MISTRAL M60, M90, M135 AND TC60

INSTALLATION, OPERATING & MAINTENANCE MANUAL

PLEASE LEAVE WITH OPERATOR

MISTRAL M60, M90, & M135 – SERIES 12

M90 SLIDING DOOR – SERIES 12

M60HA & M90HA – SERIES 2

MISTRAL TC60 – SERIES 11

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A34/002 R20 **ECN 8704 JANUARY 2018**

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 machines

MISTRAL M60, M90 & M135 SERIES 12
MISTRAL M90SD SERIES 12
MISTRAL M60HA & M90HA SERIES 2
MISTRAL TC60 SERIES 11

as described in the attached technical documentation, are in conformity with the protection requirements of the Electromagnetic Compatibility Directive 2004/108/EC and manufactured in accordance with harmonised standards EN 61000-6-1: 2001 Immunity and EN 61000-6-3: 2001 Emissions (plus product specific standards).

They also satisfy the essential health and safety requirements of the Low Voltage Directive 2006/95/EC and are manufactured in accordance with standards BS EN 60335-1 and BS EN 60335-24, and the relevant requirements of the Pressure Equipment Directive 97/23/EC.

Approved by E.Plumb

Signed at Wrexham,

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GUARANTEE

The Mistral M60, M90, M135 & TC60 units are guaranteed by IMC for 2 years from the date of their 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 purchaser. 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.

The guarantee applies in this form to installations within the United Kingdom.

Please observe these instructions carefully.

DELIVERY

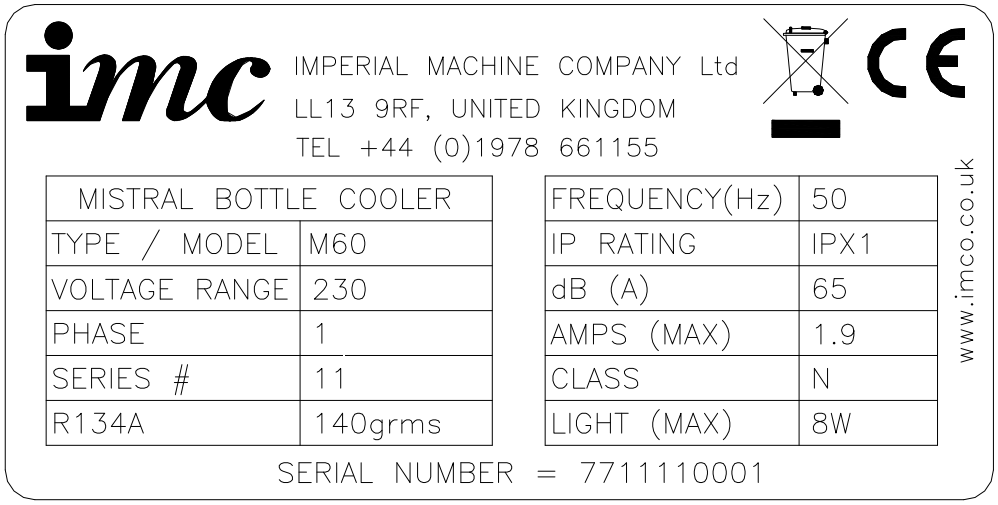
The packaged machine consists of:

M60 Bottle Cooler containing:	
Shelves	2
Shelf clips	8
Sets of keys	1
M90 Bottle Cooler containing:	
Shelves	2
Shelf clips	12
Sets of keys	2
M135 Bottle Cooler containing:	
Shelves	4
Shelf clips	16
Sets of keys	3
TC60 Bottle Cooler containing:	
Shelves	5
Shelf clips	20
Sets of keys	2
Instruction Booklet	1

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

Check that the correct machine has been supplied and that the voltage, marked on the rating plate, is suitable for the supply available. The rating plate is located on the right hand side of the case.

SAMPLE RATING LABEL

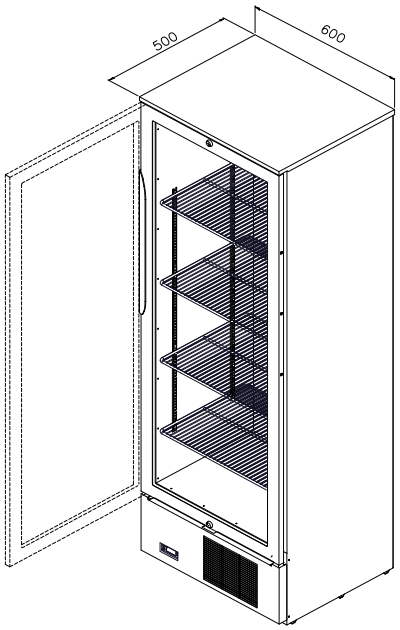


INTRODUCTION

The Mistral M60, M90 and M135 are backbar or underbar refrigerators designed for the cooling and storage of beverages. The Mistral TC60 is a full height backbar refrigerator.

The following quantity of beverage bottles can be held in each unit:

Bottle Cooler	Capacity (330ml Bottles)
M60	135
M90	204
M135	306
TC60	272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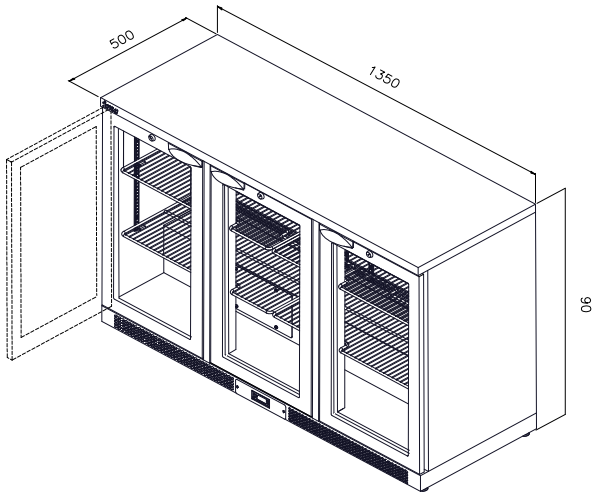
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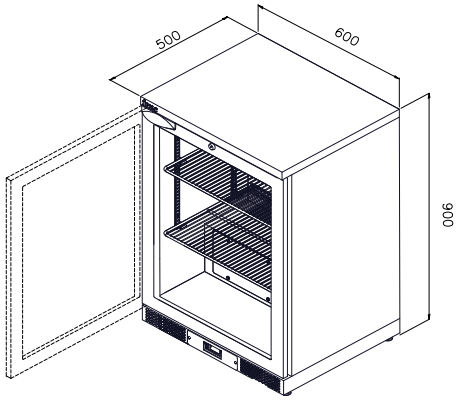
1350
90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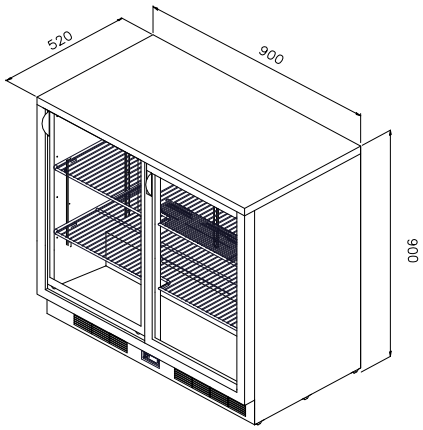
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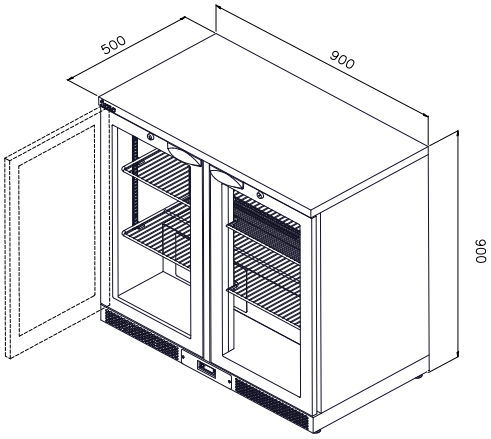
900

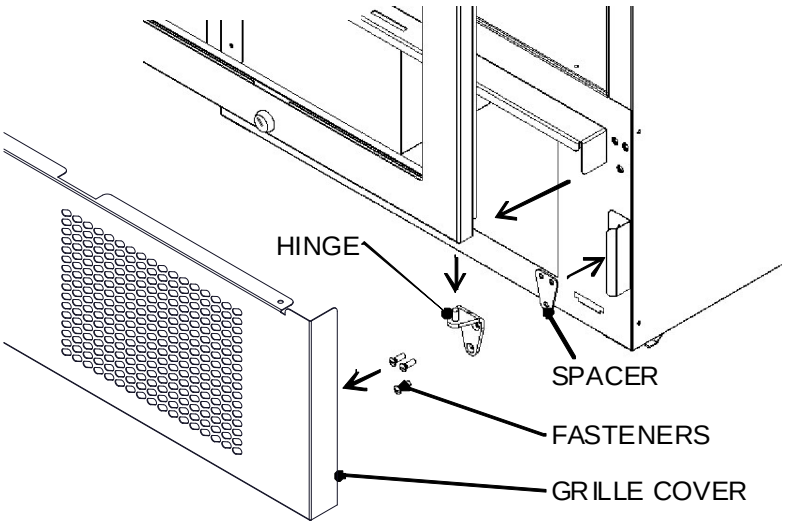

500
900
900

REVERSING DIRECTION OF DOOR (TC60)

