

**MULTIDECK 1000-1200-1500-1800**

**MULTIDEKS  
OPERATION, MAINTENANCE AND INSTALLATION MANUAL**



<b>I. GENERAL INFORMATION</b>	<b>2</b>
<b>II. OPERATING INSTRUCTIONS</b>	<b>5</b>
<b>III. CONTROL PANEL</b>	<b>7</b>
<b>IV. MAINTENANCE INSTRUCTIONS</b>	<b>10</b>
<b>V. TECHNICAL INFORMATIONS</b>	<b>12</b>
<b>VI. COOLING DIAGRAM – ELECTRICAL WIRING DIAGRAM</b>	<b>16-17</b>
<b>VII. SERVICE DIAGNOSIS</b>	<b>18</b>
<b>VIII. REMOVAL AND REPLACEMENT</b>	<b>19</b>

**MULTIDECK 1000-1200-1500-1800**

**I. GENERAL INFORMATION**

**PRODUCT DESCRIPTION LABEL**

1 - Product Number
2 - Product Description
3 - Model
4 - Refrigerant (GWP)
5 - CO <sub>2</sub> Equivalent
6 - IP Protection
7 - Climate Class
8 - Production Date
9 - Total power / Current / Lamp power
10 - Voltage – Frequency
11 - Heating Element
12 - System Pressure
13 - Blowing Agent
14 - Serial Number

PRODUCT NUMBER	1
	
PRODUCT DESCRIPTION	2
MODEL	3
REFRIGERANT	4
CO <sub>2</sub> EQUIVALENT	5
IP PROTECTION	6
CLIMATE CLASS	7
PRODUCTION DATE	8
TOTAL POWER / CURRENT / LAMP POWER	9
VOLTAGE - FREQUENCY	10
HEATING ELEMENT	11
SYSTEM PRESSURE	12
BLOWING AGENT	13

S/N: 14 

HOSHIZAKI EUROPE B.V. Burgemeester Stramanweg 101 1101 AA Amsterdam, The Netherlands

**THE PURPOSE OF USAGE**

- This product is suitable for use in indoor areas only and solely for the purpose of storing food and beverages. Storage units are designed to maintain products already at refrigerator/freezer temperature.
- The manufacturer will not be held responsible for any damages arising as a result of usage contrary to stated guidelines in this book.
- While storing food in this cabinet, it is necessary to ensure that food never comes in contact with the body of this cabinet.
- All foods must be completely covered. To avoid contamination and corrosion of internal components all products should be wrapped or stored in sealed containers.
- Do not store hot foods or hot liquids in this cabinet.
- Beverages stored in boxes and glass bottles should not be stored at temperatures below 0°C (freezing point). Cans and glass bottles may burst due to expansion. All containers with lids should not be filled completely: a small amount of space should be left for expansion.
- This cabinet is equipped with an automatic self-defrosting facility. It is also possible to perform manual defrosting. The manual defrosting does not involve turning the cabinet off for long periods but can be performed via the controller. Under no circumstances should force or hand tools be used to de-ice this cabinet, any damage arising from such action is difficult to repair.
- Do not employ any mechanical or alternative means of defrosting.
- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction.
- Children being supervised not to play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.

## **MULTIDECK 1000-1200-1500-1800**

- This appliance can be used by children aged 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 the use of the appliance in a safe way and understand the hazards involved.
- Any electrical or mechanical changes to this cabinet will void the warranty. Changes carried out by non-authorized service engineers and changes other than those described in this manual will also void the warranty. The manufacturer will not accept any responsibility for damages arising from such changes.

### **CLIMATE CLASS**

The cabinet is designed to run within specific ambient temperature and humidity levels. These are set out in the climate class system. These levels are never to be exceeded. The climate class for this product can be found on the product description label.

<b>Climate Class</b>	<b>Ambient Temperatures and Humidity</b>
3	+25°C with %60 RH

### **FIRST ACCEPTANCE AND CONTROLS**

This cabinet was packed in protective packaging material for shipping. On delivery, please check the cabinet for any possible transport damage and that the cabinet model is what you ordered.



#### **IMPORTANT**

All operations listed below must fully comply with all local by laws and safety regulations. Observe all current safety rules when operating this product.

### **TRANSPORTING**

When lifting the product using machinery, the lifting capacity of any machinery must be verified prior to undertaking any such procedures.



#### **IMPORTANT**

When using a fork truck to move the product, please ensure that the forks are inserted into the appropriate openings in the pallet.

Once moving, attention must be paid to the stability of the product. If the center of gravity is not central to the product, which will make it prone to tip over. When lowering the product with a fork truck ensure this is done slowly and with care.

Should it become necessary to transport any upright cabinets in a horizontal position, please make sure the cabinet has been upright for at least 2 hours before operating. It is not recommended to transport upright cabinets in the horizontal position and any damage arising from such action is not covered by a warranty.

**MULTIDECK 1000-1200-1500-1800**



**ATTENTION**

Recommendations written on the outside of the transport packaging are for the user's benefit. Therefore, the following recommendations should be observed:

- Carry the product carefully.
- Keep the product dry. Do not use the top of the cabinet for storage!

**OPENING THE PACKAGING**

- Remove the cardboard and any other packaging material.
- Lift the cabinet to disconnect and remove it from the pallet.
- Place the cabinet in the desired location, standing on its own base.
- Check for any visible damage.
- Packaging materials can be recycled according to local recycling regulations.
- Verify that the product code and serial number match the same on any shipping documents.

