HiDew
Dehumidifiers

www.hidew.it
info@hidew.it

CCV - Air condensed air conditioner for cellars

CCA - Air conditioner for cellars with remote air condenser

CCW - Water condensed air conditioner for cellars

INSTALLATION, USE AND MAINTENANCE MANUAL

CCV – CCA – CCW

Air conditioners for cellars

BEFORE USING THIS UNIT, READ CAREFULLY THIS USER MANUAL

Dear Customer,

Thank you for having chosen one of our products.
We are glad to provide this User Manual to you, in order to allow an optimum usage of the unit, for a better comfort and a higher safety.

We strongly recommend a careful reading of the directions mentioned in the following pages and to let the present manual available to all the operators who will work for the management and the maintenance of the unit itself.

We remain at your disposal for any further information and explication you may need, whether in the first-starting phase and in every following moment.

For necessary ordinary or extraordinary maintenance operations, we remain at your disposal with our Technical support Service, to assist you and supply the spare parts.

For a quicker assistance, please contact us at the following references:

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EEE Register: IT18080000010604

SUMMARY

1 INTRODUCTION

The present User Manual indicates the uses of the unit and gives instructions for transport, installation, assembling and regulation of the machine. It gives directions about maintenance, spare parts request, residual risks presence and staff education.

The User Manual should be read and used in the following way:
- each operator and person concerned with the use and maintenance of the unit should read it carefully and follow the instructions given;
- the employer has to verify that the operator has the required attitudes to conduct the unit and that he has carefully read the manual; the employer is also supposed to inform the operator about the risks of accidents, mainly risks deriving from the noise, the individual protection devices and the rules preview according to the law, both at an international level and at the destination Country level;
- the manual should always be available for the user, the transport Company, the operators for the placement, the maintenance, the reparation and the dismantling of the unit;
- the manual should be protected from humidity and hot zones and considered as an integrant part of the unit for all its lifetime; it has to be delivered to the next owner of the unit;
- please make sure that every update is included in the manual;
- do not damage, remove, strip or re-write the manual, neither part of it; in case it is lost or damaged, please contact the manufacturer for the request of a new user manual and communicate the matriculation number of the unit (you find it on the data label).

Please, take care of the following symbols. Their function is to underline the following information:

It makes reference to dangerous situations that can occur when using the machine, in order to grant people safety.

It makes reference to dangerous situations that can occur when using the machine, in order to avoid damages to the unit itself and to things around it.

It makes reference to suggestions or additional integration for a correct use of the unit.

The manufacturer has the right to update products and relative manuals, without being obliged to update previous versions, with exception of particular cases.
This manual refers to the current technologies adopted at the moment of the selling of the unit and cannot be considered inadequate according to following updating due to technology evolutions.
To ask for eventual manual updating or for integration, please forward your request to the previously indicated references.
Please contact the manufacturer for further information or suggestions.
In case of re-selling of the unit, please inform the manufacturer about the new owner references, in order to facilitate the communication between the both of us.

1.1 RESPONSABILITIES

The unit is granted according to the contract clauses subscribed in the sales negotiation.

The manufacturer is not responsible for accidents that can occur because of:

- **the non-following of the instructions given in this manual about the correct use, maintenance and first-starting of the machine;**
- changes made in the unit or in the safety devices without a written authorization from the manufacturer;
- non-authorized attempts of repair;
- negligence in constant maintenance or use of non-original spare parts.

Anyhow, if the user accuses the manufacturer for any fault of the unit, he has to demonstrate that the damage occurred has been a direct consequence of the supposed fault.

1.2 SERVICE RULES

The service rules described in this manual have to be considered as integral part of the unit supplied.
Moreover, these rules are reserved to the operator, who has previously been instructed about the unit in object and they provide necessary information about safety and correct use of the machine.
Please, consider that incorrect and incomplete education about the units can cause accidents.

Read carefully the following suggestions:

- **the first-starting of the unit should be done only by a qualified staff and authorized by the manufacturer;**

- when installing the unit or when an intervention is required, it is fundamental to follow the rules described in this manual and to pay attention to the directions given by the control of the machine;
- accidents can be avoided by following these technical instructions, with reference to the machine-directive CE/42/2006 and its following revisions; in every case, keep attention to the national safety rules;
- do not remove or damage protections, labels and writings, especially those imposed by the law; in case they are no more readable, please substitute them.

The machine-directive CE/42/2006 gives the following definitions:

DANGEROUS ZONE: *every zone internal or in the nearby of a unit where the presence of men is a risk their safety or wealth;*
EXPOSED PERSON: *every person who stands within or nearby a danger zone;*
OPERATOR: *the person charged for the installation, the starting, the regulation, the maintenance, the cleaning, the reparation and the transport of the unit.*

All the operators should follow the accidents prevention measures, both international and of the destination Country, in order to avoid accidents.

Please remember that the European Community has issued several directives concerning workers' safety and wealth, such as CEE/391/89, CEE/686/89, CEE/654/89, CEE/655/89, CEE/656/89, CEE/188/86, CEE/58/92 and CEE/57/92 that employers are supposed to follow and to make them followed.

The units have been realized in conformity with technical laws, dispositions and rules in force.
Used materials, equipment parts, production processes, quality warranty and control satisfy the required maximum safety standards.
The lifetime of the unit and its correct functioning can be granted by using it for the supposed usages, by moving them carefully and by following accurately maintenance and revisions.

1.3 USES

CCV, CCA and CCW units are air conditioners for cellars, thought for a use in ambients where the non-control of temperature and humidity can damage the structure and/or the products

Its use is recommended within the functioning limitations indicated in this manual

Place the unit where there are not explosion or fire dangers, neither in vibrating areas or in presence of electro-magnetic fields. Furthermore, do not operate in ways which differ from those indicated and do not underestimate safety operations.

1.4 RESIDUAL RISK AREAS

Due to the peculiar functionality of the unit, in some areas of it, there are residual risks which was not possible to elude during the project neither to reduce. Each operator should be aware of the residual risks in this unit, in order to avoid accidents.

Residual risk areas:

- *Short circuit or fire caused by short circuit risk;*
- *Explosion danger because of the presence of under pressure circuits or pollution due to the refrigerant gas in the circuit;*
- *Burn danger because of high temperature pipes;*
- *Slash danger.*

1.5 INTERVENTION AND MAINTENANCE

It is useful to remember that the manual cannot substitute the suitable experience of the user; for some maintenance operations, the manual represents a reminder of the main activities for competent operators, who have attended, for instance, instructive courses promoted by the manufacturer.

Please, read carefully the following suggestions:
- a preventive and constant maintenance grants the high safety standard. Do not postpone the required reparations and make sure they will be done by qualified staff and by using exclusively original spare parts;
- schedule carefully each intervention;
- operators workplace should be clean and free from objects which could limit their movements;
- operators should avoid inaccurate operations and positions, in order not to compromise their balance;
- operators should pay attention to risks of trapping or cloths/hair entangling in moving parts; the use of a cap is strongly recommended for people with long hair;
- necklaces, bracelets and rings could be dangerous;
- the place should be suitably lit up; an inadequate lighting can be dangerous;
- wait approximately half an hour after the turning off of the machine, before intervene for any maintenance, in order to avoid burns;

- do not repair high pressure damaged pipes with welding;
- during installation and maintenance, fluids in the refrigerant circuit and electric parts, can generate dangerous situations;

- reduce, as much as possible, the opening time of the refrigerant circuit: this because, even for a short time, the air exposition of oil causes the absorption of high humidity quantities and this leads to the creation of weak acids;
- each intervention on the unit should be made by qualified staff;
- before starting a maintenance intervention, make sure the power supply has been turned off;
- make sure the safety devices work correctly; if not, do not turn on the unit;
- use only equipment suggested by the manufacturer of the unit, in order to reduce the possibility of accidents due to low quality equipment;

-after the cleaning of the unit, the operator should verify that there are not damaged parts; in case he finds out something wrong, he should ask for the intervention of a maintenance technician;

- the place should always be clean and properly tidied up, because smearing of oil or grease could cause sliding or fallings;
- the use of inflammable fluids during cleaning operations is forbidden.

During the cleaning operations, do not use gas oil, oil or solvent because while the first leaves an oily patina, which leads to dust attraction, the latter can damage the paint and leads to the creation of rust. If some water seeps into the electrical devices, it will produce oxidation, which can cause the dysfunction of the unit. You should not use water or steam spout on sensors, connectors and other electrical parts.

Please pay attention to the integrity of pipes and other devices, which could wear out. Check that there are not leaks of fluids and other dangerous substances. If something like this occurs, the operator should not turn on the unit before the reparation.

1.6 GENERAL SAFETY RULES

1.6.1 SAFETY CLOTHES

Operators should wear safety equipment such as gauntlet, helmet, safety glasses, safety footwear and cap for protection from the noise.

1.6.2 FIRE EXTINGUISHER AND FIRST AID

Se a first aid box and a fire extinguisher near the unit.
Check regularly that fire extinguishers are charge and that you have understood how to use them.
In case of fire use it according to the regulations in force and contact the fire-men.
Check regularly that the first aid box is fully equipped.
Verify to have nearby the useful emergency phone numbers

AVVERTENZA
CAUTION

The owner of the place where the unit is installed is responsible for the fire extinguisher and the first aid box.

1.6.3 SUGGESTIONS FOR ADVICES AND MAINTENANCE

Put an “under maintenance” label on all sides of the unit.
Check carefully the unit by following the list of operations suggested in the present manual.

1.6.4 SAFETY LABELS

General danger

Electric voltage hazard

Risk of burns

Hazard: moving mechanical parts

Shearing risk

2 PRODUCT DESCRIPTION

The new CCV, CCA and CCW air conditioners are studied and developed to ensure a precise control of temperature and humidity, especially for small private cellars and other ambiences that need precise control.
The compact and elegant design of the unit satisfy the most exigent requests according to reduced spaces, as often required.
The unit is a monoblock direct expansion solution.

The CCV, CCA and CCW air conditioners combine avant-garde technical solutions and a sober but elegant aesthetic, so they find a great installation also in the most prestigious locations.
The use of quality refrigerant, hydraulic, aeraulic and electrical components, make CCV, CCA and CCW units the state of the art air conditioners, in terms of efficiency, reliability and sound power emitted.
Moreover, the CCV, CCA and CCW air conditioners have been designed to be easily inspected and maintained.

An elevate number of accessories allows the satisfaction of any request; whenever the standard range and the available accessories are not sufficient to satisfy the customer's needs, the realization of specific solutions is available.

Three versions of the unit are available:
Air condenser (CCV): external air cools the condenser then it is supplied to the ambience
Remote air condenser (CCA): a remote condenser dissipates the condensation heat
Water condenser (CCW): a water plate heat exchanger dissipates the condensation heat; water should be supplied to the unit at a temperature between 10 and 35 °C.

2.1 COMPONENTS

2.1.1 STRUCTURE

The unit is realized with an exclusive design, and when the unit is closed, it ensures the inaccessibility to all the components.
The removable front panel allows a complete accessibility to the unit for an easy and quick maintenance.
Bolts and screws are non-oxidable, INOX or carbon steel with passivation treatments.
The condensate tray is in stainless steel.
Carpentries are completely varnished with polyester powders to avoid the corrosion.

2.1.2 REFRIGERANT CIRCUITS

The refrigerant circuit is completely developed internally, by using only first quality components. Our production processes are led by qualified staff. Each CCV, CCA and CCW unit is assembled, brazed, wired and tested in the company, providing an elevate reliability of the unit. The CC range follows the Directive CE/23/97. All the units are realized with the ecologic gas R410A.
Refrigerant components:

- Compressors: rotary and scroll of main international brand. Engines are thermally protected with an internal protection, which controls the winding temperature and turns off the power supply if necessary.
- De-hydrator filter with molecular sieve
- Lamination item or thermostatic valve
- Fluid indicator
- High pressure switch
- Schrader valves for control and/or maintenance of the refrigerant circuit
- Pre-coated finned coils
- Plate heat exchanger

2.1.3 VENTILATION

Radial fans with backward shades, directly coupled to the brushless electric engine with permanent magnets; they allow reduced consumptions and lower emitted sound.

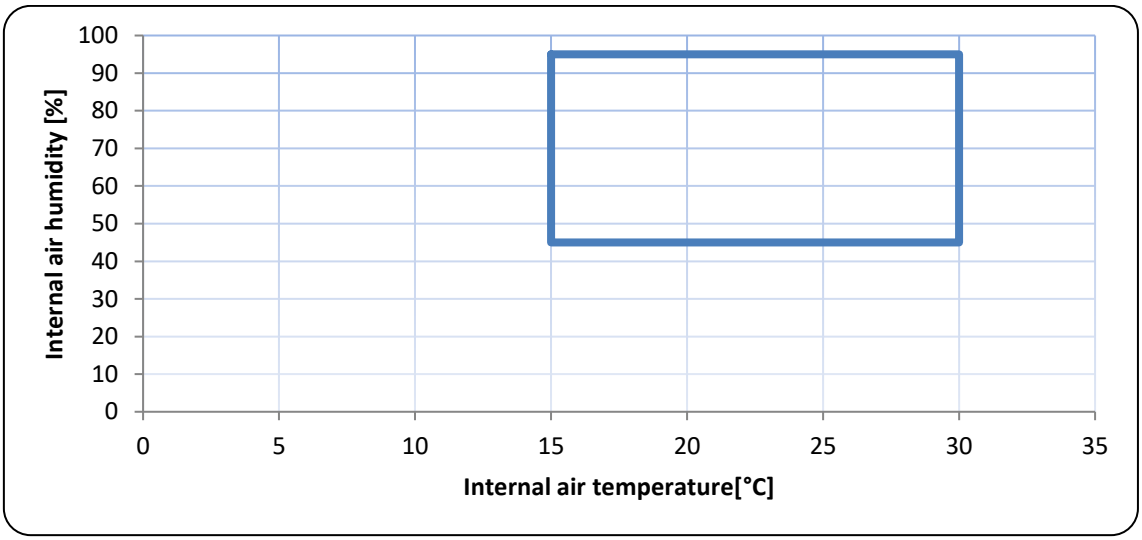
2.2 SERIES

There are three available models, according to the type of condensation:

CCV 450	CCA 450	CCW 450

2.3 OPERATIONAL LIMITATIONS

Proper operation is not ensured for conditions different from which indicate below.



2.4 AVAILABLE OPTIONS

2.4.1 HUMIDIFICATION SYSTEM

A humidifier is available as option, in order to regulate the humidity in the most precise way.
Without this option, the unit can only dehumidify; while, with the humidifier, the unit can both dehumidify and humidify, in order to respect the desired set humidity.

2.4.2 ELECTRICAL HEATERS

Electrical heaters allow heating of supply air. A thermostat in case of overheating, turns off the electrical heaters and signals an alarm.

2.4.3 RS485 SERIAL BOARD

Modbus®

The Modbus RS485 connection is available for a supervision of the unit at distance or from a domotic plant. For further information, please consult the dedicated technical manual.

