

CD85 DEHUMIDIFIER OWNER'S MANUAL



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CD85

PACKAGE CONTENTS

Item	Description	Quantity
11293GL-US	Dehumidifier	1
3014338	PVC Tube – 12mm I/D	3M
3086101	Jubilee clip	1
3090150	Handle	2
TPC604	Manual	1

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: -

R134a - 1300

R407c - 1610

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 not 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

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.

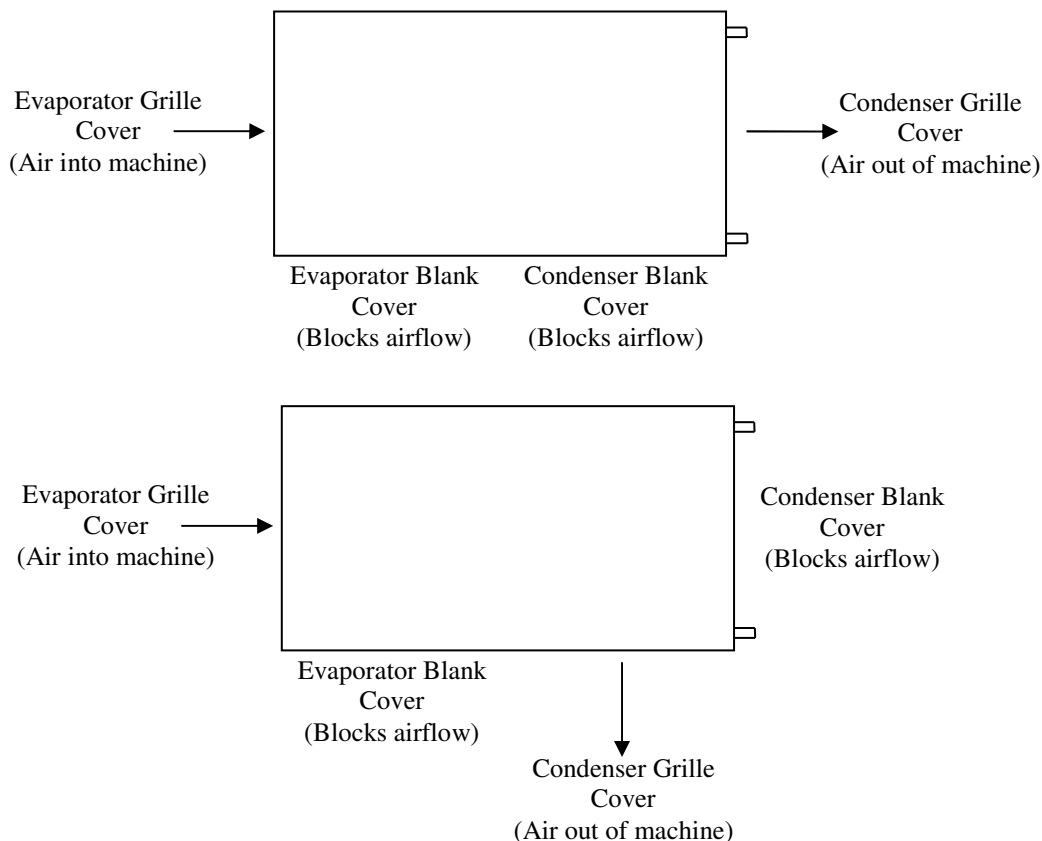
NOTE: Both inlet grille and outlet grille of the appliance must have clear space around them and not be obstructed in anyway. The unit must also be on a level surface.

