



Installation, Operation & Maintenance

AXO-HEPA

Adjustable Vanes Swirl Diffusers With HEPA Filter

Last Revision 2020-09-19



INTRODUCTION

EffectiV HVAC manufactures and supplies high quality, top-performing air distribution products and other HVAC products. EffectiV 's unique ceiling air diffusers allow Engineers, Designers to answer specific architectural and performance needs. EffectiV diffusers effectively address common comfort issues and help improve the overall energy efficiency of HVAC systems. We provide new solutions to old problems and ultimately facilitate building operators' task of keeping everyone happy.

EffectiV HVAC Inc. is the exclusive supplier of MADEL® products in the US and Canada. We have adapted some of MADEL® 's most amazing products to North American standards and we keep them in stock in our Montreal, Canada facility. Other MADEL® products can also be ordered as needed.

We thrive on supplying only the best quality products to help improve comfort, performance, interior design and energy efficiency. We fully stand behind our products performance and quality.

WE WANT TO HEAR FROM YOU

You love our products, or maybe there's something you don't like? You have an idea of how to improve installation or usability?

Whether you have a question, suggestion or comment, we'd love to hear from you!

Installers and Operators' input is very valuable to us. Please call us at 1-844-375-3885 (Toll Free) or email us at info@effectiv-hvac.com to give us your feedback.

RECEIVING MATERIALS

Diffusers and plenums must be inspected for shipping damage on delivery. The diffuser faces are individually wrapped and packed multiple faces per box. Any damaged box should be inspected and its content unpacked. If any shipping damage is found, report it immediately to the carrier and make sure it appears in writing on the bill of lading.

Diffusers and plenums should be stored in a dry and clean indoor location and multiple pallets should not be stacked.

Boxes and pallets should be handled gently in order to avoid unrepairable bends, bumps and scratches.

INSTALLATION

AXO-HEPA Adjustable Vanes Round Swirl Diffusers with HEPA Filter

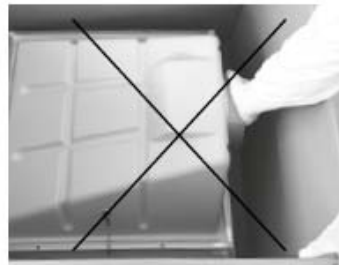
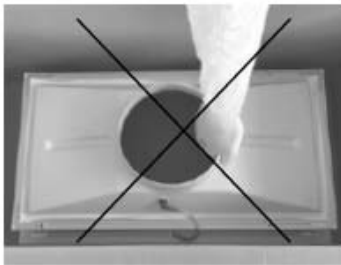
Important note: procedures listed into this manual should be carried out by qualified personnel and we recommend using relevant individual protection devices as advised by local legislation.

1) HANDLING



To avoid any possible damage to the filters during the installation of the housings, we recommended to keep the filters outside the installation area, in a safe place.

- Grab hold of the sides of the terminal filter hood's aluminium frame
- DO NOT damage the plenum and the exposed flange.





2) REMOVE THE PROTECTIVE FILM

CASE A

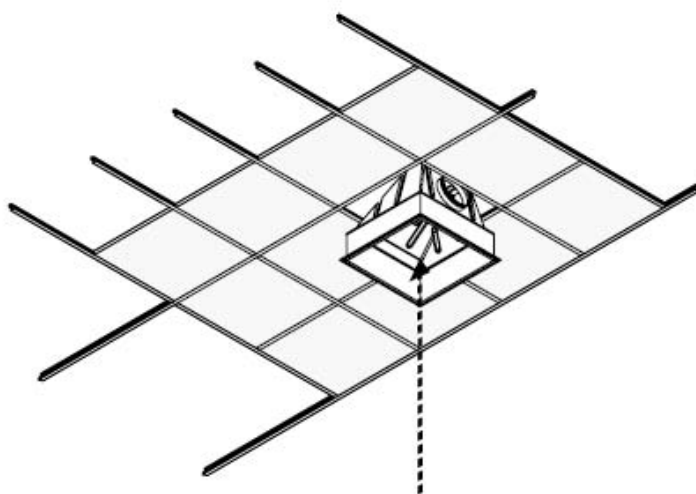
- Only remove the spigot film¹⁾
- Removal of the film below²⁾ ONLY BEFORE the filter installation

