

**PRODUCT BROCHURE**

Automatic and manual  
filtration systems





## A commitment to design and manufacturing

As one of the leading European manufacturers of automatic water filtration systems, Boll & Kirch is committed to investment in the latest design and manufacturing resources.

The introduction of synchronistic 'lean' engineering techniques and automated storage systems has significantly increased manufacturing efficiency and reduced lead times for customers.

As part of an ongoing programme of product development, a team of experienced design engineers work to create innovative solutions that maximise system efficiency and anticipate changing application needs.



The Boll & Kirch manufacturing facility in Kerpen near Cologne, Germany



The Boll & Kirch site is comprised of 40,327m<sup>2</sup> of design, manufacturing and distribution facilities



Automated racking in computer-controlled storage area



Research and development testing centre

# Ongoing investment for quality and efficiency



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Boll & Kirch's objective is to achieve the very best in competence, precision and quality for the customer, the business and its product range.

Investment in quality, with environmentally controlled production facilities and stringent QC procedures, ensures optimum product performance and reliability.



Part of the main filter production area



Boll & Kirch teams appear at all the main trade shows





# Manual simplex single filters and strainers



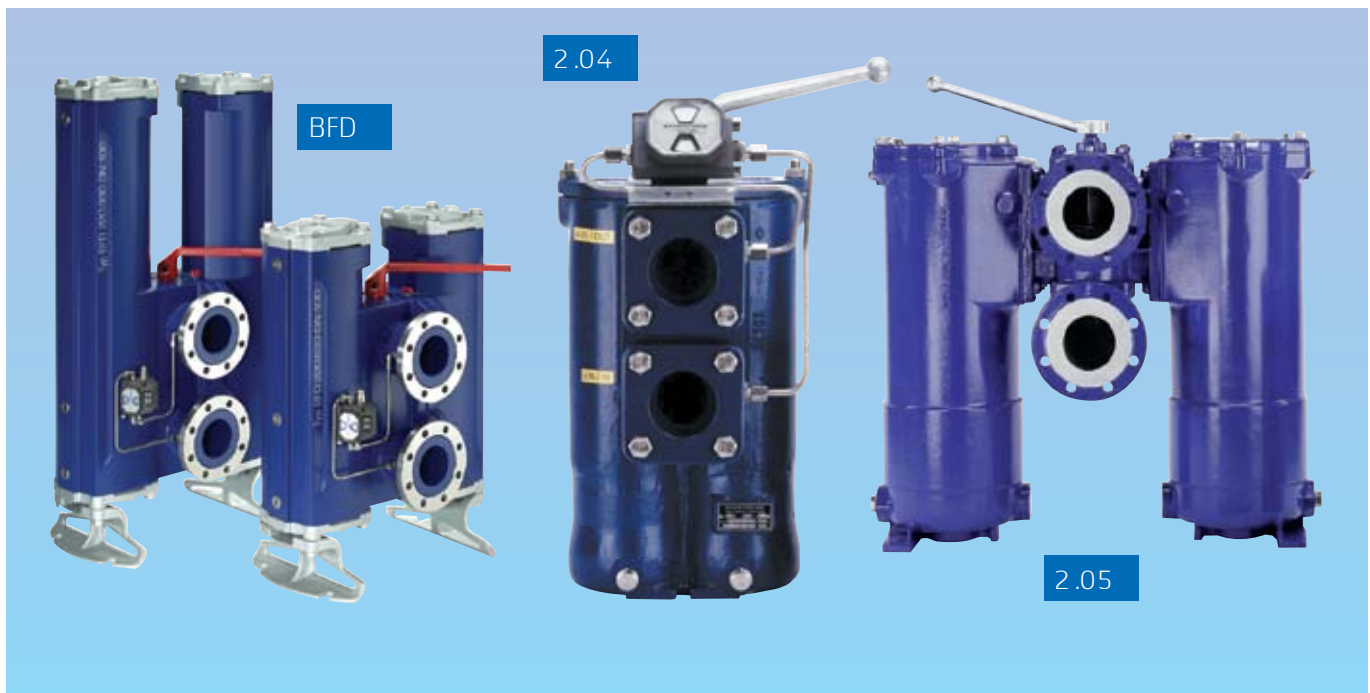
Simplex Filters are designed for use where the flow can be stopped for manual cleaning.

