DOCUMENTATION

TECHNIQUE

ROLL IN BLAST CHILLER

BIOTRONIC TURBO

Electronic Regulation

Types : R80, R160 External refrigeration unit
R80 Incorporated refrigeration unit

TECHNICAL MANUAL INCLUDING
- **USER MANUAL**
- **INSTRUCTIONS**

BONNET GRANDE CUISINE
Rue des Frères Lumière - Z.I. Mitry Compans
77292 MITRY MORY cedex
Tél. 01 60 93 70 00 - Fax. 01 60 93 70 43

FORM050B1/1

n°648257 - 04/00

USER MANUAL

ROLL IN BLAST
CHILLER

BIOTRONIC TURBO

Electronic Regulation

Types : R80, R160 with or without external refrigeration unit
R80 Incorporated refrigeration unit

CONTENTS

BONNET GRANDE CUISINE
Rue des Frères Lumière - Z.I. Mitry Compans
77292 MITRY MORY cedex
Tél. 01 60 93 70 00 - Fax. 01 60 93 70 43

IMPORTANT RECOMMENDATIONS

∗ This unit is designed for use in Restaurants or Catering facilities. It is not intended for industrial use.

∗ Installation should be undertaken by a refrigeration engineer.

∗ Avoid installing the unit near major sources of heat or in direct sunlight.

∗ Note that too high an ambient temperature can reduce performance.

∗ The compressor condenser must be cleaned regularly (every 3 to 6 months) by a refrigeration engineer.

∗ Do not modify the electrical connection made during installation, particularly the earth continuity circuit.

∗ The supply cable that is fitted is a specific part and should only be replaced with an original part. Ensure that the plug is easily accessible.

∗ In the event of problems with the electrical circuit, only the installer or the manufacturer should intervene.

∗ Observe hygiene guidelines by regularly cleaning the following :
. interior fittings
. door seal
. interior lining
Do not use corrosive or acidic products.

∗ Water splashing can cause damage.
. To avoid the risk of splash damage, do not clean with a hose or high-pressure spray.
. Do not locate the unit where it is exposed to the elements

∗ Reference to the label NF FOOD HYGIENE :
certified by : AFNOR Certification
Tour Europe
92049 PARIS-LA-DEFENSE
Cedex – France

∗ The label NF FOOD HYGIENE complies with the NF031 requirement.
The main certified characteristics are :
. Cleaning qualification
. Refrigerating performances

∗ If the installation, the use or the service is modified, the appliance will lose the right to use the label NF FOOD HYGIENE.

SPECIFICATION AND CHARACTERISTICS IN THIS DOCUMENT MAY BE SUBJECT TO BE MODIFIED WITHOUT PRIOR NOTICE

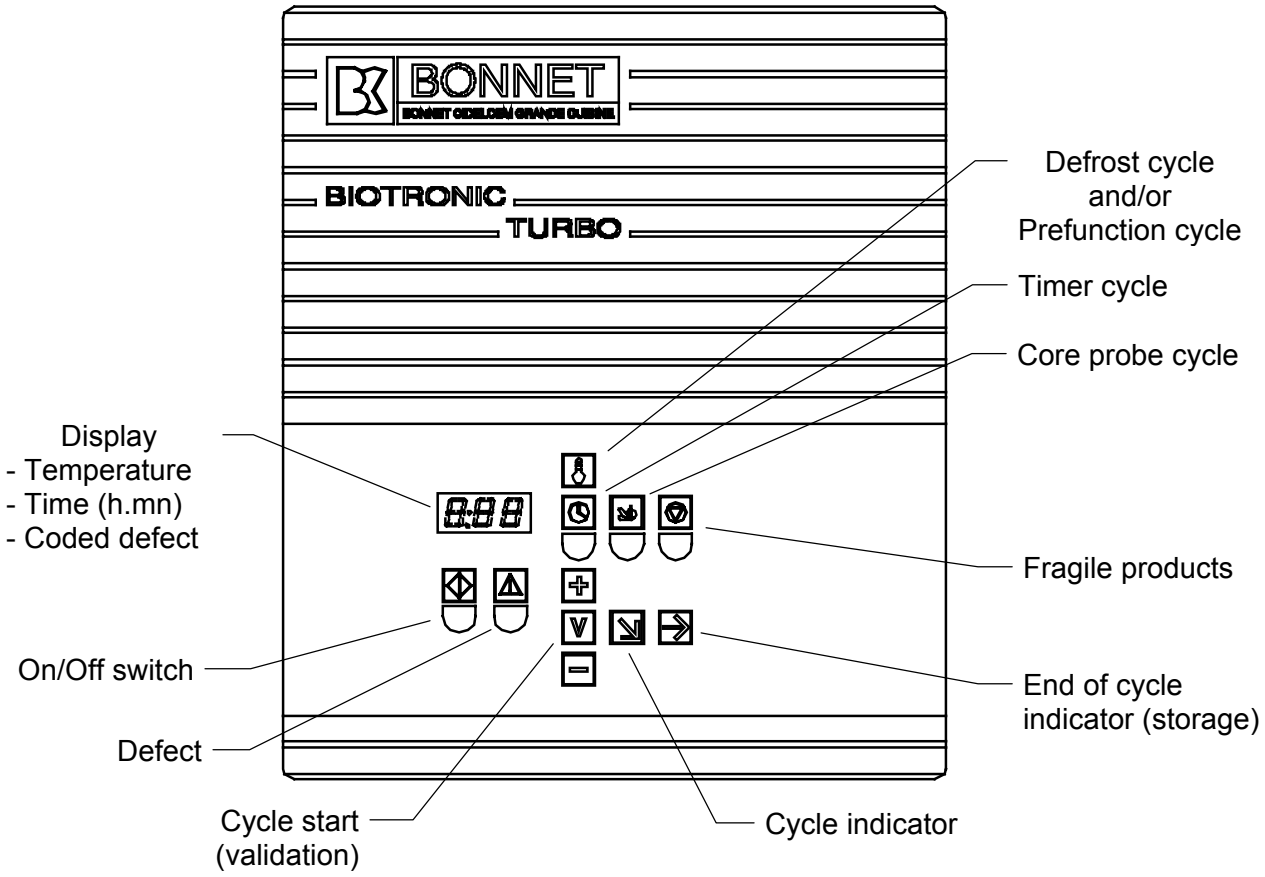
1. PRESENTATION OF THE CONTROL PANEL

1.1 IMPORTANT

Stop of the unit does not cut the power supply to the appliance.

If the appliance is not to be used for a period of time, power must be cut off with the insulation switch located on the control panel's side, the plug or the disconnector because of the risk of dammaging the refrigerating equipment.

1.2 KEYBOARD DESCRIPTION



For the use of the keyboard, see :

1.3 GENERAL RECOMMENDATIONS

1.3.1 DEFROST, PREFUNCTION CYCLE

Before loading products, a prefunction cycle should be launched in order to cool the interior of the appliance. It can be launched automatically when the appliance is powered up, by modifying the factory settings (see ‘instructions’).

Each prefunction cycle is automatically preceded by a defrost cycle. If needed, this function can be stopped (see paragraph 1.6 ‘Special settings’).

During the defrost and/or the prefunction cycle, the display indicates the ambient temperature of the appliance. Defrost is made with a weak ventilation. It can be made with a strong ventilation by modifying the factory settings (see ‘instructions’).

After loading products into the appliance, choosing the chilling cycle at the closing of the door can be made compulsory by modifying the factory parameters (see ‘instructions’).

1.3.2 REFRIGERATION CYCLE WITH CORE PROBE

It is recommended to use the core probe whenever it is possible and in particular for a chilling cycle because it automatically controls the cycle. The 5 points core probe allows to read the hotest point at the heart of the product. The cycle ends when the hotest sensor reaches the required temperature (factory setting = +10°, which can be modified case by case). The display alternately indicates the temperature at the heart of the product, and the remaining duration of the cycle.

With the factory settings, a core probe insertion test indicates that the probe is not used for a hot product (sound alarm and the indication SP is displayed).

1.3.3 REFRIGERATION CYCLE WITH TIMER

When the use of the core probe is impossible, a cycle with timer is possible (factory setting = 120 mn, which can be modified case by case). The cycle programming time depends on the type and the quantity of food to be cooled. During the cycle, the display indicates the remaining duration.

1.3.4 VENTILATION

To avoid water spattering on the products, the ventilation power is automatically controlled by the temperature of the appliance, with a factory level pre set at 12°C.

1.3.5 ‘FRAGILE PRODUCTS’ FUNCTION

In some cases, it is possible to refrigerate the products avoiding frost deposit (anti-freezing function). This function should only be used for reduced quantities of products.

After selecting the cycle with core probe or with timer, press "Fragile Products" key. In this case, the cycle will operate following the factory settings with an air temperature superior to -15°C with a strong ventilation. This can be modified case by case whenever it is needed ; for example, a weak ventilation can be applied for light products (see paragraph 1.6 ‘Special settings’)

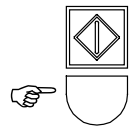
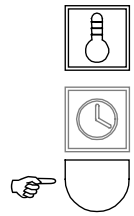
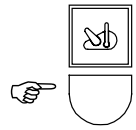
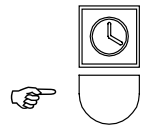
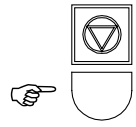
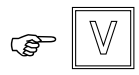
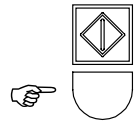
1.3.6 PRESERVATION AFTER THE CYCLE

At the end of each cycle, the appliance programs automatically the preservation to a temperature of +3°C with a weak ventilation, following the factory settings.

The display indicates the ambient temperature.

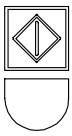
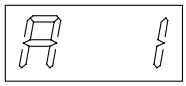
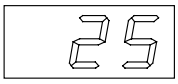
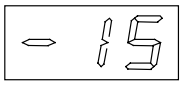
The storage duration inside the appliance can be unlimited thanks to an automatic control of the defrost during the preservation cycle.

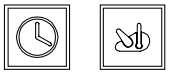
1.4 SIMPLIFIED GUIDE with factory settings

POWER UP	
Press 	Press for a few seconds.
PREFUNCTION CYCLE	
Press 	To select the cycle  Press  to launch the cycle. A defrost cycle is launched and automatically followed by a prefunction cycle.
LOADING	
At the end of the prefunction cycle, introduce the products into the appliance. For a core probe cycle, introduce the core probe deep inside the product.	
CYCLE WITH PROBE (with use of the core probe)	
Press  and if necessary 	To select the cycle. Sound alarm and the indication SP is displayed if the probe is not correctly used. To modify the temperature of the set-point at the end of the cycle.
CYCLE WITH TIMER (without using the core probe)	
Press  and if necessary 	To select the cycle To modify the cycle duration
FRAGILE PRODUCTS	
Press 	To limit air temperature, avoiding frost deposit. (press for a few seconds during the cycle).
CYCLE START	
Press 	1) To start a cycle. 2) To stop a running cycle (Press for a few seconds).
CYCLE EXECUTION	
Led 	Running cycle.
Led 	Preservation cycle (between 0 and +3°C)
STOP OF THE APPLIANCE	
Press 	Press for a few seconds. It is recommended to let the door half-open when the appliance is not used.

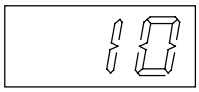
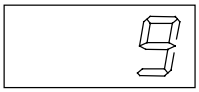
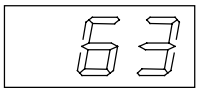
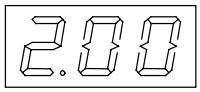
1.5 DETAILED GUIDE

1.5.1 START (Prefunction cycle)

1	Power up  Press for a few ☞ seconds	1) All the leds as well as the display light up (Microprocessor test). 2) The machine number, pre-programmed during installation lights up.  3) The ON led lights up and  the temperature of the appliance is displayed. 
2	Selection and start *This stage can be launched automatically when the appliance is powered-up, by modifying the factory setting (parameter 03).*   Manual selection Press ☞ Manual launch  Press ☞	The prefunction cycle led  lights up. 1) Start of the defrost cycle with a pre set ventilation power (weak) until the temperature of the appliance is superior to the pre set temperature (5°C) without exceeding a maximum time (30mn). *This function can be disactivated with the d6 parameter (see paragraph 'Special condition'))* 2) Start of the compressor with production of cold air until the pre set temperature is reached (-15°C) The led  indicates the running cycle and the temperature of the appliance is displayed in real time. 
3	Automatic end of cycle	The 'preservation after cycle' led lights up.  The bell rings during a few seconds. The appliance moves to the preservation stage, waiting for the products to be loaded.