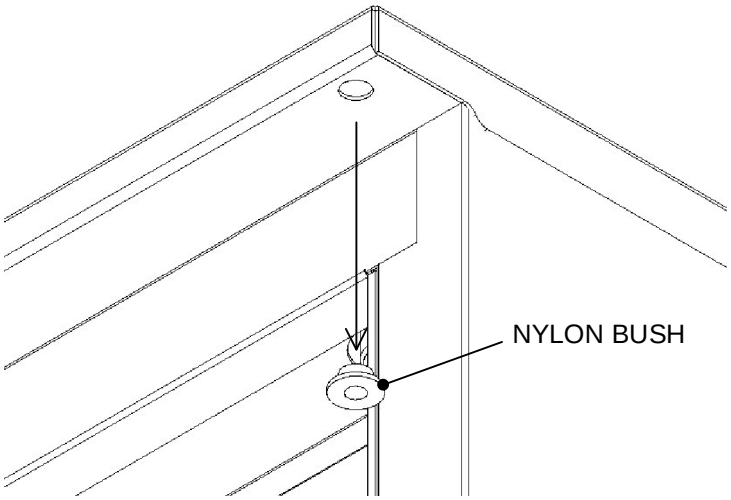
On delivery the door of the Mistral TC60 is hinged on the right hand side of the cabinet. However, it is possible to move the hinge to the other side of the cabinet by following the steps below.

To change the TC60 door:

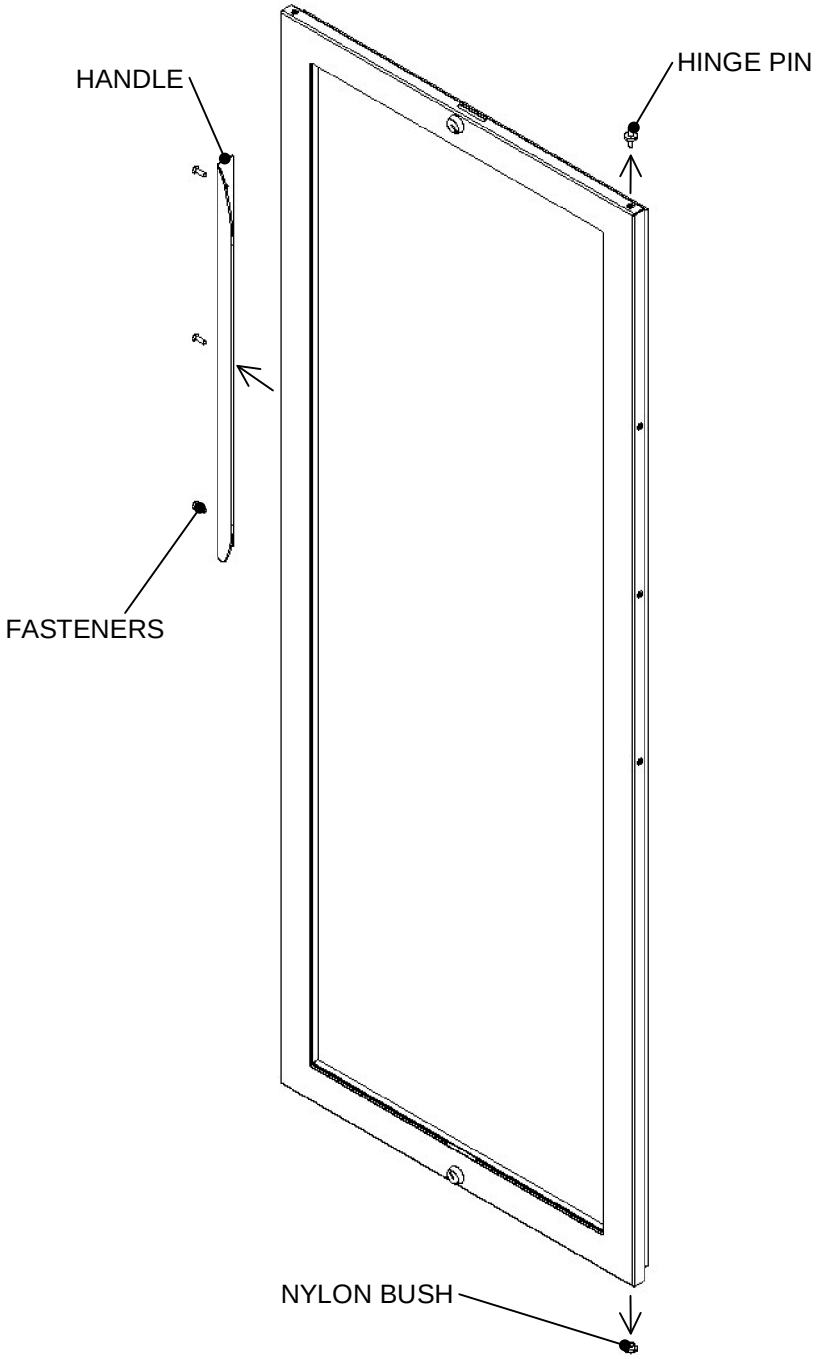
- Remove the grille cover by moving the cover upwards and then unhooking the lugs from the bottom of the cabinet.
- Hold the door in its closed position to prevent the door from dropping when the hinge fixings are removed.
- Unscrew the hinge fixings.
- Remove the hinge and triangular spacer.
- Place the door on the ground.



- Remove the Nylon bush which is located on the underside of the worktop and push it into the hole on the left hand side.



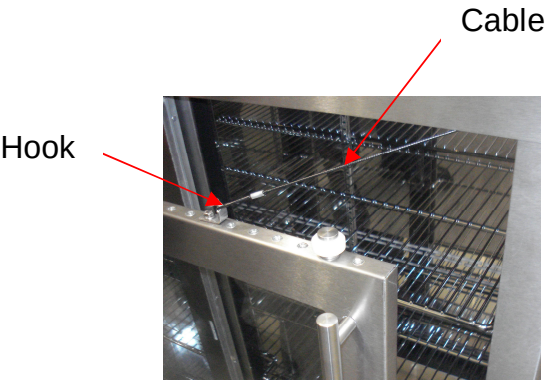
- Unscrew the fixings retaining the door handle and the hinge pin.
- Remove the door handle.
- Refit the door handle on the right hand side of the door and screw in the handle fasteners.
- Apply one drop of Loctite Studlock 270 to the hinge pin thread.
- Refit hinge pin on the left hand side of the door.
- Remove the Nylon bush which is located on the underside of the door and push it into the hole on the left hand side.



- Refit the door making sure the hinge pin is inserted into the nylon bush which is in the worktop.
- Refit the hinge and screw in the fasteners making sure the triangular spacer is clamped between the hinge and the cabinet.
- Refit the grille cover as described at the beginning of this section.

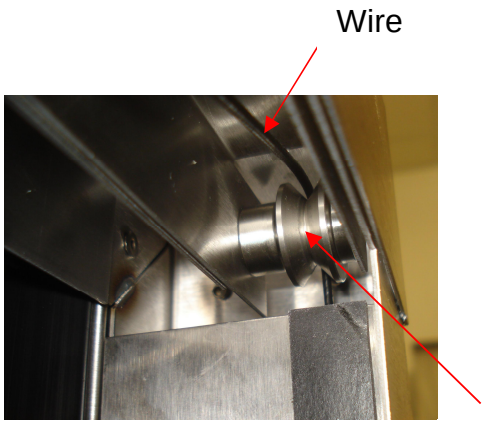
M90 SLIDING DOOR REMOVAL & TROUBLE SHOOTING

To remove the door lift the door upwards and swing the bottom out from the bottom roller guide

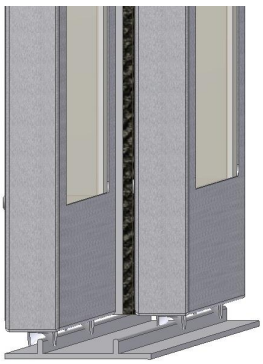


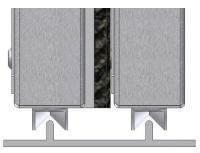
Un-hook the cable from the hook in the top of the door, the door can now be fully removed from the unit

If the door is not opening and closing freely check the following



Ensure the top wire is positioned in the top roller correctly





Ensure the bottom roller is positioned in the bottom guide rail correctly

ELECTRICITY SUPPLY CONNECTION

Position the unit in the chosen site. The electricity supply connection should be made to a power outlet socket or isolator mounted on the wall close to the machine. This socket or isolator must be accessible once the machine is installed. Before connecting, check that the voltage shown on the rating is correct for the electricity supply you have available. If the plug does not fit your sockets or a longer lead is required, changes must be made by an approved electrician.

NOTE: The plug is fitted with a 10amp fuse.
The plug fuse cover must be refitted when changing the fuse. In the event of losing the fuse cover the plug must NOT be used until a replacement fuse cover has been obtained and fitted or the plug replaced.

WARNING: This machine must be earthed

Should the supply cord become damaged then a replacement must be fitted by an approved electrician. The IEE Codes of Practice must be observed.

The wires in the mains lead are coloured in accordance with the following code

Green and yellow	Earth
Blue	Neutral
Brown	Live

COMMISSIONING

Before using a bottle cooler for the first time, the interior should be wiped out with a clean damp cloth.

