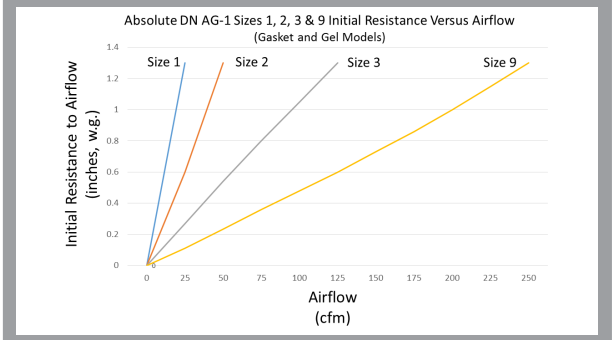
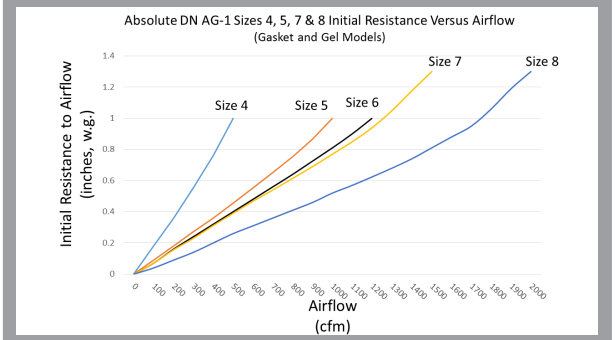
Absolute® DN

ASME AG-1 Sizes 2, 3, 4, 5, 6, 7 and Size 9 HEPA Filters

Absolute filter integrity in compliance with ASME AG-1





Camfil nuclear-qualified AG-1 Absolute DN HEPA filters are manufactured per the ASME AG-1[1] Code and are UL-586[2] listed. They are manufactured from the highest quality components as prescribed in Section FC, Article 3000 of the ASME AG-1 code. Each design has been qualified per the requirements of Section FC, Article 5000. Every filter is manufactured under an audited and approved ASME NQA-1 Quality Program. Camfil provides a Certificate of Conformance as specified in Article FC-8200 of ASME AG-1.

Each nuclear grade AG-1 Absolute filter has a tested efficiency of not less than 99.97% on 0.3 micron size particles at 100% of rated airflow and at 20% of rated airflow. The label attached to each filter furnishes individual filter test results.

Every Camfil nuclear grade AG-1 Absolute filter:

- Includes media qualified per ASME AG-1, Appendix FC-I.
- Is highly resistant to moisture and capable of operation to 99% relative humidity.
- Uses a fire-retardant phosphorus-free polyurethane adhesive sealant bonding the frame to the media pack.
- Has a 14-gauge ASTM[3] A-240 Type 304 stainless steel enclosing frame.
- Includes expanded and flattened ¼" pattern face guards on the air-entering and air-exiting sides of each media pack fabricated from 22-gauge ASTM A-240 Type 304 stainless steel.
- All sizes are available in gasket seal (in accordance with ASME AG-1, FC-3121) and gel seal versions (in accordance with ASME AG-1, FC-3122) to ensure a leak-free filter to housing or filter to frame seal.
- Gel seal models may include optional filter extraction clips to accommodate filter change in bag-in/bag-out containment systems.
- May be operated at continuous temperature of up to 250ºF (121ºC).
- Is labeled as specified in ASME AG-1, FC-9000 and in most recent DOE[4] STD-3020.
- Includes special crating as described by the most recent version of DOE STD-3020. These shipping crates are fabricated from wood components. The removable top lid and front are secured with removable fasteners for ease of removal and repackaging.

The Camfil AG-1 Absolute DN's integrity ensures continued protection of hazardous environments, and when changed in accordance with recognized procedures, protects the health of filter service personnel.

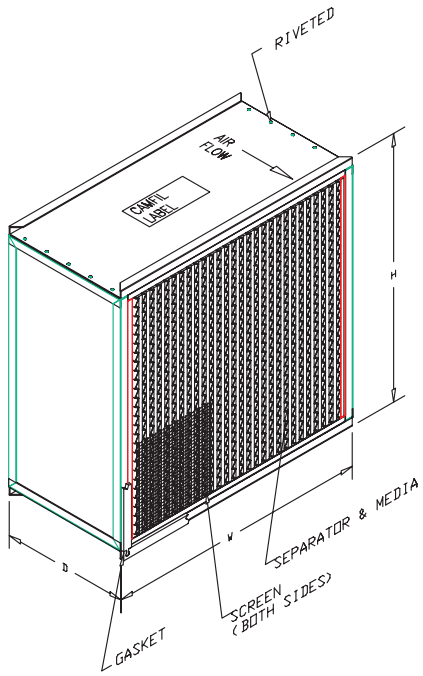
[1] ASME - American Society of Mechanical Engineers
[2] UL - Underwriters Laboratories
[3] ASTM - American Society for Testing and Materials
[4] DOE - Department of Energy

Absolute® DN

ASME AG-1 Sizes 2, 3, 4, 5, 6, 7 and Size 9 HEPA Filters

Performance

ASME AG-1 Size Designation	Seal (Type/Location) (See Note 3 below)	Nominal Filter Size Height (H) x Width (W) x Depth (D) (inches) (metric dimensions)	Airflow Capacity (cfm) (m^3/hr)	Maximum Initial Resistance @ Capacity (inches, w.g.) (pascals)	Effective Media Area (square feet) (m^2)
7	Gel/Upstream Gel/Downstream Gasket/Upstream Gasket/Downstream	24 x 24 x 11-1/2 (610 mm x 610 mm x 292 mm)	1500 (2550)	1.3 (324)	302 (28)
5	Gel/Upstream Gel/Downstream Gasket/Upstream Gasket/Downstream	24 x 24 x 11-1/2 (610 mm x 610 mm x 292 mm)	1000 (1700)	1.0 (250)	212 (19.7)
4	Gel/Upstream Gel/Downstream Gasket/Upstream Gasket/Downstream	24 x 24 x 5-7/8 (610 mm x 610 mm x 152 mm)	500 (850)	1.0 (250)	105 (9.75)
Contact factory for performance values on sizes 2, 3, 6 and 9.					



