

**When it comes to
filters they have
to be Pure**



The complete package for air filtration

PURE FILTERS (Formerly CPL Filters) have been manufacturers and providers of air filtration solutions for over 25 years, operating from our headquarters in Rochdale, Lancashire. During that time we have manufactured over 5,000 different product lines at our production plant.

Service excellence has been the key to our growth and continued success. Many of our existing clients operate in service related industries where we have become renowned for our excellent service and response times, as required by these industry sectors.

We provide our clients an unparalleled resource of expertise, technical knowledge and products for all aspects of air filtration requirements.

We know what matters and we make it our business to understand the day-to-day needs of our clients and their diverse markets.

This brochure is a brief overview of our products and shows a selection from our vast overall filter range. All of our products are manufactured to the highest standards to meet the requirements of today, with unrivalled levels of service and customer care.

We are constantly developing new products whilst investing in state-of-the-art technology and most importantly our people.

If you have filter requirements or would like any further information please contact us today.

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Our products and services include:

- ▶ Pre filtration - Pads and Panel filters
- ▶ Secondary filtration - Multi-pocket and Rigid Bag filters
- ▶ Final filtration – Deep pleat and mini-pleat HEPA filters
- ▶ Carbon filters for removal of odours and VOC's
- ▶ Water filter range
- ▶ Holding Frames and Housings
- ▶ Fan Belts
- ▶ Gauges
- ▶ A comprehensive range of other consumables second to none

Our services include:

- ▶ Filter Monitoring
- ▶ Filter Changes
- ▶ Air Quality Monitoring
- ▶ Free of charge site surveys – UK wide
- ▶ Filter Disposal in line with the latest Health and Safety guidelines

Manufacturing Quality

All of our products are manufactured to quality assurance standard ISO 9001-2000 and we are constantly striving to ensure that all of our products are the best available in the market. All of our products are independently performance tested.



Technical Expertise

We can provide the technical help needed to achieve the highest standards of air quality.

Enquiries

We are delighted to accept sales enquiries by telephone, fax, or email. We endeavour to deal with all quotations promptly in writing and our sales department will gladly assist you with any enquiry you may have whether it be of a technical nature or more straightforward. In addition our area sales managers would be more than delighted to visit you to discuss your requirements in person.

Delivery

Where goods are available from stock, goods are normally despatched the same or next day. Where items on an order are manufactured our customer services department will give lead times at the point of order. We offer a standard next day delivery service.

Sales Hotline T: 01706 642823 or F: 01706 642537 or E: info@pure-filters.com

Air filtration engineering - An overview

Why do we need air filtration?

The air around us consists of a mixture of gases, principally Oxygen and Nitrogen. However, it also contains particulate material and gases, which are the by-products of nature and man-made industrial processes. The main sources of air contamination are particulates produced by exhaust fumes from traffic and other combustion processes, carbon, oil, fly ash from stack and chimney emissions, construction and demolition. Natural causes can be such things as elemental erosion of the landscape and buildings as well as volcanic eruptions etc. Others include sea salt, sand, pollen, moulds and bacterial spores. Our precious air is far from clean.

The principle of filtration

Air filters are products that remove the unwanted particulate from an air stream as the particulate laden air passes through them. Air filters remove particulate by capturing it in or on the filter media, this is the material that makes up the filter element. There are four different processes responsible for this capture: Impingement, Interception, Diffusion and Straining. Many filters employ several of these mechanisms but one usually predominates.

Filter Grades and Applications

Filter Grade	Efficiency/ Arrestance	Application or Process
G1 & G2	50-80% Arrestance	Coarse prefiltration: Provision against accumulations of insects, textile fibres, coarse particulates.
G3	80-90% Arrestance	Medium level prefiltration: Protection against pollens, Simple ventilation units for factories, garages.
G4	>90% Arrestance	High level prefiltration: Air conditioning of Paint booths, Kitchens.
F5	40-60% Efficiency	Supply air and partial air conditioning for restaurants, gymnasia, food shops, schools, engineering workshops.
F6/7	60-90% Efficiency	Effective against all types of dust, including soots. Air conditioning for laboratories, offices, theatres, computer rooms, spray booths.
F8/9	90-95% Efficiency	Effective against soots, oil mist, bacteria. Air conditioning of clean rooms, pharmaceutical, animal health, laboratories.
H10	95-99.9% NaCl >95% @ 0.3 micron	Highly effective against bacteria, smokes, aerosols. Uses in operating theatres, pill production, electronics, sterilisation.
H11/12	99.9-99.99 NaCl 98-99.99% @ 0.3 micron	Nuclear ventilation, micro-technology, photographic processes, bacteria free rooms, transplant operating theatres.
H13	99.99-99.999% NaCl 99.99-99.999% @ 0.3 micron	Highest air quality applications. Sterile areas, class 1000 rooms, nuclear applications, bacteriological, animal health, isolation applications.

The importance of air filtration

Air filtration is the mechanism that provides us with the means to provide a suitable level of particulate and molecular cleanliness to meet the following criteria:

- ▶ To prevent the build-up of contaminants on heater or condenser coils and other ventilation system parts.
- ▶ To prevent the ingress or emission of hazardous substances.
- ▶ To protect expensive or delicate machinery from avoidable wear and therefore replacement or substantial maintenance costs.
- ▶ To provide healthier and more comfortable living and working conditions for occupants of buildings.
- ▶ To reduce risk of infection in hospital 'critical areas' and other such environments.
- ▶ To prevent the contamination of our foods, pharmaceuticals and delicate electronics during manufacture.

