Drawing	: - TPC627
Issue	: - 3
Date	: - 03/07/25

EBAC MODEL WM80

INDUSTRIAL 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.

WM80

PACKAGE CONTENTS

Item	Description	Quantity
11284DL-US	Dehumidifier	1
3082214	Brass wood screws	4
3088525	Rawl plug	4
3086144	Quick release hose coupling	1
3944110	PVC tube – 3/8” I/D	7.8M
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INTRODUCTION

Designed for a wide range of applications, the WM80 is a rugged, industrial unit, which utilizes an energy-efficient compressor and a compact portable design to provide easy efficient drying.

The WM80 has a number of special features:

- High efficiency rotary compressor
- Ebac's "**Hot Gas**" defrost system
- Integral pump out system
- Provision for permanent drainage
- Exterior epoxy powder-coated finish
- Extra long power cord
- Free Standing or Wall Mountable
- Status Indicators
- Control Humidistat

The fan draws the moist air through the cold evaporator coil, which cools the air below its dew point. Moisture forms on the evaporator coil and is collected in the condensate tray, which is equipped with a permanent drain. The cooled air then passes through the hot condenser coil where it is reheated using the same energy removed during the cooling phase, plus the additional heat generated by the compressor. The air is, therefore, discharged from the dehumidifier at a slightly higher temperature with a lower absolute humidity than that which entered. Continuous circulation of air through the dehumidifier gradually reduces the relative humidity within the area.

The WM80 dehumidifier is a reliable drying unit designed to operate effectively over a broad range of temperature and humidity conditions. An active hot gas defrost system, controlled by an electronic timer, guarantees positive de-icing, thereby optimizing operation at low temperatures.

SPECIFICATIONS

MODEL:	11284DL-US
HEIGHT:	19.4” (495mm)
WIDTH:	22” (560mm)
DEPTH:	11.4” (290mm)
WEIGHT:	81.5 lbs (37Kg)
AIRFLOW:	153 CFM (260M3/hr)
POWER SUPPLY:	110V - 60Hz - 1 ph
FINISH:	Powder-coated Epoxy
OPERATING RANGE:	33°F – 105°F
REFRIGERANT:	R-454c (See unit rating label for quantity)

OPERATION

The following procedures should be followed to test the WM80 for correct operation:

After unpacking, examine all external features to confirm damage-free shipment. Report all defects and damage at once. Connect the power cable to a grounded 13 Amp electrical socket. Connect the drainage outlet to a suitably sized hose and run the hose to a permanent drain.

Once the appliance is installed turn the power supply on, then the on / off switch to the ‚I' position, note the display will flash for approximately 1 second then show the humidity set point for approximately 12 seconds. Also all the indicator lights will illuminate for the same duration. After this brief period the display will show the room humidity and all the lights will go off. The machine is now powered up (POWER light illuminated) and ready to operate. Then carry out the following: -

- Set the humidity set point to lowest setting (35% RH) as follows.
  - Press the UP and DOWN arrow keys together for 3 seconds and the display will start to flash
  - Use the UP and DOWN arrow keys to adjust the set point to 35%.
  - Press the RIGHT arrow key to save (if the RIGHT arrow key is not pressed for 3 seconds the selection is cancelled)
  - Once set to 35% and saved the compressor will start and the drying light will illuminate
- Check that the compressor is running
- Leave the appliance to run for approximately 15 minutes
- Observe the coils through the filter grille to confirm frost formation or weeping of the evaporator coil
  - If the air temperature is below 25□C, an even coating of frost should cover the entire evaporator coil.
  - If the air temperature is above 25□C, frost and/or droplets of condensed water should cover the entire evaporator coil.

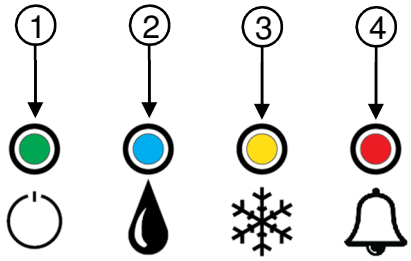
  When the unit is operated in an ambient of less than 15°C, a defrost cycle should occur. This will be at intervals of no more than every hour and will last no more than 5 minutes. The exact time is impossible to predict as the unit is fitted with a temperature sensitive defrost control. When in defrost the DRYING lamp will extinguish and the DEFROST light illuminate. After defrost the lights will switch back.