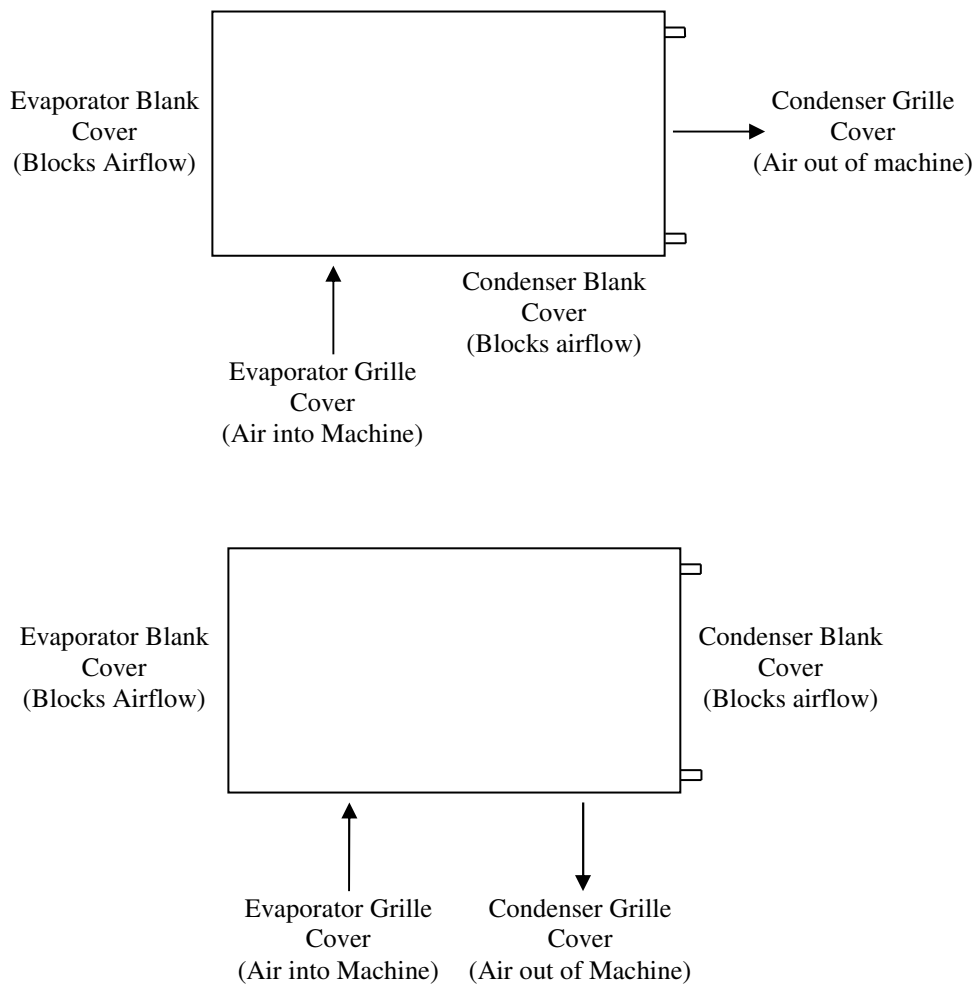
COVERS:

The unit covers can be swapped to allow the airflow direction to be changed to better suit the application the unit is to be used for. To change the covers, first remove the 4 off retaining screws and washers from each cover, swap cover positions and replace 4 off retaining screws and washers. If changing the evaporator covers then the filter retaining mesh should always be placed behind the evaporator grille cover which is held in place with 4 off M3 hex head bolts. When moving the evaporator grille cover the humidistat sensor mounting bracket and sensor housing will also need to be moved. The sensor housing bracket can be mounted to either side of the grille via 2 off m4 fixings; it should always be fitted so that it is located above the condensate pump. It will also need rotating on the bracket so the cable is pointing downwards, this can be done via the M4 fixing in the top of the housing.

Evaporator Grille Cover and Evaporator Blanking Cover are interchangeable. Condenser Grille Cover and Condenser Blanking Cover are interchangeable. Evaporator and Condenser covers are not interchangeable.

The different combinations available are shown below.





HANDLE:

The CD85 can be fitted with handles if required. Handles are found separate in the packaging. On top of the unit there are 4 off M5 pan headed bolts. Remove the bolts with appropriate flat bladed screw driver. Place handles over fixings on top of unit and replace M5 bolts to secure handle.

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 end of the dehumidifier, this should be connected to a water container or permanent drain.

OPERATION

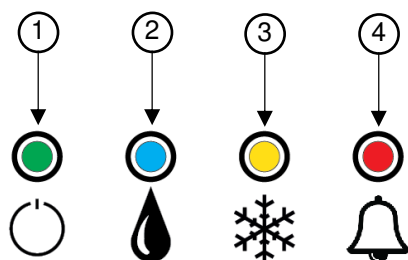
Once the appliance is installed turn the power supply on, then turn the on / off switch to the 'I' position, note the display will flash for approximately 1 second then show the humidity set point for approximately 12 seconds. Also all the indicator lights will illuminate for the same duration. After 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 (77°F), an even coating of frost should cover the entire evaporator coil.
 - If the air temperature is above 25°C (77°F), 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 (59°F), 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.

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.

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

<u>SYMPTOM</u>	<u>CAUSE</u>	<u>REMEDY</u>
Little or no airflow	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Tighten fan 2. Replace the fan motor 3. See <i>Routine Maintenance</i> 4. Check the wiring diagram to find fault and repair 5. Adjust humidistat as required or replace
Little or no water extraction	<ol style="list-style-type: none"> 1. Insufficient air flow 2. Compressor fault 3. Loss of refrigerant gas 	<ol style="list-style-type: none"> 1. Check all of the above 2. Contact EIPL 3. Contact EIPL
Little or no defrost when required	<ol style="list-style-type: none"> 1. Faulty Timer 2. Faulty bypass timer 	<ol style="list-style-type: none"> 1. Contact EIPL 2. Contact EIPL

REPAIRS

1. Should an electrical component fail, consult the Factory Service Center to obtain the proper replacement part.
2. If refrigerant gas is lost from the machine, it will be necessary to use a refrigeration technician to correct the fault. Contact the Factory Service Center prior to initiating this action.