Trademark			HOSHIZAKI							
Model name			ADVANCE MD K 100 BG N/ 100 HG N	ADVANCE MD K 120 BG N/ 120 HG N	ADVANCE MD K 150 BG N/ 150 HG N	ADVANCE MD K 180 BG N/ 180 HG N	ADVANCE MD K 100 SW N	ADVANCE MD K 120 SW N	ADVANCE MD K 150 SW N	ADVANCE MD K 180 SW N
Intended use			DISPLAY CABINET							
Chilled operating temperature			X	X	X	X	X	X	X	X
Frozen operating temperature										
Multiuse cabinet										
Vertical cabinet			X	X	X	X	X	X	X	X
Counter cabinet										
<b>Parameter</b>	<b>Symbol</b>	<b>Unit</b>	435	530	670	815	435	530	670	815
Energy Efficiency Class	EEC	-	E	E	E	E	F	F	F	F
Energy Efficiency Index	EEL	-	50,9	57,66	56,25	58,4	77,72	79,33	78,79	79,16
24 hours Energy Consumption	E24h	kWh	17,427	20,837	23,027	26,31	17,427	20,012	23,03	26,31
Annual Energy Consumption	AEC	kWh	6360,85	7605,5	8405	9603	6360,85	7304,3	8405,95	9603,15
Net volume	Vn	litre								
Max. capacity of a shelf		kg	65	80	50	60	65	80	50	60
Climate Class	CC		3	3	3	3	3	3	3	3
Refrigerant			R290	R290	R290	R290	R290	R290	R290	R290
Charge		kg	0,24	0,33	0,15X2	0,2X2	0,24	0,33	0,15X2	0,2X2
GWP			3	3	3	3	3	3	3	3
CO2 Equivalent		t. CO2	0,00072	0,001	0,0009	0,0012	0,00072	0,001	0,0009	0,0012
Heavy-duty; This appliance is intended for use in ambient temperatures up to 25°C %60RH			X	X	X	X	X	X	X	X

## **MULTIDECK 1000-1200-1500-1800**

### **II. OPERATING INSTRUCTIONS**

#### **ELECTRICITY**

Before connecting the product to electrical power, please verify that the specified electrical power supply on the product description label corresponds with the local network electrical power supply.

The Product Description label with the specified electrical power supply can be found on the inside of the cabinet, on the top left-hand side.

Installation of the product must only be undertaken by qualified and trained service personnel as per the specifications listed in this manual.

The electrical safety of this cabinet can only be valid if it's earthed in accordance with current local laws and regulations.

Earthing of the product is always required.

The manufacturer will not accept any responsibility for any damage arising from improper grounding.

Adhere to all electricity requirements stipulated by the local electrical regulations. The product's electricity plug and wall socket must have the correct earth connectivity reading. If necessary employ a qualified electrician.

#### **GENERAL PRELIMINARY CHECKS**

Make sure the cabinet is standing on level ground and is upright. If necessary, the adjustable feet of the cabinet can be used to achieve this. All feet should be in contact with the ground. This is necessary for the proper operation of the cabinet door.

Do not place the cabinet next to any heat-generating devices such as ovens, grills, and deep fryers. Do not expose to direct sunlight. The heat that may be radiated by walls or floors must be insulated with appropriate insulating material. The cabinet should be placed as far as possible from any heat source.

If the cabinet is re-located, allow three hours before re-starting. Plastic protection or tape should be removed from the outer surfaces.

Ensure the cabinet is positioned so sufficient fresh air can flow to/from the cooling circuit and around the surfaces of the cabinet. Leave at least 500 mm free space from the top of the cabinet.

If two refrigerators or freezers are to be placed side by side, there should be at least 50 mm space between them.

Do not block any vent holes.

#### **PRELIMINARY ELECTRICAL CHECKS**

- Check that the mains voltage and frequency of the socket conform to the information on the product description label.
- The cabinet is connected to the main outlet with a 13-16 Amp fuse as a serial connection.
- Turn off the main fuse connected to the power cable.
- Check that the plug on the cabinet is suitable for use with the available main socket

## **MULTIDECK 1000-1200-1500-1800**

and that they fit together.

### **FIRST OPERATIONS AND CONTROLS**

After the above checks have been completed, the cabinet can be operated. The

ON/OFF switch operates the cabinet.

After the cabinet is turned ON, the compressor will start running. The compressor will run until the factory's pre-set temperature is reached. Foods should not be placed in the cabinet until the temperature setting has been adjusted to suit the foods to be cooled.

New temperature settings can be done through the controller as described in this manual.



### **IMPORTANT**

- Allow the product to cool to the set temperature before placing food items inside.
- Never exceed the maximum load capacity.
- Refer to the "General Preliminary Checks" section of this manual for information on the amount of space required for good air ventilation around the product.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

### **WARNING:**

- Do not block any ventilation openings on the appliance at any time.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not damage the refrigerant circuit.
- Do not use electrical appliances inside the cabinet.
- Do not damage powercord, wiring or any key component.

### **STORAGE CONDITIONS AND PERFORMANCE**

Correct storage conditions are not only paramount to food hygiene and safety but improve the quality of service and reduce energy consumption. The best performance can be achieved if the following tips and guidelines are observed: keep all food items on shelves only. Food items must be placed in the cabinet or counter in such a way as to allow good airflow all around, leaving space between items and the walls of the product. If required shelf distance can be adjusted accordingly.

## **MULTIDECK 1000-1200-1500-1800**

### **III. CONTROL PANEL**

#### **CONTROL PANEL**



The control panel provides the following controls and functions:

1. SET key
  - Use to enter/set input values
2. ON/OFF key
  - Hold down for 4 seconds to turn the cabinet on or off
3. DOWN key
  - Use to scroll down through the menu or to change/reduce the value
4. UP key
  - Use to scroll up through a menu or to change/increase the value
  - Hold down for 4 seconds to start MANUAL DEFROSTING
5. Led On/Off Button

#### **FRONT PANEL FUNCTIONS**

The control panel can be locked and unlocked.