CASE B

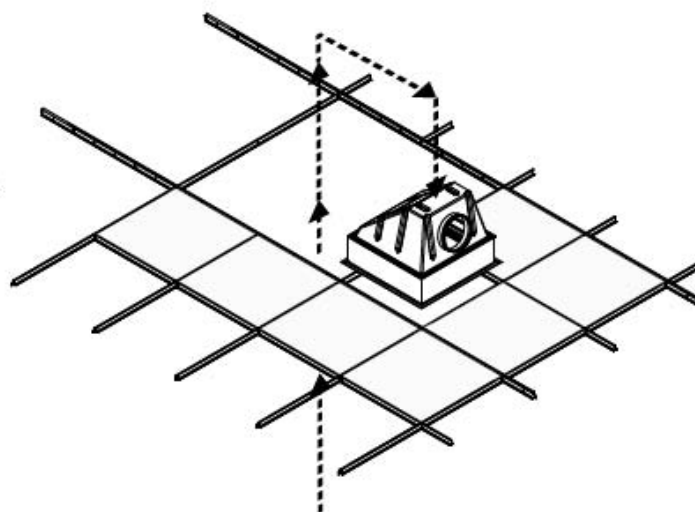
- Removal of both films¹⁻²⁾



CASE A



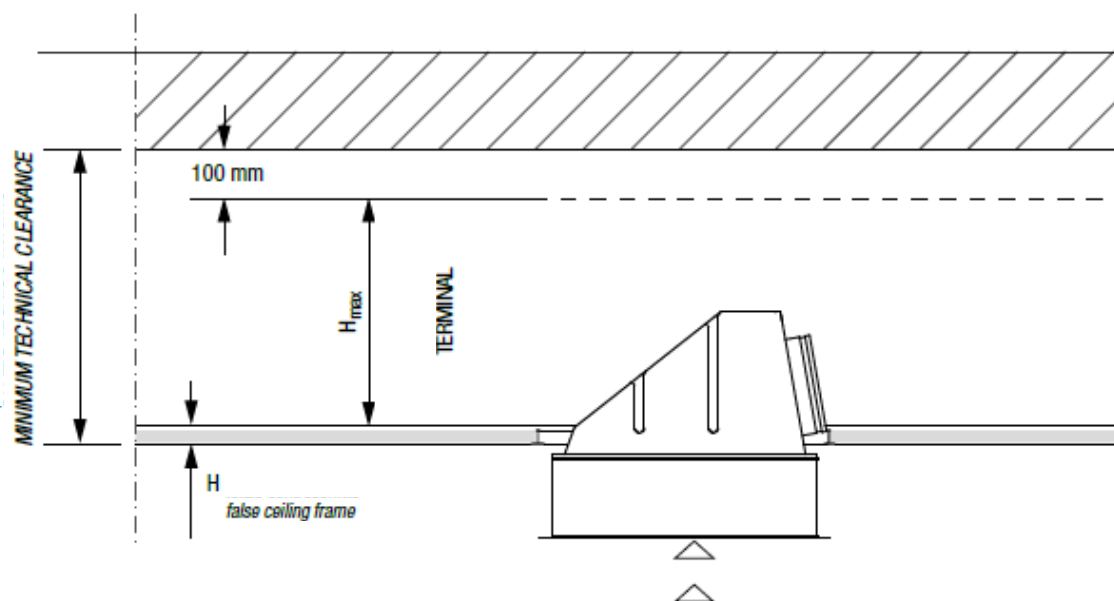
CASE B



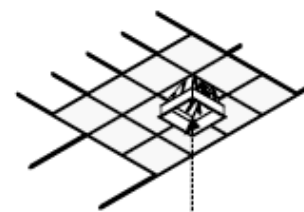
3) ASSEMBLY



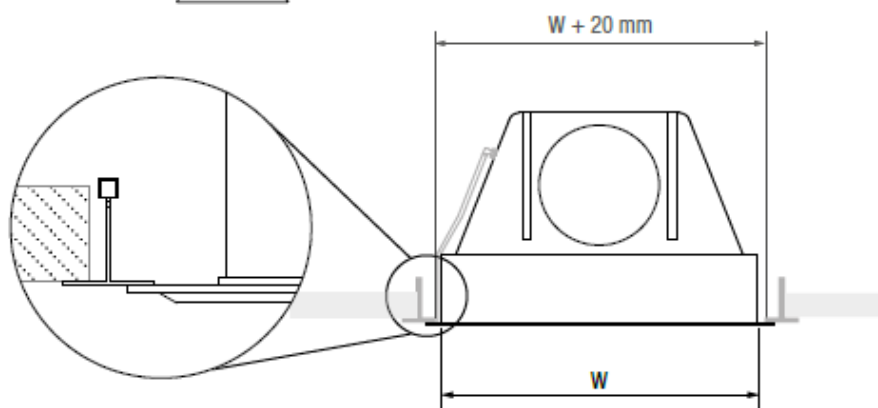
Before assembly, check the proper orientation and the size of the supply duct.