- ✔ High filtration areas
- ✔ High solids holding
- ✔ Large range of filtration levels
- ✔ Robust reusable stainless steel elements

## Technical Specifications

BOLLFILTER Simplex Filter Range	
Filter sizes	25mm up to 1000mm N/B.
Flow rates	Flows up to 7000 m <sup>3</sup> /hr (depending on filtration level).
Filtration levels	6mm down to 5 micron.
Materials of construction	Ductile Iron, Carbon Steel, Stainless Steel.
Internals/Lining	Stainless Steel/FIP Epoxy Lining.
Design pressure	Up to 100 bar (depending on model).
Design temperature	-10 to 120°C. (higher or lower temperatures available on request).
Filter elements	Basket, Candle, Multi-mantle, Ring, Cartridge (using materials such as metallic mesh, wedge wire or fibreglass media).
Typical applications	Suitable for all types of liquids. Filter Membrane, Spray Nozzle, Pump, Meter & Heat Exchanger protection. Pipeline scale removal.
Options include	Differential Pressure Indicator/Switch. DWI approved internals, Automatic Air Release Valves. Magnet Elements for metallic particle removal.

# Manual duplex double filters and strainers



Duplex Filters are fitted with an integral changeover valve and are designed for use where the flow cannot be stopped for manual cleaning. By diverting the flow through a second filter chamber, the element can be cleaned without interruption of the flow.

- ✔ Impossible to completely shut off flow
- ✔ 100% duty and standby
- ✔ Easy to operate changeover valve
- ✔ High filtration areas and solids holding
- ✔ Large range of elements & filtration levels
- ✔ Robust reusable stainless steel elements

## Technical Specifications

	<b>BOLLFILTER Duplex Filter Range</b>
<b>Filter sizes</b>	25mm up to 250mm N/B.
<b>Flow rates</b>	Flows up to 700 m <sup>3</sup> /hr (depending on filtration level).
<b>Filtration levels</b>	6mm down to 20 micron.
<b>Materials of construction</b>	Ductile Iron, Carbon Steel, Stainless Steel.
<b>Internals/Lining</b>	Stainless Steel/FIP Epoxy Lining.
<b>Design pressure</b>	Up to 40 bar (depending on model).
<b>Design temperature</b>	-10 to 120°C (higher temperatures available on request).
<b>Filter elements</b>	Basket, Candle, Multi-mantle, Ring, Cartridge (using materials such as metallic mesh, wedge wire or fibreglass media).
<b>Typical applications</b>	Suitable for all types of liquids. Filter Membrane, Spray Nozzle, Pump, Meter & Heat Exchanger protection. Pipeline scale removal.
<b>Options include</b>	Differential Pressure Indicator/Switch. Automatic Air Release Valves, Heating Elements/Jackets. Magnet Elements for metallic particle removal.



# Manual duplex lube oil filters



Innovative design with 60 variants.

Ball valve type Duplex Filters are the result of precision engineering carried out in our modern, well-equipped production facility.

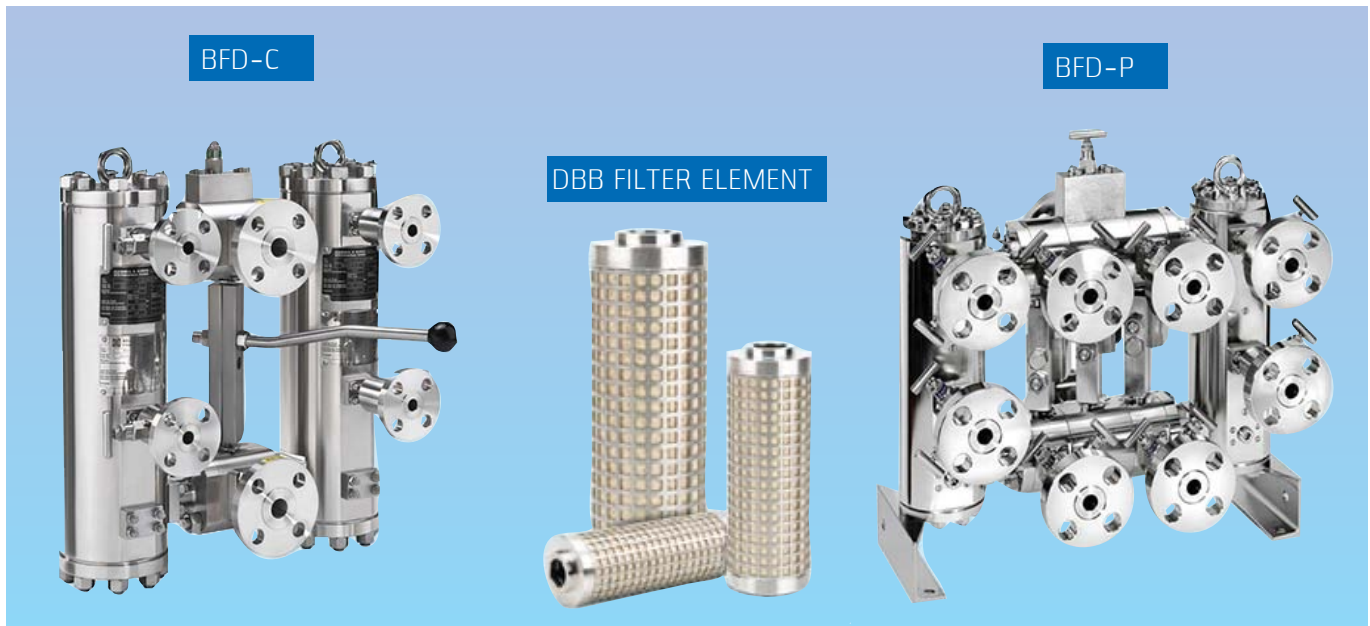
This range of filters is designed to meet the requirements of API, ASME and PED.