##### **To lock the controls:**

- Ensure that no procedure is in progress
- Do not operate for 30 seconds
- The display will show "LOC" for 1 second and the keyboard will lock automatically

##### **To unlock the controls:**

- Touch a key for one second: the display will show the message "UNL" for one second

#### **TEMPERATURE SETTING**

1. Ensure that the control panel is not locked and that no procedure is on progress.
2. Touch the SET key, the \* LED will flash.
3. Change the temperature setting by the use of the UP and DOWN arrows.
4. Touch the SET key or do not operate for 15 secs. The \* LED will stop showing and the controller will exit this procedure.
5. To exit the temperature setting procedure before it is complete.
  - a. Touch the ON/OFF key (any changes will not be saved). The working set point can also be set via the SP parameter.

## **MULTIDECK 1000-1200-1500-1800**

### **TEMPERATURE DISPLAY (as detected by probes)**

1. Ensure that the control panel is not locked and that no procedure is in progress.
2. Press the DOWN arrow for 4 seconds: the display will show the first probe available.
3. Select the correct probe using the UP and DOWN arrows.
4. Press the SET key.

This table shows the codes for each of the probes.

<b>Label</b>	<b>Displayed temperature</b>
<b>Pb1</b>	Cabinet temperature
<b>Pb2</b>	Evaporator temperature

To exit the procedure, press the SET key for 60 seconds or do not operate for 60 seconds. Then press the ON/OFF key.

Note: if the evaporator probe is not present, the Pb2 code will not be displayed.

### **TEMPERATURE ALARMS**

This is a list of alarms shown by this cabinet.

<b>CODE</b>	<b>ALARM TYPE</b>	<b>CRITICAL VALUE</b>
AL	Low temperature alarm	Low cabin temperature during this alarm
AH	High temperature alarm	High cabin temperature during this alarm
Id	Open door alarm	Maximum cabin temperature during this alarm

Alarm recording can only be done while the cabinet is turned on.

When the cause of the alarm is no longer present, the cabinet will return to normal operation.

### **ACCESS TO ALARM HISTORY**

1. Press the DOWN button for 2 seconds to show the first code
2. Press and release the UP button or select LS by pressing the DOWN button
3. Press and release the SET button: one of the codes above will be shown

To select an alarm, press the UP button till AH is shown.

To show alarm information, press and release the SET key (the flashing HACCP LED will stop).

### **DISPLAY TEXTS AND THEIR MEANING**

8.0	Critical values 8.0 °C/°F
Stop	The display shows the alarm time
h01	1-hour alarm (cont.)
n15	1 hour and 15-minute alarm
AH	Selected alarm

To exit the historical display, press and release the ON/STANDBY button repeatedly.

## **MULTIDECK 1000-1200-1500-1800**

To exit the process, repeatedly press the UP or DOWN buttons until the display shows the cabinet temperature or wait 60 seconds without pressing any buttons.

Alternative Exit method: press and release the ON/STANDBY button. If there are no alarms recorded, the LS code will not be displayed.

### **ERROR CODES**

<b>Code</b>	<b>Description</b>
<b>Pr1</b>	Cabinet probe error
<b>Pr2</b>	Evaporator probe error

The correction of these errors can only be undertaken by qualified technical personnel.

### **OPERATION STATUSES**

Available operation statuses are listed below:

<b>Status</b>	<b>Description</b>
<b>ON</b>	The cabinet is powered up and operating
<b>STANDBY</b>	The cabinet is powered up but switched off
<b>OFF</b>	The cabinet has no power, the plug is not in the socket, or the main isolator is turned off

### **IMPORTANT**

Do not carry out any maintenance or repair while the cabinet is in on or standby mode. Only when the power supply is completely isolated from the cabinet can any works be done.

## **MULTIDECK 1000-1200-1500-1800**

### **IV. MAINTENANCE INSTRUCTIONS**

The device must be cleaned regularly. The intervals depend on the usage and level of soiling (at least annually).



Before carrying out any cleaning or maintenance operations, unplug the unit



Don't touch or wet the machine compartment parts. This could result in failure or breakdown.



To prevent possible damage, don't clean the plastic parts with water above 40° C or in a dishwasher.

### **Interior & Exterior of Cabinet and Shelves**



Clean the interior and exterior at least once a week for sanitary use.



Clean off the interior and exterior of the cabinet with a soft cloth soaked in cold or warm water containing the proper amount of neutral cleaner and wrung dry. Don't use a water jet to clean the machine compartment.



Chemical agents other than neutral cleaner might cause damage to the interior and exterior surfaces.

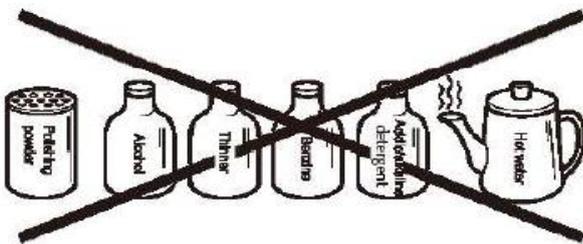


Any remaining detergent will damage metal or plastic surfaces. Use a soft cloth dampened with warm water to wipe it off.



Don't use the following items, they could damage painted or plastic surfaces:

- Polishing powder, alcohol, thinner, benzene, acidic or alkaline detergent, hot water, petroleum, soap powder, metal scourer or brush, etc. Especially detergent to clean grease on ventilator or microwave.