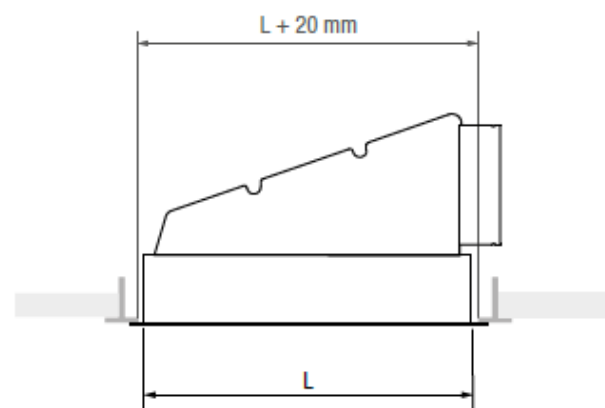
CASE A



DIMENSIONS OF THE CUT OUT IN THE FALSE CEILING

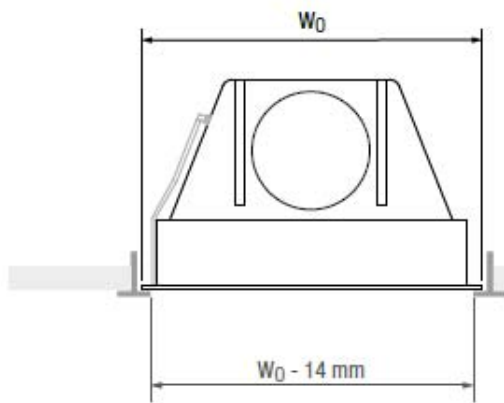
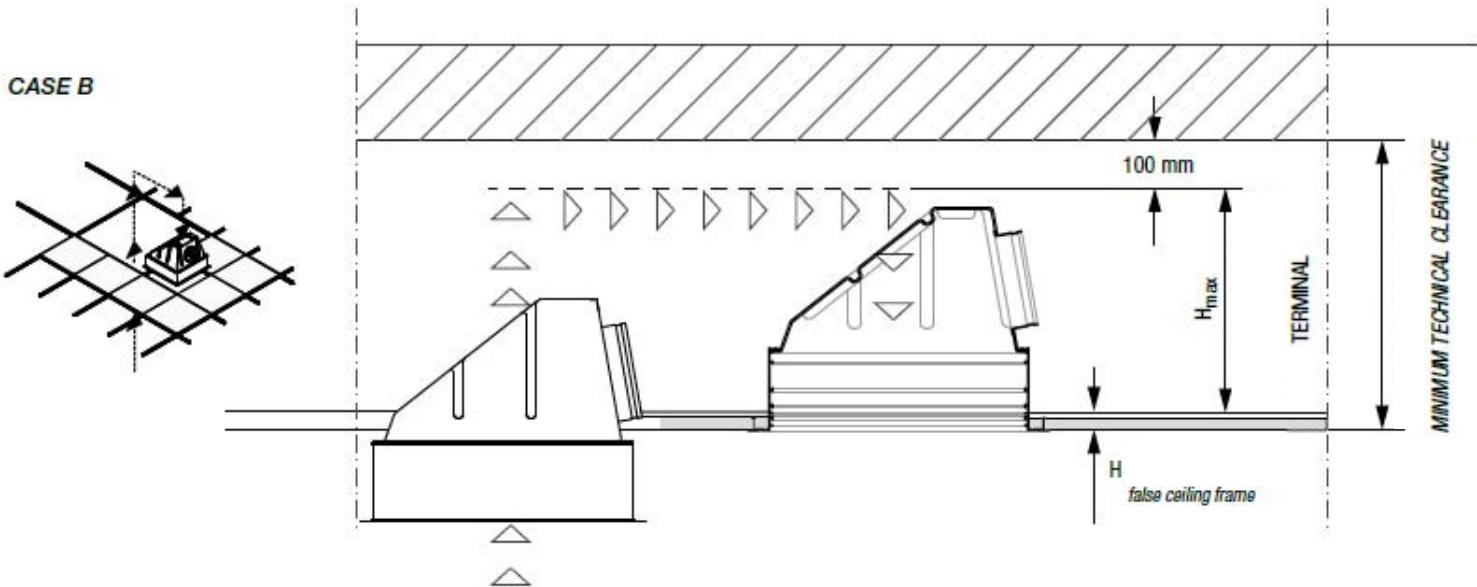


