

BD150/MK11



OPERATING MANUAL
BEDIENERHANDBUCH
MANUEL D'UTILISATION
GEBRUIKSAANWIJZING
MANUAL DE FUNCIONAMIENTO
MANUALE DI ESERCIZIO

CONTENTS

Unpacking	2
Important	2
Introduction	2
General	2
Operation	3
Electrical Connections	3
Basic Steps	4
Positioning	4
Drainage	4
On / Off Control	4
Special Features	5
Defrost	5
Dual Voltage	5
Voltage Protection Device	5
Low Voltage Protection	5
Safety	6
Service	6
Spares	6
Disposal Of Unit	6
Contacting Ebac	6
Technical Specification	7

UNPACKING

Thank you for deciding to purchase an Ebac Industrial dehumidifier. Like the many tens of thousands of people who have already bought an Ebac dehumidifier we are confident you will find it is the most effective answer to the problem of condensation and dampness related problems.

IMPORTANT

Your Industrial dehumidifier is packed in a plastic wrapping - please ensure that it is disposed of safely and where it will not be a danger to children.

INTRODUCTION

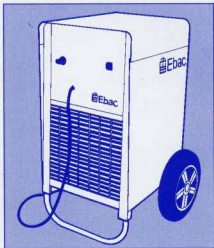
Carefully remove the BD150 dehumidifier unit from its transit box and visually check for any signs of transit damage. If there is evidence of damage DO NOT attempt to operate the unit, call your supplier for advice. Retain the packaging for further use, or dispose of it considerably.

This user manual tells you how to use the BD150 dehumidifier. Please read it thoroughly before operating the dehumidifier. If you have any questions about the unit please contact our Customer Service Department at the address shown at the back of this section or phone 01388 602751

Dehumidifiers remove moisture from the air circulating through it.

Continuous operation reduces the relative humidity of the air and this helps prevent rust, rot, mould, mildew and condensation

within the room, or other enclosed space 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 of the condensed moisture and a cabinet to house these components.

GENERAL

Ebac Industrial dehumidifiers can be stored and transported in the horizontal or vertical position. To operate, stand the unit upright, connect power and it is ready for operation.

When a generator is used to supply the power, it is essential to check the minimum kva required in the technical section within this manual. The generator must be started before connection is made to the dehumidifier.

OPERATION

The fan draws moist air through the refrigerated surface which cools it below its dew point, removing moisture which is collected and lead away. The cool air then passes over 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 a lower relative humidity than when the air entered the unit. Continuous circulation of the room air through the dehumidifier unit gradually reduces the relative humidity in the room.

The BD150 Industrial dehumidifier is a robust, compact unit designed to control the humidity in the enclosed space in which it is placed.

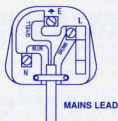
The unit is thermally protected and will switch off for a period if the maximum operating temperature of 35°C is exceeded.

MAINS PLUG WIRING INFORMATION FOR EBAC INDUSTRIAL DEHUMIDIFIERS

110V PLUG BS4343/IEC309-2



13 AMP FUSE 230V PLUG BS1363



IMPORTANT

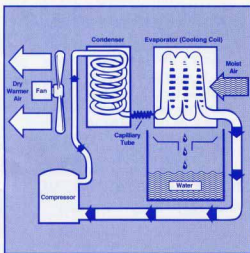
The wires in the mains lead are coloured and must be connected as shown in the diagrams above by a qualified electrician.

ELECTRICAL CONNECTIONS

The wire which is coloured Green and Yellow must be connected to the terminal marked E or by the Earth Symbol. The wire which is coloured Blue must be connected to the terminal in the plug which is marked with 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.

CHANGING THE FUSE

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



BASIC STEPS FOR DRYING

Ensure that all EXTERNAL doors and windows are CLOSED. Where no doors or windows are fitted, temporarily screen off the openings.

POSITIONING

For small areas position centrally in the area to be dried. For larger areas such as open plan buildings, offices or factories, a number of dryers may be required, in such cases they should be spaced evenly around the area. Ensure that no unit is positioned in such a way that it blows directly into another.