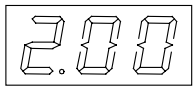
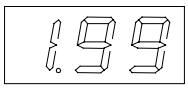
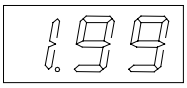
N O T A	During the cycle, press(a few sec.) ☞ 	Full and definitive stop of the running cycle.
	The door is open during the cycle	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle,  Press ☞ or 	Voluntary stop of the running prefunction cycle to select a refrigeration cycle (see paragraph 1.5.2 or 1.5.3)
	Opening or closing the door during or after the cycle by modifying the factory setting (parameter 02)	Choosing a refrigeration cycle is automatically asked. The leds flash  The bell rings until a cycle is chosen.
	All operating parameters set in factory can be modified when needed(see 'instructions').	

1.5.2 START AND STOP OF A CYCLE WITH CORE PROBE

1	Open the door and introduce the products to be cooled. Introduce the core probe as deep as possible inside the product. Close the door.	
2	<u>Selection</u> : Press ☞	The 'cycle with core probe' led lights up and the temperature of the set-point set in factory is displayed. 
3	<u>Settings</u> (eventual) : Press ☞ + or −	To modify the end of cycle set-point. Display of the temperature in real time. 
3	<u>Start</u> : Press ☞ V	The'running cycle' led lights up and the temperature at the heart of the product is displayed  in real time, alternately with the remaining duration of the cycle .  The cycle starts with a weak ventilation power (until the +12°C level set in factory is reached), and automatically moves to strong ventilation mode until the end of the cycle (at a temperature of +10°C at the heart).
4	<u>Fragile products</u> : Press ☞ (a few seconds during the cycle)	Avoid frost deposit on the products by limiting the air temperature to -15°C (with strong ventilation). *This function can be set by modifying the factory settings, with a different air temperature (cc parameter) and/or a weak ventilation (F1 parameter)* Attention : This function must only be used with small loads.
5	<u>Automatic end of cycle</u>	The 'preservation after cycle' led lights up. The bell rings for a few seconds. The appliance moves to the preservation stage at the temperature of +3°C with a weak ventilation power. Unloading : Do not forget to take out and clean the core probe before unloading.

N O T A	Opening of the door during the cycle	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle, press (a few sec.) ☞ V	Full and definitive stop of the running cycle
	All operating parameters set in factory can be modified when needed(see 'instructions')	

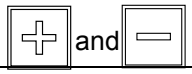
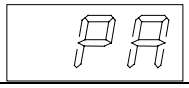
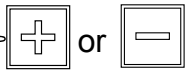
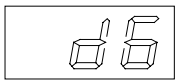
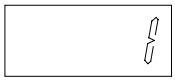
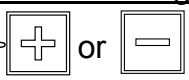
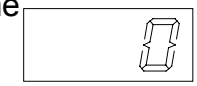
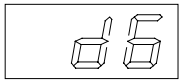
1.5.3 START AND STOP OF A CYCLE WITH TIMER

1	Open the door and introduce the products to be cooled. Check the core probe is well installed on its support. Close the door.	
2	<u>Selection</u> :   Press ☞ 	The'cycle with timer' led  lights up and the cycle duration set in factory is  displayed.
3	<u>Settings</u> (eventual) : Press ☞  or 	To modify the cycle duration. Display of the cycle duration in real time. 
3	<u>Start</u> : Press ☞ 	The'running cycle' led  lights up and the remaining duration of the cycle is displayed.  The cycle starts with a weak ventilation power (until the +12°C level set in factory is reached), and automatically moves to strong ventilation mode until the end of the cycle (at a temperature of +10°C at the heart).
4	<u>Fragile products</u>:  Press ☞  (for a few seconds during the cycle)	Avoid frost deposit on the products by limiting the air temperature to –15°C (with strong ventilation). *This function can be set by modifying the factory settings, with a different air temperature (cc parameter) and/or a weak ventilation (F1 parameter)* Attention : This function must only be used with small loads.
5	<u>Automatic end of cycle</u>	The 'preservation after cycle' led lights up.  The bell 🔔 rings for a few seconds. The appliance moves to the preservation stage at the temperature of +3°C with a weak ventilation power. Unloading : Do not forget to take out and clean the core probe before unloading.

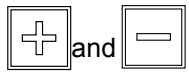
N O T A	Opening of the door during the cycle	Temporary stop of the running cycle. When the door is closed, the cycle starts again.
	During the cycle, press (a few sec.) ☞ 	Full and definitive stop of the running cycle.
	All operating parameters set in factory can be modified when needed(see 'instructions')	

1.6 SPECIAL SETTINGS

1.6.1 PROGRAMMATION (the regulation is ON)

1	Access to programmation : Press simultaneously and for a few seconds 	Beginning of the programmation mode. Display of the indication 
2	Selection of parameters : Press successively 	Display of the parameters one after another. Display of the parameters' codes 
3	Access to the selected parameter : Press 	Presetting display of the parameter 
4	Modification of the parameter setting: Press successively 	Display of the parameter's values one after another Display of the parameter's values 
5	Validation of the parameter 's setting: Press 	Display of the modified parameter's code 

Start again stage 2 to 5 for the other parameters.

6	To exit programmation : Press simultaneously and for a few sec. 	Restart of the system. During or after programmation, the system restarts automatically if no key is pressed in less than 15 seconds.

The parameters' modifications are definitively taken into account.

1.6.2 TABLE OF PARAMETERS

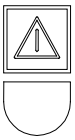
Code	Parameters		Min	Max	Factory
PA	Password to access level 2	(reserved to fitter)	-99	99	--
Temperature parameters					
cA	Core probe temperature reading	(read only) °C	--	--	--
cc	Fragile Products interior probe set-point	°C	-55	99	-15
Defrost parameters					
d6	Defrost at the beginning of the prefunction cycle	0 = No ; 1 = Yes	0	1	1
Ventilation parameters					
F1	Ventilation with Fragile Products ON	0 = Weak, 1 = Strong	0	1	1
Printing parameters (with optional printer)					
i1	Printing frequency in chilling cycle	mn	0	60	5
i2	Printing frequency in preservation cycle	mn	0	60	30
i3	Printing at the beginning of the cycle	0 = No, 1 = Yes	0	1	1
i4	Setting of the date	Day	1	31	(1)
i5		Month	1	12	(1)
i6		Year	990	050	(1)
i7	Time setting	Hour	0	23	(1)
i8		Minute	0	59	(1)

(1) the configuration must be set during installation.

1.7 ALARMS AND DEFECTS

Indicated by the red light  and the sound alarm

The display indicates the type of defects.

The buzzer can be stopped by pressing the key ☞ 

1.7.1 USE SECURITIES

SP	The core probe is not or not well introduced in the product.
Por	The door is open.
H-L	The normal time is over .
SEC	Supply breakdown.

1.7.2 OPERATION DEFECTS (call for the repairer)

SA	Regulation probe defect.
SC	Core probe defect.
AL	Refrigerating defect.

2. USE

2.1 GENERAL REQUIREMENTS

Do not load products in a way that obstructs the air circulation, this is important to ensure even distribution of cold air within the cavity.

When the probe is not used, it must be located absolutely on its support.

When the appliance is not used, it is recommended to let the door half-open.

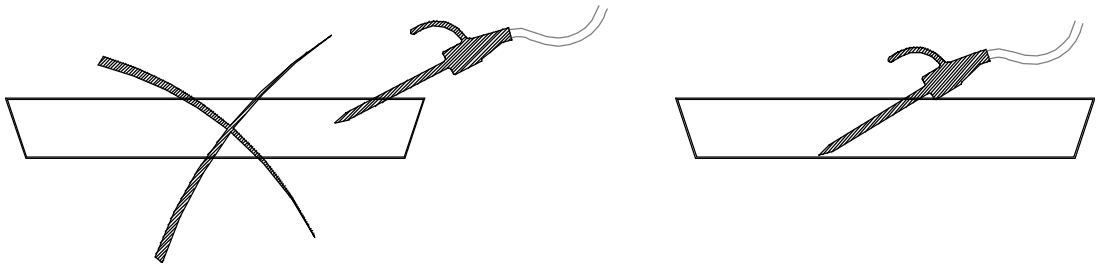
2.2 LOADING

A space of 15 to 20 mm is required between each item to allow refrigerated air to pass around the products.

The chilling depends on the weight, nature and thickness of the food, therefore it is difficult to accurately define a loading capacity.

2.3 CORE PROBE POSITION

The core probe must be introduced as deep as possible in the product to be cooled.



2.4 VENTILATION

To guaranty refrigerating performance, take care the fans grids and the funnel for air outlet have not been blocked up.

2.5 DEFROST WATER EVACUATION

Defrost water evacuation is made with a drain trap located inside the box of the control panel or in the back of the appliance.

Check that nothing blocks up the evacuation hole located at the bottom of the tank in front of the evaporator.

3. MAINTENANCE

IMPORTANT

Before any cleaning operation,
ensure that the appliance is unplugged or isolated.

Do not use a spray hose
To avoid water spattering on the products.

3.1 STAINLESS STEEL

Use warm soapy water or a non corrosive cleaner (such as Teepol or an equivalent product), then rinse thoroughly and dry.

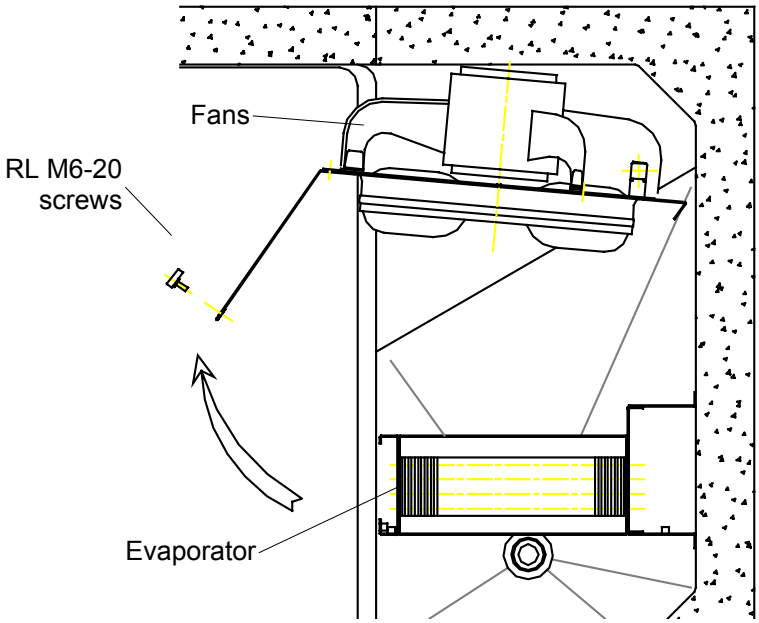
Do not use abrasive, aggressive or concentrated cleaning products.

Do not use wire wool under any circumstances. Fingerprints can be removed with a cloth soaked in alcohol.

3.2 INTERIOR LINING

This should be cleaned daily.

To ease the complete cleaning of the interior lining and to have access to the evaporator and to the expansion valve, it is possible to open the fan support sheet.



3.3 REGULAR CLEANING.

Particularly clean the door seals.

Clean the core probe whenever it is used.

In order to maintain the refrigerating capacity and to ensure the longevity of the compressor, it is necessary to clean regularly (every 3 or 6 months) the condenser in the case of an air refrigerating group. This operation must be carried out by the installer.

INSTRUCTIONS

ROLL IN BLAST
CHILLER

BIOTRONIC TURBO

Electronic Regulation

Types : R80, R160 with or without external refrigeration unit
R80 Incorporated refrigeration unit

CONTENTS

BONNET GRANDE CUISINE
Rue des Frères Lumière - Z.I. Mitry Compans
77292 MITRY MORY cedex
Tél. 01 60 93 70 00 - Fax. 01 60 93 70 43

IMPORTANT RECOMMENDATIONS

∗ When installing the unit ensure that there is adequate circulation and air volume to cool the condenser and compressor.

