

THANK YOU FOR PROTECTING THE ENVIRONMENT!

 RESTORE fx

ATCD[®] 3.0 GreenRestore[®]

**Accurate thermal chamber
for disinsection through
increased temperature
with controlled humidity**



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**Non-toxic, 100% effective,
mild on materials, reasonable
and sustainable, user-friendly,
environmentally-friendly
(CO₂ neutral)**

Usage

The ATCD®3 .0 GreenRestore® Thermal Chamber for Disinsection ensures 100% effective destruction of harmful insects that damage objects or goods made of organic materials in accordance with ČSN EN 16790. After treatment, the items can be classified as decontaminated. In combination with a properly set up biofouling prevention system, toxic substances can be completely eliminated from the process for protecting materials.



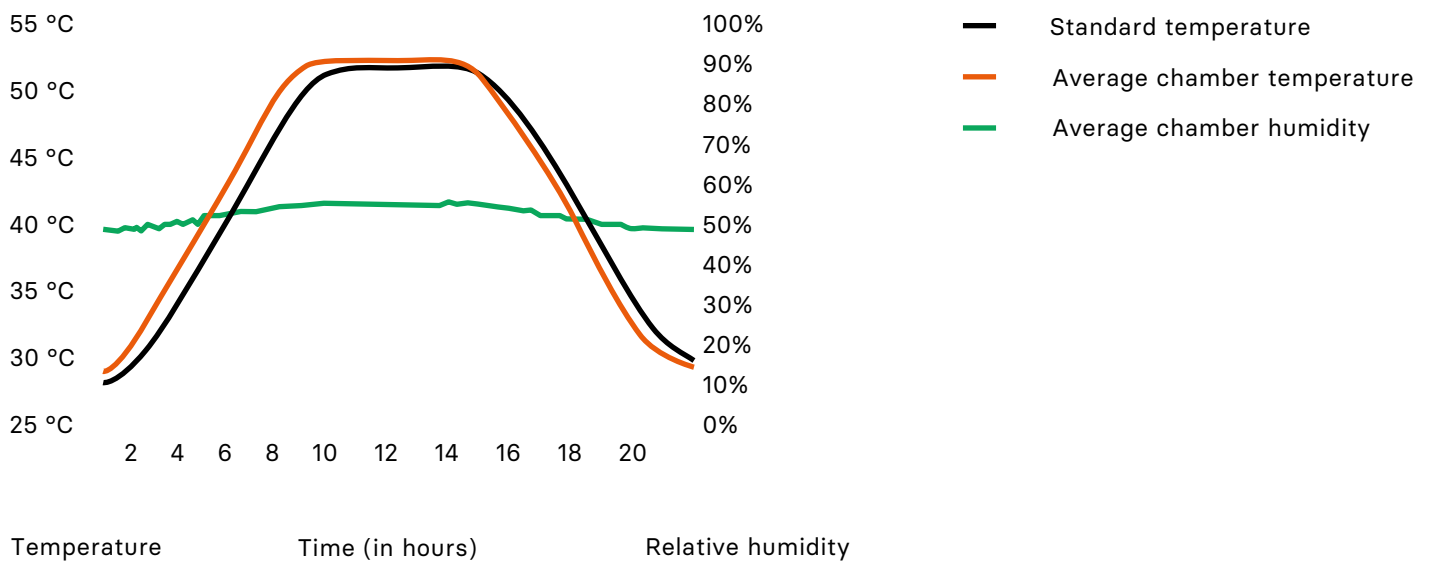
The ATCD® 3.0 GreenRestore® is a piece of equipment that should be required for every modern and sustainable off-site storage facility or warehouse. The extremely low cost of treatment, simple disinsection process and its mild nature for the treated materials means that the heat disinsection process can be carried out before placing each and every object in storage. This makes for a suitable regime for handling objects in a collection, enabling the elimination of harmful insects in a storage facility without the need for toxic substances.

Description of technology

The principle behind the non-toxic insect extermination method of heating with controlled humidity consists in temporarily heating objects stored inside the **ATCD® 3.0 GreenRestore®** above the temperature at which proteins in insects' bodies coagulate in all stages from eggs to adults. The process kills all harmful insects, including those hidden inside the treated objects. In order to prevent the loss of water from the treated objects during heating and thus possible deformation, temperature and relative humidity are regulated in the chamber.

This minimises stress on the objects undergoing such treatment. The temperature the equipment works at for reliable operation is **52°C**, although the conservator is able to select a different temperature within the recommended range of 49°C to 55°C. Once the given temperature is reached, it is maintained for the time necessary to exert the required lethal effect on insects before going back down in a controlled manner. Similarly, relative humidity is monitored and regulated to prevent unwanted damage to objects.

Thanks to the unique design of **ATCD® 3.0 GreenRestore®**, the operator has the ability to select very precise treatment parameters, including relative humidity, a variable which is of utmost importance for mild remediation without unnecessarily burdening artefacts and natural objects. The value is usually chosen according to the conditions at the original location, meaning winter and summer conditions can be flexibly taken into account.



Structure

ATCD® 3.0 GreenRestore® consists of an isolated treatment chamber and a microclimate conditioning unit. The equipment also includes a monitoring and control system for online support.

Two basic configurations exist for the equipment:

- 1) A closed-loop option for extremely precise control of parameters (no building MODIFICATIONS REQUIRED)**
- 2) An option of combining a closed circuit and an external ventilation system for routine treatment (air supply / exhaust connection required)**

The capacity of the chamber is variable with a default internal volume range from 15 to 80 m³. The duration of treatment depends on the nature of the material being treated, and ranges from 18 to 24 hours, though extra time may be required.

Installation

Installation conditions vary depending on the chosen option and the customer's requirements, with the basic elements being the possibility of connection to mains electricity and water (including sewerage). If the client is interested in external ventilation, it is necessary to take into account the need to make openings in the shell of the building and air ducts to connect the equipment to the exterior. It is also important that the floor has sufficient load-bearing capacity in relation to the weight of the objects to be treated. We are also able to manage any technical requirements clients may have by modifying the chamber's design.



Operators

The equipment may be operated by a trained employee. When protecting objects of cultural value, it is recommended to appoint a conservator who specialises in the material undergoing treatment as they are best able to expertly evaluate the input parameters and optimise the process for specific conditions.

Comprehensive care

We offer a complete **delivery of accurate ATCD® 3.0 GreenRestore®** thermal chambers including installation, setup and training staff. We also provide a warranty and post-warranty service of the equipment. We will be happy to work with you to optimise the treatment process for your individual needs and related research projects.

We can also offer our expertise to **develop a pest prevention and control plan optimised specifically for your institution's needs**. Implementation will significantly increase the efficiency of operation of **ATCD® 3.0 GreenRestore®**, while ensuring long-term, sustainable, high-quality protection of the items and objects you are responsible for.

Our team

Our people have extensive experience of devising and applying innovative solutions for conservation and restoration. We have been part of the professional community for a considerable period, participating in creating standards, development, teaching and implementing interventions with regard to cultural heritage. We shall be happy to tailor our **ATCD® 3.0 GreenRestore®** to suit your needs precisely.





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