**Note: Some solutions other than the above may also damage painted or plastic surfaces. Immediately stop using such solutions if they cause any problems!**



The door gasket and its contact surface get soiled easily. Clean every surface of these parts thoroughly. Remnants of food will accelerate aging.



Use a cloth to wipe off any water staying inside the cabinet.

## **MULTIDECK 1000-1200-1500-1800**

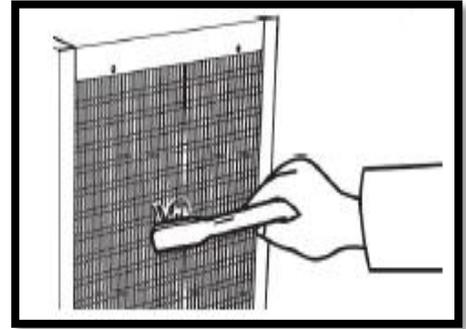
### Condenser



Use a vacuum cleaner or a soft brush to remove dust and stains from the condenser.



Warning: **If users clean the condenser with a hard brush, such as a dishwasher brush, the coating of the condenser may peel off.**



### \*Air Filter



To prevent deformation do not wash the air filter hot water above 40° C



Plastic mesh air filters remove dirt or dust from the air and keep the condenser from getting clogged. If the filters get clogged, the refrigerator/freezer's performance will be reduced.



Check the filters at least twice a month. When clogged or when the temperature controller shows "CH" use warm water and a neutral cleaner to wash the filters. Don't operate the unit with the air filters removed, or the condenser will get clogged, resulting in failure.

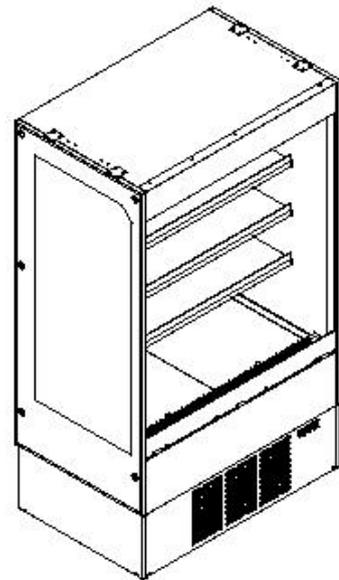
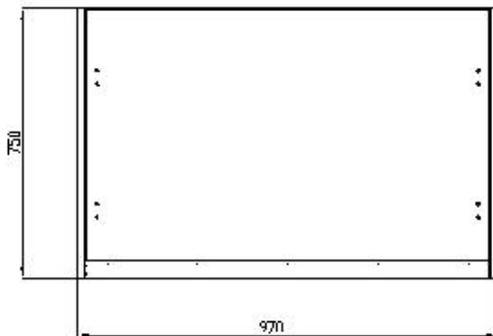
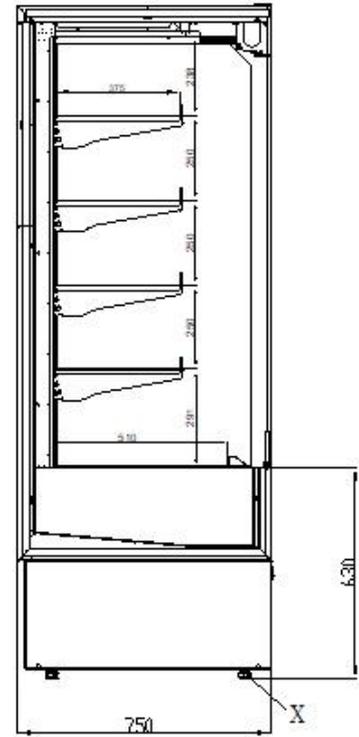
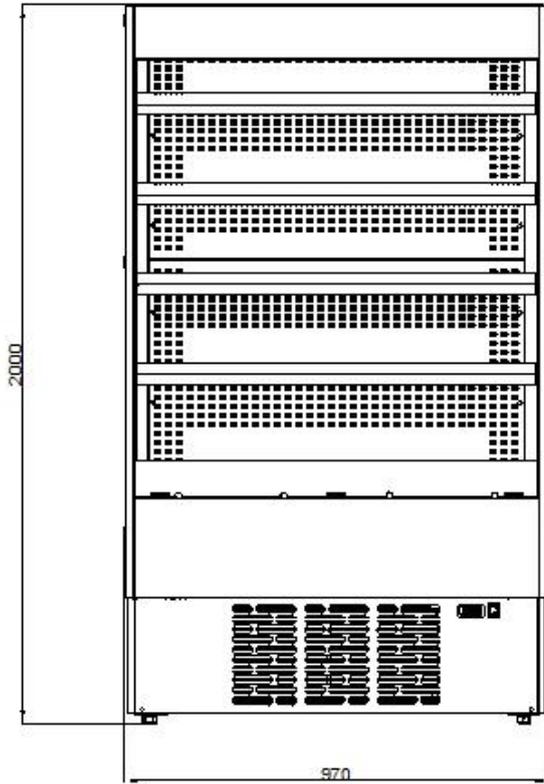
- 1) Open the front panel and remove the air filter. To prevent injury, don't touch the condenser fins directly.
- 2) Wash the air filter carefully with cold or warm water containing the proper amount of neutral cleaner. Rinse and dry the air filter thoroughly.
- 3) To refit the air filter put the two tabs into the heat exchanger or fins in a condenser and tightly attach the air filter over the condenser.