2.4.4 SILENT VERSION

The silent version option allows the reduction of the sound emitted by the compressor and makes the unit particularly silent. Is consists on a sound-absorbent mat in the compressor compartment.

2.4.5 HIGH EFFICIENCY F6 AIR RECIRCULATION FILTER

More efficient filters than the standard one; they increase air cleaning and holds the micro-particles of dust, which come from the external.

2.4.6 AIR SUCTION FROM THE BACK

The unit is provided with the suction placed on the back.

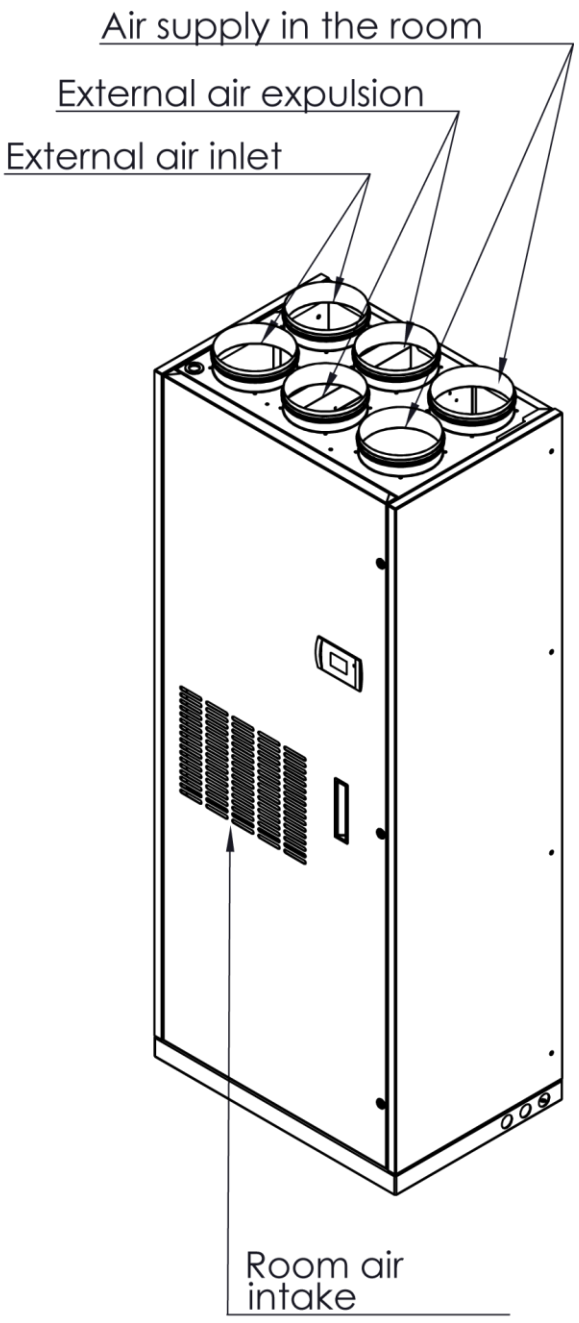
2.4.7 AIR DUCTS KIT CCV VERSION FOR THE CONDENSATION TOWARDS THE EXTERNAL

It is provided a duct kit, composed by 10 m of 160 mm diameter duct and 4 on-wall flanges.

2.5 DIRECTIONS FOR DUCTS

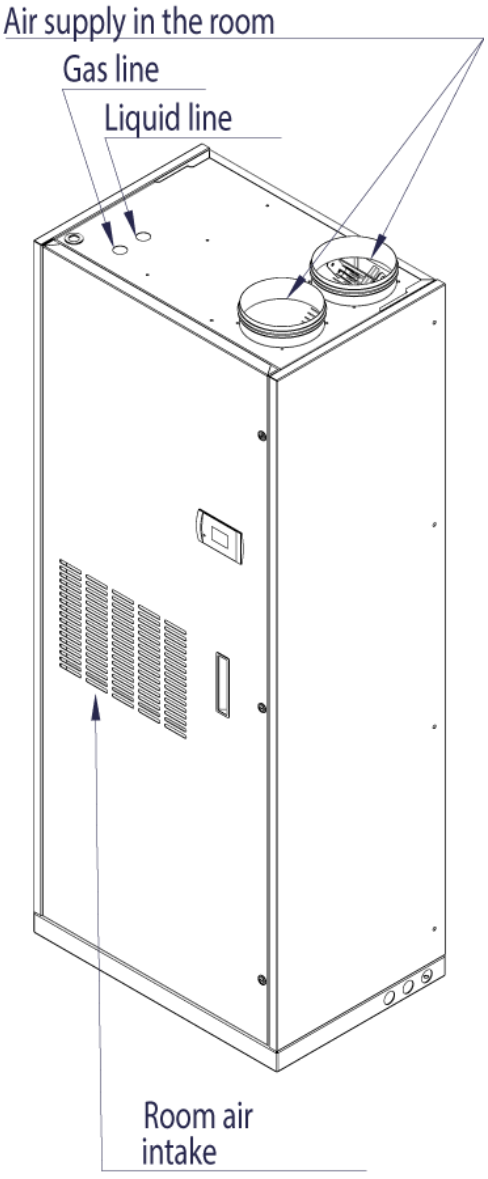
N° 6 gaskets diameter 160 mm

CCV 450



N° 2 gaskets diameter 160 mm
N° 2 connections 10 mm

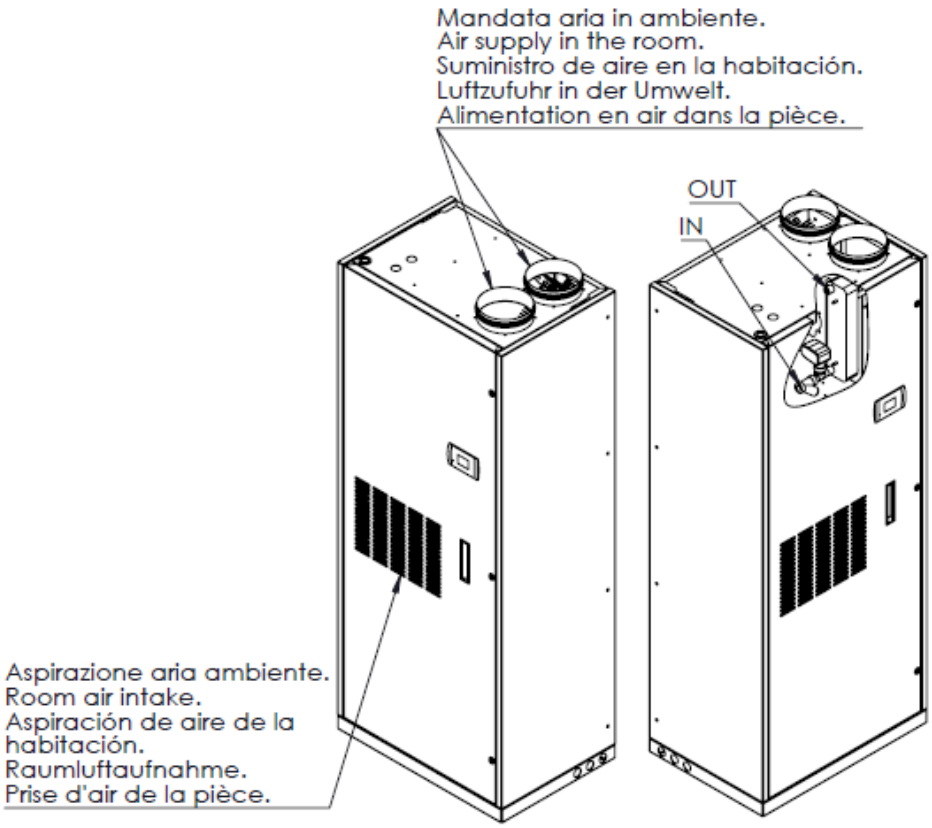
CCA 450



N° 2 gaskets diameter 160 mm
N° 2 water connections 1/2" female gas

CCW 450

2.6 ELECTRICAL CIRCUITS



The electrical panel is realized and wired according to the Directive EN 60 204-1. The control circuit is protected with a specific magneto-thermal switch.

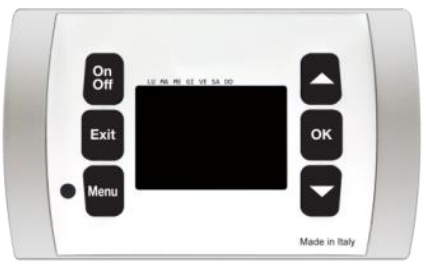
All the remote controls are realized with low tension signals and supplied by an insulating transformer.

ATTENZIONE
WARNING

Do not turn the tension off using the upstream protection, this device should be used to disconnect the unit for maintenance. Use the user terminal to turn off.

3 USER TERMINAL

The user terminal is composed by a control board and an elegant display which allows to command the unit and to modify all the different functions.



3.1 KEYBOARD

ON-OFF KEY

- on the main screen it allows the turning off of the unit
- on the 'OFF' screen it allows the turning on of the unit

EXIT KEY

- it allows the exit and the coming back to the main screen
- if you are modifying a value, it allows to exit from the modification
- on the main screen, pushing it for 4 seconds, it allows to display the software version

MENU KEY

- on the main screen, it allows to enter the first screen of the 'user menu'
- on the time-bands programming screens, it allows to modify the day you are programming

UP KEY

- it allows to scroll through the screens or to modify a value

OK KEY

- it allows the execution of what is indicated on the display

DOWN KEY

- it allows to scroll through the screens or to modify a value

3.2 MAIN SCREEN

AVVERTENZA
CAUTION

USE OF KEYS

- *With the OFF key you turn off the unit*
- *Keeping pushed the EXIT key, you display the software version*
- *With the MENU key, you enter the user menu*

- ▬ indicates the day
  - **19:05** on the right top indicates the time
  - **23°C** indicates the temperature
  - **70%** indicates the humidity
  - indicates that the heating is active
  - indicates that the cooling is active
  - indicates that the dehumidification is active
  - indicates that the humidification is active
- indicates that the time-bands are active
- indicates that the unit is managed by a serial Modbus
- indicates that the unit is doing the defrosting

3.3 USER MENU

The user menu is composed by 9 easy-to-use screens, for the basic configurations of the unit:

1. Unit driver: manual or by time-bands *
2. Desired humidity setting *
3. Desired temperature setting *
4. Alarms management *
5. Time-bands programming *
6. Language setting
7. Day and time setting
8. Unit status display
9. Password request

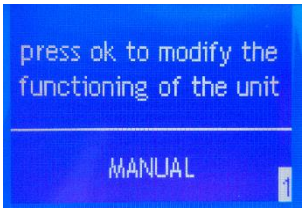
* screen not always present

Each screen has a number on the right part, in order to simplify the use.

AVVERTENZA
CAUTION

USE OF KEYS

- *With UP and DOWN keys, you can run through the screens (some of them are not always present)*
- *With EXIT key, you exit and come back to the main screen*
- *With OK key, you execute the function indicated on the screen*

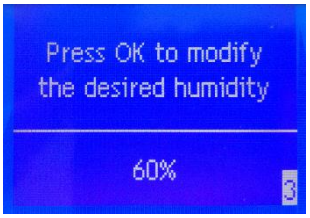


On the left you find the screen 1 of the user menu, which allows to set the functioning of the unit: MANUAL or on TIME BANDS
(this screen does not appear if: the unit is managed from a serial Modbus)

- press OK to enter in the modification phase
- press UP and DOWN to modify and with OK you confirm and exit from the modification phase
- press EXIT to exit and come back to the main screen
- press DOWN to shift to the following screen

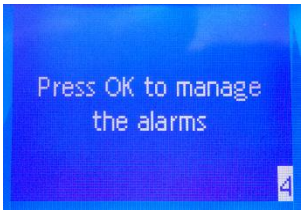
On the left you find the screen 2 of the user menu, which allows to set the desired temperature
(this screen does not appear if: the unit is managed from a serial Modbus or is set on time bands)

- press OK to enter the modification phase
- press UP and DOWN to modify and with OK you confirm and exit from the modification phase
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen



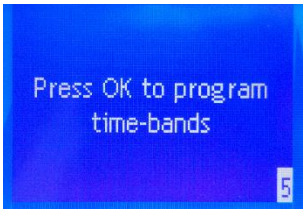
On the left you find the screen 3 of the user menu, which allows to set the desired humidity
(this screen does not appear if: the unit is managed from a serial Modbus or is set on time bands)

- press OK to enter the modification phase
- press UP and DOWN to modify and with OK you confirm and exit from the modification phase
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen



On the left you find the screen 4 of the user menu, which allows to manage the alarms
(this screen only appears if: there are alarms present)

- press OK to enter the alarm menu
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen

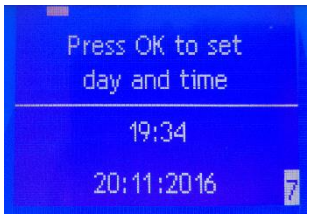


On the left you find the screen 5 of the user menu, which allows to program the time-bands
(this screen does not appear if: the unit is managed from a serial Modbus or it is set in manual mode)

- press OK to enter the time-bands menu
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen

On the left you find the screen 6 of the user menu, which allows the setting of the language

- press OK to enter the modification phase
- press UP and DOWN to modify and with OK you confirm and exit from the modification phase
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen

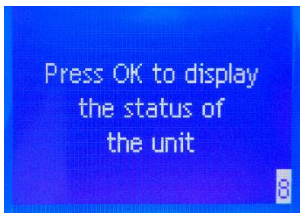


On the left you find the screen 7 of the user menu, which allows to set the time and date, necessary for the correct functioning of time-bands and other functions of the unit

You will modify:

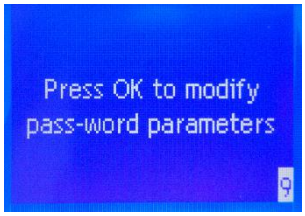
1. the day of the week
2. the hour
3. the minutes
4. the day
5. the month
6. the year

- press OK to enter the modification phase
- press UP and DOWN to modify the set
- press OK to confirm and go to the following modification
- arrived at the last modification, with OK you confirm and exit from the modification phase
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift to the following screen



On the left you find the screen 8 of the user menu, which allows to display the status of the unit, that is to say what is turned on and what is turned off, plus the reading of the temperature and humidity probes

- press OK to enter the unit status menu
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen
- press DOWN to shift the following screen

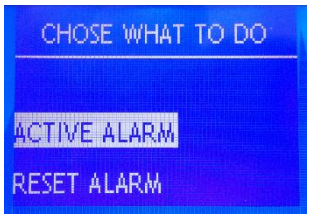


On the left you find the screen 9 of the user menu, which allows to modify the parameters covered by password

- press OK to enter the screen of password request
- press EXIT to exit and come back to the main screen
- press UP to come back to the previous screen

3.4 ALARMS MENU

This menu is accessible only if there is an alarm on the unit and it allows to display the active alarm and, if possible, to reset it.

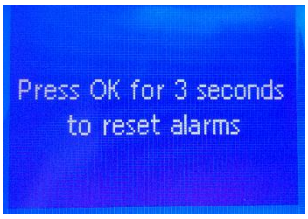


On the left you see the screen which allows to choose whether to display the alarm or to reset it.

