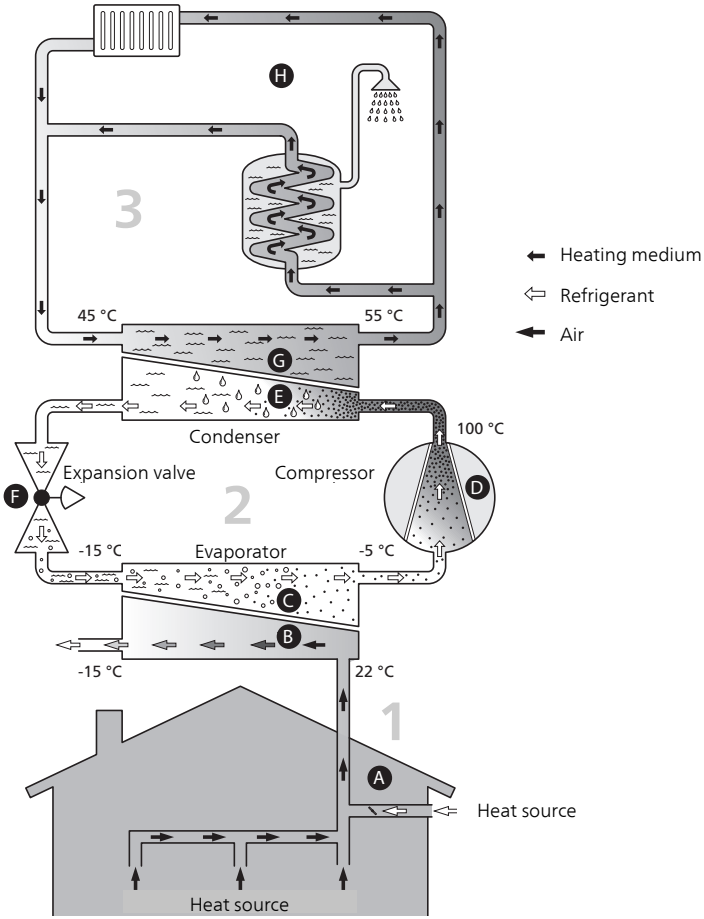
- *Low noise level*

  The exhaust air module has a very low noise level.

- *Easy to install*

  The exhaust air module is easy to install together with the indoor module and the air/water heat pump. During installation, the exhaust air module is connected to the indoor module, which enables you to read off the exhaust air module's values from the indoor module's display.

2 The heating installation – the heart of the house



The temperatures are only examples and may vary between different installations and time of year.

Exhaust air module function

An exhaust air module uses the heat that is in the building's ventilation air to heat up the house. The conversion of the ventilation air's energy to residential heating is done in three different circuits. From the outgoing ventilation air (1), free heating energy is retrieved from the house and transported to the exhaust air module. The exhaust air module increases the retrieved heat's low temperature to a high temperature in the refrigerant circuit, (2). The heat is distributed around the building in the heating medium circuit (3).

Ventilation air

A The hot air is transferred from the rooms to the heat pump via the exhaust air module.

B The fan then routes the air to the exhaust air module's evaporator. Here, the air releases the thermal energy to the brine and the air's temperature drops significantly. The cold air is then blown out of the house.

Refrigerant circuit

C A liquid, a refrigerant, circulates in a closed system in the exhaust air module, which also passes the evaporator. The refrigerant has a very low boiling point. In the evaporator the refrigerant receives the heat energy from the ventilation air and starts to boil.

D The gas that is produced during boiling is routed into an electrically powered compressor. When the gas is compressed, the pressure increases and the gas's temperature increases considerably, from approx. 5°C to approx. 80°C.

E From the compressor, gas is forced into a heat exchanger, condenser, where it releases heat energy to the heating system in the house, whereupon the gas is cooled and condenses to a liquid form again.

F As the pressure is still high, the refrigerant can pass an expansion valve, where the pressure drops so that the refrigerant returns to its original temperature. The refrigerant has now completed a full cycle. It is routed to the evaporator again and the process is repeated.

Heat medium circuit

G The heat energy that the refrigerant produces in the condenser is retrieved by the climate system's water, heating medium, which is heated to 55 °C (supply temperature).

Ventilation

J The hot air is transferred from the rooms to the heat pump via the exhaust air module.

K The fan then routes the air to the exhaust air module heat exchanger. Here, the air releases the heating energy to the brine and the air's temperature drops significantly. The cold air is then blown out of the house.

Maintenance of F135

REGULAR CHECKS

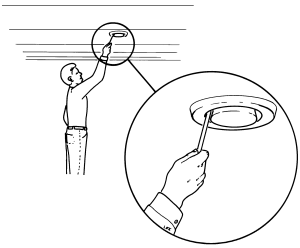
Your exhaust air module requires minimal maintenance after commissioning. However, it is recommended that you check your installation regularly.

If anything unusual occurs, messages about the malfunction appear on the indoor module's display in the form of various alarm texts.

Cleaning the ventilation devices

The building's ventilation devices should be cleaned regularly with, for example, a small brush to maintain the correct ventilation.

The device settings must not be changed.



NOTE

If you take down more than one ventilation device for cleaning, do not mix them up.

The temperatures are only examples and may vary between different installations and time of year.

