

Technical notice



Installation

Assembly

Maintenance

Safety

Evaporator ranges:

.18 and .36



For your safety and for your information,
it is imperative that you read this notice
before installation

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Technical notice - CirculAir

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Introduction

1.1 Designation

Our equipment is intended to fulfil an air treatment function.

It can be implemented only by qualified professionals.

It allows, according to the models, for cooling, heating, humidification, dehumidification, ventilation filtration and air scouring.

Any other use is prohibited.

CirculAir: Stainless steel single or double flow air conditioner

1.2 Manufacturer's information

The machine you have just purchased is designed by Climinox, manufactured under its supervision and bears the CE mark in accordance with current legislation.

CLIMINOX

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St Georges des Groseillers

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1.3 Liability limitation

Climinox cannot accept any liability if the machine is used with the doors or access hatches are open, if the protections are not in place or if the conditions set out in this manual are not met.



Please read this manual carefully before installing and using the machine.

Keep the manual safely so that it can be consulted if necessary.

General points

CirculAir evaporators are designed for treating air and must not be used for other applications. They allow, according to the models, for cooling, heating, humidification, dehumidification and ventilation.

They can be implemented only by professionals.

Climinox has designed its evaporators for agricultural purposes. This application field requires meeting a certain number of sanitary criteria, resistance in a corrosive environment and safeties.

CirculAir evaporators are made of AISI 316L stainless steel, the exchange surfaces are smooth, the body does not contain any spaces where grime can be retained. All of the parts of the air conditioner have to be accessible easily, for cleaning or visual inspection of the state of cleanliness. These operations must be performed without tools and without disassembling any screws or nuts (accidentally, one of these elements could escape and end up in food products).



No intervention, on the evaporator, must be performed without having stopped and secured the installation beforehand.

- **Single-phase 220V high-performance fan. Adjustable speed via internal or offset potentiometer. The speed can also be controlled by a 0-10V automatic device.**
- **Cold battery: direct expansion (with built-in distributor) or chilled water. (Specify when ordering)**

Installation & assembly

The installation must be carried out in compliance with basic safety standards.

Environment

The location of the air conditioner must be conceived so as to ensure the distribution of the air and proper operation of the equipment in general. However the safety of maintenance and upkeep personnel must be preserved. The clearances will be sufficient.

Suspension

The structure of the building must be able to support:

- the air conditioner while operating
- the hydraulic connections
- the electrical connections.

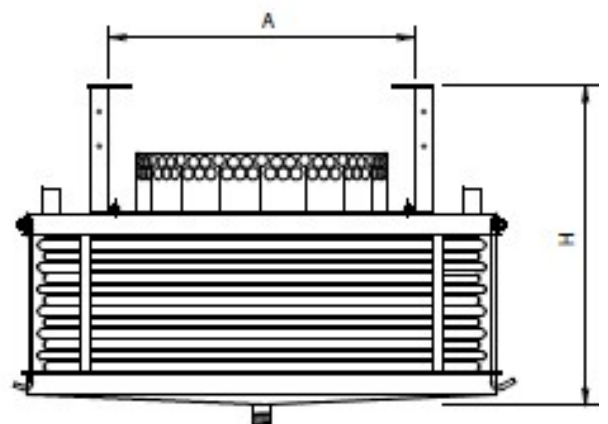
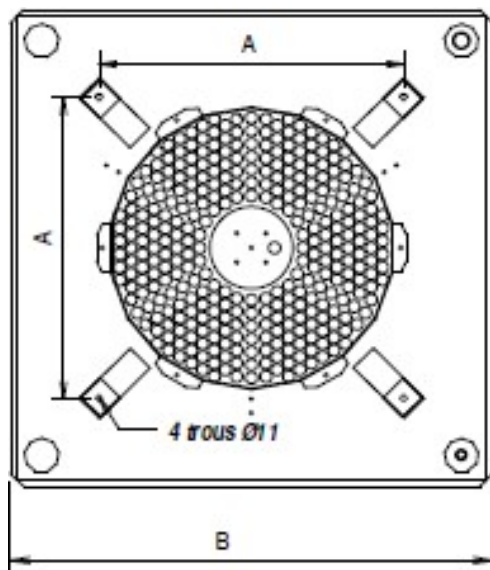
The tables hereinafter allow you to estimate this constraint.