∗ Avoid installing the appliance near major sources of heat or in direct sunlight.

∗ Note that too high an ambient temperature can reduce performance.

∗ There must be earth continuity between the appliance and the mains connections.

∗ The supply cable that is fitted is a specific part and should only be replaced with an original part. Ensure that the plug is easily accessible.

∗ The installer should ensure that the electrical connection is suitably protected by an appropriate fuse or circuit breaker (see rating plate).

∗ Ensure that the appliance is switched OFF before any intervention on the electrical or refrigeration circuits and during cleaning.

∗ The compressor condenser must be cleaned regularly (every 3 to 6 months.

∗ Water splashing can cause damage.
. To avoid the risk of splash damage do not clean with a hose or high-pressure spray.
. Do not locate the unit where it is exposed to the elements

∗ After any intervention ensure that the original installation guidelines are respected to avoid any form of risk.

∗ Reference to the label NF FOOD HYGIENE :
Certified by : AFNOR Certification
Tour Europe
92049 PARIS-LA-DEFENSE
Cedex – France

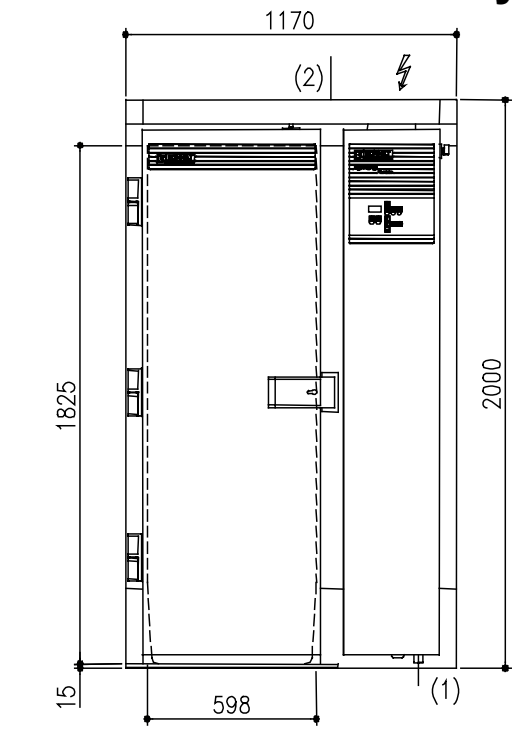
∗ The label NF FOOD HYGIENE complies with the NF031 requirement.
The main certified characteristics are :
. Cleaning qualifications
. Refrigerating performances

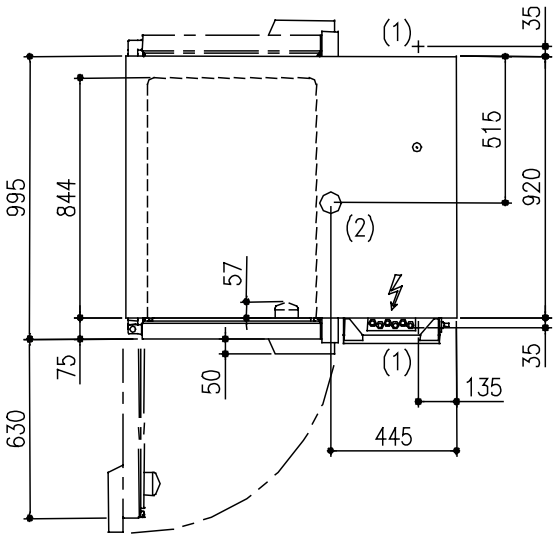
∗ If the installation, the use or the service is modified, the appliance will lose the right to use the label NF FOOD HYGIENE.

SPECIFICATION AND CHARACTERISTICS IN THIS DOCUMENT
MAY BE SUBJECT TO BE MODIFIED WITHOUT PRIOR NOTICE

1. TECHNICAL DATA

1.1 R 80 SG and GE Type





DEFROST WATER

Defrost water is collected in the resin bottom.

A two way drain (1) is provided at the back and at the front of the appliance (drain trap)

In the case of a front draining, forecast a surface grid under the flowing.

Complies with

Electric Safety : EN 60 335-1
Food Hygiene : XP U 60 010
Complies with E.C. requirements

Codes : **S 100 E 01** without refrigeration unit
S 100 E 05 with external unit

POSITIONING

The appliance must be set on a perfectly horizontal smooth and flat surface. Allow for a silicon bead on its periphery.

CONSTRUCTION

- Austenitic stainless exterior casing (4 sides), and interior lining. Outdoor ceiling in galvanised sheet . Polyester resin base.

Insulated body

- Demountable panels with assembling hook system.
- Radiused interior lining base and sides.
- Polyurethane foam insulation, 75 mm thick.
- Thermal break between inner and outer structure.

Door

- Door bib water proof joint.
- 3 rising butt hinges avoiding ground joint friction.
- Central door closing mechanism with interior opening.
- Polyethylene access ramp, 15 mm thick.
- Door opening can be reversed (at the plant)

TECHNICAL DATA

Voltage : 3N~400V 50 Cycle
Input power : Without compressor : 2400 W
With compressor : 8100 W
Protection : Without compressor : aM 4
With compressor : aM 16

Connections: 2,5 mm2

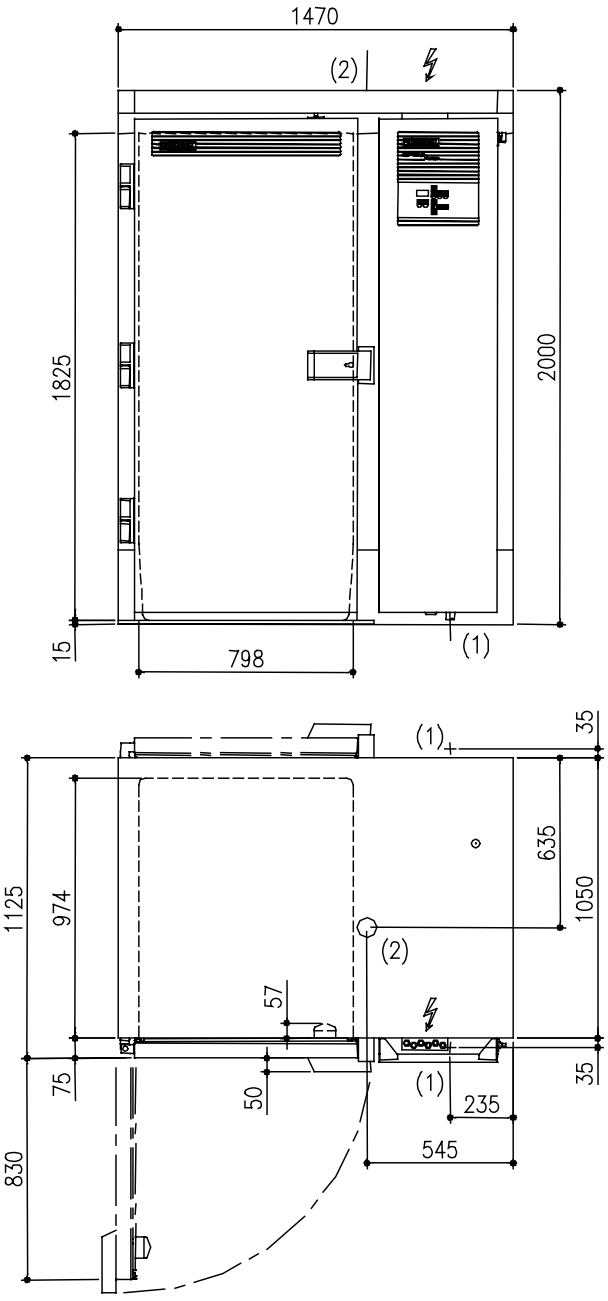
Provide for the protection against overloads or electrical defects.

The control panel of the delivered appliance without compressor includes an insulating switch, a tetrapolar and an unipolar circuit-breaker with fuse bar, and a connecting strip with contactors.

The appliance with compressor is delivered pre loaded, with pressure sensitive switch, dryer, solenoid valve, sight glass, vibration eliminator, and also pre cabled with an electric box including a connecting strip, a protection circuit-breaker, a circuit breaker with fuse bar, contactor with thermal relay, voltage and defect indicator (connection between compressor and blast chiller length 5M).

Refr. power : 5500 W at -15/+55°C
Refrigerant : R404A
Load : See instruction plate
Evaporator : Ventilated, corrosion proof
Expansion valve : Thermostatic R404A
Defrost : Forced air circulation
Connections (2) : Suction 1"3/8, Liquid 5/8"
Air compressor : 6 hp Hermetic
(L) 1270 x (D) 640 x (H) 570

1.2 R 160 SG and GE Type



DEFROST WATER

Defrost water is collected in the resin bottom.
A two way drain (1) is provided at the back and at the front of the appliance (drain trap)
In the case of a front draining, forecast a surface grid under the flowing.

Complies with

Electric Safety : EN 60 335-1
Food Hygiene : XP U 60 010
Complies with E.C. requirements

Codes : **S 100 E 03** without compressor
S 100 E 07 With external compressor

POSITIONING

The appliance must be set on a perfectly horizontal smooth and flat surface. Allow for a silicon bead on its periphery.

CONSTRUCTION

- Austenitic stainless exterior casing (4 sides), and interior lining. Outdoor ceiling in galvanised sheet . Polyester resin base.

Insulated body

- Demountable panels with assembling hook system.
- Radiused interior lining base and sides.
- Polyurethane foam insulation, 75 mm thick.
- Thermal break between inner and outer structure.

Door

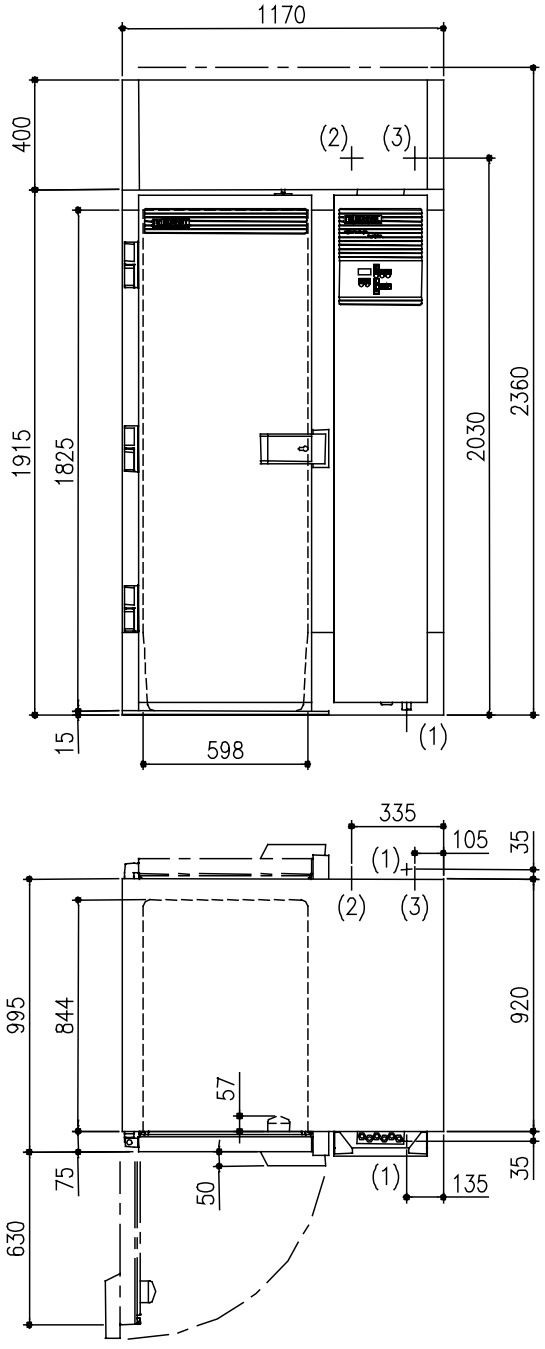
- Door bib water proof joint.
- 3 rising butt hinges avoiding ground joint friction.
- Central door closing mechanism with interior opening.
- Polyethylene access ramp, 15 mm thick.
- Door opening can be reversed (at the plant)

TECHNICAL DATA

Voltage : 3N~400V 50 Cycle
Input power : Without compressor : 2400 W
With compresssor : 13000 W
Protection : Without compressor : aM 4
With compressor : aM 25
Connections: 6 mm2
Provide for the protection against overloads or electrical defects.
The control panel of the delivered appliance without compressor includes an insulating switch, a tetrapolar and an unipolar circuit-breaker with fuse bar, and a connecting strip with contactors.
The appliance with compressor is delivered pre loaded, with pressure sensitive switch, dryer, solenoid valve, sight glass, vibration eliminator, and also pre cabled with an electric box including a connecting strip, a protection circuit-breaker, a circuit breaker with fuse bar, contactor with thermal relay, voltage and defect indicator (connection between compressor and blast chiller length 5M).

