



BARCOOLER

INSTALLATION, OPERATING AND MAINTENANCE MANUAL

PLEASE LEAVE WITH OPERATOR



BARCOOLER - MARK 3, SERIES 2

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EC DECLARATION OF CONFORMITY

(Guarantee of Production Quality)

We, Imperial Machine Company Limited of:
Unit 1, Abbey Road, Wrexham Industrial Estate, Wrexham, LL13 9RF
Declare under our sole responsibility that the machine



BARCOOLER – SERIES 2

As described in the attached technical documentation is in conformity with the Machine Safety Directive 98/37 EEC (formerly 89/392/EEC revised by 98/44/EEC and 93/68/EEC) and is manufactured under a quality system EN 29001. It is also in conformity with the protection requirements of the Electro Magnetic Compatibility Directive 89/336/EEC and is manufactured in accordance with harmonised standards EN 50-081-2 Generic Emission and EN 50-082-2 Generic Immunity (plus product specific standards).

It also satisfies the essential requirements of the Low Voltage Directive 73/23/EEC amended by 93/68/EEC.

Approved by S Witt, Product Support Manager

Signed at Wrexham, Date

January 2008

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INTRODUCTION

Barcooler is a modular backbar or under bar refrigerator designed for the cooling and storage of beverages suitable to be served at a temperature of between 4°C and 12°C, depending upon the ambient.

There are four types of Barcooler modules:

1. Refrigeration module, which comes with two end panels.
2. Add-on modules, which are available as glass door, solid door, 2 drawer or wine chiller units.
3. Corner modules, which are available in various angles to suit internal and external corners.
4. Remote evaporator modules, this replaces the standard refrigeration unit.

All modules come in a choice of stainless steel or black finish. All wiring is pre-cut and terminates to connectors where appropriate to allow for modular construction.

GUARANTEE

This equipment is guaranteed by IMC for 1 Year from the date of its purchase from IMC, or from one of its stockists, dealers or distributors. The guarantee is limited to the replacement of faulty parts or products and excludes any consequential loss or expense incurred by purchasers. Defects which arise from faulty installation, inadequate maintenance, incorrect use, connection to the wrong electricity supply or fair wear and tear are not covered by the guarantee.

Please observe these instructions carefully.

This guarantee applies in this form to installations within the United Kingdom only. Contact your Barcooler supplier first if you require warranty work.

DELIVERY

The packaged modules consists of:

Module type	
Refrigeration module	2 end panels, 8mm Allen Key and Instruction manual
Door module	2 keys, 2 shelves, 8 clips, 8mm Allen Key and Instruction manual
Drawer module	4 keys, 2 baskets, 6 basket dividers, 8mm Allen Key and Instruction manual
Wine Cooler module	2 keys, 1 baskets, 3 basket dividers, 8mm Allen Key and Instruction manual
Remote module	LH end panel, 8mm Allen Key and Instruction manual

Please notify both the carrier and the supplier within three days of receipt if anything is missing or damaged.

The electrical supply to the unit should be 230 Volt, 1 phase, 50 Hz. Check that this is suitable for the supply available.