Cleaning the air filter

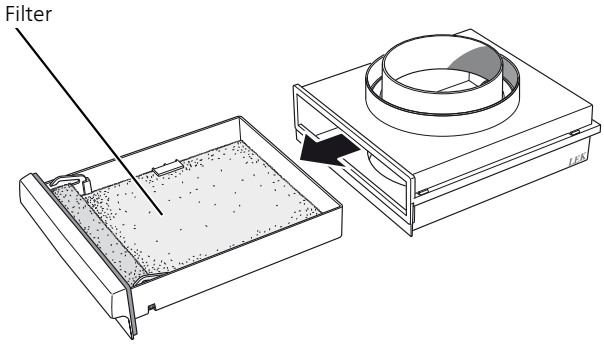
Clean the F135's air filter regularly, how often depends on the amount of dust in the ventilation air. Select what is most suitable for your installation.

1. Cut the power to the exhaust air module.
2. Pull out the filter cassette.
3. Remove the filter and shake/vacuum it clean.
4. Check the condition of the filter.
5. Carry out assembly in reverse order.

Even if the filter appears clean, dirt collects in it and this affects the efficiency of the filter. Therefore, replace it after 1 years. New filters can be ordered via the installer.

NOTE

Water or other liquids must not be used for cleaning.



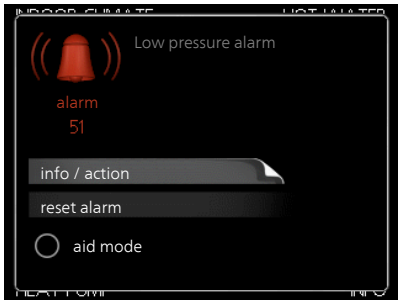
3 Disturbances in comfort

In most cases, the indoor module notes operational interference (operational interference can lead to disturbance in comfort) and indicates this with alarms and shows action instructions in the display.

Info-menu NIBE indoor module

All the indoor module measured values are gathered under menu 3.1 in the indoor module menu system. Looking through the values in this menu can often simplify finding the source of the fault.

Manage alarm



In the event of an alarm, some kind of malfunction has occurred, which is indicated by the status lamp changing from green continuously to red continuously. In addition, an alarm bell appears in the information window.

ALARM

In the event of an alarm with a red status lamp a malfunction has occurred that the indoor module cannot remedy itself. In the display, by turning the control knob and pressing the OK button, you can see the type of alarm it is and reset it. You can also choose to set the indoor module to aid mode.

info / action Here you can read what the alarm means and receive tips on what you can do to correct the problem that caused the alarm.

reset alarm In many cases, it is sufficient to select "reset alarm" in order for the product to revert to normal operation. If a green light comes on after selecting "reset alarm", the alarm has been remedied. If a red light

is still visible and a menu called “alarm” is visible in the display, the problem causing the alarm still remains. If the alarm initially disappears and then returns, you should contact your installer.

aid mode “aid mode” is a type of emergency mode. This means that the indoor module produces heat and/or hot water, even though there is some kind of problem. This could mean that the heat pump’s compressor is not in operation. In this case, the immersion heater produces heat and/or hot water.

Problems withF135 do not affect heat pump operation. You do not need to select "aid mode" in event of problems with F135.

Caution

Selecting "aid mode” is not the same as correcting the problem that caused the alarm. The status lamp will therefore continue to be red.

If the alarm does not reset, contact your installer for suitable remedial action.

NOTE

You need the product's (14 digit) serial number for servicing and support.

Troubleshooting

If the operational interference is not shown in the display the following tips can be used:

BASIC ACTIONS

Start by checking the following items:

- That the feed cable is connected to F135.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.

LOW OR A LACK OF VENTILATION (EXHAUST AIR INSTALLATION)

- Filter blocked.
  - Clean or replace filter (see page 11).
- The ventilation is not adjusted.
  - Order ventilation adjustment.
- Exhaust air device blocked or throttled down too much.
  - Check and clean the exhaust air devices.
- Fan speed in reduced mode.
  - Enter menu 1.2 and select "normal".

LOUD OR DISTURBING VENTILATION (EXHAUST AIR INSTALLATION)

- Filter blocked.
  - Clean or replace filter (see page 11).
- The ventilation is not adjusted.
  - Order ventilation adjustment.
- Fan speed in forced mode.
  - Enter menu 1.2 and select "normal".

GURGLING SOUND

- Not enough water in the water seal.

– Refill the water seal with water.

- Choked water seal.
  – Check and adjust the condensation water hose.

4 Technical data

Detailed technical specifications for this product can be found in the installation manual (nibe.eu).

5 Glossary

COMPRESSOR

Compresses the gas state refrigerant. When the refrigerant is compressed, the pressure and the temperature increase.

CONDENSER

Heat exchanger where the hot gas state refrigerant condenses (cools and becomes a liquid) and heats the hot water.

DISTURBANCES IN COMFORT

Disturbances in comfort means unwanted changes in hot water comfort, e.g. that the temperature of the hot water is too low.

A malfunction in the heat pump can sometimes be noticed in the form of a disturbance in comfort.

In most cases, the heat pump notes operational interference and indicates this with alarms and shows instructions in the display.

EVAPORATOR

Heat exchanger where the refrigerant evaporates by retrieving heat energy from the air which then cools.

EXPANSION VALVE

Valve that reduces the pressure of the refrigerant, whereupon the temperature of the refrigerant drops.

HEAT EXCHANGER

Device that transfers heat energy from one medium to another without mixing mediums. Examples of different heat exchangers include evaporators and condensers.

REFRIGERANT

Substance that circulates around a closed circuit in the heat pump and that, through pressure changes, evaporates and condenses. During evaporation, the refrigerant absorbs heating energy and when condensing gives off heating energy.

SUPPLY TEMPERATURE

The temperature of the heated water that the heat pump sends out to the heating system. The colder the outdoor temperature, the higher the supply line temperature becomes.

Item register

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