Refr. power : 15300 W at -15/+55°C
Refrigerant : R404A
Load : See instruction plate
Evaporator : Ventilated, corrosion proof
Expansion valve : Thermostatic R404A
Defrost : Forced air circulation
Connections (2) : Suction 1"5/8, Liquid 5/8"
Air compressor : 10 hp Hermetic
(L) 1410 x (D) 930 x (H) 1160

1.3 R 80 GI Type



DEFROST WATER

Defrost water is collected in the resin bottom.

A two way drain (1) is provided at the back and at the front of the appliance (drain trap)

In the case of a front draining, forecast a surface grid under the flowing.

Complies with

Electric Safety : EN 60 335-1
Food Hygiene : XP U 60 010
Complies with E.C. requirements

Code : **S 100 E 04**

POSITIONING

The appliance must be set on a perfectly horizontal smooth and flat surface. Allow for a silicon bead on its periphery.

CONSTRUCTION

- Austenitic stainless exterior casing (4 sides), and interior lining. Outdoor ceiling in galvanised sheet . Polyester resin base.

Insulated body

- Demountable panels with assembling hook system.
- Radiused interior lining base and sides.
- Polyurethane foam insulation, 75 mm thick.
- Thermal break between inner and outer structure.

Door

- Door bib water proof joint.
- 3 rising butt hinges avoiding ground joint friction.
- Central door closing mechanism with interior opening.
- Polyethylene access ramp, 15 mm thick.
- Door opening can be reversed (at the plant)

TECHNICAL DATA

Voltage : 3N~400V 50 Cycle
Input power : 7250 W
Protection : AM 16
Connections : Delivered with a moulded plug.
The installer is responsible for protecting the appliance against overloads or electrical defects. Ensure a circuit-breaker or fuses are installed.

Refr ; power : 5500 W at -15/+55°C
Refrigerant : R404A
Load : See instruction plate
Evaporator : Ventilated, corrosion proof
Compressor : hermetic 6 CV
Condenser : Water type,
Max admissible pressure : 10 bars
Max. temperature : 25°C
consumption: 0,5m^3/h
Defrost : Forced air circulation
Water connections : (2) Inlet ∅20/27
(flexible connection supplied)
(3) Drain PVC 32mm ∅

2. INSTALLATION

2.1 GENERAL REQUIREMENTS

The appliance must be installed, modified and repaired by a specialized engineer in accordance with current regulations.

2.2 HANDLING

The appliance must be handled with suitable lifting equipment, transported on its original pallet and not stacked.

If moving the appliance without its pallet, it must be carried and not pulled.

2.3 UNPACKING AND INSTALLATION

2.3.1 LOCATION

When choosing the location, make sure that there is sufficient air circulation around the appliance to allow correct cooling of the condenser and compressor.

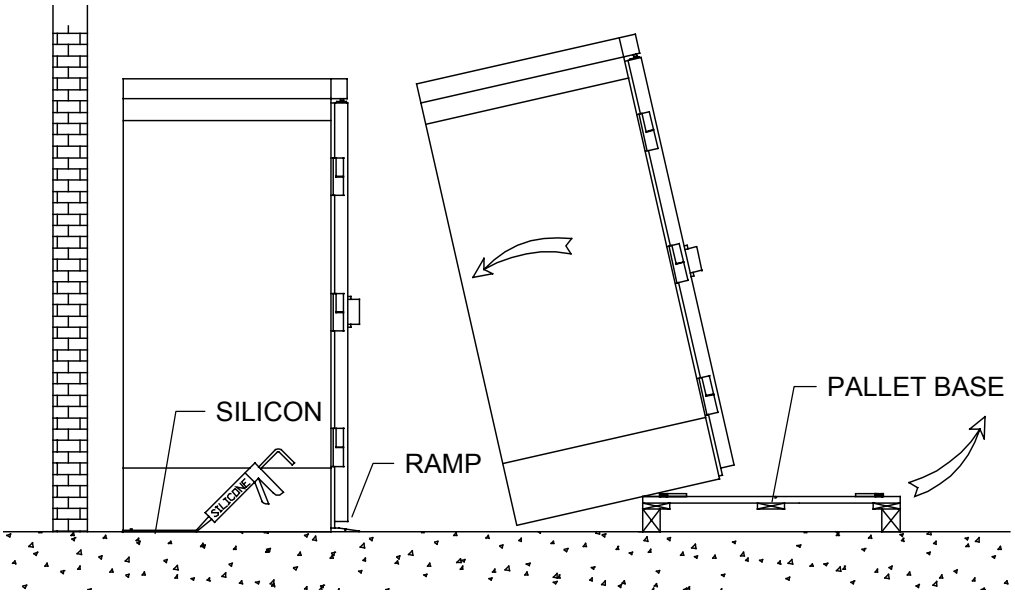
Do not install near a source of heat.

IMPORTANT : Roll in units do not have adjustable feet, therefore they must be placed on a smooth and level floor.

2.3.2 INSTALLATION

After unpacking, slide the unit off its pallet. Ensure that the weight of the unit is evenly distributed.

Slide the appliance into its final location, apply silicon mastic between the resin bottom and the floor and fix the access ramp directly to the floor.



2.4 CHILLER DISASSEMBLY

The appliance has been designed to be disassembled in case the selected location is not accessible.

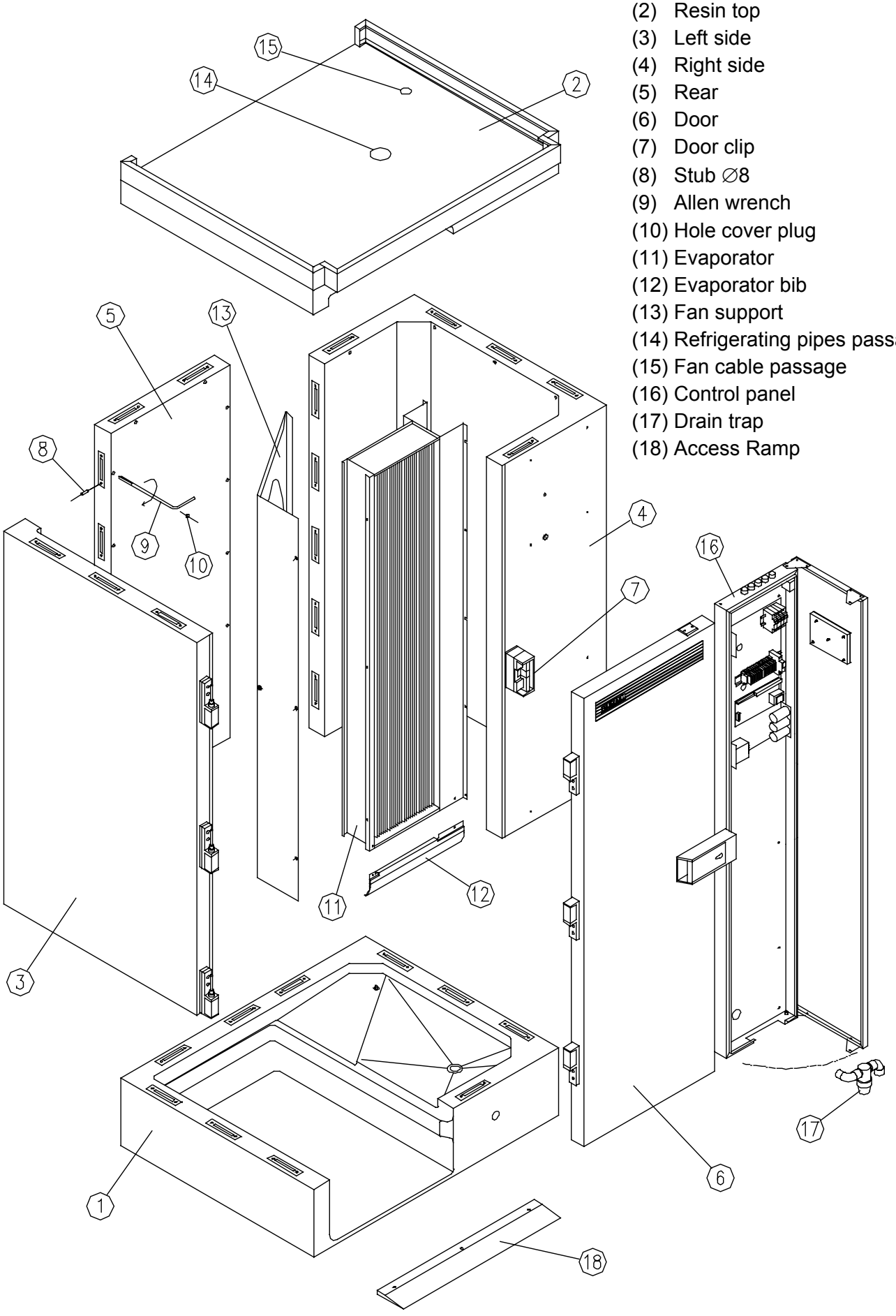
1) Remove the hinges from the service door(s).
2) Remove the control panel.
   - Open the facade by unscrewing the two top and bottom left screws
   - Disconnect the probe and the fans
   - Disconnect and unpair the group for the incorporated group models
3) Remove the fan support.
   - Slide the top and bottom hinges after unlocking them
   - Unscrew the three RL M6-20 attachment screws on the evaporator
4) Remove the evaporator (fixed to the right side of the unit).
5) Unlock and remove the top, using the provided allen wrench
6) Unlock and remove as follows.
   - the left side
   - the back (for wall chiller)
   - the right side

2.5 CHILLER REASSEMBLY

During assembly, apply a bead of silicon mastic between the various panels forming the refrigeration containment in order to make a good seal.

1) Place the resin bottom on the ground and engage the 8 mm studs in the hook assembly boxes.
2) Position the vertical walls adjusting them to fit using 8 mm studs and lock them to the bottom using the provided allen wrench (rotate in the clockwise direction until you hear a click fit).
3) Then lock the vertical walls.
4) Engage the 8 mm studs on the upper edge of the sides, put the top in position and lock it.
5) Block holes in the assembly boxes using the 10 mm plugs provided with the appliance.
6) Fix the evaporator on the right side using TH M6 screws.
7) Fix the fan support.
   - Offer it up in the closed position
   - Fix it to the evaporator using the 3 RL M6-20 screws
   - Slide and lock the 2 top and bottom pivots on the hinges
8) Install the control panel.
   - Front opened, fix with the help of 8 screws TH M6 and 4 self-tapping screws
   - Connect the probe and the fans
   - Connect and pair the group for the incorporated group models
9) Install the service door(s) (the position of the latches mounted in the factory may be modified after removing their casing).
10) Locate the chiller (see paragraph 2.3.2).

2.6 EXPLODED VIEW



(1) Resin bottom
(2) Resin top
(3) Left side
(4) Right side
(5) Rear
(6) Door
(7) Door clip
(8) Stub ∅8
(9) Allen wrench
(10) Hole cover plug
(11) Evaporator
(12) Evaporator bib
(13) Fan support
(14) Refrigerating pipes passage
(15) Fan cable passage
(16) Control panel
(17) Drain trap
(18) Access Ramp

2.7 CONNECTIONS (See paragraph 1 "Technical data ")

2.7.1 REFRIGERATING (EXTERNAL REFRIGERATION UNIT)

The chiller is delivered with the pipes of outlet connections to the ceiling.