- ✔ Impossible to completely shut off flow
- ✔ 100% duty and standby
- ✔ High filtration areas & solids holding
- ✔ Low DP due to valve design and filter media
- ✔ Changeover handle position lock available

## Technical Specifications

BOLLFILTER Duplex Lube Filter Range	
Filter sizes	25mm up to 150mm N/B.
Flow rates	Flows up to 160 m <sup>3</sup> /hr.
Filtration levels	Down to 1 micron.
Materials of construction	Ductile Iron, Carbon Steel, Stainless Steel, Duplex & Super Duplex
Internals	Stainless Steel.
Design pressure	Up to 40 bar (depending on model).
Design temperature	Up to 120°C (higher temperatures available on request).
Filter elements	Fibreglass or Stainless Steel Pleated Elements or Stainless Steel Mesh-type Candle Elements.
Typical applications	Lube Oil Filtration for Turbines, Compressors, Diesel Engines, Fuel Oil Filtration.
Options include	Differential Pressure Indicator/Switch. Drip Tray, Safety Covers. Automatic Air Release Valves, Heating Elements/Jackets. Magnet Elements for metallic particle removal.

# Manual duplex gas coalescer filters



Our state-of-the-art design and machining centres ensure the most exacting standards with all filters designed and manufactured in-house. We can produce changeover valves (DBB valves) and filter vessels for secure operation at very high pressure.

- ✔ Removal of solids and liquids from gases
- ✔ Added security of double block and bleed changeover valve
- ✔ Flexible designs to meet custom requirements

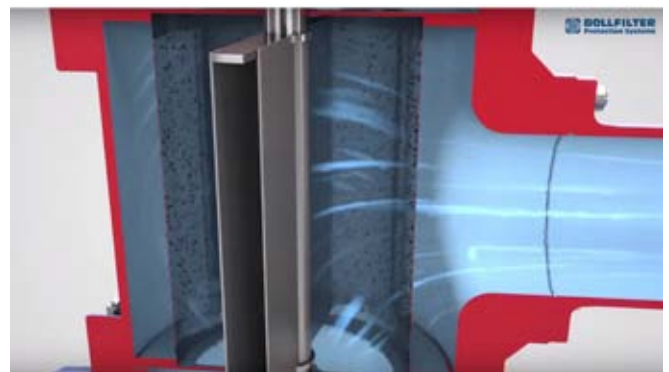
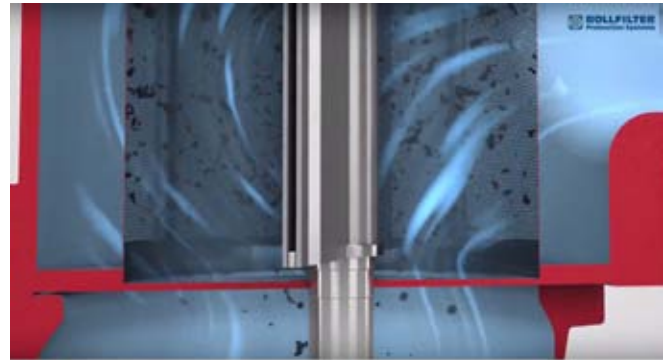
In-house testing facilities guarantee filter integrity and accuracy of the filter element.

