

General

Flanders Pureflo-GS Gel Seal Roomside Replaceable Terminal HEPA/ULPA Filter Modules are lightweight low profile ducted units with gel seal minipleat filter packs. They are designed to provide unidirectional airflow when installed in drywall or tee-bar ceilings. Pureflo Gel Seal modules are available in two sizes: nominal 24 in. x 24 in. and 24 in. x 48 in. with either nominal 10 in. or 12 in. diameter inlet collars and in two particle size efficiencies: 99.99% on 0.3 micron and 99.9995% on 0.12 micron particles. Every filter is scan-tested after assembly to meet or exceed IEST RP-1 requirements for a Type C or F filter.

Construction

The state-of-the-art minipleat filter pack is sealed in an anodized extruded aluminum frame. The sides of the filter pack contain an integral extruded channel that holds Cleanroom quality sealing gel. The filter's extruded aluminum center divider is furnished with ports for in-room damper adjustment and measurement of challenge aerosol. The one piece hood/inlet collar is made of spun aluminum and the inlet collar is dimpled to secure the flexduct retaining strap. A 20 ga. expanded steel white powder coated face grille protects the media pack.

Installation and Application

Pureflo Gel Seal Terminal Filter Modules may be used in cleanrooms for biotech and pharmaceutical manufacturing; for the fabrication of medical devices; and in other applications requiring ultraclean air and a roomside replaceable filter element. Clips on the module's top four

corners can be used to secure seismic restraint wires. The standard face velocity range of 70 to 110 fpm is easily adjusted from the roomside by a screwdriver-operated damper. Static pressure and challenge aerosol measurements can be taken through a separate roomside port. Standard construction allows the modules to be operated at a pressure drop of 2.0 in. w.g. High efficiency prefilters with a minimum rating of 80-85% per ASHRAE Standard 52.1 are recommended

Options

Pureflo Gel Seal Modules are available with either nominal 10 in. or 12 in. diameter inlet collars. One inch thick vinyl backed fiberglass insulation applied to the top and sides of the module is also available.

Physical Data

Media: Water-resistant microfine fiberglass

Filter Pack: Separatorless minipleat, 2.1 in.(53 mm)

Gel Seal: Silicone base

Media Sealant: Flame Retardant Polyurethane

Filter Frame: Anodized extruded aluminum with integral gel filled channel

Hood: One-piece aluminum with spun inlet collar

Damper: Perforated aluminum, 14 ga.

Protective Grille: White powdercoat 20 ga. expanded steel

Divider: Extruded aluminum rectangular tube

Important Features

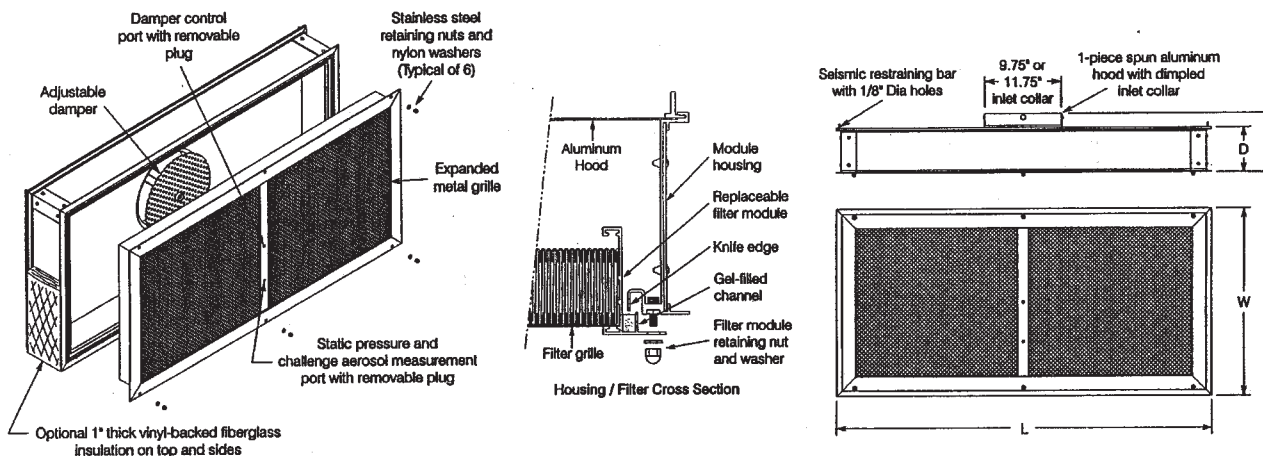
- Gel and knife edge filter seal for positive leak-tightness
- Filters replaceable from the room side
- Scan-tested after assembly to meet or exceed IEST RP-1 requirements for Type C and F filters
- Minipleat filter pack for a lightweight and low profile design
- In-room air flow damper adjustment and challenge aerosol ports



Particle Size Efficiency %	Model Number	Actual Dimensions				CFM Capacity @ Gross Face Velocity fpm		
		L	W	H	D	70	90	110
99.99 on	PF-GS493-2424	23-5/8	23.63	7.75	5.75	280	360	440
0.30 micron	PF-GS493-2448	47-5/8	23.63	7.75	5.75	560	720	880
Clean Filter Resistance (in. w.g.)						.49	.63	.77
99.9995 on	PF-GS591-2424	23-5/8	23.63	7.75	5.75	280	360	440
0.12 micron	PF-GS591-2448	47-5/8	23.63	7.75	5.75	560	720	880
Clean Filter Resistance (in. w.g.)						.65	.83	1.00

Performance Data Notes:

1. *Insert suffix 10 (nominal 10 in. collar) or 12 (nominal 12 in. collar). Add "G" to suffix to designate the insulation option.
2. Tolerances: L & W: +0, -.13 in. squareness with in .13 in.
3. Maximum operating conditions: 150F, 100% RH.
4. Modules are designed to UL 900 Class 2 requirements.
5. Installed Weight : 2424 - 44 lb; 2448 - 64 lb
6. Values shown may be averages or estimates typical of product styles. Contact factory for test data on specific models.



Guide Specifications

1.0 General

- 1.1 Terminal HEPA/ULPA Filter Modules shall be Pureflo-GS Gel Seal as manufactured by Flanders Corporation.
- 1.2 Module sizes, efficiencies and capacities shall be as scheduled on the drawings.

2.0 Module Construction

- 2.1 The module filter pack shall be 2.2 in. (53 mm) thick and constructed of water-laid microfine fiberglass media containing a water-repellent binder. The media shall be formed into closely-spaced pleats held in position by dimple pleat design.
- 2.2 The filter pack shall be polyurethane-sealed into a clearcoat-anodized extruded aluminum frame and rectangular tube section center divider.
- 2.3 The filter frame shall include an integral gel-filled channel that shall mate with a knife edge integral with an anodized aluminum housing.
- 2.4 Module top/inlet collar shall be one-piece aluminum.

- 2.5 The protective face grille shall be 26 ga. expanded steel finished in white powdercoat paint.
- 2.6 Provide an airflow damper adjustable from the room-side and accessible through a port with a removable plug located in the center divider.
- 2.7 Provide a separate port in the center divider that is open to the inlet side of the filter for measurement of static pressure and challenge aerosol concentration. The port shall be fitted with a removable plug.

3.0 Performance

- 3.1 Initial resistance shall not exceed the scheduled values.
- 3.2 The airflow damper shall be capable of regulating the module face velocity from 70 fpm to 110 fpm.
- 3.3 The filter pack shall be replaceable from the roomside without disturbing the module housing.



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