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HM150-H DEHUMIDIFIER

OWNER'S MANUAL

www.eipl.co.uk

SAFETY INFORMATION

READ AND SAVE THESE INSTRUCTION

Children shall not play with the appliance.

This appliance can be used by children 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 application in a safe way and understand the hazards involved.

Cleaning and user maintenance shall not be made by children without supervision.

If the SUPPLY CORD is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid hazard.

If the appliance is switched off at the mains power supply for any reason, the unit must be allowed to stand at rest for at least three minutes before restarting.

Due to the high pressures within the refrigeration circuit, under no circumstances must direct heat be applied to the evaporator coil in an attempt to remove the build-up of ice.

No attempt should be made to cut open any part of the refrigeration circuit due to high pressures and gas involved.

If the appliance is switched off at the mains power supply for any reason, it must be allowed to stand at rest for at least three minutes before restarting. Failure to do so may cause the appliance to blow the fuses owing to the compressor due to there being a refrigerant imbalance.

The Global Warming Potential (GWP) of refrigerants used in products manufactured by Ebac Industrial Products Ltd is as follows: -
R290 – 3
R454c – 148

For type and weight of refrigerant contained in this appliance, please refer to the product data label

Do not insert objects into any of the grilles on the machine.

Do no cover or obstruct airflow from the grilles.

Do not operate the unit with the covers removed

Do not stand on the unit

Do not attempt to lift heavy units unassisted.

Do check the plug on the unit matches the supply.

Do check the supply cord and power supply are earthed correctly

Do check the voltage selection before attempting to power up the unit (This is for dual voltage units only).

Do use a residual current device “RCD” where possible

The appliance uses R454c refrigerant gas. This gas is much kinder to the environment as it is non-toxic with zero Ozone Depletion Potential (ODP). This is a flammable gas and the following warnings should be considered:

- The appliance uses a flammable refrigerant (see unit serial plate for charge quantity). It is therefore part of a sealed system and **any servicing should only be carried out by EIPL service personnel.**
- Do not pierce / burn / puncture the appliance at any point, even when disposing of. Before disposing all refrigerant should be evacuated and disposed of as required by local environmental laws.
- If there is any damage to the appliance, DO NOT USE and contact EIPL.
- The appliance must not be used in a potentially explosive atmosphere.
- The appliance must not be used in an aggressive atmosphere e.g. chemical environments.
- The appliance must not be used in a high dust environment.
- The appliance must not be used in a high solvent concentration atmosphere.
- Do not use the appliance in a room with any continuous source of ignition e.g. open flames or gas fires.
- R454c is an odourless gas.
- Anyone who does work on the refrigeration circuit must have the appropriate qualifications / certification issued by a national accredited organisation to ensure competence when handling flammable refrigerants.
- Any parts to be replaced within the appliance should only be replaced with EIPL approved parts.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example open flames, an operating gas appliance or an operating electric heater.

GAS DETECTION

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) must not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks. Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at 25% of the LFL of the refrigerant and must be calibrated to the refrigerant deployed.

Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe work.

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HM150

PACKAGE CONTENTS

Item	Description	Quantity
11585RH-US	Dehumidifier	1
3944110	PVC tube – 3/8” I/D	7.8M
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DEHUMIDIFIER PRINCIPLE

Dehumidifiers remove moisture from the air that is circulating through the appliance.
The resulting reduction of relative humidity helps prevent rust, rot, mould, mildew and condensation within the room, or other enclosed spaces where the dehumidifier is used.
A dehumidifier consists of a motor-compressor unit, a refrigerant condenser, an air circulating fan, a refrigerated surface, a means of collecting and disposing the condensed moisture and a cabinet to house these components.
The fan draws air through the refrigerated surface and cools it below its dew point, removing moisture which is collected and led away. The cool air then passes the hot condenser, where it is reheated. With the addition of other radiated heat, the air is discharged into the room at a higher temperature but lower relative humidity than when the air entered the appliance. Continuous circulation of the room air through the appliance gradually reduces the relative humidity in the room.
The appliance is a rugged, reliable drying unit designed to operate effectively over a broad range of temperature and humidity conditions.
An active hot gas defrost system guarantees positive de-icing, thereby optimizing operation at low temperatures. Should the ambient temperature fall below 15°C then ice will form on the evaporator coil as the air is passed over it, and in turn the efficiency of the unit will drop. To prevent the buildup of this ice on the evaporator coil an electronic timer is incorporated to energize the hot-gas defrost valve. Operating the hot-gas valve causes the evaporator coil to defrost and the water to drain down to the condensate well and then is pumped out of the unit.
The appliance has been designed to work in ambient temperatures between 3°C and +35°C. Should the temperature in the room become excessive a thermostat within the compressor casing will open and dehumidifying will stop, until the thermostat resets itself.

UNPACKING

Carefully remove the appliance from its transit box and visually check for signs of transit damage. If there is evidence of damage DO NOT attempt to operate the appliance, call your supplier for advice. Do not discard the packing; it will be useful when transporting the dehumidifier unit in the future.