BARCOOLER DIMENSIONS

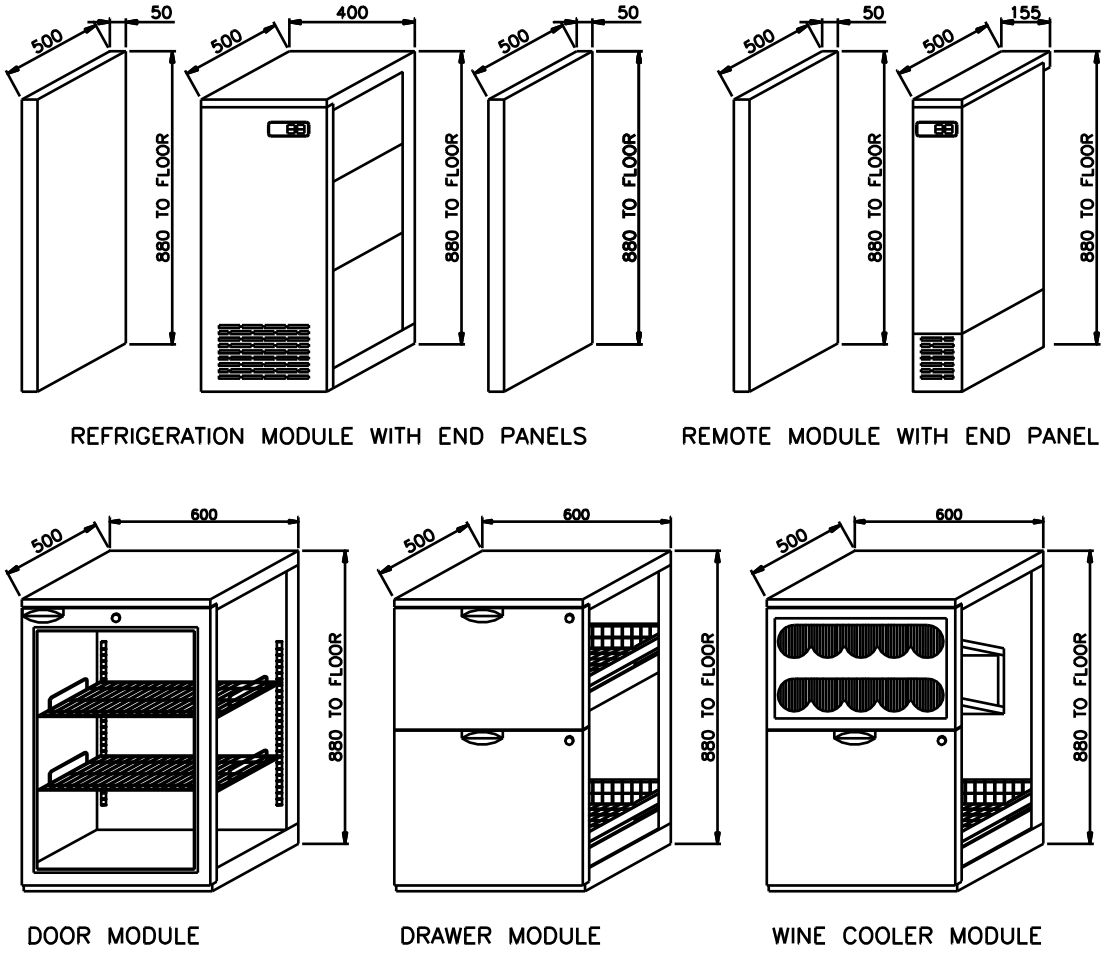


Figure 1 – Barcooler Dimensions

INSTALLATION

For the Installer:

These Instructions contain important information designed to help the user obtain the maximum benefit from the investment in an IMC Barcooler unit.

Please read them carefully before starting work, and consult with the supplier in the event of any queries.

Be sure to leave this Instruction Manual with the user after the installation of the unit is complete.

Procedure:

Installation of Barcooler should be undertaken by a recommended IMC distributor. IMC can not accept liability for damage caused either by misapplication of this equipment or where installation or operation is not in accordance with the instructions in this booklet.

Having unpacked the modules, arrange them in the order in which they are to be assembled, and decide on which way the doors are to open.

NOTE The refrigeration module must be placed at the centre of the run with a maximum of two Add on modules on both sides.

Reversing the Opening Direction of Cabinet Doors

Tip the cabinets onto their back.

Remove the two cabinet support channels on the base of the cabinet.

Remove the door.

Remove the door handle and hinge pins from the door.

Refit the handle and hinge pins onto the other side of the door, use Loctite Studlock to secure the hinge pins.

Prise out the hinge bush from the underside of the worktop and fit to the other side.

Relocate the door in the hinge bush.

Refit the two cabinet support channels.

