



## UPRIGHT REFRIGERATOR

MANUAL OF INSTRUCTIONS FOR USE AND  
INSTALLATION



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## **1. Introduction**

This equipment has been produced to match the internal and external specifications required by our clients. It has been thoroughly tested and checked before despatch to ensure it meets the highest European standards of quality and safety.

To ensure optimum performance from your equipment, please ensure to follow the instructions in this manual with regards to operation and maintenance, failure to do so may result in invalidating the warranty. By following the enclosed instructions, you will ensure a long and productive life from your machine.

## **2. Manufacturers Retained Rights and Responsibilities**

It is forbidden reproduce in whole or in part, any of these instructions without the express permission of the manufacturer.

The manufacturer does not accept liability to third parties as the result of:

- Failure to observe the warnings and instructions in this text
- Use of equipment for any purpose other than specified
- Misuse by untrained personnel
- Usage not conforming to local regulations
- Unauthorised modifications and/or repairs carried out by unsuitable persons.
- Use of non-original or recommended parts or accessories
- The manufacturer reserves the right to introduce any modification deemed necessary without notice.

### 3. Transportation

The equipment is wrapped in absorbent material and contained and fixed within a fixed pallet and stiff cardboard crate. Weights are listed as follows:

MODEL	NET Wt. (Kg)	Packing Wt. (Kg)
BH1SS		
BH2SS		
BL1SS		
BL2SS		
BH1SSCR		
BH2SSCR		
BL1SSCR		
BL2SSCR		

## **4. Putting Into Operation**

### *4.1. Positioning*

Ensure before installation that the space reserved for the unit is adequate to allow normal operation and maintenance. After carefully unpacking the unit, remove the PVC protective film and all other packaging materials used to protect the equipment in transit.

Place the cabinet on a flat and even surface. The cabinet **MUST** only be lifted from the exterior of the base to avoid the possibility of damage, particularly when using mechanical means to site.

If the unit has been transported or stored in any position other than upright, wait at least 2 hours before switching on.

The equipment must be installed in a suitable environment and not exposed to open air or exposed to rain. The correct position to site the unit is away from direct heat sources (radiators/cookers etc) and out of direct sunlight and draughts. Ensure there is suitable ventilation around the unit, failure to adhere to these guidelines will result in adverse performance or failure of your equipment.

### *4.2 Initial Cleaning*

Before putting into operation, all parts of the cabinet must be cleaned. For the interior of the cabinets, a solution of mild detergent and warm water is recommended using a moistened cloth. Dry both the interior and exterior of the cabinet with a soft dry cloth. Do **NOT** use harsh abrasive detergents or cleaning materials such as scourers, wire wool etc. Use extra caution when cleaning moving parts with sharp edges such as evaporator, condenser etc and always use protective gloves.

### *4.3 Electrical Connection*

Check that the supply conforms with the requirements listed on the factory label and that it is provided with a circuit breaker with sufficient earth connection. Should there be none present, ensure one is supplied and installed by a suitably qualified engineer by means of an omnipolar switch as indicated in the safety regulations with a minimum clearance of the contacts of **3mm**.

Where the cabinet has to be stored at distance from the power supply, ensure that the ensuing connection conforms to all local safety regulations. Cabinets supplied with integral condensing units are supplied with an appropriate plug fitted with Neutral and Earth.

The supply cable must be well stretched to avoid coiling and superimposition and it must not be exposed to the possibility of damage by third parties. It should be kept clear of liquids, water or heat sources and in the event of damage, must be replaced by a suitably qualified person.

### *4.4 Connection to Drains*

The evaporation of the defrost water is automatic in all models with an integral condensing unit.

## 5. Technical Characteristics

### 5.1 Electrical Consumption

The power loads for these units are listed in the following table:

MODEL	POWER LOAD (W)
BH1SS	322
BH2SS	524
BL1SS	750
BL2SS	880
BH1SSCR	360
BH2SSCR	560
BL1SSCR	450
BL2SSCR	680

### 5.2 Noise & Vibration

The sound level of the equipment fitted with an integral hermetic condensing unit does not exceed 70dB, it is therefore unnecessary to provide sound insulation. Under normal conditions, the unit does not generate vibrations enough to affect the surroundings

### 5.3 Suitable Usage

Do not use this equipment to maintain and store medical supplies. The cabinet is tested to Class4 of the ISO 1992 regulations.