INSTALLATION

POSITIONING:

Position the appliance in the center of the room to be conditioned if at all possible. However, if a damp patch is particularly apparent the outlet grille should be pointed towards it.

NOTE: Both inlet grille and outlet grille of the appliance must have clear space around them and not be obstructed in anyway. The unit must also be on a level surface.
Appliance shall be installed, operated and stored in a room with a floor area larger than $4M^2$.

WIRING:

Connect the power mains cable / plug of the dehumidifier as follows: -

Brown	Live
Blue	Neutral
Green/Yellow	Earth (ground)

As the colour of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminal in your own plug, proceed as follows.
The wire which is coloured Green and Yellow must be connected to the terminal marked E or by the Earth symbol or coloured Green or Green and Yellow. The wire which is coloured Blue must be connected to the terminal in the plug which is marked the letters N or coloured Black. The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Red.
You must safely dispose of the non re-wireable plug once it has been removed from the flexible cord. It is dangerous to attempt to insert the plug into any electrical socket.

CHANGING THE FUSE

13 Amp fuses that are ASTA approved to BS1362 should only be used.

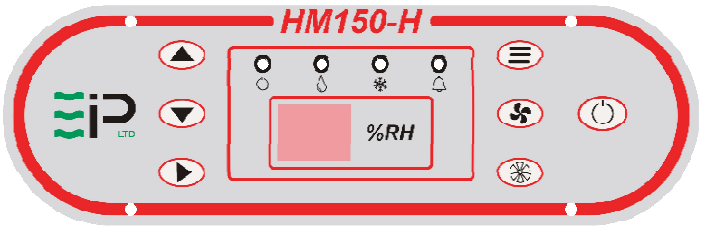
NON REWIREABLE PLUGS

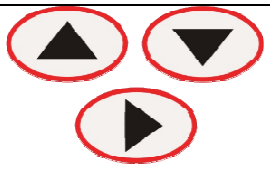
The fuse cover must be refitted after the replacement of the fuse.

DRAINAGE:

The appliance is fitted with a condensate pump which collects all the condensate. As the condensate pump fills with water it will automatically activate and empty via the tube outlet located at the back of the dehumidifier, this should be connected to a water container or permanent drain. If the pump fails, then the dehumidifier will automatically switch off. NOTE: after the pump has emptied there will still be a small amount of water standing in the pump reservoir which will leak if the dehumidifier is not kept upright.

HM150-H Dehumidifier Control Panel



Button / Ledgend	Function	Description
	ON / OFF	Switch the dehumidifier ON/OFF
	Menu	Cycle through menu options and adjust the desired set point. See below for list of menu options
	Recirculation	Select recirculation fan or dehumidification mode
	Pump Purge	Empty the integral water reservoir to prevent spillage when moving / transporting
	Navigation	Adjust the humidity set point UP/DOWN and enter to confirm

Indicator	Function	Description
	ON/OFF	Red – Off Green – On
	Drying / Recirculation	Blue – Flashing – Drying Required Blue – Solid – Drying On Green – Solid – Recirculation Mode (Fan Only)
	Defrost	Yellow – Flashing – Defrost mode selected Yellow – Solid – Defrosting in progress
	Alarm	Green – Flashing – Pump Purging Red – Solid – Fault, Pump Malfunction

Menu Options

Pressing the Menu button cycles through the following pages of information.

Menu Options when dehumidifying mode is selected

Menu	Display	Information
1	Set RH	Using the Up / Down Keys adjust the humidity to the desired set-point, pressing the Enter key to accept and save.
2	Temperature	Indicates the current room temperature.
3	Coil Temp	Shows the current coil temperature. (< -9degC display "—")
4	Time To Start	Displays the time to start drying (mins) or "on" if already drying
5	Time To Defrost	If defrost mode is selected, this option shows the remaining time until defrost will occur. The yellow defrost light will be flashing indicating a defrost is required. If defrost is currently occurring, the yellow defrost light will be solid, and the display will show the time remaining before defrost ends. Defrost not required or active the display will show "—"
Notes on Time values above 2 digits no decimal point indicates a time > 10mins 2 digits with a decimal point indicates mins and tenths of a min, ie 8.5 = 8mins 30 secs		

Menu Options when recirculation mode is selected

Menu	Display	Information
1	Humidity	Indicates the current room temperature.

Operation

Extend the short piece of tubing from the rear of the dehumidifier with the additional length supplied using the "Quick Disconnect" coupling. Place the end of this tube into a suitable drainage point, ie bucket, sink, toilet etc. Ensure the tube is not kinked or restricted.

Plug the unit into a suitable wall socket and power on.

Note the Power On Indicator shows Solid RED.

Press the ON/OFF button once to start the dehumidifier, pressing again will stop the dehumidifier. To prevent the compressor starting too quickly after being powered down, there is an inbuilt compressor off timer. This delayed start prevents the compressor for restarting for 6 minutes after being switched off.

The dehumidifier remembers the last mode of operation, and also the previously adjusted set point.

Once the dehumidifier is started, the drying / recirculation light will indicate the selected mode or operation.

Adjust the mode, as required. (Recirculation or Drying).

In drying mode, the display will show the room humidity level.