- press EXIT to exit and come back to the main screen
- press UP and DOWN to select what to do
- press OK to confirm the choice and to shift to the further screen

On the left you see an example of alarm display; in the low part you see the equipment in alarm or the type of alarm; in this example, electrical heaters are in alarm.
This screen is compulsory for the assistance in case of alarms

- press EXIT to exit and come back to the main screen



On the left you see the screen to reset the alarms. Only some alarms can be inactivated and you can proceed by paying attention to the fact that the cause of the alarm has not been solved and the alarm could appear again.

- Pressing OK for 3 seconds the alarm is reset and you come back to the main screen
- Press EXIT to exit and come back to the alarm menu

3.5 UNIT STATUS MENU

This menu is always accessible and allows to display all the information regarding the unit status, specifically the following lines: recirculation fan, condensing fan, compressor, electrical heaters, humidifier, ambient temperature, ambient humidity, defrost temperature, evaporation temperature, condensing pressure, cooling, dehumidification, heating and humidification.

The water valve and the electrical heaters are options so they could also be absent: in this case, on the corresponding line, some strokes may appear.

On the left you see the unit status screen; in this case we see that the recirculation fan is functioning at 50%, the condensing fan is not working, the compressor is off and the electrical heater is not present.
.

- Press UP and DOWN to see the other lines
- Press EXIT to exit and come back to the main screen

3.6 TIME-BANDS MENU

You can access this menu only if the unit is set in time-bands and it allows to program the bands which manage the on/off, the humidity and the temperature.

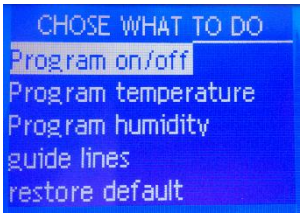
AVVERTENZA
CAUTION

It is fundamental to set correct date and time, go to the screen 7 of the User Menu (additional information in the previous chapters)

The default values set are:

- Unit always turned on (24 h / day and 7 days / week)
- Desired temperature set all the days:
  - 26°C dalle 08:00 alle 20:00
  - 23°C dalle 20:00 alle 08:00
- Desired humidity always ta 60% (24 h / day and 7 days / week)

You can set different parameters for each hour of the day and for each day of the week.

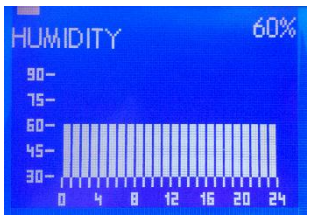


On the left you see the screen which allows to choose what to do:

- press EXIT to exit and come back to the main screen
- press UP and DOWN to select what to do
- press OK to confirm the choice and access to the dedicated screen indicated below

3.6.1 ON/OFF PROGRAM – HUMIDITY PROGRAM – TEMPERATURE PROGRAM

Selecting a program, you access to the programming screen; here below you find how to program the humidity:



- Once entered, the first bar will flash from 00.00 to 01.00; also the set value will flash on the right top
- On the left top you have the rectangle which indicates the day we are programming
- Below the day rectangle, you find the indication of the topic you are programming: “HUMIDITY”
- Below there is the bar indicating the 24 hours
- On the left there is the bar indicating the desired humidity that can be set

AVVERTENZA
CAUTION

KEYS’ USE:

- *pressing OK you change the time to program*
- *pressing MENU you change the day to program*
- *pressing UP and DOWN you modify the programming of the flashing hour*
- *pressing EXIT you come back to the main screen*
- *keeping pressed OK and MENU, you copy the program of the active day to the following day*

3.6.2 GUIDE

Selecting this guide, you have access to 5 screens which explain how to realize the time bands.

AVVERTENZA
CAUTION

USE OF KEYS

- *Pressing UP and DOWN you scroll among the 5 screens*
- *Pressing EXIT you come back to the main screen*

3.6.3 DEFAULT RECOVERY

The first time you program the time bands, it may occur that you make something wrong or that you program the time bands but, after a while, you realize that the program is not the most suitable: in both these cases you have the possibility to delete the whole program and start again from the default values.
Selecting Default Recovery you enter a screen which allows to re-set all the values of the time bands.

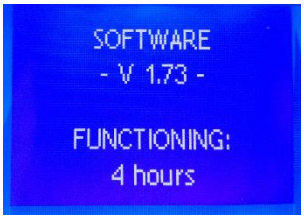
AVVERTENZA
CAUTION

USE OF KEYS

- *Pressing for 3 seconds OK, you recover all the values*
- *Pressing EXIT, you come back to the main screen*

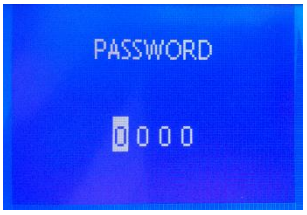
3.7 OTHER SCREENS

3.7.1 SOFTWARE VERSION



This screen allows to display the software version uploaded on the advanced control; you enter this screen only from the main one, by pressing for 3 seconds the EXIT key; the screen is displayed for few seconds and then it returns automatically to the main screen

3.7.2 PASSWORD



This screen allows to insert the password to modify advanced parameters:

- press EXIT to exit and come back to the main screen
- press UP and DOWN to set each number of the password
- press OK to turn to the modification of the following value or you confirm

4 TECHNICAL DATA

4.1 TECHNICAL DATA TABLE

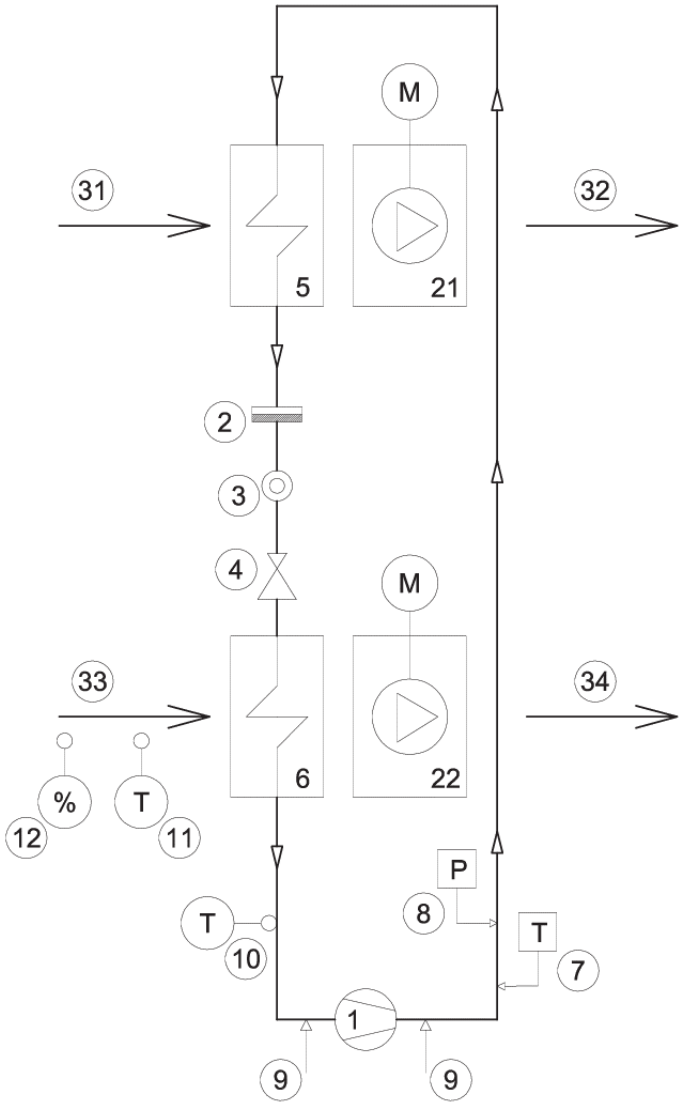
		CCV 450	CCA 450	CCW 450
COOLING CAPACITY	W	2150	2200	2250
RECIRCULATION INTERNAL AIRFLOW	m^3/h	450		
CONDENSATION EXTERNAL AIRFLOW	m^3/h	Modulated da 0 a 450		-
INTERNAL RECIRCULATION STATIC PRESSURE	Pa	180		
EXTERNAL AIR FAN STATIC PRESSURE	Pa	150	220	-
ELECTRICAL HEATERS NOMINAL POWER	W	1500		
HUMIDIFIER NOMINAL POWER	W	1575		
NOMINAL ABSORBED POWER WITHOUT OPTIONS	W	960		161
MAX ABSORBED POWER WITHOUT OPTIONS	W	1400		340
MAX ABSORBED POWER WITH ONLY ELECTRICAL HEATERS	W	3000		1840
MAX ABSORBED POWER WITH HUMIDIFIER	W	2970		1915
MAX ABSORBED POWER WITH ELECTRICAL HEATERS AND HUMIDIFIER	W	4570		3415
DIMENSIONS	mm	650 x 1645 x 450		
WEIGHT	kg	90		
REFRIGERANT GAS	tipo	R410a		
ELECTRICAL POWER SUPPLY	V / Ph / Hz	230 / 1 + N / 50		
INTERNAL HUMIDITY OPERATIONAL LIMITATIONS	%	45 - 95		
STORAGE TEMPERATURE LIMITATIONS	°C	Da -10 a +43		
STORAGE HUMIDITY LIMITATIONS	%	90		
CONDENSATION WATER FLOW	m^3/h	-	-	0,51
CONDENSATION WATER TEMPERATURE LIMITATIONS	°C	-	-	Da +10 a +35
CONDENSATION AIR TEMPERATURE LIMITATIONS	°C	-	Da -5 a +35	-
EXTERNAL CONDENSER DIMENSIONS	mm	-	463 x 300 x 286	-
EXTERNAL CONDENSER WEIGHT	kg	-	15	-

CCV 450 and CCA 450
Cooling capacity is declared at the following conditions:
- internal conditions: 18°C / 80% R.H and external air: 30°C

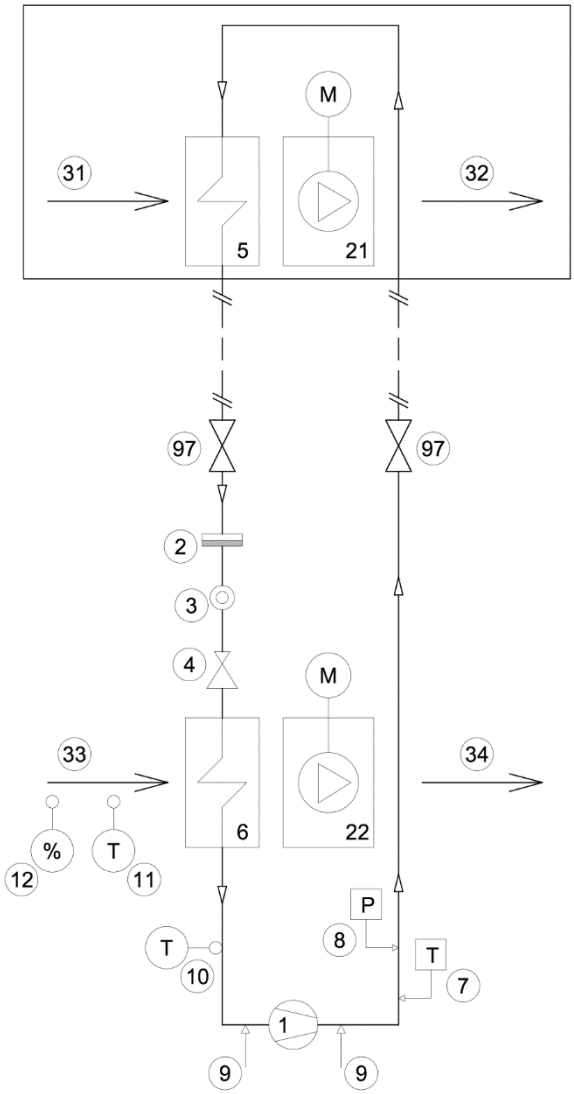
CCW 450
Cooling capacity power is declared at the following conditions:
- internal conditions: 18°C / 80% R.H. and supplied water: 15°C

4.2 FUNCTIONAL DIAGRAM

CCV



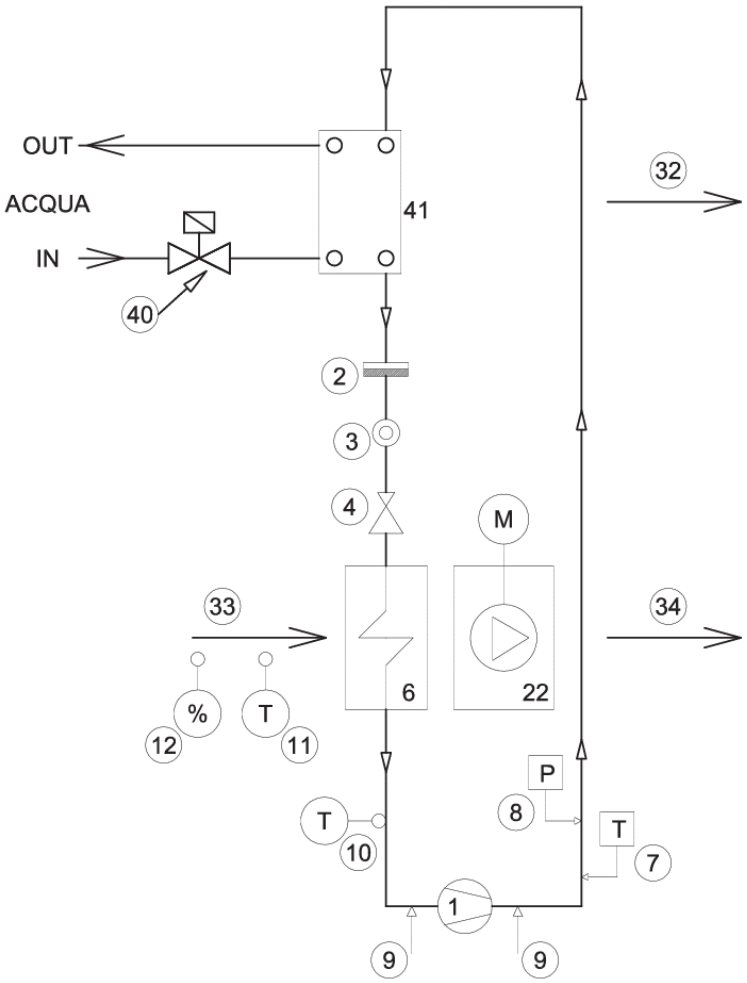
CCA



1	compressor
2	de-hydrator filter
3	moisture/liquid indicator
4	lamination item
5	condensing coil
6	evaporating coil
7	pressure transducer
8	high pressure safety switch
9	service outlet
10	evaporation temperature probe
11	ambient air temperature probe
12	ambient air humidity probe

21	condensing fan
22	recirculation fan
31	suction external air
32	expulsion external air
33	suction ambient air
34	inlet ambient air
40	condensation supply valve
41	exchanger with plates
97	water valve

CCW



1	compressor
2	de-hydrator filter
3	moisture/liquid indicator
4	lamination item
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12	ambient air humidity probe
21	condensing fan
22	recirculation fan
31	suction external air
32	expulsion external air
33	suction ambient air
34	inlet ambient air
40	condensation supply valve
41	exchanger with plates
97	gate

5 AFTER-SALES

5.1 FAILURES

In the following pages you find the more frequent possible causes of block or dysfunction of the unit. The classification is made on easy-to-identify signs.

