

SENCOR®

SDH 1210WH



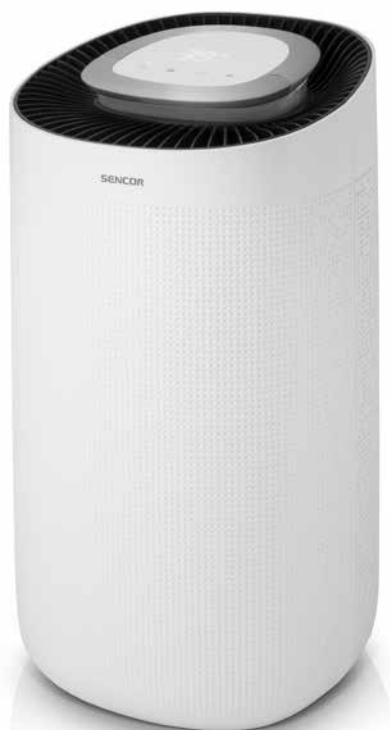
SMART DEHUMIDIFIER & AIR PURIFIER

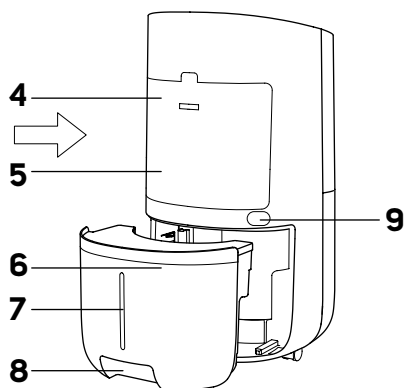
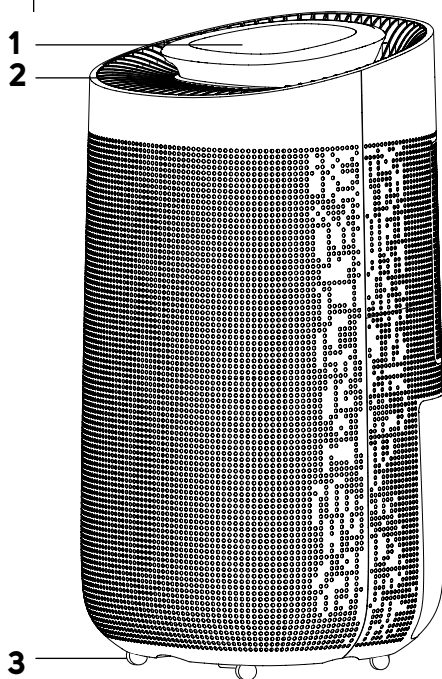
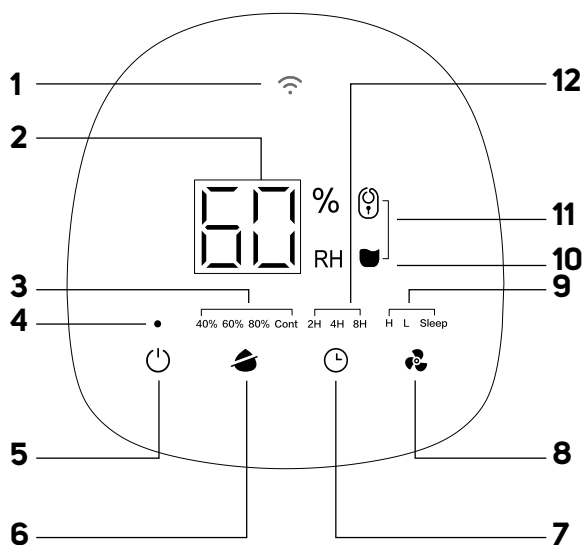
Translation of the original manual



SENCOR®

SDH 1210WH



A**B**

EN Smart Dehumidifier & Air Purifier

Important safety instructions

READ CAREFULLY AND STORE FOR FUTURE USE.

- This appliance may be used by children 8 years of age and older and by persons with physical, sensory or mental impairments or by inexperienced persons, if they are properly supervised or have been informed about how to use the product in a safe manner and understand the potential dangers.
- Cleaning and maintenance performed by the user must not be performed by unsupervised children. Children must not play with the appliance.
- If the power cord is damaged, it must be replaced by an authorised service centre or by another similarly qualified person, this will prevent the creation of a dangerous situation. It is forbidden to use the appliance if it has a damaged power cord.
- The appliance must be installed in accordance with national installation codes.
- The appliance must be stored in a manner that prevents its mechanical damage.
- The appliance must be stored in a well ventilated location, where the dimensions of the room correspond to the dimensions specified for its operation.

- The appliance must be stored in a room where an open flame is not continuously in use (e.g. running gas appliance) or where there are sources of ignition (e.g. running electrical heating element).
- Before connecting the appliance to a power socket, check that the rated voltage on its rating label matches the electrical voltage in the power socket.
- Connect the appliance only to a properly grounded socket.
- The power socket must be freely accessible so that it is possible to quickly disconnect the power cord from the power source if necessary.
- The appliance is designed for use at home, in offices and similar types of areas. Do not use it in rooms where it could be exposed to dripping or spraying water, where it could be exposed to direct sunlight, in areas where chemical or explosive substances are stored, in industrial surroundings or outdoors! Do not use it in the vicinity of a bath, shower, swimming pool, etc.
- Do not place the appliance in the vicinity of an open flame or appliances that are sources of heat.
- Do not place the appliance on unstable surfaces such as carpets with very long and thick fibres.
- The appliance may only be used on a dry, stable, smooth and horizontal surface.
- The appliance is equipped with travel wheels, so pay extra attention when handling it so that it does not fall down stairs or travel down from sloped areas. If necessary secure the wheels using the stoppers.

