Climadiff GROUPE

2011

WINE CABINETS
Technical manual

Multi-purpose wine cabinets

Wine ageing cabinets

Wine serving cabinets

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Chapter 1

GENERAL INFORMATION

CHAPTER 1: GENERAL INFORMATION

1. Wine and its requirements

Wine is the culmination of passion.

Thanks to its complexity, it develops very slowly and peacefully!
Wine requires the combination of several conditions to flourish and gradually reach its fullest potential. Therefore the following five golden rules must be observed:

- Constant temperature
- Sufficient humidity
- Dark environment
- Pure air
- No vibrations

The consistency of these conditions is vital and is the reason why wine cabinets were developed!

2. Choices available to consumers

First and foremost, a distinction must be made between ageing, preserving and serving temperatures.

- The ageing and storage temperature is 12°C irrespective of the type of wine.
- Serving temperatures on the other hand vary according to the type of wine.

3. Different types of wine cabinets

Climadiff, the wine cabinet specialist, has therefore designed different types of cabinets.

Ageing: Climatic environment developed to reproduce the conditions of real wine cellars in the most stable way to encourage optimum development of the best wines.

Multi-purpose: Single or multi-compartment environment which, thanks to a temperature gradient, provides a combination of room temperature, preserving and serving areas.

Serving or temperature control: Climatic single or multi-compartment environment designed to ensure you can enjoy your best wines at the right temperature so that the refined aromas come to life.

The mechanical refrigeration system relies on one or several mechanical or electronic thermostats to precisely regulate the temperature. The wine cabinet therefore operates in cycles of minor temperature fluctuations, which can be observed in the cabinet's air flow. This is normal and the temperatures which can be recorded randomly by placing a thermometer in the cabinet do not reflect the exact temperature of the wine.

A stable average temperature is achieved inside the bottle thanks to this method of minor air temperature fluctuations around the set point (temperature is regulated, required and controlled by the thermostat).

The more bottles of wine you store in your wine cabinet, the more important the thermal mass becomes, while the impact of possible ambient temperature fluctuations caused by thermal inertia becomes less significant.

A snowball will melt very quickly, while a large snowman will take several days to disappear even when temperatures are positive.

4. Specifications

- **Thermal inertia**

Thermal inertia is the natural tendency of your bottles to maintain their initial temperature for long periods in the event of a disruption to the thermal balance within their environment.
Therefore, the slow rate at which a possible temperature disturbance would cause your bottles to reach a new balance point can also be determined.
It is worth noting that on average the conductivity of liquids (expect for water) decreases by 0.15% per °C when the temperature rises.

Consequently, you do not need to worry if you notice temperature fluctuations within the cabinet environment; your wines are perfectly protected! A cabinet filled with 200 bottles equates to a mass of around 260 kg (on average a 75 cl bottle = 1.3 kg), which is quite a significant amount.
This phenomenon can be illustrated by comparing it to an ice cube. A single cube of ice exposed to sunlight will melt very quickly, while a large number of ice cubes placed next to each and subjected to the same conditions will take a lot longer to melt.

- **Humidity**

Humidity is used to maintain moisture in the corks of the bottles and preserve their elasticity, sealing qualities and prevent the wine from coming into contact with the air.

It is controlled through the combination of three factors:

- Circulation of ambient, humid air
- Functionality of the device
- Inner surface covered in a paint with a high level of granularity (retains condensation droplets)

During the cooling period (cold air dries out the air), frost forms and humidity levels can increase to 40%. While the compressor is shut down, the frost melts during the warming-up period and levels can rise to 70%.

The average of these two values (40% + 70%) / 2 = 55% equates to the recommended humidity level for preserving wine (55% +/-10%). The customer must be well aware of the fact that this is an average.

In fact, if a customer rings and specifies that the humidity level is 50% and complains that it is too low and particularly that it is at a constant level, it is highly probable that the reading was taken just after a cooling period. **The levels recorded inside the cabinet can therefore not remain fixed and will, on the contrary, fluctuate several times a day.**

Example: 65% +/- 10% = therefore equates to an average of 65% without causing a problem.

The duration of the cycle must also be taken into consideration. The operation of the compressor can equate to 10% of the cycle, which increases the average in this particular case to more than 65%.

The relative humidity (measured by public hygrometers) does not directly specify the quantity of water vapour in the air, but simply highlights the ratio between the state of the air in question and saturated air at the same temperature and pressure.

- **Temperature**

The thermostat enables the temperatures to be increased or decreased.

The principle of an average temperature is the same as the one that applies to humidity. Following each start-up of the compressor, the temperature will fall and following each standstill it will increase again. The average of these two extremes equates to the average temperature required for preserving wine. Example: (10°C + 14°C) / 2 = 12°C

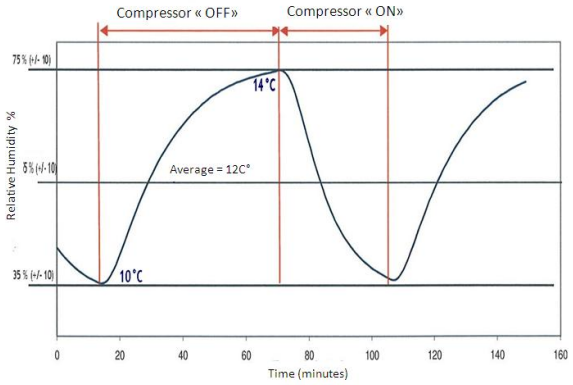
Our multi-purpose wine cabinets have different temperature levels: colder at the bottom and warmer at the top. This is achieved by distributing the static cold. This principle relies on the free and natural circulation of cold air, which is heavier and moves down the cabinet environment. Once it is warmer, it naturally rises again. In the majority of cases, the coldest area (between 6°C and 10°C) is therefore located at the bottom of the cabinet and the warmer (between 12°C and 16°C) environment is located at the top, while the central section is for preserving wine (between 10°C and 14°C) .

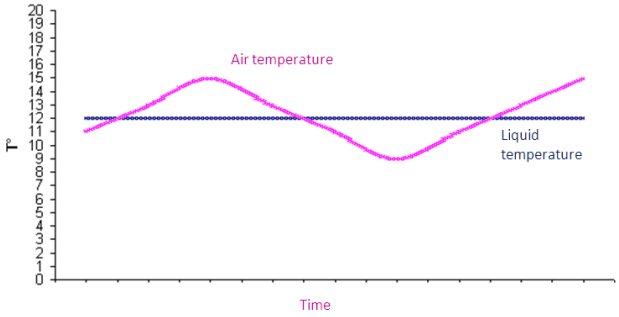
The inertia phenomenon of the temperature is also very important. Once 100 to 200 bottles are loaded, their inertia plays a significant factor and even if the compressor shuts down for one or two hours (or more), the wine inside the bottles is not subjected to the fluctuation.

It can be concluded that a **prolonged** change of 1°C in the air equals to a change of only 0.1°C in the bottle.

The best way to determine a meaningful diagnosis is to fit a temperature recorder for 24 to 48 hours. The curve clearly illustrates the average temperature and the corresponding fluctuations linked to the shut-down and start-up periods of the compressor or winter system (refer to the section on the winter system).

Also place a submersible thermometer in a bottle filled with water to determine the exact temperature of the liquid.
This enables the explanatory drawings below to be illustrated precisely.





In all cases, **where the winter system is implemented**, the element located at the bottom of the device generates a light mixture within the chamber, **which momentarily eliminates the usual separation between the various temperatures** thanks to a natural convection phenomenon (hot air is lighter than cold air). As soon as the compressor generates cold air, the separation between the temperatures returns naturally.

5. Operating principles: winter system

This system enables any temperature fluctuations resulting from a severe winter to be compensated in an unheated environment that **most importantly is frost protected**. If the unit is not frost protected, the element does not have enough power to fight the incoming cold.

In all cases, **where the winter system is implemented**, the element located at the bottom of the device generates a light mixture within the chamber, **which momentarily eliminates the usual separation between the various temperatures in multi-purpose models** thanks to a natural convection phenomenon (hot air is lighter than cold air).

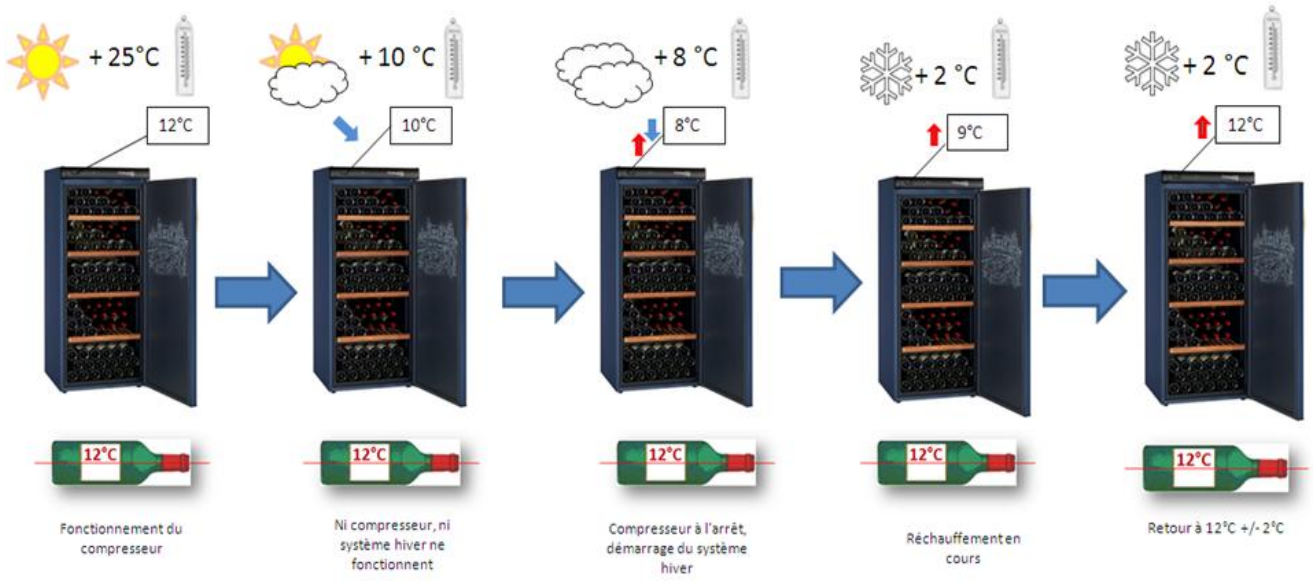
The system comprises a thermostat that is preset at the factory, a sensor which depending on the model is located below the top panel of the device, on the outside (on the rear of the device) or even on the inside, and a heating element inserted in the foam below the start-up compressor or glued behind the vaporizer (on multi-purpose models) in the internal tank.

The winter system will start up as soon as the ambient temperature recorded by the sensor at the top of the device reaches around 8°C (preset at the factory). On models equipped with Intelitherm as well as DIVA models, the setting is controlled electronically by the customer.

The element will then gradually reheat the inside of the cabinet to restore it to a value close to 12°C (+/-2°C) even before the heat exchange affects the content of the bottles.

Minimum application temperature: +0°C.

Assuming that a wine cabinet is subjected to such extreme temperatures, the winter system will work although it does not have enough power to compensate for extremely cold ambient temperatures.



Compressor operating	Compressor and winter system not operating	Compressor stops the operation of the winter system	Reheating in progress	Return to 12°C +/-2°C

At 25°C, the device is regulated by normal refrigeration.

At an ambient temperature of 10°C, the production of hot or cold air is not required.

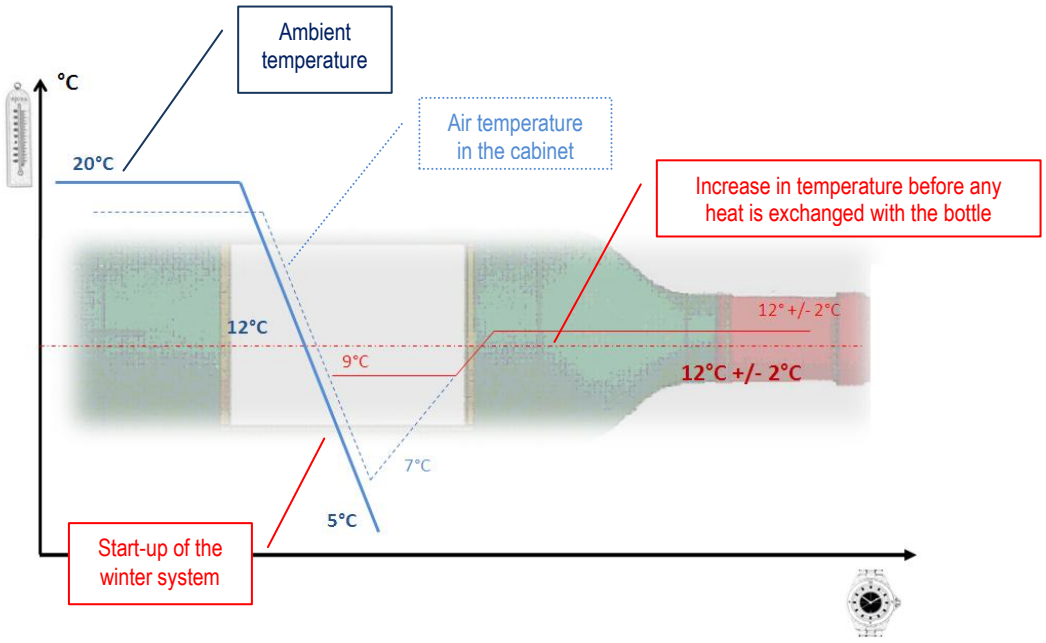
At an ambient temperature of 8°C and below, the drop in the ambient temperature will change the thermal balance of the air in the cabinet, although this will be significantly delayed by the insulator. The display therefore indicates the temperature of the air in the cabinet, which does not include the thermal inertia. The temperature of the bottles remains the same despite the recorded fluctuations. Fluctuations can be recorded according to the length of the exposure to the cold.

If the reduction of the ambient temperature continues, the winter system will start up and begin compensating for the drop in temperature. The internal reheating process is now in progress and will slowly increase the temperature.

If the temperature shown on the display does not match the operator's expectations, this is perfectly normal! Although the air temperature in the wine cabinet drops, the winter system increases the temperature before a heat exchange with the contents of the bottles is even possible.
To illustrate this, anybody stood at the side of a swimming pool, whether it has an ambient temperature of +35°C or +18°C will touch the water before diving in, simply because the air temperature at a given moment (T) does not determine the temperature of the water as a mass.

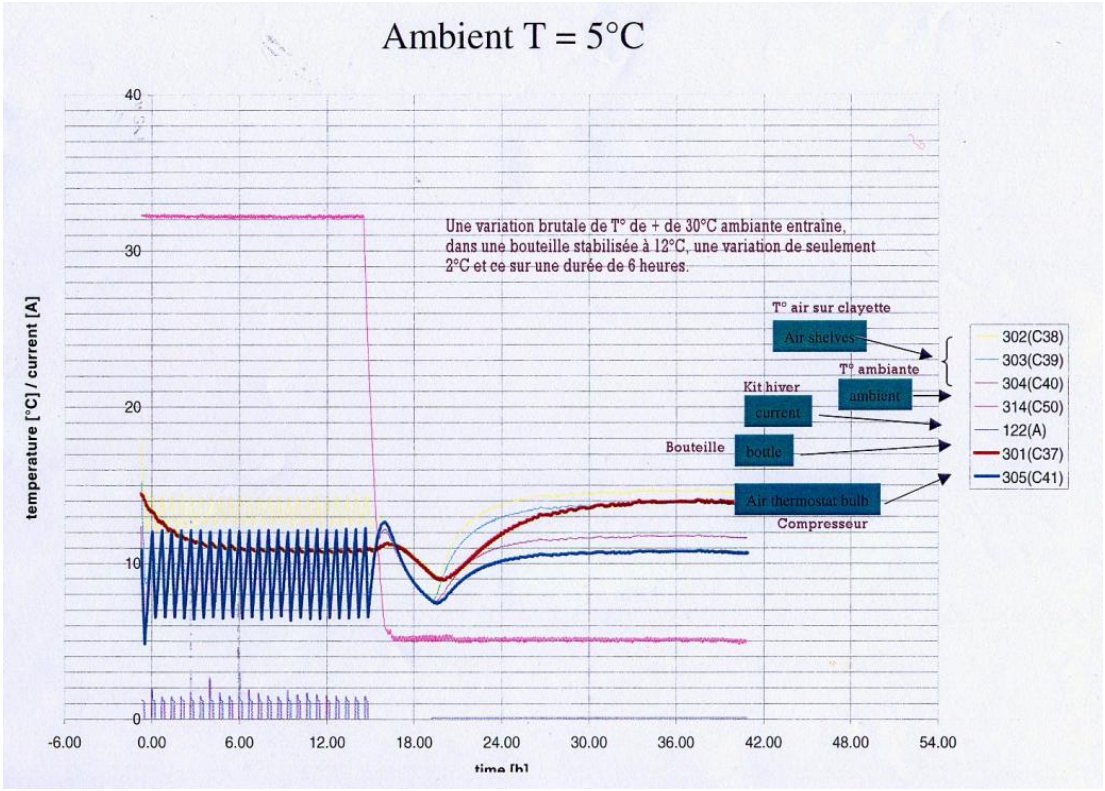
In the event that it may be 35°C or 18°C, the water temperature could very well be 25°C, which is often the case.