The optimal ambient temperatures for operation are +10°C/+30°C with relative humidity of 30/55%. The potential usage for the various models are as follows:

- **Refrigerated Cabinets (-2°C / +8°C):** Storage for short periods of fresh foodstuffs or prepared cooked food (-2°C/+8°C) and beverage refrigeration (+15°C)
- **Freezer Cabinets (-18°C / -22°C):** Storage for long periods of frozen foods and freezing of small quantities of fresh foodstuffs of smaller portions.

## 6. Putting Into Operation

### 6.1.1 Switching On/Off

Switch on operation switch and the control panel should illuminate and display the current temperature within the cabinet. Simultaneously the compressor pilot light should activate. In the event of a power failure or interruption, the compressor will normally restart after a slight delay when power is restored.

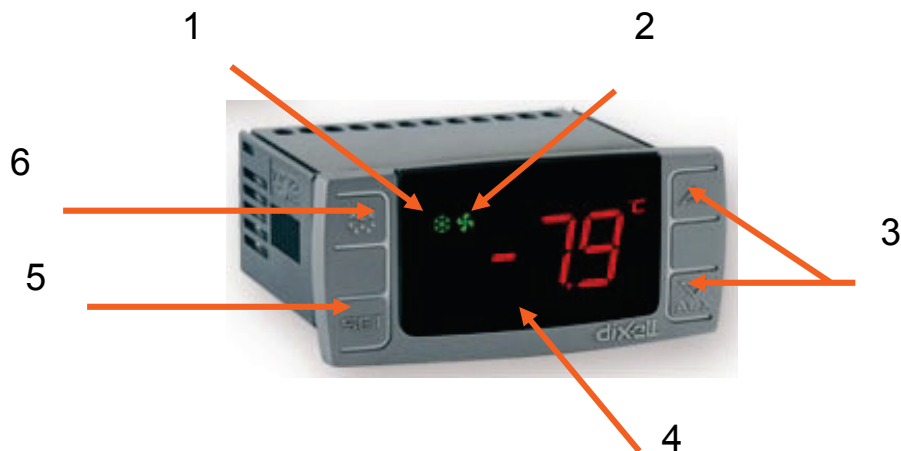
### 6.1.2 Temperature Display

During normal functioning, the cabinet temperature will be displayed on the controller as soon as the unit is switched on.

### 6.1.3 Setting The Cabinet temperature

By pressing the **SET** button for 1 second, it is possible to read the set temperature. To change the temperature press **SET** and press the switch **▲** (Up) or **▼** (Down) to respectively increase or decrease the temperature from the preset. After selecting the desired temperature confirm this by again pressing **SET**

All the manual controls are on the right hand side of the unit. The controls are shown in the illustration below:



1. Defrost Light
2. Compressor Operation Light
3. Temperature Adjustment Keys
4. Digital Thermostat
5. Set Key
6. Defrost Button



#### 6.1.4 Alarm Codes

The electronic control panel will detect certain malfunctions and display the as follows:

ALARM	CAUSE	OUTPUTS
P1	Room Probe Failure	Compressor output according to Cy - Cn
P2	Evaporator Probe Failure	Defrost end is timed
HA	Maximum Temperature alarm	Outputs unchanged
LA	Minimum temperature alarm	Outputs unchanged
EA	External alarm	Outputs unchanged
CA	Serious external alarm	All outputs OFF
dA	Door open	Compressor and fan restarts

**Action On:** If the display is showing one or more of the above alarm codes, take note and switch off the electronic control panel and switch on again after a few seconds. If the alarm codes continue to display, please contact technical assistance quoting the code displayed.