- Only use original parts to assemble the appliance. Before starting to assemble the appliance, make sure that it is turned off and disconnected from the power socket.
- Prior to connecting the appliance to a power socket, make sure that the appliance is correctly assembled according to the instructions in this user's manual.
- Do not touch the appliance with wet or damp hands. This applies especially when it is connected to a power socket.
- Do not submerge the appliance in water or in any other liquid.
- Do not cover or insert anything into the air inlet or air outlet openings. Otherwise, this could damage the appliance.
- A sufficient space for air circulation must be provided during operation with at least 20 cm along the sides and the rear, and at least 50 cm in front and above the appliance.
- Do not expose yourself to a cold air current for a long time. This could have a negative effect on your health.
- To turn the appliance on or off, always use the appropriate buttons on the control panel or the remote control. Do not turn off the appliance by disconnecting the power cord from the power socket.
- Always turn off the appliance and disconnect it from the power socket when leaving it without supervision, when not using it and before moving, disassembling or cleaning it.
- Do not attempt to remove the outer case of the appliance.

- Disconnect the appliance from the power socket by pulling on the plug, never pulling on the power cord. Otherwise, this could damage the power cord or the socket.
- In the event that the power cord or power plug are damaged in any way, do not use the appliance.
- Store the appliance in a vertical position. It may only be transported in the vertical position. If you have already used the appliance, check that all the condensate has been drained. After transporting it, wait at least 1 hour before using the appliance.
- Do not use the appliance if it is not working correctly, if it has been damaged or has been submerged in water. To avoid a hazardous situation arising, do not repair the device yourself or modify it in any way. Have all repairs or adjustments performed at an authorised service centre. By tampering with the appliance, you risk voiding your legal rights arising from unsatisfactory performance or quality warranty.
- This appliance is intended for use by experts or trained personnel in stores, light industry and in agriculture, or for commercial use by ordinary people.



Read this user's manual carefully prior to installing or operating your new appliance. Make sure that you keep it for future reference.



Fire hazard.

The appliance contains a flammable refrigerant. It is necessary to adhere to safety instructions.

SPECIFIC INFORMATION FOR APPLIANCES USING REFRIGERANT GAS R290

- Carefully study all the warnings.
- For defrosting and cleaning, do not use any other tools than those recommended by the manufacturer.
- The appliance must be stored in a room where there are no sources of ignition (e.g. open flame, gas appliance in operation, electrical heating equipment in operation) in continuous operation.
- Do not puncture or burn the cooling circuit.
- It is necessary to take into consideration that refrigerants may be odourless.
- The appliance must be installed, operated and stored in a room with a floor area greater than 9m².
- This appliance contains 45 g of refrigerant gas R290.
- R290 is a refrigerant gas that meets European environmental protection directives. Do not drill into or damage any part of the cooling circuit.
- Sufficient ventilation must be provided in the room where this appliance is installed operated or stored. Otherwise, there is a risk of an explosion or fire in the event that leaked refrigerant ignites, e.g. when a gas cooker is turned on, etc.

- The appliance must be stored in such a manner that its mechanical damage is prevented.
- Persons working with or repairing cooling circuits must have appropriate authorisation issued by an authorised institution that certifies this person's competence to work with refrigerants in accordance with the specific assessment of the association for this sector.
- Maintenance tasks must be performed solely on the basis of the recommendations of this appliance's manufacturer. Maintenance and repair tasks that required the contribution of other qualified expert personnel may only be performed under the supervision of specialised experts in the flammable refrigerants sector.
- Check the rating label for the type of refrigerant gas used in your appliance.
- Do not cover the vents.
- Adhere to national codes relating to gas.

- Thank you for purchasing a SENCOR brand product and we hope that you will be happy with it.
- Prior to using this appliance, please read the user's manual thoroughly, even in cases, when one has already familiarised themselves with previous use of similar types of appliances. Only use the appliance in the manner described in this user's manual. Keep this user's manual in a safe place where it can be easily retrieved for future use.
- We recommend saving the original cardboard box, packaging material, purchase receipt and responsibility statement of the vendor or warranty card for at least the duration of the legal liability for unsatisfactory performance or quality. In the event of transportation, we recommend that you pack the appliance in the original box from the manufacturer.
- Locate the appliance in a room where temperature does not fall below 5 °C. If the temperature were to fall below 5 °C, there is a risk of frost forming inside the appliance, which would reduce its efficiency.
- Do not locate the appliance in the vicinity of dryers, heating devices and other sources of heat.
- Use the appliance in locations where humidity could damage books or other valuable items.
- The appliance must be used in a closed room in order to ensure its maximum effectiveness. Therefore, close the doors and windows of the given room.