Type	Weight in water in lb	Height H in in	A	B
MCL 3.18	99.21	12.40	435	690
MCL 4.18	108.03	13.66		
MCL 5.18	119.05	14.92		
MCL 6.18	127.87	16.18		
MCL 7.18	138.89	17.44		
MCL 8.18	147.71	18.70		

Type	Weight in water in lb	Height H in in	A	B
MCL 3.36	174.17	12.40	580	920
MCL 4.36	202.83	13.66		
MCL 5.36	231.49	14.92		
MCL 6.36	260.15	16.18		
MCL 7.36	288.81	17.44		
MCL 8.36	317.47	18.70		
MCL 9.36	346.13	19.96		
MCL 10.36	374.79	21.22		



The air conditioner must be attached with lock nuts.

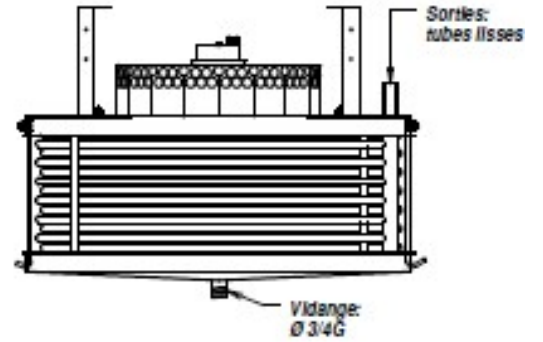
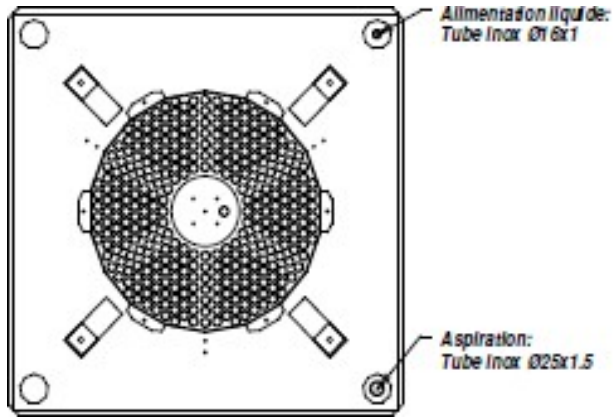


Fluid connection

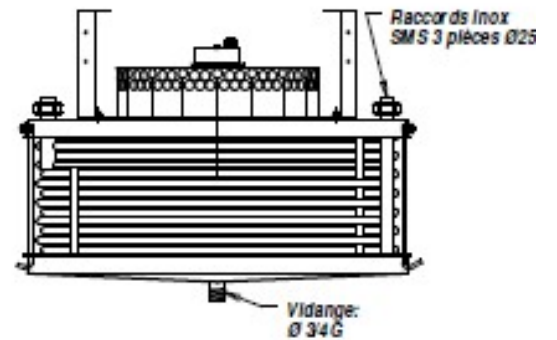
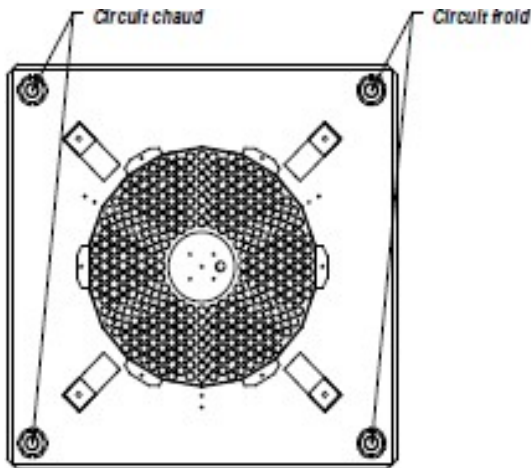
Direct expansion