Assembling Modules

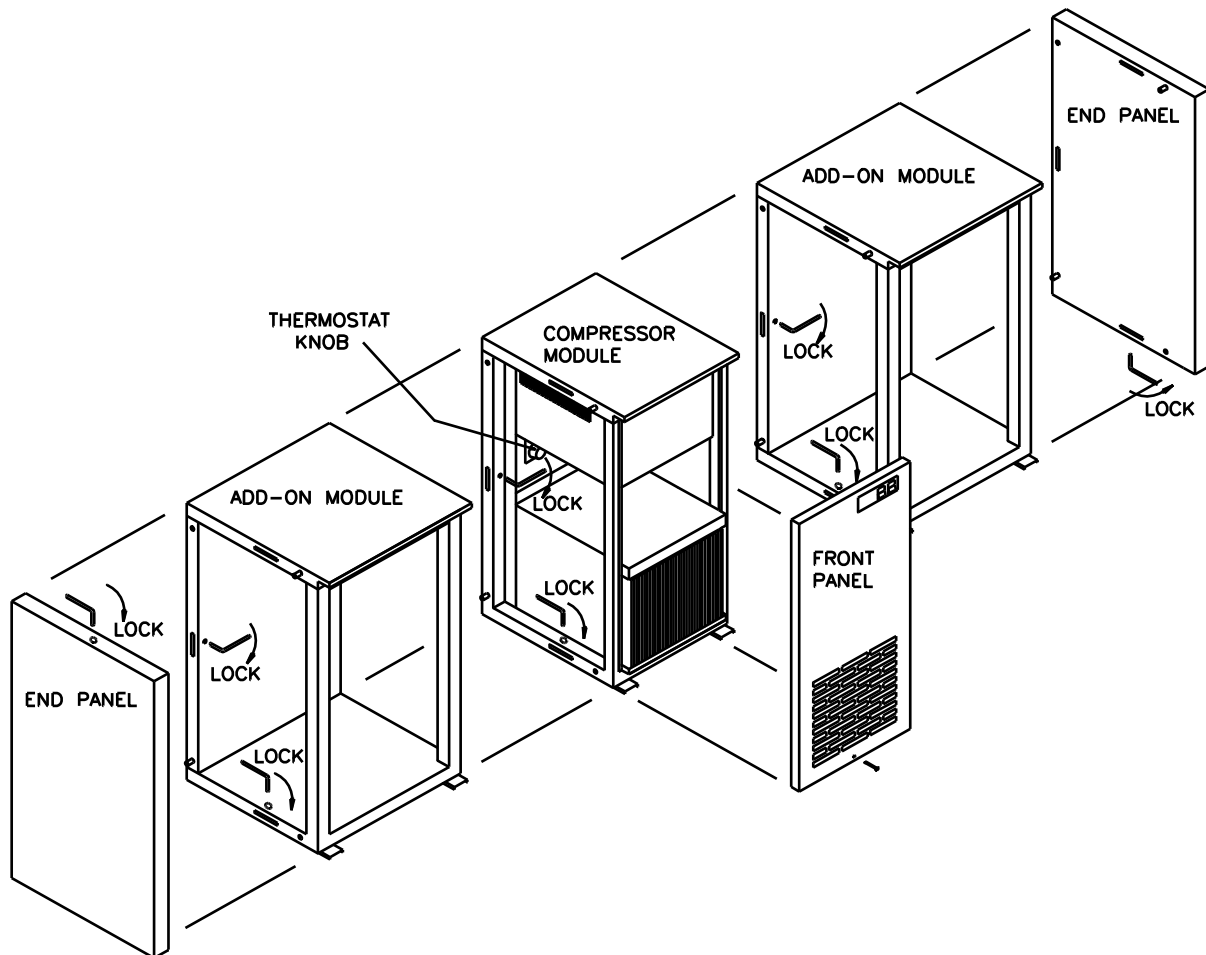


Figure 2 - Barcooler Assembly

The modules are joined together with camlocks located at the bottom, back and top of the cabinets. All internal locks lock clockwise. It is important that these camlocks are turned fully back before locking units together otherwise the locking mechanism may not engage fully with the adjacent module. An 8mm Allen key is provided to fasten these locks.

To ensure positive alignment, the cabinets have dowels that engage in holes in the adjacent cabinet or end panel. **NOTE: the right hand end panel must be fitted first as the bottom camlock is located on the underside of the end panel.**

Ensure all wires are free from being trapped or damaged. Make the electrical connection between the units by connecting the plugs and sockets at the top of each module. It will be necessary to remove the blank plug ends to do this.

All modules are fitted with adjustable feet at the front to level the units after joining together.



WARNING: DO NOT REMOVE THE PLUG END FROM THE FINAL PLUG AT EACH END AS THIS EXPOSES LIVE CONTACTS

Where more than one refrigeration module is used in a continuous run each compressor module **MUST** be supplied separately from the mains. A maximum of one refrigeration module and four 'Add-on' modules (2 each side) should be run off each mains supply. The lighting circuit **MUST NOT** be connected between compressor modules, as these must be isolated electrically from each other.



WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS COULD LEAD TO MAINS PLUG PINS BEING LIVE WHEN NOT CONNECTED INTO THE WALL SOCKET

Install the assembled modules on a flat and level floor. It is essential to make sure that there is space for ventilation of at least 40mm to both sides, top and rear. It is also important not to obstruct the airflow at the front inlet of the refrigeration module. The ambient temperature should not exceed 30°C for efficient working of the compressor. Do not install the unit close to a heat source such as a radiator or the warm air outlet of another piece of refrigeration equipment.

The electrical supply to the modules should be 230 Volt, 1 phase, 50 Hz. Refrigeration modules should be connected to a plug fitted with a 5A fuse. This should be plugged into a standard mains socket.



WARNING: THIS MACHINE MUST BE EARTHED

BARCOOLER REMOTE

Instead of using the refrigeration module this can be replaced by a remote evaporator module. The evaporator module must be connected to a condensing unit (not supplied) of appropriate duty. The advantage of the remote module is the reduction of heat and noise generated in the bar area. It is the responsibility of the installer to ensure that the evaporator module is connected correctly to a suitably sized condensing unit, and that is tested and commissioned as a compliant system. The correct refrigerant charge will depend upon the system design.

Remote Condenser Parameters

Compressor extraction capacity requirements (Watts) at 30°C ambient and 5°C cabinet temperature

Number of Cabinets	Duty Watts - Dedicated Unit	Duty Watts – Central Plant
1	330	297
2	437	393
3	544	490
4	660	590

Extraction rates are based on 0°C evaporating temperature and no suction line pressure drop. Compressor capacity must take into account suction line pressure drop.

Refrigerant circuit details

Remote evaporator module coils operate with refrigerant R134A. Nominal operating refrigerant charge for the evaporator coil is 0.35 litres. Although final charge will vary depending upon the condensing unit pipe runs fitted.

The refrigerant circuit must be fitted with a liquid receiver, a ½" suction line, a ¼" liquid line and an expansion valve. A liquid line solenoid valve and a pump down cycle are recommended. The refrigerant lines to and from the Evaporator module and the expansion valve should be fully insulated. It is the responsibility of the installer to fully test and commission the complete system.

Installation

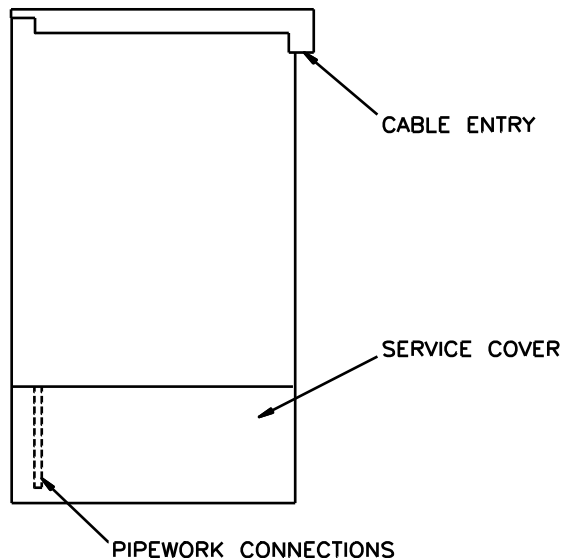


Figure 3 - Remote Connection Points

Prior to installation check the coil assembly for pressure. It is supplied charged with nitrogen under pressure and if there is no sound of escaping gas when the seal is broken the module should be returned to IMC for replacement. A unit that fails this test **MUST NOT** be installed due to danger of leakage in the remote system.

The Remote Evaporator module is designed for fitting to the right hand end (viewed from the front) of a run of Barcooler modules. The plain end panel fits the left hand end of the run.

Electrical connections are via strain relief glands at the rear of the module. One gland is for the mains supply at 230-1-50 and one for a switched pair, either for a solenoid valve for use with a central compressor or for direct connection to a dedicated compressor.

The total electric loading for the Evaporator module is 200W (not including the compressor unit), assuming that 4 x 20W internal light fittings are used.

