Purolator®

High Efficiency Barrier Filters

For Turbomachinery Air Intake Systems
90-95% and 60-65% efficiencies

Servacell VA GT

Servacell GT

Protect Sensitive Turbomachinery

- **Gas Turbines**
- **Compressors**
- **Turbocharged Engines**
- **Fans, Blowers**

Servacell VA GT

High Efficiency, High Capacity Barrier Filters
Mini-Pleat Media Pack Construction

Best Value for:

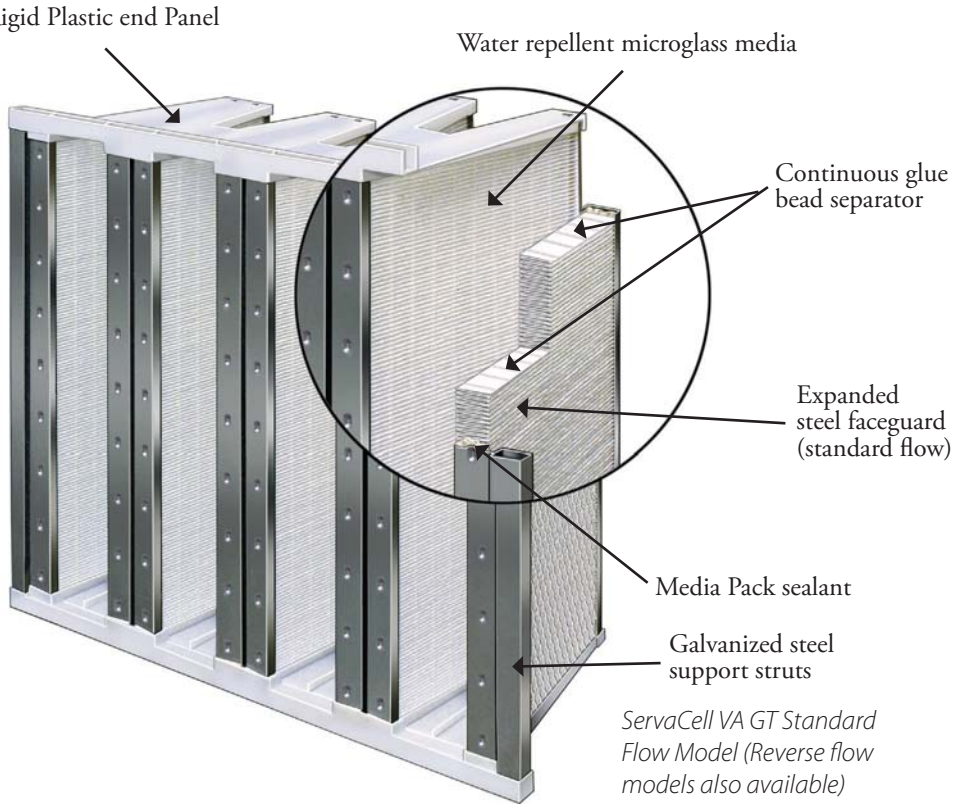
- **Durability**
- **Low Resistance**
- **Long Service Life**

Lowest Operating Resistance Produces Enormous Energy Cost Savings

Filter resistance has a significant impact on the power cost associated with operating a gas turbine. Servacell VA GT has the lowest pressure drop of any high efficiency barrier filter which translates to thousands of dollars in energy cost savings.

ServaCell VA GT Resistance Advantages (In. W.G.)	*Annual Energy Cost Savings
.20"	$61,320
.30"	$91,980
.50"	$153,300

* 100 MW turbine, $.07 per KWH, 24-7 operation



ServaCell VA GT Standard Flow Model (Reverse flow models also available)

Compare Design and Construction of the SevaCell VA GT for meeting the demanding requirements of High Efficiency Barrier Filters

Design Feature	ServaCell VA GT	Performance Benefit
Mini-Pleat Media Packs (Continuous glue bead separators, 8 packs per filter)	Maximum media area, High ratio of media to filter face area.	Low resistance. Low energy cost. Low operating cost. Maximum power generation yield
Dual Density Media	Depth loading of Media	High dust holding capacity. Long service life. Low operating cost.
Water Repellent Binder	Unaffected by intermittent exposure to humidity, moisture.	Durability, reliability in wet operating conditions.
Pleat Packs Sealed to End Panels, Support Struts	Prevents leakage	Contaminant free inlet air. Prevents fouling, erosion of blades.
Adhesive bonded/ Mechanical Fastening of Components	Totally unitized construc-tion	High burst strength - up to 30" W.G.
Expanded Metal Faceguards on Downstream Side of each pleat Pack	Supports media packs	Maintains media pack structural integrity
No Rivets or Screws	No loose parts to pen-etrate downstream	Eliminates risk of serious equipment damage

Prevent Fouling and Erosion of Turbine blades

Severely damaged turbine blades seriously affect power output.