DIMENSIONS OF THE CUT OUT IN THE FALSE CEILING

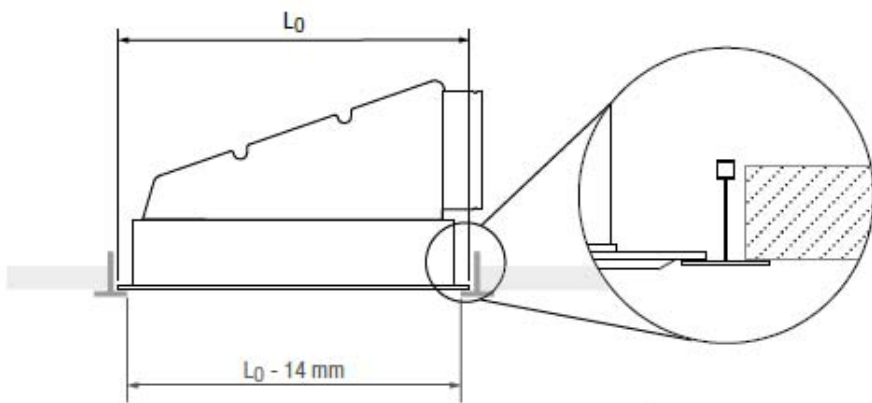


MINIMUM TECHNICAL CLEARANCE FOR ASSEMBLY H_{\max} cabinet + H false ceiling frame + 100 mm*