For private houses or flats, position the dryer on one floor at a time, starting at the lowest floor, closing all internal doors on the floor previously dried. Continue until all floor levels have been dried.

Note when a particular damp patch is to be dried out the air outlet grille should be directed towards that area but should NEVER be closer than 1m to the surface. At no time should the inlet or outlet grilles be covered or obstructed.

DRAINAGE

Under most operating conditions water will be produced continuously and it is important that it is drained away correctly and not allowed to spill. Any spillage will evaporate and will, therefore, have to be recycled through the dryer again, which in effect, only prolongs the drying period.

PORTABLE CONTAINERS

Position a closed top container underneath the water discharge pipe (approximately 25 litres capacity). Place a short length of pipe one end over the discharge pipe and the other end in the container. Use a transparent container, this will enable you to check the level of the water and so prevent overflowing. As the unit will be running for long periods of time, a regular check should be made on the container water level.

PERMANENT DRAINAGE

Connect a flexible hose to the water discharge pipe of sufficient length so that it will reach a permanent drain. The gravity head created will allow for a gradual fall from the unit to the drain. Ensure that the hose is free of kinks and is not allowed to rise at any point above the level of the discharge point from the dehumidifier. Any air locks which may be created, should the level be raised by the hose passing over obstructions, could cause the water to "back up" the hose and spill from the dryer.

SWITCHING ON

Plug the unit into the power supply and switch on. Turn the rotary switch to the ON position. (On dual voltage units turn the rotary switch to the correct supply voltage). Where applicable press and hold the push button for 1 second. The unit should now start.

SWITCHING OFF

Turn the rotary switch to the OFF position. Turn off the power supply and disconnect.

SPECIAL FEATURES

DEFROST OPERATION

If the ambient temperature of the room in which the dehumidifier is conditioning, falls below 15°C ice will form on the evaporator coil as the air passes over it. Over a period of time this build up of ice will effect the efficiency of the dehumidifier on it's ability to maintain the required set conditions within the room.

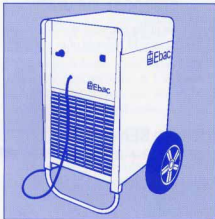
The BD150 is therefore fitted with a defrost control device. This defrost control device is timed to operate every 42 minutes for a period of 4 minutes.

During the defrost cycle the high pressure hot gas from the compressor is diverted into the evaporator coil where it melts the ice which has formed on the evaporator coil.

DUAL VOLTAGE MODELS

The BD150 dehumidifier unit is fitted with a transformer which will allow the unit to operate on either 110volts or 230volts 1ph 50Hz power supply.

All electrical components within the dehumidifier are rated for 110volts, for safety reasons. The rotary switch allows for the selection of the required voltage prior to starting the unit.



VOLTAGE PROTECTION DEVICE

The dual voltage BD150 dehumidifier unit is fitted as standard with a unique voltage selection protection device.

Should the unit be connected to a 115volts supply and the rotary selector switch set inadvertently to 230 volts, the unit will not start. Similarly should the unit be connected to a 230 volts supply and the rotary selector switch set to 110 volts, the unit will not start.

This unit is fitted with a screw type in line fuse holder with a 10 amp anti fuse holder.

LOW VOLTAGE PROTECTION

For applications which require the unit to operate under fluctuating voltage supply conditions, the BD150 dehumidifier is also available fitted with a voltage monitor. This device ensures that the compressor does not "stall start" when the supply voltage is below 208 Volts (The minimum acceptable level). Three indicators fitted to the control panel indicate the status of the dehumidifier:-

- AMBER :- Power is available to the unit
- GREEN :- Unit is running
- RED :- The voltage is below the minimum required to start the unit.

Note :- The supply voltage must be above the minimum acceptable level for a period of 3 minutes before the unit will start.