The access to the evaporator expansion valve is made by opening the fan support.(See paragraph 3.2 in the user manual)

The operating temperature of the refrigeration units connected to the chiller must extend from at least –15°C to +10°C (evaporation temperature).

Connecting the chiller to a refrigerating power station is not recommended (ask us).

2.7.2 WATER CONNECTION (WATER TYPE REFRIGERATION UNIT)

The water incorporated group chillers are delivered with a 20/27 power cord and a 32mm ∅ PVC drain trap with "funnel system" to prevent waste water from returning into the containment.

2.7.3 ELECTRIC

The installer is responsible for protecting the appliance against overloads or electrical defects.

INCORPORATED REFRIGERATION UNIT

The chiller is delivered with a power cord which must not be disossiated in any circumstances. Installation of a circuit-breaker or protection fuses are the responsibility of the fitter.

EXTERNAL REFRIGERATION UNIT (NO DELIVERED GROUP)

The chiller delivered without compressor is delivered with a fitted control panel, an insulating switch, a tetrapolar circuit-breaker and a unipolar circuit-breaker plus a connecting strip with fuses.

Connection of the electric connecting strip is forecasted with contacts for the compressor.

EXTERNAL REFRIGERATION UNIT (DELIVERED GROUP)

Chiller with compressor is delivered with :

- Control panel of the cell with an insulating switch, and a unipolar circuit-breaker plus connecting strip with fuses.
- Electric box fixed to the compressor with a control circuit-breaker, a tripolar circuit-breaker plus group connecting strip and the bipolar circuit-breakers for the fans of the air group condenser.
- Cables of electrical connections (10 meters) from the compressor to the chiller.

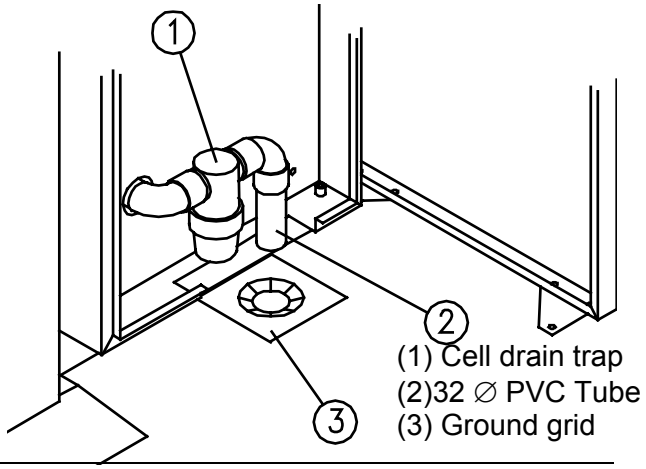
2.7.4 DEFROST WATER

The appliance is delivered with 2 32mm ∅ PVC tube outlets with a drain trap+ 1 tap.

Never connect the appliance DIRECTLY to the waste water network, in order to prevent water from returning into the containment. Install a vent (funnel principle) between the unit trap and the waste water network.

The drawing shows the drain trap in the front position. The 2nd evacuation located in the back must be blocked up with the wired tap provided with the appliance.

Procede of a similar way for the drain trap in the back position.



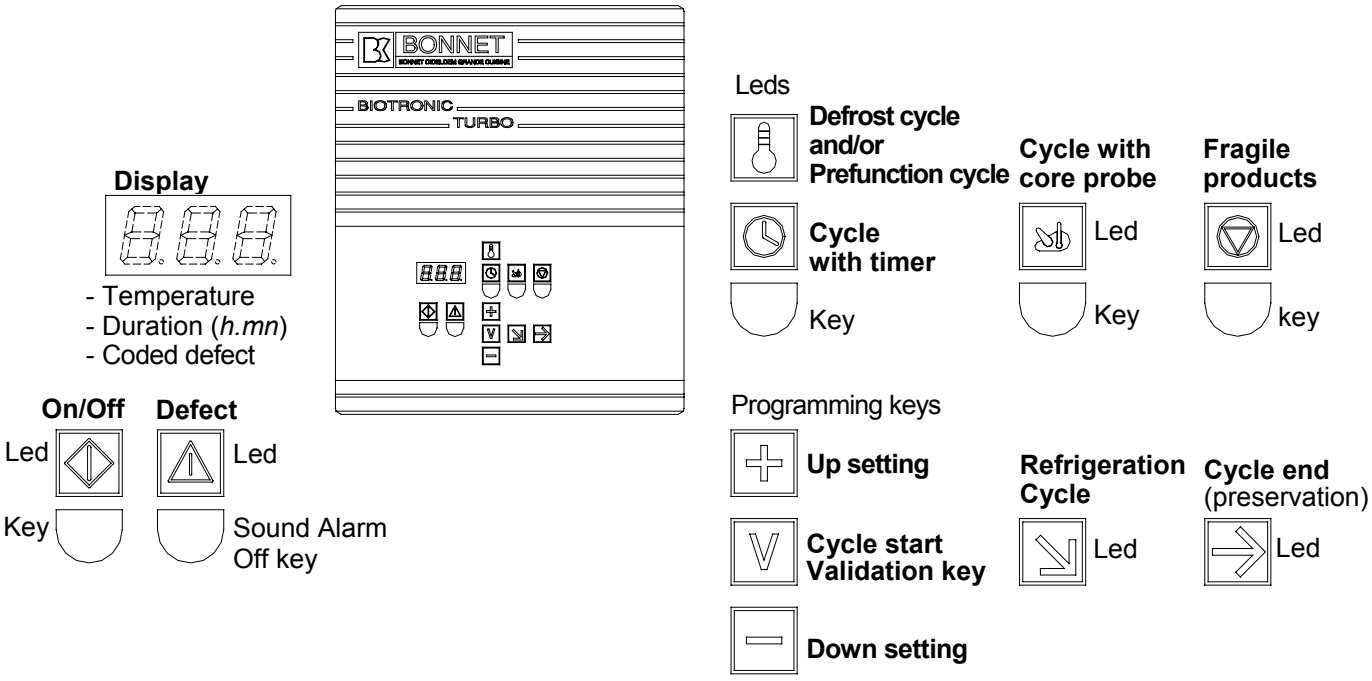
3. OPERATION

3.1 GENERAL REQUIREMENTS

Check that nothing blocks up the fans.

If the appliance has been laid during transport or locating, wait 24 hours before using the appliance to allow return of oil of the refrigerating circuit toward the compressor casing.

3.2 PRESENTATION OF THE CONTROL PANEL



3.3 ELECTRONIC CARD SETTING

3.3.1 CONFIGURATION OF PARAMETERS

The appliance is delivered from the factory with a standard configuration to fit the most current uses (see paragraph 1.3, page 4 of 'user manual'). If needed, this configuration can be modified. There are 2 levels of configuration :

Level 1 : Accessible to user (see 'user manual' page 9, paragraph 1.6)

Level 2 : Password protected, only accessible to installer in order to select and change the factory setting of all parameters (see 'table of parameters', paragraph 3.3.2, page 12)

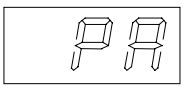
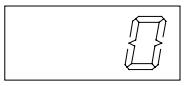
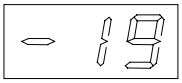
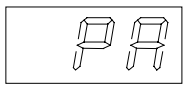
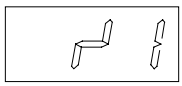
Parameters accessible at level 1 are also accessible at level 2.

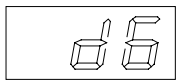
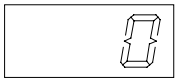
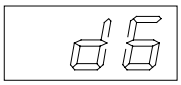
The modifications of parameters, at level 1 as well as at level 2, are definitively taken into account, even after the stop of the chiller.

When the appliance is used for the first time, it is necessary to program a code which must be set with the user, and which must be attributed to the chiller with the L5 and L6 parameters. Check the date and the hour of the regulator's internal clock with the i4, i5, i6, i7, and i8 parameters.

3.3.2 ACCESS TO PARAMETERS

The chiller is ON:

1	Access to level 1 : Press simultaneously and for a few sec. ☞ + and −	Beginning of the programmation mode. Display of the indication 
2	Access to PA parameter : Press ☞ V	Pre setting display of the parameter 
3	Setting of the parameter : Press successively ☞ + or −	To adjust value -19. Display of the parameter's value 
4	Validation of the parameter's setting : Press ☞ V	Display of the modified parameter's code 
5	Access to level 2 : Press simultaneously and for a few sec. ☞ + et −	Beginning of the programmation mode. Display of the first parameter 

6	Selection of parameters : Press successively ☞ + or −	Display of parameters one after another. Display of the parameters'codes 
7	Access to the selected parameter : Press ☞ V	Pre setting display of the parameter 
8	Modification of the parameter setting Press successively ☞ + or −	Display of the parameter's values one after another Display of the parameter's values 
9	Validation of the parameter's setting : Press ☞ V	Display of the modified parameter's code 

Start again stage 6 to 9 for the other parameters.

10	To exit programmation : Press simultaneously and for a few sec. ☞ + and −	Restart of the system. During or after programmation, the system restarts automatically if no key is pressed in less than 15 seconds.

The parameters' modifications are definitively taken into account.

3.3.3 TABLE OF PARAMETERS

Code	Parameters		Min	Max	Fact.
(2) PA	Password to access level 2	(set on –19)	-55	99	0
/ = PROBES					
/1	Core probe calibration	(correction by 1/8°C)	-55	99	0
/3	Number of core probe points	0 = 1 point, 1 = 5 points	0	1	1
/5	Ambient probe calibration	(correction by 1/8°C)	0	6	0
/8	Temperature scale	0 = °F, 1 = °C	0	1	1
o = MACHINE CONFIGURATION					
o0	Cycle type	0 = chill., 1 = comb.	0	1	0
o1	Door contact	0 = No, 1 = Yes	0	1	1
o2	Choice of cycle when closing the door	0 = No, 1 = Yes	0	1	0
o3	Automatic prefunction cycle when powered up	0 = No, 1 = Yes	0	1	0
r and **c** = REGULATOR CONFIGURATION					
r0	Prefunction cycle regulation differential	(°C)	1	15	3
r1	Prefunction cycle set-point	(°C)	-55	99	-15
c0	Preservation after cycle regulation differential	(°C)	1	15	3
(1) c1	Chilling cycle duration without core probe	(mn)	30	180	120
(1) c2	End of chilling cycle set-point with core probe	(°C)	0	99	10
c3	Chilling cycle preservation temperature set-point	(°C)	-55	99	3
(1) c4	Chilling/freezing cycle duration without core probe	(mn)	30	300	270
(1) c5	Chill./freezing end of cycle set-point with core probe	(°C)	-55	0	-18
c6	Chill./fr. cycle preservation temperature set-point	(°C)	-55	99	-20
c7	Ambient/Core probe insertion check (with cb = 1)	(°C)	0	99	5
(1) c8	Temperature level for countdown start	(°C)	0	99	63
c9	End of cycle buzzer alarm duration	(s)	0	99	3
(2) cA	Core probe temperature	(read only)	--	--	--
cb	Core probe insertion test (according toc7 and cE)	0 = No, 1 = Yes	0	1	1
(2) cc	Fragile products ambient probe set-point	(°C)	-55	99	-15
cd	Temperature level for weak/strong ventilation cycle	(°C)	-55	99	12
cE	Core probe insertion test duration (with cb = 1)	(s)	1	99	30
C = COMPRESSOR PROTECTIONS					
C0	Compressor delay at power up	(mn)	0	15	0
C1	Min. time between 2 starts of the compressor	(mn)	0	15	0
C2	Min. break after stop of the compressor	(mn)	0	15	0
C8			0	99	85
d = DEFROST					
d0	Time between 2 defrosts	(h)	0	99	8
d1	Defrost type	0 = Ventil, 1 = Elect	0	1	0
d2	End of defrost temperature (ambient probe)	(°C)	0	30	5
d3	Defrost max. duration (Safety time)	(mn)	1	99	30
d4	Defrost at the beginning of the chilling cycle	0 = No, 1 = Yes	0	1	0
d5	Defrost delay at the beginning of the pres. cycle	0 = Without (mn)	0	99	0
(2) d6	Defrost at the beginning of the prefunction cycle	0 = No, 1 = Yes	0	1	1
d7	Draining time	(mn)	0	99	0
db	Time basis	0 = H mn, 1 = mn s	0	1	0

(1) : Parameters corresponding to legislation (H-L indication if the cycle doesn't comply with these settings).
(2) : Configuration parameters on level 1, accessible to the user.