Assembly

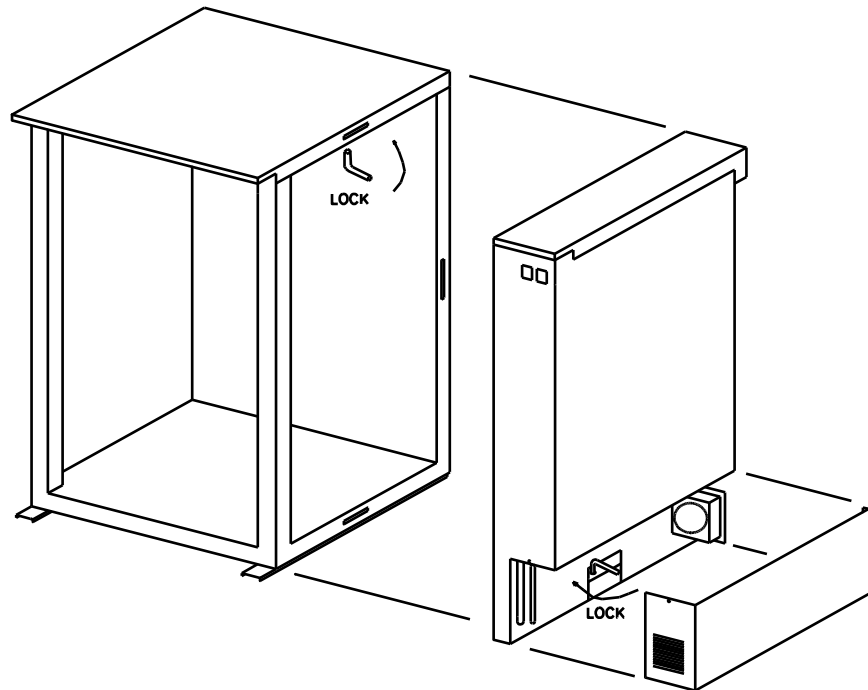


Figure 4 - Remote Assembly

The Remote evaporator is fitted to the add-on modules with three camlocs in the same way as the standard barcooler modules. To access the camloc in the base of the remote evaporator remove the lower access panel. This access panel is removed by undoing the fixing screw at the front and sliding the panel forward and down off the locating pegs at the rear. Re-assembly is the reverse of this process.

To ensure positive alignment, the cabinets have dowels that engage in holes in the adjacent cabinet or end panel. Ensure all wires are free from being trapped or damaged. Make the electrical connection between the units by connecting the plugs and sockets at the top of each module. It will be necessary to remove the blank plug ends to do this.

All units are fitted with adjustable feet at the front to level the units after joining together.

Recommended defrost drain

Defrost water can be removed by the built-in evaporating system. But it is recommended that it is disposed of by means of a hose, connected to the evaporator drain tube. This is done as follows:

1. Removed the access panel
2. Loosen the two screws securing the drip tray and remove the tray
3. Remove the heater wires from the terminal block (located above the drip tray)
4. Replace the drip tray and tighten the screws
5. Connect a drain hose to the drain tube
6. Refit the access panel

PREPARATION / OPERATION

For all installations,

- 1 Plug in and switch on at the mains.
- 2 Check both refrigeration front panel switches operate. The mains 'POWER' switch controls all power to the unit, so that the lights will only operate if the mains switch is on. Switch on 'POWER' switch at the front of the unit, and then switch on the 'LIGHT' switch. Check that all lights are working and that the thermostat is set to 5. If lights are still not lit, then check the ON/OFF switch located on the body of the fluorescent light(s) itself.
- 3 Run the units completely empty, with the doors shut and check temperature at 5, 10 and 30 minutes. The temperature should stabilise at between 4°C and 12°C, depending upon the ambient.
- 4 The temperature can be adjusted using the internal thermostat. Turn the knob clockwise to reduce the internal temperature, anticlockwise to increase it. Do not set higher than 5, as this will cause the evaporator to freeze up.
- 5 Leave the units to run for 2 hours before loading with merchandise so that all internal parts reach the correct operating temperature.
- 6 Load the cabinet with cans and/or bottles. Do not obstruct the grill at the bottom of the cabinet.
- 7 When the unit is not going to be used for several weeks, run it for 24 hours after emptying, to ensure that all condensate water evaporates.
- 8 Extra shelves and special shelves for the storage of wine bottles are available from IMC.

MAKING THE BEST USE OF THE CABINETS

DO NOT OVERLOAD THE CABINET. There should be a gap of at least **40mm** above the merchandise on the top shelf, and merchandise should be spaced to allow the circulation of cooled air throughout the cabinet. Do not load the cabinet with boxed goods as this prevents air circulation.

DO NOT place hot or warm goods in the cabinet. Only goods at room temperature or less should be placed in the unit otherwise performance will be affected.

DO NOT run unit with doors open, as this will cause the evaporator to ice up preventing the unit from working efficiently.

Ensure the front grille is always unobstructed.

