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RM40 DEHUMIDIFIER

OWNER'S MANUAL

www.eipl.co.uk

SAFETY INFORMATION

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 R290 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 / 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.
- The appliance should not be used or stored in a space of 4M^3 or smaller.
- Do not use the appliance in a room with any continuous source of ignition e.g. open flames or gas fires.
- R290 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.

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 pan and into the drainage tube.
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.

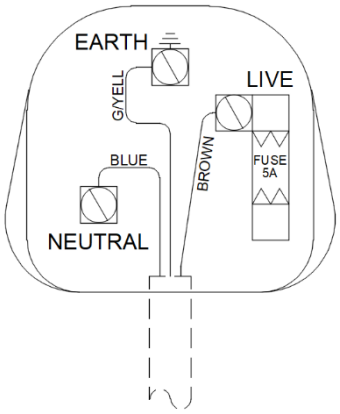
NOTE: Both inlet grille and outlet grille of the appliance must have clear space around them and not be obstructed in anyway. The unit must also be on a level surface.
Appliance shall be installed, operated and stored in a room with a floor area larger than 4M^2.

WIRING:

Connect the power mains cable to power supply as follows: -

230V supply	
Brown	Live
Blue	Neutral
Green/Yellow	Earth (ground)

5 AMP 230V PLUG BS1363



DRAINAGE:

BUCKET:
The appliance is supplied with a water bucket which collects all the condensate. When the water container is full an internal float mechanism will switch the unit off. This is indicated by the bucket full indicator on the front of the appliance. To empty the container simply remove it carefully from the rear of the appliance and empty, then replace back into the appliance.

PERMANENT DRAINAGE:
When your dehumidifier is to be used constantly in one area, it can be fitted to drain continuously, eliminating the need to empty the water container. Ideal when the property is to be left unoccupied.
For this you will need a length of PVC tubing, 10mm internal diameter. Disconnect your dehumidifier from the power supply before fitting permanent drainage. Remove the water container; remove the blind grommet on the back face of the unit and then the blanking bung from the drainage point visible through the hole. Feed tubing through hole where grommet was located and onto the visible drain point. Lastly fit the blanking bung to the drain point on the underside of the drain tray. The water container can be replaced whilst the drainage kit is in use for safe storage

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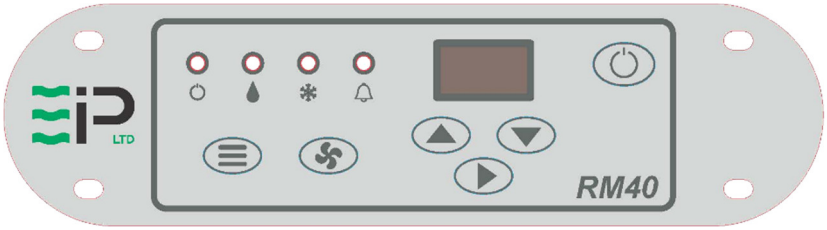
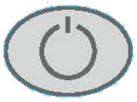
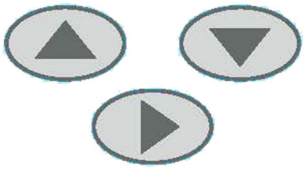
RM40 CONTROL PANEL



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
	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	Red – Solid – Fault, Bucket Full

MENU OPTIONS

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

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.
4	Humidity	Indicates the absolute humidity level in g/kg.
5	Dew-Point	Shows the Dew Point based upon the current temperature and humidity.
6	Run Hours	The length of time since power was applied to the unit (Minutes).
The last menu option changes depending upon the mode. This menu option is not available in recirculation mode.		
7	Time To DF	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.
	DF END IN	The yellow light will be solid indicating the unit is currently defrosting.
	Restart	The time before the dehumidifier starts drying. The blue drying light will be flashing indicating drying is required.

OPERATION

Ensure the bucket is inserted correctly into the rear of the dehumidifier.

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 RM40 has a removable water container, therefore its' advisable to allow any frost to melt, and empty this container 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.

Remove from the plug from the wall socket and empty the water container.

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:	RM40
HEIGHT:	615 mm
WIDTH:	382 mm
DEPTH:	365 mm
WEIGHT:	26 Kg
AIRFLOW:	185 M^3/Hr
POWER SUPPLY:	230 V, 1 ph, 50 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

Description	Part Number
Appliance Number	11187MB-GB
Filter	1019712
Water Container with float assembly	1137907
PCB - Control Board	1619522
PCB - Humidity Sensor	1619526
PCB - Display	1619528
Outlet Grille	2018704
Plastic Drain Tray	2018705
Refrigeration Coil Set	2018743
Keypad Label	2018772
Capillary Tube	3014251
By-Pass Valve	3020836
Filter Dryer	3020937
Solenoid Coil	3030452
Bucket Full Switch	3033033
Coil Sensor	3035142
Humidistat Sensor Housing	3035164
Mains inlet Terminal Block	3035364
Compressor Capacitor	3036355
Castor	3050205
Compressor	3944953
Fan Motor	3947013
Fan Blade	3947014
Mains Cable	2141002

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