Always remember the concept of thermal inertia.



The conditions of the bottle can also be illustrated in a diagram in the event of a disturbance to the ambient temperature.

The temperature log below was completed in an air-conditioned room to provide an overview of the minimal "impact" an extreme change in the ambient temperature (drop from 30°C) would have on the content of the bottle (impossible in reality).



The internal temperature increases gradually — the customer opens the door several times a day to check the temperature:

It must be explained to worried customers who open the door very frequently in order to check the winter system is working correctly, that this is detrimental to restoring a higher temperature in the device. Each time the door is opened, a very significant amount of energy is lost, which further impedes the reheating process (imagine heating your house with the doors and windows open, etc.).

Slow increase of the temperature:

To customers who complain that the temperature does not rise quickly enough, it must be explained that the wine does not withstand drastic temperature fluctuations. This is why our winter system is a low powered device ensuring a slow and gradual increase of the internal temperature and not creating a thermal shock.

Loading a large number of very cold bottles:

The winter system must not only increase the internal temperature (air) but also that of the content.

On average, one bottle = 1.3 kg. Therefore, one hundred bottles generates a mass of 130 kg, which is a considerable amount and will therefore require a long time with the door closed to reheat everything very slowly.

Bear in mind the time required to cool one bottle of water from 18°C to + 4°C in the fridge. Adding this bottle to the remaining content of the wine cabinet is enough to illustrate the applicable phenomenon of thermal inertia.

The best way to determine a meaningful diagnosis is to fit a temperature recorder for 24 to 48 hours. The curve clearly illustrates the average temperature and the corresponding fluctuations linked to the shut-down and start-up of the winter system.

Place a submersible thermometer in a bottle filled with water to determine the exact temperature of the liquid.

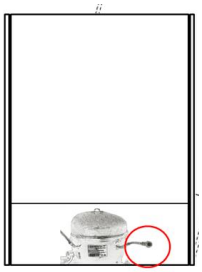
How to check the functionality of the winter system:

Checking the ambient temperature and the one inside the wine cabinet:
If the temperature in the cabinet is higher than the ambient temperature, the reheating process is in progress. Leave the device running, limiting the amount of times the door is opened as much as possible. These instructions are much more important to follow when the ambient temperature has dropped.

Equip yourself with a cold spray.
Access the system's thermostat sensor located in the upper part of the cabinet.

Cool the sensor down again. Wait a few minutes, then place your hand on heating device located at the back of the evaporator, on the lower part, for Hungarian models. On Portuguese models, you must place your hand on the step above the compressor, inside the cabinet.
If heat is coming out, the system is working. If this is not the case, check the power supply to the element, thermostat and/or replace if necessary (only to be completed by specialist technicians).

6. How should I transport my cabinet?



The cabinet must be transported as much as possible while being packed, in order to prevent any damages.
If you need to transport the wine cabinet laying on its side, protect it well and always place it on the side so that the compressor's
tail load is facing upwards.

7. I have not loaded as many bottles as the full capacity!

Our calculations are based on a standard bottle namely the most common: traditional 75 cl Bordeaux. However, due to the variety and the number of differently shaped bottles, you might be able to load less than the recommended amount (i.e. Bourgogne = approx. -30% compared to a Bordeaux).

Chapter 2

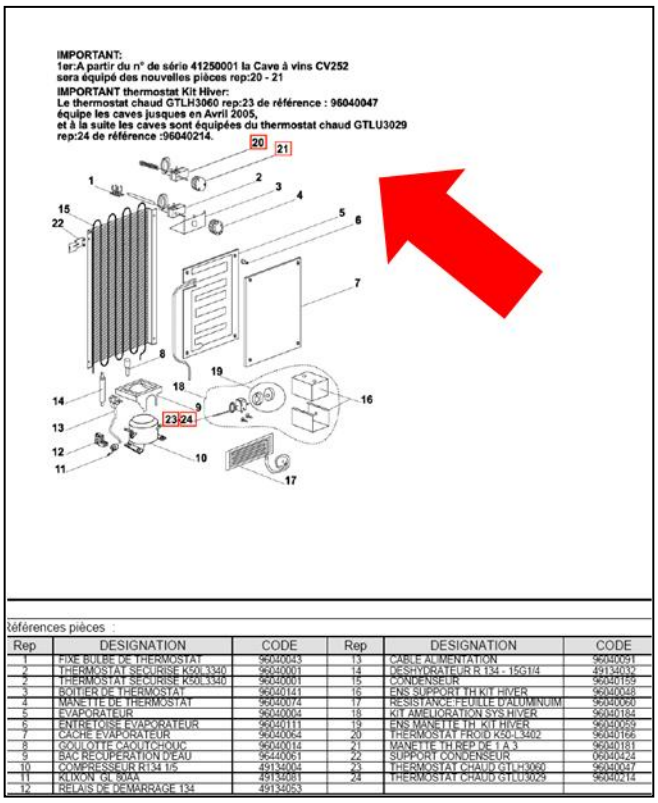
After Sales Service

CHAPTER 2: CLIMADIFF After Sales Service

Any orders for spare parts should be sent to SIDEPAR via their website www.sidepar.fr, by browsing to the section "Orders", "New order" and stipulating the following information for orders under warranty:

- Device reference/model
- Serial number
- Commissioning date
- Description of the fault
- Customer's address and telephone number

You can access detailed illustrations available on the website.



Références pièces :

Rep	DESIGNATION	CODE	Rep	DESIGNATION	CODE
1	FIXE BULBE DE THERMOSTAT	96040043	13	CABLE ALIMENTATION	96040091
2	THERMOSTAT SECURISE K50L3340	96040001	14	DESHYDRATEUR R 134 - 15G1/4	49134032
2	THERMOSTAT SECURISE K50L3340	96040001	15	CONDENSEUR	96040169
3	BOITIER DE THERMOSTAT	96040141	16	ENS SUPPORT TH KIT HIVER	96040048
4	MANETTE DE THERMOSTAT	96040074	17	RESISTANCE FEUILLE D'ALUMINIUM	96040060
5	EVAPORATEUR	96040004	18	KIT AMELIORATION SYS HIVER	96040184
6	ENTRETOISE EVAPORATEUR	96040111	19	ENS MANETTE TH KIT HIVER	96040059
7	CACHE EVAPORATEUR	96040064	20	THERMOSTAT FROID K50-L3402	96040166
8	GOULOTTE CAOUTCHOUC	96040014	21	MANETTE TH REP DE 1 A 3	96040181
9	BAC RECUPERATION D'EAU	96440061	22	SUPPORT CONDENSEUR	96040424
10	COMPRESSEUR R134 115	49132004	23	THERMOSTAT CHAUD GTLH3060	96040047
11	KLIXON 0L 90AA	49134081	24	THERMOSTAT CHAUD GTLU3029	96040214
12	RELAIS DE DEMARRAGE 134	49134053			

SIDEPAR S.A.S.
27-29 rue Henri Farman
93297 TREMBLAY-EN-FRANCE, France

Tel.: +33 (0) 141 514 070
Fax: +33 (0) 141 514 080
Email: contact@sidepar.fr

No shipping costs are charged for parts under warranty. On the other hand, a contribution to the operating costs (EUR 10.50, exclusive of tax regardless of the amount of the order) shall be charged for all orders of parts that are no longer under warranty, any accessories or consumables.

In this case, transport costs for all shipments shall also be charged to you. Orders shall be processed within 48 hours, although this can vary depending on the size of your orders.

Opening an account with SIDEPAR requires a prior application by the distributor/reseller. Once your account has been opened, your login details to the site will be sent to you.

The website also enables you to monitor the progress of your orders and check the availability* of the parts during input (*only as a guide, once the order is being processed by Sidepar the status for the part may have changed).

Chapter 3

MULTI-PURPOSE WINE CABINETS

CHAPTER 3: MULTI-PURPOSE WINE CABINETS

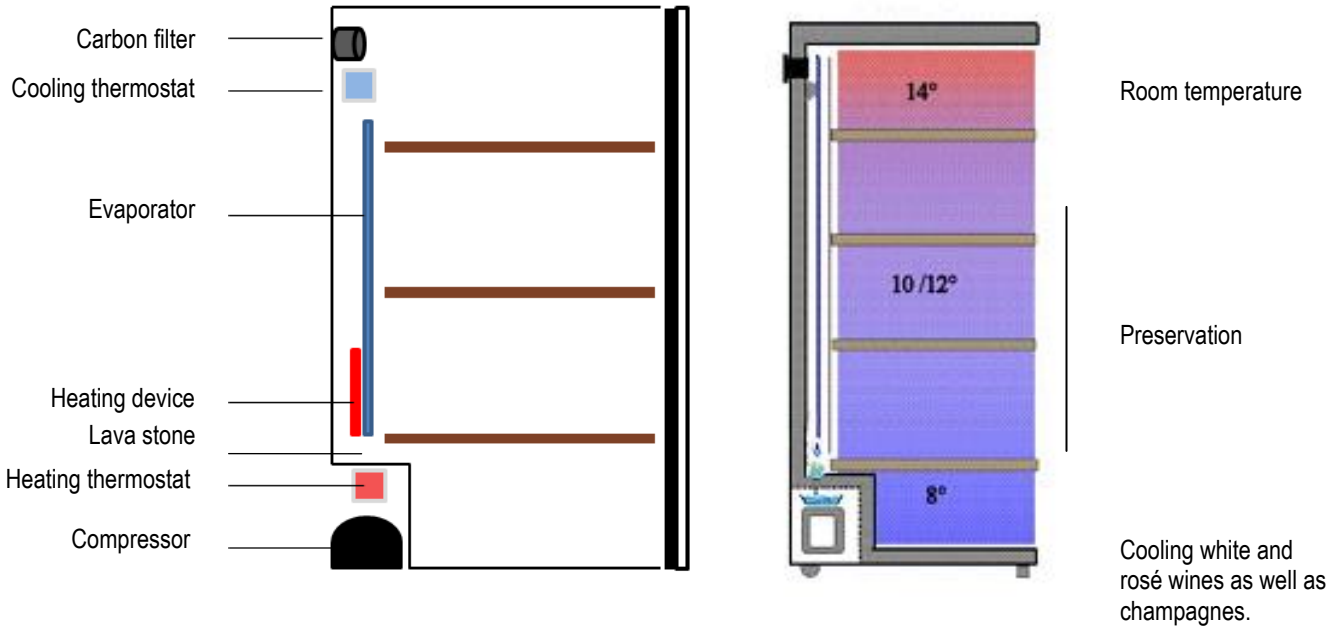
1. Operating principles

These devices are designed for preserving wine and controlling its temperature.

Preservation: maintaining the quality of wine over time.
Controlling the temperature: bringing the wine to the right service temperature.

The temperature distribution is controlled via a static principle: cold air is heavier than hot air.

Description of the device:



Temperature:

The air **temperature** fluctuates between 6°C at the bottom and 14°C at the top (18°C in models CA231GLW, EV503ZX and EV504ZX that are fitted with an element and a room temperature compartment). At an ambient temperature of 25°C, it is wise to have the thermostat on setting 2 to ensure the central section of the cabinet has an average temperature of 12°C.

The temperature is controlled by one or several thermostats in accordance with the technical specifications of the device: "winter" system, room temperature or not, etc.

The thermostat located in the device is only intended for the production of cold air.

In ambient conditions of around 14°C or lower, it is not functional.

Humidity:

The average **humidity** is around 55% +/-10 (refer to the general notes): the average is calculated by adding the instant peaks (several fluctuations throughout the day as part of the compressor's operating and shut-down cycles) and dividing the total by two; for example (30% + 80%) / 2 = 55%.

The average level is determined by combining the circulation of ambient air, which is already loaded with humidity via the carbon filter, by the operation of the device (condensation phenomenon) as well as the use of lava stones which restore the humidity. Basically, ice forms on the evaporator during the cooling period. As soon as the compressor stops, this ice melts and is absorbed by the lava stones. Any surplus is extracted by a slanted discharge spout and then evaporates.

2. Accessories

2.1 The carbon filters

From model serial number 412xxx and onwards, only a single filter is installed. It is located at the top left and is visible from the outside on the rear of the cabinet. Units produced before then have two filters. They are located at the top left and bottom left and are visible from the outside on the rear of the cabinet.

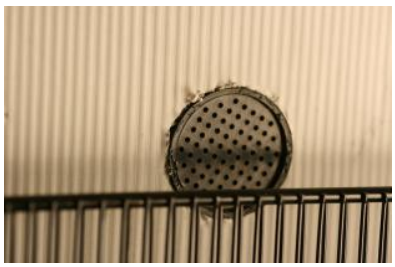
The filter has several purposes including: maintaining natural ventilation in the cabinet, preventing bad odours and insects from entering while ensuring complete darkness inside the cabinet.

This natural ventilation has a knock-on effect on the humidity levels in the device.

If you notice any odours, moulds or labels that are coming off, it is highly likely due to the fact that the filter has not being replaced.

The filter should be replaced annually.

Removal direction



Rear view

Internal view

There are two ways to remove it:

From the inside: this requires the top section of the cabinet to be emptied and to remove the evaporator cover and the evaporator (plate at the bottom of the cabinet), which is tough and time-consuming.
We recommend removing the filter by pushing from the outside to the inside and then retrieving the filter by placing your hand behind the evaporator's cover from inside the cabinet. On cabinets equipped with a grille on the rear of the device, this one must be removed.

The filter can be put back in place from inside or outside.

2.2 Lava stones

Lava stones absorb and then restore the humidity generated by the condensed water. They do not have a predefined service life. Replace when the stones are showing signs of erosion. The stones must be placed in the defrosting gutter (as indicated on the photograph) after being moistened with water.

View of the location of the lava stones.

3. Help resolving problems

3.1 Humidity level is too low:

The humidity fluctuates continuously. Not only do individuals not have the proper equipment at their disposal but with one or more instant temperature measurements it is not possible to determine or validate the average temperature.

Following an instant reading, a user can call to announce an insufficient humidity level (30%).

Is the surface of the bottle dry?

The cabinet's atmosphere cannot be dry (due to the presence of water) and this illustrates the difference between the relative air humidity (% indicated by the hygrometer) and the absolute value relating to the number of grams of water in the air.

Check the ambient humidity level and the humidification of the lava stones in models which are equipped with them.

If the ambient level is low, a moist sandbox may be added.

How many readings were taken? Using what type of device?

One or two readings a day are not enough (continuous fluctuations)

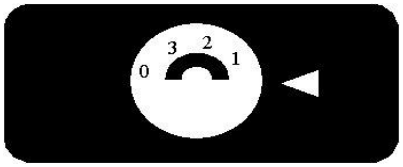
How long have you had this wine cabinet?

Check the carbon filter is not too old (to be replaced annually)

Where is the thermostat located? What is the temperature at the top of the cabinet compared to the bottom?

Based on a physical principle, the cold air dries out the air while the compressor is in operation. If the average temperatures are too low, adjust the thermostat setting.

Setting 3: Colder temperature in the cabinet



Setting 1: Higher temperature in the cabinet

Setting 0: Deactivate the thermostat

Is the cabinet located in an enclosed area that is not ventilated?

Moisten the lava stones or alternatively place a moist sandbox in the cabinet.

3.2 Humidity level is too high:

First of all reassure the customer that **THIS PHENOMENON HAS ABSOLUTELY NO IMPACT ON THE WINE** obviously if maintained within normal proportions.

The worse that can happen is that the labels come off. Sprays that protect the labels are commercially available (www.vinokado.com/fr)

On the other hand, we all imagine old, prestigious bottles to have labels that are covered in mildew and are practically illegible. Therefore the presence of humidity can be a good thing.

How long have you had this wine cabinet?

Check that the carbon filter is not too old (replace annually); usually replacing the filter will eradicate the problem.

How many readings were taken? Using what type of device?

One or two readings a day are not enough (continuous fluctuations)
Check that the hygrometer is reliable and accurate.

Ensure that the value indicated is not the result of an instant reading taken while the compressor was shut down (the internal temperatures then rise again).

3.3 Odours, moulds and labels coming off:

The atmosphere in the cabinet is very humid: has the filter been replaced? (To be replaced annually)

If not, replace the carbon filter.

3.4 Water in the bottom of the cabinet (or on the floor in front of the cabinet)

This is not detrimental to the device and can be generated in the event that ambient temperatures are higher than normal (very high temperatures)

Is the device new?

Readjust the wine cabinet (the feet are adjustable) to tilt it carefully towards the rear to force the flow of condensation towards the discharge spout designed for this purpose.

Does the door shut correctly?

Check that the door closes correctly and that the seal is airtight.

Are the internal temperatures correct?

Check the average temperatures in the wine cabinet.

Record the minimum and maximum at a given point in the cabinet or insert a temperature recorder:

If the delta temperature is very close to the set point (+/- 4°C or more), at an average of 12°C, this should equate to a minimum peak of 8°C and a maximum of 16°C. Adjust the cooling thermostat. (Only to be completed by specialist technicians)

3.5 The temperature is too high

The best way to determine a meaningful diagnosis is to fit a temperature recorder for 24 to 48 hours. The curve clearly illustrates the average temperature and the corresponding fluctuations linked to the shut-down and start-up of the compressor or winter system.

Also place a submersible thermometer in a bottle filled with water to determine the exact temperature of the liquid.

Where is the thermostat positioned? (if the ambient temperature is higher than 14°C)

The required internal temperature can be a readjusted reading: place the thermostat on a colder application.

