DELABIE

Anti-Legionella and all-germ point-of-use filters

- Tap & wall-mounted shower filters
- Shower head filters
- Spout filters
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ACS Certificate of Sanitary Conformity.
All DELABIE products conform to the CPDW* directive modified 29/05/1997,
and the French Ministry of Health circular
DGS/D7A002 no. 571
* Construction Products in Contact with Drinking Water
(European Commission).
Anti-Legionella and all-germ point-of-use filters

TAP & WALL-MOUNTED SHOWER FILTERS

SHOWER HEAD FILTERS

SPOUT FILTERS
CONTROLLING WATERBORNE HEALTH RISKS

Water, essential for hygiene, can also be a source of infection if its quality is not controlled. The proliferation of bacteria (Legionella spp., Pseudomonas aeruginosa, etc.) in the water supply or in mixers and taps may cause serious infections, especially for vulnerable people.

Water systems in all buildings open to the public should be monitored for Legionella (e.g. hotels and holiday accommodation, campsites, detention centres, etc.) and not just healthcare facilities.

The prevention of health risks associated with pathogenic bacteria in water systems should be a constant concern for public buildings, and in particular healthcare facilities (see the current French and UK government guidance below).

The BIOFIL range of point-of-use filters provides a preventative or curative solution to secure the water quality at the point-of-use and protect the health of the user.

CURRENT GUIDANCE

French and UK legislation is well established in both healthcare and public buildings to reduce the risk of Legionella

The French Circular of 22 April, 2002, recommends that healthcare facility managers should create "secure points-of-use" where the water quality is safe for high risk users.

In the UK, the Health & Safety Executive guidance (HSG274 Part 2, 2014) recommends point-of-use filters as a temporary measure until a permanent, safe solution is in place. In some healthcare situations the long-term use of filters may be necessary to protect vulnerable patients.

Point-of-use micro-filters with a 0.2µm membrane constitute a means for removing Legionella and Pseudomonas aeruginosa in water drawn off from the system.

The French Directive of 1st February, 2010, and the UK guidance HSG274 Part 2 both state that monitoring for Legionella should be carried out. Analysis of water samples should take place in those locations which are deemed at risk. In France this includes points-of-use that are accessible to the public and where aerosols are generated (mixers, taps, showers, etc.).

In the UK, sampling should occur where there are vulnerable people (e.g. in hospitals and care homes). Also where Legionella control measures such as hot water temperature control or biocide treatments are not consistently achieved.

When a sample identifies a Legionella count above acceptable levels, the facility manager must assess the installation to identify the necessary action to protect users.

Point-of-use micro-filters are a means to restore the bacteriological quality of water at the point-of-use (anti-Legionella and all-germ tap filters and shower heads, etc.).

The French High Council Report on public health and the risk of Legionella from 11 July, 2013, is a guide to investigation and management assistance.

If sampling in public buildings shows Legionella levels above the acceptable threshold, the first priority is to protect users. Contaminated equipment should be placed out-of-action and “anti-legionella” point-of-use filters should be installed on the water system in healthcare facilities and nursing homes.

The UK Health & Technical Memoranda 04-01 Part C (2016) provides advice on managing Pseudomonas aeruginosa in augmented care units. The water quality must be guaranteed for augmented care patients. This means either: water where testing has shown an absence of P. aeruginosa; or water supplied through a POU filter; or sterile water (for example, for skin contact for babies in neonatal intensive care units).
ANTILEGIONELLA AND ALL-GERM RANGE OF BIOFIL FILTERS

DELABIE offers a collection of BIOFIL water filtering devices: tap and wall-mounted shower filters, shower head filters and spout filters. 

BIOFIL filters are designed to deliver bacteriologically controlled water at the point-of-use. These devices retain bacteria, including waterborne opportunistic pathogenic micro-organisms such as *Legionella spp.*, *Legionella pneumophila*, *Pseudomonas aeruginosa*, non-tuberculous Mycobacteria and other micro-organisms, thanks to a hollow fibre micro-filtration membrane with a porosity of 0.1µm nominal-rated. This micro-filtration technology guarantees a bacteriological quality superior to that of the drinking water system without changing its chemical composition.