DESCRIPTION OF THE APPLIANCE

A1 Control panel	A8 Handle
A2 Air outlet grille	A9 Drain hose connection outlet
A3 Travel wheels	A10 Power cord (not shown)
A4 Air inlet grille	A11 Drain hose (not shown, available only with certain models)
A5 Pre-filter (located behind a grille)	A12 H11 filter (not shown)
A6 Condensate tank	
A7 Viewing window	

DESCRIPTION OF THE CONTROL PANEL

B1 Wi-Fi icon	B8 Button  serves to set the fan speed/control panel lock
B2 Display (displays the current relevant humidity)	B9 Fan speed indicator lights
B3 Humidity indicator light	B10 Full condensate tank indicator light
B4 Power On indicator light	B11 Control panel lock indicator light
B5 Button  serves to turn the appliance on / off	B12 Timer indicator lights
B6 Button  serves to set the target humidity in the room	
B7 Button  serves to set the timer/reset Wi-Fi	

BEFORE FIRST USE

- Before first use, take the appliance and its accessories out of the packaging material and remove all promotional labels and stickers. Check that neither the appliance nor any of its parts is damaged.



Note:

Travel wheels are supplied separately and need to be attached prior to using the appliance. Insert the travel wheels into the holes at the bottom of the appliance and push them all the way in.

- Do not travel over carpets, door thresholds or other obstacles with the wheels. This could damage them.
- Do not move the appliance when the condensate tank is full.

INSTALLATION LOCATION OF THE APPLIANCE

- Locate the appliance on an even, dry and stable surface within reach of a properly grounded power socket.
- Do not use the appliance outdoors.
- To ensure sufficient air circulation, leave at least 20 cm of free space along the sides and the rear, and at least 50 cm in front and above the appliance.

PRE-FILTER AND H11 FILTER

- The pre-filter is installed in the dehumidifier from the factory and is located behind the air inlet grille. While the H11 filter is supplied with the dehumidifier but not installed.
- The pre-filter is suitable to use when you need to increase the dehumidification efficiency.
- The H11 filter is suitable if you want to use the dehumidifier as an air purifier.



Warning:

Never use both filters at the same time.

Follow these steps when installing the H11 filter:

1. Carefully remove the grille and remove the pre-filter.
2. Remove the H11 filter from its protective packaging and insert it into the dehumidifier. Then put the grille back.
- If you need to install the pre-filter, follow the same procedure.

OPERATING THE APPLIANCE

- The dehumidifier is used for drying out, for example, flooded basements, rooms with an increased level of moisture, etc. Do not use it in areas where substances or items are stored requiring precise room temperature and humidity control.
- Use the appliance at an ambient temperature in the range 5 °C – 35 °C and at a humidity of 30 % – 80 %. These values will ensure the most effective operation of the dehumidifier.
- Always wait at least 3 minutes before turning the appliance on again.
- Do not connect the appliance to a power socket to which another appliance is already connected. We recommend connecting the appliance to an independent circuit.
- Make sure that the condensate tank is correctly installed in the appliance, otherwise the appliance may not function correctly.

OPERATING THE APPLIANCE

- Make sure that the appliance is located in a suitable place and that it is correctly assembled. Then insert the power plug into a power socket. Three sounds will be made. The dehumidifier is in stand-by mode.

Turning on/off

- Press the  button to turn on the dehumidifier. A single sound will be made. The power indicator light will be lit. The dehumidifier will start automatically in the default continuous dehumidification mode. The display will show the humidity in the room and the fan will start running.
- If you need to turn off the appliance, press the  button and the indicator light will turn off. The dehumidifier is now in stand-by mode. If you need to turn the appliance off completely, pull the power plug out of the power socket.

- The operation of the dehumidifier will stop automatically if the condensate tank is full or incorrectly installed.



Note:

The dehumidifier will start in last set mode when it is turned on again even though it has been disconnected from the power plug, or in the event of a power outage.

Setting the humidity

- Button  serves to set the humidity. Press it repeatedly to set the required humidity: 40% - 60% - 80% - Cont (continuous dehumidification). Each time the button is pressed, the respective indicator will be lit on the control panel and the current humidity in the room will be shown on the display.
- When the required humidity is reached, the compressor will stop, nevertheless, the fan will continue to run. If humidity rises again above the required level, the compressor will start running again.
- When the display shows "LO", the relative humidity in the room is less than 40 %. When the display shows "HI", the relative humidity in the room is more than 80 %.

Setting the fan speed

- Button  serves to set the fan speed. Press it repeatedly to set the required speed: H (high speed) – L (low speed) – Sleep (very low speed). Each time the button is pressed, the respective indicator will be lit on the control panel.

Automatic shut-off

- The dehumidifier is equipped with an automatic shut-off function that is activated after a set time has elapsed.
- Button  serves to set the automatic shut-off time. Press it repeatedly to set the required time: 2H – 4H – 8H. Each time it is pressed, the respective indicator light will be lit. After several seconds the selected time will be saved to memory and the countdown will start. When the set time has elapsed, the dehumidifier will turn off and switch to the stand-by mode.

Control panel lock

- The lock enables the control panel elements to be locked in order to prevent accidentally changing your settings.
- Press and hold down the  button for 3 seconds to activate the control panel lock. All the buttons on the control panel will be inactive. The lock indicator light on the control panel will be lit.
- If you need to deactivate the lock, press and hold down the  button for 3 seconds. The lock will be cancelled and the lock indicator light on the control panel will turn off.

CONTROL VIA THE SENCOR HOME APPLICATION

- The dehumidifier can be controlled via the Sencor HOME application.
- Download the application to your smart phone, register yourself and control the dehumidifier via the application.

