



TESTING FOR
A BETTER PLANET

7 THINGS YOU SHOULD KNOW before purchasing a Climatic Chamber



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WHAT SHOULD YOU KNOW BEFORE PURCHASING A CLIMATIC CHAMBER?

7 TIPS FOR A QUICK INSTALLATION

Introduction

Sometimes during the selection of a climatic chamber, the focus is mainly on its performance, leaving the check of the specifications for proper installation for later. During this check, some critical issues may emerge that, in some cases, could lead to the modification of the model chosen or to product adjustments that are costly in terms of time and money.

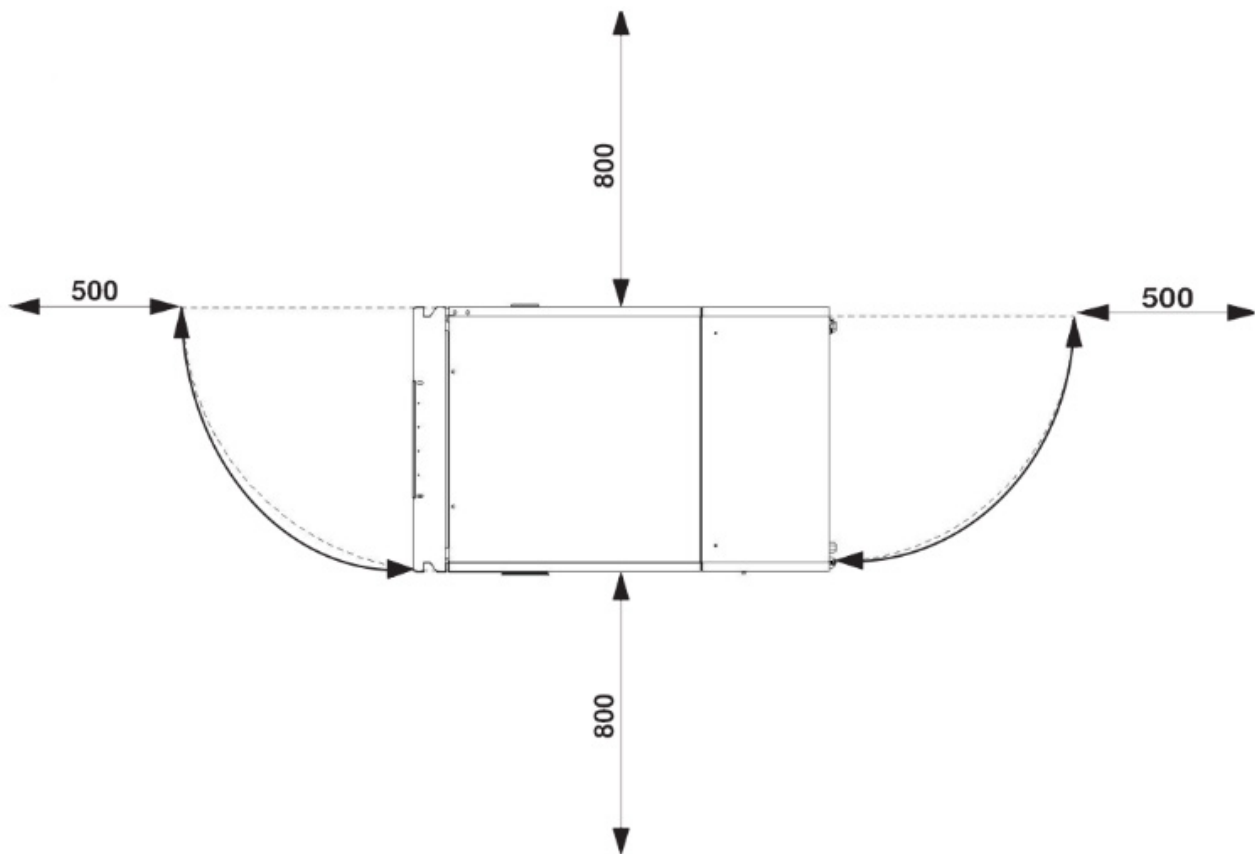
It is good practice to check all the drivers referred to installation before purchasing. Generally, all those good practices that suggest to install the chamber in an environment protected from atmospheric agents, with a flat floor that can withstand the weight of the chamber and that is far from heat sources, are obviously true also for climatic chambers. More in details, we have identified 7 points to be checked before you purchase a climatic chamber.