In recirculation mode the display shows the current room temperature.

Using the Menu Key cycle through the menu options to the Set RH page, using the up/down and enter keys adjust the humidity to the desired level.

The dehumidifier will now self-regulate to maintain the desired humidity level. The unit will automatically defrost as needed. In warmer climates defrost is not required, allowing the dehumidifier to continually dry.

Moving / Transporting the unit

The HM150-H has an inbuilt reservoir, which contains a small amount of water, therefore its' advisable to allow any frost to melt, and empty this reservoir prior to moving.

Instructions / sequence

Switch the unit off by the control panel ON/OFF switch

Allow approximately 30mins for any frost / ice to melt

Press the Pump purge switch inorder to expel all water in the reservoir. The switch may need pressing several times to ensure all water has been expelled

Remove from the plug from the wall socket and disconnect the drain tube

The unit is now ready to be moved / transported. Note the unit should be kept upright at all times.

If, after carrying out the above procedures, the appliance does not appear to function properly, refer to the *Trouble Shooting* section, which follows, or contact EIPL.

ROUTINE SERVICE

WARNING:
ENSURE THE POWER CORD TO THE APPLIANCE IS DISCONNECTED BEFORE CARRYING OUT ROUTINE SERVICE. SERVICING AND REPAIR SHOULD ONLY BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

To ensure continued full efficiency of the appliance, maintenance procedures should be performed as follows:

1. Clean the surface of the evaporator and condenser coils by blowing the dirt out from behind the fins with compressed air. Hold the nozzle of the air hose away from the coil (approx 6") to avoid damaging the fins. Alternatively, vacuum clean the coils.

WARNING:
DO NOT STEAM CLEAN THE REFRIGERATION COILS

2. Check that the fan is firmly secured to the motor shaft and that the fan rotates freely. The motor is sealed for life and does not require any lubrication

3. To check the refrigerant charge, run the appliance for 15 minutes. The evaporator coil should be evenly frost coated across its surface. At temperatures above 25°C, the coil may be covered with droplets of water rather than frost. Partial frosting accompanied by frosting of the thin capillary tubes, indicates loss of refrigerant gas or low charge.

4. Check all wiring connections.

TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Little or no airflow	1. Loose fan on shaft 2. Fan motor burnt out 3. Dirty refrigeration coils 4. Loose electrical wiring 5. Control humidistat either set too high or malfunctioning	1. Tighten fan 2. Replace the fan motor 3. See *Routine Maintenance* 4. Check the wiring diagram to find fault and repair 5. Adjust humidistat as required or replace
Little or no water extraction	1. Insufficient air flow 2. Compressor fault 3. Loss of refrigerant gas	1. Check all of the above 2. Contact EIPL 3. Contact EIPL
Little or no defrost when required	1. Faulty Timer 2. Faulty bypass timer	1. Contact EIPL 2. Contact EIPL

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SPECIFICATIONS

MODEL:	HM150-H
HEIGHT:	470 mm (18.5 in)
WIDTH:	465 mm (18.3 in)
LENGTH:	680 mm (26.8 in)
WEIGHT:	43Kg (95 lb)
AIRFLOW:	540 CFM
POWER SUPPLY:	110 V, 1 ph, 60 Hz
FINISH:	Rotational Moulded polyethylene
REFRIGERANT TYPE/QTY:	R454c (See unit rating label for quantity)
OPERATING RANGE:	3°C – 35°C

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APPLIANCE SPARE PARTS LIST

Product Part Number	11585RH-US
PCB Timer	1619522
PCB - Humidity Sensor	1619526
PCB - Display	1619529
Foam Blanking Strip	2056028
Refrigeration Coils	2158002
Keypad Label	2158028
Filter	2158036
Capillary	3014254
Foam Tape (Inseal)	3015199
Reversing Valve	3020833
Filter Dryer	3020958
Solenoid Coil	3030453
Mains Cable	3031231
20mm Open Grommet	3032101
12.5mm Open Grommet	3032104
25mm Open Grommet	3032111
Mains Lead Klambush	3032501
Pump High Level Float Switch	3033043
Coil Sensor	3035142
Humidity Sensor Housing	3035164
Circuit Board Jumper	3035834
PTCR	3036347
Compressor Capacitor	3036358
Fan	3040279
Fan Inlet Ring	3040284
Wheel	3050125
Knurled Hand Wheel – M4	3080190
Starlock Washer Uncapped	3082610
Starlock Washer Capped	3082611
Hose Snapper Clip (SNP6)	3086136
Quick Release Tube Coupling	3086144
Hose Snapper Clip (SNP8)	3086146
Handle Spacer Washer	3087727
Handle Pivot Bolt	3088580
Handle Pivot Nut	3088594
Handle Retainer Catch	3088595
Circuit Board Support	3101413
Non Return Valve	3160157
Condensate Pump	3160161
Solid State Relay	3931320
LED Light Pipes	3931732
Plug	3934517
PTCR Clip	3934701
PCB Connecting Cable	3935420
Condensate Outlet Tube	3944110
Condensate Reinforced Pump Tube	3944113
Compressor	3944967

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