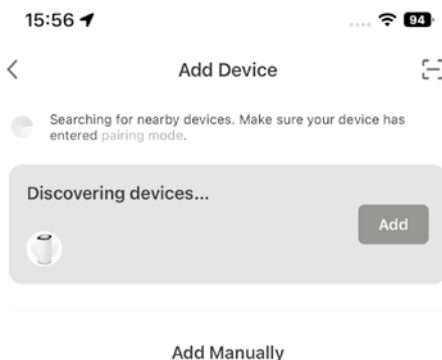


- If you already have the application installed, add the dehumidifier to your devices.

Adding the dehumidifier to the list of appliances via Bluetooth

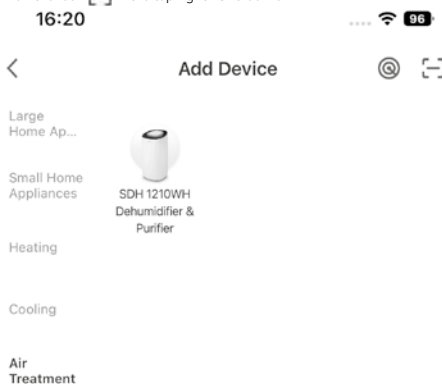
- You can add the mobile air conditioner to the Sencor HOME application by pairing it via Bluetooth.
1. Turn on the Bluetooth function on your mobile phone.
 2. Turn on the mobile air conditioner.
 3. Open the application and on the home screen of the application, click on the icon "+".

4. The discovered devices will be displayed at the top of the screen and click on "Add".



Adding the dehumidifier to the device list via a QR code

- The dehumidifier can also be added to the Sencor HOME application using the QR code provided below. On the home screen of the application, click on the "+" icon and on the add device screen, click on the icon  in the top right hand corner.



QR code for adding the control panel of the dehumidifier to the application Sencor HOME



Manually adding the dehumidifier to the device list

1. On the main screen, click on "Add device" or on the "+" in the top right hand corner.
2. A screen with appliance categories will appear together with a list of appliances.
3. Click on "Air quality" and from the list, select "Dehumidifier (Wi-Fi & BT)".
4. On the next screen, you will be asked to select a Wi-Fi network. Select a network, enter the password and click on "Next". Ensure that the dehumidifier is ready for pairing. It is important that the dehumidifier is connected to a power source and is in stand-by mode. The Wi-Fi icon will start to flash quickly on the display. If the

icon does not appear, hold down button  for at least 5 seconds until the Wi-Fi icon appears on the display and starts to flash quickly.

5. In the application, confirm that the Wi-Fi icon is quickly flashing and click on "Next".
6. The dehumidifier will automatically be added to the device list. The Wi-Fi icon will be lit on the display.
7. In the device list on the main screen, click on the icon of the dehumidifier to enter control interface.

Wi-Fi reset

- While the dehumidifier is in operation, press and hold down button  for 5 seconds. The Wi-Fi settings will be reset and the Wi-Fi icon will flash quickly (twice per second).

FULL CONDENSATE TANK INDICATOR

- If the condensate tank becomes full while the dehumidifier is in operation, the compressor and the fan will stop running and the full condensate tank indicator light  will be lit on the control panel.
- Carefully pull the condensate tank out of the rear part of the dehumidifier and pour out the condensate.
- When the condensate tank is reinstalled, the dehumidifier will automatically resume operation. When the dehumidifier is in the dehumidification mode, the compressor will start only after 3 minutes.

AUTOMATIC DEFROSTING

- If the temperature sensor of the vaporizer coil registers a temperature lower than -2 °C, the dehumidifier will automatically switch to the automatic defrosting mode. "HS" will appear on the screen. After defrosting, the dehumidifier will switch back to the initial operating mode.
- If the frost on the surface of the vaporizer melts away and the temperature is higher than 2 °C and the defrosting time time is greater than 10 minutes, then the automatic defrosting function will turn off and the dehumidification mode will start.



Note:

If the temperature is still low, the dehumidifier will intermittently switch between the automatic defrosting mode (10 minutes of operation and dehumidification mode (30 minutes of operation)).

INFORMATION ABOUT H11 FILTER REPLACEMENT

- When the operating time of the dehumidifier exceeds 2,200 hours of operation, the Power On indicator light will start flashing. This means that it is necessary to replace the H11 filter. Proceed according to the instruction in section "Replacing the filter" below.
- As soon as the filter is replaced, press and hold down the  button to reset the dehumidifier and to start a new countdown.

CONTINUOUS CONDENSATE DRAINING VIA THE DRAIN HOSE

- For continuous draining of condensate, open the plastic plug.



Note:

If there is water in the outlet when the plug is opened, wipe it using a dry wiping cloth.

- Connect the end of the drain hose to the outlet. Ensure that it is properly connected so that the condensate does not leak.
- Locate the free end of the hose so that the condensate can flow out freely. The container or the place where the condensate is drained must be lower than the outlet. Do not bend the hose excessively.
- Set the required humidity and fan speed.



Note:

When not using the drain hose for continuous draining of condensate, screw it off, wipe away any water and close the outlet using the plug.

SMART PROTECTIVE ELEMENTS

Protection against low/high temperature

- If the temperature/humidity sensor at the air inlet detects that the ambient temperature is greater than 42 °C, then "L3" will start flashing on the display. The dehumidifier will stop completely. At this point, it is possible to restart the dehumidifier by turning it on again.
- If the temperature/humidity sensor at the air inlet detects that the ambient temperature is less than 0 °C, then "L4" will start flashing on the display. The dehumidifier will stop completely. At this point, it is possible to restart the dehumidifier by turning it on again.

