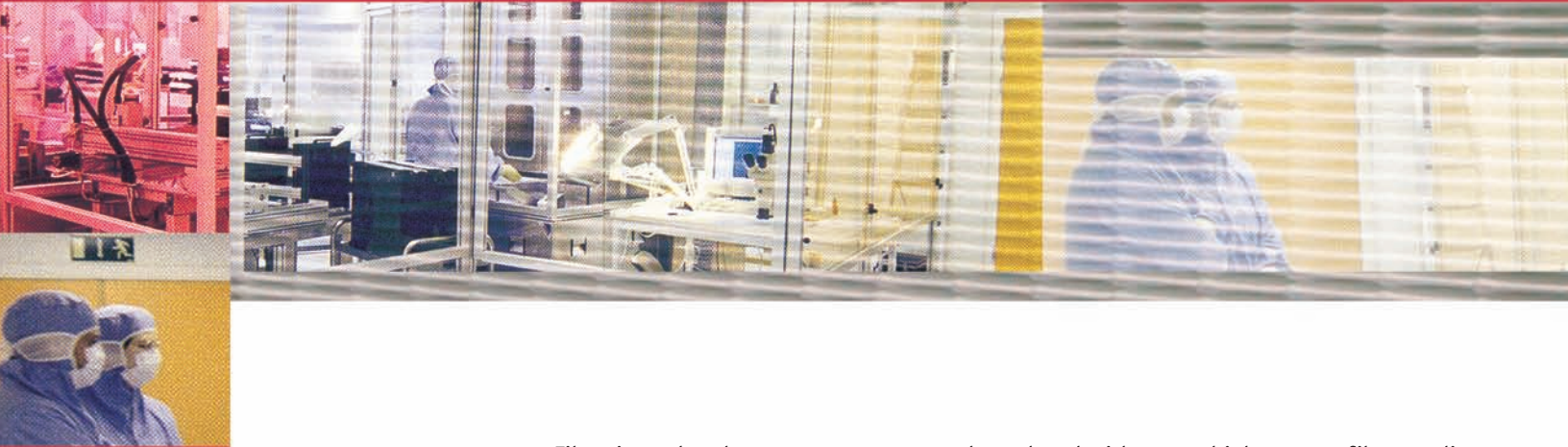


PERFORM NEXT-GENERATION HEPA/ULPA FILTER MEDIA



H&V has formulated an exciting new product family to solve HEPA and ULPA filtration challenges. New PerForm filter media sets a fresh industry standard. The results are better processability in the manufacturing plant and superior performance in the cleanroom.

Filtration-related energy costs can now be reduced with a new high-gamma filter media. Design engineers and end users alike have a new opportunity for higher performance from their filter designs and cleanroom filtration systems — in electronics fabrication, pharmaceutical production, hospitals, food processing, and other industrial uses.

The new PerForm™ family of next-generation filter media and materials achieves class-leading performance and processability. It's the ultimate solution for HEPA and ULPA use. PerForm represents yet another innovation from Hollingsworth and Vose Company, a global leader in filtration media and the world's number one supplier of microglass fiber media.

PerForm sets a new standard in media formation and uniformity. H&V aims to reduce the total cost of manufacturing and operating filters, and take processability and productivity in filter manufacturing to the next level.

For example, pleater machine setup times are reduced. Media can be pleated faster, yet yield higher quality pleats. Expensive pleater scrap is greatly reduced.

Additionally, PerForm media has been developed with a substantially lower pressure drop than traditional filter media. So, cleanroom air handling works more easily — and energy expenditures drop.

Finally, many of this product's advantages combine to ensure that your PerForm filter media provides significantly lower costs of ownership over the long term.

Benefits

- Lower total cost of ownership
- Improved filtration performance
- Easier processability and increased productivity
- Reduced waste during filter production
- Greater energy savings with reduced air handling effort
- Longer service life

H&V's new PerForm next-generation HEPA/ULPA filter media bring together a number of advantages over conventional products.

Formation index

H&V has developed a specialized tool to assess the uniformity of fiber distribution in a given media. Its formation index measurements show that PerForm possesses superior formation, minimizing both heavy and thin spots across the material.

High uniformity lets PerForm contribute to higher productivity and reduced waste in filter manufacturing, as well as improving filter performance in use.

Penetration and pressure drop

In measuring filtration effectiveness, the relation between pressure drop and penetration of the filtration material is expressed as gamma. The higher the gamma value, the better the filtration performance.

Compared to traditional filter materials, PerForm media delivers required efficiency at a lower pressure drop. This results in lower energy consumption for air handling equipment than competitive media.

In fact, PerForm from H&V delivers the highest gamma in its class.

PerForm Grades

| PerForm grade reference | | HC4393 | HB5793 | HB5493 | HB5593 | HB5893 | HA8393 |
|--|---------------------------|-------------|-----------|-------------|-------------|-------------|-------------|
| Basis weight | lbs/3,000 ft ² | 43 | 43 | 43 | 43 | 43 | 46 |
| Grammage | g/m ² | 70 | 70 | 70 | 70 | 70 | 75 |
| Air flow resistance @ 10.5 fpm or 5.33 cm/s | mm H ₂ O Pa | 24.2 237 | 27 265 | 29.1 285 | 31.6 310 | 36.7 360 | 39.3 385 |
| DOP smoke penetration @ 10.5 fpm or 5.33 cm/s | % | 0.04 | 0.015 | 0.008 | 0.004 | | |
| CNC penetration @ 5.0 fpm or 2.5 cm/s | % | | | | | 0.0007 | 0.00035 |



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