BIOFIL filters are designed to secure water delivery at the point-of-use. They are recommended for managing and preventing so-called healthcare associated infections (HAIs).

AREAS OF USE

Anti-Legionella and all-germ filters

BIOFIL 2, 3 and 4-month point-of-use filters provide a physical barrier to reduce the risk of infection associated with waterborne micro-organisms. The micro-filtration membrane provides protection for immunosuppressed and vulnerable people.

Filters are necessary for the care of immunosuppressed patients in high risk areas such as bone marrow and organ transplant units, oncology, intensive care, neonatal wards and any other area providing care for this type of patient. They also provide protection against the risk of *legionella* and ensure compliance with regulations for users of public buildings.

NO CHEMICAL PRODUCTS

No chemical products are used during the manufacture of our filters.

TOTAL CONTROL OF THE MANUFACTURING PROCESS

100% quality controlled

The fibre quality and porosity of the finished product are continuously monitored during the manufacturing process for 100% of the fibres.

COMPONENT DISPOSAL STRATEGY

BIOFIL filters are classified as household waste. The outer packaging is made from recycled cardboard which is also fully recyclable.

HOLLOW FIBRE, AN INNOVATIVE, TECHNICAL SOLUTION

Hollow fibre micro-filtration

There are two main types of membrane used in point-of-use micro-filtration devices: flat membrane or tubular membrane. DELABIE chose to use hollow fibre tubular membrane filtration technology.

THE PRINCIPLE OF HOLLOW FIBRE FILTRATION

Hollow fibre filter

The BIOFIL filter is made up of a collection of polyethylene hollow fibres grouped together into a unit. The fibres are extremely fine and flexible, with an outer diameter of 0.6mm and a thickness of several tens of microns.

The fibres are hollow and shaped like a straw (tubular).

Microporous structure

The hollow fibre membranes have multiple pores which vary in size from 0.01 - 0.1 micron. Each membrane consists of several surfaces with microporous structures (micro slits).

Bacteria and any particles in suspension that are larger than 0.1 micron are trapped by these structures and are retained permanently on the external surface of the membrane.

External/Internal frontal filtration

DELABIE uses a frontal filtration system. The water requiring treatment flows at right angles to the filter surface and passes through the membrane due to the pressure difference on either side of the membrane.

The water flows from the external to the internal surface of the fibre.

Bacteria and other microparticles that cannot pass through the gaps in the membrane structure are retained on the outer surface and therefore do not penetrate the membrane.

Filtration area/storage of bacteria

The filter’s large hollow fibre filtration surface area makes it possible to filter a larger volume of water. Consequently the storage capacity for bacteria and impurities trapped inside the filter is much greater.
**BACTERIAL CHALLENGE**

BIOFIL filters are approved using the ASTM F838* method. This test confirms the effective bacterial retention power of the filters used for the decontamination of liquids. The microbiological challenges carried out on BIOFIL filters in laboratories using the species *Brevundimonas diminuta*, *Legionella pneumophila* and *Pseudomonas aeruginosa* demonstrate a retention efficiency of log** for all waterborne micro-organisms which are larger than the filter pores which have a nominal porosity rating of 0.1μm and absolute porosity rating of 0.2μm.

When subjected to this test, all BIOFIL filters delivered an effluent free from bacteria, so they have a sterilising grade of 0.1 micron nominal-rated.

*Standard Test Method for Determining Retention of Membrane Filters Utilized for Liquid Filtration.*

**LIFESPAN**

BIOFIL anti-Legionella and all-germ filters can be used for up to 4 months after initial installation (depending on the model installed). After the time period marked on the filter (2, 3 or 4 months), DELABIE recommends changing the filter to avoid any risk of retro-contamination from the bacteria concentrated in the filter especially in at-risk areas.

Note: The amount of impurities in the water will vary between water systems. Filters will, therefore, become clogged at different rates. If the filter becomes clogged prematurely, it is necessary to change it. We recommend pre-filtration upstream to filter out suspended solids and/or colloids, etc.

Bacterial proliferation is significantly reduced in an installation where the water is pre-filtered, and the lifespan of all equipment is greatly increased.