PROTECTION AGAINST LEAKAGE OF REFRIGERANT

- When the dehumidifier is running, the internal system is checked every 8 minutes for leakage of refrigerant. If a refrigerant leakage is detected in five consecutive checks, then "C8" will start flashing on the display. The compressor and the fan will stop. At this point, no button will be functional and no sound warning will be made.
- If this happens, turn off the dehumidifier and disconnect the power cord from the power source. Contact an authorised service centre. If this happens, it is forbidden to use the dehumidifier.

PROTECTION OF THE COMPRESSOR

- The dehumidifier is equipped with a compressor protection function, which prevents its damage in the event that the dehumidifier is turned off and immediately turned on again. If this happens, the compressor will only start after 3 minutes. Only the fan will run during this time.
- If the dehumidifier turns off for longer than 3 minutes, the compressor will start together with the fan.
- When using the dehumidifier in the dehumidification mode or automatic defrost mode, it is necessary to remove the condensate tank and then to put it back in, or to turn the dehumidifier off and then on again, however, the dehumidification mode will start only after approximately 3 minutes.

TEMPERATURE AND HUMIDITY MALFUNCTION DETECTION

- When the error message E1 starts flashing on the display, then the vaporizer coil temperature sensor is damaged or it has been short circuited. If this happens, the dehumidifier will continue to operate, but the compressor will run for 30 minutes and then turn off for 10 minutes. This will repeat itself in cycles. Turn off the dehumidifier and contact an authorised service centre.



Note:

When a sensor malfunction is detected, all the control elements remain fully functional, however, the performance of the dehumidifier may decline slightly.

- When the error message E2 starts flashing on the display, the temperature and humidity sensor components are damaged or they have been short circuited or they are not in contact. If this happens, all the control buttons, with the exception of the  button, will be fully functional and the dehumidifier will switch to the continuous dehumidification mode. Turn off the dehumidifier and contact an authorised service centre.

CLEANING AND MAINTENANCE

- Disconnect the power plug from the power socket before cleaning.

**Note:**

For cleaning, do not use cleaning products with an abrasive effect, solvents, etc. that could damage the appliance.

**Warning:**

To prevent the risk of injury by electrical shock, do not submerge the appliance, power cord or power plug in water or any another liquid.

Cleaning the condensate tank

- Empty out the condensate tank whenever you finish using the appliance and wipe it using a wiping cloth.
- To prevent undesirable bacteria, micro-organism or moulds from multiplying inside the tank, clean it out at least once per month using a cloth dampened in lukewarm water with the addition of neutral detergent. Then rinse it out thoroughly using clean water, wipe it dry and insert it back into the appliance.
- Do not wash the condensate tank in a dishwasher.

Cleaning the H11 filter

- The H11 filter should be cleaned regularly at least once every two weeks or more often when the appliance is used every day.
- You can remove the dust from the H11 filter using a brush with gentle bristles. In the event that the H11 filter is heavily soiled, you can vacuum out the dust and dirt using a vacuum cleaner set to the lowest power setting with an upholstery brush attached.
- Install the H11 filter back in its place. However, first make sure that it is completely dry. Then reattach the grille.

**Warning:**

Do not use the appliance without the filter being properly installed. Do not soak the H11 filter in water, it is not dishwasher safe or washing machine safe.

Replacing the H11 filter

- When the indicator light starts flashing, it is necessary to replace the filter. Contact an authorised service centre or your vendor.
1. Remove the new H11 filter from the protective packaging.
 2. Release the grille and remove the existing H11 filter.
 3. Put on the new H11 filter and subsequently attach the grille.
 4. Press and hold down the  button to reset the dehumidifier and to start a new countdown.

Cleaning the pre-filter

- The pre-filter should be cleaned regularly at least once every two weeks, or more often when the appliance is used every day.
- Remove the pre-filter from the dehumidifier and shake it out. For hygiene reasons, shake the pre-filter out of the living space.
- In case of heavy soiling, wash it under clean, running water and leave it to dry completely in a dry, well-ventilated place.
- Always make sure it is completely dry before installing it in the dehumidifier.

**Warning:**

Do not install the pre-filter in the dehumidifier if it is damp or wet. Do not use a hair dryer, oven, dryer, etc. to dry the pre-filter. Do not dry the pre-filter on a heater or in direct sunlight.

Cleaning the outer case

- To clean the outer case, use a wiping cloth lightly dampened in lukewarm water with the addition of a neutral cleaning agent. Make sure that water does not enter into the vents. In the event that air inlet and outlet grilles are only dusty, a vacuum cleaner may be used to clean them.

Storage

- When not using the appliance for an extended period of time, disconnect the power plug from the power socket and clean it according to the instructions provided above.
- Clean the condensate tank only 24 hours after turning the appliance off since even during this time a small amount of condensate may accumulate.
- Store the appliance in a dry, clean and well-ventilated location not exposed to extreme temperatures and out of children's reach.

