



USER MANUAL

INJ Aerosol Injection Port User Manual for Filtered Diffusers

FFU, LFDC, RFDC, FRFDC

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PRICE[®]

AEROSOL INJECTION PORT USER MANUAL FOR FILTERED DIFFUSERS

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Application Support

Having difficulty installing this product? Price is here to help.

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AEROSOL INJECTION PORT USER MANUAL FOR FILTERED DIFFUSERS

PRODUCT OVERVIEW

Before You Start

Ensure HEPA filter is installed and ductwork is balanced to scheduled flow prior to proceeding.

For HEPA filter installation instructions, refer to the [Room-side Replaceable Filter Quick Start Guide](#) or [Benchtop Removable Filter Quick start guide](#).

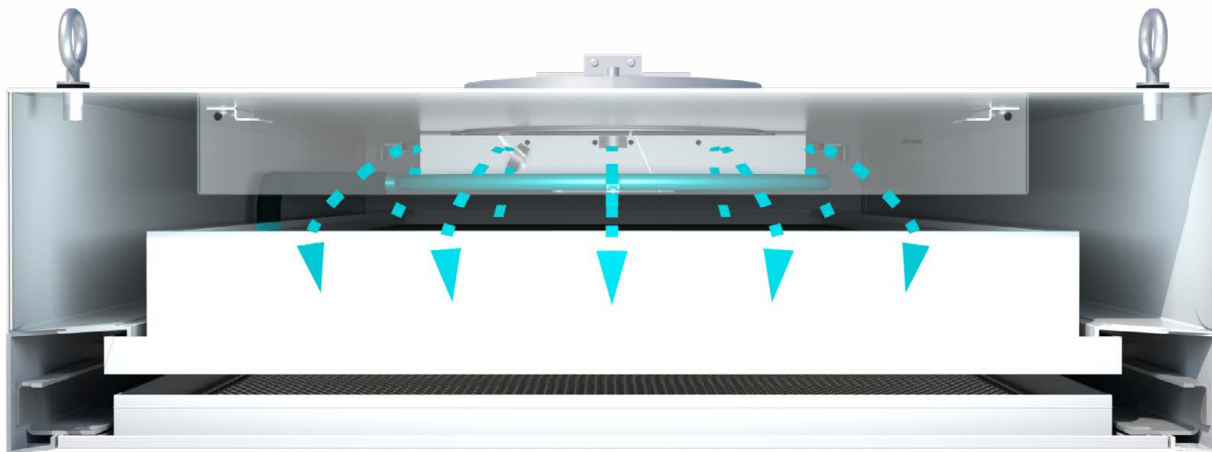
NOTE: Extreme caution should be taken to avoid contact with filter media. Touching filter media may result in filter failure. The filters supplied by Price have been 100% tested and certified by the manufacturer to be free of defects and leaks. Price cannot accept responsibility for damage that occurs after shipment, whether through transit, handling or installation, and will not replace filters under Price standard warranty.

General

This instruction applies to the use of the integrated and remote Aerosol Injection Port (INJ) options for filtered diffusers. It is intended as a guide to assist properly trained and qualified technicians.

Aerosol testing is used to validate filter and diffuser integrity in critical applications including cleanrooms, pharmaceutical compounding rooms and operating rooms. This testing is done by injecting aerosol, typically PAO (polyalphaolefin) above the filter, and subsequently measuring aerosol concentrations below the filter to determine if any filter leakage or bypass has occurred.

Typically filter testing is conducted every time a filter is installed/replaced. In pharmaceutical applications, integrity tests are often required every 6 months of operation. Testing should be conducted after the diffuser and filter have been installed and airflow balanced.



Introduction

This section outlines the various ports used in the aerosol testing process.

Aerosol Sample Static Pressure Port (ASSP)

Every filtered product from Price is supplied with an aerosol sample/static pressure port.

The ASSP is a 1/4" port used for measuring plenum static pressure as well as sampling aerosol concentrations above the filter.

The ASSP is located on the lower knife-edge frame and ships from the factory with a gasketed bolt installed; it can be accessed from the room side by removing the diffuser face.