TABLE OF PARAMETERS (2nd part)

Code	Parameters		Min	Max	Fact.
F = VENTILATION					
F0	Ventilation ON in preservation cycle	0 = weak, 1 = strong	0	1	0
(2) F1	Ventilation ON with fragile products	0 = weak 1 = strong	0	1	1
F4	Ventilation ON in defrost cycle	0 = weak 1 = strong	0	1	0
F5	Ventilation rythm after draining		0	15	0
u = OUTLET ASSIGNATION					
u0	RL1 relay operation	0 = on/off, 1 = alarm	0	1	1
u1	RL1 relay polarity	0 = NO, 1 = NC	0	1	0
i = PRINTER					
i0	Printer presence	0 = no, 1 = Yes	0	1	0
(2) i1	Printing frequency in chilling cyle	(mn)	0	60	5
(2) i2	Printing frequency in preservation cycle	(mn)	0	60	30
(2) i3	Printing at the beginning of the cycle	0 = no, 1 = yes	0	1	1
(2) i4	Date setting	Day	1	31	(3)
(2) i5		Month	1	12	(3)
(2) i6		Year	990	050	(3)
(2) i7	Time setting	Hour	0	23	(3)
(2) i8		Minute	0	59	(3)
L = NETWORK					
L1	Instrument address		1	15	1
L2	Instrument group		0	7	0
L3	Timeout link		2	250	7
L4	Transfer rate	0 = 1200 bauds 1 = 2400 bauds 2 = 4800 bauds 3 = 9600 bauds	0	3	1
L5	Machine code		A	Y	(3) A
L6	Machine number		1	99	(3) 1

(2) : Configuration parameters on level 1, accessible to the user.
(3) : Configuration parameters which must be set during the installation.

4. INTERVENTIONS AND REPAIRS

IMPORTANT

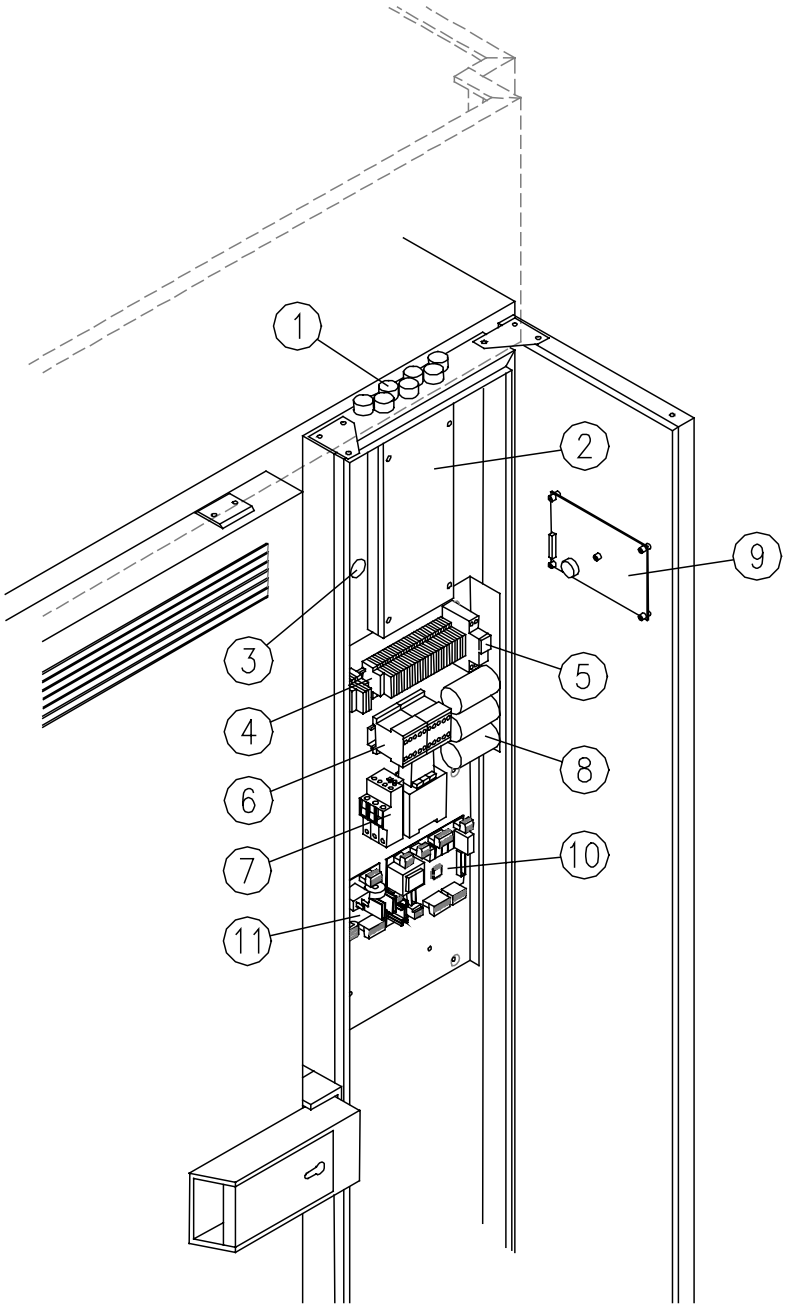
Before any operation, ensure that
the appliance is unplugged or isolated.

4.1 CONTROL PANEL

The access to the regulation components is possible by pivoting the front face of the control panel after having unscrewed the 2 TH M6 top and low left screws.

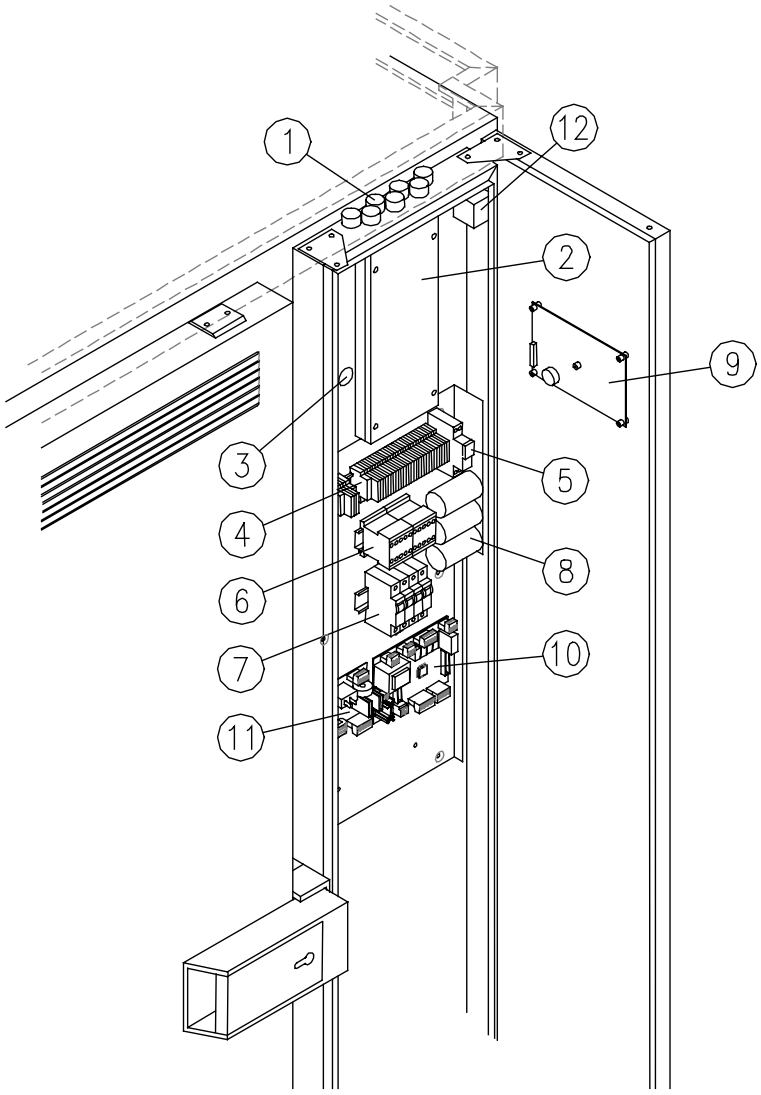
INCORPORATED GROUP MODEL

(1) Cable protection
(2) Electric cables spout
(3) cable way to connect the probe
(4) Connecting strip
(5) Unipolar circuit-breaker
(6) Ventilation contactor
(7) contactor with thermal relay
(8) Fans condensators
(9) Display electronic card
(10) Microprocessor card
(11) Extension electronic card
(12) Insulating switch



EXTERNAL GROUP MODEL

(1) Cable protection
(2) Electric cables spout
(3) Cable way to connect the probe
(4) Connecting strip
(5) Unipolar circuit-breaker
(6) Ventilation contactor
(7) Tetrapolar circuit-breaker
(no delivered group)
(8) Fans condensators
(9) Display electronic card
(10) microprocessor card
(11) Extension electronic card
(12) Insulating switch



4.2 EVAPORATOR EXPANSION VALVE

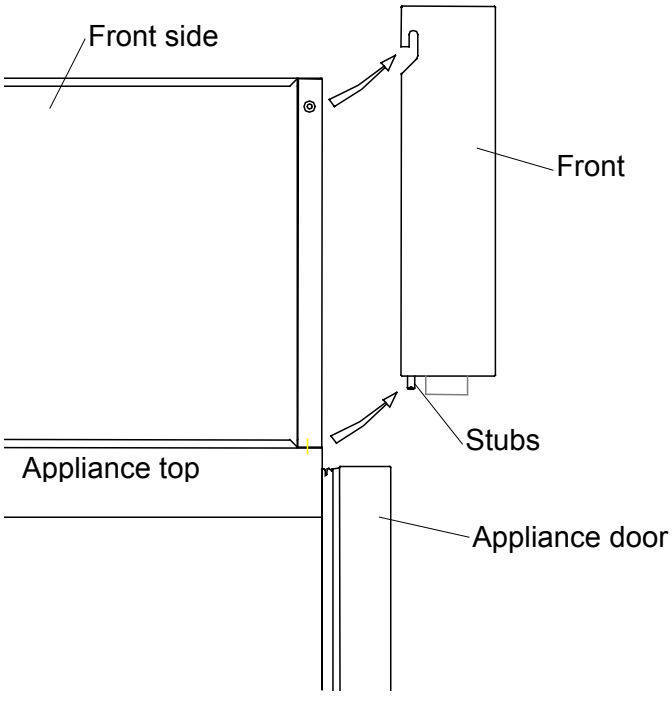
To have access to the expansion valve, open the fan support (see paragraph 3.2 of the user manual)

4.3 INCORPORATED UNIT

To ease the access to the unit, it is possible to hold down the front.