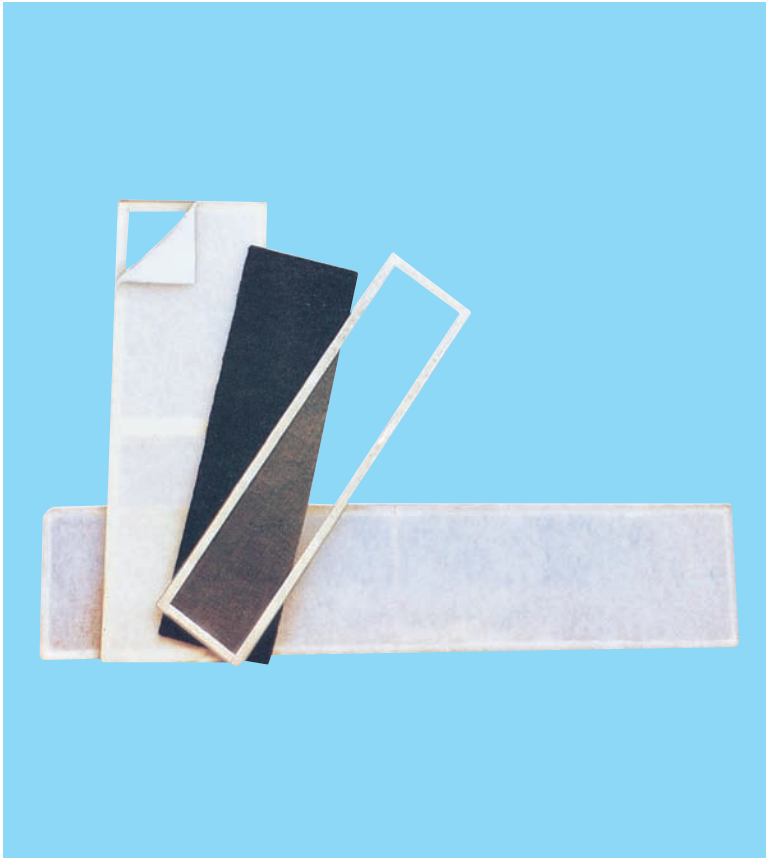
Useful Conversions

PRESSURE		
To Convert	To	Multiply by
Pa (N/m ²)	in WG	0.004
mm WG	in WG	0.0393
mbar	in WG	0.401
mmWG	in Hg	0.00289
in WG	Pa (N/m ²)	249.37
in WG	mm WG	25.4
in WG	mbar	2.493
in Hg	mm WG	346.0

VOLUME FLOW RATE		
To Convert	To	Multiply by
m ³ /s	cfm	2119.0
l/s	cfm	2.119
cfm	m ³ /s	0.00047
cfm	l/s	0.0472
cfm	m ³ /hr	1.7

Fan Coil/Rod Frame Filters

G2 - G3



Synthetic Media 150gsm	G2
Synthetic Media 220gsm	G3
20ppi Foam	G2
Maximum Working Temperature	80°C

Application

For installation into floor, wall or ceiling mounted fan coil induction units. Their purpose is to maintain air cleanliness and to provide protection for fans, coils and motors within the unit.

Construction

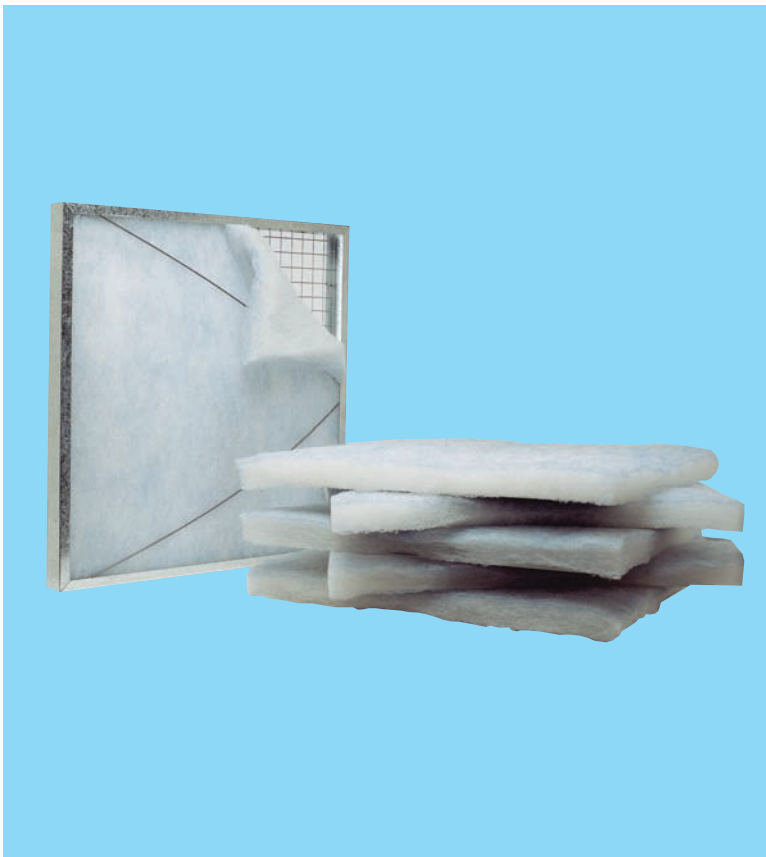
Available in synthetic thermally bonded fibre and reticulated foam. The media is bonded/stitched to copper-plated wire frames sized to fit the end unit.

Range

All Fan Coil Frames are sized according to the customer's individual requirements. Please contact us for further details or to discuss your requirements.

Pads, Rolls and Refills

G2 - F5



Glass Media	G2-G3
Synthetic Media Pads	G2-G4
Deckhead Synthetic Media	F5
Fire Rating to DIN 53438 PT3	Synthetic F1
Maximum Working Temperature	Glass 200°C

Application

Glass and Synthetic filter media for HVAC systems and spray booth deckhead and exhaust applications. This media is available in bulk rolls or pads for use in re-loadable frames or cut to specific customer requirements. Also available as roll filter refills.