Allow the machine to stand for 1 hour to allow the refrigerant to settle. Plug in and switch on at the wall socket. There is no separate switch to turn on the machine. The compressor will start running =<15 seconds after the supply is switched on.

Check that the light is working. The light switch on the Mistral M60, M90, M90SD and M135 is located on the left hand side of the light fitting. The light switch on the Mistral TC60 is located inside the cabinet on the right hand end of the inner upper back panel.

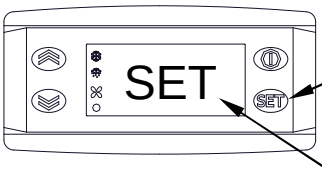
Run the unit empty, and check that cold air is being circulated within the cabinet.

The Mistral range has an electronic temperature controller that is factory set to control at +4 ±2°C and will cycle the air temperature between 2°C and 6°C at an ambient between +10 and +32°C.

The High Ambient version has an electronic temperature controller that is factory set to control at +5 ±2°C and will cycle the air temperature between 3°C and 7°C at an ambient between +32 and +43°C.

The set point can be adjusted between 0°C and 10°C for standard units and 4°C and 18°C for High Ambient versions by following the button sequence below:

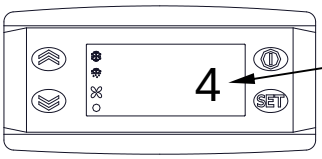
1)



Press the SET button once

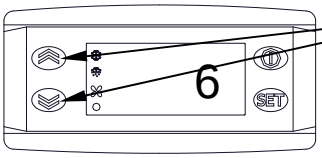
ñSETò will appear

2)



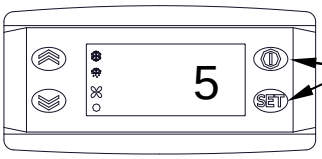
Then press SET button again, current set point temperature is displayed

3)



Using the up and down buttons, scroll to the desired set point temperature (min 0°C, max 10°C)

4)



Press SET button to accept

Then press stand-by button to esc. Display will revert back to current internal air temperature. If depressed for more than 5 seconds this button will also switch the unit off. Display will show ñOFFò

Extra shelves are available from IMC.

USING YOUR BOTTLE COOLER

This unit is for cooling bottles and cans only, do not load the cabinet with boxed goods as this prevents air circulation and the goods will not cool down as quickly. While loading ensure that the interior grilles are not obstructed by the bottles.

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. When stocking the unit it is recommended that this is done after closing at night or first thing in the morning to allow time for the bottles to cool. Ensure that stock is rotated by placing new stock at the back of shelves or in one side of the cabinet to ensure that colder bottles are served first.

Do not leave the doors open when the unit is running, as this causes the evaporator to ice up, preventing the unit from operating efficiently.

Ensure that the front grille is always unobstructed.

Units must not be used to store food.

CLEANING

Clean doors and surfaces as required, occasionally remove all merchandise and clean interior surfaces, with a clean damp cloth.

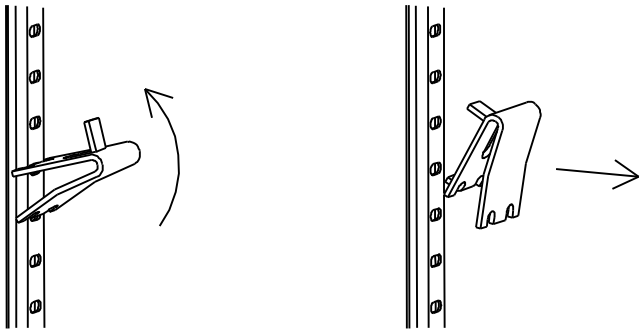
DO NOT USE CLEANING MATERIALS CONTAINING ABRASIVES OR BLEACHES.

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.

CHANGING SHELF POSITION

The shelves in all Mistral units are fully adjustable. To adjust the shelves:

- Remove the shelf.
- Unclip the shelf supports as shown below.



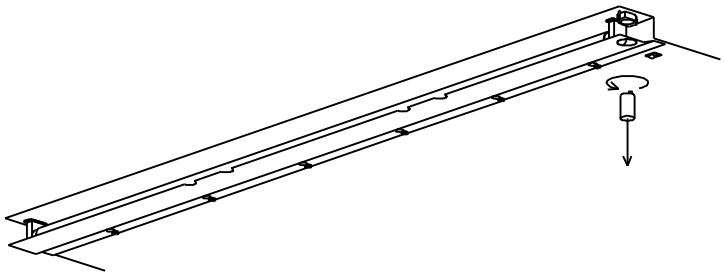
- Hook the shelf supports in the required location.
- Ensure all shelf supports are at the same height for a level shelf. The support strips are numbered to aid positioning.
- Replace the shelf.
- On the M135 also replace the shelf clip to the front at the joint of the shelves.

CHANGING THE LIGHT BULB AND STARTER TC60

For the Mistral TC60 the cabinet interior is illuminated by a fluorescent tube located at the front of the right-hand inner side panel. The starter for the tube is located at the top of the light cover. The light switch for the tube is located at the top front corner of the right-hand inner side panel.

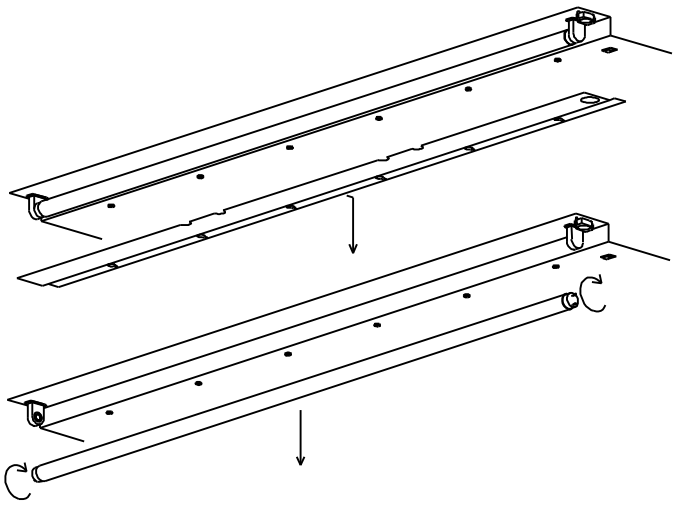
To change the starter:

- Open the front cabinet door(s).
- Ensure the light switch is in the off position.
- The starter can be seen protruding through the light cover.
- Rotate the starter anticlockwise and remove
- Fit a new starter and rotate clockwise to secure.



To change the tube:

- Remove the starter as described above.
- Pull out all the light cover clips and remove the light cover.
- Rotate the tube by 90° and gently pull it downwards.
- Place a new tube in the tube end caps and rotate by 90° to secure.
- Refit the light cover and push in the light cover clips.
- Replace the starter as described above.

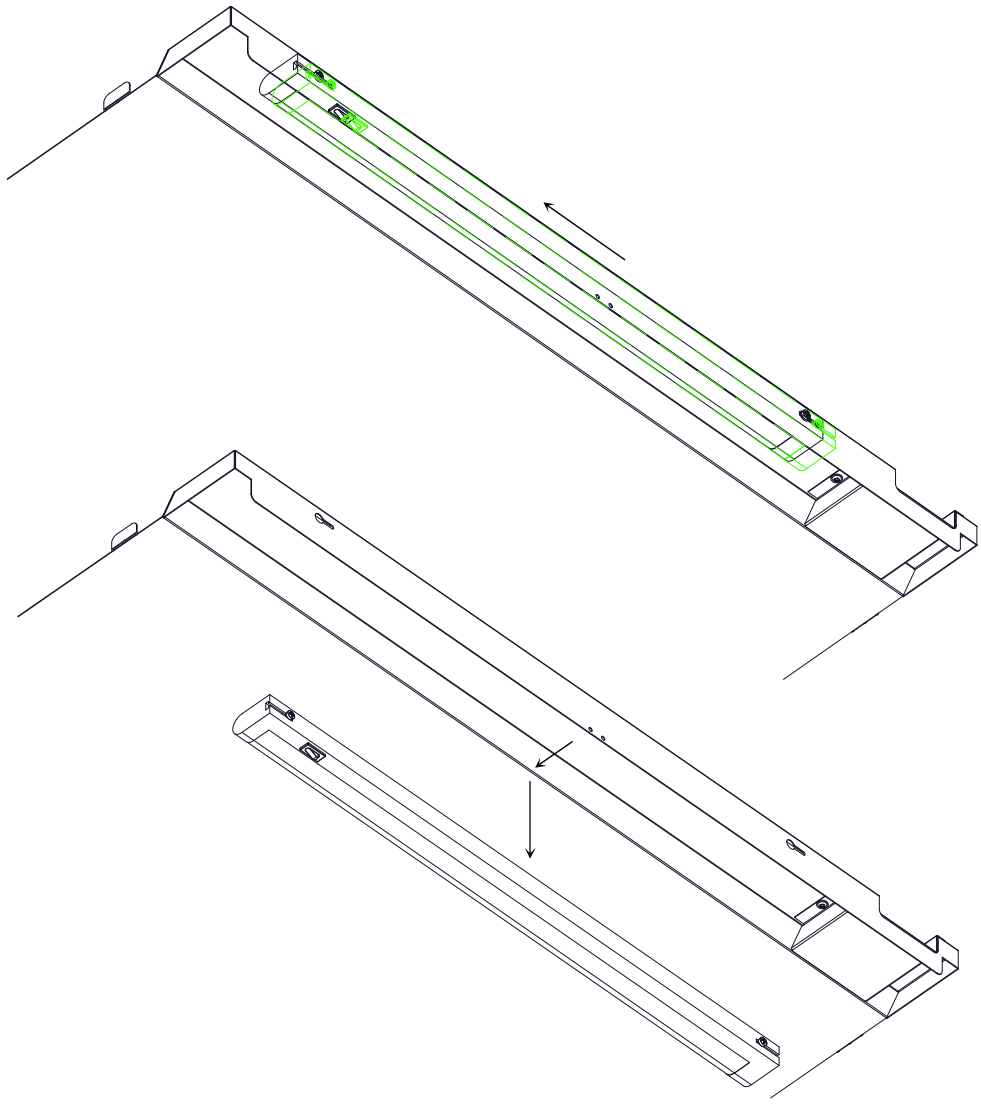


CHANGING A FLUORESCENT STRIP LIGHT FITTING M60, M90, M90SD & M135

The M60, M90, M90SD & M135 cabinet interior is illuminated by a fluorescent fitting located at the front of the top inner panel. The switch is located at the left-hand end of the strip light fitting.