## Technical Specifications

BOLLFILTER Duplex Gas Filter Range	
Filter sizes	25mm up to 200mm N/B.
Flow rates	Flows up to 100,000 Nm <sup>3</sup> /hr.
Filtration levels	Down to 0.1 micron.
Materials of construction	Carbon Steel, Stainless Steel, Duplex & Super Duplex Stainless Steels.
Internals	Stainless Steel.
Design pressure	550 bar.
Design temperature	-20 to 120°C (higher or lower temperatures available on request).
Filter elements	Fibreglass & Stainless Steel Particle Filters and Coalescer Elements. Stainless Steel Demisters and Cyclone Elements.
Typical applications	Removal of solids and liquids from gas. Seal Gas, Fuel Gas, Process Gas.
Options include	Double block and bleed changeover valve. Demister Elements and Cyclone Separators.



# Automatic backflushing filter aquaBoll® coarse



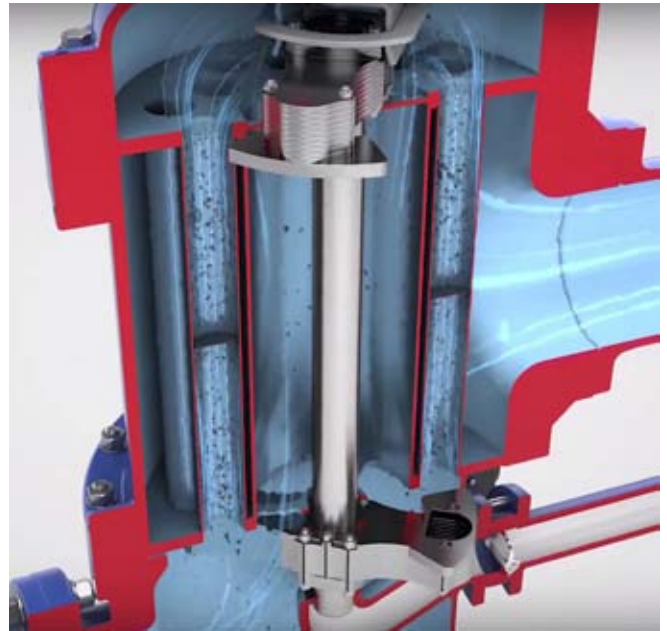
- ✔ Large filtration area - 12x inlet CSA
- ✔ Cylindrical screen design
- ✔ Coarse and fine collectors
- ✔ Can handle large solids
- ✔ Forward and reverse cleaning arm

## Technical Specifications

BOLLFILTER aquaBoll® Automatic Filter	
Filter sizes	50mm up to 1000mm N/B.
Flow rates	Up to 9,000 m <sup>3</sup> /hr.
Filtration levels	2mm, 3mm and 5mm.
Materials of construction	Ductile Iron/Carbon Steel.
Internals/Lining	Stainless - SD St.Stl./FIP Epoxy Lining/Rubber Lining/DWI Lining.
Working pressure	1.5 up to 16 bar as standard.
Design temperature	0 to 60°C (other temperatures available on request)
Filter elements	Perforated plate cylinders.
Typical applications	Raw Water Inlets, River & Canal Water, Irrigation & Seawater, Injection, Re-injection & Cooling Water. Coarse Inlet Strainer, ACC/RCW Strainer.
Options include	Skid mounted pump and control system. DWI approved internals for potable water applications. Control panels to customer specification.