Construction

Glass Media - The media is manufactured from continuous monofilament glass-fibre bonded with thermosetting resin. The pattern of the fibres is designed to give the lowest resistance to air whilst offering the highest dust holding capacity.

Synthetic Media - Consists of 100% Polyester fibres, which are thermally bonded for optimum filtration efficiency and to avoid fibre shedding.

Range

Available in a wide range of media types and thickness and can be supplied as pads or refills to fit all makes of Roll-Filters.

Glass/Pleated/Synthetic Panel Filters G3 - G4



Face Velocity Rating	Glass 1.85/Pleated 2" 1.85/4" 2.6 M/S
Initial Pressure Clean	Glass 40 Pa/Pleated 50 Pa
Rec. Final Pressure	250 Pa
Max Working Temp.	Glass 100°C/Pleated 80°C

Application

With the increased demands of advancing technology, panel filters provide a high level of efficiency at a low replacement cost.

Construction

Glass Media Panel Filters - Produced as per Glass Media Pads, the elements are then bonded into a card or galvanised frame as required. They are also available with a scrim to reduce fibre shedding.

Pleated Panel Filters - The pleated element is produced by pleating a highly efficient synthetic filter media which is non-hygroscopic, and flame retardant (BS 2963) to a support wire mesh. The construction is completed by fixing and bonding the pleated element into a card or galvanised frame (FR) to eradicate any possible movement or by-pass by the airflow. In addition to the 25mm and 50mm panels, we offer a 100mm depth version as a standard product for high velocity applications.

Synthetic Media Panel Filters -

Produced as per Synthetic Media Pads, the elements are then bonded into a card or galvanised frame as required.

Range

Glass, Pleated and Synthetic panel filters are available in a wide range of standard sizes and efficiencies, please contact us for full details.

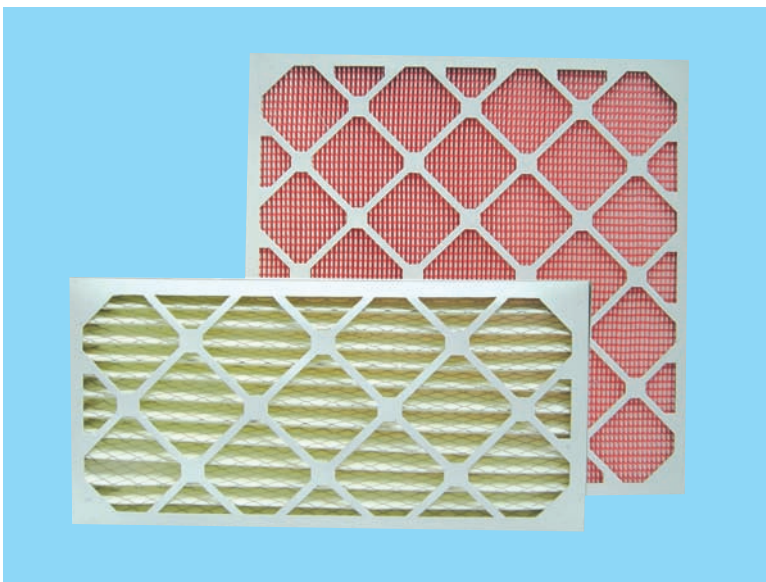
High Efficiency and Ultrapleat Panel Filters F6 - F8

HEF 595mm x 595mm x 97mm

Airflow Rate m3/hr	50mm 1220 / 97mm 2000
Initial Pressure Drop Clean	F6 75 / F7 125 / F8 165 Pa
Rec. Final Pressure	300 Pa
Max Working Temp.	80°C

Ultrapleat 595mm x 595mm x 97mm

Airflow Rate m3/hr	3200
Initial Pressure Drop Clean	F6 87 / F7 111 / F8 151 Pa
Rec. Final Pressure	380 Pa
Max Working Temp.	80°C



Application

The HEF and Ultrapleat Panel ranges have been designed to provide a high level of filtration where the depth allowance within the air-handling unit is confined. When used in either toxic or biohazard environments the Ultrapleat may be fully incinerated. The Ultrapleat's rated face velocity of 2.5 M/S is further enhanced by its physical strength and durability. It is particularly suitable for use in Medical and Pharmaceutical applications due to its anti-microbial characteristics, or wherever a high velocity, high performance rated product is required.