To change the fitting:

- Open the front cabinet door(s)
- Ensure the mains power to the unit has been turned off
- Slide the fitting to the left
- Pull the fitting out from the key-hole slots
- Remove power cable from the right-hand end of the fitting
- Connect the new fitting to the power cable and insert into the key-hole slots
- Slide the fitting to the right until it stops
- Re-connect the mains power and ensure the light illuminates by means of the switch.



MAINTENANCE

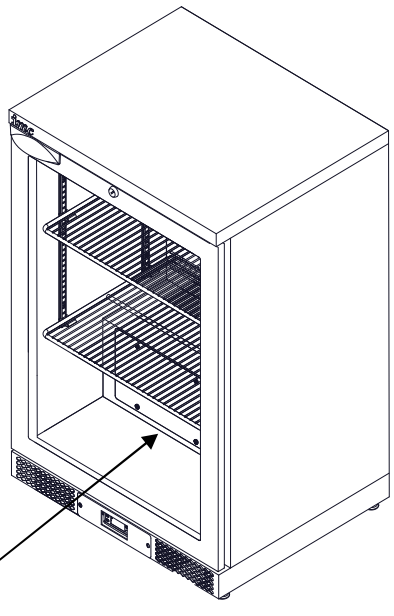
Warning
Never service, repair or troubleshoot a unit unless you are a professional air conditioning / refrigeration service person. Improper servicing can lead to serious injury or death from fire, electric shock or explosion.

TC60

Remove the front grille cover. Clean the compressor coil with a brush and vacuum cleaner every three months or when dirty (whichever is sooner). Replace the grille cover.

M60, M90, M90SD and M135

Every three months switch off the unit and remove the contents to gain access to refrigeration service panel. Remove the service panel and insulation. Clean the condenser coil and compressor with a brush and vacuum cleaner. Refit the insulation and service panel. Restock the unit and switch on.



SERVICE PANEL

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

Details of IMC Service Contracts are available on application.

DO'S AND DON'TS

Do Install on a level surface.

Do Ensure plug is accessible with the unit installed.

Do Regularly clean the condenser and compressor.

Do Rotate stock of bottles.

Don't Sit or stand on the unit worktop.

Don't Load with boxed goods.

Don't Leave the doors open.

Don't Cover the shelves with any protective materials which may obstruct air circulation through them

Don't Install unit in direct sunlight.

Don't Block the air inlet grilles.

Don't Store food in the unit.

Don't Place hot or warm goods in the unit.

Don't Use the unit outside.

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:

IMC Service Desk	E-mail: service@imco.co.uk
IMC Spares Desk	E-mail: spares@imco.co.uk

END OF LIFE DISPOSAL

At the end of its useful life the unit must be disposed of correctly and safely, to meet the requirements of EU legislation regarding the recovery of ozone depleting substances. The unit must be sent to specialist recovery, recycling and disposal site that is licensed for the disposal of refrigerated equipment. Please note that the insulation in the Mistral range does not contain any ozone depleting substances. The refrigerant used in the Mistral range is R134a.

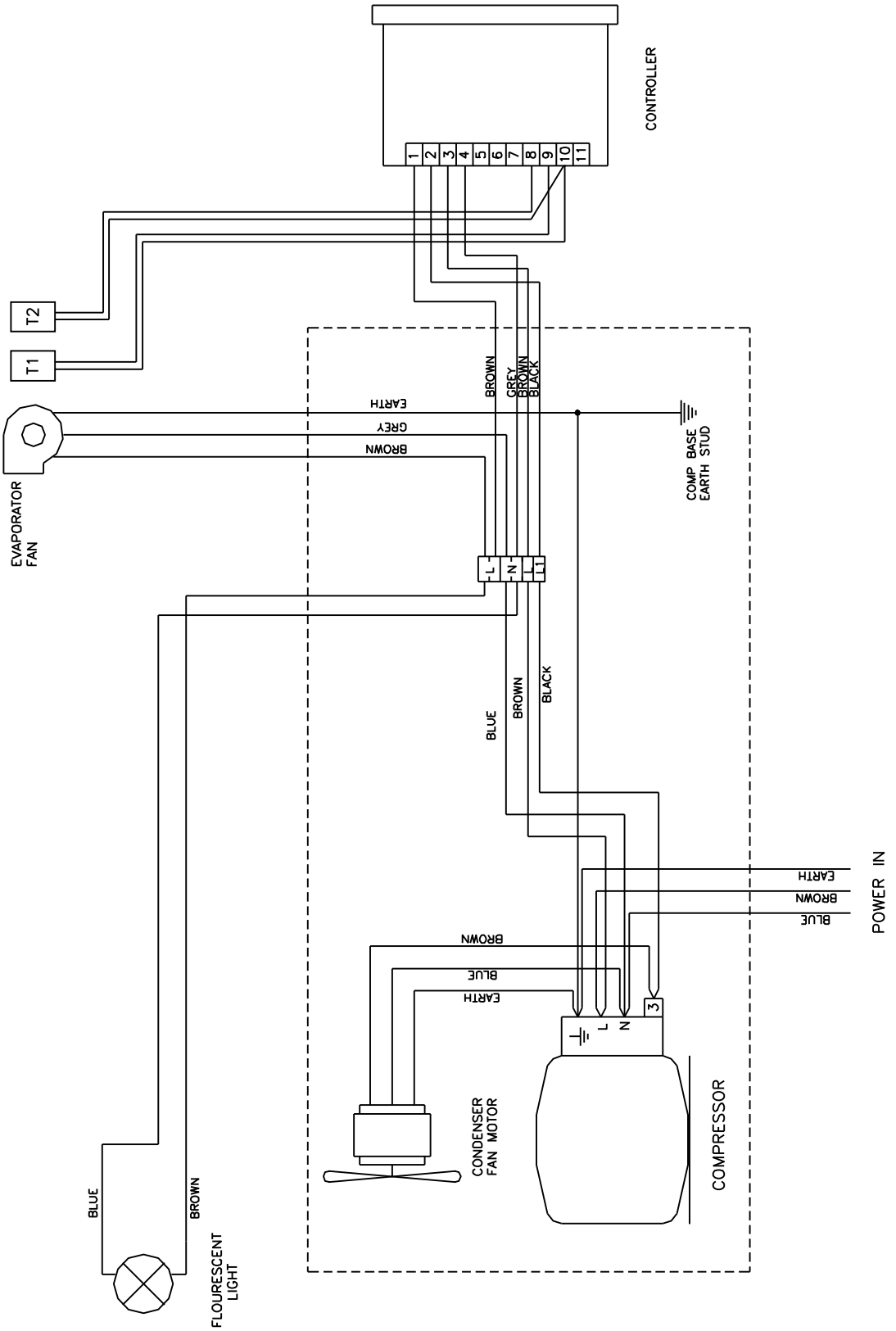
IMC can arrange removal of your redundant bottle coolers, transfer to safe storage and disposal. For more information contact IMC service department.