# Automatic backflushing filter aquaBoll® candle type



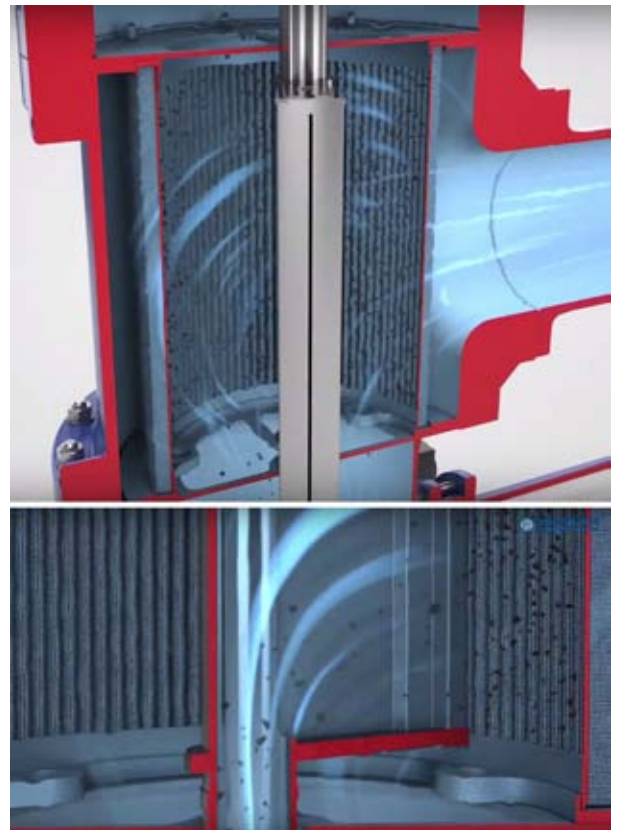
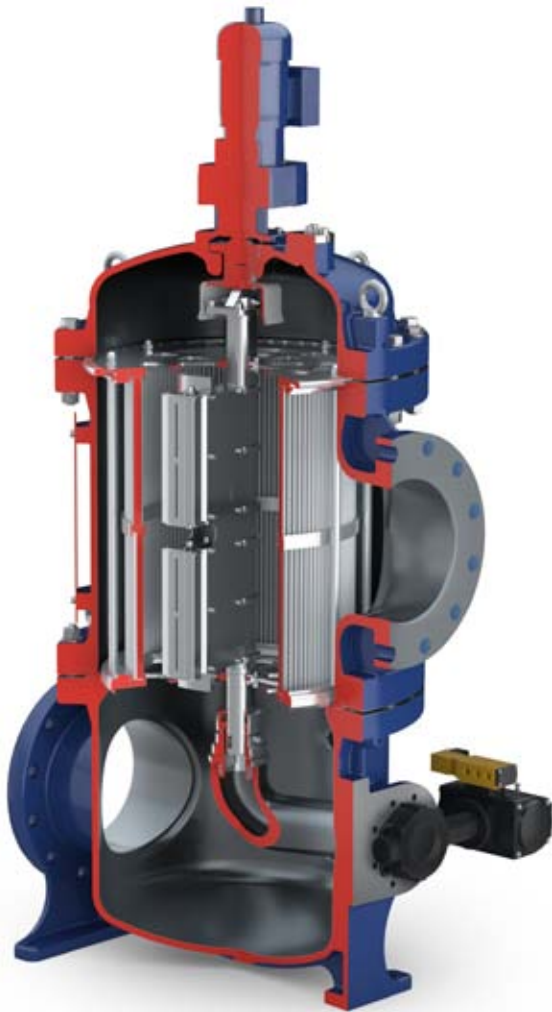
- ✔ Elements cleaned from both ends
- ✔ Can handle large solids and high solids loading
- ✔ Hydrodynamic backflushing system
- ✔ Fast on-stream cleaning
- ✔ Flushing arms offset by 90 degrees

## Technical Specifications

BOLLFILTER aquaBoll® Automatic Filter	
Filter sizes	50mm up to 1000mm N/B.
Flow rates	Up to 9000 m <sup>3</sup> /hr.
Filtration levels	1000 micron down to 100 micron.
Materials of construction	Ductile Iron/Carbon Steel.
Internals/Lining	Stainless - SD St.Stl./FIP Epoxy Lining/Rubber Lining/DWI Lining.
Working pressure	1.5 bar up to 16 bar as standard.
Design temperature	0 to 60°C (other temperatures available on request).
Filter elements	Wedge Wire, Mesh, LRP.
Typical applications	Filter Membrane, Spray Nozzle, Heat Exchanger, UV, TSR, TTP Protection. General Pipeline Scale Removal and FE Washwater Filtration.
Options include	Foulex™ Coated Elements. DWI approved internals for potable water applications. Control panels to customer specification. Skid mounted pump and control system for low pressures.