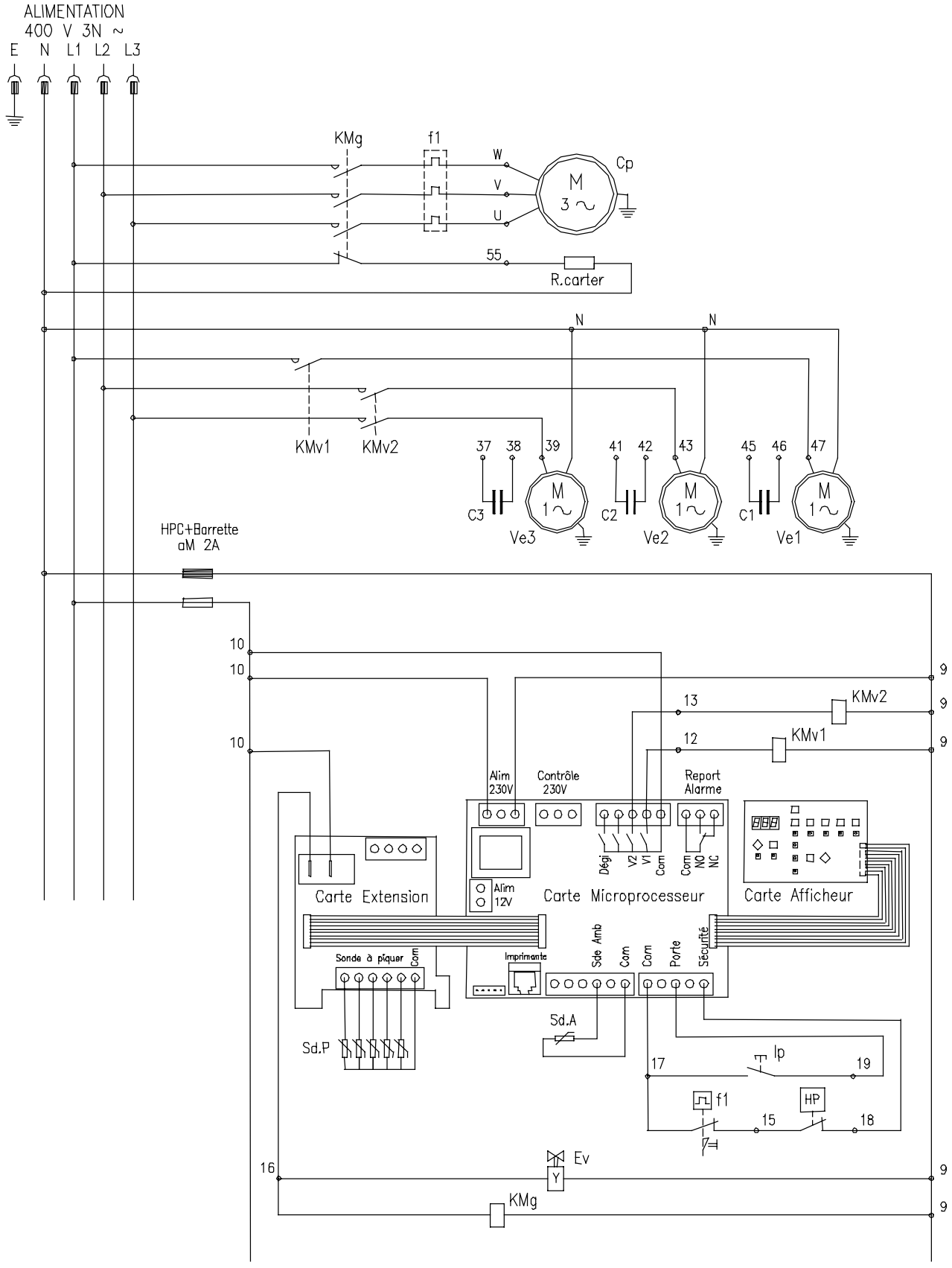
After having unscrewed by the top the 2 sheet screws located on each side of the door switch, take off the front from the clips of the group cover sides and from the positionning stubs of the ceiling.

For reassembling, locate the clip of the front on the plastic washers with edges of the sides, and screw the 2 sheet screws.



5. ELECTRICAL DIAGRAMS

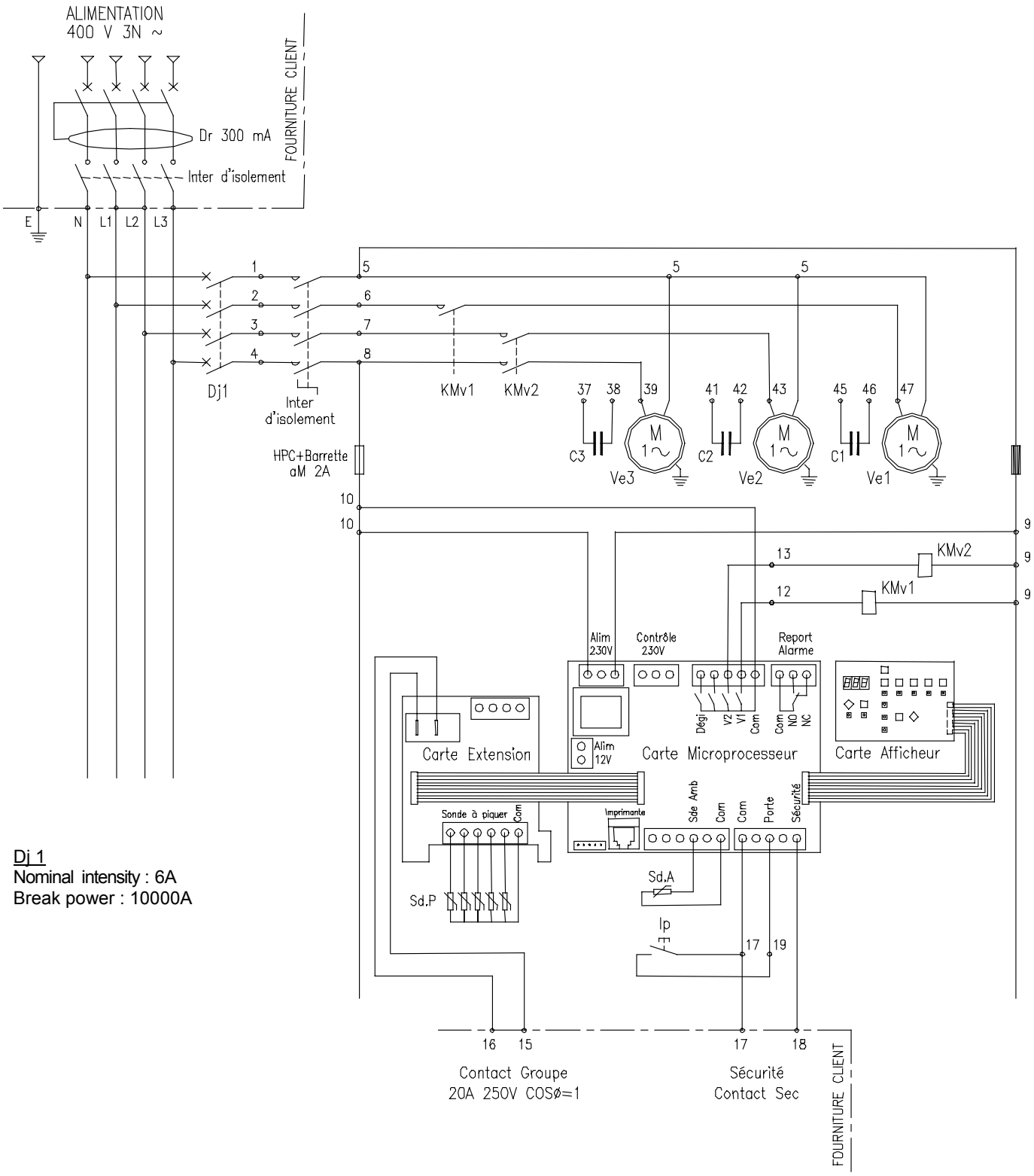
5.1 PRINCIPLE DIAGRAM FOR R80 IG (N°SE138)



The installer is responsible for protecting the appliance against overloads or electrical defects.

5.2 PRINCIPLE DIAGRAM FOR R80, R160 REFRIGERATION UNIT NOT SUPPLIED

(N°SE139)

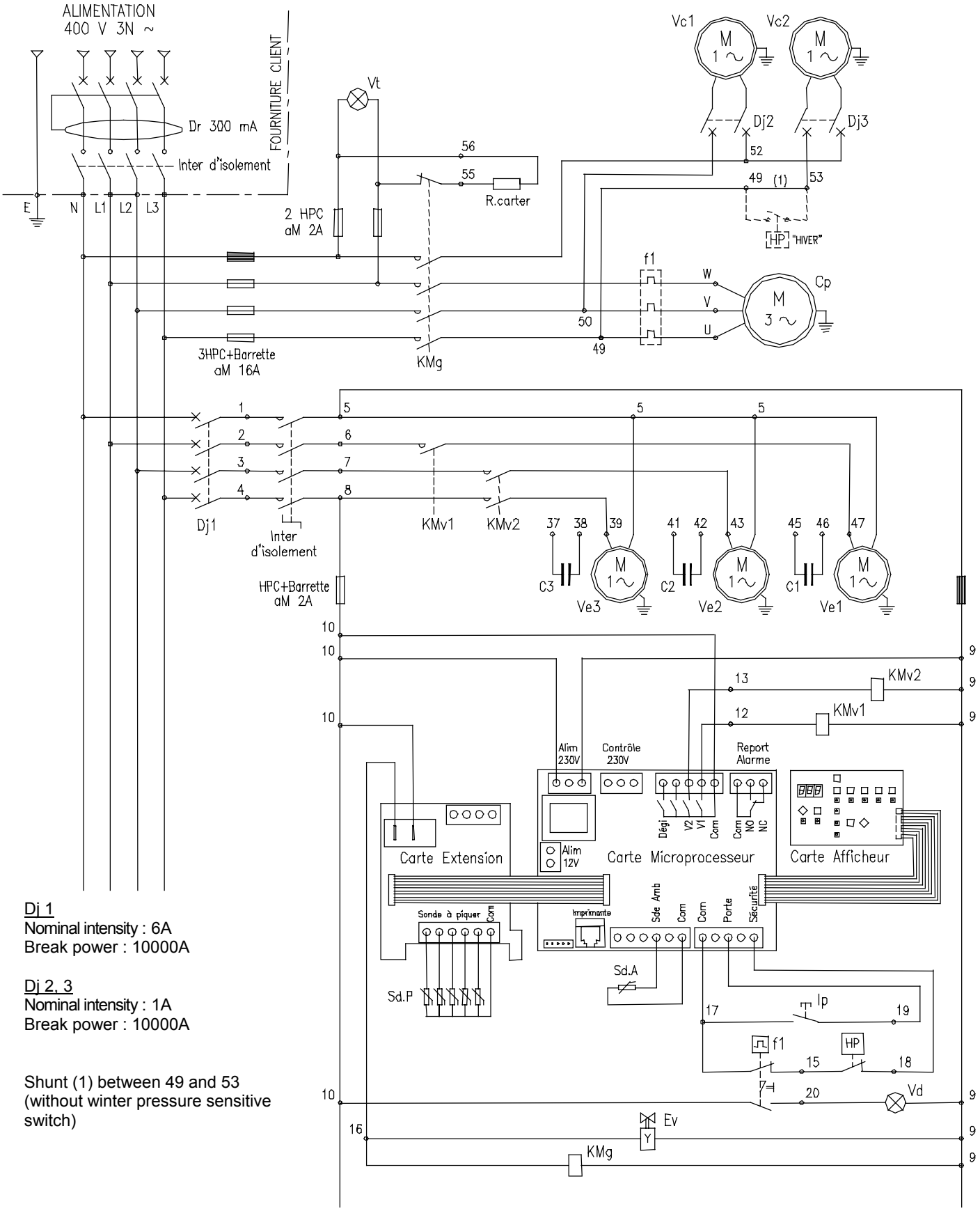


Dj 1
Nominal intensity : 6A
Break power : 10000A

The installer is responsible for protecting the appliance against overloads or electrical defects.