Shutdown Procedure
After using the WM80, turn it off at the switch (do not disconnect from mains supply) for 5 minutes to allow the condensate on the coils to drain into the pump reservoir.
If the compressor has been running for longer than 10minutes, and the set point has been reached, the unit will initiate a defrost before the compressor switches off.
LED Status during this 'run on' period – Drying LED OFF / Defrost LED ON (solid)

CAUTION
ONCE THE UNIT HAS BEEN SWITCHED OFF, WAIT AT LEAST 5 MINUTES BEFORE RESTARTING

Light Functions:

The unit has four LED indicators, located on the side of the unit. The following lists the functions of these lights:



1 - ON / OFF
Green solid – Indicates power ON

2 – DRYING
Blue flashing – Indicates drying selected (compressor has not started)
Blue solid – Indicates drying ON (compressor has started)

3 – DEFROST
Yellow flashing (Approximately every 5 seconds) – Defrost cycle active
Yellow solid – Defrost in progress

4 – Alarm
Indicates the pump is running, colour can be Flashing Yellow or Red
Initially flashes yellow for a minimum time of 5 seconds. If after 10 seconds the pump is still running the controller assumes a fault / restriction and turns to solid Red.
If the fault clears and the float returns to its normal position, the pump will stop and the LED extinguishes

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.

INSTALLATION

The WM80 Dehumidifier can be left free standing unit, alternatively can be wall mounted for instructions on mounting the unit please read the following:

A full installation kit is included in the package to allow a problem free install. This kit comprises of the following :-

1 X WM80 Dehumidifier
1 X Mounting Bracket
4 X Rawl plugs and screws
4 X M6 Hex Head Bolts, flat and spring washers

For mounting the WM80 Dehumidifier to a wall you will first need to remove the cover from the unit and detach the wall mounting bracket from the rear of the unit by removing the 4 bolts that secures it.

With reference to the installation drawing at the rear of this manual, maintain the minimum clearances from adjacent objects (ie walls celings etc). Maintaining these distances will ensure easy access for installation and maintaining the unit during the products life

Place the wall mounting bracket onto the wall, ensuring the correct orientation, and the bracket is level. Mark off 4 points on the wall where you will be securing the bracket, the bracket has numerous holes and slots to allow the bracket to be mounted at different points depending on the wall you are mounting it to. It is advised to have the fixing points spaced out as far as possible to allow a more ridged and secure installation.

Using a 7mm masonry bit, drill the 4 points you marked off earlier to a depth of 40mm, insert the 4 Rawl plugs into the wall that are supplied with this unit.

Secure the wall mounting bracket to the wall using the 4 brass screws supplied with the unit.

Ensure all fixings are tight and bracket is secured to the wall.

Screw 2 X M6 Bolts into the top fixings on the bracket, only screwing them in a 2-3 turns. Lift the unit onto the bracket and hook the unit onto the bolts using the keyhole slots in the rear of the unit do not tighten the bolts yet. Fit the 2 remaining bolts through bottom holes in the rear of unit and into the wall mounting bracket and tighten all 4 bolts.

Check to make sure the unit is secure to the wall mounting bracket.

Check to make sure foam seal attached to the fan deck is intact.

Replace cover and refit all fixings that have been removed.

ROUTINE SERVICE

WARNING

ENSURE THAT THE POWER CORD TO THE MACHINE HAS BEEN DISCONNECTED BEFORE CARRYING OUT ROUTINE SERVICE. THE SERVICING AND REPAIR OF THIS UNIT SHOULD ONLY BE CARRIED OUT

To ensure continued full efficiency of the dehumidifier, 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 to avoid damaging the fins. Alternatively, vacuum clean the coils.

WARNING: DO NOT STEAM CLEAN REFRIGERATION

2. Remove the air filter and clean by either blowing compressed air through, vacuuming or washing in warm water

3. Check that the fan is firmly secured to the motor shaft and that the fan rotates freely. **The fan motor is sealed for life and therefore does not need oiling.**

4. To check the refrigerant charge, run the unit for 15 minutes and briefly remove the top cover. 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. During this inspection, check visually to ensure that the pump rollers are turning.

5. Check all wiring connections.

6. To check the operation of the defrost system, switch the machine on and leave it running for approximately 42 minutes. The machine will then enter “Reverse Cycle” defrost mode for approximately 4 minutes before returning to normal operation. If the unit will not defrost, the printed circuit timer board may be defective or the by-pass valve may be inoperable.

IF ANY OF THE PRECEDING PROBLEMS OCCUR, CONTACT THE EIP SERVICE CENTER PRIOR TO CONTINUED OPERATION OF THE UNIT TO PREVENT PERMANENT DAMAGE.

TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Unit inoperative	1. No power to unit	1. Check the power from power supply panel
Little or no airflow	1. Loose fan on shaft 2. Fan motor burnt out 3. Dirty refrigeration coils / filter 4. Loose electrical wiring	1. Tighten fan 2. Replace the fan motor 3. See *Routine Maintenance* Section 4. Check the wiring diagram to find fault and repair
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 the Factory Service Center 3. Contact the Factory Service Center
Little or no defrost when required	1. Faulty timer 2. Faulty by-pass valve	1. Contact the Factory Service Center 2. Contact the Factory Service Center
Unit vibrates excessively	1. Loose compressor 2. Damaged fan	1. Tighten the nuts on the compressor mounts 2. Replace fan
Water flooding inside the machine	1. Drain pipe blocked/frozen 2. Drain pipe too high 3. Crimped or blocked tubing	1. Clear the obstruction 2. Ensure that no section of the drain hose is above the level of the water outlet 3. Straighten, clear, or replace tubing

SPARE PARTS LIST

Description	Part Number
Product Part Number	11284DL-US
PCB Timer	1619522
Controls Display PCB	1619524
Humidity Sensor PCB	1619526
PCB Connecting Cable	2013748
Condenser Coil	2026014
Evaporator Coil	2026074
Filter	2028420
Mains Cable	3035148
Keypad Label	2128417
Drain Tray	2131107
Insulation Tube 10mm ID	3014301
Silicone Drain Tray Tube	3014368
By-Pass Valve	3020837
Filter Dryer	3020901
Solenoid Coil	3030451
20mm Open Grommet	3032101
3/8” Open Grommet	3032104
M16 Gland Nut	3032512
Humidity Sensor Housing	3035164
M16 Gland	3035442
On / Off Switch	3035914
Fan Motor	3040137
Spire Clip	3080501
No. 10 x 5/8” Screw	3084095
Large Hose Clip	3086135
Quick Release Tube Coupling	3086144
Small Hose Clip	3086146
Edge Fastener Clip	3088520
PCB Mounting Pin	3101413
Feet	3101436
Condensate Pump	3160145
SSR	3931320
Light Pipe Lens	3931733
Compressor Capacitor	3036357
Condensate Drain Tube	3944110
Condensate Pump Outlet Tube	3944113
Compressor	3944966

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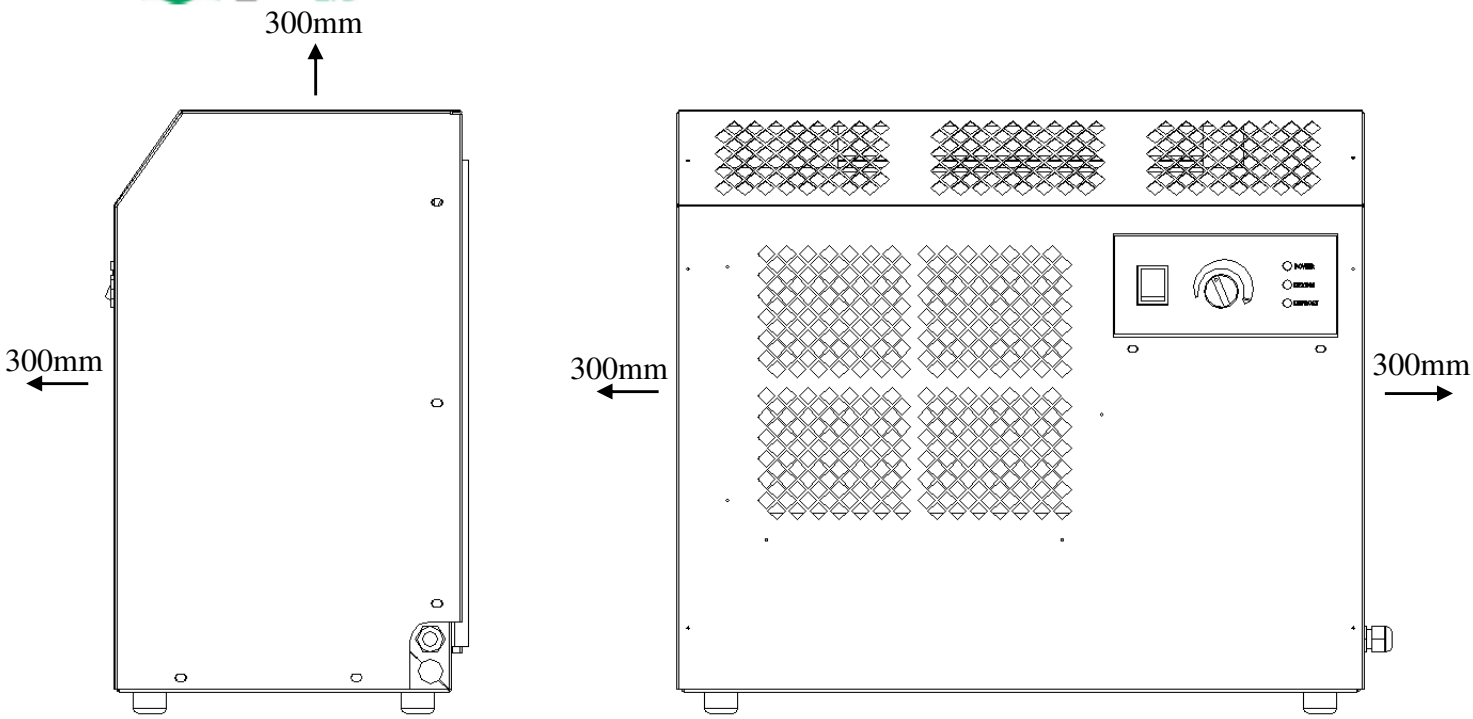