* Minimum tolerance recommended for installation



DIMENSIONS OF THE CUT OUT IN THE FALSE CEILING



DIMENSIONS OF THE CUT OUT IN THE FALSE CEILING



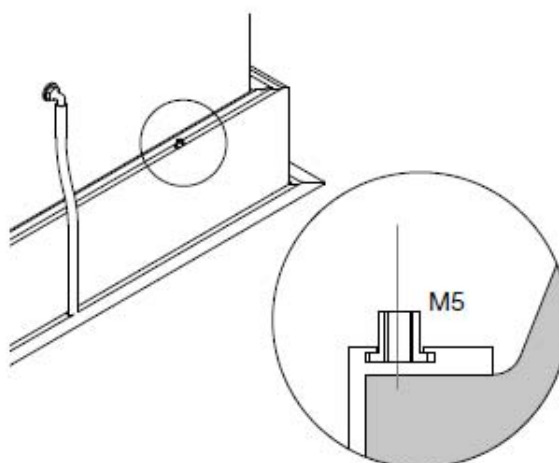
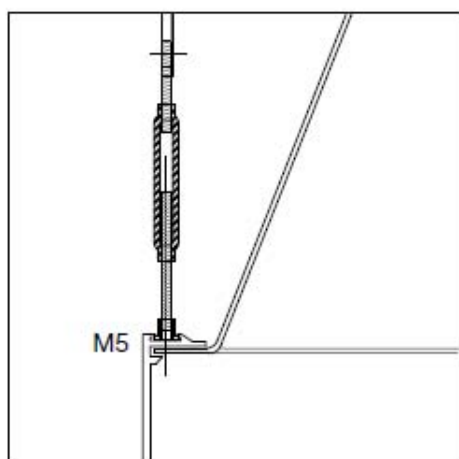
4) ANCHORING AND POSSIBLE FIXINGS

Fix the hood without filter

- to the concrete ceiling A
- or to a proper supporting structure B

A

- By means of 4 M5 threaded rods, screwed to the relevant bushes on the upper part of the profile (1).

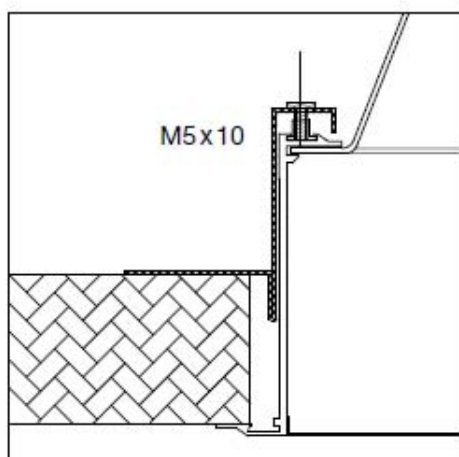


1

M5 inserts for threaded rod

B

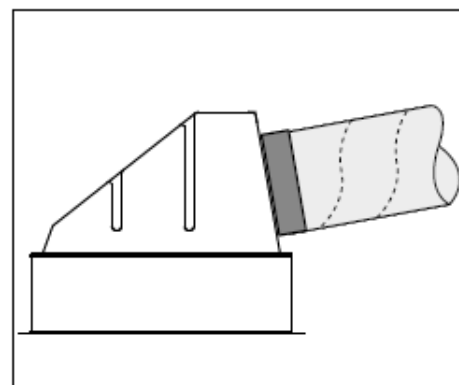
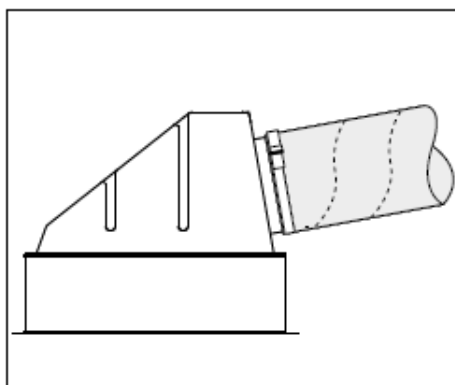
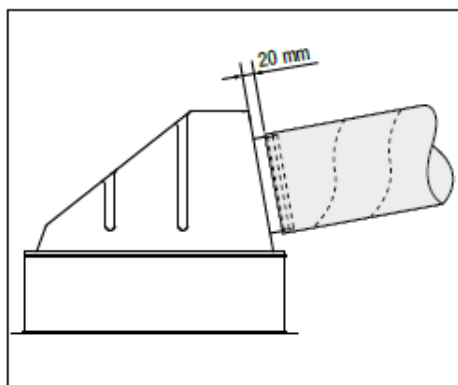
- Installation with brackets