When executing the operations suggested to solve the problem, be careful: an excessive self-confiance can be dangerous. It is recommended to contact the manufacturer or a qualified technician, after having identified the failure.

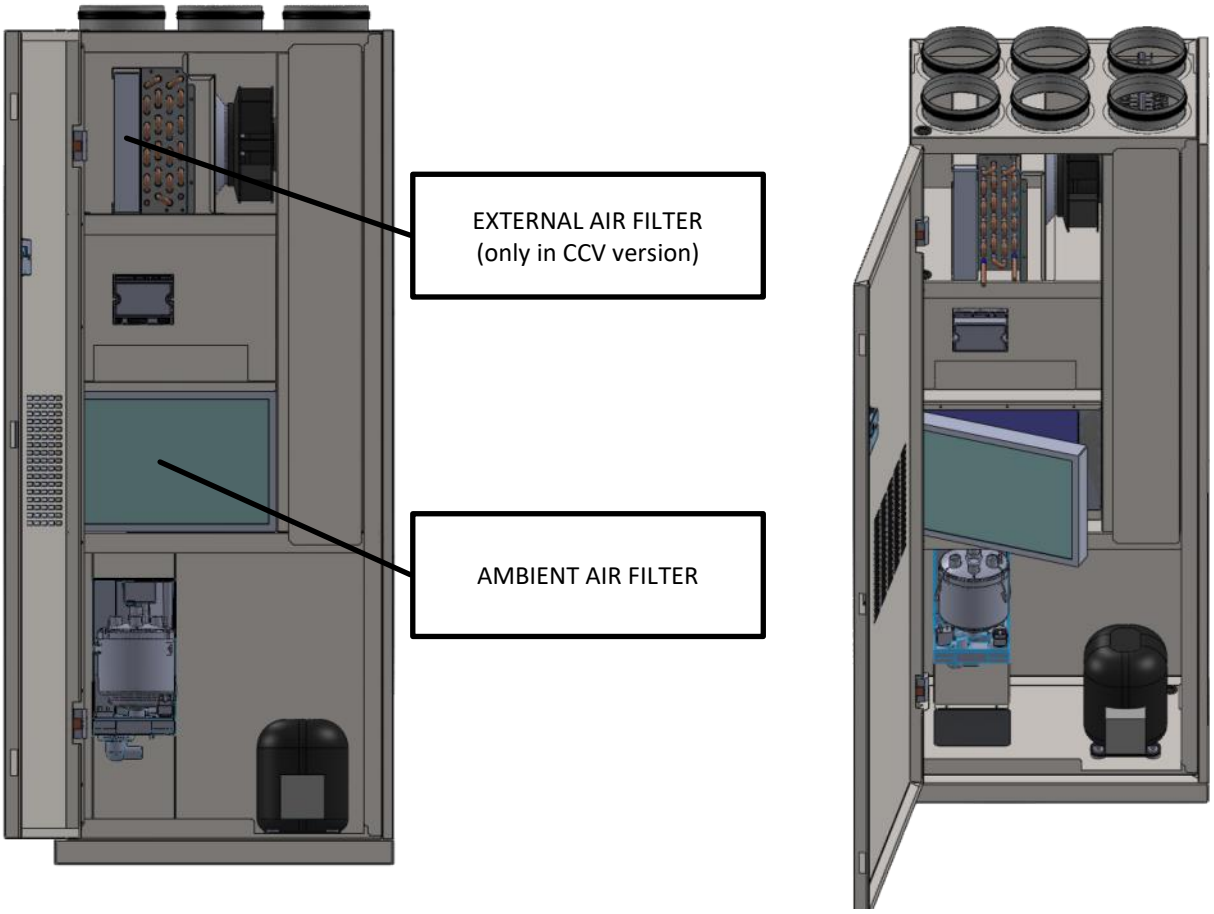
NR	ANOMALY	POSSIBLE CAUSES	WHAT TO DO
1	The unit cannot start	There is no power supply to the unit	See if there is power supply on the feeding clamps
		There is no supply to the control board	See if there is power supply on the board clamps
		There are some alarms on	See on the terminal the presence of alarms, remove the cause and make it start again
2	The compressor cannot start	Intervention of the internal thermal protector	Turn the unit off, wait that the compressor to be cools down; then turn the unit on and control if the unit starts. Identify the cause of the intervention and remove it.
		High pressure protection intervention on the refrigerant circuit	Make reference to the failure number 3
		The humidity set values do not allow turning on	Set different humidity or temperature values
		Low temperature in ambient	Heat the ambient minimum at 9°C
3	High pressure	The air flow is not sufficient [only CCV and CCA versions]	See if the condensing fan is working properly
			Check thermal exchange coil cleaning (condenser)
			Check external air filter cleaning (only CCV version)
			Check the length and the curves of the ducts and, eventually, short them (only CCV version)
		The water flow is not sufficient [only CCW version]	Check water supply to the unit, check that the flow is sufficient and the temperature is set within the limits.
		Other causes	Contact a technician
4	Low pressure	Evaporating coil is frost	If there is frost on the evaporating coil, turn the unit off and wait that frost is melt
		Other causes	Contact a technician
5	Electrical heater overheating	The air flow is not sufficient	See if the recirculation fan is working properly
			Check thermal exchange coil (evaporator) and external air filter cleaning
			Check the length and the curves of the ducts and, eventually, short them
		Other causes	Contact a technician

5.2 ORDINARY MAINTENANCE

The manufacturer recommends that the periodical maintenance is done every three months.

5.2.1 CLEANING / SUBSTITUTION OF THE AIR FILTERS

FILTERS	AMBIENT AIR FILTER EXTRACTION



The pictures above show the unit view with the open frontal panel; to extract the filters:
EXTERNAL AIR FILTER: remove it
AMBIENT AIR FILTER: as shown in the right picture, fold towards the external and remove it

The filters should be cleaned with water and impurities should be removed with hands, paying attention not to damage them. A ruined, damaged or pierced filter has to be replaced.

ATTENZIONE
WARNING

It is important to insert always the suction filter on the unit. Their lack compromises the correct functioning of the unit.

AVVERTENZA
CAUTION

To delete the message "Clean filters" from the display, push the EXIT key.

HiDew Dehumidifiers

5.2.2 Maintenance Table

To ensure the performance of the unit, it is strongly suggested to make reference to the following table for maintenance done and to be done.

MAINTENANCE	YEAR ___				YEAR ___				YEAR ___				YEAR ___				YEAR ___			
	1° quarter	2° quarter	3° quarter	4° quarter	1° quarter	2° quarter	3° quarter	4° quarter	1° quarter	2° quarter	3° quarter	4° quarter	1° quarter	2° quarter	3° quarter	4° quarter	1° quarter	2° quarter	3° quarter	4° quarter
Control and safety equipment functioning																				
Status, fixing and balance of the fans																				
Compressor status and fixing																				
Sound level emitted																				
No oil leakages from the compressor																				
No refrigerant gas leakages from the refrigerant circuit																				
Clamps control on the electrical panel																				
Air filters cleaning / replacement																				
Condensate tray cleaning																				
Thermal exchange coil cleaning																				

6 DISMANTLING OF THE UNIT

When dismantling the unit, please take note of the following advices:
- the refrigerant gas should be recovered from qualified staff and sent to the proper collection centers;
- the compressors' lubricating oil should be recovered and sent to the proper collection centers;
- the structure and the components, if no more usable, should be demolished and divided according to their material: this is particularly true for copper and aluminum.

Please follow the mentioned dispositions, in order to facilitate the collection, dismantling and recycling centers, and to reduce as much as possible the environmental impact required by these operations.

- If the unit, or part of it, has been dismantled, its susceptible components should be made inoffensive, in order to avoid any danger.

When substituting components subjected to differentiate dismantling, it is necessary to make reference to the current dispositions.

Please, remember that it is compulsory to register the charge and discharge of special wastes and toxic-dangerous ones.
The withdrawal of these wastes should be led by qualified and authorized Companies.
The dismantling of these wastes should be made by following the current directions and laws of the user's country.
For the dismantling of the unit please follow the current directions of the user's country.
Before the dismantling of the unit ask for the inspection to the apposite office and for the recording of the intervention.
Proceed with the dismantling, by following the national directions

Dismantling operations should be led by qualified staff.

6.1 ENVIRONMENTAL PROTECTION

The law concerning the directions [reg. CE 2037/00] about the use of ozone damaging substances and gases responsible of the greenhouse effect, affirms the prohibition of refrigerant gases dispersion in the environment: owners are obliged to recover and deliver them to the reseller or to the dedicated collecting centers.
The R410A refrigerant gas, even if not damaging the ozone, is mentioned within the substances responsible for the greenhouse effect; so, it has to follow these directions.

Please be careful during maintenance operations, in order to reduce, as much as possible, the risk of refrigerant leaks.

6.2 MANAGEMENT OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

This product is covered by Directive 2012/19/EU on the management of waste electrical and electronic equipment (WEEE).
The appliance must not be disposed of with household waste because it is made of different materials that can be recycled at appropriate facilities. Contact your local authority to find out where the nearest ecological platform is, so that the product can be disposed of and recycled.
Also remember that, if you purchase an equivalent appliance, the dealer is required to collect the old product for free.
The product is not potentially harmful to human health and to the environment, as it does not contain harmful substances as per Directive 2011/65/EU (RoHS), but if it is abandoned in the environment, it has a negative impact on the ecosystem.
Read the instructions carefully before using the appliance for the first time. It is recommended not to use the product for any purpose other than that for which it was intended, as there is a risk of electric shock if it is used improperly.

The crossed-out bin symbol on the sticker attached to the appliance indicates that this product complies with the legislation on waste electrical and electronic equipment.
Abandoning the equipment in the environment or disposing of it illegally are punishable by law.

7 INSTALLATION

7.1 INTRODUCTION

7.1.1 INSPECTION

When receiving the unit, please check it: the unit has left our factory after having been controlled; damages should be immediately protested to the forwarder and noted on the Delivery Paper before signing it.
The manufacturer or his agent should be informed as soon as possible about the entity of the damage.
The Customer is supposed to fulfill a written report for every relevant damage.

7.1.2 LIFTING AND TRANSPORT

Please be careful when moving the unit and avoid sudden or harsh working during the unloading and the placement of it.
Internal transports should be carefully conducted and the components of the unit should never be used as point of support.

When lifting the unit make sure you have well fixed it, in order to avoid overturning or accidents.
Do not use the removable panels as point of lift.

7.1.3 UNPACKING

Unit packaging should be carefully removed, trying to avoid every possible damage to the machine; the package can be of wood, paper, nylon and other materials. It is a good habit to preserve the different packages and deliver them separately for both the draining or the recycling, in order to reduce the environmental impact.

7.1.4 IDENTIFICATION OF THE UNIT

Each unit is characterized by an identification label, placed on the internal side of the electrical panel space. Here you find all the necessary data for installation, maintenance and traceability of the unit.

Take note of the model, the matriculation number, the definitive refrigerant charge of the unit and the reference schemes of the unit in the table on the right, in order to be easily found in case of damage of the data label as reported in the table.

Modello - Model	
Matricola - Serial number	
Data di produzione - Date of production	
Categoria PED/ CE 97/23 Category	
Procedura di valutazione conformità - Conformity module	
Max temp. di stoccaggio - Max storage temperature [°C]	
Max temp. funzionamento - Max ambient working temperature [°C]	
Min. temp. ambiente di funzionamento-Min. ambient working temp. [°C]	
Potenza frigorifera nominale - Nominal Cooling Capacity [kW]	
Potenza nominale in riscaldamento - Nominal Heating Capacity [kW]	
Refrigerante - Refrigerant [Ashrae 15/1992]	
Carica refrigerante - Refrigerant charge [kg]	
Peso a vuoto - Empty weight [kg]	
Alimentazione - Power supply	
Potenza assorbita Nominale - Nominal power input [kW]	
Corrente nominale - Nominal absorbed current [A]	
Corrente massima - Full load ampere FLA [A]	
Corrente di spunto - Starting Current LRA [A]	
Schema elettrico - Wiring diagram	
Schema frigorifero - Refrigeration diagram	

7.2 POSITIONING

ATTENZIONE
WARNING

It is fundamental to ensure always the complete access to the unit for the ordinary/extraordinary maintenance and calibration operations.

Please keep attention to the following advices when deciding the most suitable place for the installation of the unit and its connections:

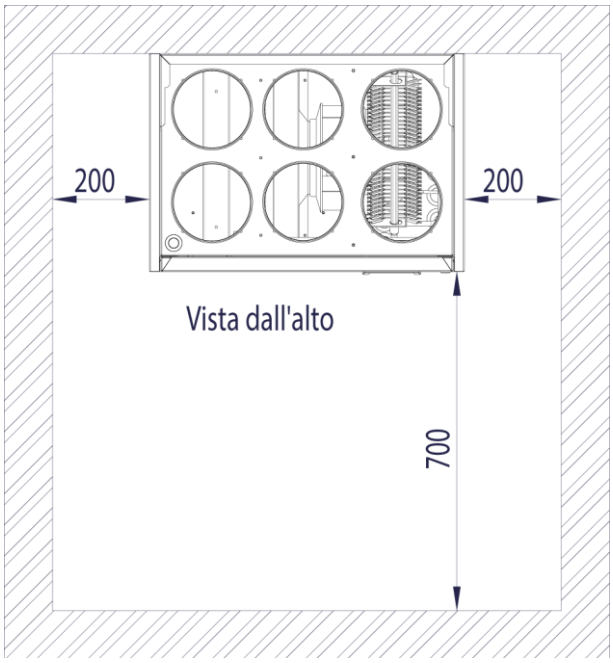
- hydraulic pipes dimensions and origins (if present)
- electrical power supply placement
- accessibility for maintenance or repair operations
- point of support strength

7.2.1 CCV, CCA AND CCW CLEARANCES

ATTENZIONE
WARNING

All CCV, CCA and CCW models are planned and built for indoor installation.
Do not install the unit outdoors and make sure that it is not exposed to atmospheric agents such as rain, hail, humidity and frost.

It is fundamental to ensure the complete accessibility to the unit.
We recommend the installation of anti-vibration damper feet for each fixing point, in order to avoid the transmission of noise and vibrations.

