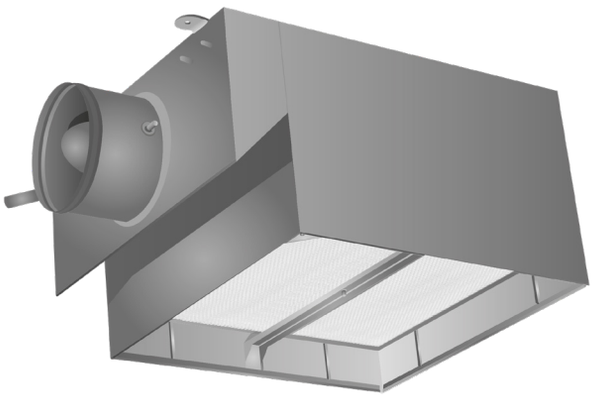
HEPA FILTER BOX

HEPA Filter Box (HFB), main demands of the clean room technology and especially in its pharmaceutical applications is the air-conditioning and accordingly the air quality.

Air distribution is generally made through the HEPA Filter installed to its housing. Therefore, selection and assembling the HEPA Filter to its housing without leakage is very important. HEPA Filter Box consists of 3 main parts, which are the box, filter and the diffuser. HFB has an inlet duct connection port for air inlet at the top or at the sides.

Filters can be chosen according to the room Class from H13 to U17. There are three different type of HEPA Filter Box's surface according to HEPA Filter gasket type which are surface with test groove system, flat surface, and knife edge surface.





Field of Application

HEPA Filter Boxes are widely used across various industries, including pharmaceutical, electronic, optical, food, and chemical sectors. In hospitals, these boxes are crucial for maintaining sterile environments in operating theatres, side rooms, intensive care units, isolation solutions, and other sterile zones. Laboratories also benefit significantly from HEPA Filter Boxes, as they are used in clean zones and working areas to ensure a controlled environment free of particulate contamination.





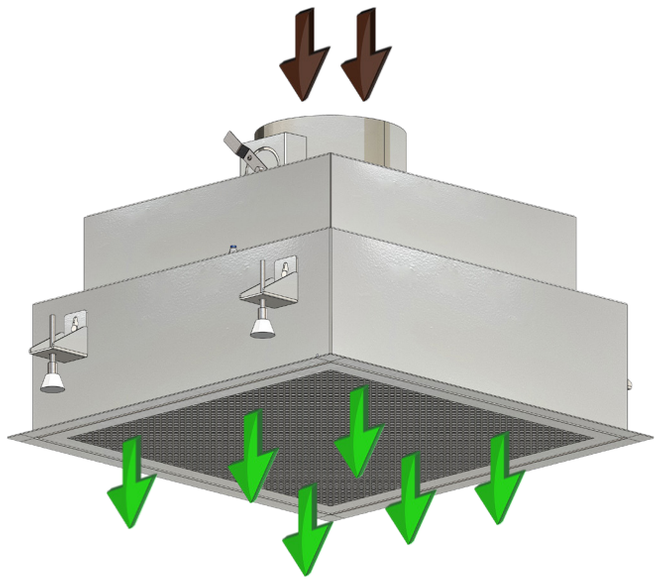


HEPA FILTER BOX

HEPA Filter Box are hanged or placed in different type of suspended ceiling (walkable panel, clip-in, plaster ceiling, etc.) for cleanroom application. Pay attention to tightness between HEPA Filter Box and ceiling type. HEPA filter and air diffuser are assembled into the HEPA Filter Box.

Accessible ports for leakage test and differential pressure drop of filter located on room side of the box.

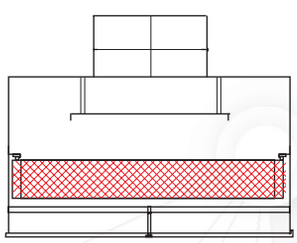
Interconnection components such as springs, stamps, nut bolts, screws required for assembly are also used on this module.



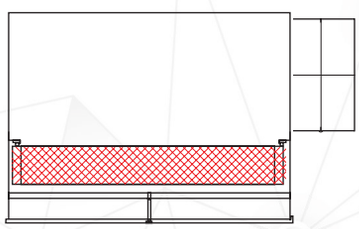
Inlet Options

The inlet ports for our HEPA filter boxes can be configured for top inlet, side inlet, or Z inlet (low ceiling) entry. Depending on the customer's ceiling space and equipment arrangement in the technical area, air can be supplied from the desired direction. Additionally, based on specific customer requirements, the inlets can also be designed in square or rectangular configurations.