**RESISTANT TO DIFFERENT WATER SYSTEM TREATMENTS**

BIOFIL filters will withstand thermal and chemical shocks. During chemical or thermal shocks, impurities become trapped in the filter and reduce its lifespan. DELABIE, therefore, recommends changing the filter after any treatment.

Resistance to thermal shocks: Temperatures of 70°C for a cumulative period of 30 minutes during its lifetime.

Resistance to chemical shocks: Chlorine levels for 2-month filters: 2 hours at 100ppm; 3-month filters: 3 hours at 100ppm; and 4-month filters: 4 hours at 100ppm.

**OPTIMISED TRACEABILITY**

To control the health risks associated with water, the whole process from the manufacture of the medical device components to the use of the finished product must be completely traceable.

Individual packet label

All BIOFIL filters have a unique batch number which can be easily traced back through the production process.

**COMPLIANCE**

**CE marked class I Medical Devices**

BIOFIL non-sterile filters comply with the European Regulation EU 2017/745 and benefit from the CE Mark (2022).

**CE marked class I Medical Devices**

BIOFIL sterile filters comply with the European Regulation EU 2017/745 and benefit from the CE mark (2022).

Sterilisation complies with European standard EN ISO 11137

After manufacture, BIOFIL sterile filters are sterilised using gamma rays. Each box has a visual marker showing that the filters have been sterilised. After sterilisation, BIOFIL filters have a shelf life of 3 years. The product expiry date is marked on the label.

Certificate of sanitary compliance


WRAS

Our BIOFIL filters are WRAS approved. WRAS Approval demonstrates that a product complies with the Water Supply (Water Fittings) Regulations and Scottish Water Byelaws. The WRAS approval standard is accepted as a quality benchmark by water suppliers who enforce the Water Regulations and Byelaws.
Controlling the bacteriological quality of water

**Featured models:** BIOFIL tap filter (ref. 30250) and BIOFIL spout filter (ref. 30040)

**SPACE SAVING**
- Suitable for mixers and taps with a low drop height
- Reduced risk of retro-contamination

**SUPERIOR PERFORMANCE**
- Very large filtration area: higher volume of filtered water than with a flat membrane filter
- Completely effective and reliable with drinking water of any quality
- Reduced risk of premature clogging: large capacity to store bacteria inside the filter
- Filter lifespan up to 4 months

**EASY TO INSTALL**
- Tap and wall-mounted shower filters: simply connect to the outlet requiring treatment, no tools required, using push-fit connectors
- Shower heads: can be screwed onto any standard shower hose

**TOTAL PROTECTION**
Bacteriologically controlled water: hollow fibre membrane with a water filtration threshold of 0.1µm nominal-rated and 0.2µm absolute-rated

**PROTECTIVE SKIRT**
Filter outlet protected from any contamination by hand

**SPOUT FILTER**
- No additional space required: drop height maintained
- Removes the spout as a potential contaminant

**TILTED CONNECTOR**
Optimises filter position: reduced risk of retro-contamination

**EASY TO INSTALL**
Suitable for mixers and taps with a removable BIOCLIP spout, no tools required

- Water flow through the filter

Featured models: BIOFIL tap filter (ref. 30250) and BIOFIL spout filter (ref. 30040)

DELABIE
Mechanical basin mixer 2565T1+ BIOFIL 2-month anti-Legionella and all-germ tap filter 30250 • Push-fit connector M24 × 100 B20124N
**Point-of-use filters** Taps and wall-mounted showers / BIOFIL

### BIOFIL tap and wall-mounted shower filter
Anti-Legionella and all-germ filter

- Single use filter for taps and wall-mounted showers, sterilising grade 0.1µm nominal-rated.
- Hydrophilic polyethylene hollow fibres.
- Maximum lifespan: 2, 3 or 4 months after installation depending on the model installed.
- Space saving, suitable for mixers and taps with a low drop height.
- Volume of water filtered per duration of use: 6,000L for 2 months; 9,000L for 3 months; 12,000L for 4 months.
- Filtration flow rate: 5.5 lpm* at 3 bar for 2-month versions; 7.6 lpm* at 3 bar for 3 and 4-month versions (filter only, excludes any flow rate restrictor/regulator in the shower or mixer).
- Maximum upstream pressure at point-of-use: 5 bar.
- Careful management of retro-contamination: protective skirt and filter position is optimised thanks to a tilted connector.
- Compatible with and resistant to chemical and thermal shocks.
- CE marked class I Medical Device for non-sterile versions.
- CE marked class Is Medical Device for sterile versions.
- Available in two versions:
  - sterile filters, individually wrapped in sterile packaging;
  - non-sterile filters, individually wrapped in non-sterile packaging.
- * Average flow rate during the product lifespan.