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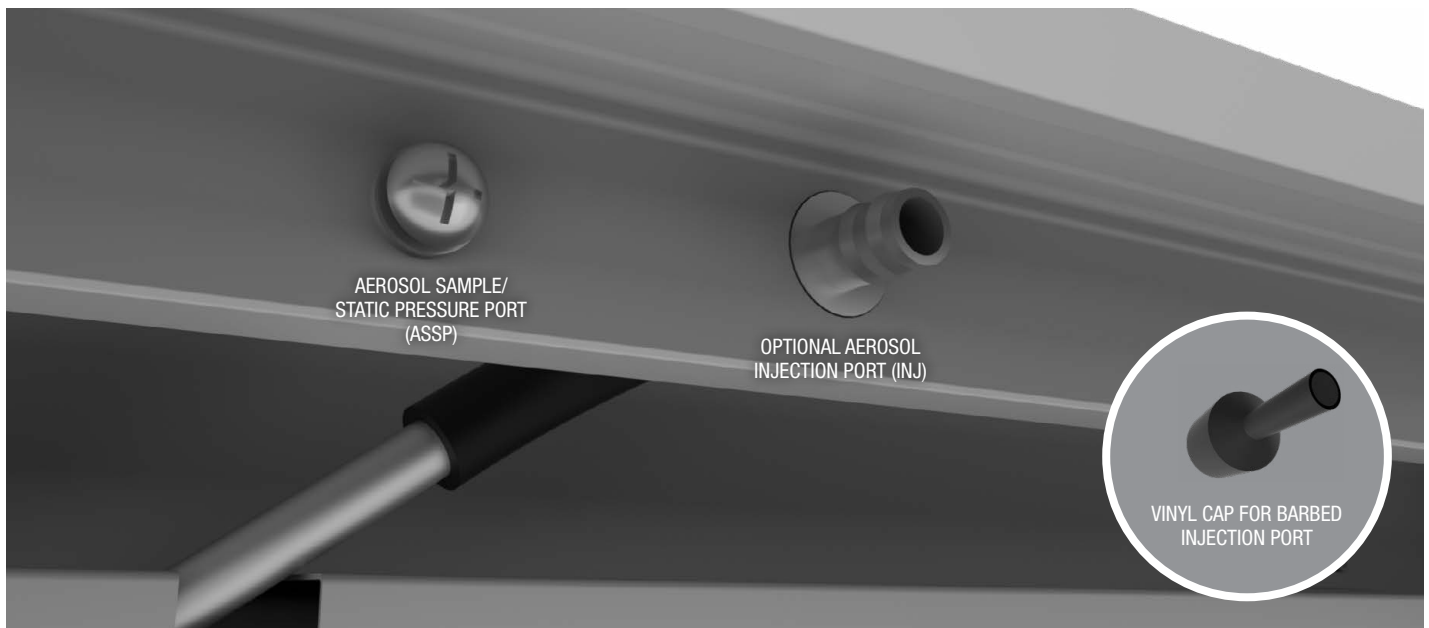
PRODUCT OVERVIEW

Optional Aerosol Injection Port (INJ)

Filtered products can be ordered with an optional aerosol injection port for easier commissioning.

The INJ is a barbed port for 1/2" inner diameter tubing, used to inject aerosol above the filter for aerosol testing.

The aerosol injection port is located next to the static pressure port, and can be accessed from the room-side by removing the diffuser face and the vinyl cap that seals the barbed port.



Optional Remote Aerosol Injection Port (INJ)

If aerosol testing is required on a unit that does not have an injection port, a remote injection port can be used. Remote injection ports are used to retrofit existing units that are not equipped with an integrated injection port, or for convenience and accessibility.

The remote injection port kit includes a panel with up to ten imbedded 3/8" Female NPT ports that can be installed in either a hard-lid or grid ceiling. Tubing run from each port and inserted into the ductwork upstream of each diffuser, allowing aerosol to be injected above the filter.

For instruction on how to install the remote aerosol injection port, please refer to the [INJ Remote Aerosol Injection Port Manual](#).



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TESTING GUIDELINES

Test Procedure

Testing should be carried out by a certified test agency, in accordance with test standard IEST-RP-CC034: HEPA and ULPA Filter Leak Tests. In general, the process is as follows:

Step 1: Release the fasteners and remove the diffuser face.