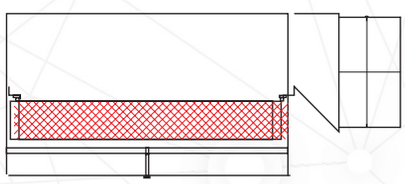
Top Inlet



Side Inlet



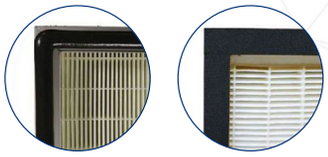
Z Inlet



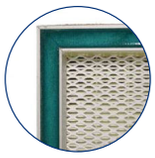
HEPA FILTER BOX

Filter Gasket

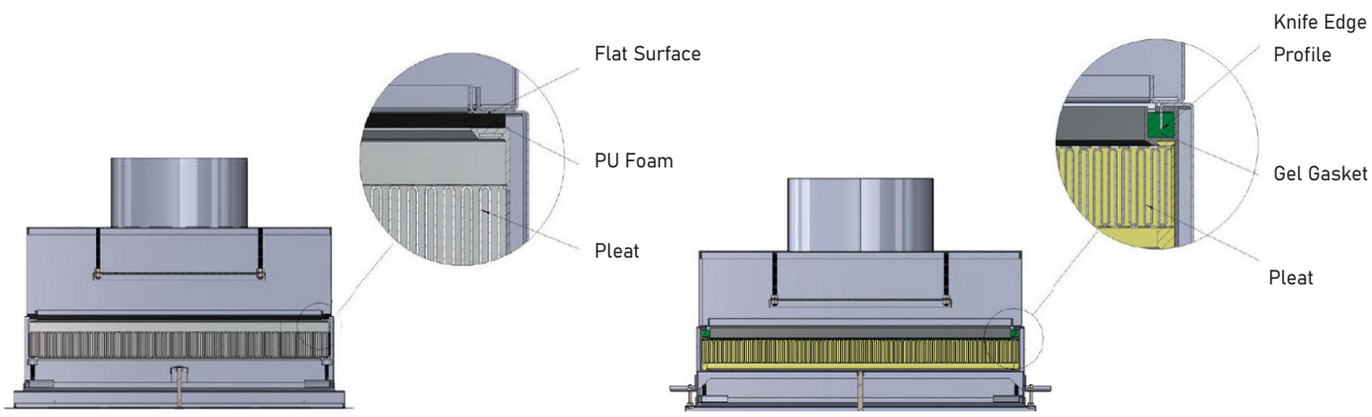
For HEPA filters, three types of gaskets are used depending on the application and the gasket pressure surface of the housing: PU foam, Gel, and EPDM. These gaskets ensure airtightness between the HEPA filter and the HEPA filter box. Selecting the correct gasket type is essential for maintaining a tight seal, which prevents leaks at the filter-box interface. This tight seal ensures that commissioning tests can be performed efficiently without any leakage. Using the appropriate gasket provides a secure seal, which enhances the overall performance and reliability of the filtration system by maintaining proper harmony between the filter and the housing.



PU Foam EPDM Gasket



Gel Gasket

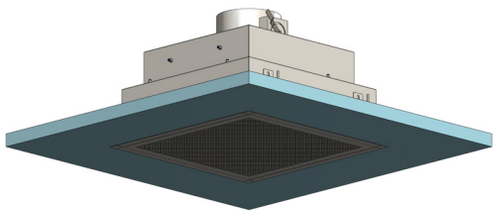


Air Diffusers

Supply air passes through the diffuser and is distributed throughout the room. Depending on the diffuser model, air distribution can be turbulent or homogeneous. Common models include perforated and swirl diffusers. Diffusers can be fixed from four corners or centrally with bolts, or assembled with two hanger pins on one side and locked with two fixing magnets on the other, based on customer request.

Perforated Diffuser

Perforated diffuser is designed to ensures that the conditioned air is distributed homogeneously.



Swirl Diffuser

Swirl diffuser is designed to ensures that the conditioned air is distributed by means of the swirling effect.

