McCarthy Hire
PART OF MCCARTHY ENVIRONMENTAL GROUP
ENGINEERING CLEAN AIR

EPUR 150 FRESH AIR COOLER

INSTRUCTION MANUAL

McCarthy Hire, part of McCarthy Environmental Ltd
Unit 9B Cygnet Court, Swan Valley Way,
Northampton NN4 9BS

Phone: 01604 635 333
E-Mail: sales@mccarthyhire.co.uk
www.mccarthy-environmental.co.uk

EPUR 150 FRESH - INTRODUCTION

Thank you for choosing a McCarthy Hire air purifier/cooler. We hope it will give you lasting satisfaction. This air purifier/cooler is a high-tech product that is extremely simple to use and exceptionally reliable, thanks to its European design.

It works on the following principle: the air drawn in passes through several filtration stages (G4 to F8 filters) and in cases of extreme temperatures, the alveolar panels can be dampened. When the water is continually distributed over the surface of the cooling panels, the air drawn in through the panel causes the water to evaporate, making the air cooler. The circulating water flows back down to the reservoir, where it is then once again pumped through the cooling panels. The purified/cooled air is then diffused throughout the room, providing both good quality air and optimal thermal comfort.

With both its high airflow and large capacity, this device is suitable for spaces from 70 to 400 m².

EPUR 150 FRESH - USAGES

This air cooler is currently used in several different industries for many different purposes in numerous countries.

They are ideal for purifying and/or cooling all types of workspaces, industrial halls and logistical halls in a completely natural, ecological, and sustainable way.

This air purifier/cooler is particularly well-suited to relatively dusty environments, for example:

- Production workshops
- Storage halls
- Laboratories
- Sheet metal or boiler making factories
- Food-processing industry
- Assembly halls
- Processing lines
- Manufacturing lines

EPUR 150 FRESH - PRIMARY FEATURES

- Efficient and economical
- Energy-saving
- Environmentally friendly
- Reliable operation
- Capable of cooling large spaces
- Powerful air volume of 15,000 m^3/h
- Completely portable
- No installation or ductwork required
- Low operating costs
- Filtering pads to block dirt
- Low energy consumption
- Multidirectional airflow
- Easy to move thanks to its wheels with brakes
- Intuitive control panel
- Rapid replacement of the filtering medias

EPUR 150 FRESH - TECHNICAL SPECIFICATIONS

Max. Airflow	m^3/h	15 000
Electric Supply	V/Hz	220-240 / 50
Surface Treated	m^2	up to 400 m^2
Water Capacity	L	N/A - connected to the water network
Water Consumption	L/H	10 - 15
Nominal Current	A	3.3
Water Supply		auto or manual
Measurements (L/W/H)	mm	1130 x 1130 x 2110
Weight	kg	230
Power	W	2200
Max. Noise Level	dB	62
Fan Speed	RPM	565

EPUR 150 FRESH - TECHNICAL FEATURES

Cooling panels:
The cooling panels are composed of several layers of treated cellulose. They are constantly dampened while the air flows across them. Gradually, the dampening of the panels increases and the temperature decreases.

The panels are equipped with a metallic support allowing for rapid fastening to the equipment and simple installation.

Water distribution system:
The water distribution system is responsible for the continuous supply of water to the panels through a water pump and a network of diffusers.

Aeration train:
The aeration train consists of a low-noise, high-flow centrifugal fan powered by an electric motor. The bearings are treated with an anti-corrosion treatment.

Exterior casing:
The product offers a modern, aesthetically pleasing design, with panels that can be easily removed for access to the interior for easy servicing and cleaning of the equipment.

EPUR 150 FRESH - IMPORTANT REMINDERS

Please carefully read the manual before operating the air purifier/cooler.

General rules:
The equipment is delivered as assembled. Only 3 actions are necessary:

- Assemble the manual drain valve
- Connect the water supply tube to the water network
- Connect the device to a 230V network through the outlet of the device

Also ensure that the equipment is levelled.

It is recommended that the first commissioning and end of season maintenance be carried out by a specialist company. The manufacturer is not liable for any damages resulting from the use of the device with any modification/removal of parts of lack of maintenance of components carried out without prior authorisation.

First water fill:
Before filling the device for the first time, ensure that all of the dust and residue generated during unpacking has been cleaned. Verify that the water pump has been fastened and adjust the water level float, and verify that the drain valve is closed and that the safety overflow is correctly positioned.

Next, turn on the faucet to fill the device. Verify the electric consumption of the motor, that the drain valve does not have any leaks, and that it does not make any noise that is unsuitable for the correct operation.

Stop the device and open the drain valve to evacuate the reservoir and eliminate all of the residue that is left from unpacking the product.