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**Related products**

**Push-fit connector**
- Simple to connect to the point-of-use requiring treatment, no tools required.
- Standard or vandal-resistant versions available.

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**1 BIOFIL tap and wall-mounted shower filter**

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<thead>
<tr>
<th>2-month lifespan</th>
<th>3-month lifespan</th>
<th>4-month lifespan</th>
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<tbody>
<tr>
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* Reference is for a single unit. Can only be ordered in multiples of 10 (packaged in boxes of 10).
**BIOFIL shower head filter**

Anti-Legionella and all-germ filter

- Single use shower head filter, sterilising grade 0.1µm nominal-rated.
- Quick to install: screws on to all standard shower hoses.
- Hydrophilic polyethylene hollow fibres.
- Maximum lifespan: **2, 3 or 4 months** after installation depending on the model installed.
- Volume of water filtered per duration of use: 6,000L for 2 months; 9,000L for 3 months; 12,000L for 4 months.
- Filtration flow rate: **11.2 - 11.8 lpm** at 3 bar depending on the model (filter only, excludes any flow rate restrictor/regulator in the shower).
- Maximum upstream pressure at point-of-use: 5 bar.
- Compatible with and resistant to chemical and thermal shocks.
- CE marked class I Medical Device for non-sterile versions.
- CE marked class Is Medical Device for sterile versions.
- Available in two versions:
  - sterile filters, individually wrapped in sterile packaging;
  - non-sterile filters, individually wrapped in non-sterile packaging.
- Very light hand spray:
  - 2-month version: empty filter: 105g; filter filled with water: 186g.
  - 3 & 4-month versions: empty filter: 133g; filled with water: 253g.
  * Average flow rate during the product lifespan.

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<thead>
<tr>
<th>1 BIOFIL shower head filter*</th>
<th>20261/30261</th>
<th>20361/30361/20461/30461</th>
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BIOFIL spout filter
Anti-Legionella and all-germ filter

• Single use spout filter, sterilising grade 0.1µm nominal-rated.
• Can be installed instead of BIOCLIP spouts (does not require tools or the water to be shut off).
• Hydrophilic polyethylene hollow fibres.
• Maximum lifespan: 2 months after installation.
• Qualified water volume per duration of use: 6,000L.
• Filtration flow rate: 6 lpm* at 3 bar (filter only, excludes any flow rate restrictor/regulator in the mixer).
• Maximum upstream pressure at point-of-use: 5 bar.
• Compatible with and resistant to chemical and thermal shocks.
• Available in two versions:
  - sterile filters, individually wrapped in sterile packaging;
  - non-sterile filters, individually wrapped in non-sterile packaging.
• * Average flow rate during the product lifespan.

Quick and easy to install:
1 Pull the BIOFIL spout towards you to remove it.
2 Insert another spout filter in its place

Related products

BIOCLIP mixer with swivelling spout
• High, removable, disposable, swivelling spout H. 180mm, made from recyclable Hostaform®, L. 180mm.
• Spout can be replaced by a BIOFIL filter spout (see opposite).
• Ø 35mm ceramic cartridge, standard or pressure-balancing.
• Flow rate limited to 5 lpm.
• Hygiene control lever L. 185mm requires no manual contact.

BIOFIL spout filter

1 BIOFIL spout filter

2-month lifespan
Sterile  20040
Non-sterile  30040

* Reference is for a single unit. Can only be ordered in multiples of 10 (packaged in boxes of 10).
AVAILABLE CATALOGUES:

DOC 609INT: Water Controls for Public and Commercial Places
DOC 900INT: Water Controls for Healthcare Facilities and Retirement Homes
DOC 950INT: Accessibility and Independence - Hygienic Accessories for Public and Commercial Places
DOC 750INT: Stainless Steel Sanitary Ware
DOC 200INT: Water Controls for Professional Catering

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