

Last Chance Filtration

Hydraulic, Fuel Control, Lubrication, Printing
and Pneumatic Applications



Porvair Filtration Group

Porvair Filtration Group is an international leader in the development and supply of materials and products for applications in filtration and separation.

Porvair manufacture in the UK, USA and China and have an extensive network of sales offices and distribution channels throughout the world. Our expertise is wide and varied, with products used in markets such as:

- Aerospace and Defence
- Food and Beverage
- Gasification
- Life Sciences and Scientific
- Microelectronics
- Nuclear
- Pharmaceutical
- Porous Media and OEM Materials
- Printing
- Process
- Transportation
- Water

Our ongoing success is based on a dedication to technical excellence and superior customer service. Our future will be built on our investment in research and development to provide innovative new products that exceed the expectations of our customers in solving the challenges that they face.



Last Chance Filtration

Fluid systems require last chance filters and screens to provide critical point-of-use protection for contamination sensitive components. Last chance filters perform a complimentary role to main system filters. These are designed to remove and retain contamination, such as machining chips, burrs, wear debris and fluid breakdown products induced during operation or built in downstream of the main system filters.

To provide maximum protection, these filters should be located as close to the device they are protecting as possible and the design of each filter should ideally be tailored specifically to the system's operating and environmental conditions. Last chance filters are commonly used within the hydraulic, fuel control, lubrication, ink and pneumatic industries in applications as diverse as aircraft flight control systems and adhesive resin dispensers.



Porvair Filtration Group offers a range of filters, all designed to specific performance and installation requirements. These filters are available in the following media configurations:

- Sinterflo® F sintered metal fibre
- Sinterflo® P sintered metal powder
- Sinterflo® M sintered woven mesh
- Sinterflo® MC composite metal mesh
- Sinterflo® FMC fibre mesh composite
- Laser drilled

Porvair Filtration Group filters are designed to be used in challenging operating environments and benefit from the following features:

- wide range of filtration options
- bi-directional flow
- high fatigue requirements
- high flow differential strength
- injection moulding
- controlled build cleanliness
- integral bypass devices
- wide operating temperature range



Disc and Disc Assembly Filters

Porvair Filtration Group offers a range of disc type filters, designed to fit standard pipe sizes.

These filters can be supplied in a variety of designs, which include flat discs and pleated formations that benefit from a highly effective filtration area.

Where a higher differential strength is required, complete sintered supported variants can be supplied.



Elements and Screens

To enhance performance capabilities, **Porvair Filtration Group** produces a vast range of tubular last chance filters and screens, designed to be fully integrated into customer systems. These filters are manufactured using a number of techniques, including micro resistance welding, fusion welding, laser drilling and injection moulding.

Our elements are designed for long on-stream life and can be designed and constructed to withstand full system pressure.



Unions Filters and Miniature Housings

In many applications the filter discs or tubular inserts are supplied fully integrated into a miniature housing, which forms part of the customer system allowing easy replacement of the filter.

Porvair Filtration Group filters can be integrated within a variety of standard industry fittings.

Our housings can be made from a variety of materials, including aluminium alloy, stainless steel, titanium and engineering thermoplastics.



In-line Housings

For highly contaminated systems, **Porvair Filtration Group** has designed a range of inline filter assemblies.

These filters feature a removable pleated or cylindrical filter cartridge with an increased filter area and, therefore, operational life. Additional optional features include bypass devices and system condition monitors.



Product Innovation, Manufacturing, Testing and Quality

Porvair Filtration Group has a policy of continuous improvement in all areas of its business. Listening to the customers' present and future requirements is a vital part of our operations and a key part of driving change.

We understand that product development involves building multidiscipline teams, not only within the company, but often in partnership with our customers, improving project efficiency and ensuring complete customer satisfaction. This continuous development of products and materials is vital, to enable us to offer new and better solutions to applications. **Porvair** has implemented various methodologies to drive out waste and process variance across the company to achieve the ultimate goal of zero defects.

We have a dedicated team of scientists, engineers, production and quality professionals working towards the best possible filtration solutions for our customers. We have a fully equipped test house and laboratory, and our experienced design engineers use the latest AutoCAD® technology, with 3D solid modelling, integrated with a finite element analysis system to give full structural assurance capability.

Quality is at the heart of every stage of our operation and a fundamental part of our culture. We are ISO9001 approved at a number of our manufacturing facilities and hold many other accreditations for the various industries we serve.

Research and Development

Continuous development of products and materials is vital to enable **Porvair** to offer new and better solutions to applications. Development plays a fundamental part in our operations and, as a result, we have developed a number of new bespoke products based on our established porous polymeric materials (Vyon®) and sintered metal media (Sinterflo®).

Although we operate across many filtration and separation markets, there is significant interaction between each division in terms of product research and development. The new product development team is drawn from scientists and engineers from across all divisions encouraging new ideas and new solutions. The success of this approach has been in the interaction of chemists and engineers working together to find practical solutions to some extremely complex scientific challenges identified in the chosen market areas.

Engineering

From initial concept design through to manufacture and validation to in service support, our highly experienced team of dedicated engineers work to develop the optimal filtration solution. Our team utilises the latest engineering tools of 3D AutoCAD®, Finite Element Stress Analysis, Computational Fluid Dynamics (CFD) and bespoke pressure vessel design software (PD5500, ASME VIII, EN13445). This is combined with over 30 years of proven experience and a knowledge and strong ethos of working closely with our customers, ensuring filtration solutions that meet customer requirements.



Manufacturing

Porvair Filtration Group produces filters and filtration systems, as well as a range of porous materials based on sintered polymers and metals, at production sites within the UK and the USA. We manufacture for a wide variety of industrial, pharmaceutical and biomedical applications, as well as supplying filtration solutions for extreme conditions of temperature, pressure and corrosion for the aerospace and nuclear markets.

Our production capabilities include the complete element or cartridge construction, along with the build of entire tubeplate and vessel assemblies. We boast specialist fabrication skills and techniques in all of our manufacturing sites around the world as well as extensive ISO Class 5 cleanroom facilities.

Testing and Laboratory

Our dedicated test, development and laboratory services underpin our design and development activity, from filtration media and material characterisation, product verification testing to customer systems simulation trials and in service performance evaluation. Our capabilities include filtration characterisation, environmental testing and analysis.

Quality

Our policy is to provide products and services that consistently satisfy the commitments made to our customers by complying with their requirements, working together as a team and by achieving continual improvement in our skills, systems, processes and performance.

We have a dedicated team of quality professionals with many years' experience in definition, implementation and maintenance of quality management systems meeting multiple industry requirements. This extends across the workforce through a strong quality culture and a philosophy of 'getting it right first time' driven from the top of the organisation.

Our quality management systems are regularly audited internally and by customers and regulatory bodies. We hold ISO9001 at a selection of our manufacturing sites along with, EN 9100 and EASA Part 21 Subpart G at our Segensworth facility. We are NQA1 capable subject to specific project requirements.