Built-in distributor
Use an expansion valve with external pressure equalisation

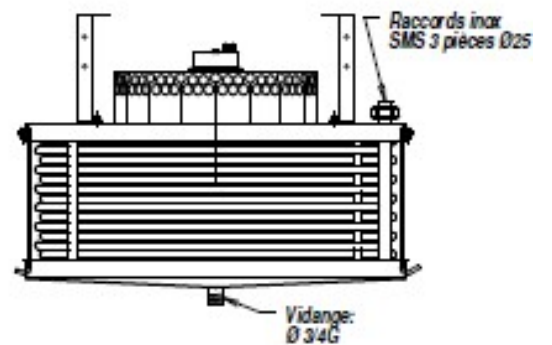
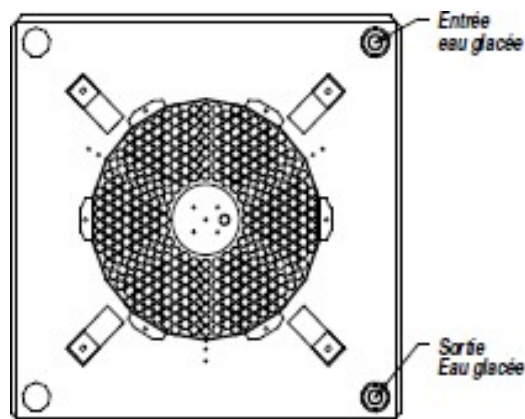
If copper tubing connection
Use silver brazing >50%
Liquid \varnothing 1/2" or 5/8"
Suction \varnothing 7/8" or 1" 1/8



Double circuit



Chilled water



Electrical power supply



The electrical installation must comply with the safety rules so as to:

- Protect people and property.
- The ground plane must absolutely be grounded
- The electrical switchboard, in addition to the disconnectors and thermal protections, has to have a locking by key, in order to secure the maintenance and upkeep operations.

Fan

The fan is compliant with the **ErP2015** standards for low-energy consumption. The motor, regulated by electronic switching, is variable speed.

This new technology allows Climinox to standardise the MCL series with a single fan model.

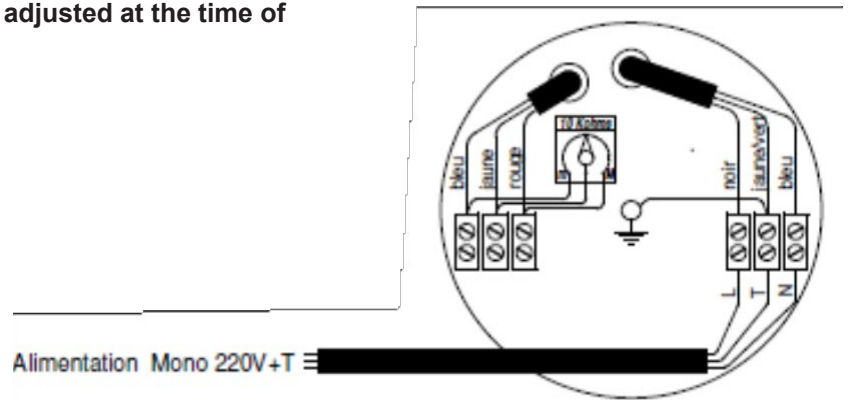
Many advantages are offered in terms of installation or use:

- Adjustment of the power of the evaporator or of the range of the air
- Ventilation controlled by automatic device
- Possibility for several setpoints. (example: In premises that receive sensitive products, possibility to switch to reduced speed in balance with the climate regulation.)

Type: AN04-03		
<i>Nominal voltage</i>	<i>VAC</i>	<i>200-240</i>
<i>Frequency</i>	<i>Hz</i>	<i>50/60</i>
<i>Power</i>	<i>W</i>	<i>140</i>
<i>Intensity</i>	<i>A</i>	<i>1.4</i>
<i>Phase</i>	<i>no.</i>	<i>1</i>
<i>Variable speed</i>	<i>rpm</i>	<i>0-900</i>
• <i>potentiometer mode</i>	<i>Ohm</i>	<i>10,000</i>
• <i>signal mode</i>	<i>VDC</i>	<i>0 -10</i>
<i>Diameter</i>	<i>in</i>	<i>15.75</i>
<i>Motor thermal protection</i>	<i>PTC resistance</i>	<i>Built-in / electronic</i>

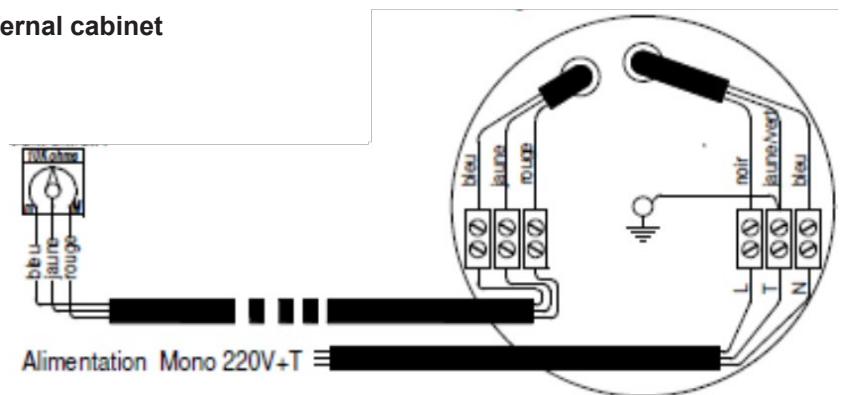
Variable speed drive

Potentiometer in the box to be adjusted at the time of commissioning
(Factory connection)