**MULTIDECK 1000-1200-1500-1800**

**V. TECHNICAL INFORMATIONS**

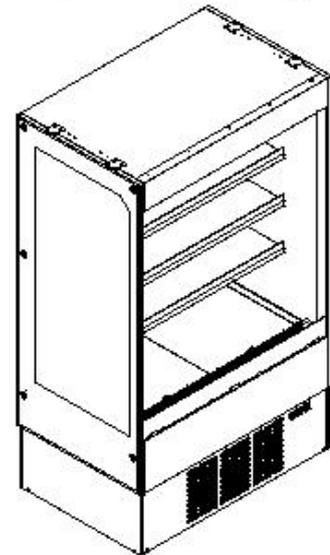
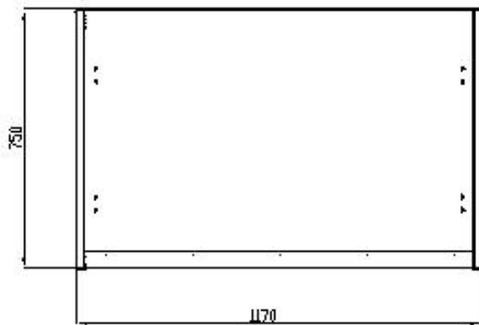
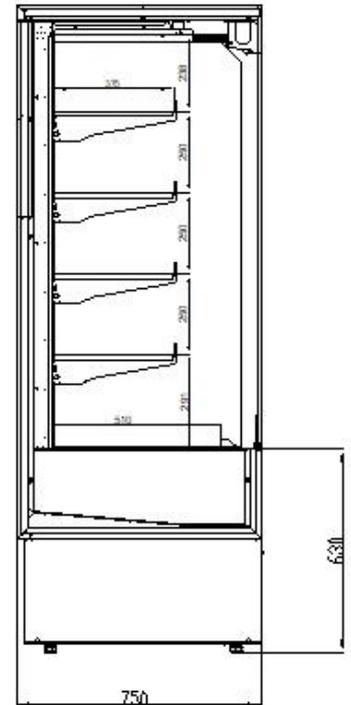
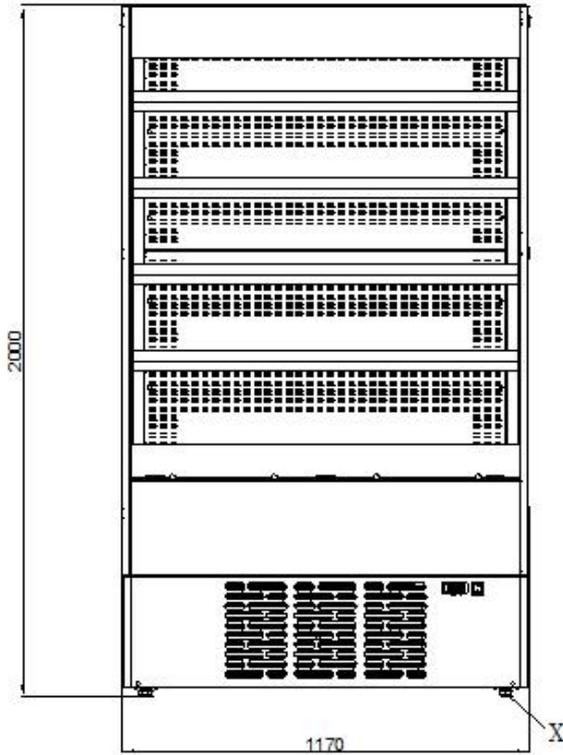
**DIMENSIONS OF THE DEVICES**