MATERIAL CONTENT

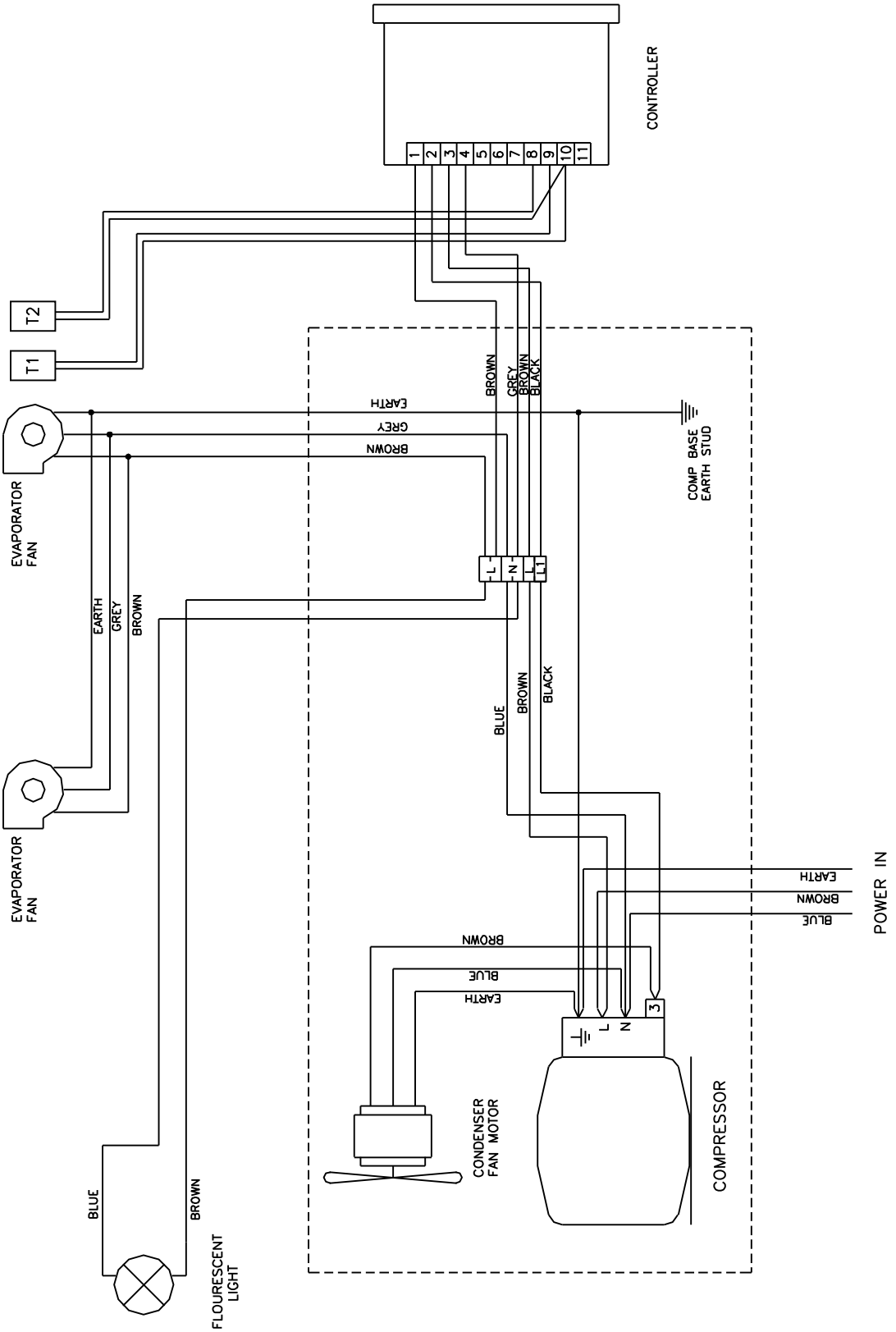
The Mistral units contain the following materials;

Metals	Stainless Steel, Mild steel (inc. Nickel Plated, Chrome Plated & Zinc plated), Aluminium and copper
Plastics & Rubber	PVC, Nylon, Polypropylene, Polycarbonate, Polyester, Acetate, Neoprene rubber and silicone rubber
Insulation	Polystyrene, Polyurethane foam
Oils & Gases	Ester oil, Refrigerant R134a
Other	Glass, Magnesium oxide, electronic components.