Check the functionality of the thermostat: if it is faulty, replace it (only to be completed by specialist technicians)

Is the compressor cooling?

Several minutes after the compressor has been operating, place your hand on the evaporator inside the cabinet:

If it is cold the refrigeration process is in progress.

If it is not cold, refer to the checks listed below.

Is the compressor continuously in operation?

- **Yes:**

Check that there is no gas leak or an obstruction on the refrigerating circuit.
Replace the faulty part (condenser, evaporator, repair the welding) (only to be completed by specialist technicians).

- **No:**

Check the thermostat setting and adjust if necessary.
Check the gas load in the system, if there is not enough; refill it if necessary (only to be completed by specialist technicians).

3.6 The temperature is too low when a reading is taken with a submerged thermometer

Is the device situated in an unheated environment?

Check this during the winter and ensure that the wine cabinet model is equipped with a winter system.

How many readings were taken? How? Using what type of device?

Ensure that the value indicated is not the result of an instant reading taken while the compressor was shut down (the internal temperatures then rise again).

Where is the thermostat located?

Adjust the position of the thermostat if necessary.

What is the local ambient temperature?

If the area is cold and the cabinet is equipped with a winter system, check the:

- Heating thermostat
- Element

And replace if necessary.

Is the door closed correctly? Is the door joint completely airtight?

A loss of energy will result in the continuous operation of the refrigerating units.

Formation of ice on the inside: unplug the unit and leave it to defrost
Check the cabinet settings
Ensure that a bottle is not blocking the door
If possible, replace the joint if it is deformed

Is the thermostat in the correct position?

Check the position of the thermostat (if the external temperature is higher than 14°C) and adjust the position if necessary.

Replace if necessary (only to be completed by specialist technicians)

Is the correct amount of gas in the system?

Check the amount of gas in the system is not higher than the amount indicated on the display by touching the compressor's suction device. If the copper tube is very cold, it can be assumed that there is an excess of gas. If necessary, evacuate and then re-inject the amended amount of gas. (Only to be completed by specialist technicians)

3.7 Temperature is the same throughout the cabinet

At an ambient temperature of below 14°C to 10°C in top section of the cabinet, the device will adjust to the ambient temperature.

The production of hot or cold air is not required.

What is the local ambient temperature where the device is located?

If the temperature is above 14°C, the refrigerating units must operate intermittently.

If the ambient temperature is low enough for the winter system to operate (i.e. when the compressor is deactivated) or when the winter system is in operation, the heating element located at the bottom of the device generates a light mixture within the chamber, which momentarily eliminates the usual separation between the various temperatures thanks to the natural convection phenomenon (hot air is lighter than cold air).

How many readings were taken? How? Using what type of device?

Assuming that the refrigerating units are operating and are cooling normally, it must definitely be an instant temperature reading.

In fact, if cold air is physically heavier than hot air, only an instant reading can result in sidestepping this physical phenomenon and cause confusion.

3.8 How do I determine the internal temperature and properly regulate the temperature of my wine cabinet?

Placing a thermometer in the atmosphere of the wine cabinet will only lead to confusion, even if that is what everyone would do instinctively.

The wine cabinet was designed to maintain the temperature of the wine in the bottles at a constant level rather than that of the air.

In contrast to the wine and even the material of the bottles, air does not have a mass or any inertia.

We can advise the following to the user:

To reproduce the conditions in the bottle as closely as possible, take a bottle of white or rosé wine (in a transparent bottle), empty it, refill it with water and place a submersible thermometer or a fixed sensor in it. Re-cork the bottle, seal with wax and place it amongst the other bottles.

This has a dual advantage: the recorded temperature equates to that of the wine, which does not fluctuate like that of the air. By always maintaining a minimum period of 48 hours between two readings, the user can then increase or decrease the thermostat setting to adjust the temperature of the wine accordingly.

However, if the customer still wishes to place a thermometer in the cabinet, this should ideally be a measuring device with a portable display that records the minimum and maximum values ensuring that the average can easily be determined from the recorded values.

The instant temperature that is displayed is not of great importance if it is not ensured that the internal temperature remains well within the "standard" limits. In fact, it must not be forgotten that the thermometer's sensor is located in a wall and is therefore in a confined space which is also subjected to external temperature influences.

3.9 The cabinet is silent:

If the local ambient temperature where the wine cabinet is located is approximately 12°C (+/- 2°C) and in all other instances remains below 12°C:

ONLY the compressor will make a noise and will **ONLY** cool. Under these ambient conditions, it is therefore normal not to hear it as the wine cabinet does not need a cooling period.

If the ambient temperature is permanently below 9°C, the heating circuit takes over and the reheating process is maintained by an element. The device is therefore completely SILENT.

If the local ambient temperature where the wine cabinet is located is higher than 14°C and the device is permanently silent (the compressor is not running):

Check that the cooling thermostat is operating correctly: push it out completely to trigger the activation of the compressor. Be careful, if the device is in "Automatic defrosting mode" (not all models are equipped with this function), you may need to wait at least 10 minutes with the door open for the units to start-up provided that the temperature of the unit is higher than 18°C.

If nothing happens, the thermostat and/or the compressor are faulty. Replace (only to be completed by specialist technicians)

To test the functionality of the refrigerating units (thermostat + compressor): (only to be completed by specialist technicians)

Disconnect the thermostat terminals and bring together to generate a short-circuit. If the compressor is activated, replace the thermostat.

If it is not activated, the compressor or the temperature switch is faulty (thermal protector faulty).

Repeat the same steps with the temperature switch. If the compressor is activated, replace the temperature switch.

If it is not activated, replace the compressor.

3.10 Noises or bangs:

This concept is very objective.

Depending on its location, the time of day and a person's perception, the concept of noise varies greatly. As means of an example, during the day a mosquito is completely inaudible. However, once it is night and the noise of everyday life subsides, nothing is more unbearable, however, if the dB (A) levels are measured it cannot be perceived.

The refrigerating gas circulates through coils. The gurgling noise, small creaks and light bangs are normal.

Check to ensure a bridge of ice has not formed between the evaporator and the wall protection, which can generate a considerable amount of noise when defrosting (remove the protection).

If the bangs occur during the start-up or shut-down or only when the compressor is deactivated; replace the compressor (only to be completed by specialist technicians)

The contraction and expansion of the internal walls can generate creaking noises of varying intensity.

3.11 My wine cabinet's inner walls are expanding

Fault with the composition of the foam. First reinforced unit: serial no. **83600285**. It is considered faulty, if the difference between the top, middle and bottom is more than 1.5 cm. In this case, please contact Climadiff After-Sales Service.

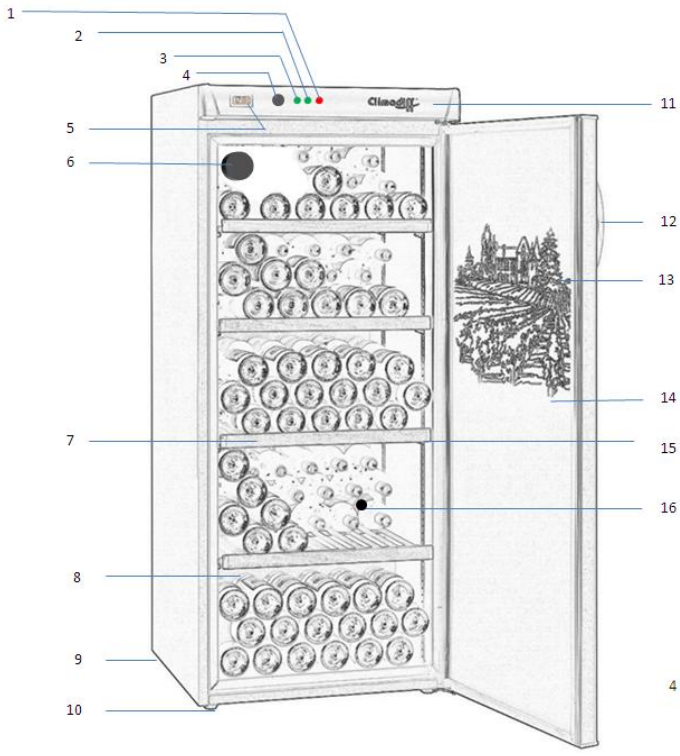
Chapter 4

WINE
AGEING CABINETS

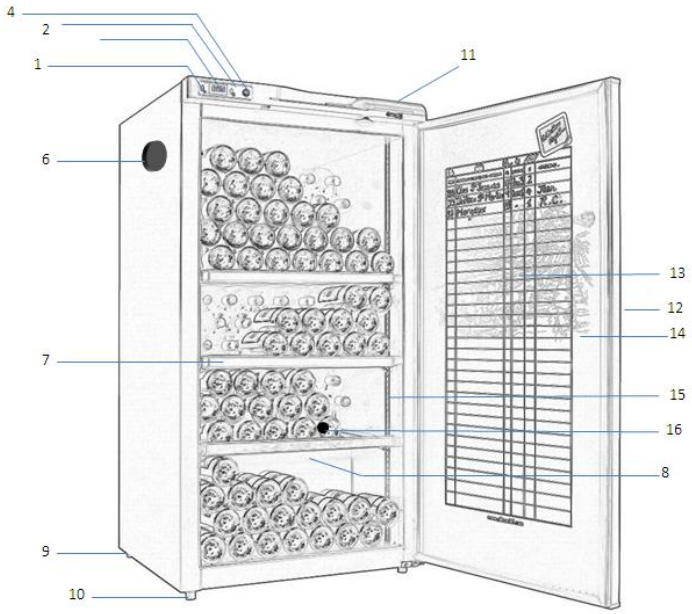
CHAPTER 4: WINE AGEING CABINETS

1. Operating principles

Description of the device



CVP180



CV196

1. Winter system light
2. Refrigeration light
3. ON/OFF light
4. Thermostat button
5. Temperature display
6. Carbon filter
7. Shelf
8. Condensation gutter
9. Foot (wheel)
10. Adjustable foot
11. Top panel
12. Handle
13. Inner door (silkscreen or cabinet record, depending on the model)
14. Lock (depending on the model)
15. Shelf rail mountings
16. Air vent (rear of the cabinet)

These units are designed for ageing wine.

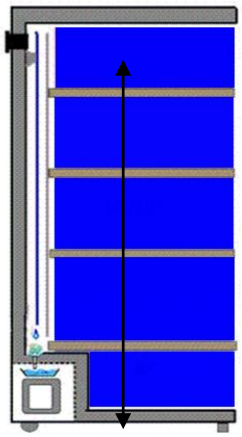
The ageing process consists of exposing young or partially aged wines to all of the optimum conditions so that they develop to their full potential.

The homogenisation of the temperature operates on a thermodynamic principle and the distribution of the cold: larger production of cold air in the top part and natural homogenisation without any mechanical stirring.

The air **temperature** fluctuates between +10°C and +14°C. At am ambient temperature of +25°C, it is generally advisable to have the thermostat on setting 3 to ensure the liquid has an average of temperature 12°C.

The average **humidity** must be around 55% and 70%. The average is calculated by adding the instant minimum and maximum peaks (several fluctuations throughout the day as part of the compressor's operating and shut-down cycles) and dividing the total by two; for example (35% + 85%) / 2 = 60%. The duration of a cycle must also be taken into consideration when calculating the average.

The thermostat located on the top panel of the device enables the relevant temperature to be adapted by making it colder (setting 1) or warmer (setting 5), however this only controls the cooling thermostat and not the heating circuit or the winter system in the device.



12°C +/-2°C

***Temperature**:*

The air **temperature** is homogeneous from the top to the bottom without mechanical stirring.

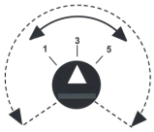
This distribution of the cold prevents the use of a ventilator (generating tiny vibrations, which increase electricity consumption). At an ambient temperature of 25°C, it is advisable to have the thermostat on setting 3 to ensure the central section of the cabinet has an average temperature of 12°C.

The temperature is controlled by one or more thermostats in accordance with the technical specifications of the device ("winter" and refrigeration setting).

The thermostat located on the top panel of the device is only intended for the production of cold air and cannot be used to change the winter setting.

In ambient conditions of around +14°C or less, the compressor becomes ineffective unless used to force the cabinet to operate by setting the thermostat to a maximum (1).

Depending on the thermostat, a temperature of 12°C may not be able to be achieved precisely on setting 3. In such an instance, it is necessary to adjust the position of the cursor.

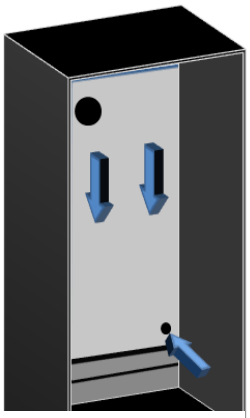


Please note that we have not used the entire adjustable range available on the thermostat (3/4 end stop). You can therefore go beyond the specified reference points, if necessary.

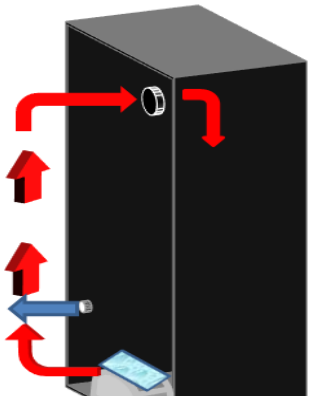
Humidity:

The average **humidity** is around 65% +/-10 (refer to notes): the average is calculated by adding the instant peaks (several fluctuations throughout the day as part of the compressor's operating and shut-down cycles) and dividing the total by two; for example (30% + 80%) / 2 = 55%.

The average level is determined by combining the circulation of the ambient air, which is already loaded with humidity via the carbon filter, by the operation of the device (condensation phenomenon) as well as the internal steel walls covered in a paint with a high level of granularity that retains condensation droplets.

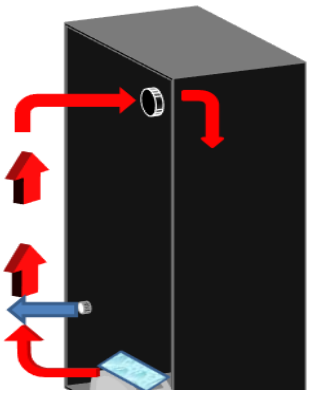


The device produces cold air, which is heavier than the warm air and gradually descends. This creates a pressure and forces the air through the hole located at the bottom.



When the compressor is running, it creates heat that evaporates any water condensation. Hot air rises and this humid air is sucked up to the carbon filter.

While the compressor is in operation, the air humidity is sucked up by the evaporator and is then transformed into frost. When the compressor shuts down, the internal temperature increases and the frost slowly melt. Condensation is generated.



Any excess condensation is collected in a tank. When the compressor restarts, the circuit closes and the air starts to circulate.

2. Accessories

2.1 The carbon filters

A single filter is fitted. It is a black piece of plastic that is approximately 5 cm in diameter. It is located at the top left from inside the cabinet and at the top right from the rear.

The filter has several purposes including the maintenance of the natural ventilation in the cabinet and also preventing bad odours and insects from entering while ensuring complete darkness.

Combined with a hole to extract air (vent located at the bottom of the cabinet) it ensures a continuous circulation of clean air in the cabinet.

This natural ventilation has a knock-on effect on the humidity levels in the device.

If you notice any odours, mould or labels that are coming off it is highly likely is that this is down to the filter not being replaced.

The filter should be replaced annually.

It must be removed from the front where the diameter is greater. Be careful not to remove the plastic cover at the same time!

3. Help resolving problems

3.1 Humidity level is too low:

The humidity fluctuates continuously. Not only do individuals not have the proper equipment at their disposal but with one or more instant temperature measurements it is not possible to determine or validate the average temperature.

Following an instant reading, a user can call to announce an insufficient humidity level (30%).

Is the surface of the bottle dry?

- **Yes:**

The cabinet's atmosphere cannot be dry (due to the presence of water) and this illustrates the difference between the relative air humidity (% indicated by the hygrometer) and the absolute value relating to the number of grams of water in the air.

- **No:**

Check the ambient humidity levels.
If the ambient level is low, a moist sandbox may be placed in the cabinet's tank.

How many readings were taken? With what type of device?

One or two readings a day are not enough (continuous fluctuations)

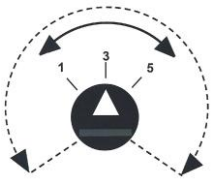
How long have you had this wine cabinet?

Check the carbon filter is not too old (to be replaced annually)

Where is the thermostat located? What is the temperature at the top of the cabinet compared to the bottom?

Based on a physical principle, the cold air dries out the air. If the average temperatures are too low, adjust the thermostat setting.

Setting 1: Colder temperature in the cabinet



Setting 5: Milder temperature in the cabinet

---------- = Total available range of the regulator

Is the cabinet located in an enclosed room that is unventilated and dry?

Ventilate the unit frequently; a moist sandbox may be placed in the cabinet.

3.2 Humidity level is too high:

First of all reassure the customer that **THIS PHENOMENON HAS ABSOLUTELY NO IMPACT ON THE WINE** obviously if maintained within normal proportions.

The worse that can happen is that the labels come off. Sprays that protect the labels are commercially available (www.vinokado.com/fr).

On the other hand, we all imagine old, prestigious bottles to have labels that are covered in mildew and are practically illegible. Therefore the presence of humidity can be a good thing.

How long have you had this wine cabinet?

Check that the carbon filter is not too old (replace annually); usually replacing the filter will eradicate the problem.

How many readings were taken? With what type of device?