ServaCell VA GT and ServaCell GT filters provide high efficiency filtration to prevent fouling and damage to turbine blades. Clean inlet air helps keep units operating at like-new efficiency. No loss of output efficiency due to dirt deposits or blade damage

Particle Size (Microns)	Problem	Affect	ServaCell VA GT/ ServaCell GT Efficiency @ 625 FPM	
			90-95%	60-65%
10pm and greater	Erosion of turbine blades	Permanent damage to blades	99+%	96%
5pm and smaller	Causes deposits on blades	Fouling affects air handling characteristics. Reduces output efficiency	96% (1-3microns) 99% (3-5 microns)	64% (1-3 microns) 91% (3-5 microns)

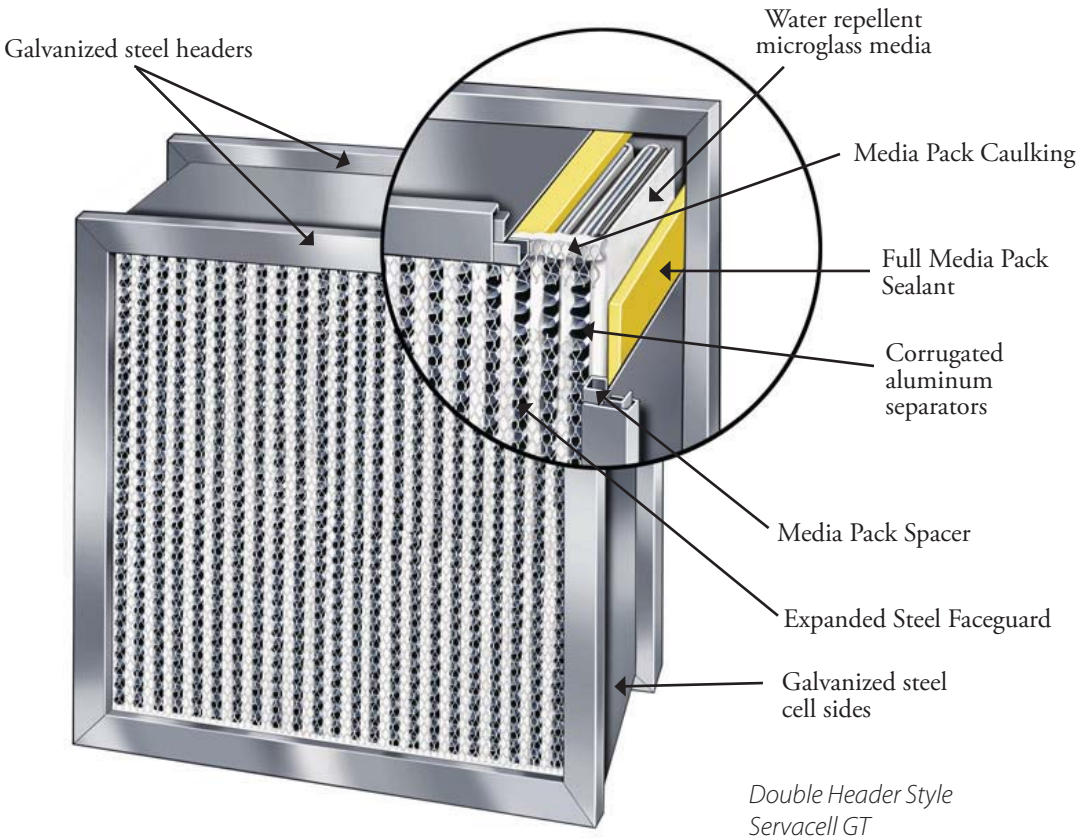
Servacell GT

High Efficiency, Heavy Duty Barrier Filters
corrugated Separator Style Media Pack Construction