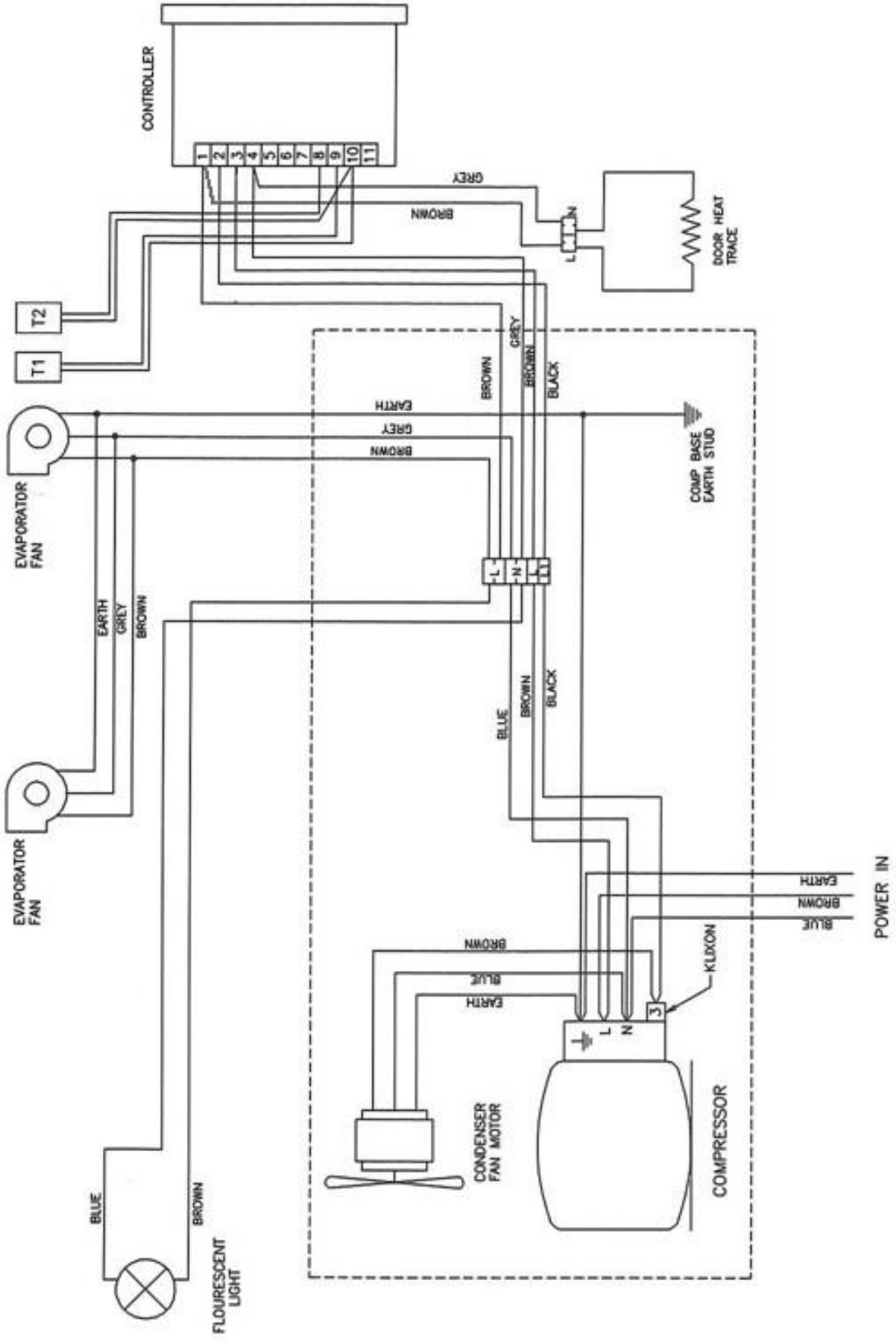
M60 WIRING DIAGRAM



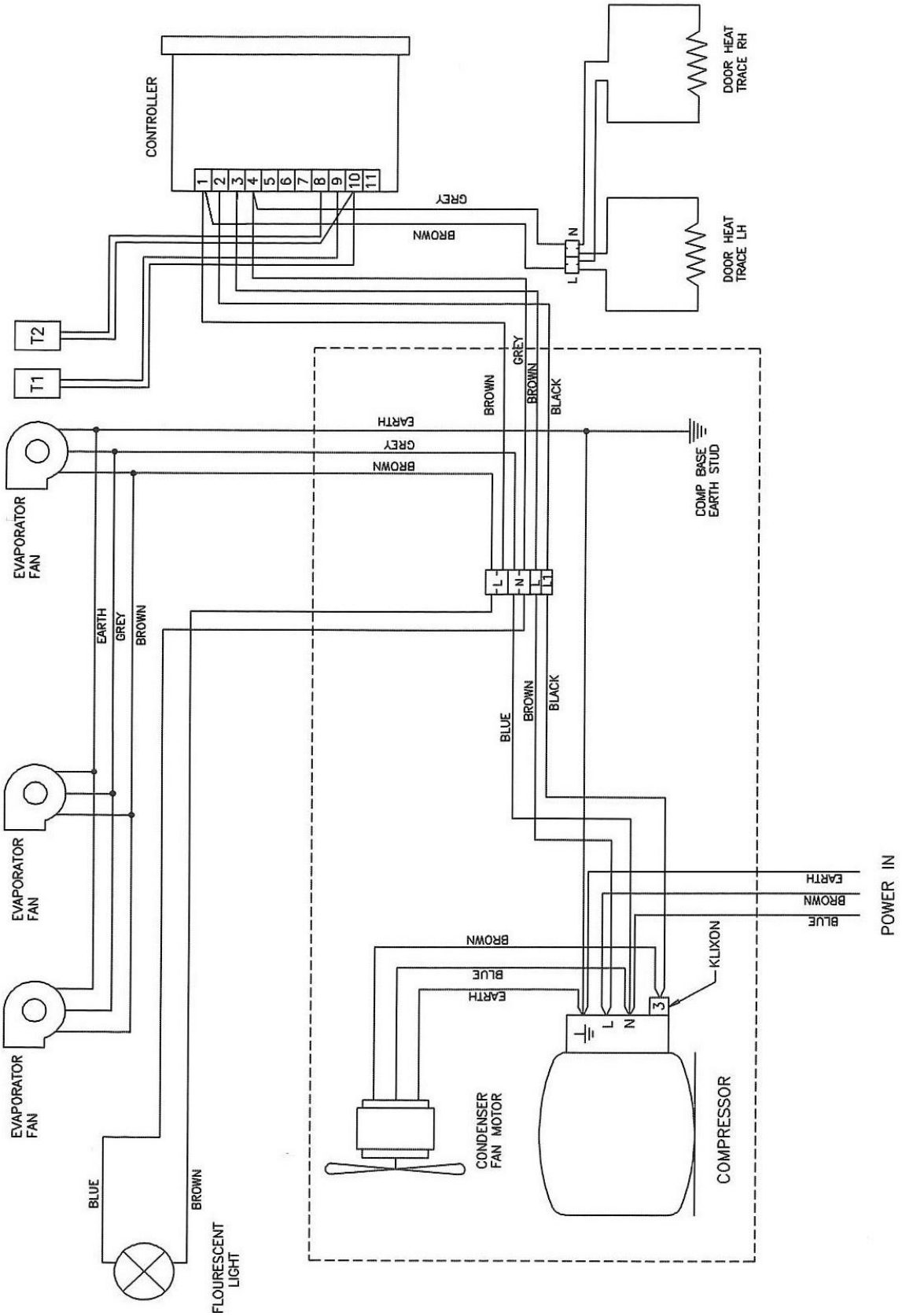
M90 & M90SD WIRING DIAGRAM



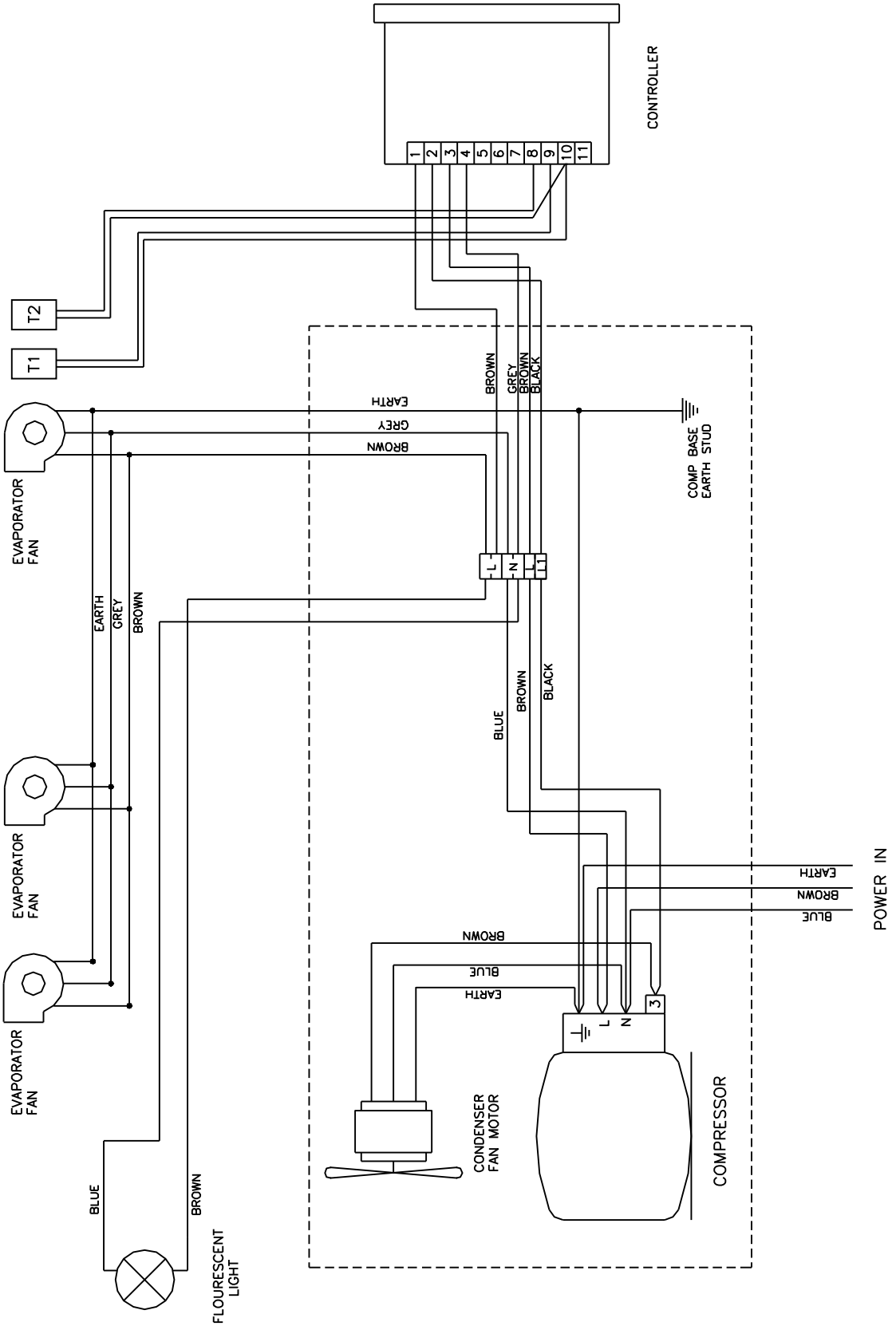
M60 HIGH AMBIENT WIRING DIAGRAM



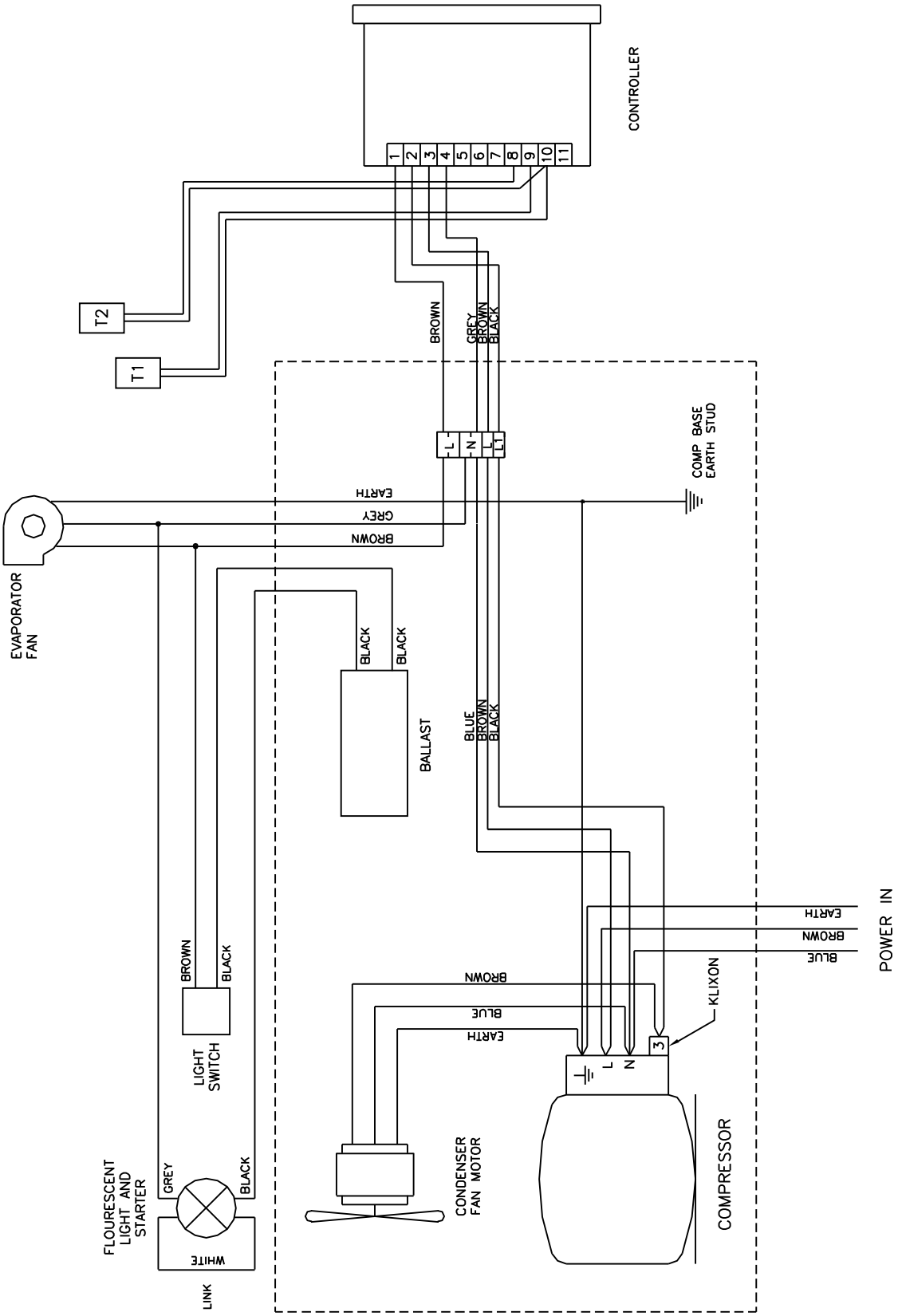
M90 HIGH AMBIENT WIRING DIAGRAM



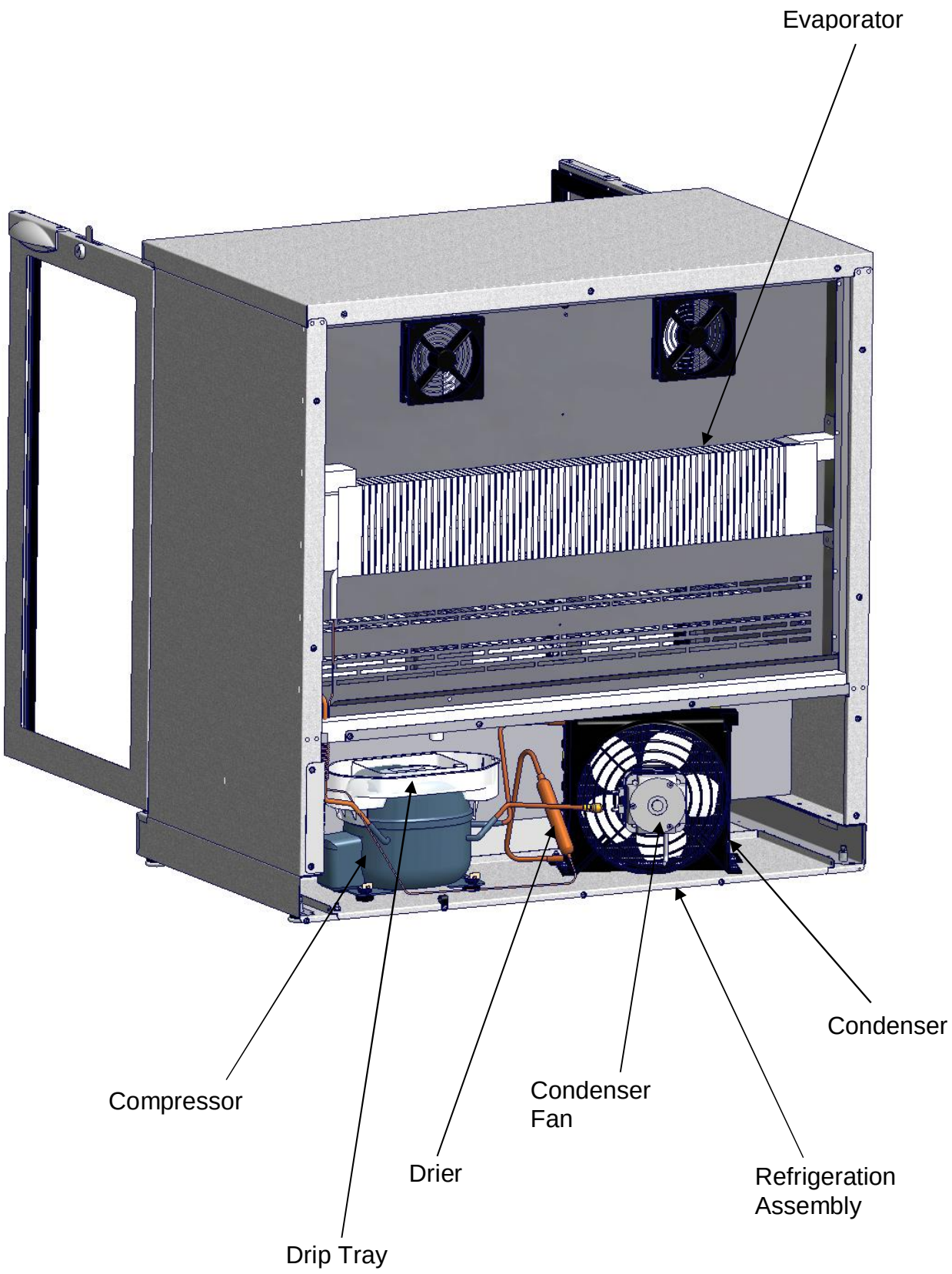
M135 WIRING DIAGRAM



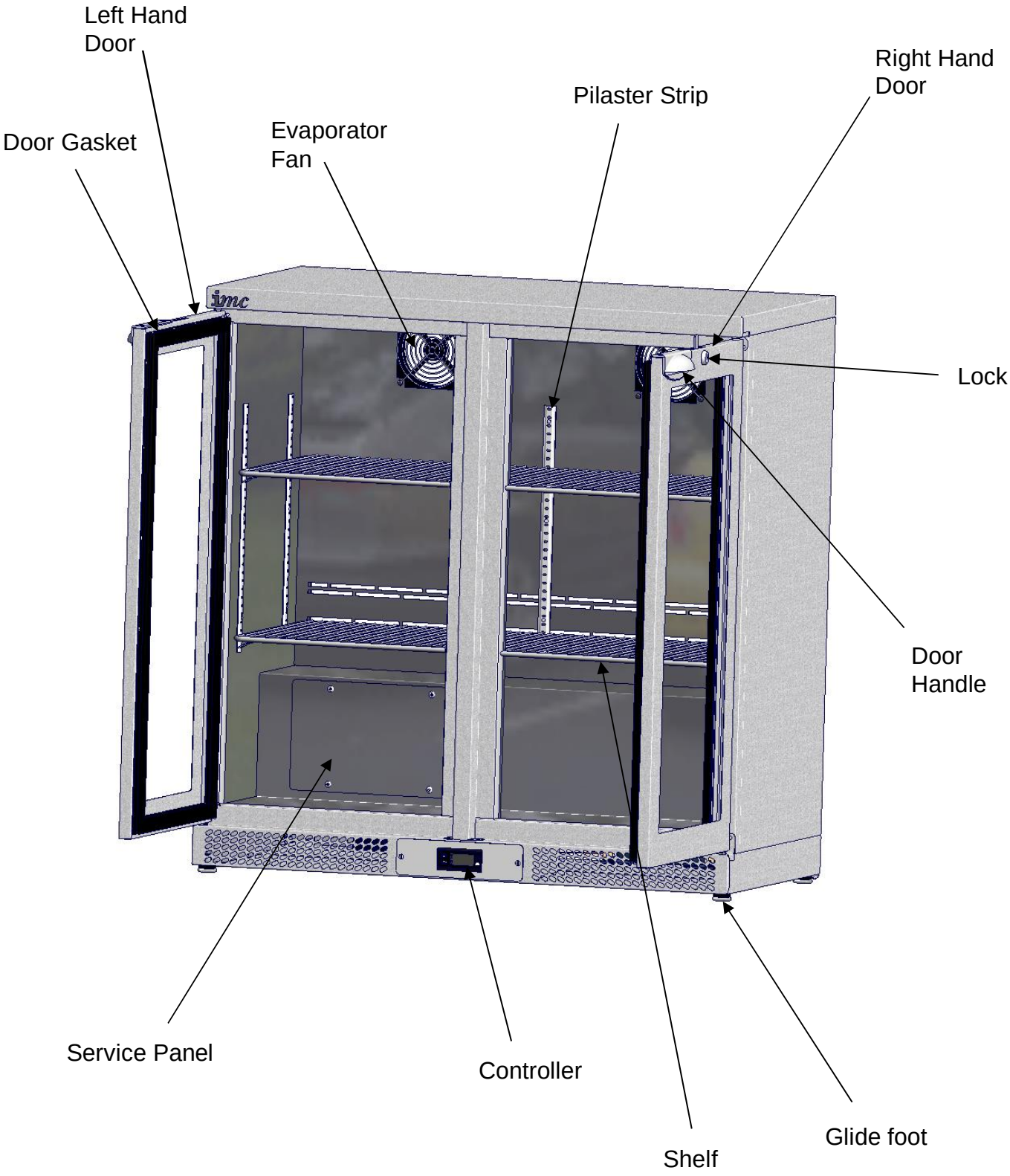
TC60 WIRING DIAGRAM



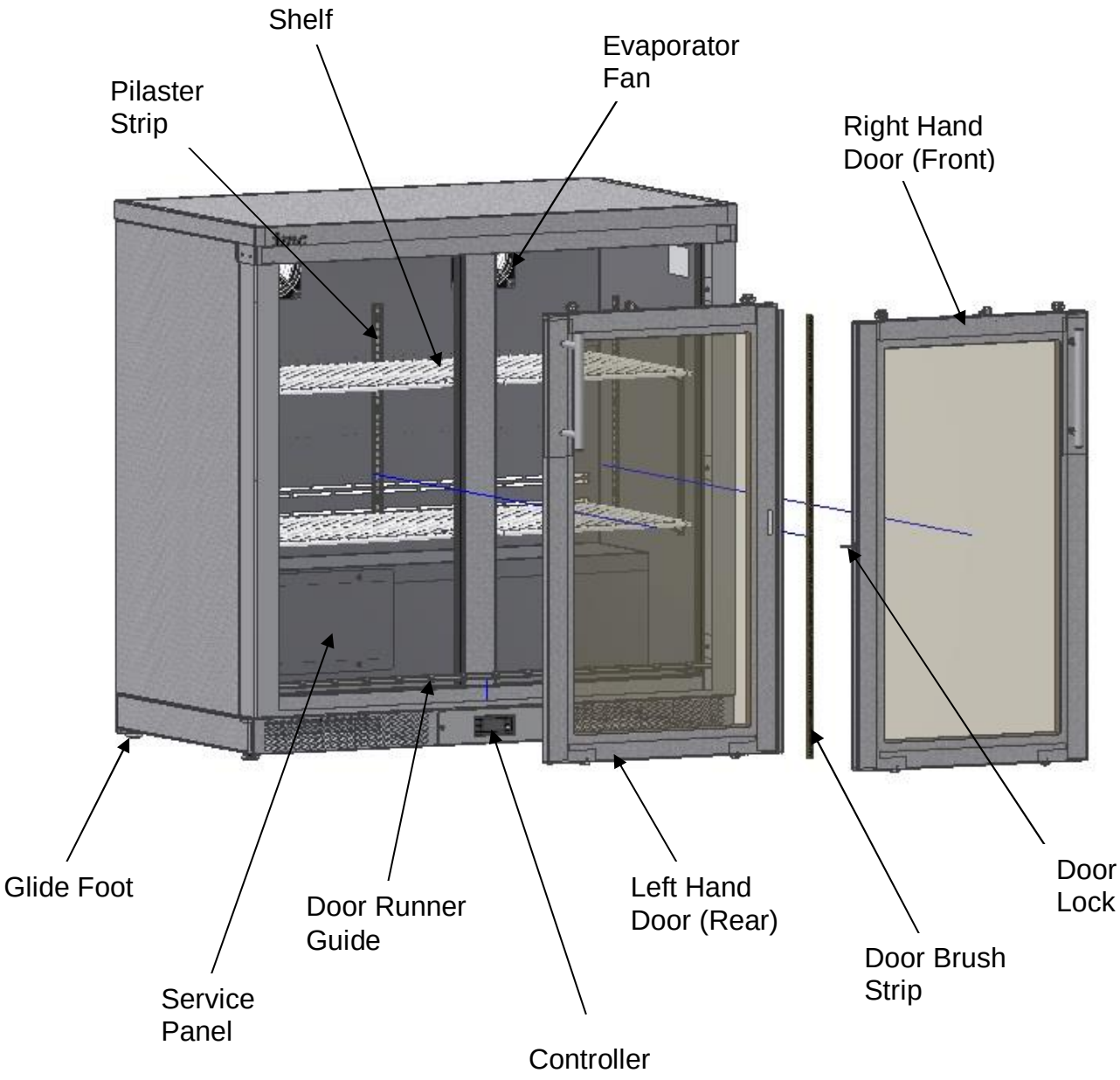
REAR VIEW SPARES GUIDE



FRONT VIEW SPARES GUIDE



FRONT VIEW SPARES GUIDE M90 SLIDING DOOR



SPARE PARTS LIST

Mistral M60 – Series 12		Mistral M90 – Series 12	
Part No	**Description**	**Part No**	**Description**
A11/276	Door Gasket	A11/275	Door Gasket
A12/073	Pilaster Strip	A12/073	Pilaster Strip
A12/091 Z1	Shelf	A12/092 Z1	Shelf
A12/100	Wine Shelf	A12/101	Wine Shelf
A12/036	Shelf Clip (4 per shelf)	A12/036	Shelf Clip (6 per shelf)
A19/027	Glider Foot	A19/027	Glider Foot
A21/011	Lock, clip & keys	A21/011	Lock, clip & keys
E76/221	Access panel	E76/221	Access panel
G30/420	Electronic Controller	G30/420	Electronic Controller
G30/450	Electronic Controller 115V	G30/450	Electronic Controller 115V
G42/020	Plastic Drip Tray	G42/020	Plastic Drip Tray
G60/348 M1	Mains Cable	G60/348 M1	Mains Cable
G60/349	Mains cable EU plug	G60/349	Mains cable EU plug
S77/007	Refrigeration Pack	S77/003	Refrigeration Pack
S77/007-220	Refrigeration Pack 220V-60Hz	S77/003-220	Refrigeration Pack 220V-60Hz
S77/007-115	Refrigeration Pack 115V-60Hz	S77/003-115	Refrigeration Pack 115V-60Hz
J09/054	Condenser/fan motor assembly	J09/046	Condenser/fan motor assembly
		G40/239	Condenser fan ï motor only
J09/026	Evaporator	J09/045	Evaporator
J09/007	Service Drier	J09/007	Service Drier
X08/057 (2mtr)	Capillary M60	X08/057 (3mtr)	Capillary M90
G96/049	Evaporator Fan	G96/049	Evaporator Fan
G96/052	Evaporator Fan 115V	G96/052	Evaporator Fan 115V
G50/132	Fluorescent Light 8W T5	G50/133	Fluorescent Light 14W T5