# Automatic backflushing filter aquaBoll® fine



- ✔ Large filtration area - 50x inlet CSA
- ✔ High element free area
- ✔ High solids loading capacity
- ✔ High efficiency backflush collectors

## Technical Specifications

BOLLFILTER aquaBoll® Automatic Filter	
Filter sizes	50mm up to 1000mm N/B.
Flow rates	Up to 2500 m <sup>3</sup> /hr.
Filtration levels	80 micron down to 10 micron.
Materials of construction	Ductile Iron/Carbon Steel.
Internals/Lining	Stainless - SD St.Stl./FIP Epoxy Lining/Rubber Lining/DWI Lining.
Working pressure	1.5 to 16 bar as standard.
Design temperature	0 to 60°C (other temperatures available on request).
Filter elements	Special construction pleated mesh cylinder.
Typical applications	RO and UV Membrane, Ultra Violet Reactor, Nitrate Reduction Plant, Washwater System Protection and General Pipeline Scale Removal.
Options include	DWI approved internals for potable water applications. Control panels to customer specification. Skid mounted pump and control system.

# Automatic low pressure backflushing filter



- ✔ Operates at low working pressures
- ✔ Efficient cleaning using backflush assist pump
- ✔ Can handle large solids and cope with high solids loading
- ✔ On-stream cleaning in seconds
- ✔ Low backflush using process fluid
- ✔ Available as packaged, fully assembled plant (as pictured)

## Technical Specifications

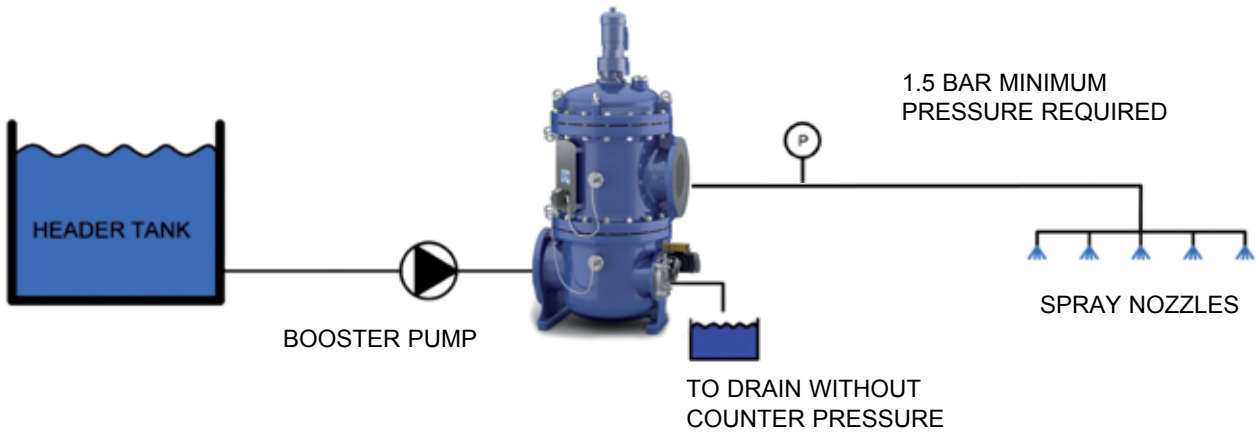
BOLLFILTER Automatic Filter	
Filter sizes	50mm up to 1000mm N/B.
Flow rates	5 m <sup>3</sup> /hr up to 9000 m <sup>3</sup> /hr.
Filtration levels	5mm down to 10 micron.
Materials of construction	Ductile Iron, Carbon Steel.
Internals/Lining	Stainless Steel/FIP Epoxy Lining.
Working pressure	Typical minimum – 0.5 bar.
Design temperature	0 to 60°C (other temperatures available on request).
Filter elements	Wedge Wire, Mesh, Round Profile Wire, Perforated.
Typical applications	Filter Membrane, Spray Nozzle, Pump, Heat Exchanger protection. Pipeline scale removal. Water and effluent.
Options include	Foulex™ Coated Elements (from 1mm down to 100 micron). DWI approved internals for potable water applications. Control panels to customer specification. Manual bypass strainer.