Clean doors and the surfaces, and occasionally remove all merchandise and clean interior surfaces with a damp soft cloth. **DO NOT USE CLEANING MATERIALS CONTAINING ABRASIVES OR BLEACHES.** In the case of heavy soiling use a mild liquid detergent. The unit can be washed on the inside using bicarbonate of soda to remove stale smells.

MAINTENANCE

Undo the screw securing the refrigeration module front panel and remove the panel . Clean the compressor coil with a brush and vacuum cleaner every months or when dirty (whichever is sooner). Replace the front panel.

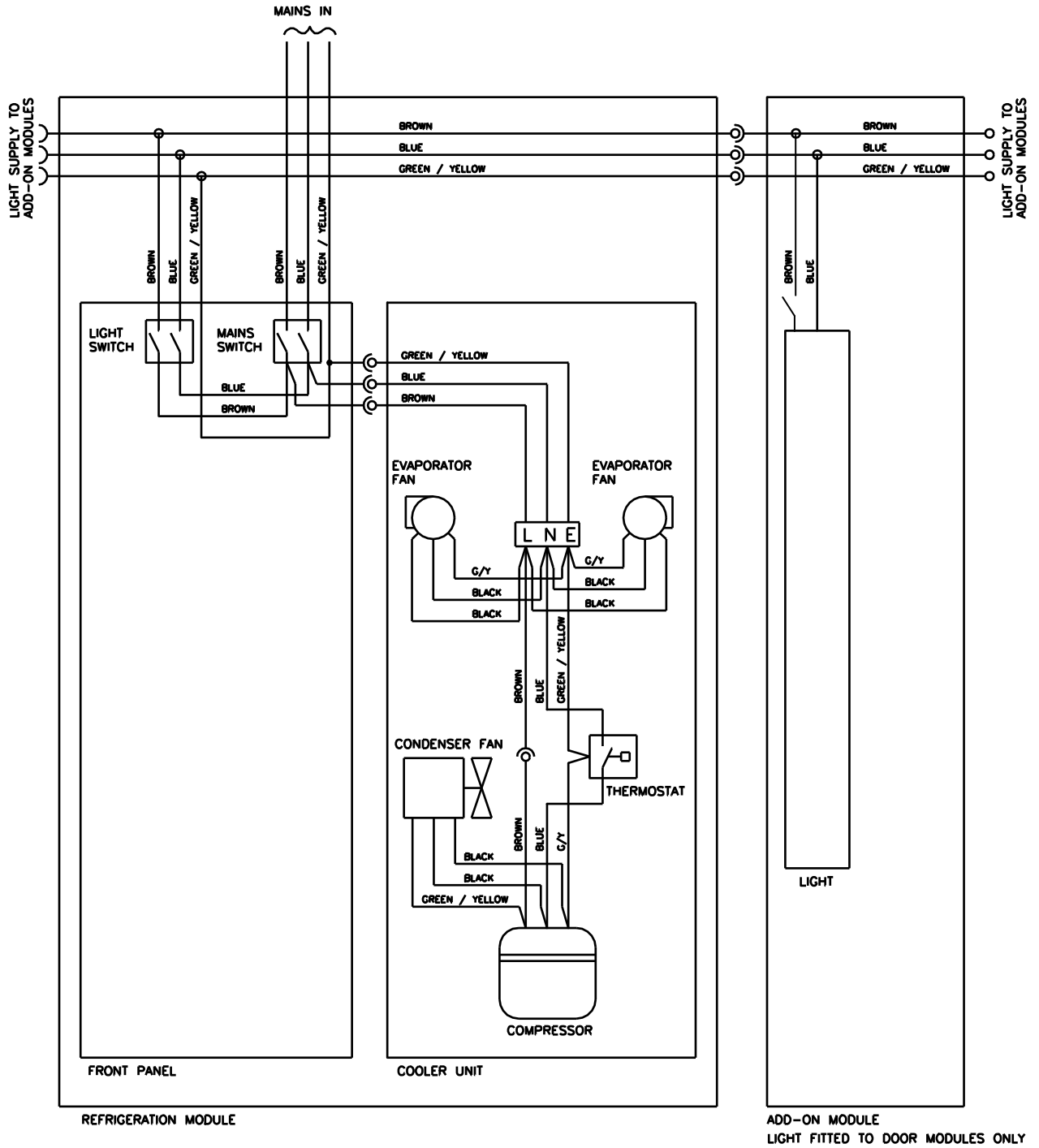
Other than regular cleaning the Barcooler requires no maintenance by the end user. It is recommended that an IMC approved engineer services the unit at least once a year.