TROUBLESHOOTING

Problem	Cause	Solution
The power On indicator light is flashing quickly.	It is necessary to replace the H11 filter.	Proceed according to the instruction in section "Replacing the filter".
The dehumidifier is emitting hot air.	This is normal. Dehumidified air passes through a heating element, whereby the air is heated up (without the cooling function).	
The dehumidifier is not removing humidity from the room.	Temperature and humidity in the room are low.	If the temperature and humidity in the room are low, reduce dehumidification power. Check the temperature and humidity in the room. As a rule, humidity will be higher during the cooler months. This is not a defect.
The dehumidifier will stop.	The plug is not correctly plugged into the power socket.	Insert the plug correctly into the power socket.
	Air inlet and outlet vents are blocked.	Remove the cause of the blockage and check that the vents are clean.
	Full condensate tank indicator light  is lit.	Empty the water tank. Proceed according to the instruction in section "Full condensate tank indicator".
The dehumidifier cannot achieve the set humidity level.	The power On indicator light is lit.	The defrosting process was started. Wait until the process finishes; the dehumidifier will then switch back to the initial operating mode.
	The room is too large.	Only use the dehumidifier for the recommend room floor area – see technical specifications.
	Windows or doors are open.	Close any windows or doors.
The humidity shown on the display does not correspond to other humidity measurement devices in the room.	An oven or another appliance is generating water vapour.	Turn off the oven or other appliance that is generating the water vapour, e.g. humidifier or aromatic diffuser.
		Humidity may differ from place to place, even within a single room. The humidity shown on the display of the dehumidifier is only indicative.
The emitted air has a foul smell.	When the temperature of the heat exchanger and the cooler is abnormal, it may temporarily emit an odour. This is not a defect.	
The dehumidifier is making a gurgling noise.	This is the noise of refrigerant flowing through the internal circuit. As a rule, this noise occurs when the appliance is turned on or off before the refrigerant stabilises. This is normal.	
The dehumidifier is too noisy while running.	The dehumidifier is not set level.	Move the dehumidifier to a firm, level location.
	The H11 filter is clogged.	Clean the filter according to the instructions in section "Cleaning the H11 filter".
	The dehumidifier is located in a tight area.	Place a mat underneath the dehumidifier.

Error messages

Error messages on the display	Meaning	Solution
E1	Error on the coil temperature sensor or a related malfunction of the circuit.	Turn off the dehumidifier and contact an authorised service centre.
E2	The temperature and humidity sensor components are in an open state or they have been short circuited, or they are in contact.	Turn off the dehumidifier and contact an authorised service centre.
L3	The ambient temperature is too high ($\geq 42^{\circ}\text{C}$).	Turn the dehumidifier off and then on again.
L4	The ambient temperature is too low ($\leq 0^{\circ}\text{C}$).	
HS	The dehumidifier has switched to the automatic defrosting mode.	This is normal. When the defrosting process is complete, it will automatically switch to the last set mode.
C8	Refrigerant leak	Turn off the dehumidifier and contact an authorised service centre.

- In the event that the problem persists, or is not listed in the table above, stop using the appliance and contact an authorised service centre.

TECHNICAL SPECIFICATIONS

Power supply	220–240 V~, 50 Hz
Dehumidification capacity	12 l / 24 h (30 °C/80 %)
Rated input power	205 W
Rated current	0.83 A
Energy factor EEEV	1.95 l/kWh
Starting current	2.1 A
Fuse type and current value	T.6.3 A/250 V
Condensate tank capacity	3.2 l
Refrigerant type and weight	R290/45 g
GWP (global warming potential)	3
Equivalent CO ₂	0.00018
Air flow volume	100/90/80 m ³ /h (high/low/very low speed)
Noise level	45 dB (A)
Dimensions	295 x 295 x 560 mm
Weight net / gross	12/13 kg
Operating temperature	5–35 °C
Recommended room area	18–30 m ²

We reserve the right to change text and technical specifications.

INSTRUCTIONS AND INFORMATION REGARDING THE DISPOSAL OF USED PACKAGING MATERIALS

Dispose of used packaging material at a site designated for waste in your municipality.

DISPOSAL OF USED ELECTRICAL AND ELECTRONIC EQUIPMENT



This symbol on products or original documents means that used electric or electronic products must not be added to ordinary municipal waste. For proper disposal, renewal and recycling, hand these appliances over to determined collection points. Alternatively, in some European Union states or other European countries you may return your appliances to the local retailer when buying an equivalent new appliance. Correct disposal of this product helps save valuable natural resources and prevents potential negative effects on the environment and human health, which could result from improper waste disposal. Ask your local authorities or collection facility for more details. In accordance with national regulations penalties may be imposed for the incorrect disposal of this type of waste.

For business entities in European Union states

If you want to dispose of electrical or electronic equipment, ask your retailer or supplier for the necessary information.

Disposal in other countries outside the European Union.

This symbol is valid in the European Union. If you wish to dispose of this product, request the necessary information about the correct disposal method from the local council or from your retailer.



This product meets all the basic requirements of EU directives related to it.

SERVICING INSTRUCTIONS

- The service manual is intended only for qualified personnel with authorisation for handling flammable refrigerants.

1.1 Area check

Before starting work on a system containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised. When repairing a cooling system, the following measures must be adhered to prior to performing any work.

1.2 Work procedure

Work must be performed following a controlled procedure so that the risk of flammable gases or fumes being present during this time is minimised.

1.3 General work area

The whole maintenance crew and other personnel at the site must be informed about the nature of the works being performed. Work in tight areas must be prevented. The area around the work site must be divided into sections. It must be ensured that the conditions inside the area are safe by means of inspections of flammable materials.