S77/014	Door Assembly LH M60	S77/016	Door Assembly LH M90
S77/015	Door Assembly RH M60	S77/017	Door Assembly RH M90

SPARE PARTS LIST CONT..

HIGH AMBIENT VERSIONS – M60HA & M90HA

Mistral M60HA – Series 2		Mistral M90HA – Series 2	
Part No	**Description**	**Part No**	**Description**
A11/276	Door Gasket	A11/275	Door Gasket
A12/073	Pilaster Strip	A12/073	Pilaster Strip
A12/091 Z1	Shelf	A12/092 Z1	Shelf
A12/100	Wine Shelf	A12/101	Wine Shelf
A12/036	Shelf Clip (4 per shelf)	A12/036	Shelf Clip (6 per shelf)
A19/027	Glider Foot	A19/027	Glider Foot
A21/011	Lock, clip & keys	A21/011	Lock, clip & keys
E77/270	Access panel	E77/270	Access panel
G30/420	Electronic Controller	G30/420	Electronic Controller
G42/045	Plastic Drip Tray	G42/045	Plastic Drip Tray
G60/348 M1	Mains Cable	G60/348 M1	Mains Cable
G60/349	Mains cable EU plug	G60/349	Mains cable EU plug
S77/037	Refrigeration Pack HA	S77/047	Refrigeration Pack HA
J09/049	Condenser/fan motor assembly	J09/046	Condenser/fan motor assembly
		G40/239	Condenser fan ï motor only
J09/026	Evaporator	J09/045	Evaporator
J09/007	Service Drier	J09/007	Service Drier
X08/057 (2mtr)	Capillary M60	X08/057 (3mtr)	Capillary M90
G96/080	Evaporator Fan	G96/080	Evaporator Fan
G96/052	Evaporator Fan 115V	G96/052	Evaporator Fan 115V
G50/132	Fluorescent Light 8W T5	G50/133	Fluorescent Light 14W T5
S77/049	Door Assy LH M60HA with heat trace	S77/044	Door Assy LH M90HA with heat trace
S77/036	Door Assy RH M60HA with heat trace	S77/043	Door Assy RH M90HA with heat trace

SPARE PARTS LIST CONT..

Mistral M135 – Series 12		Mistral M90SD – Series 12	
Part No	**Description**	**Part No**	**Description**
A11/275	Door Gasket	A12/174	Brush Strip
A12/073	Pilaster Strip	A12/073	Pilaster Strip
A12/099	Shelf	A12/092 Z1	Shelf
A12/102	Wine Shelf	A12/101	Wine Shelf
A12/036	Shelf Clip (4 per shelf)	A12/036	Shelf Clip (6 per shelf)
A19/027	Glider Foot	A19/027	Glider Foot
A21/011	Lock, clip & keys	A21/042	Lock, clip & keys