One or two readings a day are not enough (continuous fluctuations)
Check that the hygrometer is reliable and accurate.

How many readings were taken? How? Using what type of device?

Ensure that the value indicated is not the result of an instant reading taken while the compressor was shut down (the internal temperatures then rise again).

3.3 Odours, moulds and labels coming off:

The atmosphere in the cabinet is very humid: has the filter been replaced? (to be replaced annually)

If not, replace the carbon filter.

3.4 Water in the bottom of the cabinet (or on the floor in front of the cabinet)

This is not detrimental to the device and can be generated in the event that ambient temperatures are higher than normal (very high temperatures)

Is the device new?

Readjust the wine cabinet (the feet are adjustable) or tilt it carefully towards the rear and left to force the flow of condensation.

Does the door shut correctly?

Check that the door closes correctly and that the seal is airtight.

Are the internal temperatures correct?

Check the average temperatures in the wine cabinet.

Record the minimum and maximum at a given point in the cabinet or insert a temperature recorder:

If the delta temperature is very close to the set point(4°C or more), at an average of 12°C this should equate to a minimum peak of 8°C and a maximum of 16°C. Adjust the cooling thermostat. (Only to be completed by specialist technicians)

White lines at the bottom of the tank:

These are lines of chalk from the water, which has dried after it has drained away. See below.

3.5 The temperature is too high

The best way to determine a meaningful diagnosis is to fit a temperature recorder for 24 to 48 hours. The curve clearly illustrates the average temperature and the corresponding fluctuations linked to the shut-down and start-up of the compressor or winter system.

Also place a submersible thermometer in a bottle filled with water to determine the exact temperature of the liquid.

Where is the thermostat positioned? (if the ambient temperature is higher than 14°C)

The required ambient temperature can be a readjusted reading: place the thermostat on a colder application.

Check the functionality of the thermostat: if it is faulty, replace it (only to be completed by specialist technicians)

Is the compressor cooling?

Several minutes after the compressor has been operating, place your hand on the vaporizer inside the cabinet:

If it is cold the refrigeration process is in progress.

If it is not cold, refer to the checks listed below.

Is the compressor continuously in operation?

- **Yes:**

Check that there is no gas leak or an obstruction on the refrigerating circuit. (Only to be completed by specialist technicians)
Replace the faulty part (condenser, vaporizer, repair the welding) (only to be completed by specialist technicians).

- **No:**

Check the thermostat setting and adjust if necessary.
Check the gas load in the system, if there is not enough; refill (only to be completed by specialist technicians).

LIGHTS AND THE THERMOMETER: (on the following models)

Models with two lights and a thermometer in the centre, CV range ...

Located to the left of the thermometer, this light illuminates **ORANGE** when the heating circuit is in operation.

Located to the right of the thermometer, this light illuminates **GREEN** when the compressor is in operation. This is not a light that can be switched on.

The lights switch on and off intermittently when the corresponding (cooling or heating) system is activated. This is perfectly normal.

The temperature indicated on the display keeps fluctuating:

This is predominantly a display and not a thermometer indicating the temperature of the wine in the bottles.

As explained previously, the device works in cycles and fluctuations are therefore normal and only indicate the air temperature at a given moment.

It is based on this principle of fluctuation to the air that a consistent average temperature is maintained in the bottles.

To check the display is functioning correctly:

Place a thermometer in the cabinet, check the temperature that it displays and compare it to the one indicated on the display on the panel. The thermometer must be positioned at the same height as the sensor, however there will most certainly be a difference as the sensor is enclosed.

If there is a significant difference, replace the display (only to be completed by specialist technicians).

The temperature that is usually indicated on the display no longer appears:

Replace the batteries (2 x LR44):

Procedure: remove the display, open the rear compartment, replace the batteries, close and reinsert the display.

Be careful not to pull it down too far so as not to change the position of the sensor.

3.6 The temperature is too low

Is the device situated in an unheated environment?

Check this during the winter and ensure that the wine cabinet model is equipped with a winter system.

How many readings were taken? How? Using what type of device?

Ensure that the value indicated is not the result of an instant reading taken while the compressor was in operation (the internal temperatures are colder = minimum peak).

What is the local ambient temperature?

If the area is cold and the cabinet is equipped with a winter system, check the:

- Heating thermostat
- Element

And replace if necessary.

Is the door closed correctly? Is the door joint completely airtight?

A loss of energy will result in the continuous operation of the refrigerating units.

Significant formation of ice on the inside: unplug the device and leave it to defrost.
Check the cabinet settings
Ensure that a bottle is not blocking the door
Replace the joint if it is deformed.

Is the thermostat in the correct position?

Check the position of the thermostat (if the external temperature is higher than 14°C) and adjust the position if necessary.

Replace if necessary (only to be completed by specialist technicians)

Is the correct amount of gas in the system?

Check the amount of gas in the system is not higher than the amount indicated on the display by touching the compressor's suction device. If the copper tube is very cold, it can be assumed that there is an excess of gas. If necessary, evacuate and then re-inject the amended amount of gas. (Only to be completed by specialist technicians)

3.7 How do I determine the internal temperature and properly regulate the temperature of my wine cabinet?

Placing a thermometer in the atmosphere of the wine cabinet will only lead to confusion, even if that is what everyone does.

The wine cabinet was designed to maintain the temperature of the bottles at a constant level rather than that of the air.

In contrast to the wine and the material of the bottles, air does not have a mass or any inertia.

We can advise the following to the user:

To reproduce the conditions in the bottle as closely as possible, take a bottle of white or rosé wine (in a transparent bottle to make it easier to read), empty it, refill it with water and place a submersible thermometer or a fixed sensor in it. Re-cork the bottle, seal with wax and place it amongst the other bottles.

This has a dual advantage: the recorded temperature equates to that of the wine, which does not fluctuate like that of the air. By always maintaining a minimum period of 48 hours between two readings, the user can then increase or decrease the thermostat setting to adjust the temperature of the wine accordingly.

However, if the customer still wishes to place a thermometer in the cabinet, this should ideally be a measuring device with a portable display that records the minimum and maximum values ensuring that the average can easily be determined from the recorded values.

The instant temperature that is displayed is not of great importance if it is not ensured that the internal temperature remains well within the "standard" limits. In fact, it must not be forgotten that the thermometer's sensor is located in a wall and is therefore in a confined space which is also subjected to external temperatures.

3.8 The cabinet is silent:

If the local ambient temperature where the wine cabinet is located is approximately 12°C (+/- 2°C) and in all other instances remains below 12°C:

ONLY the compressor will make a noise and will **ONLY** cool. Under these ambient conditions, it is therefore normal not to hear it as the wine cabinet does not need a cooling period.

If the ambient temperature is permanently below 9°C, the heating circuit takes over and the reheating process is maintained by an element. The device is therefore completely SILENT.

If the local ambient temperature where the wine cabinet is located is *higher than 14°C and the device is permanently silent (the compressor is not running):*

Check that the cooling thermostat is operating correctly: push it out completely to trigger the activation of the compressor. Be careful, if the device is in "Automatic defrosting mode", you may need to wait at least 10 minutes with the door open for the units to start-up provided that the ambient temperature of the cabinet is higher than 18°C.

If nothing happens, the thermostat and/or the compressor are faulty. Replace (only to be completed by specialist technicians)

To test the functionality of the refrigerating units (thermostat + compressor): (Only to be completed by specialist technicians)

Disconnect the thermostat terminals and bring together to generate a short-circuit. If the compressor is activated, replace the thermostat.

If it is not activated, the compressor or the temperature switch is faulty (thermal protector faulty).

Repeat the same steps with the temperature switch. If the compressor is activated, replace the temperature switch.

If it is not activated, replace the compressor.

3.10 Noises or bangs:

This concept is very objective.

Depending on its location, the time of day and a person's perception, the concept of noise varies greatly. As means of an example, during the day a mosquito is completely inaudible. However, once it is night and the noise of everyday life subsides, nothing is more unbearable, however, if the dB (A) levels are measured it cannot be perceived.

The refrigerating gas circulates through coils. The gurgling noise, small creaks and light bangs are normal.

Check to ensure a bridge of ice has not formed between the evaporator and the wall protection, which can generate a considerable amount of noise when defrosting (remove the protection).

If the bangs occur during the start-up or shut-down or only when the compressor is deactivated; replace the compressor (only to be completed by specialist technicians)

The contraction and expansion of the internal walls can generate creaking noises of varying intensity.

INTELITHERM TECHNICAL MENU

This sub-menu is mainly used for factory testing and configuration purposes.

ONLY INTENDED FOR TECHNICIANS

You shall bear full responsibility for any modification you make to the sub-menu that cause a fault.

On the other hand, in the event of technical interventions, you can give this document to an approved technician or your supplier's after sales team who can request a code from Climadiff to grant them access to the menu

Display	Description
- CONFIGURATION - MENU TECHNIQUE (TECHNICAL MENU CONFIGURATION)	To enter this menu simultaneously press both of the buttons until you hear an audible sound
> TECHNIQUE < OFFSET TEMP (OFFSET TEMPERATURE SETTING)	Temperature compensation: stagnation temperature set at the factory. **Please note: This function is only available to technicians and other authorised persons.**
> TECHNIQUE < TEST COMPRESSEUR (COMPRESSOR TEST SETTING)	This menu is used to test the compressor by enabling it to manually switch ON and OFF. This tests the electronic control of the compressor. **Please note: This function is only available to technicians and other authorised persons.**
> TECHNIQUE < TEST RESISTANCE (RESISTANCE TEST SETTING)	This menu is used to test the resistance by enabling it to manually switch ON and OFF. This tests the electronic control of the resistance. **Please note: This function is only available to technicians and other authorised persons.**
> TECHNIQUE < DYNAMIQUE TEXTE (DYNAMIC TEXT)	In this menu it is possible to authorise any automatic changes to the basic message in the main menu. When "Texte Fixe" (set text) is selected, the screen permanently displays the internal temperature. When "Texte Auto" (automatic text) is selected, the screen alternatively displays the wine cabinet's internal temperature and the status of the controller. Default mode: "Cave à vin" (wine cabinet) or another name that has been selected.
- TECHNIQUE - EXIT (exit setting)	To return to the main menu, **you must ensure you have definitely exited the programming menu:** Navigate this menu using the [▲] button until you see the message **CONFIGURATIONS EXIT (exit configuration), then simultaneously press both of the buttons until you hear two beeps.** This will return you to the device's main display menu, enable the new settings to be applied and the device to be controlled.

LOG

The "Historique" function (log) enables you to see a log of the minimum and maximum values recorded by the module once the device has been connected to the power supply and for a certain operating period.

To display the log, select the "Historique" function and continuously press for five to six seconds. The display will then display (for example):

HISTORIQUE (LOG)
Min: 10°C; max: 13°C

This function also enables you to determine the average temperature which is generally present in the mass.

OFFSET MENU

CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	Device's main display. To enter the configuration menu, simultaneously press the two buttons (▼▲). Two audible sounds (beep) will acknowledge your choice.
- Configurations - **Réfrigération (refrigeration settings)**	This option is used to select the value below which the compressor will be activated *FROID ON* (COOLING ON). To select the settings menu, press the top arrow (▲) to browse through the menu and select "Configurations menu technique" (configuration of the settings menu).
- CONFIGURATION - **MENU TECHNIQUE (CONFIGURATION OF THE SETTINGS MENU)**	To enter this menu simultaneously press both of the buttons until you hear an audible sound
< TECHNIQUE > **Offset temp (offset temperature setting)**	To enter the menu simultaneously press both of the buttons until you hear two audible sounds.
Offset temp (offset temperature setting) **Sélection 0°C (setting: 0°C)**	Select the required temperature using both of the buttons, once selected, acknowledge by pressing both of the buttons simultaneously until you hear two beeps.
Offset temp (offset temperature setting) REGISTRE 0°C (REGISTER: 0°C)	This information is automatically displayed for a few seconds. The device takes the selected temperature into consideration.
< TECHNIQUE > **Offset temp (offset temperature setting)**	The device returns to the offset temperature menu. Press the▲ arrow until "technique exit" (exit settings) is displayed.
< TECHNIQUE > **Exit (exit settings)**	Once this menu is selected, simultaneously press both of the buttons until you hear two audible sounds.
CONFIGURATION - **MENU TECHNIQUE (CONFIGURATION OF THE SETTINGS MENU)**	The device returns to the settings menu in the configuration menu. Simultaneously press both of the buttons until you hear two audible sounds.

CONFIGURATION - **EXIT (EXITS SETTINGS)**	To return to the main screen, **you must ensure you have definitely exited the programming menu**: once you are in the **CONFIGURATIONS EXIT (exit configuration) menu simultaneously press both of the buttons until you hear two beeps.**
CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	The previous command returns you to the operating device's main display menu, enable the new settings to be applied and the device to be controlled.

COMPRESSOR TEST MENU

CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	Device's main display. To enter the configuration menu, simultaneously press the two buttons (▼▲). Two audible sounds (beep) will acknowledge your choice.
- Configurations - **Réfrigération** **(refrigeration settings)**	This option is used to select the value below which the compressor will be activated *FROID ON* (COOLING ON). To select the settings menu, press the top arrow (▲) to browse through the menu and select "Configurations menu technique" (configuration of the settings menu).
- CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE SETTINGS MENU)**	To enter this menu simultaneously press both of the buttons until you hear an audible sound
< TECHNIQUE > **Offset temp (offset temperature setting)**	On this screen press the (▲) arrow until "test compresseur" (compressor test) is displayed.
< TECHNIQUE > **Test Compresseur (compressor test setting)**	Once this menu is selected, acknowledge by simultaneously pressing both of the buttons until you hear two audible sounds.
[HAUT = ON] [Bas = OFF] (UP = ON; DOWN = OFF) **Test Compresseur (compressor test setting)**	Press the ▲ arrow to activate the start-up of the compressor. Press the ▼ arrow to activate the shut-down of the compressor.
EXIT [OFF] **Compresseur [OFF] (compressor [OFF])**	To exit the menu simultaneously press both of the buttons until you hear two audible sounds
TECHNIQUE **Test Compresseur (compressor test setting)**	On this screen press the (▲) arrow until "technique exit" (exit settings) is displayed.
TECHNIQUE **Exit (exits settings)**	On this screen, simultaneously press both of the buttons until you hear two audible sounds
CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE**	On this screen press the (▲) arrow until "configurations exit" (exit configuration) is displayed.

SETTINGS MENU)	
CONFIGURATION - EXIT (EXITS SETTINGS)	To return to the main screen, **you must ensure you have definitely exited the programming menu**: once you are in the **CONFIGURATIONS EXIT (exit configuration) menu simultaneously press both of the buttons until you hear two beeps.**
CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	The previous command returns you to the operating device's main display menu, enable the new settings to be applied and the device to be controlled.

RESISTANCE TEST MENU

CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	Device's main display. To enter the configuration menu, simultaneously press the two buttons (▼▲). Two audible sounds (beep) will acknowledge your choice.
- Configurations - **Réfrigération** **(refrigeration settings)**	This option is used to select the value below which the compressor will be activated *FROID ON* (COOLING ON). To select the settings menu, press the top arrow (▲) to browse through the menu and select "Configurations menu technique" (configuration of the settings menu).
- CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE SETTINGS MENU)**	To enter this menu simultaneously press both of the buttons until you hear two audible sounds
< TECHNIQUE > **Offset temp (offset temperature setting)**	On this screen press the (▲ arrow until "test résistance" (resistance test) is displayed.
< TECHNIQUE > **Test resistance (resistance test setting)**	Once this menu is selected, acknowledge by simultaneously pressing both of the buttons until you hear two audible sounds.
[HAUT = ON] [Bas = OFF] (UP = ON; DOWN = OFF) **Test resistance (resistance test setting)**	Press the ▲ arrow to activate the start-up of the resistance. Press the ▼ arrow to activate the shut-down of the resistance.
EXIT [OFF] **Resistance [OFF]**	To exit the menu simultaneously press both of the buttons until you hear two audible sounds
TECHNIQUE **Test resistance (resistance test setting)**	On this screen press the (▲) arrow until "technique exit" (exit settings) is displayed.
TECHNIQUE **Exit**	On this screen, simultaneously press both of the buttons until you hear two audible sounds
CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE SETTINGS MENU)**	On this screen press the (▲) arrow until "configurations exit" (exit configuration) is displayed.

CONFIGURATION - **EXIT**	To return to the main screen, **you must ensure you have definitely exited the programming menu**: once you are in the **CONFIGURATIONS EXIT (exit configuration) menu simultaneously press both of the buttons until you hear two beeps.**
CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	The previous command returns you to the operating device's main display menu, enable the new settings to be applied and the device to be controlled.