1.4 Check for presence of a refrigerant

The area must be checked using an appropriate detector for the presence of refrigerant before and during work to ensure that technicians are aware of a potentially flammable atmosphere. It must be ensured that the device used for the detection of leaks is suitable for use on flammable refrigerants, i.e. non-sparking, appropriately sealed or intrinsically safe.

1.5 Presence of a fire extinguisher

In the event that any work is performed on the cooling device or associated parts under heat, then a suitable fire extinguisher must be on hand. In the vicinity of the filling area, there must be a powder or CO₂ fire extinguisher.

1.6 No ignition sources

No person performing work related to the cooling system that encompasses the uncovering of any pipes that contain or have contained flammable gasses may use any ignition sources in a manner that could lead to a fire or explosion hazard. All possible ignition sources, including the smoking of cigarettes should be kept at a sufficient distance from the installation, repair, removal or disposal location, during which flammable refrigerant could potentially be released into the surrounding environment. Prior to starting work, the area around the appliance must be checked to ensure that there are no fire hazards or ignition risks present. A "smoking forbidden" sign must be installed.

1.7 Ventilated area

It must be ensured that the area is ventilated or appropriately ventilated prior to penetrating the system or performing any work under heat. The intensity of ventilation must continue for the time that works are performed. Ventilation should safely dissipate any released refrigerant and draw it out into the atmosphere as a priority.

1.8 Cooling system checks

In places where electrical components are replaced, these components must be suitable for this purpose and conform to correct specifications. The manufacturer's instructions for maintenance and service must always be followed. If any doubts arise, it is necessary to request help from the manufacturer's technical department.

- On installations containing flammable refrigerants, it is necessary to perform the following checks:
 - the amount of refrigerant corresponds to the size of the room in which components containing refrigerant are installed;
 - ventilation systems and outlets are in full working order and are not clogged;
 - if any indirect cooling circuit is used, the second circuit must be checked for the presence of refrigerant;
 - the markings on the appliance must remain constantly visible and legible, and marking and signs that are illegible must be repaired;
 - The cooling pipes and components are installed in locations where it is not probable that they will be exposed to any substances that could corrode the parts containing refrigerant, unless these components are built using materials that are inherently resistant to corrosion or are appropriately protected against corrosion.

1.9 Electrical device check

The repair and maintenance of electrical components must include safety checks and inspections of components.

In the event of a malfunction that could affect safety, no electrical power may be connected to the circuit until the malfunction is satisfactorily resolved. In the event that the malfunction cannot be immediately repaired but it is necessary to continue running the appliance, an appropriate temporary solution must be used. The owner of the appliance must be informed in such a way that all parties know about it.

The initial safety check must ensure:

- that capacitors are discharged: this must be performed in a safe way to prevent the possibility of sparking;
- that no electrical components or wiring is uncovered during the process of filling, draining or cleaning the system;
- that the grounding is not interrupted.

2. Repair of sealed components

When repairing sealed components, all the electrical power supply must be disconnected from the appliance on which work is being performed before sealed lids, etc. are removed. When it is absolutely necessary to have live power supply going into the appliance while servicing the appliance, it is necessary to install a permanent device in the most critical point to detect leakage so that a dangerous situation is averted.

Special attention must be paid to ensuring that as a result of the work performed on electrical components the cover is not changed to the extent of affecting the level of protection. This must also include damage to cables, excessive number of connections and terminals not performed according to original specifications, damaged gaskets, incorrect configuration of plugs, etc.

It is necessary to ensure that the appliance is mounted safely.

It is necessary to ensure that gaskets or sealing materials are not damaged in such a way that they no longer serve to prevent the entry of a flammable atmosphere. Spare parts must conform to the manufacturer's specifications.



Note:

The use of silicone gaskets and seals may suppress the efficiency of certain type of leak detection devices. Intrinsically safe components do not need to be disconnected prior to being worked on.

3. Repairs of intrinsically safe components

No permanently inductive or capacitive load may be placed on the circuit without it being ensured that thereby the permitted voltage and current for the used appliance is not exceeded.

Intrinsically safe components are the only type on which it is possible to work in a flammable environment even while under live current. Testing equipment must have correct specifications.

Parts are replaced using only parts specified by the manufacturer. Different parts could result in ignition of refrigerant upon leakage into the environment.

4. Cabling

Check that cabling is not exposed to wear and tear, corrosion, excessive pressure, vibrations, sharp edges or any other negative environmental effects. This check must also take into consideration the effects of ageing and permanent vibrations from sources such as compressors or fans.

5. Detection of flammable refrigerants

Under no circumstances may potential sources of ignition be used for locating or detecting refrigerant leaks.

A halogen burner (or any other type of detector utilising an open flame) must not be used.

6. Leak detection methods

The following leak detection methods are considered acceptable for systems containing flammable refrigerants.

For the detection of flammable refrigerants, electronic leak detectors must be used, however their sensitivity may not be appropriate or they may require recalibration. (Detection equipment must be calibrated in an area without any refrigerant present). It is important to ensure that the detector is not a potential ignition source and that it is suitable for the used refrigerant. The leak detector must be set to a percentage of LFL refrigerant and must be calibrated for the used refrigerant and the respective gas percentage is confirmed (maximum 25 %).

Leak detection liquids are suitable for use on most refrigerants, however, detergents containing chlorine must be excluded since chlorine may react with the refrigerant and corrode copper pipes.

In the event of a suspected leak, all open flames must be removed/ extinguished.