Startup and operation:

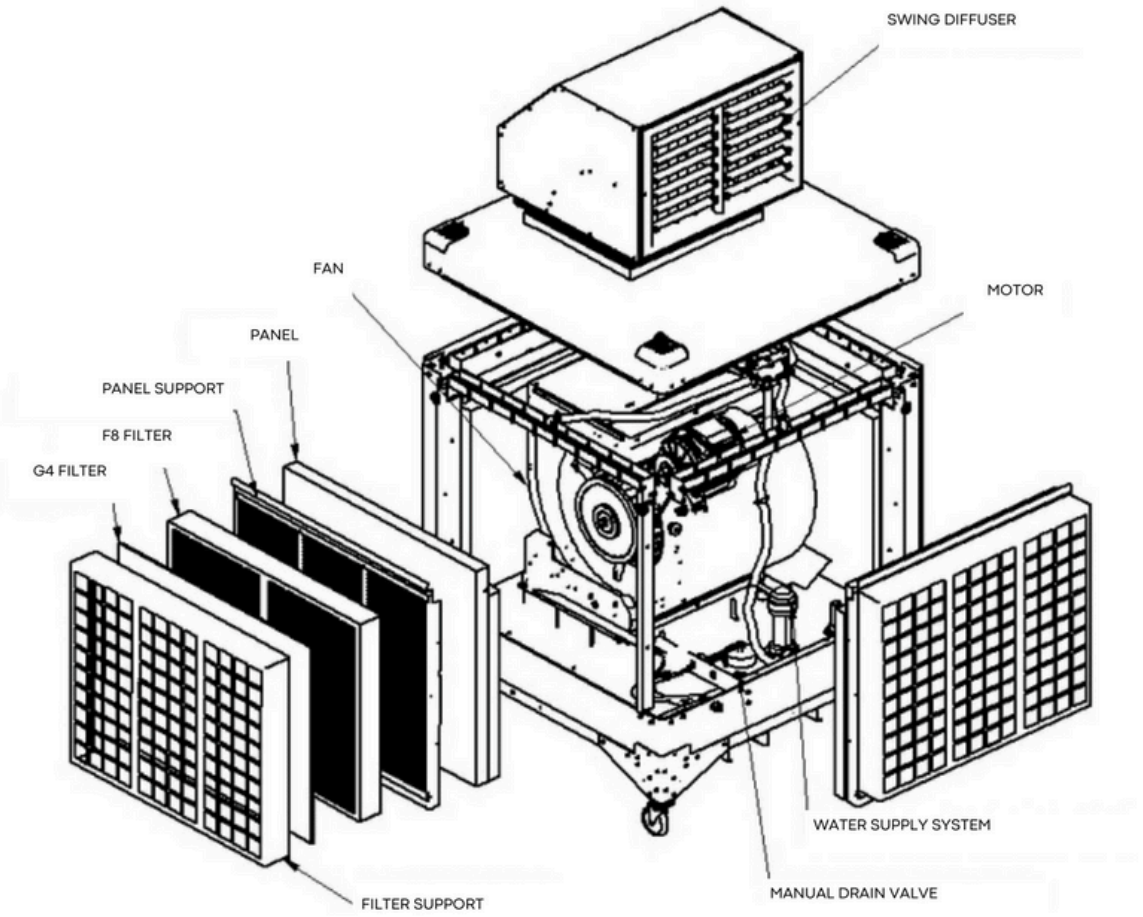
- Verify that the equipment is connected to the water network
- Turn on the device
- The device will automatically start to be filled with water
- The fan will turn on and begin to blow air
- After a few minutes, the supplied air will cool. The panels will take a few minutes to soak up the water
- At the end of the day, stop the equipment