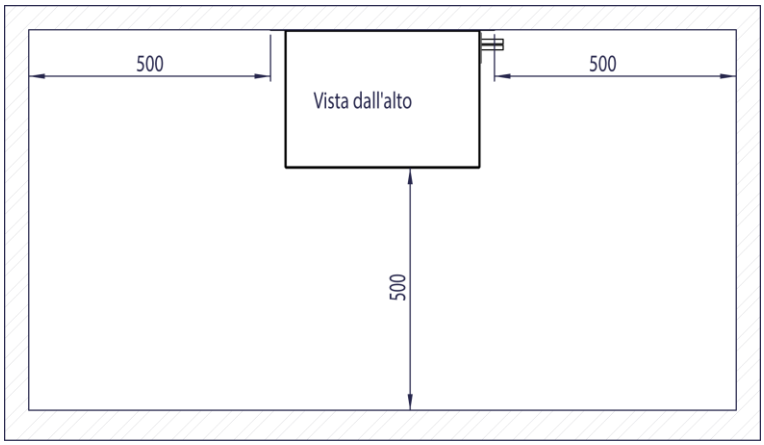


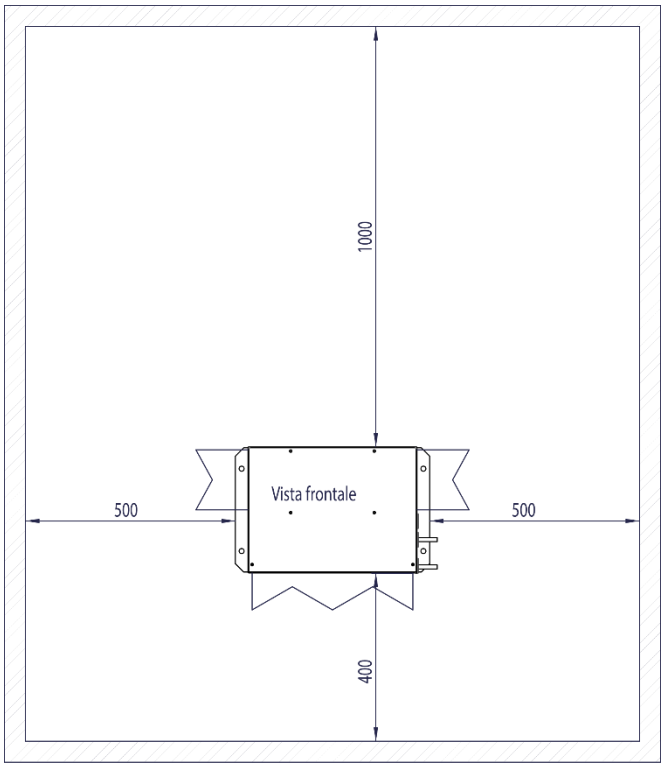
For the installation and the ordinary maintenance, the complete opening of the front door is necessary.
For the extraordinary maintenance, the opening of the side panels of the unit is necessary.

7.2.2 RESPECT AREA OF THE EXTERNAL CCA CONDENSER

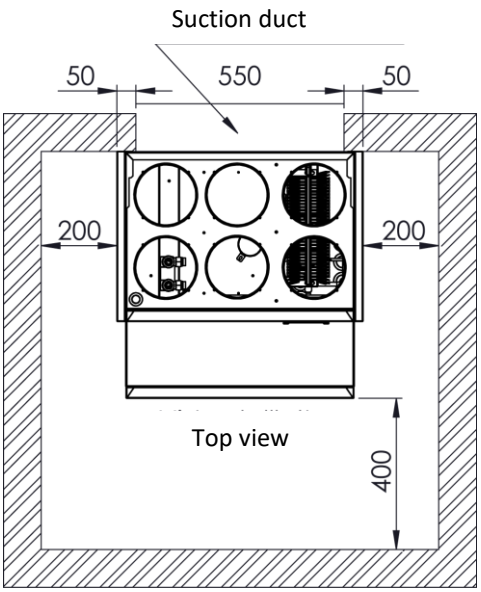
The external condenser is planned for an installation from indoor to outdoor.

It is fundamental to ensure complete accessibility to the external condenser and clearances for correct airflow.
We recommend the installation of anti-vibrating damper feet for each fixing point, in order to avoid the transmission of noise and vibrations.





7.2.3 CCV, CCA AND CCW RESPECT AREAS WITH AIR SUCTION FROM THE BACK OPTION



7.3 HYDRAULIC AND ELECTRIC CONNECTION

7.3.1 HYDRAULIC CONNECTION

When preparing the hydraulic connection, it is compulsory to follow the indications below and to follow the National dispositions.

ATTENZIONE
WARNING

Do not twine the unit connections. With a key, block the connection and, with another key, fix the connecter.

Fix the pipes with flexible curves in order to avoid the transmission of vibrations and to compensate the thermal dilatations.
It is recommended to install the following components on the pipes:

- temperature and pressure indicators for the ordinary maintenance and control of the group. The pressure control allows to evaluate the correct functioning of the expansion vase and to highlight in advance eventual water losses in the plant;
- interception valves (valves) to disconnect the unit from the hydraulic circuit in case of maintenance;
- Mechanical filter (inlet pipe) with 1 mm mesh, to protect the exchanger from the impurities present in the pipes. This prescription is necessary especially at the first starting;
- Air vent valves, to be placed on the highest areas of the hydraulic circuits, in order to allow air purge;
- Discharge cock and drain tank, where needed, in order to empty the system for maintenance

Dimensions and positioning of the hydraulic connections are indicated on the dimensional drawings.

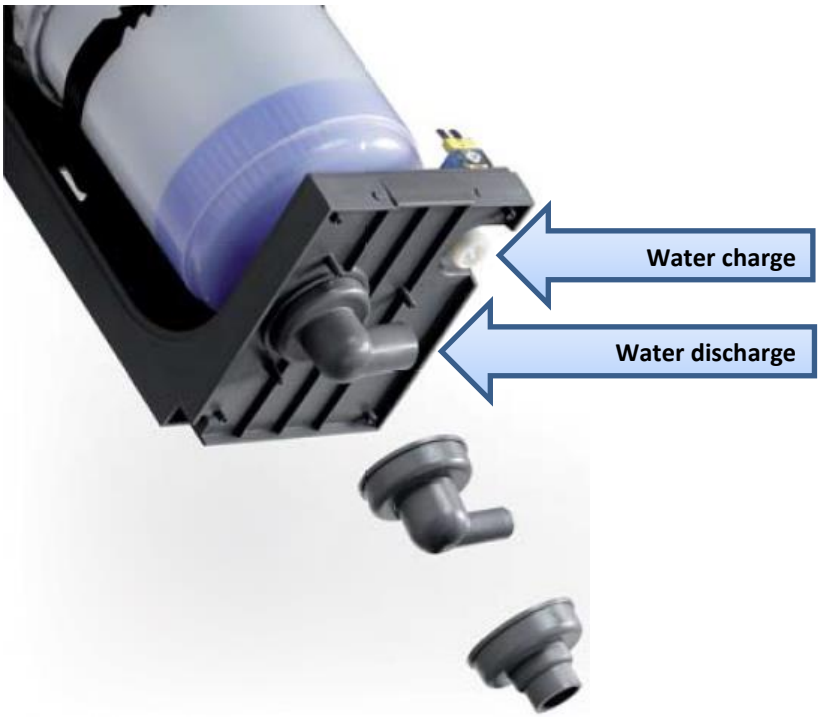
AVVERTENZA
CAUTION

It is fundamental that the water inlet is correspondent to the connection marked with the label "Water Inlet". If not, the circuiting countercurrent would not be respected with the risk of malfunctioning, blocking or the rupture of the unit.

ATTENZIONE
WARNING

The hydraulic circuit should be realized in order to grant the constancy of the nominal water flow (+/-15%) in every functioning condition.

7.3.2 HUMIDIFIER CONNECTION (OPTIONAL)



Connect in the point shown on the left picture, the supply power of the water from the aqueduct.
The water should not be decalcified and should not carry organic compounds.
The water discharge should not be limited because the humidifier makes periodic and/or complete discharges.

Water charge:
Flow 0.6 l/min., from 1 to 40 °C, firmness from 10°F to 40°F
From 1 to 8 bar (from 14.5 to 116 psi, from 0.1 to 0.8 MPa)
Junction on the fund 3/4" G male

Water discharge:
4 l/min., can reach 100 °C
It is not toxic and can be discharged in the collecting system of white waters.
Two types of attachment available:
- 90 degrees, external diameter of 32 mm (1.26 inches)
- Rectilinear external diameter 32 mm (1.26 inches)

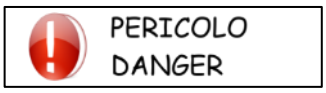
7.3.3 CONDENSATION DISCHARGE CONNECTION

For the connection, use a duct of flexible rubber with an internal diameter of 16 mm.
The siphon is present inside the unit.

The inclination of the discharge duct should permit the water flow towards the external. If not, the collection basin inside the unit fills up and there will be water losses.

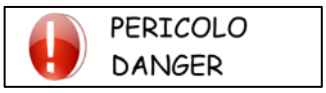
7.3.4 ELECTRICAL CONNECTIONS

Open the electrical panel, introduce the supplying cable and the others according to the hole, connect them to the clamps, close the panel.



The grounding connection is compulsory. The installer should connect the ground cable with the suitable clamp situated within the electrical panel, with the dedicated indication.

The electrical connection, the feed cables and the protections should be realized according to the attached electrical scheme and following the local and international directives.



The wiring should be done without tension.
DEATH DANGER!

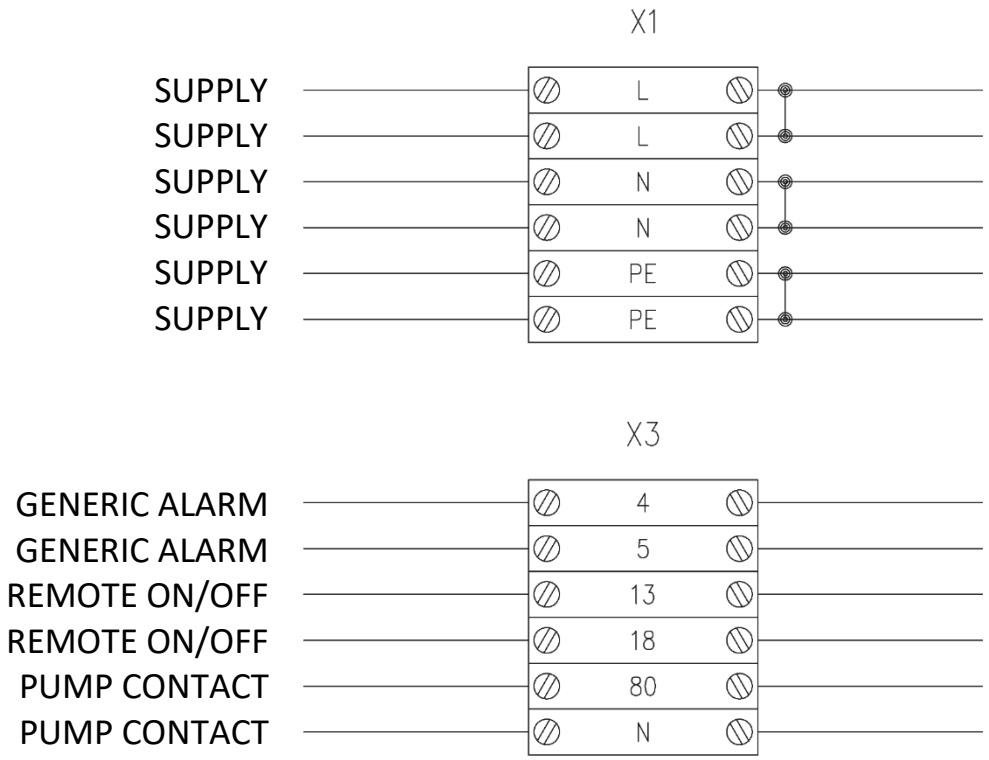
The electrical connection, the feed cables and the protections should be realized according to the attached electrical scheme and following the local and international directives.

7.3.5 SUGGESTED PROTECTION INSERTED UPSTREAM

Insert upstream a magneto-thermal switch or fuses, in order to protect the unit and the electric line.

		CCV 450	CCA 450	CCW 450
WITHOUT OPTIONS	[A]	16	16	16
WITH ELECTRICAL HEATER	[A]	25	25	25
WITH HUMIDIFIER	[A]	25	25	25
WITH ELECTRICAL HEATER AND HUMIDIFIER	[A]	32	32	32

7.3.6 CLAMPS AND WIRING



CLAMPS - X1

Clamps L - N - PE are for the supply; connect the neutral N, the phase on L and the ground connection on PE.

CLAMPS - X3

CLAMPS 4 - 5 are for the signal of alarm on the unit; it is possible to connect a light led or a central plant management.
Clean contact, no power supply.

Open contact	No alarms present
Close contact	Unit in alarm

Clamps 13 - 18 are for the remote on/off; connect a contact from a switch or from a central plant management, in order to command the unit at distance.
Connect only a clean contact

Open contact	Unit off
Close contact	Unit on

Tutti i comandi e le segnalazioni sono invertibili, fare riferimento al paragrafo apposito.

AVVERTENZA
CAUTION

The remote on/off contact, the electric wiring and the alarm signal should be set from the display during the first starting;
Make reference to the dedicated paragraph.

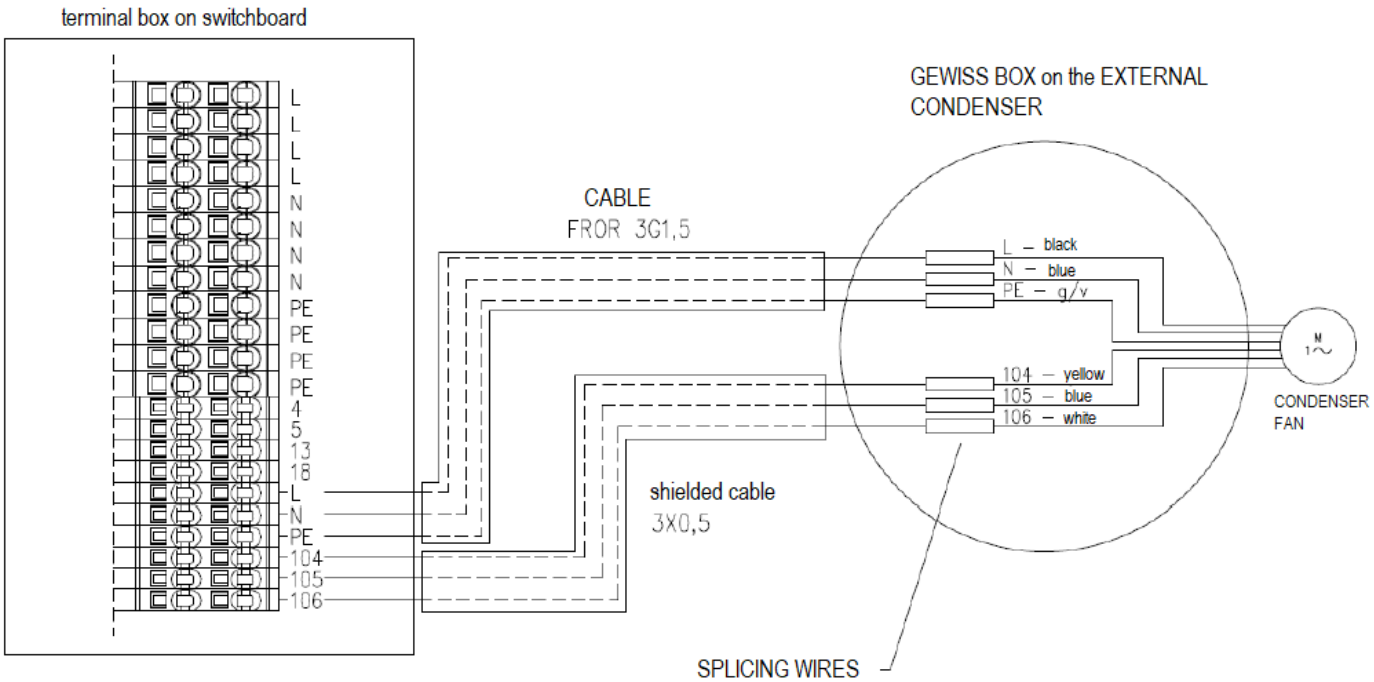
Clamps 80 - N are present and should be used only if the unit is CCW model. They should be connected to a water pump (max 1°) to command the water supply to the unit. The command is at 230V. For devices with consumptions superior to 1A, intercalate a contactor or a power relay.