DYNAMIC TEXT MENU

CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	Device's main display. To enter the configuration menu, simultaneously press the two buttons (▲▼). Two audible sounds (beep) will acknowledge your choice.
- Configurations - **Réfrigération** **(refrigeration settings)**	This option is used to select the value below which the compressor will be activated *FROID ON* (COOLING ON). To select the settings menu, press the top arrow (▲) to browse through the menu and select "Configurations menu technique" (configuration of the settings menu).
- CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE SETTINGS MENU)**	To enter this menu simultaneously press both of the buttons until you hear an audible sound
< TECHNIQUE > **Offset temp (offset temperature setting)**	On this screen press the (▲) arrow until "Dynamique texte" (dynamic text) is displayed.
< TECHNIQUE > **Dynamique texte (dynamic text)**	Once this menu is selected, acknowledge by simultaneously pressing both of the buttons until you hear two audible sounds.
[O] = OUI [N] = NON ([O] = YES [N] = NO) **Dynamique texte (dynamic text)**	Press the top arrow ▲so that the display alternatively shows the different information (refer to explanation above). Press the down arrow ▼so that the display permanently shows the device's internal temperature only. Then, simultaneously press both of the buttons until you hear a beep.
Sélection active (active selection) **Texte auto (automatic text)**	The device automatically displays the selected option (in this case: active selection) for several seconds and then displays the following screen.
TECHNIQUE **Dynamique texte (dynamic text)**	On this screen press the (▲) arrow until "technique exit" (exit settings) is displayed.
TECHNIQUE **Exit**	On this screen, simultaneously press both of the buttons until you hear two audible sounds
CONFIGURATION - **MENU TECHNIQUE** **(CONFIGURATION OF THE SETTINGS MENU)**	On this screen, simultaneously press both of the buttons until you hear two audible sounds

CONFIGURATION - **EXIT (EXIT SETTINGS)**	To return to the main screen, **you must ensure you have definitely exited the programming menu**: once you are in the **CONFIGURATIONS EXIT (exit configuration) menu simultaneously press both of the buttons until you hear two beeps.**
CAVE A VIN (WINE CABINET) **Temp. Int. (internal temperature) 12°C**	The previous command returns you to the operating device's main display menu, enable the new settings to be applied and the device to be controlled.

SPECIFIC INSTRUCTIONS

* Do not allow children to play with the device and keep the device's programming unit out of their reach.

* If there is any doubt relating to the programming or any uncertainty relating to the operation, disconnect the power supply for at least three minutes, which will result in the module automatically being reset to the default factory settings.

This can prove to be useful and prevents configuration errors and thus possible unwanted malfunctions. Therefore do not hesitate to fall back on this method if you are in any doubt.

* The thermometer on the front displays the instant air temperature inside the wine cabinet. This temperature can obviously fluctuate depending on the operational cycle of the device. This is perfectly normal and therefore prevents frequent adjustments to the settings having to be made, which would disrupt the good temperature management and cause possible malfunctions.

* It is important to remember that the total inertia of your cabinet is not reached until after a few days of operation.

* If there is any doubt relating to the operation of your device, contact Climadiff S.A. Customer Services or your supplier's After Sales Team.

Chapter 5

WINE SERVING CABINETS

Compressor temperature control wine cabinets
Thermoelectric wine cabinets

All of these models must be located in an environment with an ambient temperature of between +16°C and +32°C. These are wine cooling devices that do not have a "winter" system making it possible for them to be kept in an unheated environment.

CHAPTER 5: SERVING CABINETS

1. Operating principles

These devices are designed for cooling wine.

Controlling the temperature: bringing the wine to the right temperature for serving.

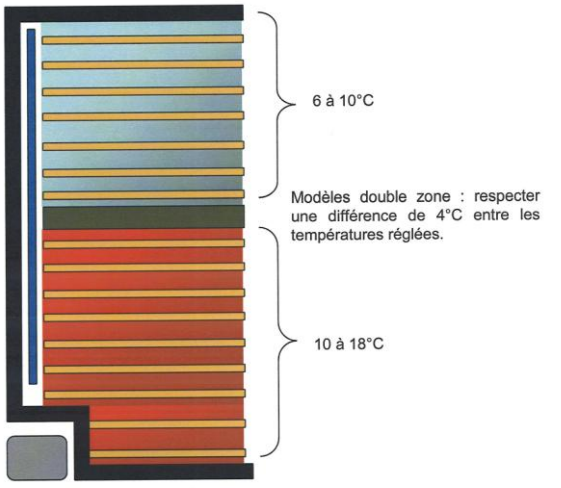
The homogenisation of the temperature is controlled by internal ventilation based on two cooling principles: either through **compression** or by the **Peltier thermoelectric** system (limited capacity wine cabinets):

1. In the first case, the air is cooled through the compression of coolant, which is propelled into the cabinet by ventilators.

2. The Peltier model comprises a "cold" and a "warm" side. When a current passes through the ventilators, heat is pumped on to the cold side and restored on the warm side (silent and few vibrations although electricity consumption is high).

The temperature is controlled by an electronic card. Some models have two or even three temperature zones. On these systems (with a cold ventilated system) the colder temperature is in the top section and the warmer part is in the bottom. **There is no winter system for temperature control wine cabinets, which should therefore not be located in an unheated environment.**

The humidity is not controlled. A tank permanently filled with water is required inside the cabinet (following models).



Exemple : modèle double zone (schéma non contractuel)

Double zone models: keep a 4°C difference between the 2 set temperatures

1.1 Compression cabinets:

Upper compartment:

It is equipped with an evaporator and a central ventilator that transmits cold air into the lower compartment.

Lower compartment:

It is fitted with a heating element. Please note that this is not an actual heating system but rather an adjustment system.

The temperature of the lower compartment is achieved through the simultaneous management of hot and cold air production in the upper compartment.

1.2 Thermoelectric wine cabinets:

Two different types of conductive materials are linked by two junctions. In the case of the Peltier effect, an electric current is maintained in a circuit, by placing a source of electricity which releases heat at one junction and absorbs heat at the other.

This system does not contain coolant gas or CFC.

The following models have one or multiple temperature zones, each of which may contain its own module.

2. Help resolving problems

2.1 Humidity level is too low:

WARNING! A lot of customers do not have the material adapted to record the humidity and can only measure the instant humidity. The humidity changes several times a day, therefore it is not the instant levels that are of interest to us but rather the average humidity level.

If the rate is lower than 50% this is completely normal. This is not a model with naturally controlled humidity levels.
Unique solution: permanently have a tub filled with water inside the cabinet and open it on a regular basis to stabilise the tank as these models are not equipped with an active carbon filter.

2.2 Humidity level is too high:

First of all reassure the customer that **THIS PHENOMENON HAS ABSOLUTELY NO IMPACT ON THE WINE**. The worse that can happen is that the labels come off. Sprays that protect the labels are commercially available (www.vinokado.com)

This is not a model with naturally controlled humidity levels.

Do not place the tub(s) of water (in the following models).

Check that the door joint is fitted correctly.

Do not open the door too often or for too long.

Check the delta temperature to determine if it is higher than 4°C around the set point (which is the required temperature): **replace the control card** (only to be completed by specialist technicians)

2.3 Odours, moulds and labels coming off:

The atmosphere in the cabinet is very humid. Remember to ventilate to remove any excess humidity.

2.4 Condensation on the external side of the door

This is just a physical phenomenon relating to the fresh air in the device in contrast to the ambient temperature.

2.5 The inner walls are too hot

This is normal, the condenser is located in the foam generating an exchange of energy whereby hot air is extracted to cool.

2.6 The temperature is too high or too low

On certain models with a double temperature zone (refer to the operating instructions) you must maintain a minimum difference of 4°C between the two compartments when selecting the temperatures.

These models must be located in a room with an ambient temperature between +16°C and +32°C. Check the ambient conditions.

Place a thermometer in the cabinet, check the temperature that it displays and compare it to the one indicated on the display.

If there is a significant difference (more than 4°C) to the set point temperature, replace the display or the control card (only to be completed by specialist technicians). A maximum tolerance of +/- 3°C is permitted.

Check the Ω values of the sensors (only to be completed by specialist technicians)

Temperature is too high (compression and thermoelectric devices):

Check the temperature control: the ambient temperature may require the thermostat to be adjusted.

1. Maybe the door is opened too frequently, preventing the temperature from returning to the required level.
2. The door does not close completely.
3. Joint on the door is not airtight.

Temperature is too high (not standard, approx. 20°C or higher):

The compressor is continuously rotating without cooling:

1. Control card and/or sensor faulty.
2. Refrigerant leak.
3. Obstruction on the refrigerating circuit.

Temperature is too high (thermoelectric wine cabinets)

The ambient temperature may be too high and requires the temperature setting to be adjusted.

The technical limit of this refrigerating system, known as the PELTIER effect or thermoelectric setting generally enables a maximum temperature of 15°C below the ambient temperature to be achieved.

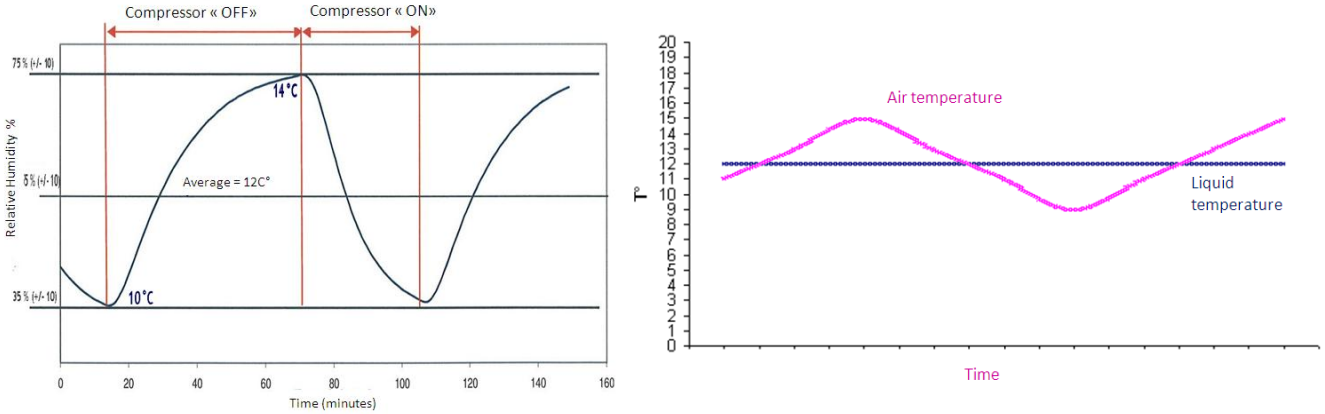
This is why it is advised to operate these devices at an ambient temperature of around 20°C/maximum of 25°C.

2.7 Fluctuations in the displayed temperature values

The device displays the instant air temperature in the cabinet and not the specified temperature (refer to the device's operating instructions).

Different temperature values can therefore be recorded and do not precisely reflect the required temperature. This is perfectly normal.

The frequent and brief fluctuations of the air temperature around the set point enable the operating principle of the device (specified below) to reach a stable average temperature in the bottle, which in contrast to the air has a mass and inertia.



Generally, frequent operations (linked to the internal ventilation) can be detected in these devices.

The mixture of air homogenises the internal temperature and, in the event of the door being opened for prolonged periods, ensures the quick return to the original temperature. However, you can check that:

1. The ambient temperature is not too high.
2. A large number of bottles was recently added.
3. The door is not opened too frequently.
4. The door does not close correctly.
5. Joint on the door is not airtight.
6. Sufficient air circulation is provided around the device.

2.8 Noises

This concept is very objective.

Depending on its location, the time of day and a person's perception, the concept of noise varies greatly. As means of an example, during the day a mosquito is completely inaudible. However, once it is night and the noise of everyday life subsides, nothing is more unbearable, however, if the dB(A) levels are measured it cannot be perceived.

Gurgling noise, small creaks and light bangs caused by the circulation of gas are normal.

The contraction and expansion of the internal walls can generate creaking noises.

In certain devices, the number of ventilators ranges between two to five, which depending on the model generates varying degrees of blast noise (recoding around 41 decibels). This is perfectly normal.

For built-in models (page 1) check that any remnant packaging does not touch the condenser's ventilator, as this can cause a loud noise.

Replace faulty ventilator(s) (only to be completed by specialist technicians)

Generally, the most sensitive ventilator in this regard is the condenser's ventilator, which on in-built models, is located at the rear next to the housing of the compressor.

Due to its angle, it can sometimes slightly misalign generating a noise.

2.9 Sensors: Error codes and solutions (only to be completed by specialist technicians)

Ref.: CV48AD – CV70AD

If the display shows code "**EH**", the temperature sensor is faulty.

Contact the Climadiff After Sales Service department to find out based on the serial number of the device, if the unit can be replaced.

Ref.: CV48AD – CV70AD: red light permanently lit up

The red light lights up for prolonged periods if:

The required temperature is reached (in standby mode)
The device is located in an area that is too cold (refer to the specifications)
The temperature must be modified to increase the temperature: the device and its contents must slowly increase the temperature to reach the new set point.

*The **DOLCE VINA1 (amber display)** cannot be repaired, while the **DOLCEVINA2 (bluish display)** can be repaired.*

Ref.: CV22IX, CV52IXDZ, CV41DZX, CV44E, CV42TWIN, CV44SV, AV42XDP, CV168EI CV168EIDZ, CV112EI, CV112EIDZ, AV121XDZ, AV154XDZ, AV143X3Z, VSV154

1. If the temperature display shows "**E1**": there is a connection problem with the sensor in the cooling compartment. Replace the sensor.

2. If the temperature display shows "**E2**": there is a problem with the sensor in the cooling compartment short circuiting. Replace the sensor.

3. If the temperature display shows "**E3**": there is a connection problem with the sensor on the vaporizer. Replace the sensor.

4. If the temperature display shows "**E4**": there is a problem with the vaporizer's sensor short circuiting. Replace the sensor.

5. If the temperature display shows "**E7**": there is connection problem with the sensor in the cooling compartment. Replace the sensor.

6. If the temperature display shows "**E8**": there is a problem with the sensor in the cooling compartment short circuiting. Replace the sensor.

If the display shows 37°C, 99F or a "continuous" symbol on some models that have an old version of the control panel, replace the sensor.

7. If the temperature display shows "**HI**" **(with regard to: AV143X3Z):** "HI" on the display indicates that the device's internal temperature is above 23°C after ten hours of operation.

Complete the following checks:

1. Connect and disconnect the device to the wall socket.
   Adjust the temperature of the top and centre compartments to 5°C, the lower compartment to 12°C (on models with three areas) or the top one to 5°C and the lower one to 12°C (models with two areas).
2. Leave the device to operate empty for two to three hours.

After having completed these tasks:

1. If the external ventilator and the compressor are working correctly but the two or three areas are not reaching the previously stipulated temperatures there is a gas leak or an obstruction on the circuit.

2. If the higher compartment reaches the required temperature (on models with three areas) or the other compartments (on models with two areas) cannot reach the temperature despite all of the ventilators working correctly, the refrigeration valve is causing the problem and in this instance should be replaced.

Inconsistent symbols on the display (compression cabinets):

Start by disconnecting the device for several minutes by removing the plug from the power supply and then plugging it in again.

Sometimes this is enough to reboot the device.

Please note that if the power supply is disconnected for a prolonged period, the factory settings are restored.

Otherwise replace the control and display panels. (Only to be completed by specialist technicians)

Ref.: AV24XI, AV45XDZI, AV46CDZI, AV79XDZI, AV80CDZI, AV93X3ZI

If the temperature display shows “EH or EL” the sensor is faulty. Replace the sensor.

CV52IXDZ: Replacing the condenser

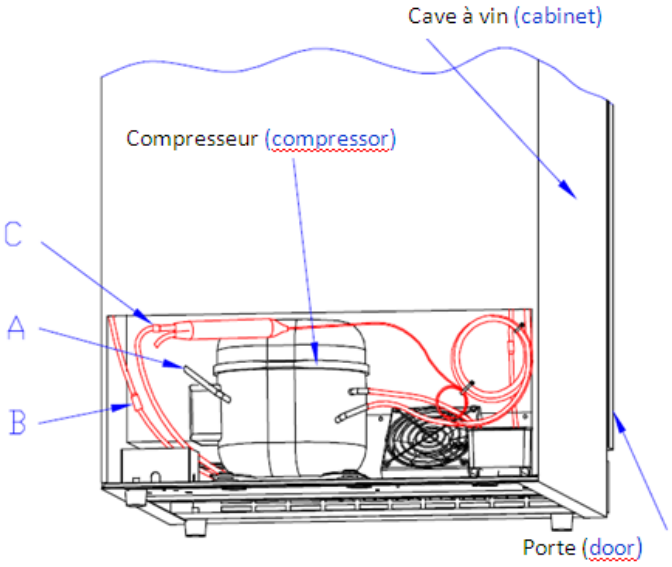
1. Cut tube "A" on the compressor and allow the gas to escape.

2. Heat contact points "B" and "C" using a soldering iron.

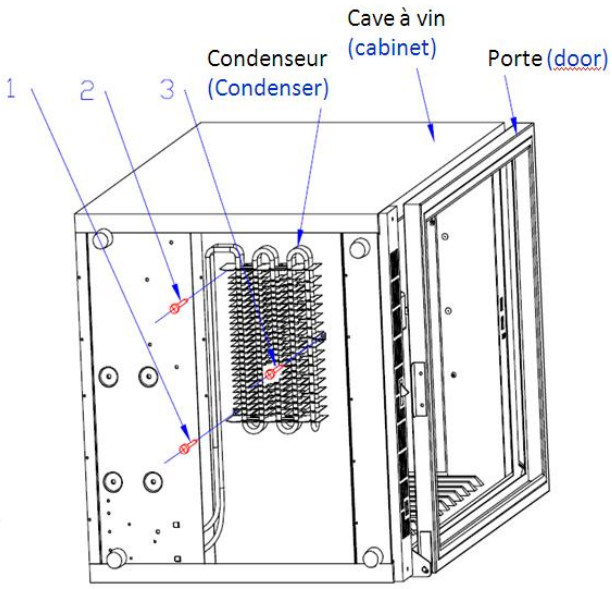
3. Remove screws 1, 2 and 3 using a screwdriver, then remove the condenser.