1. Space requirements

Choosing the right place for installation is important for ensuring that your new environmental test chamber works properly. Although the chamber does not take up too much room, some space should be left around it to ensure optimal performance and to provide space for future maintenance operations.

You need to leave enough space to allow the door to be easily opened without it hitting the wall and to allow easy access to the compartment inside the chamber; in addition, with air-condensed chambers, it is good to leave enough free space at the back to allow adequate airflow.



Representation of the space requirements for a climatic chamber

The addition of accessories may increase the area required for installation, so make sure you have enough space to safely hold them.

2. Stairs, doors and hallways



Knowing the external dimensions of a new chamber is necessary not only to make sure that there is enough room for it in the laboratory where you want to install it, but also to make sure that all operations for moving and handling the chamber can be carried out without any problems.

The dimensions of the doors and corridors must be taken into consideration to ensure that the machine will be able to pass through them in order to reach its place of installation.

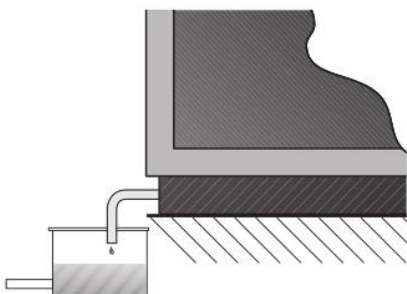
3. Connection to the water drain

Some climatic chamber manufacturers equip their products with a system that allows the recirculation of the dehumidification water, when it is clean.

In cases where the test specimen is dirty, the water will contain impurities, and must be disposed of through a drain (1). In this case, all necessary precautions must be taken to ensure that the drain is not clogged (2), as this could cause serious damage to the chamber. In addition, traps should not be used (3).



If there is no drain near the machine, the water can be collected by having it flow into a container.



4. Laboratory ambient temperature



The performance of a climatic chamber is usually declared based on a given external temperature, which is assumed to be that of the room in which the chamber will be operating. Increasing this temperature affects the performance and the ability to reach the declared specifications.

Thus it is important to consider the temperature of the laboratory in which the tests take place, taking into account the heat dissipated by the chambers themselves, especially when several chambers are placed close to one another in the same room. In this case, compliance with the space requirements (see point 1) or the addition of an air conditioning system (if the room is not already air conditioned) may be necessary to avoid affecting the performance of the climatic chambers and to ensure that the work environment is more comfortable for the personnel working in the lab.

5. Plugs and power system

Varieties of climatic chamber models exist, with different power and performance specifications; thus we can find chambers with single-phase and three-phase power systems having different Amperage values.

Some environmental test chambers, typically those that offer the highest performance and the largest models, may have high Amperage values, such that it may require the power supply system to be suitably configured for proper machine operation.



In these cases, high Amperage lines are quite rare and require specific plugs and cables. Usually the machine is supplied with the power cord already connected to the control panel terminal board. If the latter is not present, a plug must be connected to the other end of the cable, therefore you must remember to check the plug specifications given in the technical documents.

6. Water connection for the humidification system



Water can be supplied for humidification in the following ways:

- Directly from the mains supply if the climatic chamber is equipped with built-in water softener. In this case, you can connect the water supply line directly to the water connection.
- From a demineralized water network.
- By pouring demineralized water into the water tank, where present.

However, it is recommended that you refer to your supplier's specific technical documentation regarding the water characteristics.

7. Water connection for the water condenser

Climatic chambers can be water condensed or air condensed.

In the case of water condensation, it is important to provide for the availability of the water at the laboratory or installation site, and that the water characteristics are in compliance with the requirements of the supplier as given in the technical documentation.





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