

Absolute D- PYRO

The Absolute D-PYRO is a high quality product for use in depyrogenation tunnels and ovens. Camfil provides you with more than 50 years' experience in filter manufacturing with the highest safety and quality standards.



CAUTION SAFETY:

The employer (or their representative) must read the content of the user instructions to the operators to ensure that there is no health risk to the operator through ignorance of the information it contains.

The filter is operational right after the installation: no fume / no outgazing from the filter. Compliance with the following items is the basis for the undisturbed operation of your facility:

Transport of Absolute D-PYRO

- Each Absolute D-PYRO transport must be performed with the utmost care.
- All Absolute D-PYRO filters are fully inspected prior to shipment.
- The transport packaging protects the filter from damage and vibration during transport. For this reason, we recommend leaving the original transport packaging intact until planned time of use.
- The Absolute D-PYRO filters must be transported upright with the media pack folds and separators vertically oriented to prevent sagging of the filter package.

Preparations for the use of Absolute D- PYRO filters

- Thoroughly clean the surface on which the filter will be seated.
- Check the planned filter mounting surface in your equipment for any damage or imperfections. The surface must be as flat as possible with a tolerance of +/- 0,5mm to ensure long-term secure sealing of the filter.
- Check the fastening system to ensure correct operation.

Unpacking the Absolute D- PYRO filters

- Immediately after receipt, inspect the transport packaging for any exterior damage.
- If there are visual damages on the packaging.
 - Direct claim to the shipping company.
 - If there should be an inspection done: contact your local Camfil branch office or Camfil representative to further assistance.

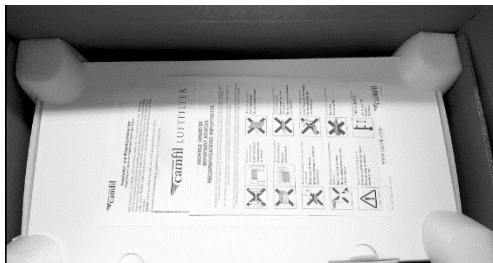
- If the box was dropped, make sure to have the filter inspected before use.
- For transportation of the cardboard box, use the strong outside handle.



- Open the cardboard without knife and do not turn the box.
ONLY USE THE HELP HANDLE.



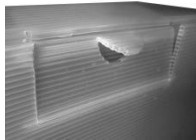
- Open the top with the handle.



- Remove the foam plastic protection corner (top side) and continue to open the cardboard.



- Carry with “closed” handle the plastic box to the installation area (life science compliance)
- Open the plastic box without knife and do not turn the box.
ONLY USE THE HELP HANDLE.



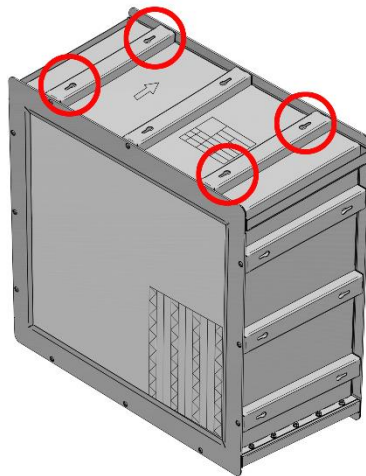
- Open the top with the handle.



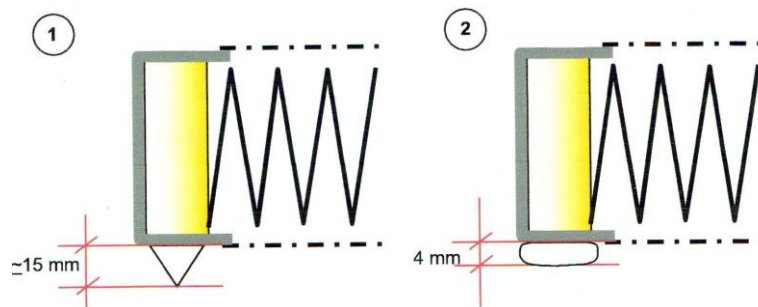
- Keep and file the filter report.
- Open the front box with the handle.
- Only touch the filter by its frame and do not reach into the filter package.
Avoid unnecessary transport and movement.

Installing the Absolute D- PYRO filters

- Make sure that seals and gaskets are intact.
- While paying attention to engraved air direction arrows, place the filter into the intended position. During the installation process be sure not damage any seals.
- With vertical installation it is absolutely necessary to mount the filter such that the media pack folds and separators are in the vertical orientation. For the mounting, use the keyhole in the frame.



- Triangular gasket: Fasten the clamping until the seal is compressed to approx. 4mm evenly all around as shown in figure 1 and 2 below:



- Obtain optimal clamping, each filter should be pressed with uniform force.
- Once installed Absolute D-PYRO filters may not be removed and re-installed to avoid any damage on the gasket.

Tempering the Absolute D-PYRO

- No tempering cycle is required.
- Direct use: Filter is operational right after installation (no fumes).
- Based on the installation of such filter the operation instruction of the tunnel manufacturer should be followed. After the usual stabilisation phase (1h at 350°C or 2 h at 320°C) the validation tests on ISO class can be performed.

Continuous operation of Absolute D- PYRO filters

- An optimal operating condition for an Absolute D-Pyro filter is continuous operation at constant operating temperature.
- Using a ramp up rate of 5°C/min, heat the installed filter to final temperature of 350°C while maintaining rated air flow. Some peak at higher temperature could be possible. However, the specified heating rate should not be exceeded because heating too quickly can cause stress on the sealing compound or filter media. Heating at slower rate is permissible.
- Using a cooling rate not exceeding 5°C/min. A slower cooling rate is permissible.

NOTE:

- Filter can behave differently dependent on the depyrogeneration tunnel, the values quoted are only recommendations. Following these values doesn't guarantee filter performance due to the intense conditions these type filters are exposed to.
- In some constructions even higher gradients in combination with the design of the tunnel can give the required value.
- For the majority of installations, a cooling down to room temperature is the most economical way of operating the depyrogeneration tunnel.
- The temperature reduction for the not productive period (e.g. at night) has to be agreed between tunnel producer and end user.

Operating conditions

- Camfil manufactures the Absolute D-PYRO filter with due care, test the filter at room temperature conduct to final inspections and ensure that they leave our plant securely packaged for transport.

- Unfortunately, it is impossible to make a general statement about the service life of the Absolute D-PYRO filter since it depends on the type of application and the characteristics of the equipment to which it is installed. However, please find below a list of possible errors that could shorten the service life of Absolute D-PYRO filters.

- The service life depends on:
 - Process temperature cycle
 - Inlet air flow uniformity – evenly distributed air flow is better.
 - Turbulent air flow may damage the filter.
 - Maximum air flow rate – exceeding filter rating may shorten service life.
 - Vibrations in the equipment- may cause relative movement within the filter resulting in damage.

- Based on Camfil's test and customer feedback, Camfil has learned that, depending on the operating conditions, Absolute D- PYRO filters might have 12 to 36 months' life time based on customer installation and operation.

- Absolute D-PYRO are manufactured in accordance with the regulations of EN1822:2009. The determination of the filter class is accomplished at 20°C using DEHS as the challenge aerosol.

- The filters are tested referring to:
 - 99,995% at MPPS (H14 according to EN 1822)
 - 99,95% at MPPS (H13 according to EN 1822)

DISCLAIMER

We would like to take this opportunity to thank our customers and other parties for their interest in Camfil filters, housings and products and to remind them that each user bears the full responsibility for making its own determination as to the suitability of Camfil materials, information, products, recommendations and advice for its own particular purpose.

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