DATA NOTES
1. Rated airflow in ACFM based on tests indoors at atmospheric pressure.
2. Gasket seal shown to the right, gel seal version not shown.
3. All gel seal filters listed in the above table have extraction clips included.
4. Minimum efficiency is 99.97% on particles 0.3 micron in size.
5. Maximum continuous operating temperature 250ºF (121ºC).
6. Recommended final resistance is 4.0˝ w.g.
7. ASME AG-1 Absolute filters meet all applicable requirements as published under in the following documents; ASME AG-1, NQA-1, N509, and UL 586.
8. Camfil nuclear grade HEPA filters have been qualified by the Edgewood Chemical Biological Center to meet the performance requirements of ASME AG-1 Sections FC-4000 and FC-5000, with the exceptions of FC-5150 (Resistance to Heated Air) and FC-5160 (Spot Flame Resistance) which have been qualified by the UL 586 listing of the product.
9. For complete construction components please contact a factory representative for sales submittal drawings.

Camfil AG-1 Air Filter Specification

1.0 General

1.1 - Air filters shall be Camfil Model _____ ASME AG-1 qualified and UL 586 listed HEPA air filters with ASME AG-1, Appendix FC-I qualified HEPA media in the ASME AG-1, FC-1121 Type A pleat configuration, polyurethane media-to-frame sealant, Type 304 stainless steel enclosing frame, media pack face guards and a filter face seal to ensure filter seal integrity.

1.2 - Overall dimensions shall be 8" high by 8" wide by 5⅞" deep for AG-1 Size 2 filters; 12" high by 12" wide by 5⅞" deep for AG-1 Size 3 filters; 24" high by 24" wide by 5⅞" deep for AG-1 Size 4 filters; 24" high by 24" wide by 11½" deep for AG-1 Size 5, 6 and 7 filters; 12" high by 12" wide by 11½" deep for AG-1 Size 9 filters.

2.0 Construction

2.1 - The media shall be manufactured from waterproof borosilicate glass micro fibers and a synthetic binder formed into a continuous flat sheet with physical and functional properties. The test results shall be traceable to manufacturing lot number, roll number and the serial number of the final product. The media shall be qualified in accordance with ASME AG-1, Appendix FC-I.

2.2 - The media pack shall be potted into the enclosing frame through the use of a polyurethane sealant.

2.3 - The enclosing frame shall be of 14-gauge Type 304 stainless steel and bonded to the media pack to form a rugged and durable enclosure. Overall dimensional tolerance shall be +0/ - 1/8˝ on the face dimensions, +1/16˝ / - 0 on the depth dimension. The face shall be square within a tolerance of 1/8˝ when measured diagonally across the corners of both faces.

2.4 - The assembled filter shall include media pack face guards constructed of expanded and flattened ¼" pattern made from 22-gauge ASTM A-240 Type 304 stainless steel. The face guards shall be on the air-entering and air-exiting sides of the media pack.

2.5 - For gasket seal applications, a ¼" x $^{11}/_{16}$" epichlorohydrin gasket, in accordance ASME AG-1 FC-3121, will be applied to the upstream or downstream face flange. For Gelatinous seal applications, the filter shall include a continuous channel located upstream or downstream and filled with silicone gel in accordance with ASME AG-1, FC-3122. Four filter extraction clips shall be provided, (if specified), for filters installed in a bag-in/bag-out containment housing.

3.0 Performance

3.1 - The filter shall be designed to meet the requirements of ASME AG-1, Section FC-4000 and qualified in accordance with ASME AG-1, Section FC-5000.

3.2 - The filter shall be listed by Underwriters Laboratories as UL 586 and labeled accordingly.

3.3 - The filter shall be capable of operating at 250ºF (121ºC) continuous.

3.4 - Manufacturer shall supply a Certificate of Conformance with each filter detailing manufacturers name, model number, unique filter serial number, resistance to airflow at rated capacity, percent penetration on particles 0.3 micron in size at 100% of rated airflow and at 20% of rated airflow. Filter rated less than 125 cfm shall be tested at 100% or rated airflow only. The filter shall be labeled as specified in ASME AG-1, FC-9000 and in the most recent version of DOE STD 3020.

3.5 - Finished filters are securely packaged and are crated. Crating shall be constructed as described by the most recent version of DOE STD 3020. These shipping crates shall be fabricated from wood components. The removable top lid and front shall be secured with removable fasteners for ease of removal and repackaging.

[1] Gelatinous seal of Polydimethylsiloxane.

NQA-1 ASME NQA-1 QUALITY PROGRAM
CERTIFIED QUALITY SYSTEM ISO 9001:2015

For detailed specifications please consult your local Camfil Distributor or Representative or Absolute DN.
Camfil has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

Camfil | 1 North Corporate Drive, Riverdale, NJ 07457 | Tel: (973) 616-7300