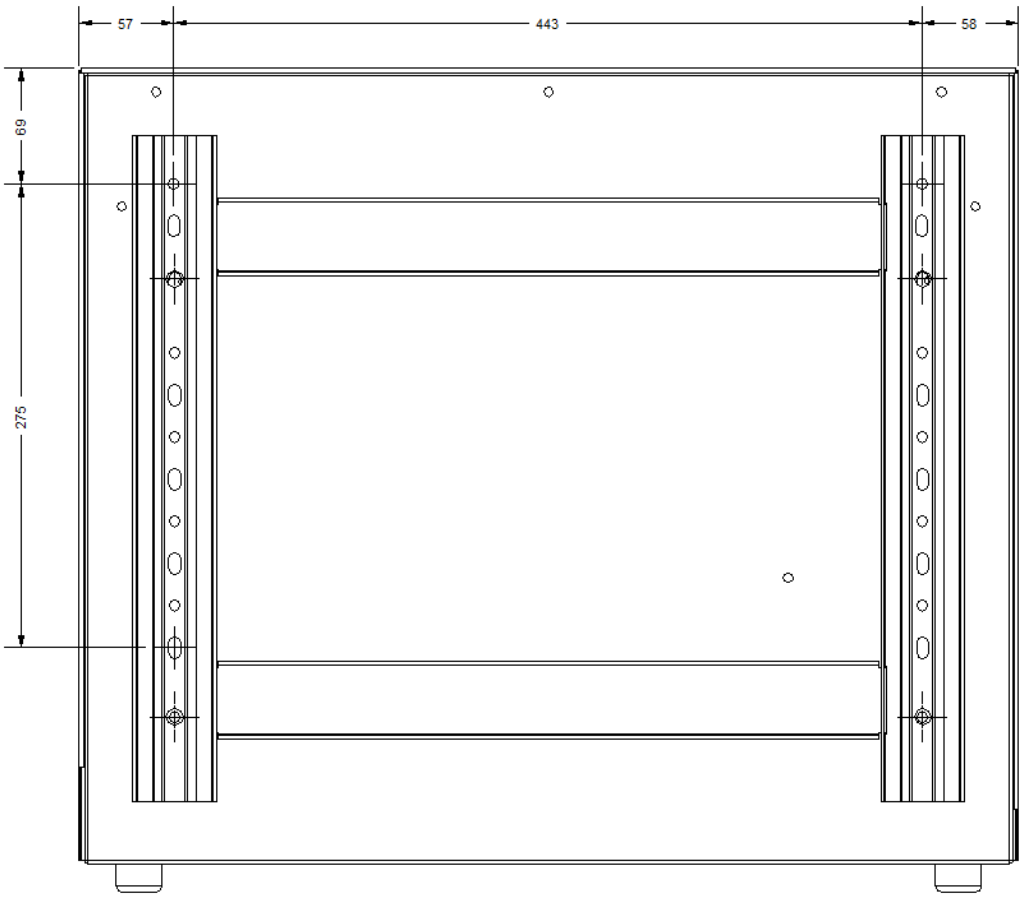

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