SAFETY

- **DO NOT USE THE UNIT IF THE CABINET OR POWER CORD IS DAMAGED.**
- **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 ATTEMPT ANY REPAIRS SHOULD THE UNIT FAIL TO OPERATE.**
- **DO NOT STAND ON THE UNIT.**
- **DO NOT ATTEMPT TO LIFT HEAVY UNITS UN ASSISTED**
- **DO CHECK THE PLUG ON THE EQUIPMENT MATCHES THE SUPPLY.**
- **DO USE THIS UNIT ONLY FOR THE PURPOSE FOR WHICH IT WAS DESIGNED.**
- **DO ENSURE THE POWER CORD AND SUPPLY IS EARTHED CORRECTLY.**
- **DO CHECK THE VOLTAGE SELECTION BEFORE ATTEMPTING TO POWER UP THE UNIT. (DUAL VOLTAGE UNITS ONLY)**
- **DO USE A RESIDUAL CURRENT DEVICE "RCD" WHERE POSSIBLE.**

CONTACTING EBAC CUSTOMER SERVICES

If you have any further queries please contact the Ebac Customer Services Department on 01388 602751 and have the following information to hand:

- Part Number and Serial Number of the machine (located on the rating plate at the front of the machine)
- Full name and address
- Where your machine was purchased

SERVICE

This machine should be serviced by qualified Ebac personnel or other persons having technical competence in servicing refrigeration equipment following the instructions in the Ebac Service Manual.

SPARES

Full spare parts listings and Ebac Service Manuals are available upon request by contacting one of the Ebac Service Centres listed in this manual.

OZONE FRIENDLY

The gas which is used inside the hermetically sealed refrigeration circuit is R22, which is an HCFC. Under NO circumstances should this gas be released into the atmosphere. The unit should be serviced by trained personnel who will re-claim the removed gas.

DISPOSAL OF UNIT

At the end of the machines working life the refrigerant must be disposed of in the correct manner.

TECHNICAL SPECIFICATION

	1021800 UK	1021900 UK	1024500 USA	1024700 GmbH	1025000 USA	1025310 GmbH	1025320 GmbH	1025800 FR	1022300 UK	Units of Measure
Height :	905	905	905	905	905	905	905	905	905	mm
Width :	610	610	610	610	610	610	610	610	610	mm
Depth :	560	560	560	560	560	560	560	560	560	mm
Weight :	85	75	75	75	75	75	75	75	75	Kg
Airflow :	1114	1114	1114	1114	1114	1114	1114	1114	1114	m ³ /min
Voltage :	230/110	230	110	230	110	230	230	230	110	V
Phase :	1	1	1	1	1	1	1	1	1	
Frequency :	50	50	60	50	60	50	50	50	50	Hz
Maximum Power :	1.5	1.5	1.5	1.5	1.8	1.5	1.5	1.5	1.8	kW
Maximum Current :	8/16	8	16	8	16	8	8	8	16	A
Generator Size :	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	kva
Fuse Rating :	13	13	13	13	13	13	13	13	13	A
Effective Volume :	300	300	300	300	300	300	300	300	300	m ³
Refrigerant Type :	R22	R22	R22	R22	R22	R22	R22	R22	R22	
Refrigerant Quantity :	0.54	0.54	0.54	0.48	0.54	0.54	0.54	0.54	0.54	Kg
Normal Extraction :	18	18	18	18	18	18	18	18	18	l/24hrs
Maximum Extraction :	82	82	82	82	82	82	82	82	82	l/24hrs
Noise Level :	Less than 70dba when running									
Finish :	Epoxy Coated Zintec Steel									
Mobility :	Light in construction and easily positioned									
Normal :	Rated Extraction at 15°C 65% RH Conditions									
Maximum :	Rated Extraction at 45°C 99% RH Conditions									

This machine has been manufactured in the United Kingdom



Ebac Limited, St. Helen Trading Estate,
Bishop Auckland, County Durham DL14 9AL
Tel: 01388 605061 Fax: 01388 609845

Part No. 3141528 Issue 1 Sept 1995