Any competent refrigeration technician will be able to service the equipment. The following procedure must be used:

- a. The source of the leak must be determined and corrected.
- b. The machine should be thoroughly evacuated before recharging.
- c. The unit must be recharged with refrigerant measured accurately by weight.
- d. For evacuation and recharging of the machine, use the crimped and brazed charging stub attached to the side of the refrigerant compressor.

The charging stub should be crimped and rebrazed after servicing. **NEVER** allow permanent service valves to be fitted to any part of the circuit. Service valves may leak causing further loss of refrigerant gas.

3. The refrigerant compressor fitted to the dehumidifier is a durable unit that should give many years of service. Compressor failure can result from the machine losing its refrigerant gas. The compressor can be replaced by a competent refrigeration technician.

Failure of the compressor can be confirmed by the following procedure:

- a. Establish that power is present at the compressor terminals using a voltmeter.
- b. With the power disconnected, check the continuity of the internal winding by using meter across the compressor terminals. An open circuit indicates that the compressor should be replaced.
- c. Check that the compressor is not grounded by establishing that a circuit does not exist between the compressor terminals and the shell of the compressor.

SPECIFICATIONS

MODEL: 11293GL-US

HEIGHT: 400 mm (15.8 in)

WIDTH: 600 mm (23.6 in)

DEPTH: 345 mm (13.6 in)

WEIGHT: 33 Kg (72.8 lb)

AIRFLOW: 350 M³/Hr (206 CFM)

POWER SUPPLY: 115 V, 1 ph, 50 Hz

FINISH: Epoxy Coating

REFRIGERANT TYPE/QTY: R-407c / 500g (17.64oz)

OPERATING RANGE: 3°C (37°F) – 35°C (95°F)

"This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. The refrigeration system is hermetically sealed.

The Global Warming Potential (GWP) of refrigerants used in products manufactured by Ebac Industrial Products Ltd is as follows

R134a – 1300

R407c – 1610

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

APPLIANCE SPARE PARTS LIST

Description	Part Number
Product Part Number	11293GL-us
PCB Timer	1619522
Controls Display PCB	1619524
Humidity Sensor PCB	1619526
PCB Connecting Cable 1100mm	2013753
PCB Connecting Cable 300mm	3935419
Mains Cable	3035148
Filter	2029331
Drain Tray	2029332
Condenser / Evaporator Coil Block	2029336
Control Label	2128417
Capillary Tube	3014254
Insulation Tube 10mm ID	3014301
Silicone Drain Tray Tube	3014368
By-Pass Valve	3020837
Filter Dryer	3020909
Solenoid Coil	3030451
20mm Open Grommet	3032101
3/8" Open Grommet	3032104
Mains Cable Gland Nut	3032512
Float Switch	3033043
Coil Sensor	3035142
Humidity Sensor Housing	3035164
Mains Cable Gland	3035442
On / Off Switch	3035914
Fan	3040277
Fan Inlet Ring	3040283
Cover Fixing Spacer	3080504
Jubilee Clip	3086101
Silicone Tube to Copper Tube Clip	3086135
Non Return Valve Clip	3086136
Handle	3090150
PCB Mounting Pin	3101413
Feet	3101436
Condensate Pump	3160102
Relay	3036157
Light Pipe Lens	3931732
Compressor Capacitor	3030908
Condensate Drain Tube	3944115
Compressor	3944932

Spare parts available online
www.EIPLDIRECT.com



Drawing	: - TPC604
Issue	: - 2
Date	: - 25/04/25

LIMITED WARRANTY

Our products carry a one-year unconditional warranty against any defects in workmanship or material. This warranty will cover all parts and labor required to repair your Ebac product. This warranty is invalid if the unit has been abused, damaged, whether intentional or accidental, or if any modifications have been made to the unit.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS ISSUED IN LIEU OF ALL OTHER WARRANTIES (WHETHER WRITTEN, ORAL, OR IMPLIED) INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. EBAC INDUSTRIAL PRODUCTS, INC. DISCLAIMS ANY LIABILITY FOR CONSEQUENTIAL DAMAGES, LOST PROFITS, OR INCIDENTAL DAMAGES FOR BREACH OF ANY WRITTEN OR IMPLIED WARRANTY WITH RESPECT TO THE FOREGOING DESCRIBED MERCHANDISE.

For Your Records: Model: _____
 S/N: _____
 Date Received: _____

 SAVE THIS SECTION FOR YOUR RECORDS
 CLIP AND RETURN THIS CARD

PLEASE NOTE

To ensure that your Ebac Dehumidifier is accorded the full coverage provided by this warranty, please complete and mail this card at your earliest convenience.

Thank You

WARRANTY REGISTRATION		
MODEL _____	S/N _____	DATE RECEIVED _____
OWNER _____		
ADDRESS _____		
CITY _____ STATE _____ ZIP _____		
COMMENTS _____		

Ebac Industrial Products. 700 Thimble Shoals Boulevard, Suite 109, Newport News, Virginia. 23606-2575		



Drawing	: - TPC604
Issue	: - 2
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