

DESCRIPTION

DR dehumidifiers have been designed for use in places which have to be dried quickly or where an uncontrolled rise in levels of relative humidity cannot be permitted.

DR dehumidifiers reduce the relative water vapour condensation level in the air.

As you can see in Fig. 1, each unit has a refrigeration circuit and a fan. The air which is drawn in by the fan (3) passes through the filter (5) and strikes the cold walls of the evaporator (6) where it cools to a temperature which is slightly below condensation point. Some of the vapour condenses and is collected in the water tank (9). Then the air passes through the condenser (4) and is heated to a temperature which is slightly higher than room temperature.

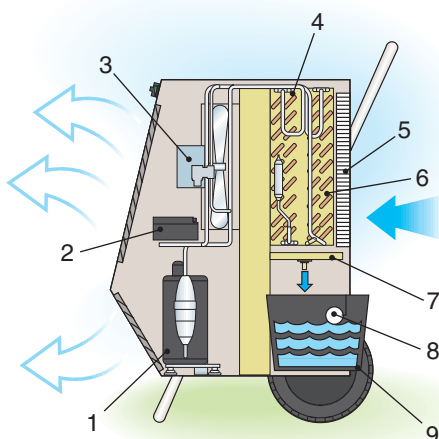


Fig. 1 How the unit works: 1. Air-tight compressor; 2. Control device; 3. Helical fan; 4. Condenser; 5. Air filter; 6. Evaporator; 7. Tube fitting; 8. Float; 9. Water tank (Except DR 310).

Best results are obtained at relative humidity levels of between 40% and 100% and at temperatures that range from 3°C to 40°C.

A humidistat automatically controls the unit, turning it on and off when the desired level has been attained. The electronic control device (2) automatically starts and stops the defrosting process in accordance with the workings of the unit. In case of overheating due to malfunction or if the unit has been used in a place where the temperature exceeds the maximum permitted limit of 40°C, the control device automatically blocks the unit, the fan and compressor stop and the control lamp (b) lights up.

Warning

STOP If room temperature is lower than the minimum permitted value (3°C) the dehumidifier doesn't work and the control lamp (b) flashes.

Warning

STOP The mains supply to the heater (230V, monophase, 50 Hz) must be earthed and have a magneto-thermal switch with differential.

The dehumidifier should preferably be placed in the middle of the space where it will operate so that the intake and expulsion of air will not be hindered. It should be at least 20 - 30 cm from any wall. It should not be placed next to sources of heat such as radiators, stoves or other heat outlets. It should not be placed near doors or openings. When the dehumidifier is working all doors and windows must be shut.

Warning

STOP Cloths or coverings of any kind must not be placed on the dehumidifier when it is working.

If necessary, the water tank can be removed and the water drained off directly by attaching a rubber tube to the tube fitting (7).

INSTRUCTIONS FOR USE

TURNING ON

Warning

STOP The dehumidifier must be used, stocked and, for DR 120, transported in a vertical position. Should this not be the case, the machine will not function properly.

To turn on the unit proceed as follows:

- turn the hydrostat adjusting knob clockwise to 20%;
- turn ON the green switch (a) position "1". The fan and compressor start and the switch lights up;

Warning

STOP The dehumidifier is provided with an automatic security device which starts the compressor just 1 minute after the switch (a) is on.

- turn the hydrostat adjusting knob (d) anti-clockwise to the desired relative humidity level.

TURNING OFF

Turn OFF the green switch (a) position "0".

Warning

STOP If room temperature is lower than the minimum permitted value (3°C) the dehumidifier doesn't work and the control lamp (b) flashes.

THE WATER TANK (Except DR 310)

When the water tank is full the unit stops immediately and the pilot lamp (c) comes on. The tank must be emptied before the unit can start working again.

Warning

STOP Before taking out the water tank, turn OFF the main switch and take out the plug.

Warning

STOP After emptying, put the water tank very carefully back in its bay so as not to damage or interfere with the switch which is connected to the float.

MAINTENANCE

Warning

STOP Before any maintenance operation turn OFF the main switch and take out the plug.

