

Vaporclean

The Flanders Vaporclean vapor phase adsorbers are designed for removal of molecular contaminants at low concentration levels while utilizing the proven technology of dry processed carbon composite media, (DPCC). The adsorbers provide high efficiency removal of multiple contaminants for applications within museums, archive storage facilities, airports and semiconductor fabrication facilities.

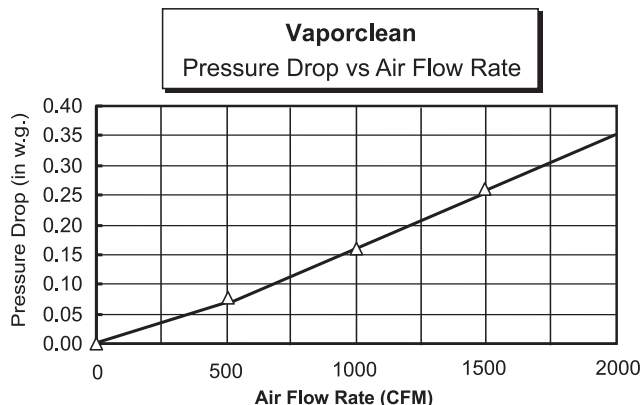
Technical Description

The carbon media is manufactured with a dry processed carbon composite of ultrafine 30 x 50 mesh activated carbon with a minimum carbon tetrachloride activity of 90% per ASTM D-3467. The high efficiency carbon granules are thermally bonded to polyester nonwoven bicomponent fibers. The pleated media pack is contained within a 24 ga corrosion resistant steel casing and bonded with a polyimide hot melt adhesive to maintain rigidity and eliminate air bypass. Pleat spacing and alignment is maintained with high impact polystyrene plastic separators installed on both air entering and leaving sides.

Product Options

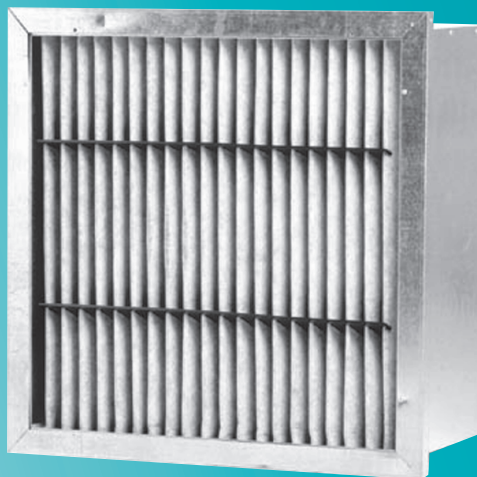
The Vaporclean adsorbers are available with five contaminant specific dry processed carbon composites.

DPCC	Application
1501	Effective removal of gas mixtures consisting of aldehyde, acid gases and hydrocarbons.
1076	Effective removal of ozone, hydrocarbons & volatile organic
1073	Effective removal of acid gases such as SO ₂ and NO ₂ .
1209	Multipurpose blend for both alkaline and acid gases.
1090	Effective removal of alkaline gases such as ammonia and other light organic ammine compounds.



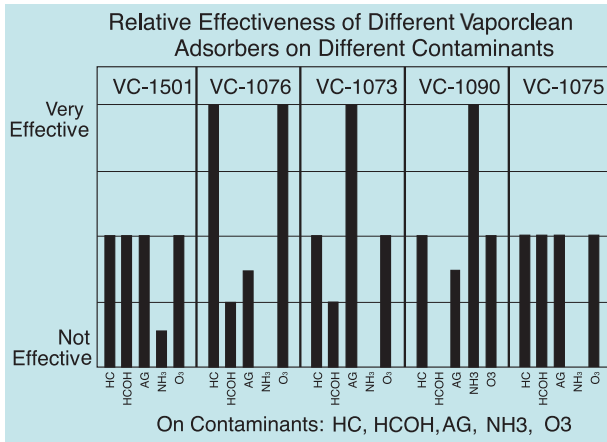
Important Features

- Maximized carbon surface area
- Increased efficiency and capacity
- Low initial static pressure
- Consistent carbon distribution
- Non-dusting media



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Contaminant Matching

Match the Vaporclean media type to the contaminant of concern.

HC	Hydrocarbons
HCOH	Formaldehyde
AG	Acid Gases
NH ₃	Ammonia
O ₃	Ozone

Application Media

Animal Odors	1090
Diesel Exhaust	1501
Cooking Odors	1501
Museums	1073
Sewer Odors	1075

Sample Model Number

VC | 1501 | 17 | 01 | 2424 | GD

Vaporclean Media type 24 ga Frame Style Size Gasket

VC-1501-17-01-2424-GD

Represents a Vaporclean, 24 ga corrosion resistant steel frame, single header style, gasketed downstream, with 1501 media. Actual filter size is 23-3/8 x 23-3/8 x 11-1/2"

NOTE:

- The 17-01 indicates a header style filter and 17-00 indicates a box style filter. Other frame materials, frame styles and sizes are available. Consult the factory.
- Maximum operating temperature is 120°F.
- Frame Style: 01 for Single Header or 00 for Box Style.

Vaporclean Performance

The pressure drop of the Vaporclean is 0.35 inch w.g. at a face velocity of 500 fpm. The initial efficiency of the adsorber under the following conditions shall be met.

Contaminant	Challenge Concentration	Efficiency	Capacity @ 50% Efficiency
Toluene	25 ppm	>90%	560 grams
SO ₂	30 ppm	>90%	60 grams
NO ₂	5 ppm	>70%	100 grams
Formaldehyde	500 ppb	>80%	4 grams

Guide Specifications

1.0 Products

- Pleated High Efficiency gas phase air filter shall be the VaporClean as manufactured by Flanders.
- Model numbers and capacities of the gas phase air filter, particulate pre-filters and holding frames or housings shall be as specified or as shown on the drawings.

2.0 Construction

- VaporClean filter shall be constructed of pleated high efficiency carbon filled non-woven polyester. Filters shall be pleated 10-5/8" deep and have approximately 22-24 pleats and 8-10 lbs. of applicable carbon.
- Filter pack shall be separated and supported by plastic horizontal pleat fingers.
- Filter frame shall be box or header style constructed of a rigid 24 gauge galvanized steel.

- The filter element shall be sealed to the frame on all (4) sides utilizing a hot melt sealant.
- Each filter shall be sealed in a polyethylene bag before being placed in its shipping carton.

3.0 Performance

- Activated carbon media shall be virgin coconut shell base, minimum 80% CTC activity by the ASTM D-3467 test method, minimum apparent density of 0.49 g/mL, minimum hardness of 97 by the ASTM D-3802 method and a minimum surface area of 1100m²/g by the N₂ BET method.
- The VC-1076-16-01-2424-GD model shall contain no less than 8 lbs. of activated carbon. At 2000 cfm (0.94 m³/s) it shall have an airflow resistance no greater than 0.60 inch w.g. (0.12 kPa) and a residence time no less than 0.030 seconds.



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