4. Put the new on in place, rinse the circuit and refill with gas.

Vue de l'arrière (Back view)



Vue de dessous – Bottom view



MONO AND DUAL AREA TEMPERATURE CONTROL CABINETS

Ref.: CV22IX, CV52IXDZ, CV41DZX, CV44E, CV42TWIN, AV22 IX, CV44SV, AV42XDP, CV168EI CV168EIDZ, CV112EI, CV112EIDZ, AV121XDZ, AV154XDZ, AV143X3Z, VSV154

Ω sensor values							
T (°C)	R (KΩ)	T (°C)	R (KΩ)	T (°C)	R (KΩ)	T (°C)	R (KΩ)
-30	33.81	0	6.466	30	1.618	60	0.5030
-29	32.06	1	6.149	31	1.551	61	0.4853
-28	30.19	2	88.50	32	1.487	62	0.4684
-27	28.43	3	5.566	33	1.427	63	0.4521
-26	26.79	4	5.298	34	1.369	64	0.4365
-25	25.25	5	5.044	35	1.314	65	0.4214
-24	23.81	6	4.804	36	1.261	66	0.0470
-23	22.47	7	4.577	37	1.211	67	0.3931
-22	21.20	8	4.362	38	1.162	68	0.3798
-21	20.01	9	4.158	39	1.116	69	0.3670
-20	18.90	10	3.965	40	1.073	70	0.3547
-19	17.86	11	3.781	41	1.031	71	0.3429
-18	16.90	12	3.608	42	0.9906	72	0.3315
-17	15.95	13	3.443	43	0.9524	73	0.3206
-16	15.09	14	3.286	44	0.9157	74	0.3100
-15	14.27	15	3.138	45	0.8807	75	0.2999
-14	13.51	16	2.997	46	0.8472	***	***
-13	12.79	17	2.863	47	0.8152	***	***
-12	12.11	18	2.736	48	0.7845	***	***
-11	11.47	19	2.615	49	0.7551	***	***
-10	10.87	20	2.500	50	0.7270	***	***
-9	10.31	21	2.391	51	0.7001	***	***
-8	9.774	22	2.287	52	0.6743	***	***
-7	9.272	23	2.188	53	0.6496	***	***
-6	8.790	24	2.094	54	0.6259	***	***
-5	8.352	25	2.005	55	0.6032	***	***
-4	7.930	26	1.920	56	0.5815	***	***
-3	7.532	27	1.839	57	0.5606	***	***
-2	7.156	28	1.762	58	0.5106	***	***
-1	6.802	29	1.688	59	0.5214	***	***

Ω values of the sensors (only to be completed by specialist technicians)

Ref.: CV48AD – CV70AD: 10 K Ω to 25°C

NOISE LEVELS FOR TEMPERATURE CONTROL CABINETS

Reference	Noise level (db)
DOLCE VINA 2	29
CV16TX	33
CV22IX	38
CV39X	38
CV40MX	38
CV40DZ	38
CV41DZX	38
CV42TWIN	38
CV44E	38
CV50EI	40
CV52IXDZ	40
AV42XDP	40
CV112EIDZ	42
CV168EI	42
CV168EIDZ	42
VSV154	42
AV121XDZ	42
AV154XDZ	42
AV143X3Z	42
VSV12	25
DUOVINO	25
AV12DZX	25
CV48AD	30
CV70AD	30
MAV18	25
MAV28	25

Chapter 6

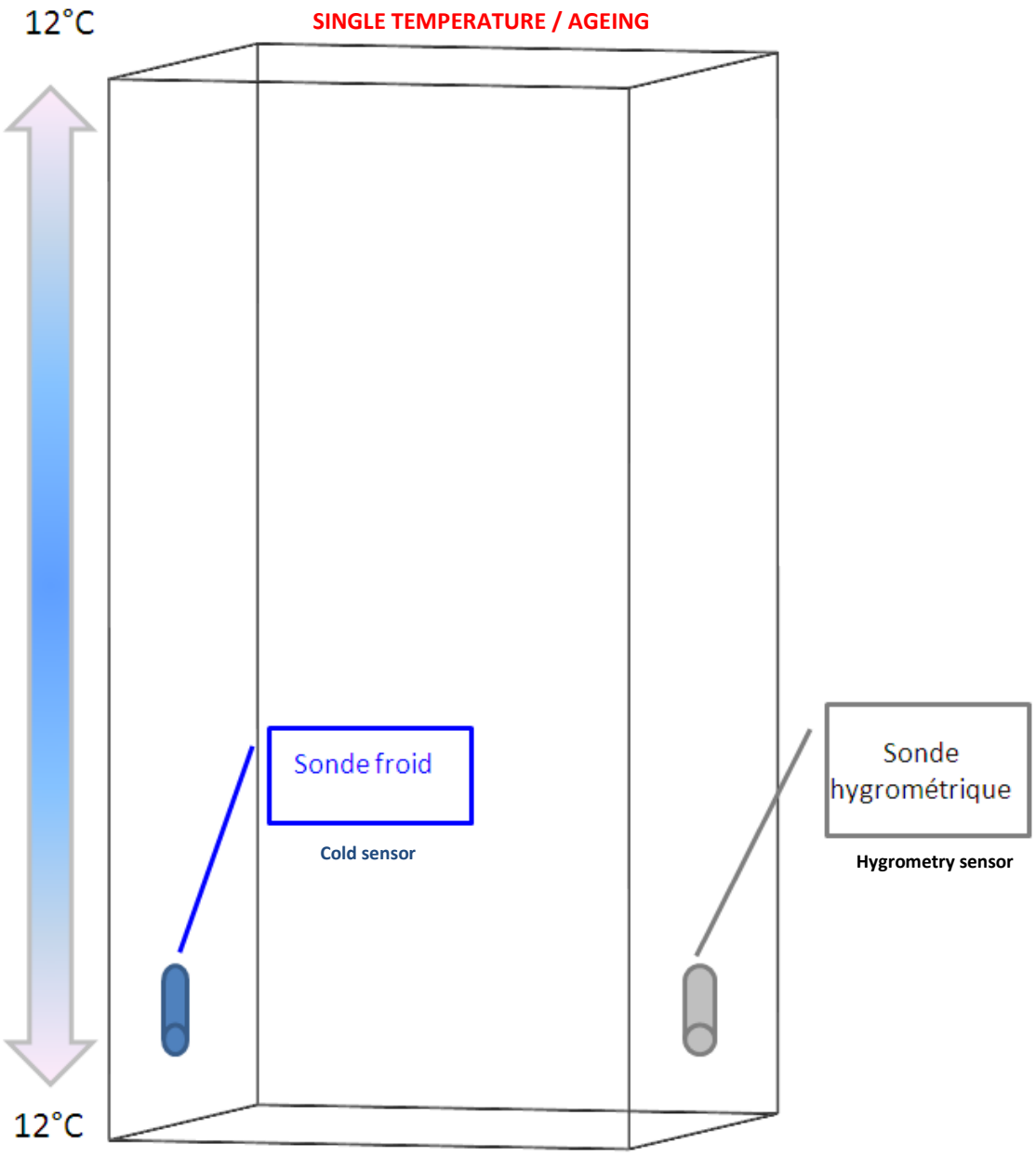
PRESERVATION, SERVING AND AGEING WINE CABINETS FROM THE DIVA RANGE

POSITION DES SONDES CAVES DIVA

MONO TEMPERATURE VIEILLISSEMENT

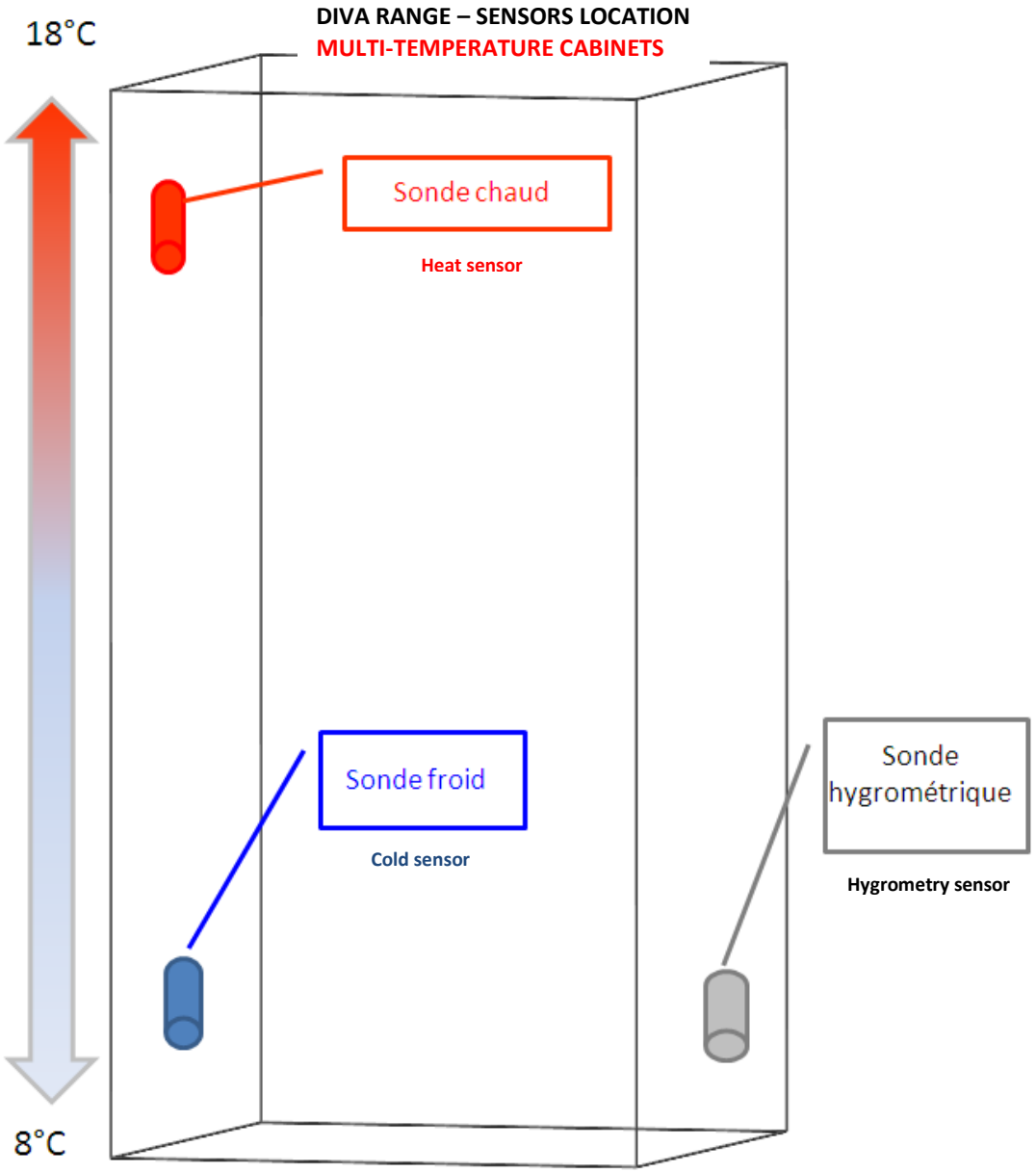
DIVA RANGE – SENSORS LOCATION

SINGLE TEMPERATURE / AGEING



POSITION DES SONDES CAVES DIVA

MULTI TEMPERATURES



PARTICULAR FEATURES FROM THE DIVA RANGE

POSSIBLE ERROR CODES

E01: P1
E02: P2
E03: P3
E09
E010

P1 = temperature sensor located in the bottom part: regulates the refrigeration function and the winter system, if present.

P2 = temperature sensor located in the top part: regulates the superior resistance function; **ONLY** available in multi-temperature wine cabinets, which are all equipped with this function.

P3 = sensor to measure the humidity levels and to control the humidification system (depending on the model, option unavailable)

E01, E02 and E03: relevant sensor faulty or connection between the circuit board of the power card and the sensor is lost.

E09: the safety thermostat has disconnected the refrigeration and heating functions as the internal temperature is too low.

When the temperature at the bottom of the wine cabinet returns to 6°C or to the selected temperature level, the compressor will restart.

Code E09 flashes with a triangle alert on the screen as long as the power supply and the plug are disconnected from the mains supply for two to three minutes.

The symbol and the error code disappear as soon as the plug is reconnected to the mains supply.

If the temperature is still too cold in the lower section of the cabinet, the "triangle" symbol and the error code reappear.

E10: communication cable for the circuit board and power card or the circuit board for the display is faulty, or the cable is damaged.

Sensors P1, P2, P3 and the safety thermostat are inserted from the rear into foam tubes inside the side walls.

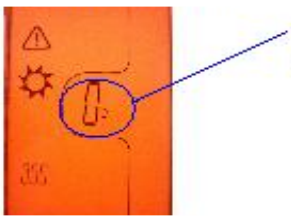
PLEASE NOTE: THE SENSORS MUST BE PUSHED AS FAR AS POSSIBLE UNTIL RESTING AGAINST THE BOTTOM OF THE TUBE

INSTRUCTIONS ON HOW TO CONVERT DEGREES CELSIUS TO FAHRENHEIT

1 Simultaneously presser all of the buttons for five seconds. The following is displayed:

2 Press the ON-OFF button. The following is displayed:

This number can vary.



3 Using the up/down arrows select setting 18

4 Press the ON-OFF button. The following is displayed:

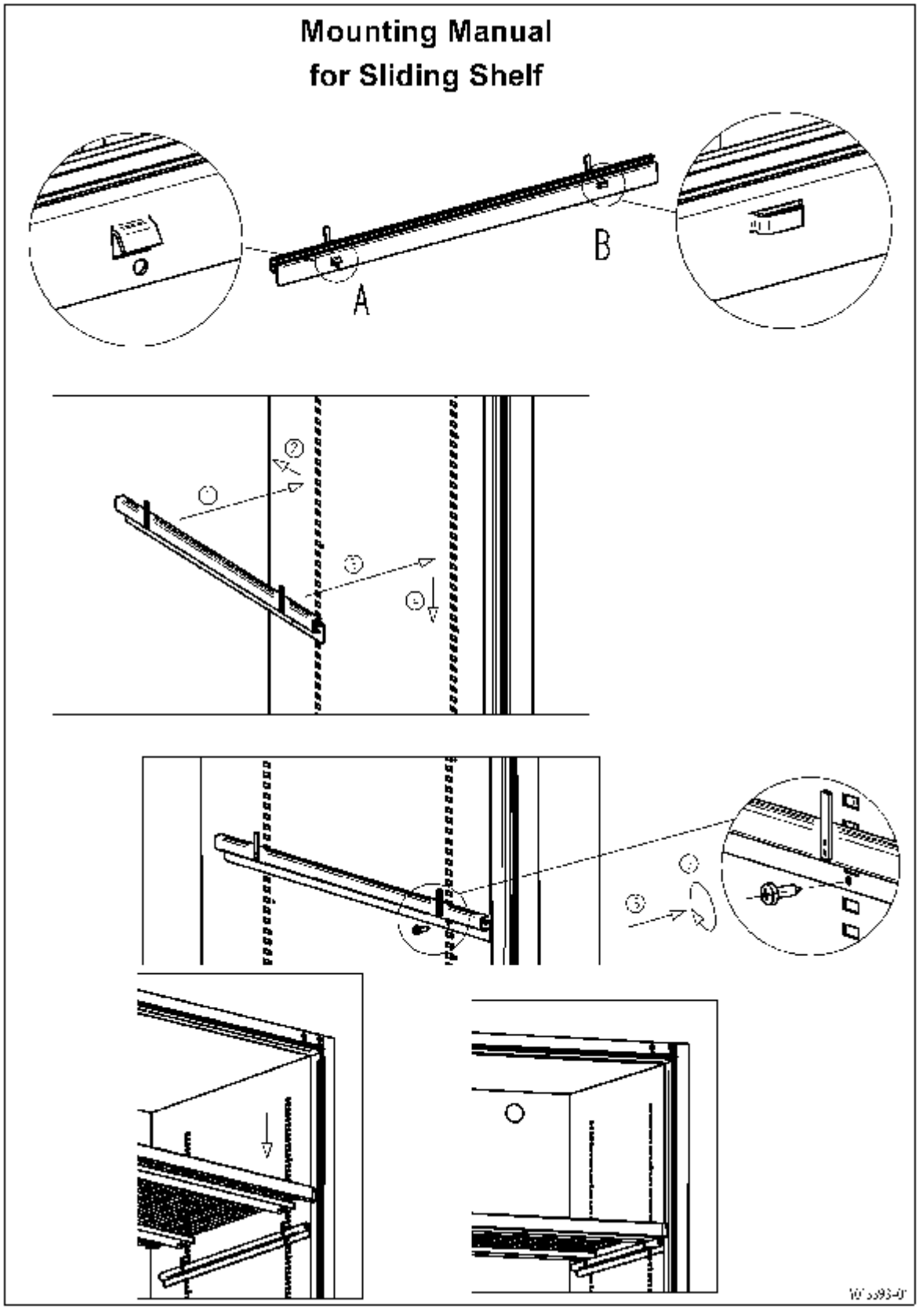
5 Press the up arrow. The following is displayed:

1

6 Press the ON-OFF button. The following is displayed:

7 Press the light button twice. The temperature is then converted to F°

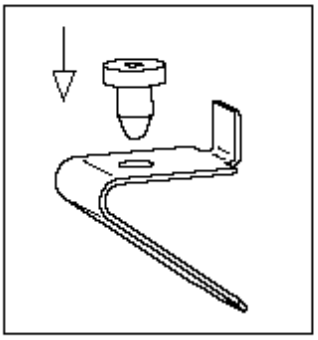
MOUNTING MANUAL FOR SLIDING SHELVES



MOUNTING MANUAL FOR FIXED SHELVES

Mounting Manual
for Fix Shelves

1



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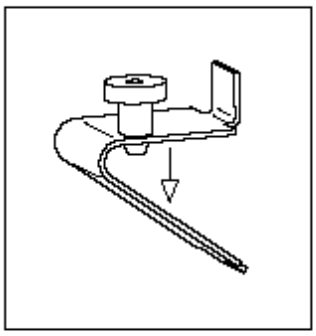

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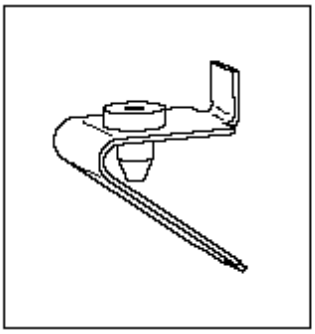

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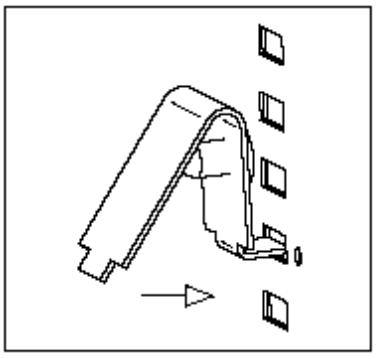

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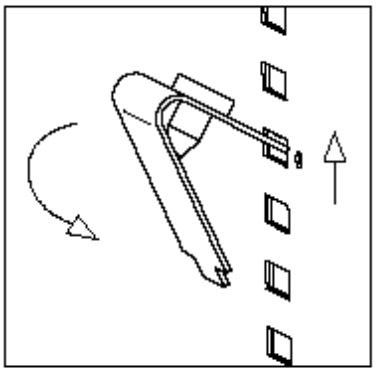

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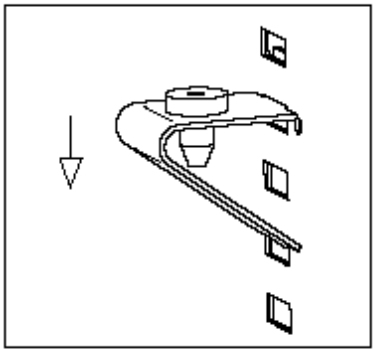

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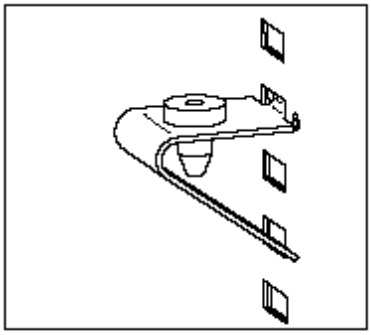
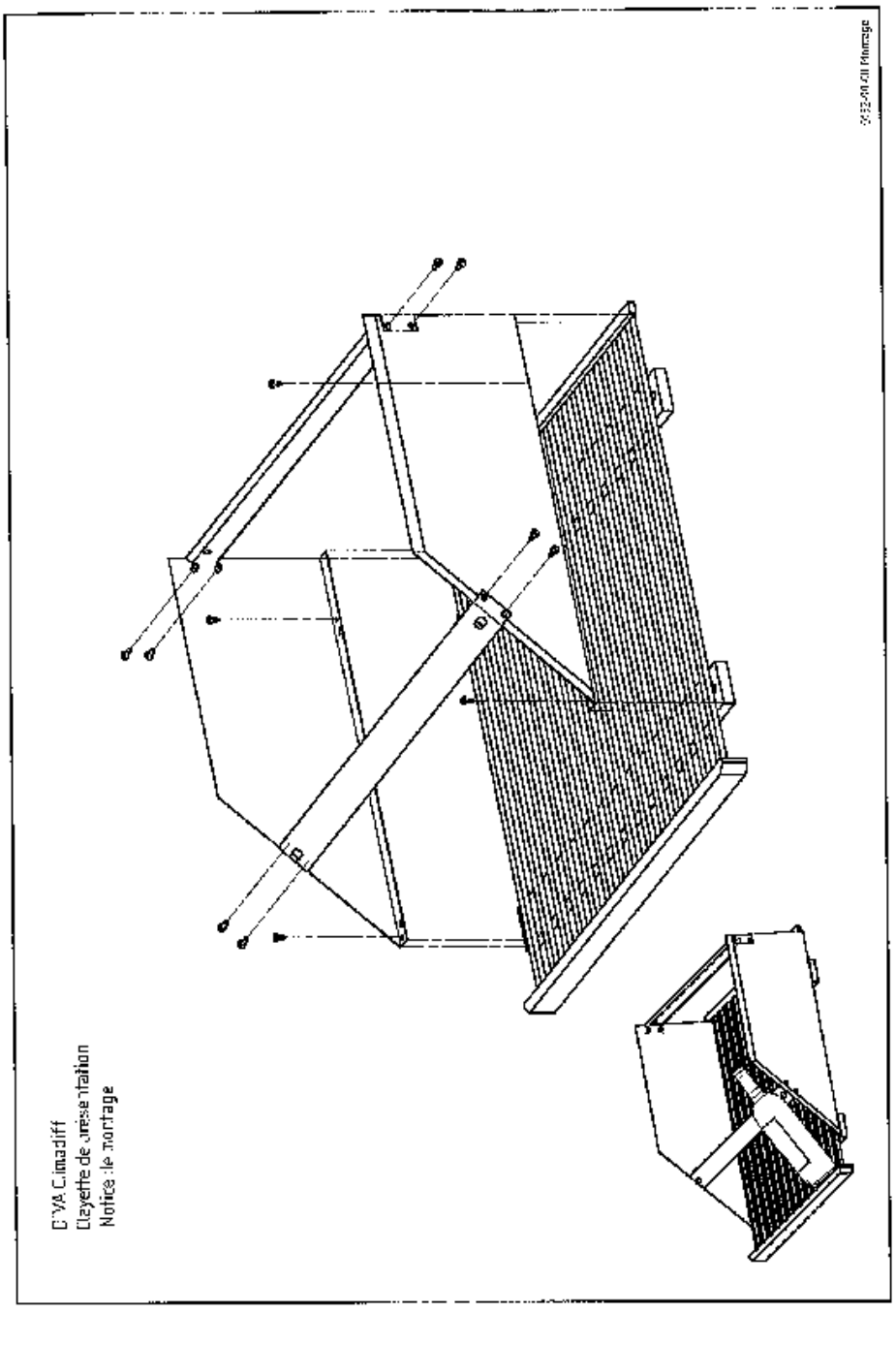


MOUNTING MANUAL FOR THE PRESENTATION BOX



INSTRUCTIONS FOR REPLACING THE DOOR

1. Remove the profile frame
2. Disconnect both of the connection sockets
3. Remove the display housing
4. Remove the door's profile frame including the lighting cable

5. Cut off the socket at the end of the cable

6. Remove the cable fittings

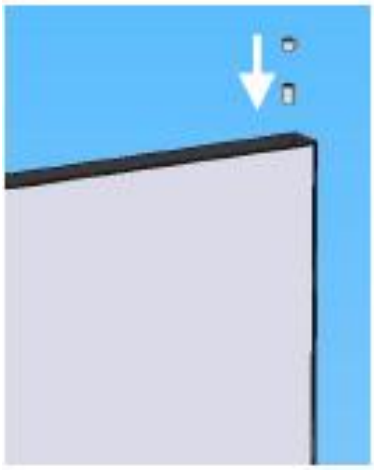
7. Remove the cable from the door

8. Remove the pivot from the upper hinge using a flat-headed screwdriver

9. Gently tilt the top of the door and lift as illustrated on the photograph

10. Place the two plastic guards in the hole for the upper hinge of the new door

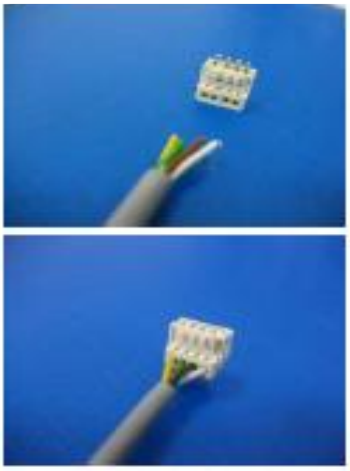
11. Install the new door and attach using threaded rods



12. Insert the cable in the door and attach using plastic clamps as illustrated on the photograph

13. Prepare the end of the cable and install the wires in the socket; order of the colours: yellow, green, brown, and white

14. Push the four metal connections on the socket using a thin screwdriver



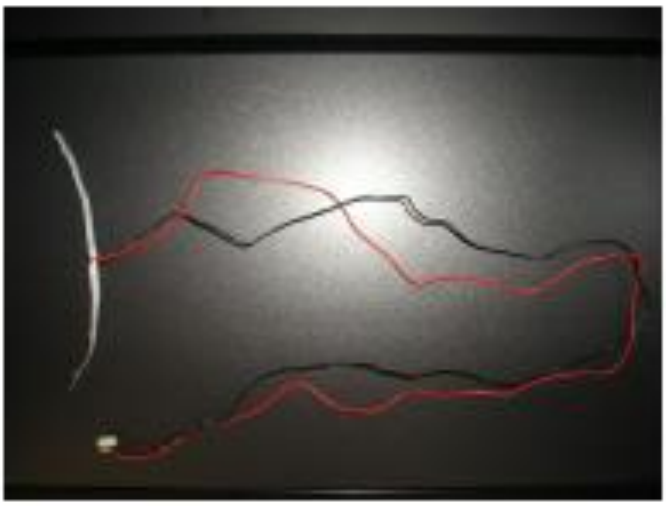
15. Place the profile frame next to the door and take the display housing

16. Reconnect both of the sockets to the display housing

17. Replace the display housing in the frame of the door and attach with four screws

18. Push the profile frame into the door. Start with the internal corners and continue along the sides of the frame.

INSTRUCTIONS FOR INSTALLING A LIGHT



1. Get the light

2. Remove the profile frame

3. Remove the screws from the display housing

4. Connect the lighting cable as illustrated on the photograph

5. Attach the display housing with the four screws

6. Place the cable along the channel

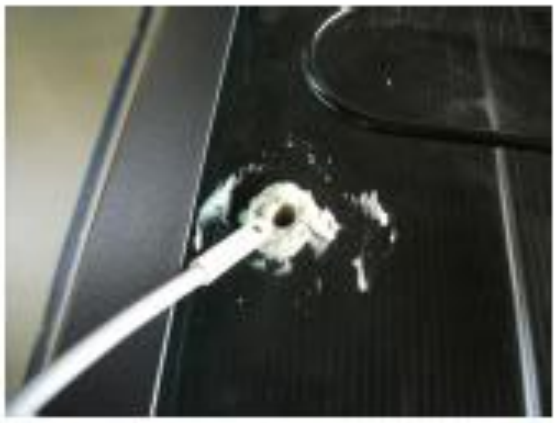
7. Put the profile frame back on the door starting with the internal corners, then the external corners and concluding with the external sides

8. Clean the surface of the profile frame, remove the self-adhesive protective film from the light and place the lighting band in the profile

INSTRUCTIONS FOR REPLACING SENSORS

1. Remove the label stuck to the sensor

2. Remove the paste from the pipe inlet

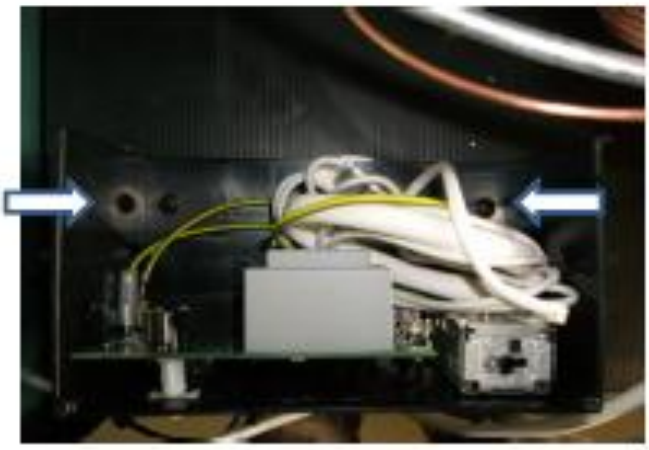


3. Remove the sensor from the pipe

4. Detach the sensor cable from its fittings

5. Remove the screws from the housing cover

6. Remove the screws from the switch box



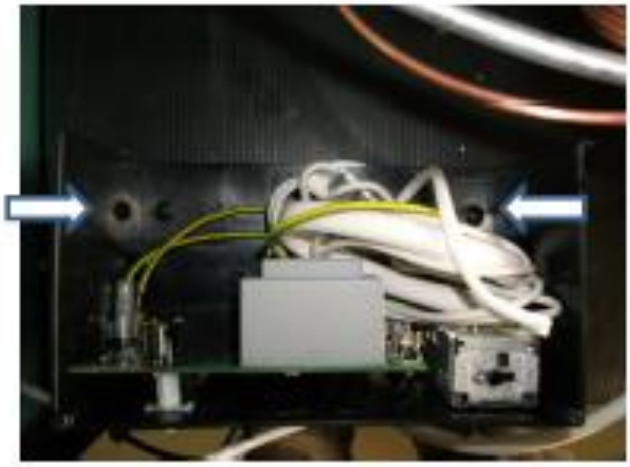
The shortest cable on the switch box can limit access to the sensor sockets.

If there is too much play in the door, the connection cable can be pulled out by 20/30cm through the pipe located at the back of the cabinet

7. Disconnect the sensor sockets from the electronic card

8. Connect the sockets on the new sensors to the switch box

S_RH: humidity sensor
S_P1: lower temperature sensor
S_P2: upper temperature sensor (only in multi-temperature cabinet)
COM: connection cable (display housing)



9. Replace the switch box fixing screws

10. Replace the box cover and fix in place using the screws

11. Insert the sensor approx. 30 cm into the pipe until the sensors come to a stop

12. Reseal the end of the pipe using paste, which shall initially remain uncovered

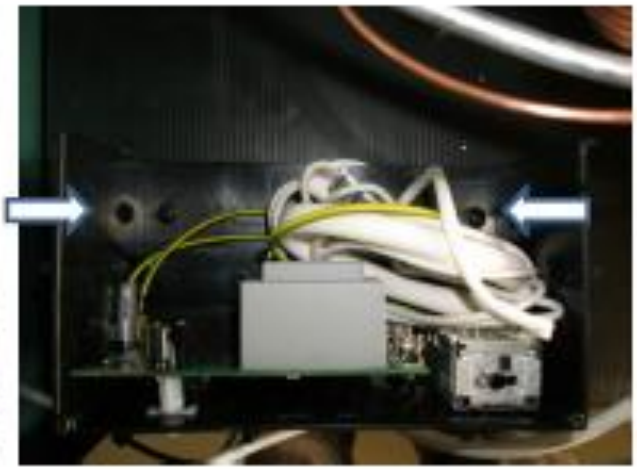
13. Affix the silver label to cover up the paste

14. Attach the sensor cable using the fixing elements

INSTRUCTIONS FOR REPLACING THE CONTROL UNIT

1. Unscrew the cover and remove

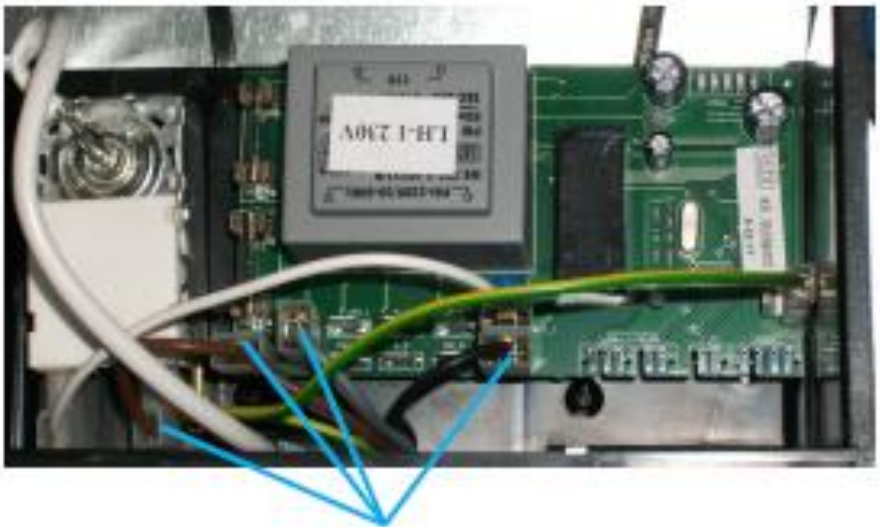
2. Remove the screws from the switch box



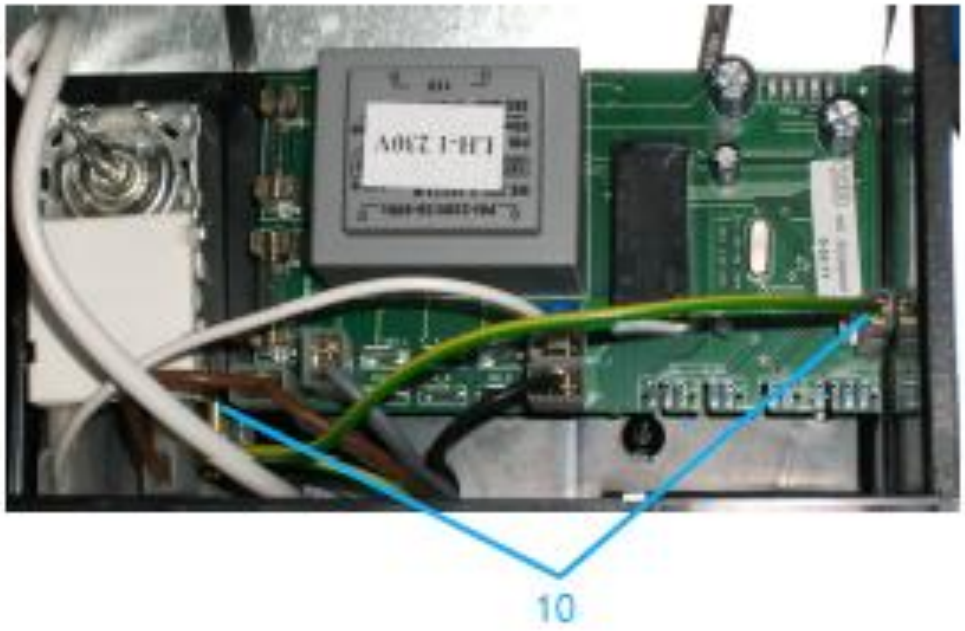
The shortest cable on the switch box can limit access to the sensor sockets.