7.3.7 OUTDOOR UNIT WIRING

PERICOLO
DANGER

Wiring must be carried out without voltage. DANGER OF DEATH!

The connection between the unit and the remote condenser must be made by the installer, who must wire it as shown in the diagram below:



7.3.8 RS485 MODBUS CONNECTIONS [OPTIONAL]

ATTENZIONE
WARNING

It is recommended to keep the communication cable between the board and display as far away as possible from any power cable, in order not to compromise communication between the two**.**
Therefore, it is strictly FORBIDDEN to pass the cable with power cables.

For the connection of all the Modbus system/network use a CEAM Y08761 cable or an equivalent one.
Connect the Modbus RS485 cable on the removable terminal indicated in the picture on the left:

- + (positive pole) to terminal **A**
- - (negative pole) to terminal **B**
- the shielding to terminal **GND**

On all the devices connected in the network, respect the connection A, B, GND.

For the Modbus parameters configuration, make reference to the installer paragraph in the following pages.
More information on request.

7.4 Refrigerant connections (only CCA)

7.4.1 INSTRUCTIONS FOR THE EXTERNAL CONDENSER CONNECTION

CCA units have an external condenser which allows to dissipate condensation heat.

For all the operations on the refrigerant circuits (ducts placement, brazing of the ducts, curves and junctions, refrigerant components installation, circuit pressure, vacuum, gas charge…) rely exclusively on qualified staff, owning a valid license.

All these operations should be done without electric tension.

The maximum distance between the unit and the external condenser is of 15 m, which is the maximum length for every circuit adding up the supply duct with liquid duct; it should not overcome 30 m, the maximum height is 10 mts. In these cases the refrigerant charge will be sufficient that of the factory.

The unit is given filled up with refrigerant gas.
The refrigeration engineer should:

1. Make sure that you have no electrical supply in the unit and in the external condenser;
2. Place all the ducts, the junctions, the curves and all the material for the refrigerant connection;
3. Empty the external condenser circuits from the nitrogen charge, if present;
4. Remove any caps from the external condenser and from the unit;
5. WARNING: do not open the taps on the unit;
6. Brazes all components avoiding overheating of fragile parts, such as the taps in the unit; on the fragile parts place a wet rag, in order to reduce the heat;
7. Check visually all the circuit and make sure there are no losses or cracks;
8. Charge the new ducts and the external condenser with nitrogen, at a pressure level of 16 bar;
9. Wait almost 24 h and check the pressure: if it is decreased there is a loss. Look for the loss, discharge the nitrogen and repair the loss. Come back to point 8 and repeat the operations;
10. If no losses on the refrigerator circuit occur, do the vacuum on the new ducts and on the external condenser;
11. Open the taps on the unit;

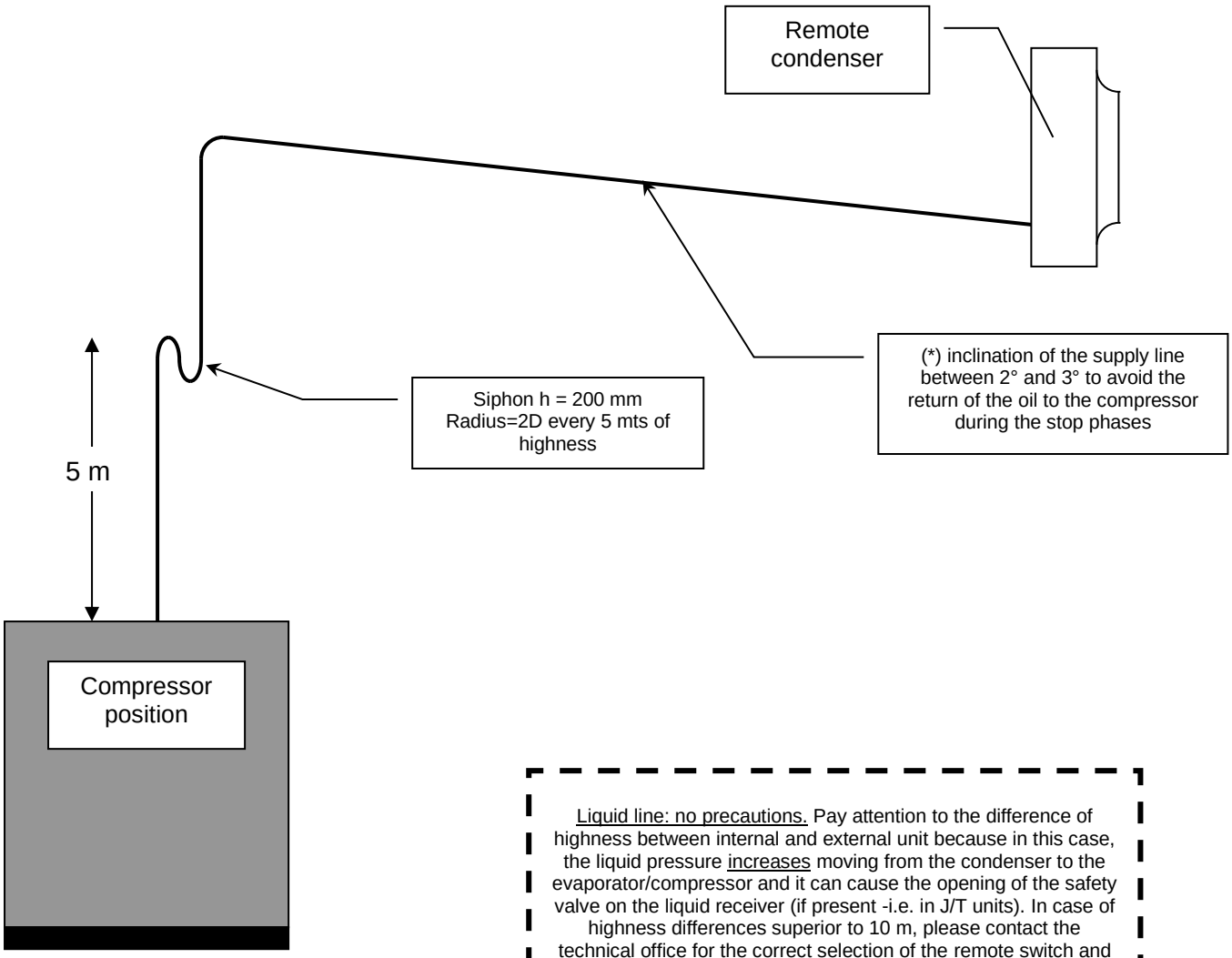
The unit, as indicated before, is already filled up with refrigerant as standard and if the duct stroke is not long enough, the integration of the refrigerant could not be necessary.

Unit supply connection	mm	10
Unit liquid connection	mm	10
Condenser supply connection	mm	10
Condensing liquid connection	mm	10
tubazione mandata consigliata	mm	10
Suggested liquid duct	mm	10

To check the correct refrigerant charge, you have to control the moisture/liquid indicator during the functioning procedure of the compressor:

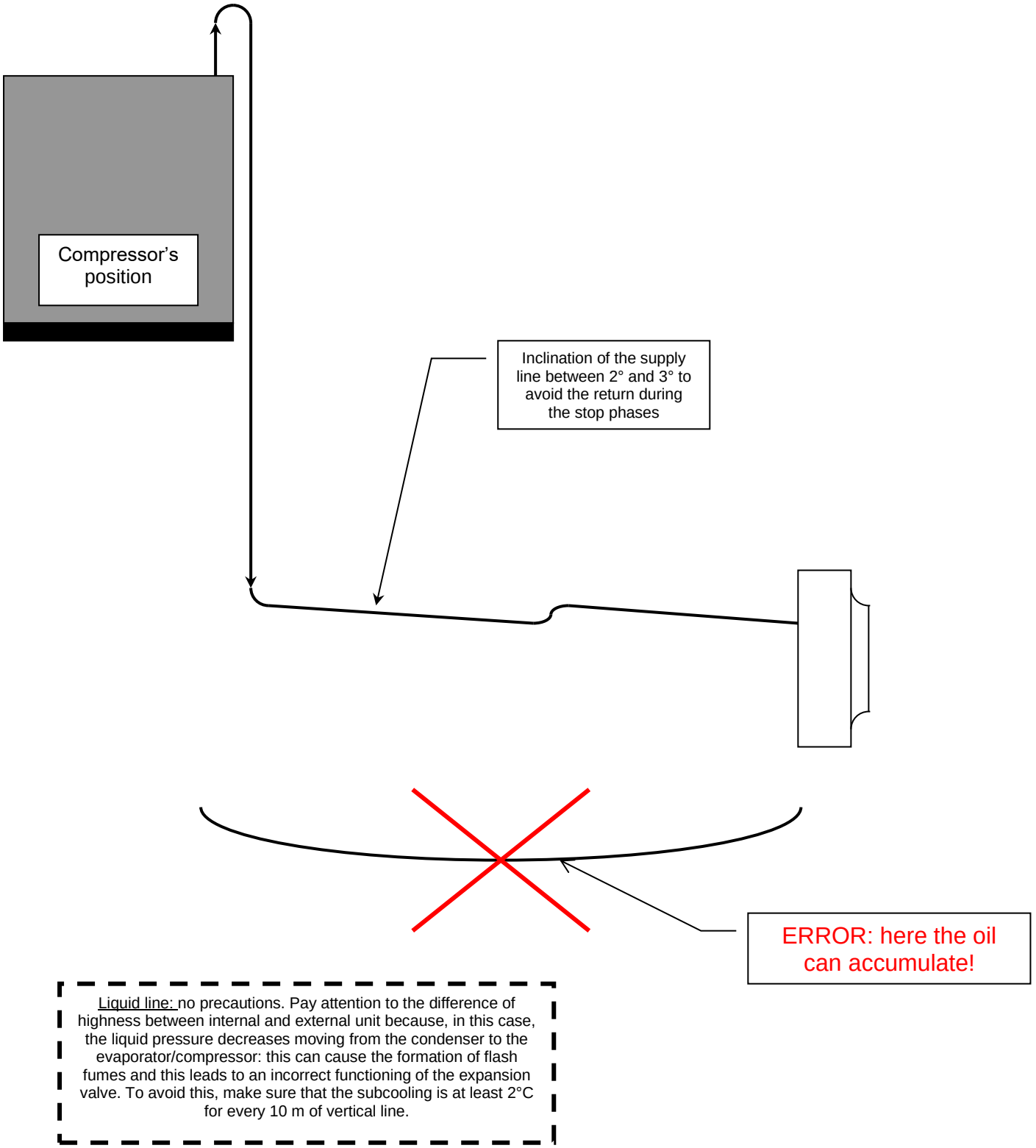
- With an entirely clean moisture/liquid indicator, the refrigerant charge is sufficient
- If there are bubbles on the moisture/liquid indicator, it is necessary to add refrigerant on the circuit

7.4.2 SUPPLY LINE INSTALLATION (CONDENSER ABOVE THE EVAPORATOR/COMPRESSOR)



Liquid line: no precautions. Pay attention to the difference of highness between internal and external unit because in this case, the liquid pressure increases moving from the condenser to the evaporator/compressor and it can cause the opening of the safety valve on the liquid receiver (if present -i.e. in J/T units). In case of highness differences superior to 10 m, please contact the technical office for the correct selection of the remote switch and condensers.

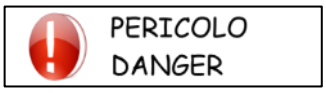
7.4.1 SUPPLY LINE INSTALLATION (CONDENSER BELOW EVAPORATOR/COMPRESSOR)



7.5 FIRST STARTING

First starting, calibration and configurations should be led only by qualified staff.
DO NOT IMPROVISE, NON IMPROVVISARE, UNIT MALFUNCTIONING DANGER

Before starting, check that all the closing panels are in their correct position and closed with their own screws (?).
For the first starting follow carefully the instructions below:



Check that all the hydraulic, electric and aeraulic connections are correctly installed and that all the indications on the labels and in the user manual are followed.

Check that the taps of the hydraulic circuit, if present, are open, that the hydraulic implant has been vented, eliminating every air residue, by charging it gradually and opening the vent devices on the upper part.
Verify that there are no water losses.

The unit leaves the factory ready to work; supply the unit, if it is in OFF mode press ON/OFF to turn it on.

For the basic settings (i.e. the desired temperature in ambient), make reference to the “user terminal” paragraph.

For the advanced settings (optional) make reference to the “installer parameters’ modification” paragraph.

7.5.1 RECIRCULATION FAN CALIBRATION

Give tension to the unit. After a few seconds the display will turn on and the unit will be ready to work autonomously.

The calibration of the recirculation fan is necessary only if you reduce the nominal flow by ducting the air inlet, and we have to increase the speed of the fan to compensate the charge losses. For the unit calibration you need a duct anemometer (measurer of the hot-wire air flow for the channels’ use)

Place on the display; access to the main screen by pressing EXIT (more than once if necessary) or by pressing ON/OFF if the unit is turned off.

In the modification phase (highlighted parameters) the program will wait for the confirm without exiting.

Press the 3 keys on the right (UP, OK and DOWN) together.
You will display the screen on the left. This screen is the password request.
Set “0099” and press OK to confirm.

You will display now the calibration menu, as shown on the picture on the left.
In the lower part you can increase the recirculation fan speed for all those installations where the supply is ducted and the charge losses increase.
Measure with the anemometer and check that the reached flow is the nominal one; if not, increase the value until you reach the nominal flow.

Once you have reached the nominal flow, press EXIT (more than once) to go back to the main screen.

7.5.2 INSTALLER PARAMETERS' MODIFICATION

The installer parameters allow to modify some advanced settings of the unit.