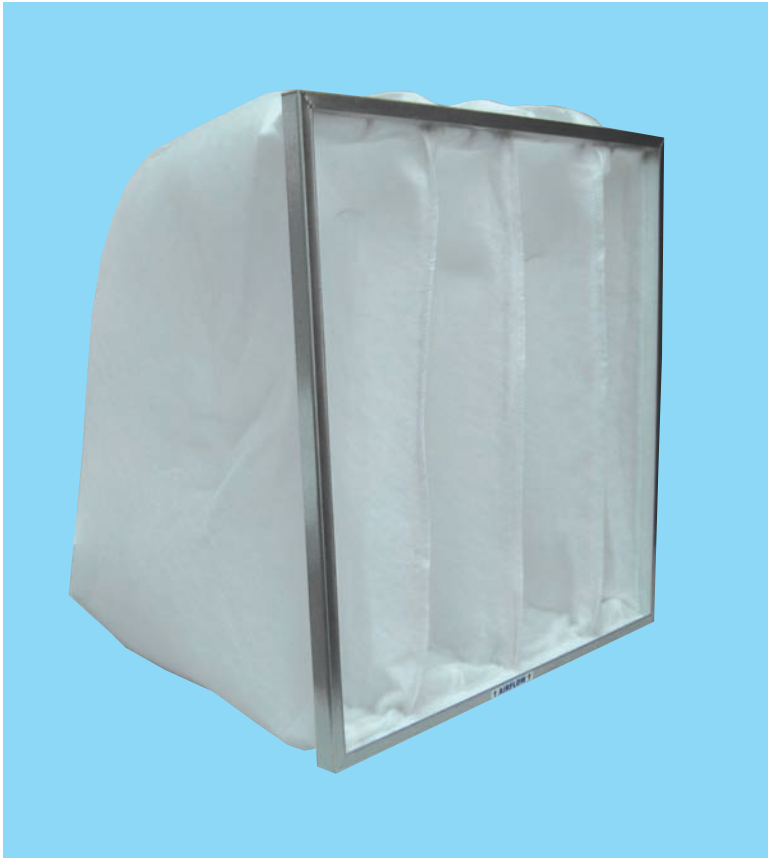
Construction

The HEF panel is constructed with a pleated element of high quality synthetic micro-fibre laminated to a water resistant expanded wire grid. The Ultrapleat has a 100% polypropylene core pack, constructed using mini-pleat technology and has continuous thread polypropylene spacers to greatly increase airflow capacity. Due to the nature of polypropylene, the Ultrapleat is anti-microbial.

Range

Both are available in a wide range of face sizes, the HEF is available in 50mm and 97mm depths, the Ultrapleat in 97mm depth only.

SG4 Bag Filters - High Dust Holding G4



Airflow Rate m3/hr (592x592)	300mm 2700 / 450mm 4250
Initial Pressure Drop Clean	300mm 60Pa / 450mm 65Pa
Rec. Final Pressure	250 Pa
Max Working Temp.	>80°C <90°C

Application

This bag filter is a medium efficiency, extended surface area filter that combines high levels of dust holding with low levels of resistance, these features ensure that the product is ideal for use within all applications where low replacement frequency is required.

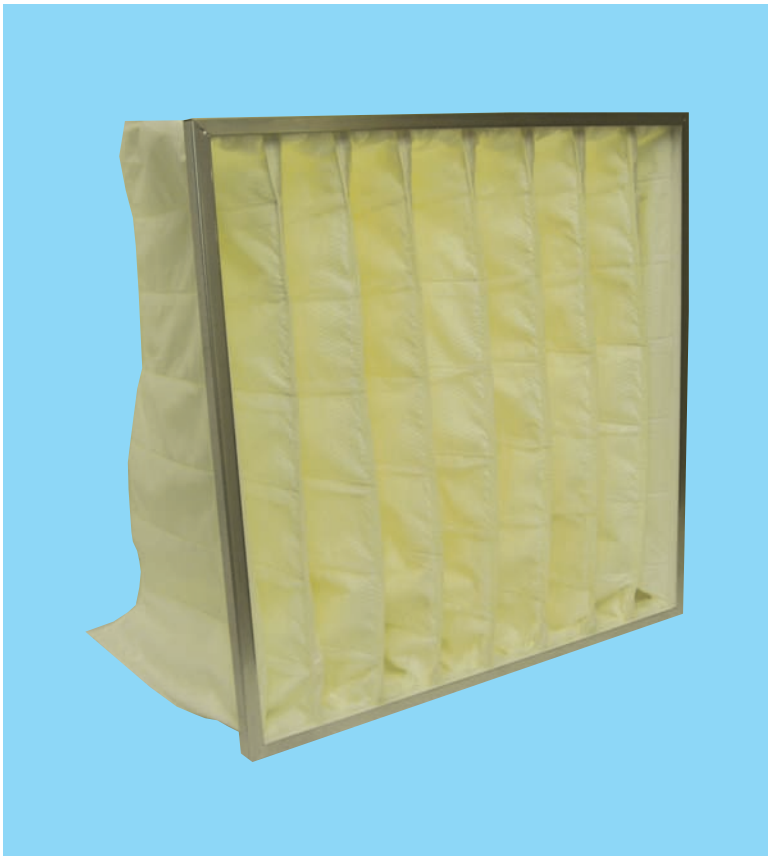
Construction

The media is manufactured from thermally bonded, lofted, synthetic fibre that provides an F1 fire resistance to DIN 53438, making this Bag particularly appropriate for use in the Food, Pharmaceutical and Electrical industries. The pocket assembly is contained within a sturdy galvanised channel frame with the corners mitred and braced. For maximum safety a rolled edge is featured on all internal parameters of the frame.

Range

Available in a wide range of standard sizes and grades, please contact us for full details.

HE Multi-Pocket Bag Filters F5 - F9



Airflow Rate m3/hr (592x 592 F7 8Pkt)	500mm 3400 / 762mm 4250
Initial Pressure Drop Clean	500mm 125Pa / 762mm 90Pa
Rec. Final Pressure	450 Pa
Max Working Temp.	90°C

Application

For medium to high efficiency filtration in heating, ventilation and air conditioning systems or as pre-filters for HEPA (Absolute) filters. The HE Multipocket range is designed to ensure long life between maintenance intervals and achieve a high level of cleanliness in offices, shopping centres, factories, etc. Made from 100% spun bonded Polypropylene synthetic media these bag filters are inherently Anti-microbial and resist microbial growth and any build up of moulds or mildews. As such they are particularly suitable for Hospitals and food production areas and all applications where micro-glass fibre is unacceptable.

Construction

The HE Multipocket range is constructed from 100% spun bonded Polypropylene synthetic media with integral ultrasonically welded spacers, which have a high burst pressure. These spacers prevent over inflation of the pockets and provide uniform air distribution throughout the media, which reduces pressure differential. The pockets are retained in a rigid galvanised header frame ensuring maximum stability in all applications.

Range

Available in a wide range of standard sizes and grades, please contact us for full details.