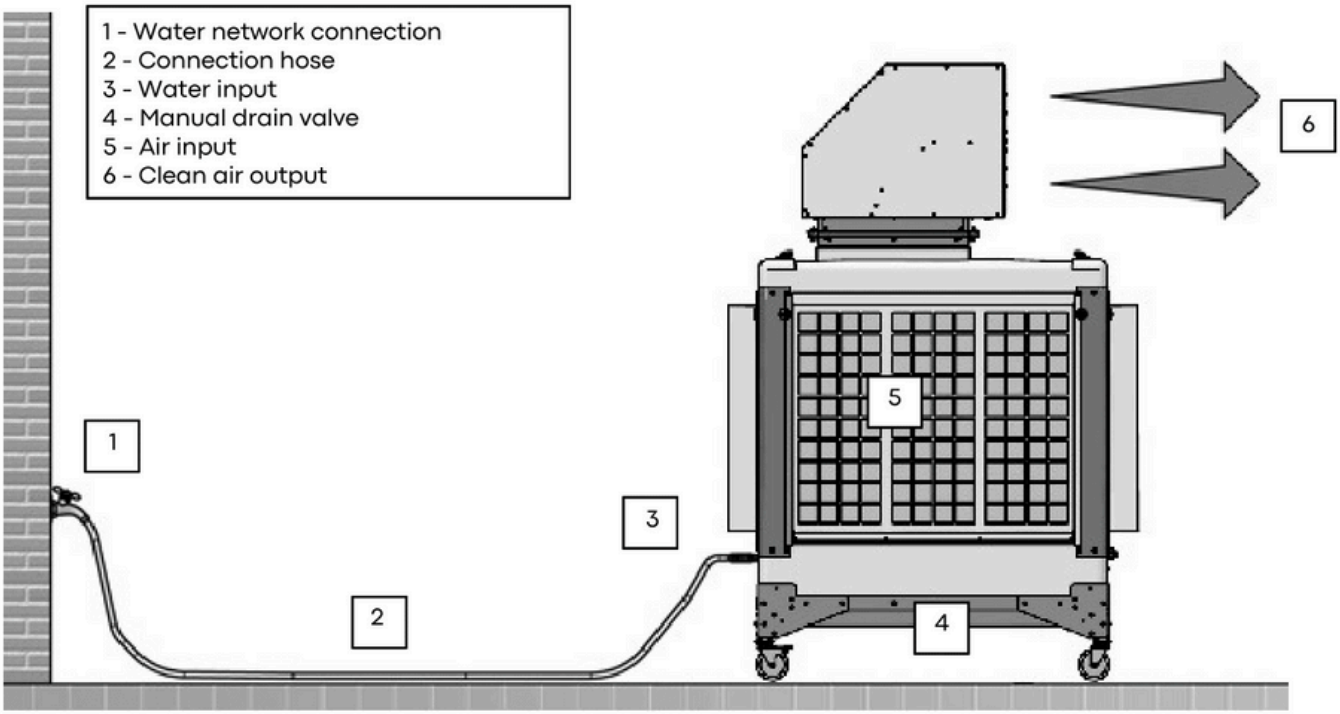
If the device is equipped with a UV lamp, connect the equipment to an electric power supply and turn it on the COOL setting while the reservoir is filling to turn on the lamp.

End of season rest:
Unplug the device and proceed with the cleaning and maintenance of the equipment. It is very important that the equipment be clean and dry until the next season, in order to prolong its lifespan.

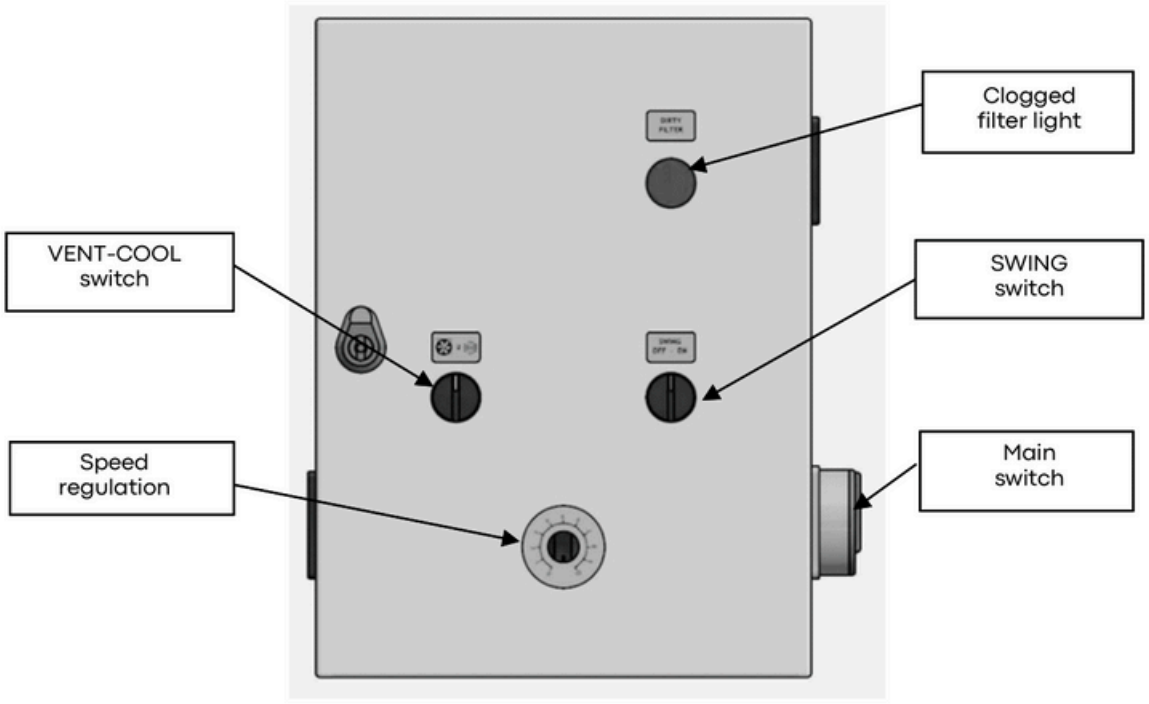
At the beginning of the next season, it is advised to carry out full maintenance in order to verify that all of the equipment functions correctly.