ATTENZIONE
WARNING

Some parameters modify in a significant way the functioning of the unit.
MODIFY ONLY IF NECESSARY

To access to the installer's menu, follow the indications below:

- Place on the main screen by pressing EXIT if necessary
- Press MENU to access to the first screen of the user menu
- Scroll with DOWN till the last screen (screen 9)
- Press OK
- The password is requested, set "0010" and confirm with OK

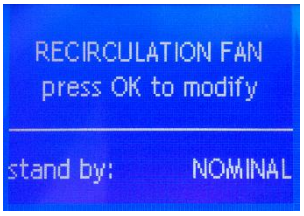
AVVERTENZA
CAUTION

Keys' use:

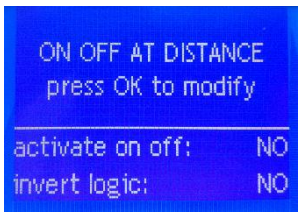
- *With UP and DOWN you scroll through the screens (some are not always present)*
- *With EXIT you exit and you go back to the main screen*
- *WITH OK you execute the function indicated on the screen*

Now we see in detail the installer's menu screens:

***Screen not always present**

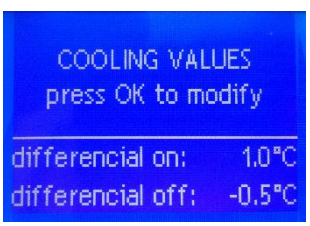


RECIRCULATION FAN
It allows to modify the fan speed in stand-by, that is to say when the temperature and humidity set are respected; by default, it is set at nominal values, so the fan goes on turning and recirculating the air, it is possible to set it at the min speed or to stop it completely. We suggest not to stop the fan, because there is a risk of stratification: this could affect the reading of the temperature and humidity ambient probes.
default: nominal

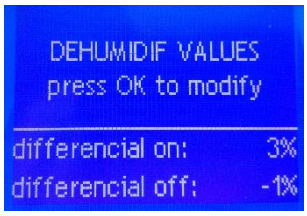


ON/OFF REMOTE CONTACT*
It allows to activate the contact for the remote on/off and, if necessary, invert the functioning logic
default: remote on/off license and logic reversal inactive

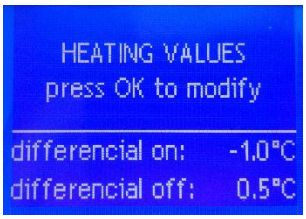
ALARM DIGITAL EXIT*
It allows to activate the digital output for the alarm signal and, if necessary, invert the functioning logic.
Depending on the alarm, the unit will inactivate one or more devices; once the problem has been resolved and the alarm has been turned off, the unit automatically will come back to the normal functioning.
default: inactive alarm output license and logic reversal inactive



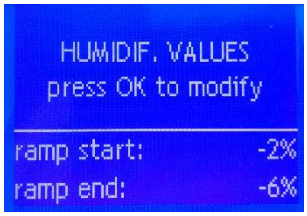
COOLING VALUES
It allows to modify the differentials that manage the cooling request.
default: differential on 1°C and differential off -0,5°C



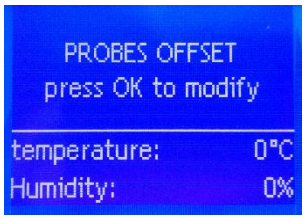
DEHUMIDIFICATION VALUES
It allows to modify the differentials which manage the dehumidification request
default: differential on 3% and differential off -1%



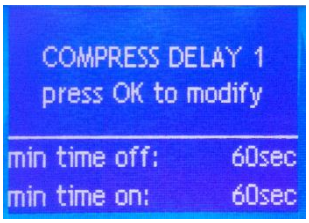
HEATING VALUES *
It allows to modify the differentials which manage the heating request
default: differential on -1,0°C and differential off 0,5°C



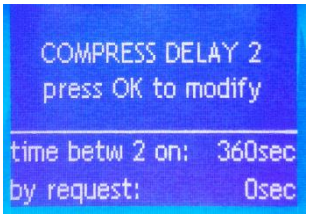
HUMIDIFICATION VALUES*
It allows to modify the values of the ramp that manages the requests for humidification
default: ramp starting at -2% e ramp stop at -6%



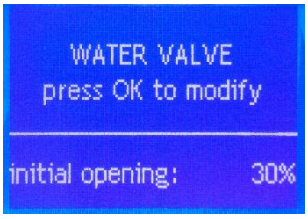
PROBES' OFFSET
It allows to correct the reading of temperature and humidity probes.
default: temperature 0°C and humidity 0%



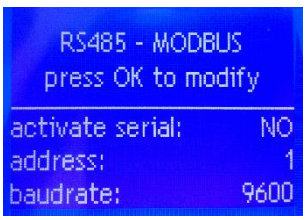
COMPRESSOR 1 DELAY
It allows to modify the lighting delays of the compressor
Default: min. time off 60 sec, min. time on 60 sec



COMPRESSORE 2 DELAY
It allows to modify the lighting delays of the compressor
Default: time between two on 360 sec, from request 0 sec



WATER VALVE*
It allows to modify the opening percentage of the valve for the starting of the compressor
Default: initial opening 30%



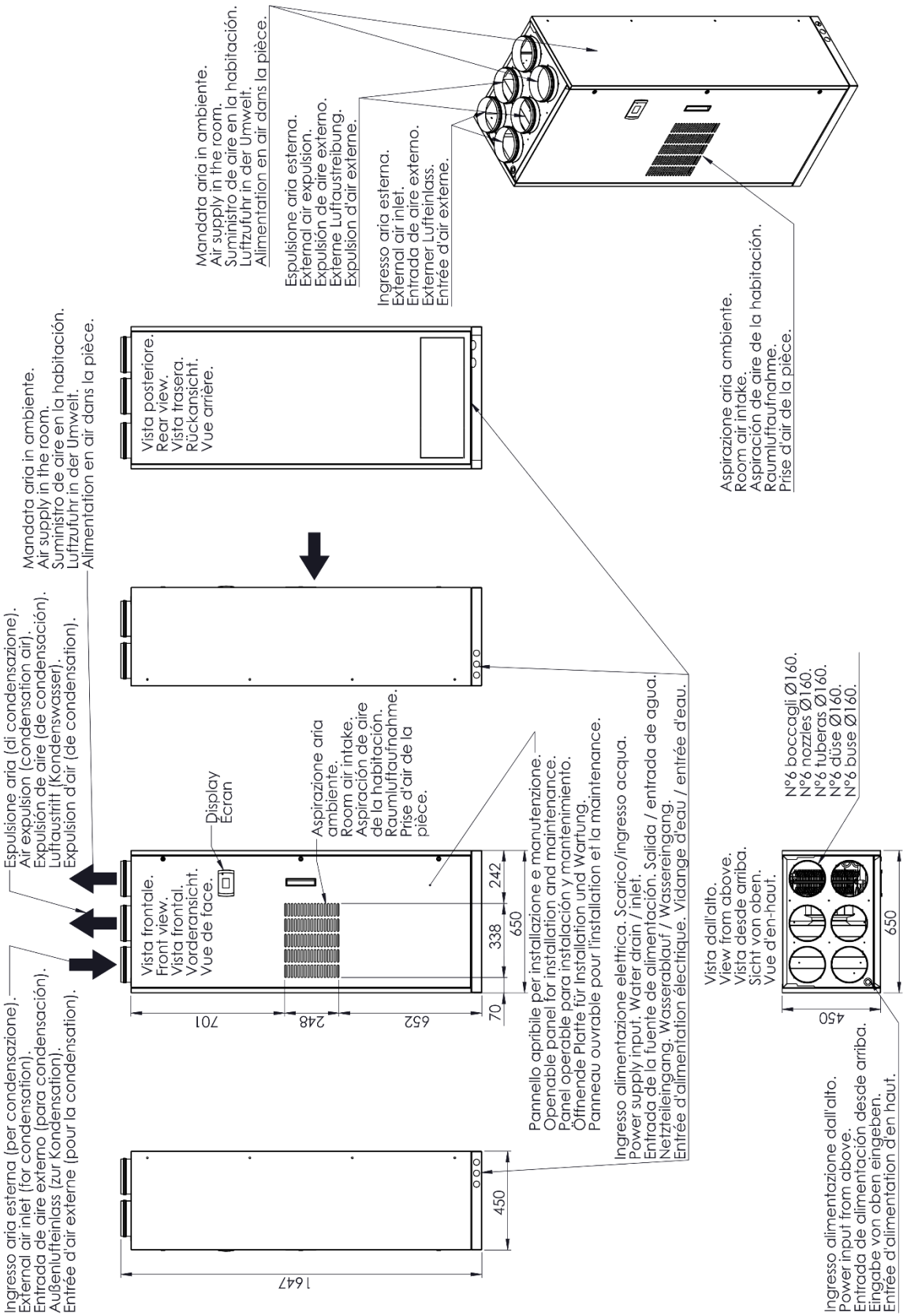
RS485 – MODBUS *
It allows to enable and to modify the parameters linked to the Modbus communication
default: not enabled serial, address 1 and baudrate 9600

ALARM HISTORY
Possibility to display the unit alarms' history.
In the history alarms all the alarms are memorized, with their number and day, month and year in which it occurred.

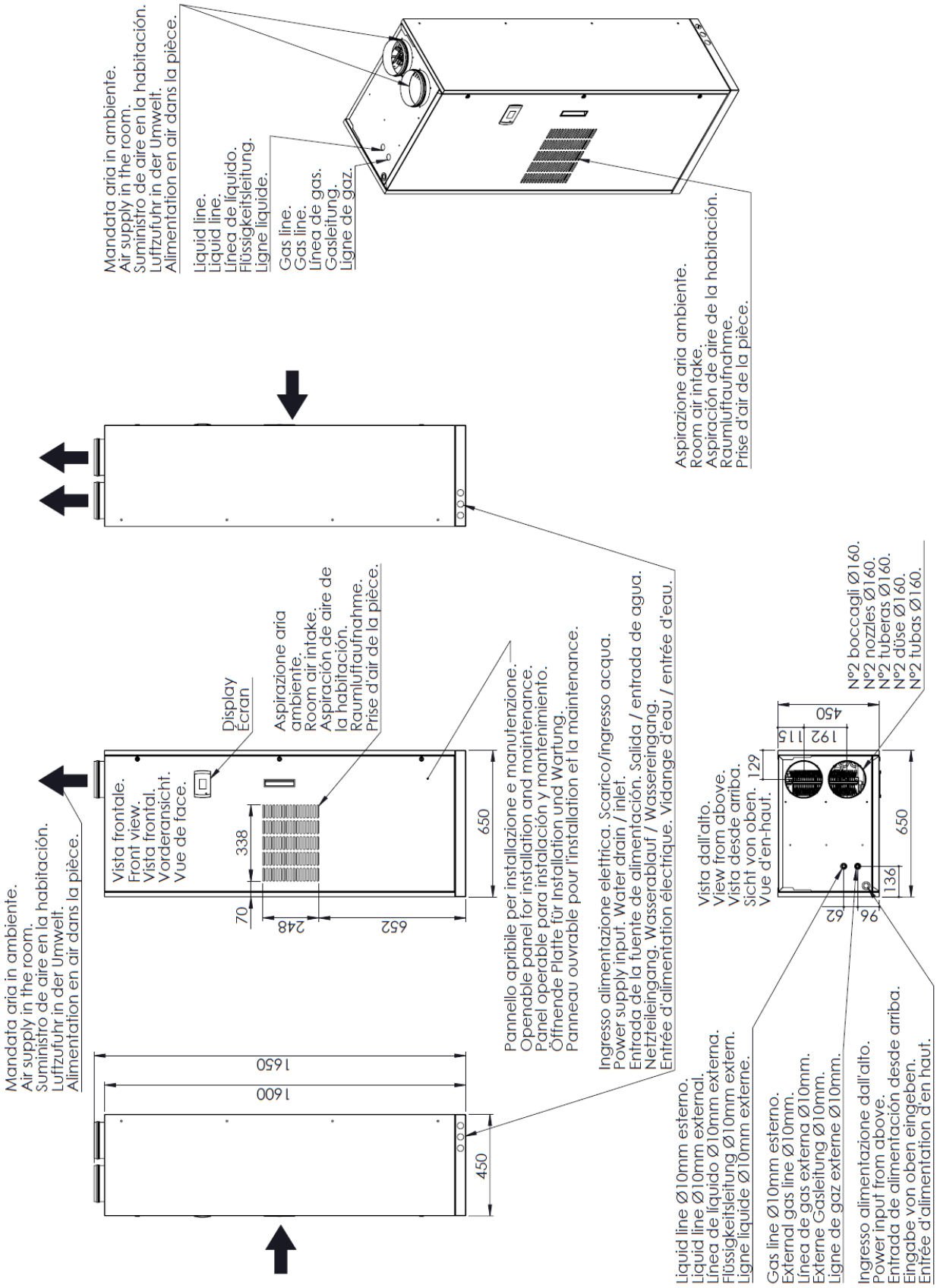
DEFAULT VALUES' RESTORATION
Possibility of restoring all the installer and user's parameters.
In case some parameters on the menu are accidentally modified, they can be restored and the unit will be as it was at the moment of purchase.
WARNING: by restoring, all the user's settings are deletes, such as the desired temperature and humidity, the set season and all the installers' parameters, while the calibration parameters and the time-bands programming are not deleted.