To work efficiently the air filter and the internal parts of the humidifier must be cleaned periodically. To clean the air filter apply compressed air or wash with tepid soapy water.

To gain access to the internal parts unscrew the external casing panels. The internal parts must be cleaned with an aspirator. Take special care when cleaning the condenser's and evaporator's ribbed batteries and the fan blades.

TRANSPORT AND MOVEMENT

Warning

STOP Before moving a unit turn OFF the main switch and take out the plug.

The dehumidifier must not be transported in a horizontal position.

Having wound up the electrical cable, wheel the unit. Must be tilted as illustrated in Fig. 2.



Fig. 2

To move the unit up or down a stairs or steep incline proceed as illustrated in Fig. 3.



Fig. 3

DISMANTLING AND DISPOSAL

There is a pressurized refrigerant, R407C, in the refrigeration circuit and oil in the compressor. For this reason, when a unit has come to the end of its working life, it must not be dumped. It must be dismantled and the various parts can be recycled and/or scrapped.

Warning



The following operations must be carried out by qualified personnel.

Refrigerants cannot be dumped. In order to extract R407C you need:

- a pliers like the one in Fig. 4;
- motorcondenser;
- pressurized vessel.



Fig. 4


Proceed as follows:

- connect the pressurized vessel to the motorcondenser, and the motorcondenser to the pliers;
- punch a hole in the compressor's exit tube and leave the pliers in position;
- open both motorcondenser taps, turn it on and empty the refrigeration circuit;
- stop the motorcondenser and close both taps. Then close the tap on the pressurized vessel;
- remove the pliers;
- if the pressurized vessel is full it should be given to a company that specializes in the disposal of waste fluids.

The welded joints on the compressor's entry and exit tubes should be eliminated and lock bolts removed. Then drill a hole in the underside of the chassis, and pour the mineral oil into a vessel which should be delivered to a company that specializes in the recycling and disposal of oil.

The remaining metal parts which contain copper, aluminium and steel can be recycled or scrapped.

At the end of its useful life, you have to scrap and dispose of this product by taking it to a local differentiated waste collection center in conformity to law.

Before scrapping, check the serial number plate on the machine: if it has the symbol , it means that disposal is regulated by EU Directive 2003/96 (Waste Electrical and Electronic Equipment, WEEE).

The user must inquire about the local electrical and electronic waste collection system and follow its instructions.

Illegal disposal of this product with normal domestic waste can seriously harm the environment and health and is subject to administrative penalties.

OBSERVED FAULT, POSSIBLE CAUSES AND REMEDIES

OBSERVED FAULT	CAUSE	REMEDY
• The unit won't start	• No electricity	• Check that the the switch is working and that it is ON • Check mains characteristics (230V 1 ~ 50 Hz)
	• Humidistat not set correctly	• Set the humidistat at a relative humidity level which is lower than the room humidity level
	• Water tank full (pilot light (c) on)	• Empty the water tank
• The ventilator and compressor are working but neither water nor ice form on the walls of the evaporator	• Air flow not sufficient	• Check that nothing is blocking intake and expulsion of air • Check that there aren't any deposits or incrustation on the filter or on the ribbed batteries of the condenser or of the evaporator
	• Room temperature and relative humidity level too low	• Check that the temperature is between 0°C and 40°C and that relative humidity is between 40% and 100%
	• Refrigeration circuit not working correctly	• Call an Authorised Service Technician
• The unit stops and the pilot lamp (c) comes on	• Water tank full	• Empty the water tank
• The unit stops and the control lamp (b) comes on (the condenser's ribbed battery has over heated)	• Air flow obstructed	• Remove obstacles to air flow and start unit again
	• Air temperature above 40°C	• Only use unit when temperature drops below 40°C
	• Fan motor broken	• Call an Authorized Service Technician
	• Refrigeration circuit not working correctly	• Call an Authorized Service Technician
• The unit stops and the control lamp (b) flashes	• Temperature lower than 3°C	• Move the dehumidifier in a place where temperature is 3°C