E76/221	Access panel		
G30/420	Electronic Controller	G30/420	Electronic Controller
G30/450	Electronic Controller 115V	G30/450	Electronic Controller 115V
G42/020	Plastic Drip Tray	G42/020	Plastic Drip Tray
G60/348 M1	Mains Cable	G60/348 M1	Mains Cable
G60/349	Mains cable EU plug	G60/349	Mains cable EU plug
S77/021	Refrigeration Pack	S77/003	Refrigeration Pack
S77/021-220	Refrigeration Pack 220V-60Hz	S77/003-220	Refrigeration Pack 110V-60Hz
S77/021-115	Refrigeration Pack 115V-60Hz	S77/003-115	Refrigeration Pack 115V-60Hz
J09/054	Condenser/fan motor assembly	J09/046	Condenser/fan motor assembly
		G40/239	Condenser fan ï motor only
J09/026	Evaporator	J09/045	Evaporator
J09/007	Service Drier	J09/007	Service Drier
X08/057 (1.4mtr)	Capillary M135	X08/057 (3mtr)	Capillary M90SD
		G42/041	Compressor (240V 50Hz)
G96/080	Evaporator Fan	G96/080	Evaporator Fan
G96/052	Evaporator Fan 115V	G96/052	Evaporator Fan 115V
G50/134	Fluorescent Light 21W T5	G50/133	Fluorescent Light 14W T5
S77/026	Door Assembly RH M135	S77/209	Door Assembly RH M90SD
S77/025	Door Assembly LH M135	S77/208	Door Assembly LH M90SD
		L77/012	Door Runner Guide
		A29/010	Wire for Weights (self closing)

SPARE PARTS LIST CONT..

Mistral TC60 – Series 11	
Part No	**Description**
A11/264	Door Gasket
A12/055	Pilaster Strip
A12/041 Z1	Shelf
A12/082	Wine Shelf
A12/036	Shelf Clip (4 per shelf)
A21/011	Lock, clip & keys
G30/420	Electronic Controller
G30/450	Electronic Controller 115V
G60/348 M1	Mains Cable
G60/349	Mains cable EU plug
S67/052	Refrigeration Pack
S67/145	Door assembly
E67/154	Door handle
J09/025	Condenser
G96/017	Condenser Fan Blade
G96/040	Condenser Fan Motor
J09/027	Evaporator
J09/007	Service Drier
X08/057 (1.6mtr)	Capillary TC60
G42/003	Compressor
G96/020	Evaporator Fan
G50/037	Fluorescent Light tube
G50/038	Ballast
G50/026	Starter holder
G50/027	Starter FSU
G50/053	Lamp holder
G45/097	Light switch

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