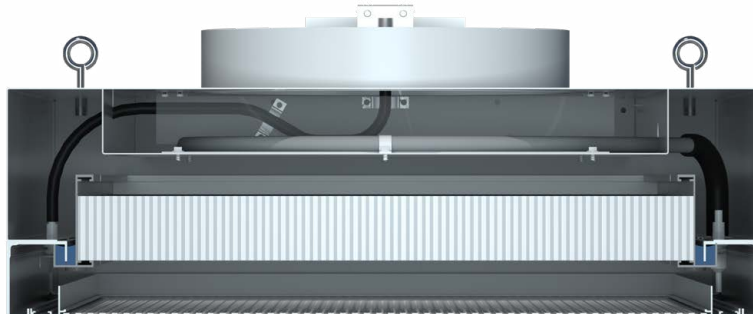
Step 2: Remove the vinyl cap from the injection port, and connect the 1/2" inner diameter tubing from the aerosol generator to the barbed port.



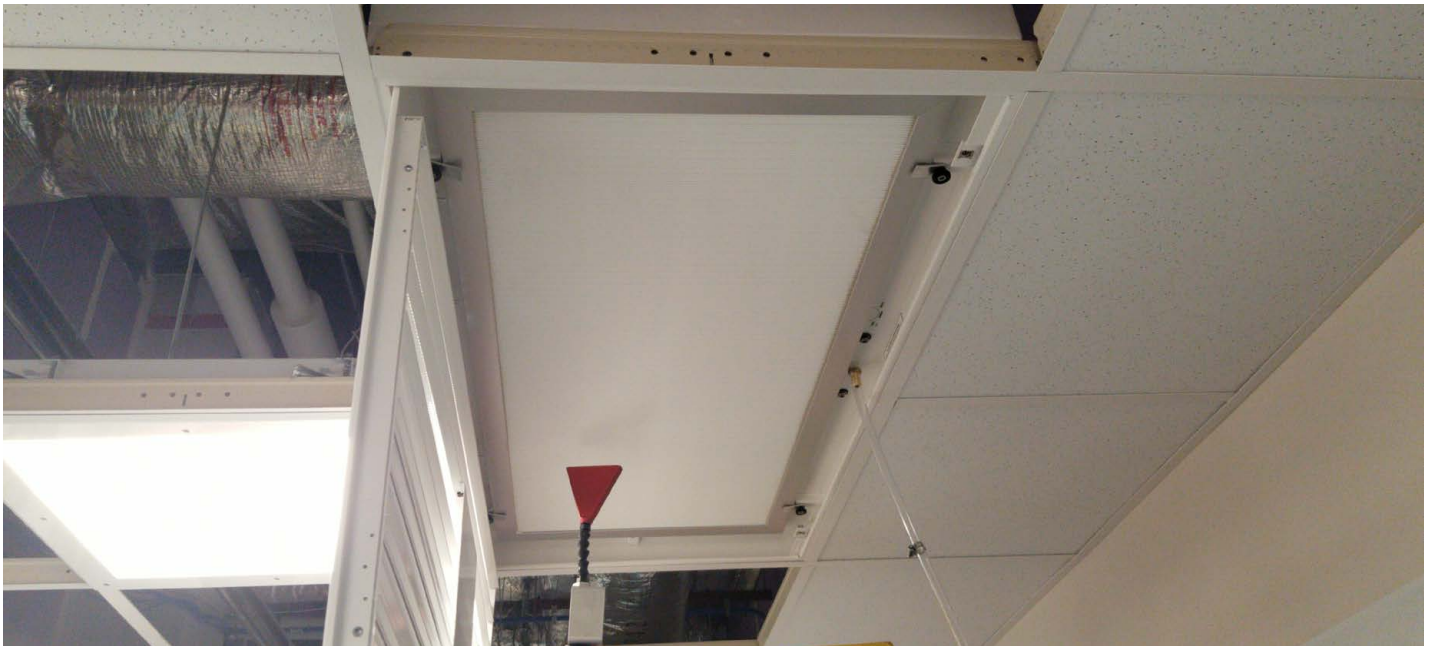
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TESTING GUIDELINES

Step 3: Aerosol concentration upstream of the filter can be sampled through the static pressure aerosol sample port. To access the port remove the plug. Replace the plug after sampling.



Step 4: Scan the filter and diffuser casing to verify overall unit integrity. If leakage in excess of the approved limit is detected, follow the diffuser and filter vendor's recommendations for troubleshooting and field repairs if needed.



Step 5: Disconnect the test equipment, reinstall the plug in the aerosol injection port and reinstall the diffuser face. If the safety cables were disconnected when removing the face, they must be reattached. Make sure all fasteners are firmly latched.



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