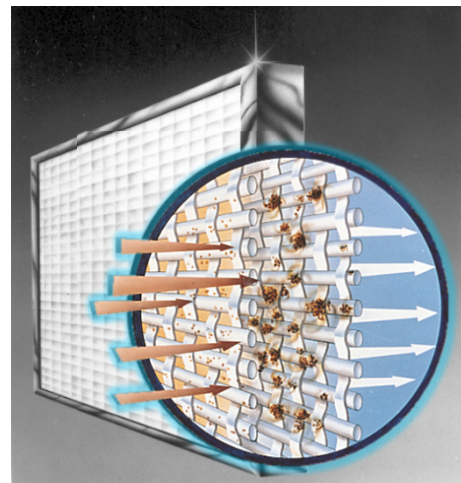




The Exclusive Accumulator Chamber® Efficient by Design

Since 1957, Permatron products have featured the unique Accumulator Chamber construction for effective and efficient filtration. Years of experience, many thousands of filters, and independent laboratory tests have proven that the engineering design of Permatron air filters enables them to outperform the competition.

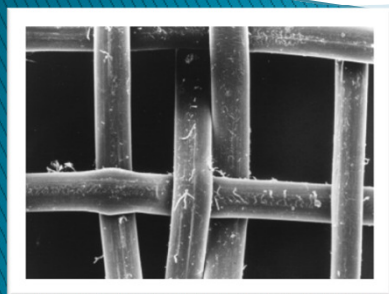


Each 1" and 2" Permatron filter represents a miniature filter bank; there are in fact 2 filters in 1. The outer steel frame holds 2- ¼" panels also housed in steel frames. The 3 frame construction, although lightweight, maintains strong support and assures that the media is firmly held in place even over long, hard use. Between the 2 filter panels is an air space that is ½" wide on a 1" filter, and 1 ¼" wide on a 2" filter. This is our exclusive Accumulator Chamber.

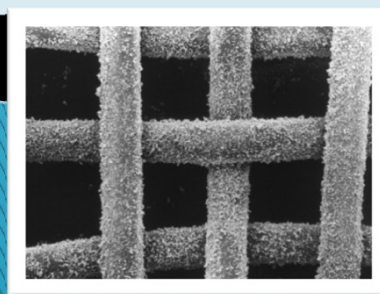
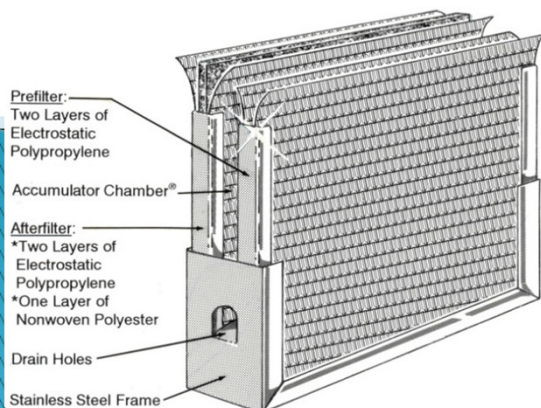
Permatron woven filter media allows air to flow through, enhancing its electrostatic charge. This media never loses its charge, as it is an inherent property. The airborne particulates are attracted to the media fibers like iron filings to a magnet. The particulates, attracted to the fibers in the direction of air flow, build up on the fibers without face loading.

If an excess of particulates build up (due to high concentrations in the air, or failure to clean the filter regularly) on the prefilter, they tend to break off, allowing air flow to sweep through the prefilter into the Accumulator Chamber. Cross currents within the Accumulator Chamber cause further agglomeration and some settlement until the first is rinsed. The afterfilter (back panel) attracts and holds particles that escape the prefilter or do not respond to an electrostatic charge.

Filters with woven plastic fabric are commercially available. Many claim electrostatic properties, which they may have, but to varying degrees. Other materials may include supporting wire and layers of nonwoven media or foam. These materials are often stacked together in a frame. Filters with this stacked construction can certainly be effective, but may also exhibit key engineering disadvantages. Whereas the initial pressure drop is within acceptable levels, after six months to a year of usage, residential particulates can accumulate between the compressed layers. In this case, even a filter that has been cleaned according to the manufacturer's instructions may have developed an abnormally high pressure drop, or resistance to air flow, and this seriously impairs its effectiveness. Engineers are primarily concerned with high pressure drop and the interference with air flow negatively associated with some air filters. High pressure drop and cleanability weigh heavily in the engineer's decision not to purchase such as filter.



Woven filter media
before use



Woven filter media
after use

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