

## **GENERAL FILTER SPECIFICATION**

### **General Description**

The Purex Fume Extraction and Purification units provide three stages of filtration

1. Removal of coarse particulates from the airstream via a concertina bag type pre-filter, composite F8/F9 fabric with filtration efficiency 95% removal of particles down to 0.5 microns (BS En 779)

Prefilter fabric comprises:

Synthetic, organic fibre filtration media having several layers of fibre mixtures of varying densities which increase in the direction of the airflow through the filter, with a final membrane. The fabric media is a thermoplastic polyester material. The pockets are fastened and sealed by stitching with high strength polyester yarn.

2. Removal of gaseous and vaporous contaminants using an impregnated activated carbon bed which removes organic solvents and gases/vapours through the principle of adsorption (the forming of bonds between molecules of the contaminant and surface molecules of carbon).
3. Removal of small particles via a High Efficiency Particulate Air (HEPA) filter with standard removal efficiency 99.997% with particles sizes down to 0.3 microns (filtration standard to BS En 1822).

In the ‘main filter’, filtration stages 2 and 3 are housed within a zinc coated casing which has galvanized steel perforated plates at the top and bottom of the filter to distribute the flow evenly throughout the filter media.

The activated carbon bed has sheets of coarse filter material at top and bottom to prevent small particles from the carbon passing into the HEPA filter.

The main filter is positioned on a cradle which has an over centre locking bar device. This applies sufficient force to press the top edge of the filter carcass into a resilient sponge rubber seal (which has excellent recoverability characteristics) to create an absolute and consistent gas tight seal.