Duraflow Long Life Bag Filters

F5 - F9



Airflow Rate m3/hr (Std 592x592)	360mm 2300/500mm 3000/635 3500
Initial Pressure Drop Clean	F5 50/F6 78/F7 105/F8 118Pa
Rec. Final Pressure	600 Pa
Fire Resistance	Meets Din 53438 - FI & UL Class I

Application

Ideal for use in most applications and particularly where glass fibre media is not acceptable. Tests prove Duraflow filters can last more than twice as long as conventional bag filters. This is achieved through the development of a new fibre and manufacturing technology. The filter media used in Duraflow is 3-4 times thicker than that of conventional materials, its density gradually increases towards the downstream side giving the filter outstanding dust holding capacity, coupled with low air resistance, resulting in longer life and reduced plant room down time. Duraflow ensures a constant quality clean air supply whatever the need.

Construction

Duraflow self supporting pockets are manufactured from a patented filter media with a built in pre filter. The media is enhanced by the unique blending of two fibre types, that on contact create a long lasting and consistent electrostatic charge. This allows the clean filter to achieve its full efficiency performance from day one and throughout life expectancy, whereas the efficiency of a conventional bag filter is well below its average when clean. The pockets are retained in a rigid galvanised header frame ensuring maximum stability in all applications.

Range

Available in a wide range of standard sizes and grades, please contact us for full details.

Rigid Bag Filters

F6 - H10



Airflow Rate m3/hr (592x592x292 F8)	Up to 5000
Initial Pressure Drop Clean	170Pa
Rec. Final Pressure	450Pa
Maximum Working Temperature	70°C

Application

A high airflow capacity filter for use in general air conditioning systems where space is restricted or a rigid filter construction is required to combat turbulence, variable air volume conditions or vibrations. They will operate unaffected by fan shut down or start up. A low pressure drop filter giving maximum economy and extremely long service life.

Construction

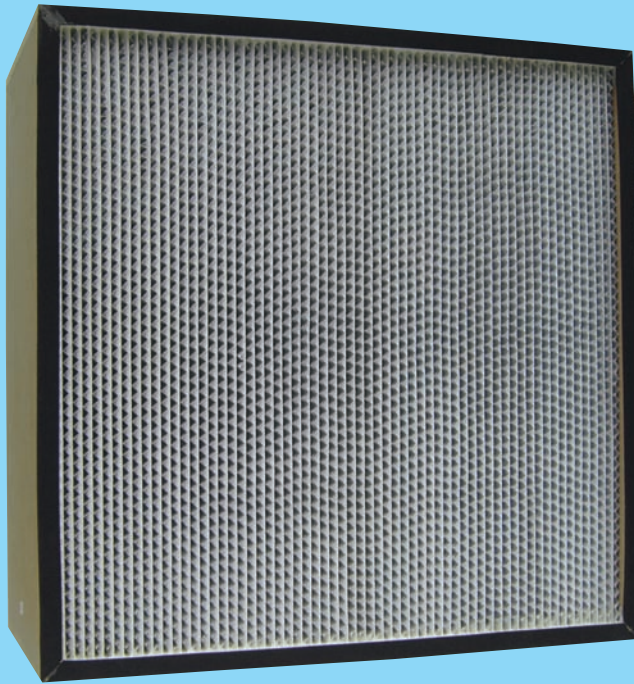
Manufactured from either non fibre shedding glass fibre paper or Polypropylene synthetic media, the filter packs are mini pleated with the pleats separated by thermoplastic beads. The filter packs are then sealed into a Polystyrene case with Polyurethane sealant.

Range

Available in a range of standard sizes and grades, please contact us for full details.

Deep Pleat Hepa Filters

H10 - H14



Airflow Rate m3/hr (610x610x292 H13)	3000
Initial Pressure Drop Clean	270Pa
Rec. Final Pressure	600Pa
Maximum Working Temperature	90°C

Application

Designed for the air intake and extract systems of critical applications such as Pharmaceutical and Electronic manufacturing and in Hospital and research laboratories where high efficiency filtration is necessary. They are also used in Safe Change systems. HEPA filters are normally used as final filters with pre filters fitted upstream to extend their life. These filters are subjected to full quality assurance procedures and each filter is individually leak tested, certified and numbered for tracking.

Construction

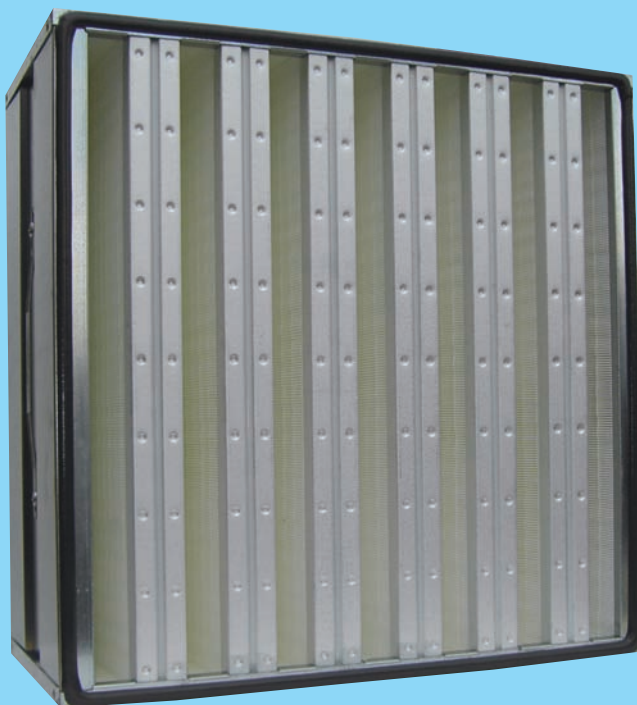
Deep Pleat filters are designed to give the optimum combination of high filtration efficiency and excellent dust holding capacity. They consist of a deep pleat pack of filter media, sealed into either a corrosion resistant coated mild steel or MDF case. The filter pack is a continuous length of high efficiency water repellent micro-fibre glass filter media, folded over aluminium or kraft paper separators. It is then bonded to the case with a polyurethane sealant to give a rigid and robust construction.

