

PRODUCT OVERVIEW

- Housing available in 14GA Galvanized, T304 or T316 stainless steel
- Optional 2", 4" pre-filter section available.
- Designed for filters that use gasket or fluid seals.
- One step seals all filters
- 2 doors for easy access for units 4 wide or greater.
- No clips or extra gasketing necessary
- Flange for installation to ductwork
- Custom made available to meet end user requirements
- Ideal for use in
 - Hospitals
 - Semiconductor
 - Food Processing
 - Pharmaceutical
 - Biotechnology
 - Buildings
 - Replacing any existing HEPA housing.



AEROSTAR HEPA CRANK-SEAL HOUSING

WHY SPECIFY THE HEPA CRANK-SEAL HOUSING?

- Premium multistage unit designed to hold HEPA filters in 99.97% and 99.99% efficiency at 0.3-micron size particles with either a gasket or fluid seal
- The Crank-Seal design provides a consistent compression over the periphery of the HEPA filter, assuring a leak free seal between the gaskets or the gel seal on the filter.
- Optional prefilter section is available to accommodate 2" or 4" prefilters. Standard housing depth is 21-1/2" for HEPA filters only, 27" with 2" or 4" pre-filters.
- Horizontal trays on the bottom and top push the filter against the sealing surface on gasket seal.
- Locking mechanism moves the trays with a 5/8" drive bolt linkage system. On gel seal housings there are formed angles that push the filter against the housing knife edge. The angles are moved by a mechanical lever system operable with the door open.
- The one-step Crank-Seal makes changing the filters easy, minimizing downtime and labor cost.
- For housings that are wider than 24", center stability bars have been added for rigidity.
- To prevent contamination and air by-pass, the housing is fully seam welded with a broken channel for the filters instead of an aluminum extrusion
- Studs and aluminum knurl knobs seal the door. The door is fitted with interior gasket to ensure there is no air bypass around the filters
- A unique door hinge allows the door to either remain on its hinges or be completely removed.
- Custom or drilled flanges are available to improve ease of installation



HEPA CRANK-SEAL HOUSING

PERFORMANCE DATA

FILTER HOUSING CAPACITY (CFM)*								
HEIGHT	WIDTH							
	.5	1	1.5	2	2.5	3	3.5	4
.5	—	1000	—	2000	—	3000	—	4000
1	1000	2000	3000	4000	5000	6000	7500	8000
1.5	—	3000	4500	6000	7500	9000	10500	12000
2	2000	4000	6000	8000	10000	12000	14000	16000
2.5	—	5000	7500	10000	12500	15000	17500	20000
3	3000	6000	9000	12000	15000	18000	21000	24000

* Flow above based on 500 fpm duct velocity. Systems may be designed for 600 fpm when using FG HV Series HEPA

TO DETERMINE HOUSING SIZE: Find the cfm you are filtering and go to the left to the height column. Write down the number. Then go from the cfm up to the width row and write down that number. Example 12000 cfm = 3 x 2. Note there may be more than one size for most cfm; choose the one that will best fit your space.

TO DETERMINE NUMBER OF FILTERS: Example housing is 3 h x 2 w. First determine number of filters in a row (width). Example: Width = 2 is 2 - 24x24x2 HEPA filters. Second, multiply each size by the number of rows (height). Example: Height = 3. There are 6-24x24x1.5 HEPA filters in this configuration.

OPTIONS

- Weather Cover
- 14 gauge aluminized steel
- T304/T316 stainless steel
- Double wall insulation
- Vertical flow application
- Bottom Access
- Drilled or custom flanged housing
- Static / DOP port(s)
- Magnehelic / Photohelic gauges
- High temperature gasket
- Lifting lugs
- Transitions

ENGINEERING SPECIFICATIONS

1.0 Filter Housing

- 1.1 HEPA filter housing shall be Aerostar HEPA Crank-Seal Side Access Housing as manufactured by Filtration Group.
- 1.2 Housing shall be factory assembled and capable of accepting filters without the use of holding frames or clips.
- 1.3 Housing shall be suitable for operation between +/- 10" w.g.
- 1.4 To prevent contamination and air by-pass housing shall be fully seam welded with a broken channel for the filters instead of an aluminum extrusion.

2.0 Construction

- 2.1 Housing shall be constructed in 14 gauge galvanized steel.
- 2.2 Panels and posts shall be permanently fastened to maintain tolerances.
- 2.3 There shall be a 1-1/2" flange around the air entering and leaving side to accommodate connection to ductwork and air handling equipment.
- 2.5 No holes shall be drilled or punched to assure leak-free field installation

3.0 Locking Mechanism

- 3.1 The Crank-Seal locking mechanism shall secure a leak free seal between filters and housing by an evenly distributed pressure of 1,400 lbs per square inch (600 foot pounds per filter).
- 3.2 The Crank-Seal mechanism shall be on the upstream side of the HEPA filters, to seal the filters against a smooth sealing surface.
- 3.3 The Crank-Seal mechanism shall be constructed in 12 gauge galvanized steel. For fluid seal filters the locking mechanism shall distribute an even pressure to guarantee a leak free seal between the knife edge and the fluid seal.

4.0 Doors

- 4.1 Doors are one side up to 3 filters wide. Access side to be identified on plans for units 4 wide or larger access from both sides is required.
- 4.2 Hand torqued door latches shall provide a positive seal between the housing and the gasketing on the door.
- 4.3 A unique door hinge shall allow the door to either remain on its hinges or be completely removed.