5.3 PRINCIPLE DIAGRAM FOR R80 REFRIGERATION UNIT SUPPLIED

(N°SE140)



Dj 1
Nominal intensity : 6A
Break power : 10000A

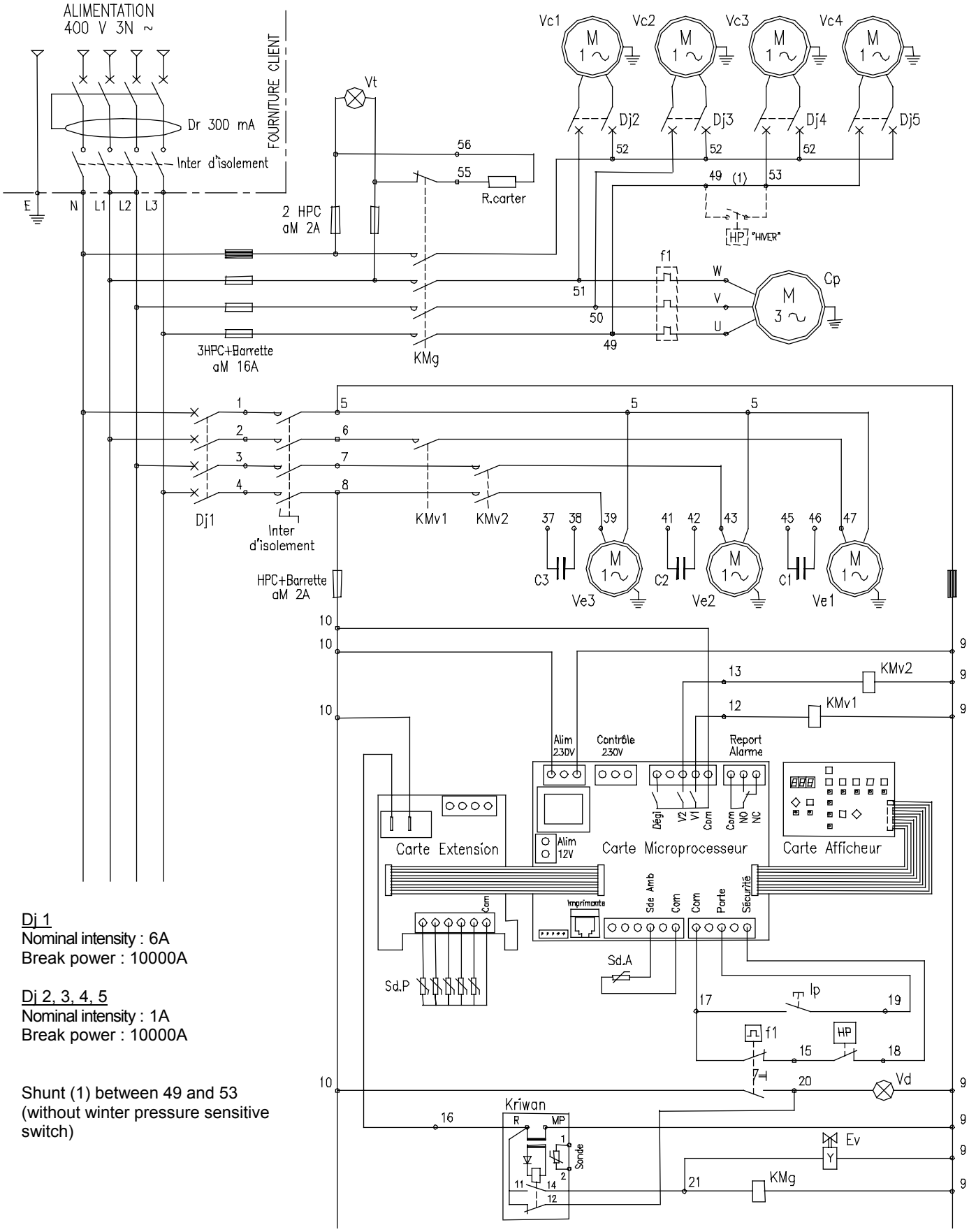
Dj 2, 3
Nominal intensity : 1A
Break power : 10000A

Shunt (1) between 49 and 53
(without winter pressure sensitive switch)

The installer is responsible for protecting the appliance against overloads or electrical defects.

5.4 PRINCIPLE DIAGRAM FOR R160 REFRIGERATION UNIT SUPPLIED

(N°SE141)



Dj 1
Nominal intensity : 6A
Break power : 10000A

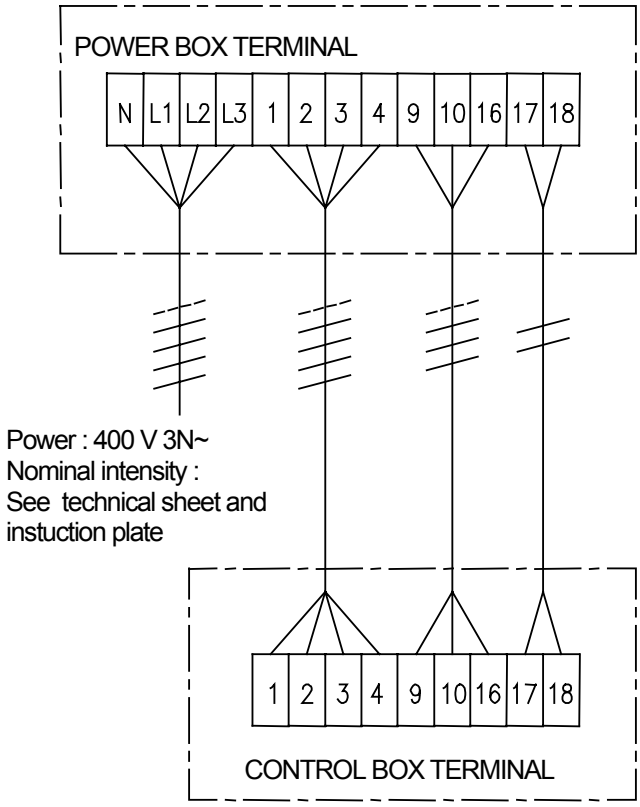
Dj 2, 3, 4, 5
Nominal intensity : 1A
Break power : 10000A

Shunt (1) between 49 and 53
(without winter pressure sensitive switch)

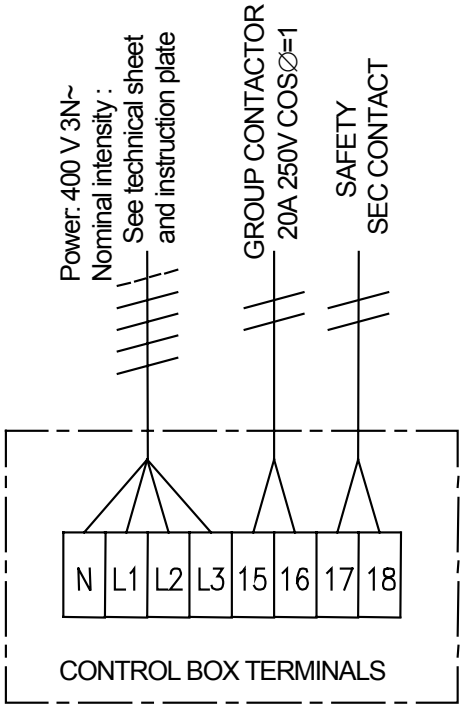
The installer is responsible for protecting the appliance against overloads or electrical defects

5.5 CONNECTION DIAGRAMS (N°SE145)

5.5.1 UNITS DELIVERED WITH EXTERNAL REFR. UNIT



5.5.2 UNITS DELIVERED WITHOUT EXTERNAL REFR. UNIT



6. SPARE PARTS

6.1 CASING

R 80GI	R 80	R 160	Code	Designation
●	●		S321P53	Solid door 430x1818
		●	S323P53	Solid door 630x1818
●	●	●	S209P11	Door magnetic seal type R80
●	●	●	S210P11	Door magnetic seal type R160 RF80/160
●	●		S078PC64	Door lower part seal type R80
		●	S078PC64	Door lower part seal type R160 RF80/160
●	●	●	S090P01	Door hinge
●	●	●	S092P01	Door handle with clip
●	●	●	S291P11	Door label
●	●	●	S409P42	Door switch ramp
●	●		S853PM42	Access ramp 750
		●	S853PN42	Access ramp 950
●	●		S370P45	Fans sheet ∅350 evaporator R80
			S371P45	Fans sheet ∅350 evaporator RF80
		●	S372P45	Fans sheet ∅450 evaporator R160
●	●	●	S152P02	Evaporator fans sheet hinge
●	●	●	S153P02	Evaporator fans sheet hinge support
●	●	●	S855P42	Probe support air deflector
●	●	●	S058P03	M6x15 triangle button screw
●	●	●	S773PO42	Probe connection connector fixing plate
●	●		S014P64	410 Bib evaporator corking
		●	S015P64	510 Bib evaporator corking
●	●	●	S088P64	Defrost water drain trap set
●			S868P42	Casing front type R80GI
	●		S404PM42	---"--- type R80
		●	S404PN42	---"--- type R160
●			S864P42	Casing side type R80 GI
	●		S406PM42	---"--- type R80
		●	S406PN42	---"--- type R160
●			S865P42	Casing stiffening plate R80GI
●	●	●	S408P42	Door switch fixing angle
●	●		S897PM42	Control panel door type R80
		●	S897PN42	---"--- type R160

6.2 REFRIGERATING ELECTRIC EQUIPMENT

R 80GI	R 80	R 160	Code	Designation
●	●		S030P30	4N60T 300LT Evaporator
		●	S031P30	4N60T 400LT Evaporator
●	●	●	S150P20	TE5 - 68B4011 expansion valve piece
●	●	●	S156P20	TES 5 - 68B3342 Thermostatic train
●	●	●	S144P20	n°1 - 68B2089 Expansion valve nozzle
●	●		S167P15	A350 4PL30 MXC50P2 Fan
		●	S168P15	A450 4PL30 MXC70P4 Fan
●	●	●	S198P15	Door switch
●	●	●	S297P11	Control panel label
●	●	●	S196P20	Electronic regulation cards set
●	●	●	S198P20	Microprocessor regulation card
●	●	●	S199P20	Extension regulation card
●	●	●	S197P20	Front regulation card
●	●	●	S194P20	Ambient probe
●	●	●	S200P20	Core probe
●	●	●	S201P20	Core probe connection connector
	●	●	S207P15	Control panel insulating switch
●	●	●	S406P15	Unipolar circuit-breaker
●	●	●	S306P15	aM 2A 10.3x38 fuse
	●	●	S423P15	Tetrapolar circuit-breaker
●	●	●	S104P15	LC1K0910M7 Ventilation contactor
●			S102P15	LC1D1210M7 contactor
●			S076P15	LA1D11 auxiliary contact
●			S116P15	LR2D1316 Thermal relay

REFRIGERATING ELECTRIC EQUIPMENT (2nd part)

R 80GI	R 80	R 160	Code	Désignation
	●		S026P56	6 CV Group power box unit
		●	S032P56	10 CV Group --- " ---
	●	●	S429P15	3P+N 32A Circuit-breaker
	●		S304P15	aM 16A 10.3x38 Fuses
		●	S357P15	aM 20A 10.3x38 Fuses
	●	●	S300P15	32A Fuses support
	●	●	S307P15	aM 1A 10.3x38 Fuses
	●	●	S122P15	LC1D25M7 Group contactor
	●	●	S076P15	LA1D11 auxiliary contact
	●		S116P15	LR2D1316 thermal relay
		●	S118P15	T25DU32 --- " ---
	●	●	S423P15	Tetrapolar circuit-breaker
	●	●	S424P15	Bipolar circuit-breaker
●			S167P40	TAG 4568 Z Compressor
●			S052P30	CEBV 235 Water condenser
●			S079P20	WVFX 10 Pressostatic water valve
	●		S001P40	TAG 4568 ZHR Group
		●	S002P40	UAK 1000 CC Group
	●		S101P19	1"1/8 vibration eliminator
		●	S608P19	1"5/8 vibration eliminator
●	●	●	S084P20	5/8 solenoid valve
●	●	●	S017P20	DN 305 S dryer
●	●	●	S169P19	SGN 16 S sight glass
●	●	●	S032P20	HP KP5 Pressure sensitive switch

BONNET

DECLARATION DE CONFORMITE

CONFORMITY DECLARATION

HERSTELLERKONFORMITÄTSERKLÄRUNG

CE

TYPE */ TYPE / TYP* :
N° DE SERIE */ SERIAL N° / FAB Nr* :

Cet appareil est conforme aux dispositions de la directive « Basse tension » 73/23/CEE et de la directive « Compatibilité électromagnétique » 89/336/CEE.

This appliance complies with the provisions of the low voltage directive EEC/73/23 and with the provisions of the electromagnetic compatibility directive EEC/89/336.

Dieses Gerät entspricht nach den Bestimungen der niederspannung-richtlinie EWG/73/23 und den Bestimmungen der elektromagnetischen Übereinstimmung-richtlinie EWG/89/336.

Il est également conforme aux dispositions de normes européennes harmonisées suivantes :

It is in compliance with the following harmonized standards :

Und entspricht ebenfalls der folgenden Europaïschen Norme :

- EN 60335 - 1 **Sécurité des appareils électrodomestiques et analogues**
Safety of houseold and similar electrical appliances
Elektrische Geräte für den Hausfebrauch und ähnliche Zwecke

DIRECTION GENERALE
Général Manager
Betriebsleiter

H.GIRAUD

FORM055A1/1