Range

Deep Pleat HEPA's are available with efficiencies between H10 and H14, in a range of standard cases with nominal airflow rates up to 3800m3/hr.

Multi-Wedge Hepa Filters

H10 - H14



Airflow Rate m3/hr (610x610x292 H13)	4000
Initial Pressure Drop Clean	250Pa
Rec. Final Pressure	600Pa
Maximum Working Temperature	60°C

Application

Designed for the air intake and extract systems of critical applications where high efficiency filtration is necessary. The multi-wedge system provides a much larger media area for higher airflow capacity than standard deep pleat HEPA filters. These filters are subjected to full quality assurance procedures and each filter is individually leak tested, certified and numbered for tracking.

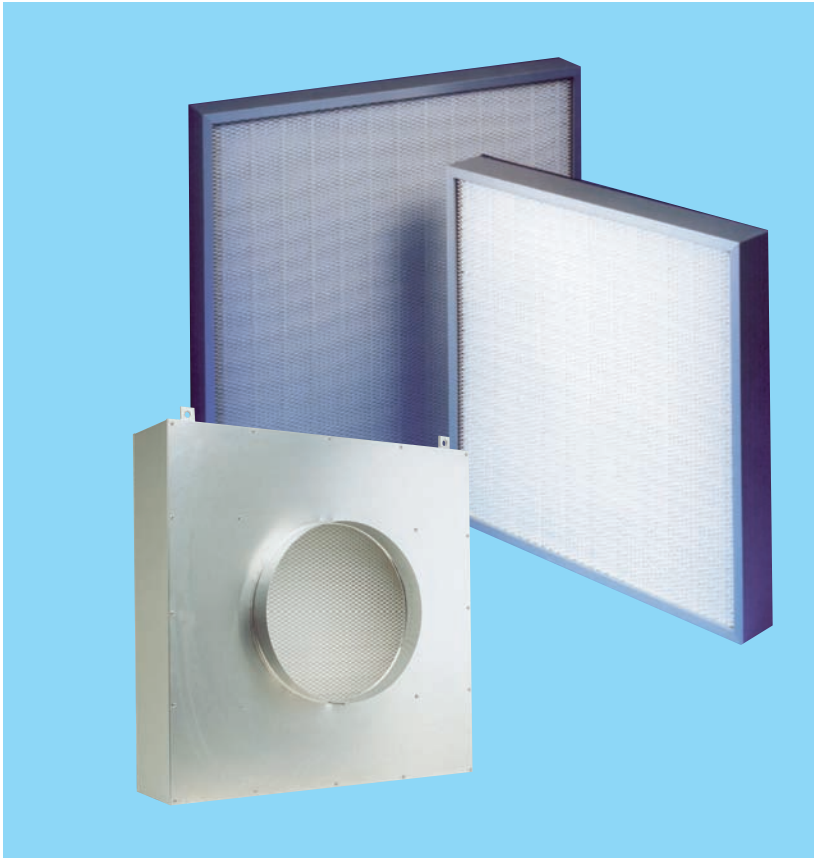
Construction

Manufactured from non fibre-shedding micro-fibre glass paper the filter packs are mini pleated with the pleats separated by a continuous thermoplastic cord. The filter packs are then sealed with Polyurethane sealant into a galvanised steel or MDF case. They are then fitted with gaskets as required.

Range

Multiwedge HEPA's are available with efficiencies between H10 to H14, in a range of standard cases with nominal airflow rates up to 4000m3/hr.

Mini-Pleat Hepa Filters & Terminal Hoods **H13-U15**



Face Velocity Rating m/sec	0.45 (50mm pack)
Initial Pressure Drop Clean	85-120Pa (By depth)
Rec. Final Pressure	400Pa (Max 600Pa)
Maximum Working Temp.	60°C

(Please contact the office for all specific technical enquiries)

Application

High efficiency air filters for use in clean room and all other HEPA filter applications including laminar flow benches, and can be fitted into ceilings and walls. Specifically designed to remove the finest particles in order to meet the most stringent performance criteria. Our Terminal Hoods are designed to meet the needs of high technology process industries for HEPA and ULPA grade filtration. The range offers efficiencies of up to 99.9999% at 0.12µm when tested to BS EN 1822. These modules are designed for clean room applications in hospitals, laboratories, food, pharmaceutical, and electronic component plants.