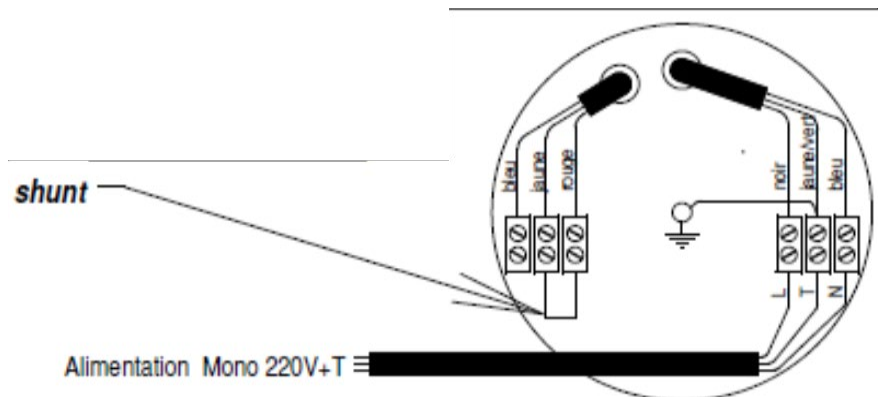


Variable speed drive

Potentiometer offset in an external cabinet



Speed set to the maximum value



Options

Electric heating

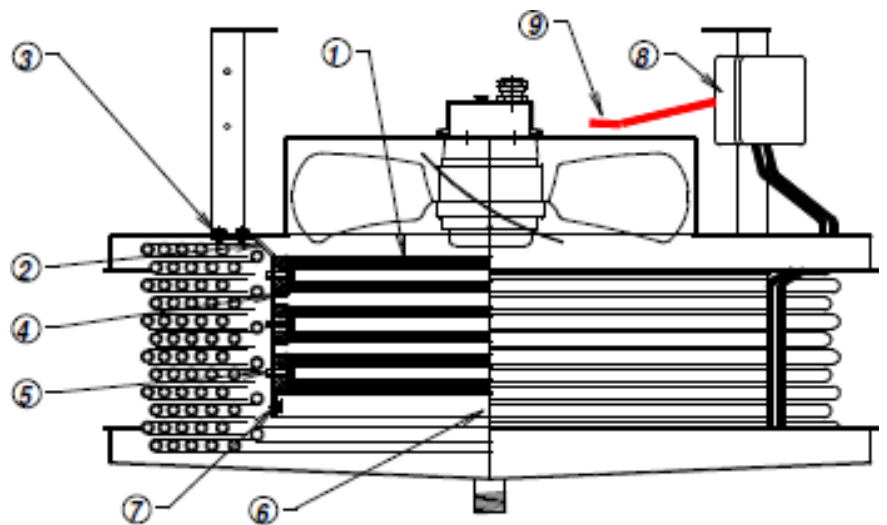
CirculAir evaporators can be equipped with an electric heating battery.

This battery is comprised of one or several hooped resistances placed at the centre of the machine.

Unit power 1 KW in mono 220V

Type	power possible in KW
MCL 3.18 or 3.36	1 to 3
MCL 4.18 or 4.36	1 to 4
MCL 5.18 or 5.36	1 to 5
MCL 6.18 or 6.36	1 to 6
MCL 7.18 or 7.36	1 to 7
MCL 8.18 or 8.36	1 to 8

- 1 - Resistance 1 KW 220V
- 2 - Fastening lug (3 per MCL)
- 3 - Screw Ø 5x6 + washer (3 per MCL)
- 4 - Bracket (3 per resistance)
- 5 - Screw Ø 5x20 + washer (3 per resistance)
- 6 - Stiffener (1 per MCL starting from MCL5)
- 7 - Screw Ø 5x20 + washer (3 per resistance)
- 8 - Connection box
- 9 - Heating safety bimetallic strip (50° max) to cut off the control circuit of the resistances