**ADVANCE MD K 100 BG N U - 201103140**



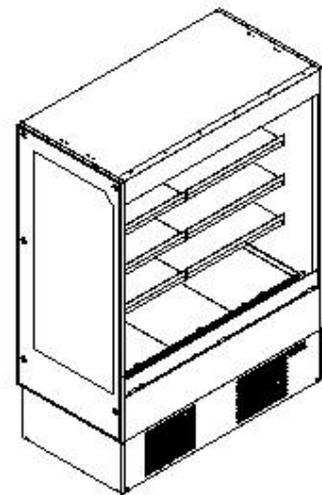
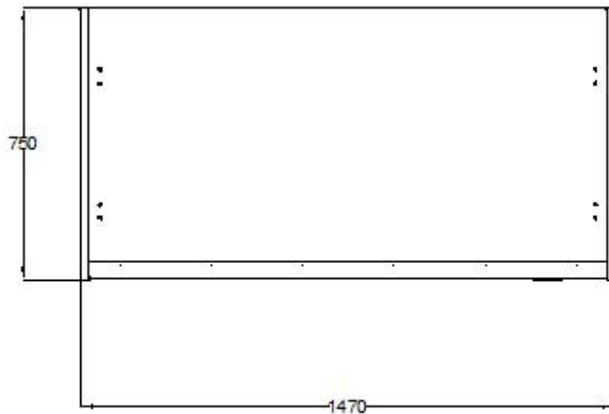
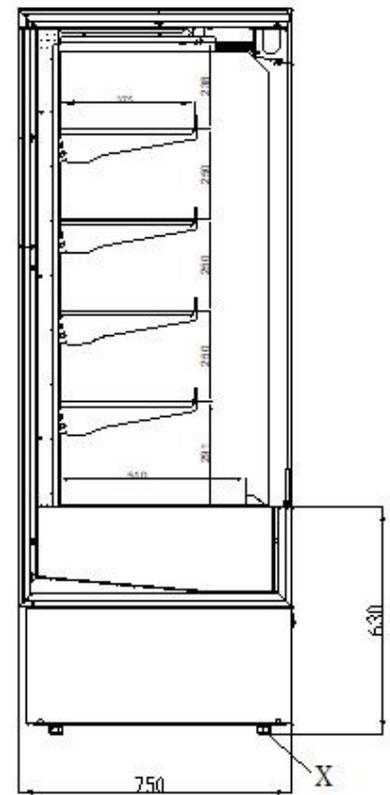
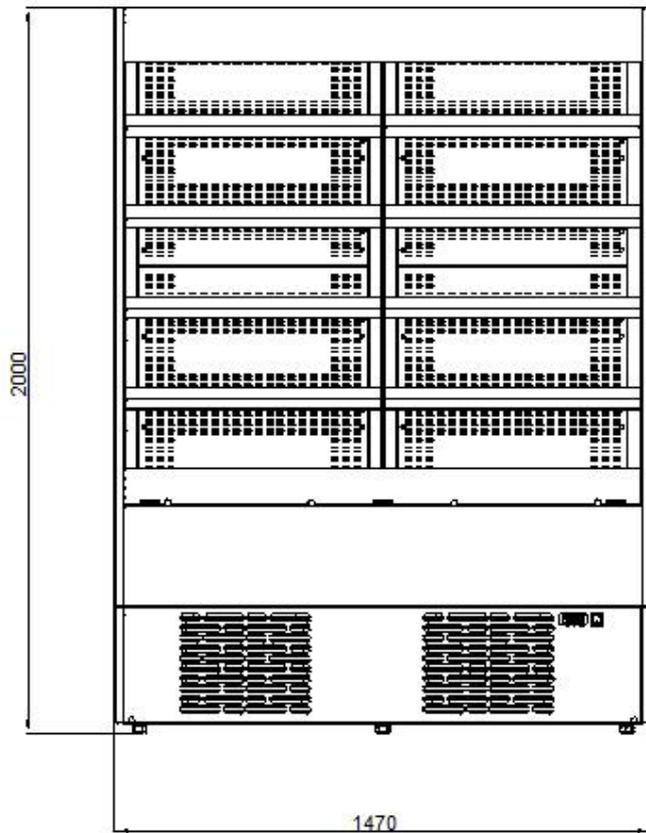
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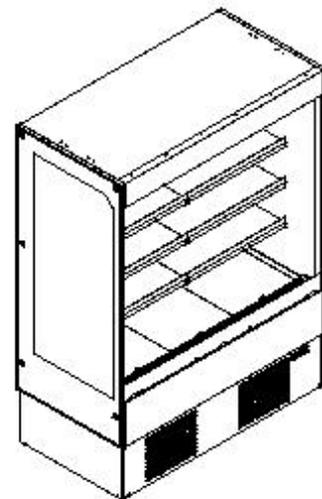