EPUR 150 FRESH - KEY ELEMENTS





EPUR 150 FRESH - CONTROL PANEL



The VENT-COOL switch enables users to choose between:

- Position 0 - turns off all the equipment
- Position VENT - turns on the fan, allowing for it to be used in ventilation mode (no cooling effect)
- Position COOL - turns on all of the equipment (pump and fan)

The SWING switch allows for the activation of the vertical blades of the diffuser. The horizontal blades must be adjusted manually.

The regulation of the fan speed, both in ventilation and cooling mode, is done through the help of a potentiometer.

The light "clogged filter" turns on when the filter is clogged.

EPUR 150 FRESH - MAINTENANCE

For optimal results and long term operation, regular maintenance is essential.

Cleaning and maintenance (beginning of season):
In the begininng of the season, it is very important to perform cleaning tasks to ensure the device functions correctly. The main tasks are the following:

- Clean and review the tray and structure of the equipment
- Clean the interior zones by eliminating the accumulated organic debris from the winter
- If the equipment has mesh filtering panels, clean them without creasing
- Clean the cooling panels
- Verify the state of the panel's water distributors
- Clean and verify the drain valve
- Clean and verify that the pump functions
- Clean the fan and the drive belts and pulleys
- Check the tension of the drive belts
- Check the bearings condition
- Visually inspect the electric and hydraulic connections

At the end of the preventive maintenance, start the equipment and verify the water filling and the humidity:

- Verify that the water distributors are in good condition
- Verify that the buoy/float functions properly and that the level in the tank is correct
- Verify that the water pump works properly
- Verify that all of the panel's water distributors receive water correctly
- Check that the light on the UV lamp transformer is on when the device is in COOL mode

Preventive maintenance (end of season):
At the end of the season, it is important to completely clean and dry all of the material, as well as a general overhaul of the equipment to ensure that the material will be in good condition at the beginning of the next season.

- Completely empty the water circuit
- Clean and remove residue from the interior zones created during operation
- For the devices equipped with a UV lamp, it is recommended to replace them every year
- If the device has mesh filtering panels, clean them without creasing
- Clean the cooling panels and verify that they are not saturated with lime
- Clean and eliminate the scale in the water distribution system
- Clean and let the water pump dry
- Clean the fan and the drive belts and pulleys
- Clean and let the equipment tray dry
- Turn off the water inlet
- Let the panels dry, then cover them with a plastic tarp

Replace the UV lamp:
The UV lamp is supplied in an easy to assemble kit that contains all of the components. To replace it, unplug the equipment from the outlet and remove the existing lamp. Open the kit and follow the steps. It is recommended that the replacement be done at the same time as the end of season maintenance by the same specialised servicing company.

EPUR 150 FRESH - TROUBLESHOOTING

Malfunction	Reason	Solution
The cooler makes strange noises	• Turbine not correctly positioned • Loose or damaged drive belts • Bearings in poor condition	• Centre the turbine and tighten the screw • Balance or replace the drive belts • Replace the bearings
Loss of airflow	• Clogged cellulosic panels • Aeration grates incorrectly placed • Lack of air output to the outside of the building	• Clean or replace the panels • Direct them to the correct position • Increase the exit openings (each m2 opening allows 10,000 m3/h)
Does not cool the air	• Incorrect water pump rotation direction • Burned or blocked water pump • Lack of water in the deposit • Clogged cellulosic panels • Possible obstruction in the water inlet • Clogged water distributor • Pump suction port clogged	• Reverse the rotation direction of the water pump • Replace the pump • Check the water inlet and the level regulation • Clean or replace the panels • Check the water inlet and increase the flow rate • Clean the distributor • Clean the pump
Unpleasant air odour	• Dirty water in the deposit	• Empty and clean the reservoir then fill it again • Increase the drainage frequency
Bothersome drafts	• Poorly regulated networks	• Adjust the grate orientation
The pump does not work	• Damaged motor	• Replace the motor
Water pump leak	• Damaged radial sealing joint	• Replace the joint

Warning: It is very important to perform end of season maintenance in order to put the machine away verified, clean, and dry.

This maintenance is even more important if the evaporation unit has a UV lamp, in the event that there is water inside the lamp and it freezes due to cold temperatures, the internal components of the UV lamp could be severely damaged.

First Name:	Contact:
Last Name	Address:
Maintenance Records:	