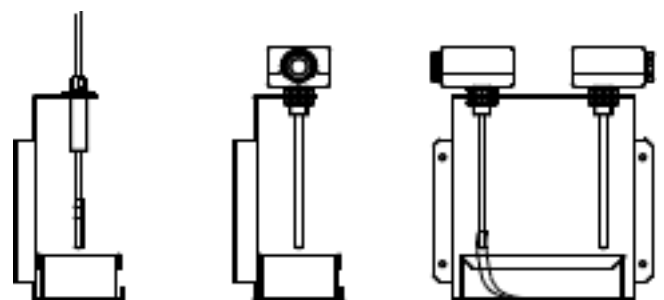
Psychrometer

Climinox provides psychrometer wall supports as accessories. The support is separated from the wall in order to protect the sensors from the radiating effect of the wall. They have a substantial reservoir of water.

The probes must under no circumstances be influenced by the air blown from the air conditioner (which would have the effect of defeating the regulation).

The psychrometer must therefore be positioned on a wall that it close to the air conditioner's air intake.

Climinox psychrometers can receive wired or thimble sensors.



Maintenance



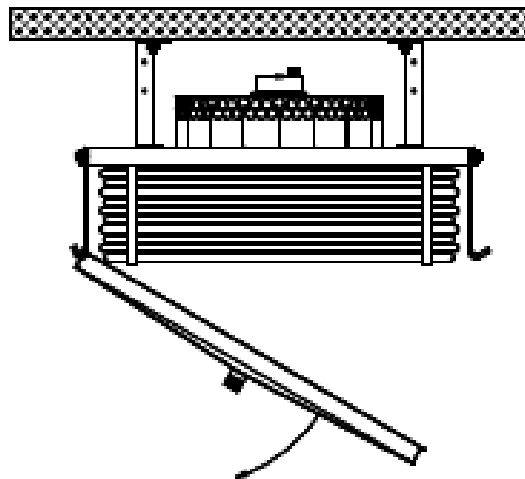
The personnel authorised to intervene on the air conditioner must have been informed of the safety rules to be complied with and the prescriptions stipulated in this notice.

If the air conditioner is at a height, use stable scaffolding provided with guard rails.

Cleaning

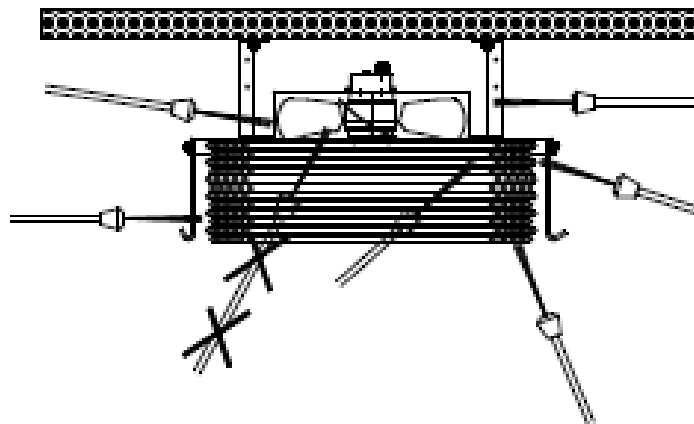
Before starting cleaning, the operator must ensure that the installation has been stopped and secured at the electrical control switchboard.

In order to have full access to the MCL to facilitate cleaning, after removing the drain tube, pivot the pan on the two most curved hooks, then unhook the condensate pan.



CirculAir evaporators are designed to be washed with a high-pressure hose.

However, never direct the stream directly on the fan.





EC declaration of conformity

*The Company **Climinox***

Z.A. Rue St Eloi

61 100 Saint des Groseillers – France

*declares, hereinafter, that the: **CirculAir***

*Evaporators of ranges **.18** and **.36***

*were designed and manufactured in accordance
with:*

Machine Directive 2006/42/EC

*A technical notice for the installation, mounting,
maintenance and safety was drawn up for this
purpose.*

*Done at: **Saint Georges des Groseillers***

The Manager:

*On: **10 January 2017***

Samuel DROULLON

SARL with a capital of 60,000 Euros / SIRET: 415 245 927 00017 / APE: 2599B / EEC: FR
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