8 DIMENSIONAL DRAWINGS

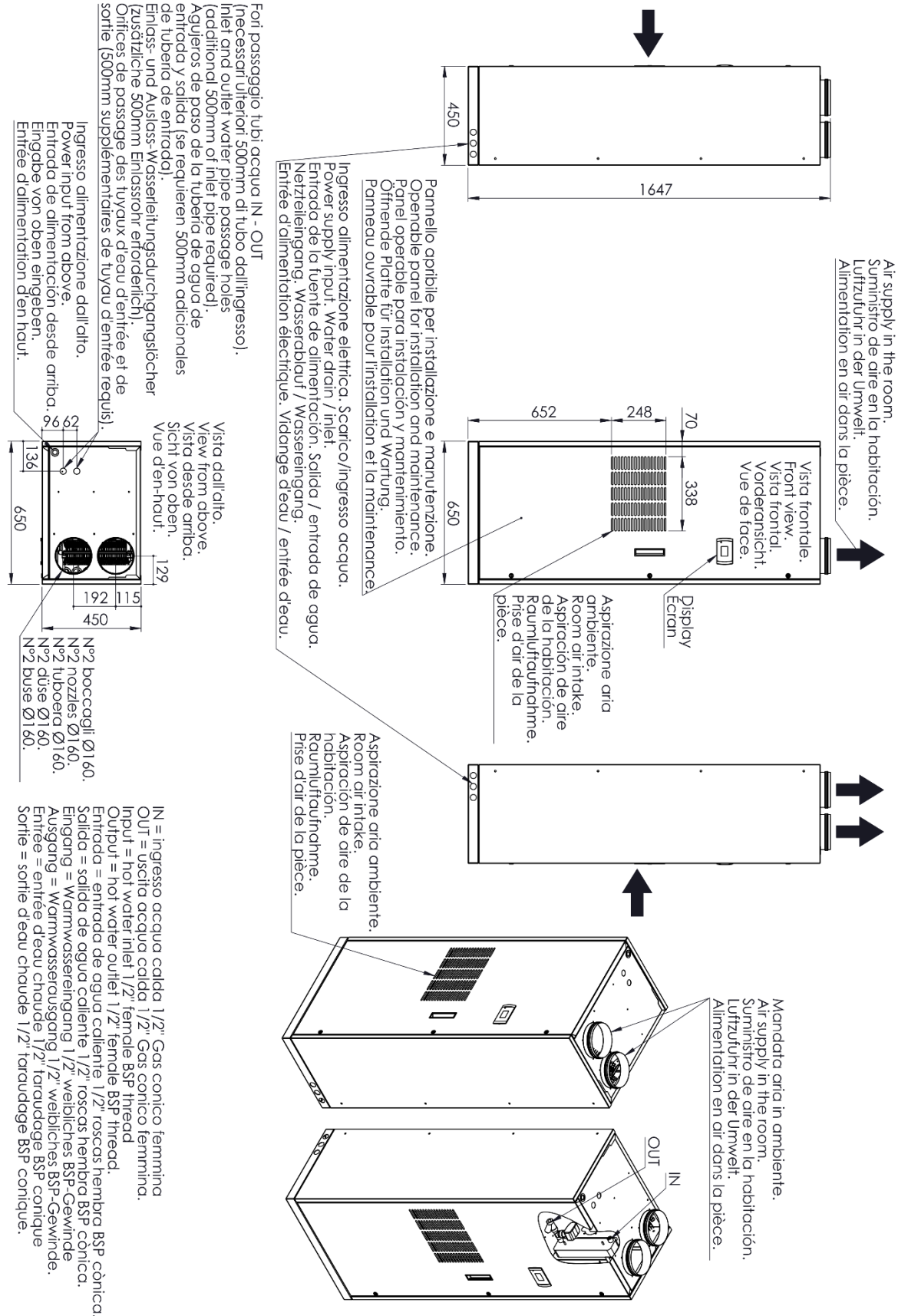
8.1 CCV



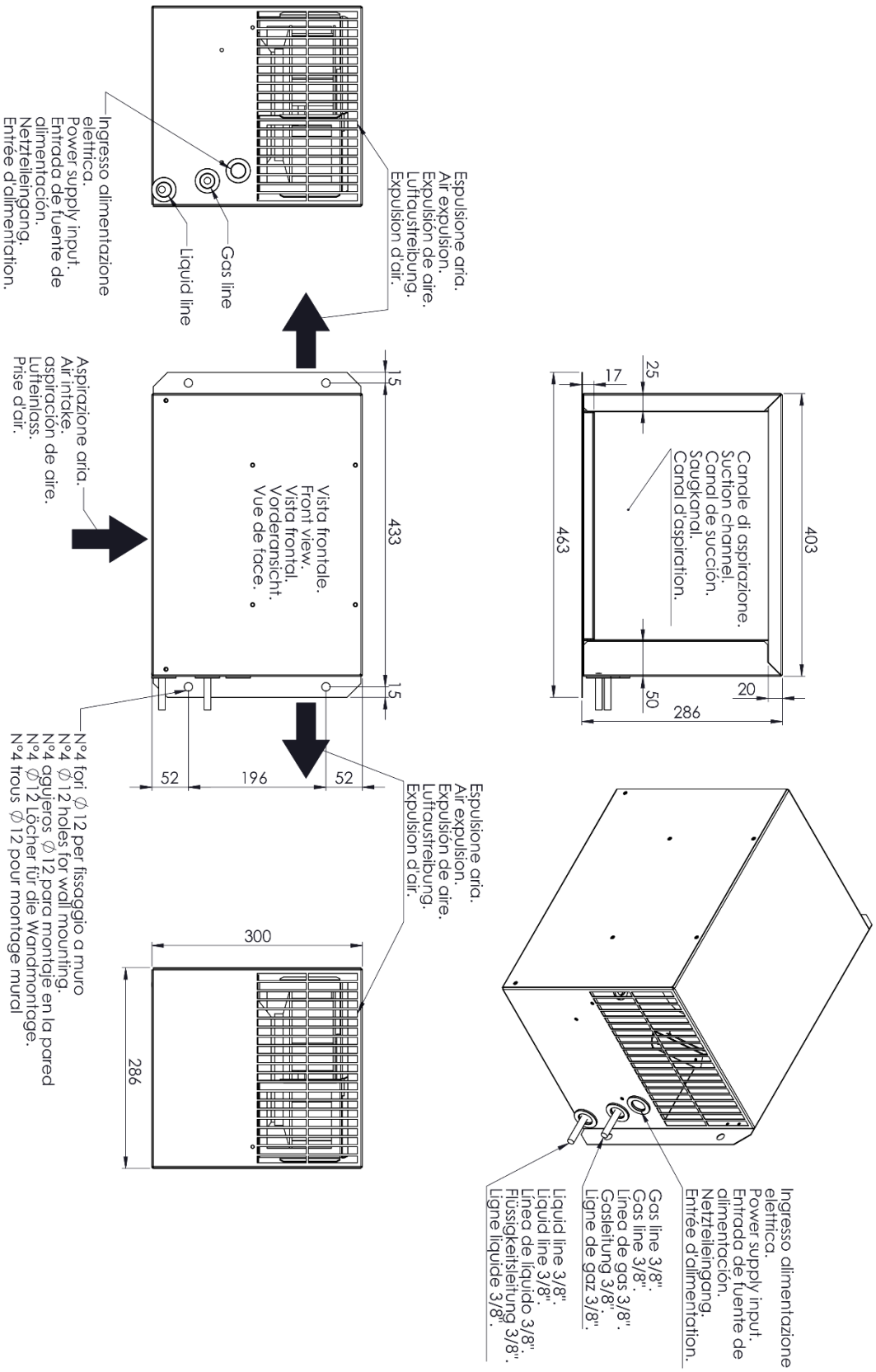
8.2 CCA


Mandata aria in ambiente.
Air supply in the room.
Suministro de aire en la habitación.
Luftzufuhr in der Umwelt.
Alimentation en air dans la pièce.
Liquid line.
Liquid line.
Línea de líquido.
Flüssigkeitsleitung.
Ligne liquide.
Gas line.
Gas line.
Línea de gas.
Gasleitung.
Ligne de gaz.
Aspirazione aria ambiente.
Room air intake.
Aspiración de aire de la habitación.
Raumluftaufnahme.
Prise d'air de la pièce.
Display
Écran
Aspirazione aria ambiente.
Room air intake.
Aspiración de aire de la habitación.
Raumluftaufnahme.
Prise d'air de la pièce.
Vista frontale.
Front view.
Vista frontal.
Vorderansicht.
Vue de face.
338
70
248
652
650
Pannello apribile per installazione e manutenzione.
Openable panel for installation and maintenance.
Panel operable para instalación y mantenimiento.
Öffnende Platte für Installation und Wartung.
Panneau ouvrable pour l'installation et la maintenance.
Ingresso alimentazione elettrica. Scarico/ingresso acqua.
Power supply input. Water drain / inlet.
Entrada de la fuente de alimentación. Salida / entrada de agua.
Netzteileingang. Wasserablauf / Wassereingang.
Entrée d'alimentation électrique. Vidange d'eau / entrée d'eau.
Mandata aria in ambiente.
Air supply in the room.
Suministro de aire en la habitación.
Luftzufuhr in der Umwelt.
Alimentation en air dans la pièce.
1650
1600
450
Vista dall'alto.
View from above.
Vista desde arriba.
Sicht von oben.
Vue d'en-haut.
129
450
192
115
650
136
62
96
N°2 boccagli Ø160.
N°2 nozzles Ø160.
N°2 tuberas Ø160.
N°2 düse Ø160.
N°2 tubas Ø160.
Liquid line Ø10mm esterno.
Liquid line Ø10mm external.
Línea de líquido Ø10mm externa.
Flüssigkeitsleitung Ø10mm extern.
Ligne liquide Ø10mm externe.
Gas line Ø10mm esterno.
External gas line Ø10mm.
Línea de gas externa Ø10mm.
Externe Gasleitung Ø10mm.
Ligne de gaz externe Ø10mm.
Ingresso alimentazione dall'alto.
Power input from above.
Entrada de alimentación desde arriba.
Eingabe von oben eingeben.
Entrée d'alimentation d'en haut.

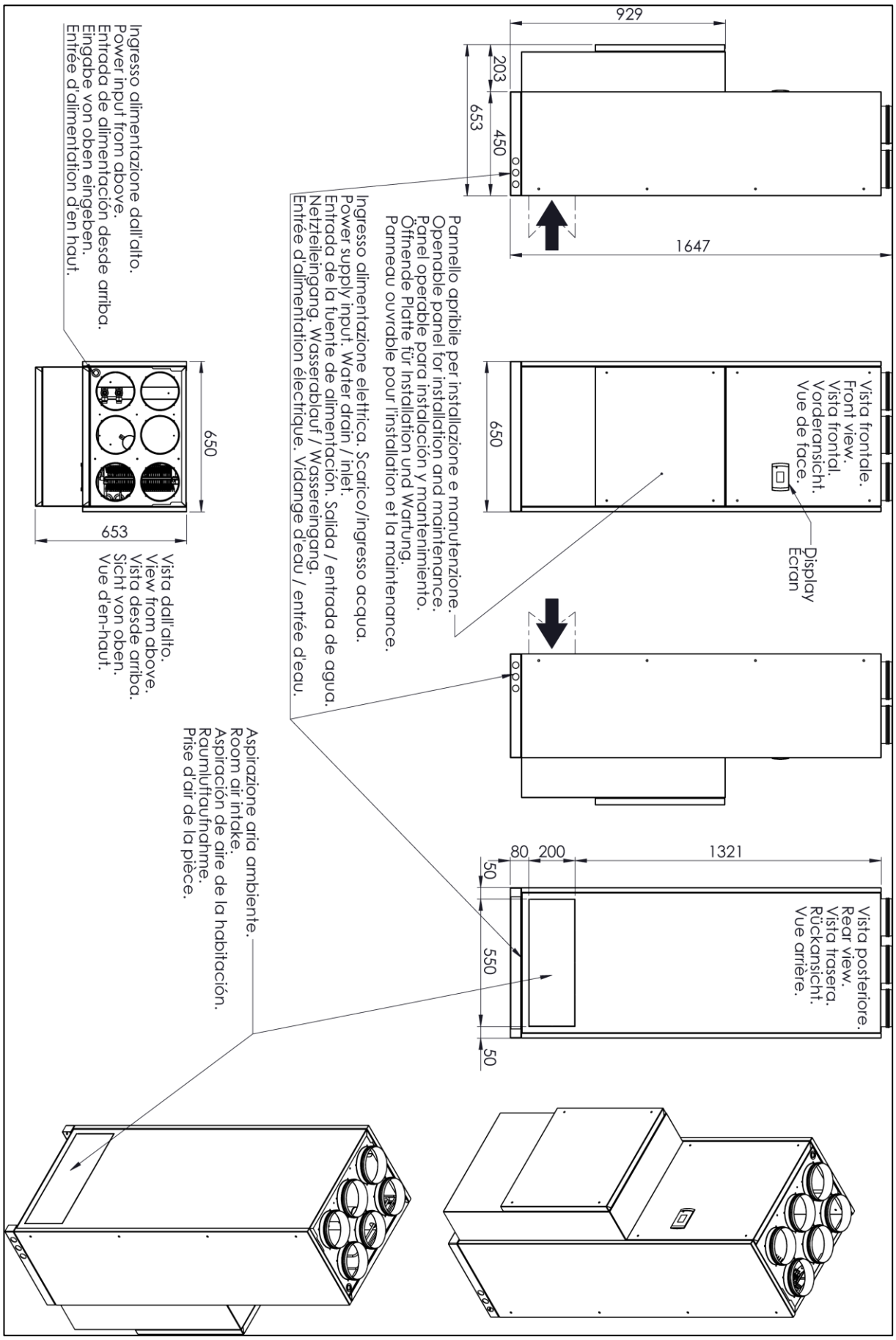
8.3 CCW


Mandata aria in ambiente.
Air supply in the room.
Suministro de aire en la habitación.
Luftzufuhr in der Umwelt.
Alimentation en air dans la pièce.
450
1647
Pannello apribile per installazione e manutenzione.
Openable panel for installation and maintenance.
Panel operable para instalación y mantenimiento.
Öffnende Platte für Installation und Wartung.
Panneau ouvrable pour l'installation et la maintenance.
652
248
70
338
650
Vista frontale.
Front view.
Vista frontal.
Vorderansicht.
Vue de face.
Display
Écran
Aspirazione aria ambiente.
Room air intake.
Aspiración de aire de la habitación.
Raumluftaufnahme.
Prise d'air de la pièce.
Ingresso alimentazione elettrica. Scarico/ingresso acqua.
Power supply input. Water drain / inlet.
Entrada de la fuente de alimentación. Salida / entrada de agua.
Netzteileingang. Wasserablauf / Wassereingang.
Entrée d'alimentation électrique. Vidange d'eau / entrée d'eau.
Aspirazione aria ambiente.
Room air intake.
Aspiración de aire de la habitación.
Raumluftaufnahme.
Prise d'air de la pièce.
Mandata aria in ambiente.
Air supply in the room.
Suministro de aire en la habitación.
Luftzufuhr in der Umwelt.
Alimentation en air dans la pièce.
OUT
IN
Fori passaggio tubi acqua IN - OUT
(necessari ulteriori 500mm di tubo dall'ingresso).
Inlet and outlet water pipe passage holes
(additional 500mm of inlet pipe required).
Agujeros de paso de la tubería de agua de
entrada y salida (se requieren 500mm adicionales
de tubería de entrada).
Einlass- und Auslass-Wasserleitungsdurchgangslöcher
(zusätzliche 500mm Einlassrohr erforderlich).
Orifices de passage des tuyaux d'eau d'entrée et de
sortie (500mm supplémentaires de tuyau d'entrée requis).
Ingresso alimentazione dall'alto.
Power input from above.
Entrada de alimentación desde arriba.
Eingabe von oben eingeben.
Entrée d'alimentation d'en haut.
96
62
136
650
192
115
450
129
Vista dall'alto.
View from above.
Vista desde arriba.
Sicht von oben.
Vue d'en-haut.
N°2 boccagli Ø160.
N°2 nozzles Ø160.
N°2 tuberia Ø160.
N°2 düse Ø160.
N°2 buse Ø160.
IN = ingresso acqua calda 1/2" Gas conico femmina
OUT = uscita acqua calda 1/2" Gas conico femmina.
Input = hot water inlet 1/2" female BSP thread
Output = hot water outlet 1/2" female BSP thread.
Entrada = entrada de agua caliente 1/2" roscas hembra BSP cònica.
Salida = salida de agua caliente 1/2" roscas hembra BSP cónica.
Eingang = Warmwassereingang 1/2" weibliches BSP-Gewinde
Ausgang = Warmwasserausgang 1/2" weibliches BSP-Gewinde.
Entrée = entrée d'eau chaude 1/2" taraudage BSP conique
Sortie = sortie d'eau chaude 1/2" taraudage BSP conique.

8.4 External condensing CCA



8.5 CCV, CCA and CCW with option air intake from behind



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