For further advice or assistance, contact the supplier of your cabinet.

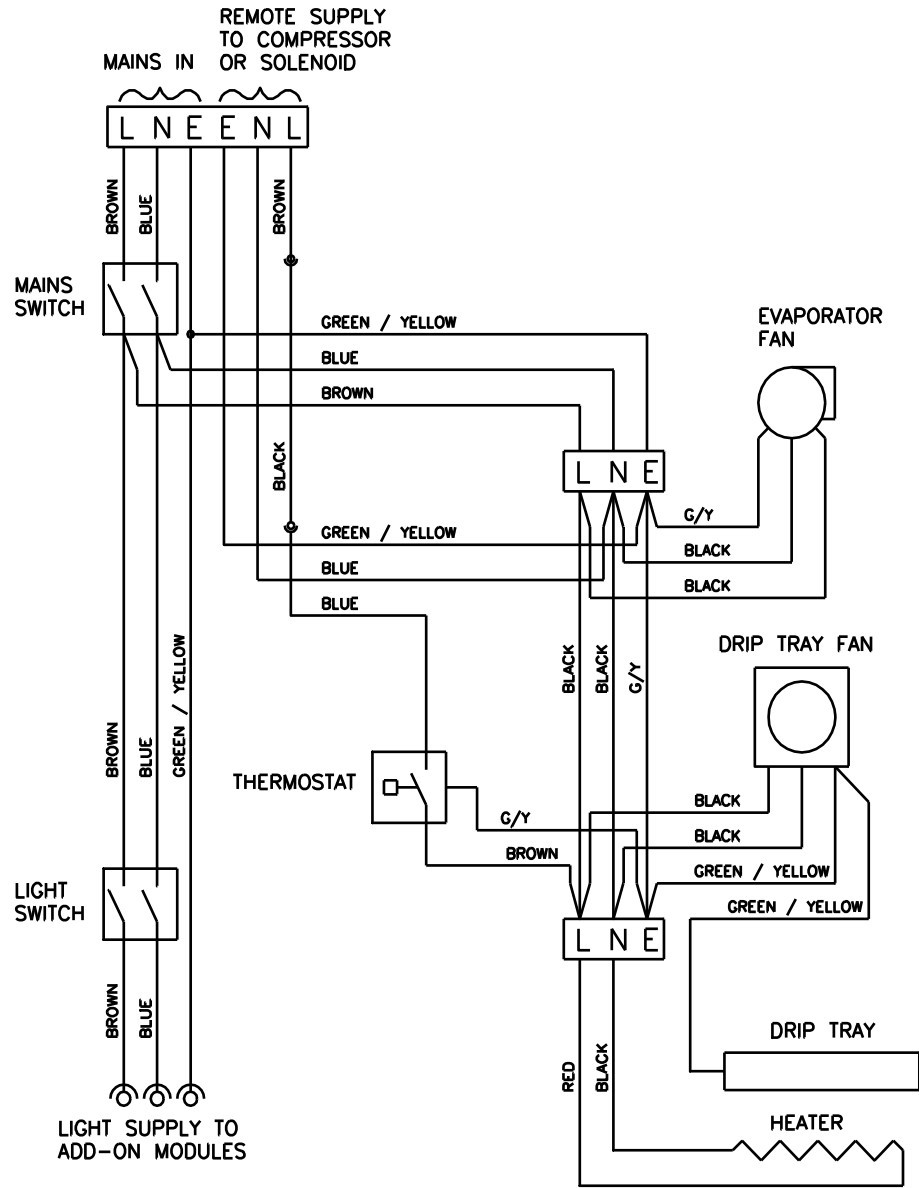
No maintenance is required for Remote units except for maintaining the condenser as per manufacturers instructions.

WIRING DIAGRAMS

Barcooler



Barcooler Remote



ORDERING SPARE PARTS

In the event that spare parts or accessories need to be ordered, please always quote the SERIES AND SERIAL NUMBER of the machine. This is to be found on the rating plate located near the supply cable.

For installations outside the UK please contact your supplier.

For information on IMC spares and service support (if applicable), please call IMC on +44 (0)1978 661155. Alternatively, contact us via email or fax:

IMC Service Desk

Fax: +44 (0)1978 667766

E-mail: service@imco.co.uk

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