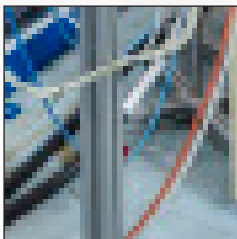
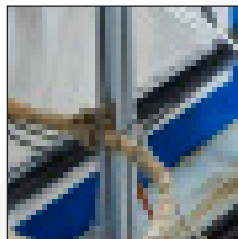
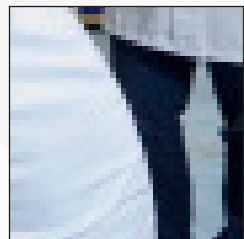
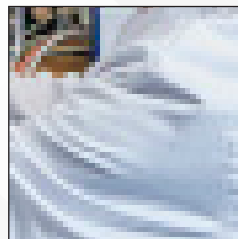
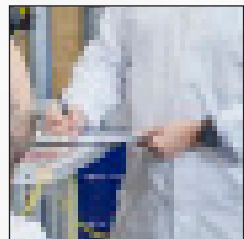
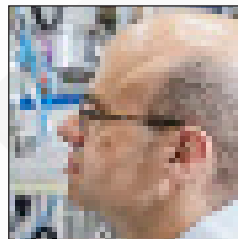
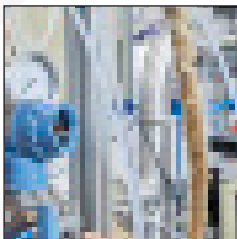
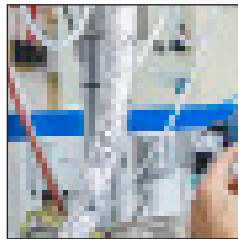
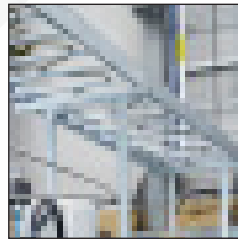
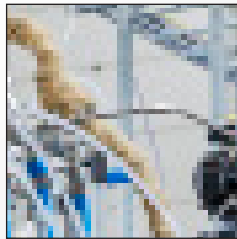
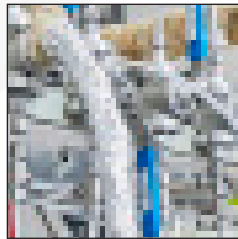
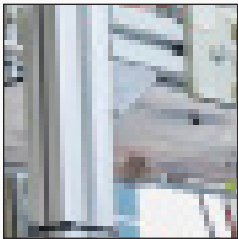


# Porvair Technical Services

An Overview of Test, Laboratory, Research and Development Services



From initial design concept 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 modelling, simulation, finite element stress analysis, computational fluid dynamics (CFD) and bespoke pressure vessel design software (PD5500, ASME VIII, EN13445).

This is combined with our knowledge and strong ethos of working closely with our customers, ensuring filtration solutions that meet their market requirements.

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

### Segensworth, UK

Our head office is the home to the following business units:

- Aerospace and Defence
- Energy
- Nuclear

The following technical services are available:

#### Filtration Performance

- Multipass efficiency ISO16889
- Single pass efficiency ASTM F795
- HEPA efficiency
- Glass bead efficiency MIL-F-8815
- Particle size counters. Range from 0.3-150µm
- Ozone removal efficiency
- Volatiles removal efficiency
- Gaseous efficiency. Condensation and laser particle counters >3nm

#### Environmental Testing

- Environmental test chamber
- Accelerated age testing
- Impulse fatigue
- Steam cycling
- Flow fatigue
- Humidity
- Filter collapse
- Hydraulic Cold Start

#### Flow Pressure Loss Testing

- Air, fuel, hydraulic oil, turbine lube oil, water, steam
- Flow measurement
  - Air: Coriolis, rotameter, anemometer
  - Liquid: turbines
- Comprehensive range of pressure transducers and gauges

#### Analysis (Product/Materials)

- Computer-assisted microscopy
- Metallographic examination (polishing/grinding)
- Tensile/compression tester
- Porometry/pore size distribution
- Permeability
- Filter integrity by bubblepoint