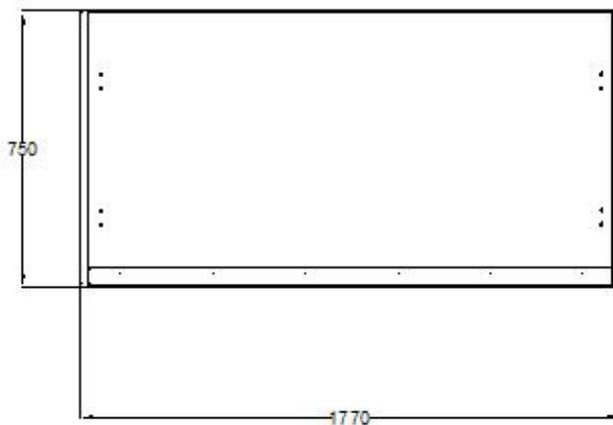
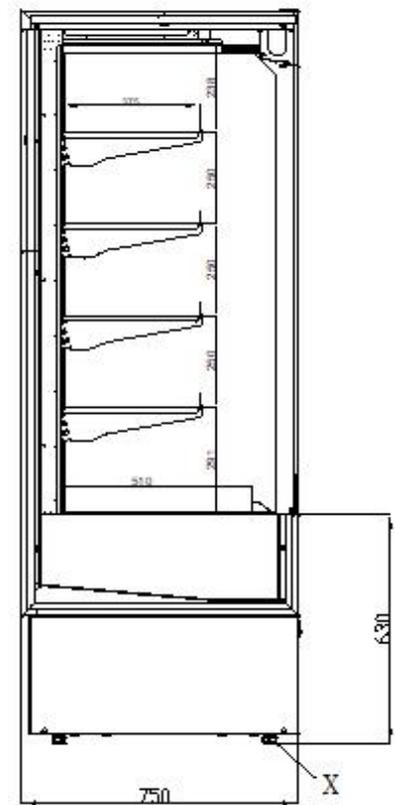
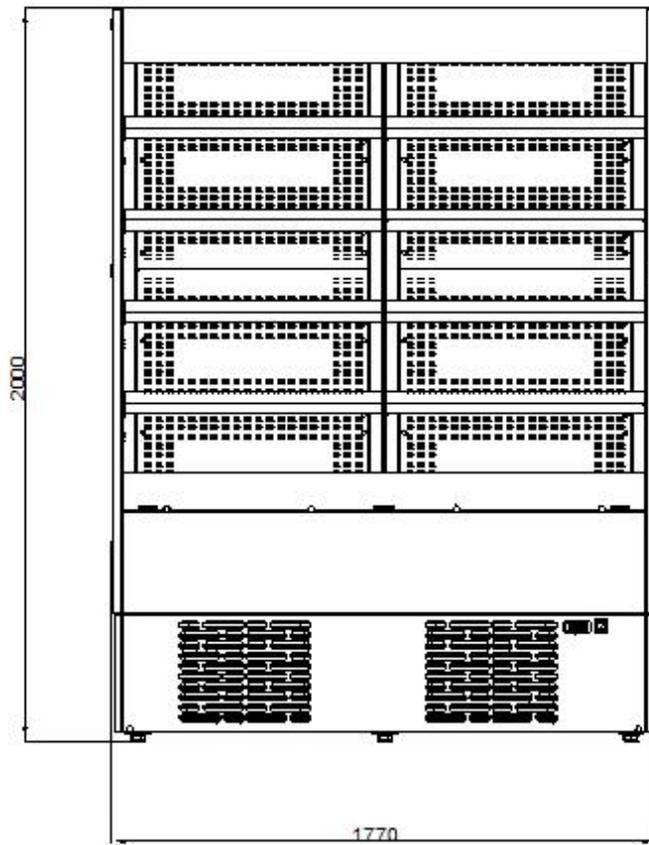
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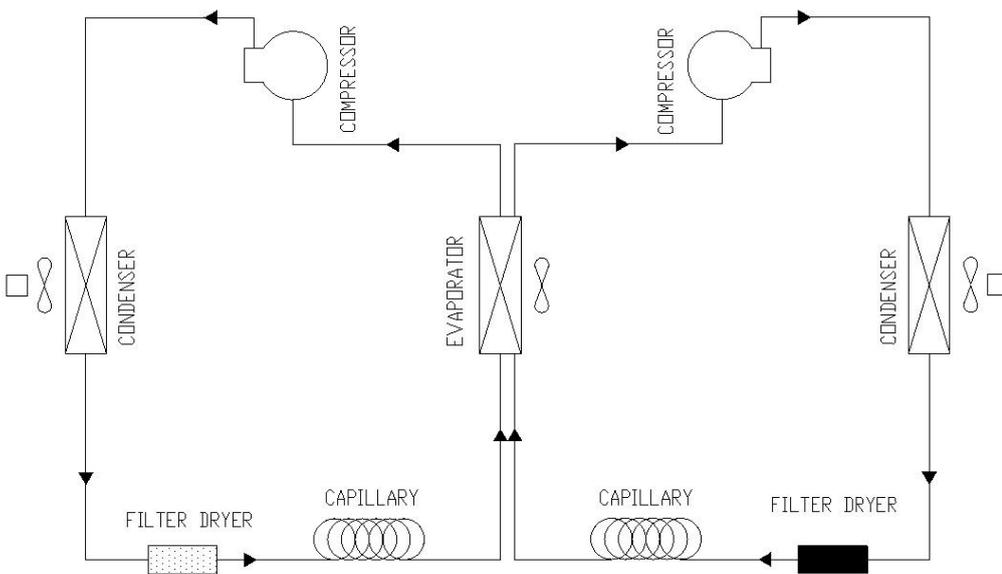
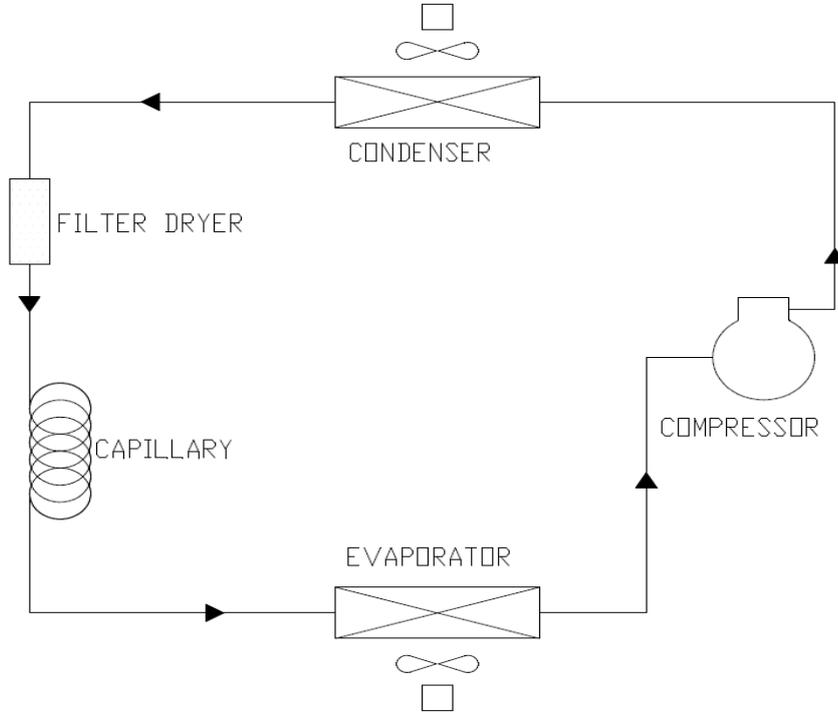
**MULTIDECK 1000-1200-1500-1800**

