

HL-DA Specifications

Duct filtration unit

1. General

This description sets out the requirements for the design, manufacture, supply and installation of a filter unit for duct networks, intended for the installation of one or more filtration levels. The system must meet the highest standards in terms of air purity and flexibility.

2. Application

The filter unit is designed to be installed in duct networks, where one or more filter levels can be fitted.

The system is suitable for various applications where air cleanliness is paramount.

3. Materials and construction

The unit is made of one-piece galvanised steel for optimum durability and robustness.

On both sides (upstream/downstream), a pre-drilled flange 30 mm wide is provided to facilitate connection to the duct network.

A hinged side access door is fitted for easy maintenance, with sealing provided by star knobs and a gasket.

A suitable fastening system is provided for each type of filter: slide system for pre-filters, cam clamping system for high-efficiency filters, fully welded or one-piece seal for HEPA filters, and heavy-duty construction for activated carbon cartridges.

Pressure taps are provided for each filter section (except for activated carbon filters) in order to measure the pressure drop.

4. Functionality and performance

The assembly complies with class C according to standard EN 1751 and class L1 according to standard EN 1886.

The standard mechanical resistance is +/- 1500 Pa.

Various configurations are possible, allowing for the installation of 1 to 3 filter levels: pre-filter, fine filter, activated carbon filter, and HEPA filter.

For high flow rates, it is possible to install up to 9 filters per filter level (3 high x 3 wide).

5. Options

- AISI 304L or AISI 316L stainless steel construction
- Epoxy paint finish, RAL colour alternatives
- Flange hole pattern on plan
- Round duct connection with flat plate up to size H2L2

- Conical round/square reducer with connection
- Sealed control and/or shut-off register (class 3 or class 4 according to EN 1751).
- Rain cover with anti-bird screen
- Diamond tipped roof for outdoor installation
- Support legs
- Earthing connection for ATEX zone
- Larger size than H3L3
- Special design according to the customer's specification
- Door on the left (utilities)
- Vertical air flow unit

6. Quality assurance

All components and the installation must comply with the standards and directives in force for air handling systems.

Full documentation of the installation, including test results, must be provided.

This technical description provides a comprehensive basis for specifying a versatile and reliable filtration unit for duct networks.