#### Microstructural Analysis

- Scanning electron microscopy (SEM)
- Energy dispersive spectroscopy (EDS)
- Particle size analysis, size, distribution, morphology

#### Pulse Jet Reverse Cleaning Test Facility

**Site contact: +44 (0) 1489 864330**

### Royal Dahlman, NL

Royal Dahlman supply engineering packages to leading licensors worldwide, including the delivery of critical, proprietary internals, up to fully dressed filtration skids. Markets include:

- Oil and Gas
- Petrochemical

The following technical services are available:

- Total Suspended Solids (TSS)
- Particle Size Distribution (PSD)
- Determination of asphaltenes in crude petroleum and petroleum products
- Filtration of sample products on a lab scale.

**Site contact: +31 10 599 11 11**

## New Milton, UK

Our process departments operate out of our New Milton Division. These include:

- Food and Beverage
- Pharmaceutical
- Polymer
- Printing
- Process

The following technical services are available:

- Integrity testing
  - Bubblepoint
  - Diffusive flow
  - Water intrusion
  - Pressure hold

- Porometry/pore size distribution
- OSU-F2 filter efficiency test rig
- Flow Vs differential pressure test
- Optical microscopy – image analysis
- UV spectrophotometer – assays (e.g. amount of polyphenols in beer, preservatives in ophthalmic solutions)
- Filterability test. Scale-up from disc to 10" cartridge
- Particle size counters. Range from 0.3-150µm
- Silt density index
- Materials testing
- Product-based validation of pharmaceutical processes

**Site contact: +44 (0) 1425 612010**

## Ashland, USA

Our head office in Virginia, USA, is also the USA manufacturer for many of the industries we are involved with, including:

- Aerospace and Defence
- Energy
- Food and Beverage
- Nuclear
- Pharmaceutical
- Polymer
- Printing
- Process

The following technical services are available:

### Filtration Performance:

- HEPA efficiency
- Glass bead filtration efficiency
- Bubble point testing
- Flow/pressure loss testing (gas)
- Element burst/collapse testing

### Analysis:

- Computer-assisted microscopy
- Porometry/pore size distribution
- Permeability

**Site contact: +1 804 550 1600**

## Caribou, USA

Caribou, Maine, focuses on the manufacture of custom engineered porous sintered metal powder components and assemblies for use in a wide range of filtration and flow applications, including:

- Process and analytical instruments

The following technical services are available:

- Burst test chamber to 30,000psi

**Site contact: +1 207 493 3027**

## Boise, USA

Boise, Idaho, focuses on the manufacture of custom metal filtration components and assemblies with porous sintered metal and PTFE media for use in a range of applications within:

- Semiconductor, solar/photovoltaic, HBLED, and wafer manufacturing
- Flat panel display and hard disk drive manufacturing

The following technical services are available:

- Flow measurement
- Particle counter
- Helium leak testing

**Site contact: +1 208 461 2090**



**Porvair Filtration Group Ltd.**

1 Concorde Close  
Segensworth, Fareham  
Hampshire, PO15 5RT, UK  
Tel: +44 (0)1489 864330  
Email: info@porvairfiltration.com

**Porvair Filtration Group Inc.**

301 Business Lane  
Ashland, Virginia 23005, USA  
Tel: +1 804 550 1600  
Email: infoUS@porvairfiltration.com

**Porvair Filtration India PVT. Ltd.**

401, 4th floor, Plot No C-3, Centrum  
IT Park, Wagle Estate, Near Mulund  
Checknaka, S.G. Barve Road, Thane  
West, Maharashtra, 400604  
Tel: +91 22 2081 1148  
Email: infoIN@porvairfiltration.com

[www.porvairfiltration.com](http://www.porvairfiltration.com)

Porvair is a registered trademark of Porvair plc.

© Copyright 2019. Porvair Filtration Group Ltd. All rights reserved.

Whilst every effort has been made to ensure the accuracy of this document, due to continuous product development, the data contained is subject to constant revision and Porvair Filtration Group Ltd. reserves the right to change, alter or modify its contents.

PFG009 / December 2019 / Rev1: Aug21