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**MULTIDECK 1000-1200-1500-1800**

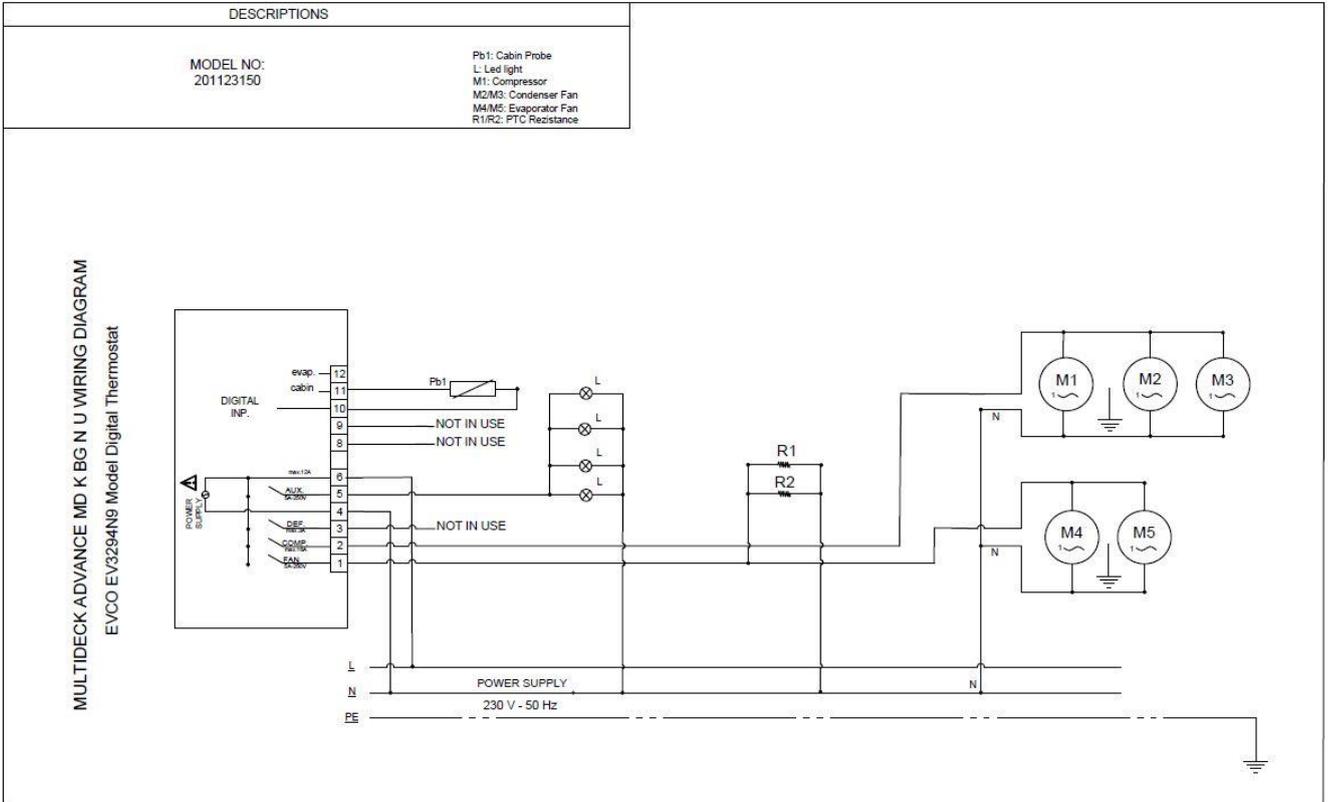
**VI. COOLING DIAGRAM & ELECTRICAL WIRING DIAGRAMS**  
**ELECTRICAL WIRING DIAGRAM (A SYSTEM AND TWICE SYSTEM)**





**MULTIDECK 1000-1200-1500-1800**

**ELECTRICAL WIRING DIAGRAM (FOR CABINET REFRIGERATOR MODELS)**



**MULTIDECK 1000-1200-1500-1800**

**VII. SERVICE DIAGNOSIS**

The table below lists several problems that you may encounter. If an alarm code is displayed, a malfunction has occurred. Please correct any possible causes before resetting the cabinet. Potential causes and remedies are listed below.

If an error code persists after you have carried out the checks below, please contact an authorized technician. The characteristics of the error message must be determined. Product details including the serial number can be found on the nameplate of the product.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>	
The cabinet is not working	No power is supplied to the cabinet	Check the power plug and cable are fault free	
The compressor seldom stops running	The ambient temperature is too high	Ventilation needs to be improved	
	Condenser or condenser filter are blocked	Check and clean condenser filter regularly	
	Door gaskets are not sealing properly	Call an authorized technician to replace seals	
	The evaporator is iced up		Do not place hot food items in the cabinet
			Do not place food items with high water content inside the cabinet unless they are stored in sealed
Evaporator fan/fans are faulty		Start a manual defrosting cycle Call an authorized technician to replace the fan/fans	
Overflowing water from the condenser water tray	Frequent placement of hot food items in the cabinet	Do not place hot food items in the cabinet Only place food items with high water content in sealed containers in the cabinet	
	Frequent opening of doors or drawers	Verify whether cabinet specifications confirm it is suitable for current usage	
Cabinet temperature is high	The condenser is blocked with dirt and dust	Check and clean condenser filter regularly	
	Airflow within cabinet is blocked	Remove items of food blocking the airflow	
	Ambient air is entering the cabinet		Ensure the door is closed
			Check for damage to the door and drawer seals
The evaporator is iced up		Contact an authorized technician Start a manual defrosting cycle	

## **MULTIDECK 1000-1200-1500-1800**

### **VIII. REMOVAL AND REPLACEMENT**

#### **REPLACING THE LED LIGHTINING**

- Turn off the power at the main isolator or remove the cabinet plug from the socket.
- Remove the sheet metal of the shelf.
- Open the clips inside the cable camouflage sheet metal.
- Remove the led lighting screws with tools. Install the new lighting in its place.
- Insert the cable ends into the clips properly. Place the clips back in their position.
- Put the sheet metal of the shelf back in place. Turn on the energy.

#### **DISPOSING OF THE CABINET**

- The cooling gas present in the cabinet can be identified from the nameplate.
- The cabinet is produced from recyclable materials in accordance to EU regulations. Therefore, at the end of its economic life, the cabinet must be passed to the appropriate recycling center for disposal.
- Do not recycle the cabinet as metal or household waste.
- Do not compact the cooling plant refrigeration circuit.



#### **IMPORTANT**

Adhere to local by-laws and regulations during disposal of the cabinet.