In the event that the refrigerant leak is found and requires hard soldering, then all the refrigerant must be drained from the system or separated (by closing a valve) in a part of the system distant from the leak. The system must then be cleaned out using oxygen-free nitrogen (OFN) both before as well as after the hard soldering process.

7. Collection and pump discharge

In the event that the cooling circuit is breached due to repairs – or for any other reason – conventional procedures must be followed. It is, however, important to adhere to the best method due to flammability. It is necessary to adhere to the following procedure:

- collect the refrigerant;
- clean out the circuit using inert gas;
- pump out;
- again clean out using inert gas;
- open the circuit by cutting or hard soldering.

The contents of the circuit must be collected into correct collection cylinders. The system must be "flooded" with OFN (oxygen-free nitrogen) for the unit to remain safe. It may be necessary to repeat the procedure several times. For this task, neither compressed air nor oxygen may be used.

Flooding may be achieved by disrupting the vacuum in the system with the use of OFN, and by continued filling until the operating pressure is achieved, then venting into the atmosphere and finally lowering to a vacuum. This process must be repeated if refrigerant still remains in the system. When the last OFN cartridge is used, the system must be ventilated to atmospheric pressure to enable work to be performed. This activity is absolutely necessary if hard soldering is to be performed on the pipes.

It is necessary to ensure that the vacuum pump outlets are not nearby to any ignition source, and ventilation must be provided.

8. Filling procedure

Apart from conventional filling procedures, also the following requirements must be adhered to.

- It is necessary to ensure that no contamination by various refrigerants occurs when the filling device is used. Hoses or pipes must be as short as possible to minimise the amount of refrigerant contained inside of them.
- Cylinders must be held vertically.
- It is important to ensure that the cooling system is grounded prior to being filled with refrigerant.
- When filling is complete, the system must be marked with a label (if it does not have one already).
- It is necessary to pay extreme care to ensure that the cooling system is not overfilled.

A pressure test using OFN must be performed before refilling the system. In the case of a leak, the system must be tested after being refilled but also before being put into operation. A verification test must be performed before leaving the installation location.

9. Taking out of operation

Prior to performing this procedure it is essential that the technician fully acquaints him/herself with the device and all its particulars. Correct practice of safely collecting all refrigerant is recommended. Prior to performing this activity, oil and refrigerant samples must be taken if an analysis is required prior to using the regenerated refrigerant for the first time. It is essential that prior to starting this activity that electricity is available.

- a) Acquainting one's self with the device and its activity.
- b) Electrical disconnection of the system.
- c) Prior to starting the procedure, ensure that:
 - if required, mechanical device for handling the cylinder with refrigerant is available;
 - all personal protective devices are available and used correctly;

- the collection process is constantly under the supervision of a competent person;
 - the collection device and cylinders comply with respective norms.
- d) Pump out the cooling system if possible.
 - e) If achieving vacuum is not possible, collection pipes are created to enable the collection of refrigerant from various parts of the system.
 - f) Ensure that the cylinder is placed on the scale before the collection of refrigerant is started.
 - g) The collection device is turned on and runs according to the manufacturer's instructions.
 - h) Cylinders are not overfilled. (No more than 80 % of liquid content capacity).
 - i) The maximum operating pressure of the cylinder is not exceeded, even temporarily.
 - j) When the cylinders are properly filled up and the procedure is complete, ensure that the cylinders and devices are immediately removed from the installation location and that all the separation valves on the device are closed.
 - k) The collected refrigerant must not be filled into a different cooling system until it is cleaned and checked.

10. Marking with a label

- The appliance must be marked with a label indicating that it has been put out of operation and is without refrigerant. The label must be dated and signed. It is ensured that there are labels on the appliance indicating that it contains flammable refrigerant.

11. Collection

When the refrigerant is collected from the system, either due to servicing or when it is put out of operation, it is recommended to adhere to proper practice and safely collect all the refrigerant.

When the refrigerant is transferred into the cylinders, it is necessary to ensure that appropriate cylinders for collecting refrigerant are used.

It is necessary to ensure that there is a sufficient number of cylinders available to contain the complete contents of the system. All the cylinders that are to be used must be intended for collecting refrigerant and be marked with a label for this refrigerant (i.e. special cylinders for collecting refrigerant). The cylinders must be complete with a safety valve and associated closing valves in good working condition. The empty collection cylinders are pumped empty and if possible cooled prior to collecting refrigerant.

The collection device must be in good operating condition with a set of manuals relating to the device, which are on hand and it must be suitable for collecting flammable refrigerants. Apart from this, a set of calibrated scales in good operating condition must also be available. Hoses must be complete with couplers without seepage and in good condition. Prior to using the collection device, check that it is in satisfactory operating condition, has been properly maintained and all the associated electrical components are sealed to prevent ignition in the event of refrigerant being released. If in any doubt, consult the manufacturer.

The collected refrigerant must be returned to the refrigerant supplier in the correct collection cylinder and with a respectively arranged waste transport letter. Refrigerants are not to be mixed in the collection units and especially not in the cylinders.

In the event that compressors or compressor oils are to be collected, ensure that they are pumped out to an acceptable level in order to ensure that flammable refrigerant does not remain in the lubricant. The pump discharge process must be performed before the compressor is returned to the supplier. To speed up this process, only electrically heated compressor elements may be used. When the oil is drained from the system, it must be disposed of safely.