## *6.2 Storage of Food*

In order to obtain the optimum performance from your machine, it is necessary to observe the following instructions:

- Place the merchandise into the unit only after it has reached the desired operating temperature on the digital display
- Do not place uncovered hot foods or liquids inside the unit
- Package or protect foods where possible
- Do not overload the cabinet as this will affect the airflow inside the cabinet
- Avoid excessive opening of doors/drawers
- Avoid prolonged periods of opening doors
- After closing a door, wait a few moments before reopening. Whilst stocking, only open and fill one door/drawer at a time to eliminate the risk of over-balancing

## *6.3 Defrosting*

### *6.3.1 Defrost Timer*

The electronic control panel automatically defrosts 4 times in 24 hours. Its timer will reset to the time of the initial startup. To modify the start time for defrost to the required time, press the Defrost button (Dripping Snowflake) for more than 5 seconds, a defrost cycle starts immediately and the following one will start after 6 hours. During defrosting an LED will be switched on.

### *6.3.2 Manual Defrosting*

All tables defrost automatically (see 6.3.1). To start a manual defrost follow the instructions above and modify the start time accordingly. For evaporation of condensate, see section 4.4.

## **7. Maintenance**

### *7.1 Periodic Cleaning*

For hygienic reasons and improved performance clean the cabinet at least once a week using warm water and a weak detergent diluted solution.

Before cleaning, perform a manual defrost cycle (section 6.3). When complete, disconnect from the power supply and follow the cleaning instructions given in (section 4.2).

### *7.2 Cleaning of Condenser*

For improved performance, clean the condenser at least once a week. Before beginning, ensure the unit is disconnected from the power supply then proceed as follows:

- Unscrew and remove protective grill
- Remove the dust deposited on the front surface of the condenser using a soft brush and vacuum cleaner. When complete, replace grill and screw securely

### *7.3 Cabinet Not in Use*

During periods of inactivity, remove the products from the cabinet and follow these instructions:

- Disconnect the unit from the power supply, ensuring all switches are set to OFF
- Carefully clean the unit as described in (section 4.2)
- Cover the cabinet with a cloth or cover that allows air circulation around the cabinet.

## **8. Troubleshooting**

Often, a malfunction in the unit can be put down to a simple solution that can be resolved without the need for a technician, therefore, eliminate the faults by following these instructions:

### **8.1**

*If the cabinet doesn't operate, check the following:*

- The plug is not connected to the power supply
- The supply cord is not damaged

### **8.2**

*If the required temperature is not achieved, check the following:*

- The command switch is turned on
- The controller has been correctly set
- The cabinet is not defrosting/frosting
- The evaporator is not covered with frost
- The condenser is not blocked with dust
- The cabinet is not located close to a heat source
- The airflow to the condenser is not obstructed
- The products in the cabinet are not impeding the door
- The cabinet is not overloaded, or loaded in a way that obstructs air circulation

### **8.3**

*If the cabinet leaks water, ensure that:*

- The evaporator tray is not damaged
- The drains are not blocked or obstructed
- The cabinet has been properly levelled
- The door seal is not gathering condensation as a result of door heater failure.

## 8.4

*If the cabinet is excessively noisy, ensure that:*

- The frame or cabinet does not have any loose nuts, screws or bolts
- The cabinet has been sited in a stable position and correctly levelled

## 9. Spares/Repairs

Before commencing any service or maintenance work, isolate the cabinet from the electrical supply. Always fit original spares which may be obtained from an authorised supplier. If electrical supply cable needs to be renewed it must conform to the original specification to that supplied with the cabinet. The engineer must ensure that there is no possibility of water ingress or damp.

For replacement or extra parts, please scan the QR code below with your smartphone or reader.

Alternatively, visit [www.pentlandparts.co.uk](http://www.pentlandparts.co.uk)

## 10. Disposal

The scrapping of the cabinet should be undertaken by a suitable authorised company working to local legislation and observing local statutes. The composition of the cabinet is as follows:

The cabinet consists of:

- Structure in steel plate
- Electrical components and cables
- Electrical compressor
- Plastic materials
- Refrigerant gas which must be discharged by a suitably qualified person

This manual has been compiled by  
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