If there is too much play in the door, the connection cable can be pulled out by 20/30cm through the pipe located at the back of the cabinet

3. Unplug the sensors' connection sockets from the switch box
4. After having removed the sticker and the paste, remove the safety thermostat sensor from the cabinet chest
5. Unplug the resistance connections from positions: 4SH-L, 4SH-N, H-L, H-N, WH-L, WH-N

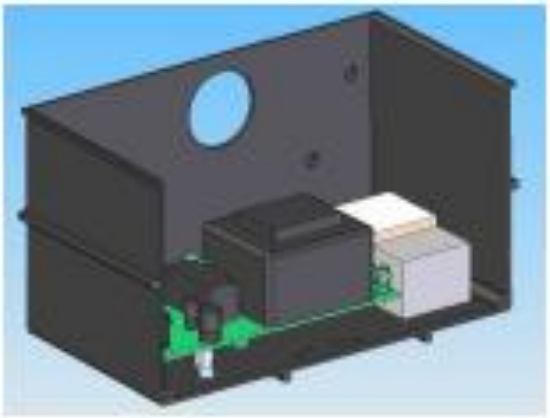


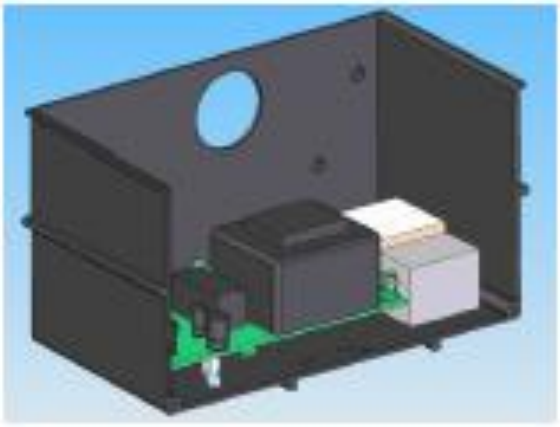
6. Unplug the wire connections from the compressor



7. Disconnect the green/yellow wire connections from the earth: protective conductor on the switch box, safety thermostat cover

8. Replace the control box with a new one containing the appropriate software (according to the spare parts list)



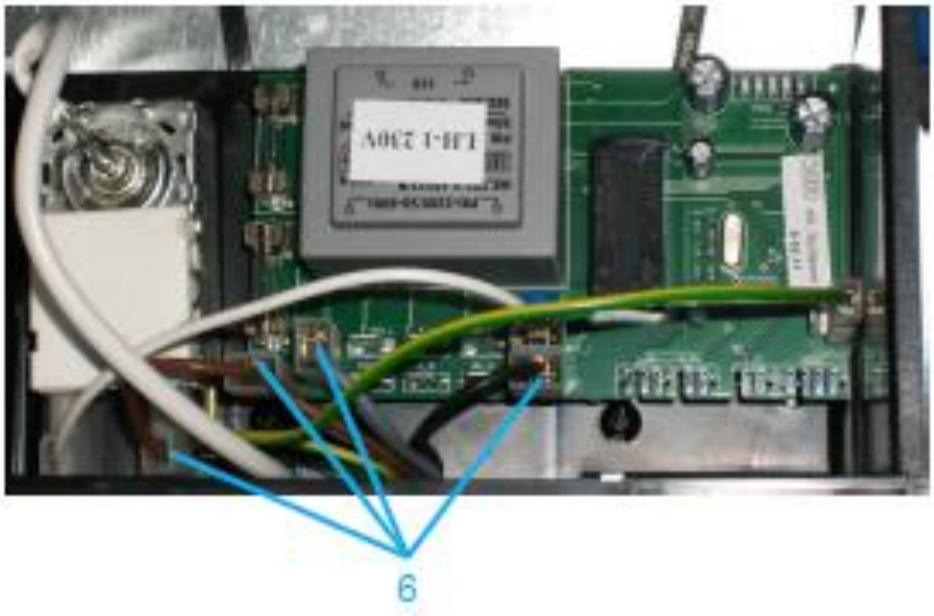


9. Connect the new sensor's electric sockets to the box

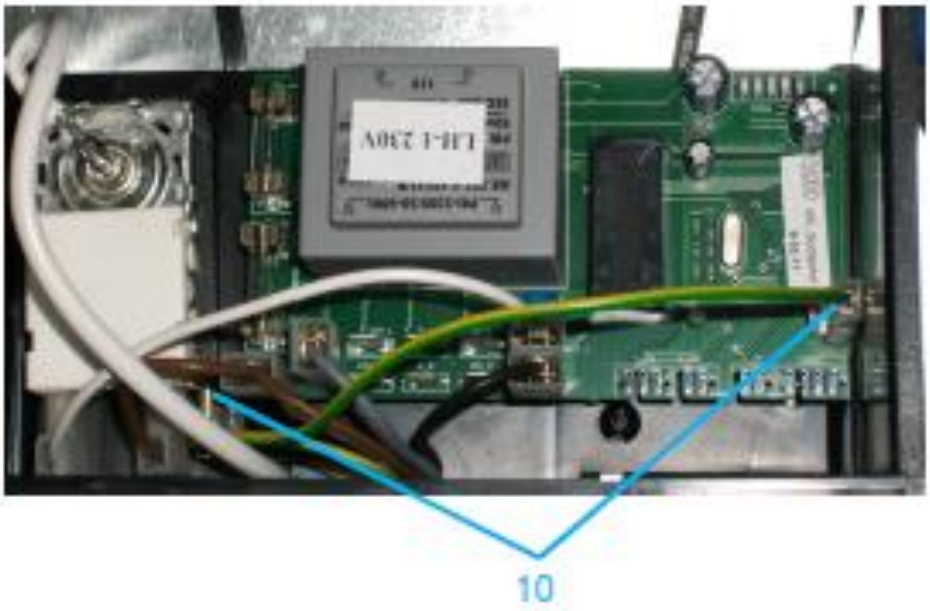
S_RH: humidity sensor
S_P1: lower temperature sensor
S_P2: upper temperature sensor (only in multi-temperature cabinets)
COM: connection cable (display housing)

10. Connect the resistance cables to the the positions: 4SH-L, 4SH-N, H-L, H-N, WH-L, WH-N - in accordance with the table below

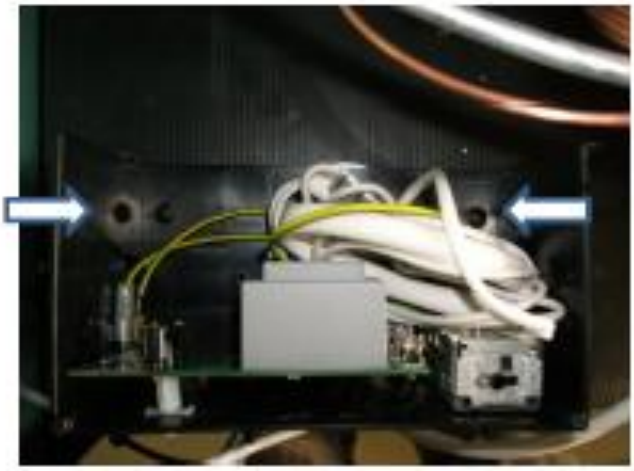
Type of cabinet	Connecting position on the electronic panel		
	4SH-L 4SH-N (upper heater)	H-L H-N (evaporating heater)	WH-L WH-N (winter heater)
	Heater connected to the marked connecting position		
DV265M, DV315M 230V-50Hz (multi)	4014951-01 (30W)	4014950-01 (18W)	4011805-01 (18W)
DV265M, DV315M 115V-60Hz (multi)	4014951-02 (30W)	4014950-02 (18W)	4011805-02 (18W)
DV265A, DV315A 230V-50Hz (mono)	-	4014950-01 (18W)	4014951-01 (30W)
DV265A, DV315A 115V-60Hz (mono)	-	4014950-02 (18W)	4014951-02 (30W)



11. Connect the wires from the compressor in accordance with the wiring diagram



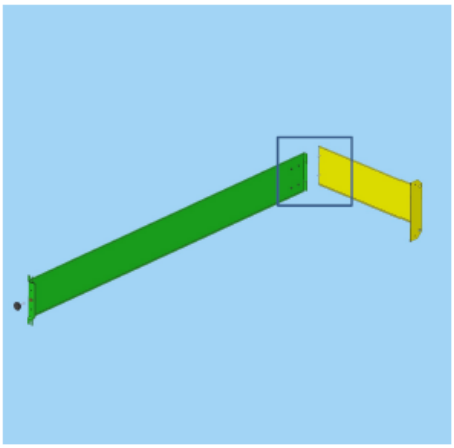
12. Disconnect the green/yellow wire connections from the earth: protective conductor on the switch box, safety thermostat cover

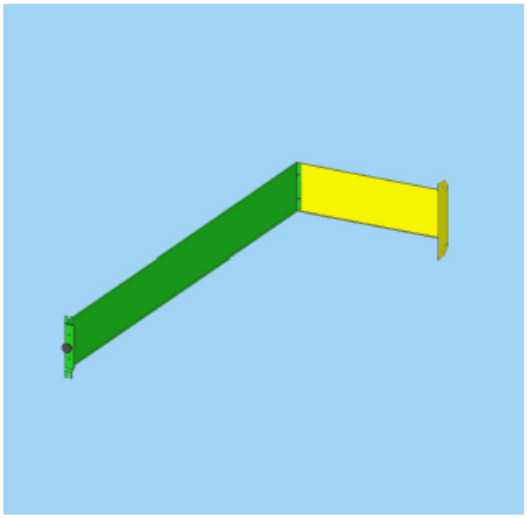


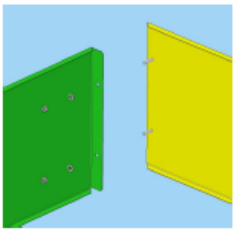
13. Secure the switch box screws

14. Replace the cover and fix in place with the screws

MOUNTING MANUEL FOR DIVA CONNECTING KIT

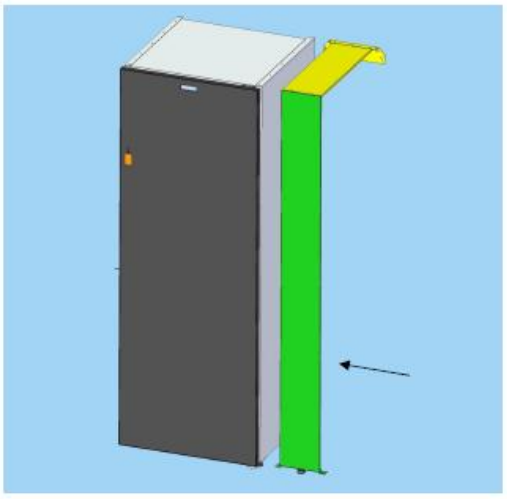






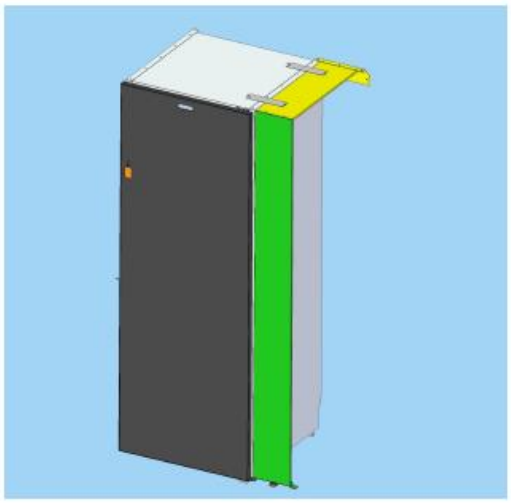
1. Place the foot in
2. Fix the top to the column with screw + washer + nut

1. Placer et visser le pied.
2. Fixer le haut avec la partie verticale à l'aide des boulons, rondelles et écrous.



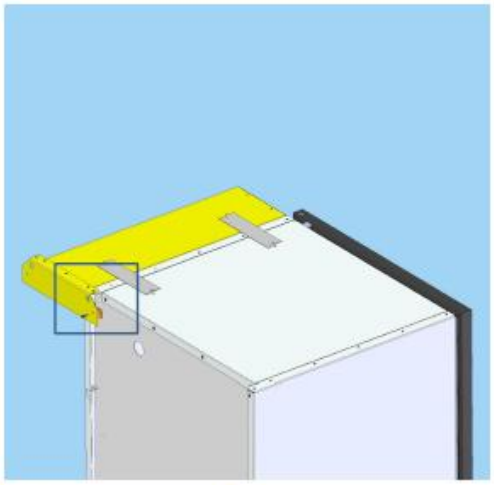
3. Fit the connecting column with top to the left cabinet

3. Assembler l'ensemble avec l'armoire de gauche.



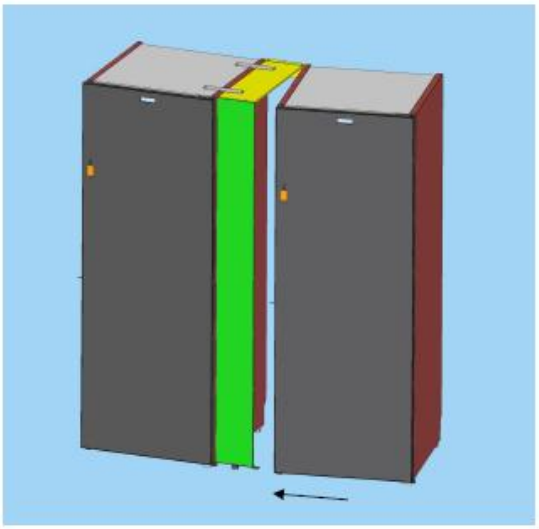
4. Fix the top to the left cabinet with adhesive removable tape

4. Fixer le haut à l'armoire avec du ruban adhésif.



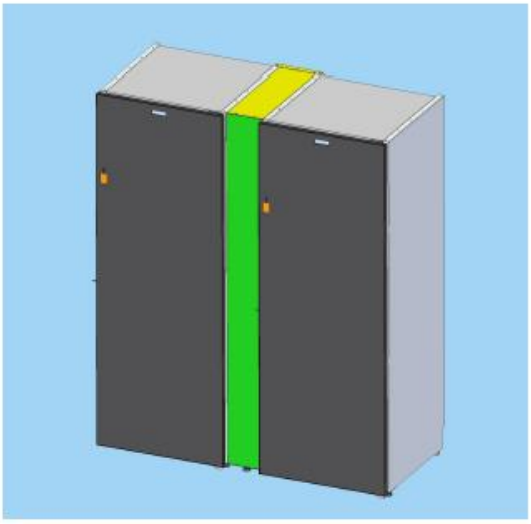
5. Fix the top to the back of the left cabinet

5. Fixer la partie haute à l'arrière de l'armoire de gauche comme indiqué sur le dessin.



6. Fit the rear upper corner of the right cabinet to the connecting top.
7. Fit the front lower corner of the right cabinet to the connecting column.

6. Ajuster l'armoire de droite avec le haut du kit de jonction.
7. Approcher enfin l'armoire de droite de la colonne et enclencher le pied comme indiqué.



8. Une fois l'ensemble jointif, repousser les deux armoires simultanément vers le mur ou leur position définitive.

FINAL NOTES

This document is only intended for technical stations managed by the After Sales Services or the retailer and must under no circumstances be passed on to the operator as it contains certain procedures and information that must be overseen by approved technicians only.

We hope we have clarified information relating to Climadiff wine cabinets for you and shall remain at your disposal for any questions that cannot be answered using this technical manual.

Do not hesitate to contact us with any suggestions or comments, which will enable us to improve and expand this document.

Please find our contact details as well as those for SIDEPAR listed below. Upon request, SIDEPAR will provide you with login access to its site also enabling you to access all of the specifications online.

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