Built Tough for Turbomachinery Applications

Servacell VA GT and Servacell GT filters are engineered to provide rated efficiency and maintain structural integrity under the extreme operating conditions experienced by turbomachinery applications:

- **High Velocity**
- **Turbulence**
- **Surges**
- **Heavy Dirt Loading**
- **Rain/Snow/Sleet**



Double Header Style Servacell GT

Compare Servacell GT's Rugged Reliability for all Rotating Machinery Intake Applications

Design Feature	ServaCell GT Advantage	Performance Benefit
Dual Density Media	Collects dirt throughout the entire depth of the media	High dust holding capacity. Long service life. Low operating cost.
Water Repellent Binder	Unaffected by intermittent exposure to humidity, moisture	Durability, reliability in wet operating conditions
Full Media pack Sealant (High loft media wrapped around entire perimeter of media pack)	Prevents Leakage (Many competitive brands have no sealant or only a layer at the top and bottom of the pack.)	Contaminant free inlet air. Prevents fouling, erosion of turbine blades.
Media Pack Caulking (Sealant applied along top and bottom of media pack on air entering side.)	Prevents Leakage around media pack	Contaminant free inlet air. Prevents fouling, erosion of turbine blades.
Rolled Edge Corrugated Aluminum Separators	Prevents damage to media	Prevents unfiltered air from passing through the filter. Minimizes risk of injury to maintenance personnel
Snap Lock Assembly	High integrity filter assembly method	Durability over long service life.
Single Rivet Header Construction	Minimizes number of loose parts to penetrate downstream.	Minimizes risk of serious equipment damage.
Expanded Metal Faceguards on both sides	Supports media pack	Maintains media pack structural integrity. High burst strength - up to 25" W.G.
24 Gauge Galvanized Steel Components	Heavy duty construction. Rust resistant	Maintains structural integrity. Prevents bypass. prevents rust

Servacell PV H 65/85/95

V-Configuration Rigid Cell Filters

Introduction

- The Purolator SERVA-CELL PV H offers the benefits of ASHRAE filtration performance, lightweight materials and industrial strength construction able to withstand nominal air flow of 750 FPM.
- The new all plastic frame construction allows it to be user and environmentally friendly. The new frame is lighter and compleatly disposable through incineration.
- Low pressure drop and maximum use of the filtration surface area combine to increase filter service life and allow for maximum efficiency ratings.
- The Servacell PV H captures particulate in the size range of fine dust, soot, pollen, smoke, bacteria, and vapor, making it ideal for most air conditioning filter applications.
- Since they are self-contained and sized for most standard requirements, each Servacell PV H is maintenance free and easy to replace (fits into most standard fames and housings).
- Average efficiency range: 65-95% , Average arrestance: 97-99%, Recommended air flow rate: 500/625 FPM
- Available in three filter face sizes with a depth under 12": 12x24, 20x24 and 24x24

Rated Average Efficiency (52.1)	MERV Rating (52.2)	Rated Initial Resistance @500 FPM (in. W.G.)	Recommended Final Resistance (in. W.G.)
65 60-65%	11	.28"	1.5"
85 80-85%	13	.32"	1.5"
95 90-95%	15	.39"	1.5"

(1) All performance data is based on ASHRAE 52.1 and 52.2 test methods.
(2) SERVA-CELL PV H filters can be installed with the pleats either vertical or horizontal.

Underwriters laboratories, Inc. Classification - SERVA-CELL PV H filters are Classified U.L. Class 2 per U.L. Standard 900.

Construction Features

- Frame: All Plastic
- To assure no dirty air bypass, the media pack is securely bonded to the periphery of the enclosure frame.
- Tested in accordance with U.L Standard 900, ASHRAE 52.1-1992, and ASHRAE 52.2.
- Recommended operating temperature: ≤ 180°F
- Media: Consist of 100% synthetic fiber
- Pleat Configuration: The key to high performance for the Servacell PV H is the consistency of pleat spacing provided by adhesive beads as a pleat seperator.
- Fiber density increases gradually from the air-entering to the air-exiting side of the media, providing dual density filtration action.
- Burst strength rated to 30" W.G.

P-GASTURBINE-608

Purolator®

CLARCOR ISO-9001 QUALITY SYSTEM
UL CERTIFICATE A4915

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Distributed by:
Air Cleaning Specialists
11088 Gravois Industrial Ct.
St. Louis, MO 63128
(866) 455-2128
www.purolatorfilters.com