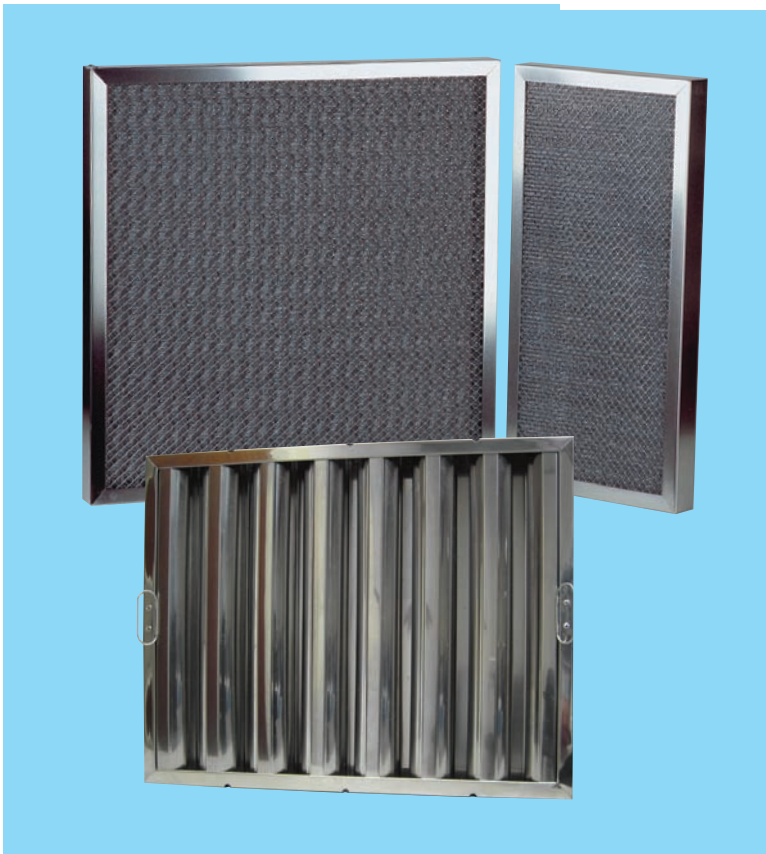
Construction

Mini-Pleat filters consist of finely pleated water resistant micro-fibre glass paper media, positively spaced using continuous thermoplastic cord. Positive pleat separation maximises the use of the media area and minimises pressure drops. The Mini-Pleat pack is bonded into the filter frame using Polyurethane. For handling and transit protective grilles are fitted on the inlet and outlet faces as standard. Terminal Hoods are factory sealed and made with Polystyrene or Aluminium plenums.

Range

These mini-pleat filters are available as standard 69mm, 90mm, 115mm and 124mm deep, other depths are also available, ask for details. Terminal Hoods are also available in a range of depths, and spigot sizes, please contact us for full details.

Grease Filters



Face Velocity Rating	1 - 3 M/S
Baffle Filter Meets	DW172 (304 SS Only)

Application

Designed for general-purpose kitchen extract use, the Standard Grease filter is suitable for removing airborne fats and grease from the atmosphere. Regular maintenance by degreasing the panel ensures optimum performance at all times. The Baffle grease filter reduces the fire hazard above the heat source through its unique design concept of interlocking baffles.

Construction

Standard - The cell is produced using the fully enclosed frame method of construction, with a galvanised crimped knitted mesh core and galvanised weld-mesh grilles and frame. A heavy duty version is also available.

Baffle - A series of vertical stainless steel or aluminium air baffles are housed in a heavy-duty frame of the same specification. Each of the baffles is strategically aligned to create a complex path for the air to pass through. As the grease laden air enters this path the deposition of the grease occurs and the grease is captured without the risk of re-entrainment. Due to the smooth nature of the baffles, the grease runs downwards, and out through drainage holes and in to collecting trays located in the casing.

Range

Stock sizes available along with custom sizes to order. Handles and drain holes also available.

Safe Change Housings



Application

A commercial safe change system that facilitates the removal of filter elements contaminated with hazardous materials without personnel being exposed to high levels of contamination.

Construction

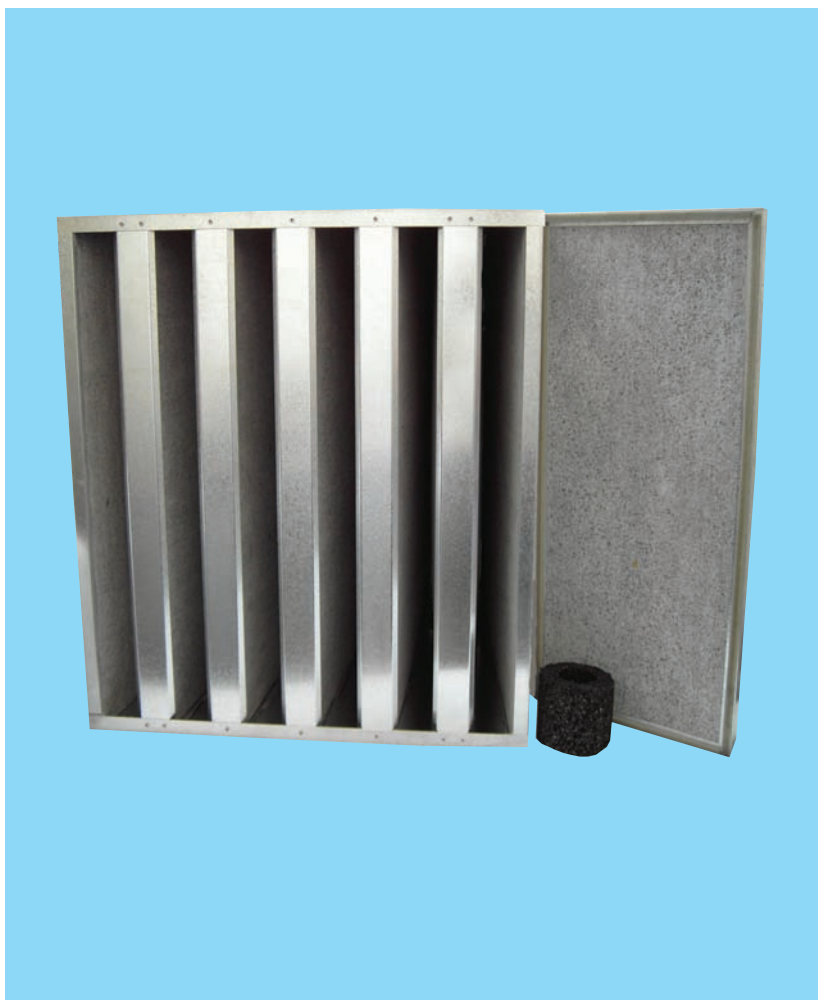
All welded construction using state of the art manufacturing techniques these units are modular to give greater flexibility. They are available in polyester powder coated mild steel or self finish stainless steel, and have a continuously welded safe change spigot as standard. There are pressure test, injection and sampling ports on all housings. System or individual cell low leakage dampers and bleed filters are available as required. All systems are assembled and pressure tested prior to delivery.