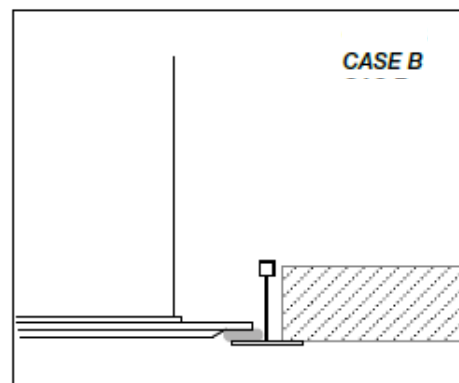
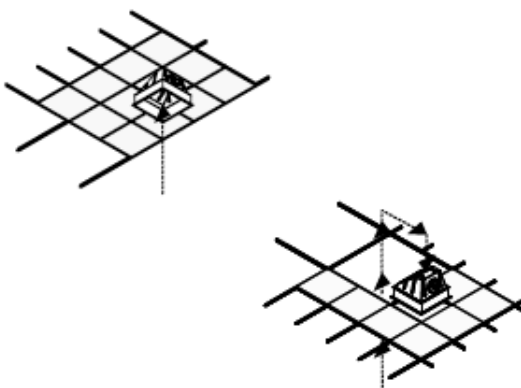
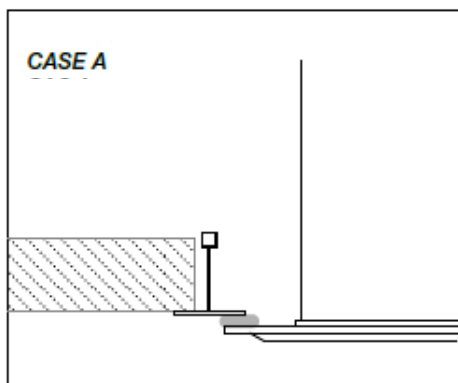


We recommend to position the flexible duct at least 20 mm away from the connection between the plenum and the spigot.
(See figure below)

- Connect the plenum spigot with the flexible duct and secure it in place with a clamp.
- Secure the coupling between the spigot and the flexible duct with insulating tape to avoid leaks.



Apply polyurethane sealant between the terminal filter hood and the ceiling



5) CLEANING THE TERMINAL FILTER HOOD



Before installing the filter clean the interior surfaces of the plenum and frame using a suitable cleanser.

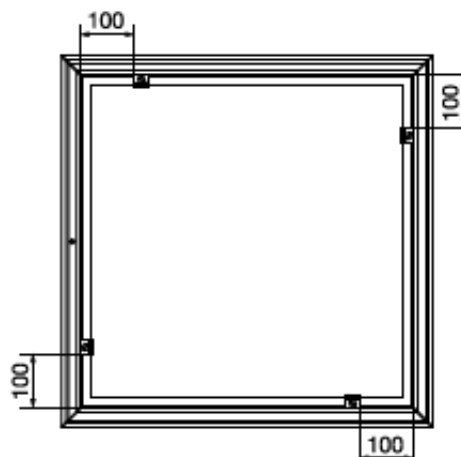
6) FILTER INSTALLATION



We recommend careful visual inspection of the filter before installation.