Range

A full range of systems are available, please contact our office to discuss your requirements. We offer a full range of accessories including Safe Change Bags, Heat Sealers, Magnehelic Gauges and Differential pressure switches. On-site testing and commissioning is also available.

Carbon Panels/Bags and Discarb Units

Due to the complex nature of absorption, carbon filters are generally designed to suit each individual application. We therefore recommend that you contact our office to discuss your specific requirements.



Application

Used for the removal of offensive odours in a wide variety of applications such as office blocks, hospitals, theatres, cinemas and airports. Carbon filters are also used for the removal of toxic contaminants in industrial or commercial applications. Some unwanted by-products include mercury vapour, sulphur dioxide and hydrogen sulphide and the odours that can be generated by sewage works, slaughter houses, restaurant kitchens, toilets, wash rooms, laboratories and other areas. Some of these applications require chemically impregnated activated carbon to enhance efficiency. Also widely used by museums and galleries to protect artefacts and paintings.

Construction and Range

Carbon Panels

A patented bonding process is used to bond the carbon granules together into a biscuit, which incorporates a non-woven fabric on both faces. This process produces a homogeneous panel of consistent quality and dimensional stability thus producing an even resistance across the face. Panels can be supplied unframed or bonded into a galvanised, stainless steel or aluminium channel to give a robust construction. Where the carbon to be used is impregnated or needs to be in pellet form, we offer a loose fill panel.

Rigid / Standard Carbon Bag

Panels are also available in a rigid carbon bag, bonded in a 'V' formation and housed within a polypropylene frame, these are available in three sizes and come with a standard 25mm header. A traditional bag filter is also available manufactured from a carbon impregnated media.

Discarb Cells

These have the highest carbon loading in our range, and are available in either standard or extra duty versions depending on the application. Discarb cells contain bonded carbon panels permanently sealed into a galvanised sheet metal casing, giving a very strong construction capable of handling large air volumes. They can be manufactured to almost any reasonable size and where requested can be fitted with a removable plug which can then be tested to determine the remaining useful life expectancy.

Water and Liquid Filters



Series SBC Spun Bonded Sediment Cartridges

Length Inches	Diameter Inches	Filtration Micron	Flow Rate L/Min	Pressure Drop Bar
9 7/8	2 1/2	1, 5, 20, 50	20	0.2 - 0.4
20	2 1/2	1, 5, 20, 50	30	0.2 - 0.4
9 7/8	4 1/4	1, 5, 20, 50	40	0.3 - 0.5
20	4 1/4	1, 5, 20, 50	60	0.3 - 0.5

Working Temperature: 2 - 52°C NSF, FDA and PZH Approved Material

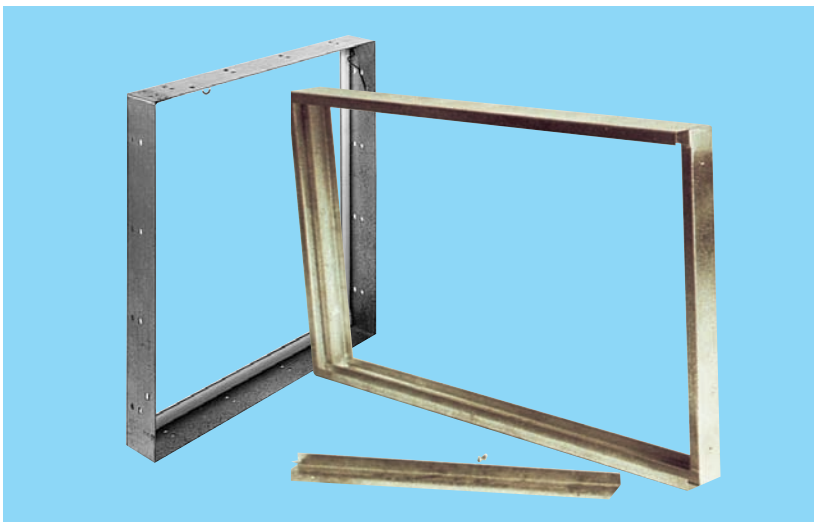
Application

New generation spun bonded polypropylene cartridges are the best solution for sediment filtration, removing rust particles, sand, silt and other particulate deposits from liquids. High-grade polypropylene fibre with increased solids holding capacity, is resistant to many chemicals and bacterial growth. Special technology is used to manufacture these cartridges, which provide accurate filtration ratings from 1-50 microns.

Range

We can also offer a wide range of Wound Depth Cartridges to cover a large number of applications please contact us for full details.

Frames and Housings



Application

These frames are used by air handling unit contractors, ductwork and building service contractors. They can be used in AHU's or installed directly into the fabric of a building. Larger installations can be catered for by bolting frames together, to form increased face area. Front withdrawal frames accept single or pre and secondary filtration by increasing the retaining clip sizes. Frames are fitted with retaining clips, and gaskets to eliminate air by pass.

Construction

Manufactured from galvanised mild steel or stainless steel.

Range

We offer a comprehensive range of Front Withdrawal, Side Withdrawal and Pad Holding Frames in standard and non-standard sizes supplied individually or in multiples. Housings for all types of filters are also available in both standard and non standard sizes. Please contact us for full details of the range.

Drive Belts



High quality Vee belts are available in a range of cross sections and belt lengths to suit every application. Our range of belts offer a versatile and economical low maintenance drive which is standardised throughout the world. All belts have superior anti static, heat and oil resistant properties which exceeds the new industry anti ignition standards. The complete range is fully approved by all international standards.

- ▶ Extensive Product Range
- ▶ Non Standard Sizes Manufactured
- ▶ Design and Manufacture of Bespoke Filters
- ▶ Air Quality Management
- ▶ Products and Services second to none

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