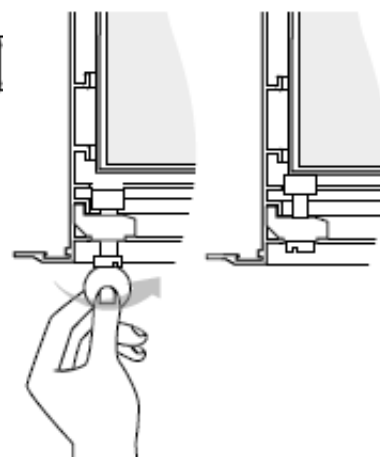
1. Handle the filter carefully by the frame only; do not press on the protective screen of the filter pack.
2. When handling the filter make sure you wear suitable gloves and mask (only when removing used filter); do not use tools that could damage the filter (pliers, scissors, screwdrivers etc.), or if strictly necessary handle them carefully.
3. Pay special attention to the gasket, which must be unbroken before installation.
4. Bring the filter, still in its bag, close to the cabinet.
5. Open the bag and take the filter out, taking care you don't damage its seal.
6. Follow the instructions shown in the below pictures 1 and 2 for the installation of the filter clamps.

(Fig. 1)



Cod. 3 - 42 - 43 - 4

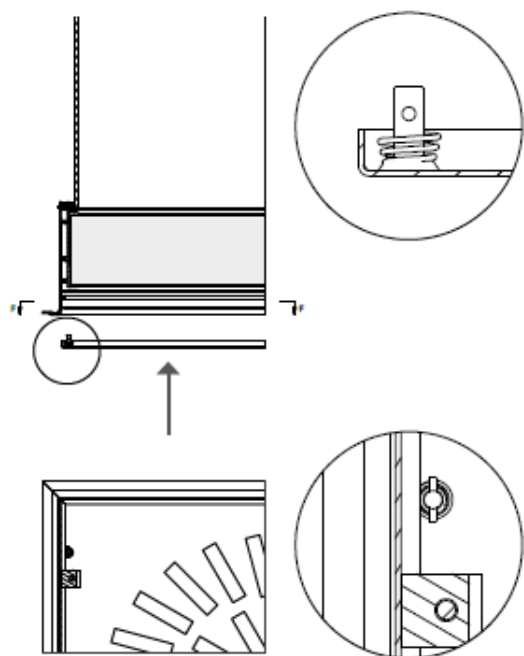
(Fig. 2)



- Place the fixing devices in the groove of the aluminium frame, placing them about 100 mm from the corners (fig. 1)
- Tighten the filter clamps all the way down (fig. 2)

7) FIXING THE PANEL

- *Install the diffuser panel (cleaning it beforehand with a suitable cleanser), just rotating its locking devices by 90° using a screwdriver.*



8) LEAK-TEST



OBJECTIVE

Check for leaks in the filter system and cabinet. This validation test must be performed by qualified personnel.

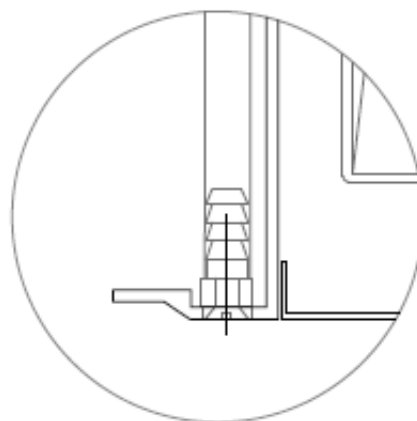
GETTING STARTED

1. *Install the filter as shown in point 5;*
2. *File away the individual certificate which should be kept;*
3. *Supply the cabinet and activate the flow to the room (previously cleaned) until you achieve a stable level of cleanliness in accordance with ISO 14644-4.*

TIPS DURING THE TEST

1. *Make sure the photometer in use has a stable ZERO to avoid false readings;*
2. *If a leak is detected near the perimeter of the system, separate the area being tested from the external environment using screens and check whether the readings do not depend on induction effects (perimeter vortices, Venturi effect).*

Leak test port



Optional tests	Reference in ISO 14644-3:2005			Referenced in
	Principle	Procedure	Apparatus	
Installed filter system leak test	4.2.4	B.6	C.6	ISO 14644-2