# Installation layouts of automatic filters

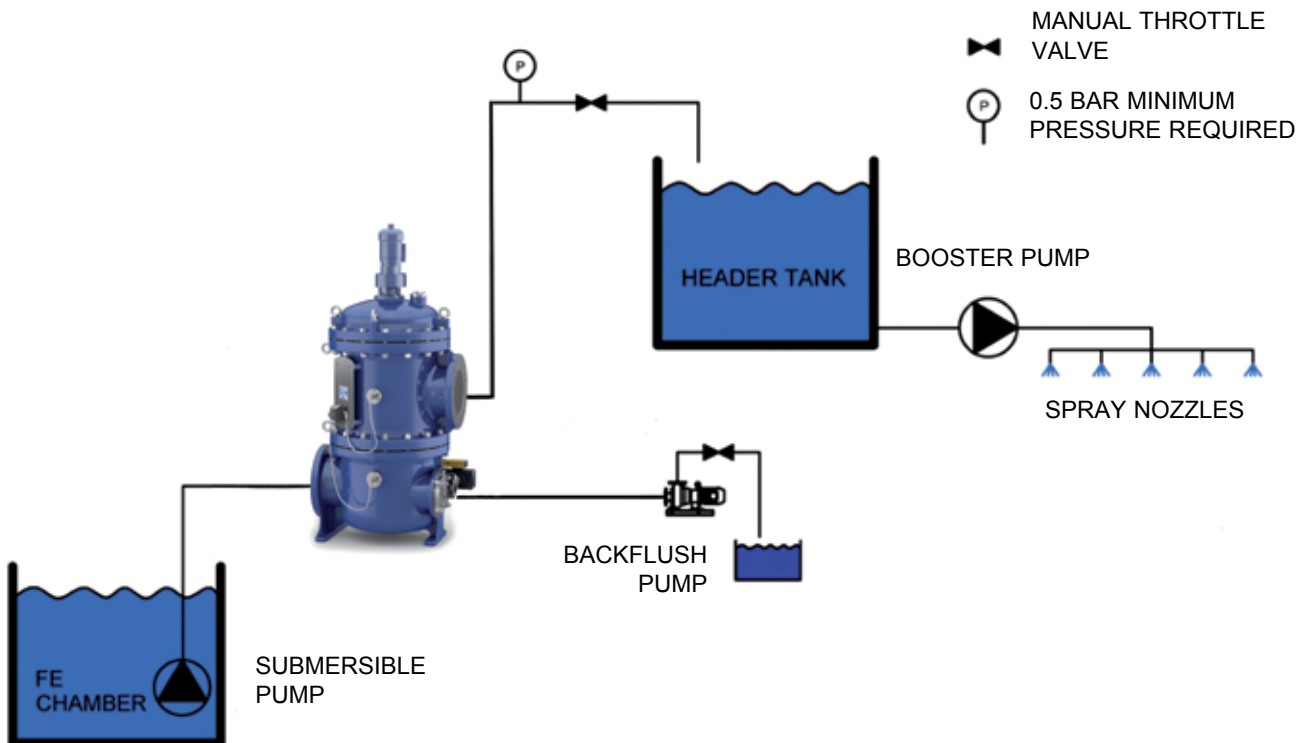
## High pressure application

aquaBoll®



## Low pressure application

aquaBoll®





# FouleX to counteract and prevent biofilm



## What is biofilm?

Biofilm consists of micro-organisms and their secretions, which produce hydrogels in connection with water. These hydrogels are relatively stable and therefore difficult to remove. FouleX is a very thin, silver-containing layer which is applied to the filter elements. This unique coating prevents or reduces the formation of biofilm. FouleX can be applied to new or existing filter elements in either wedge wire or mesh design.

Two Backflushing BOLLFILTER Automatics were installed at the WAG Water Treatment Plant in Roetgen, Germany, for the filtration of dam water. Removing particulates down to 150 microns, they provide primary protection for the membrane plant used for the ultra-filtration of potable water supply to the Aachen region.

However, due to the presence of manganese bacteria, a biofilm formed on the filter elements after just three months' operating time.

As a result, the normally self-cleaning filters had to be manually cleaned – washed inside and out with a high-pressure cleaner and decontaminated with an acidic cleaning agent. The solution to the problem was a new development from BOLL & KIRCH's R & D Team: FouleX.



BOLLFILTER Automatic Type 6.18 Filter elements

FouleX is an antibacterial coating designed to reduce biofilm contamination. It was applied to the WAG filter elements and after 3 months of normal operation, the elements were checked and found to be free from biological growth. The operating company at WAG was delighted with the improved filter performance. "With the FouleX coating, the operating time without cleaning has been extended to 16 months. Better still, the cleaning is much easier: you just rinse with water."

A maintenance interval of 12 months is normally recommended for BOLLFILTER Automatic Systems. At the WAG plant, the FouleX coating has increased this by a third, significantly reducing maintenance and downtime. The cost for cleaning chemicals has also been reduced.



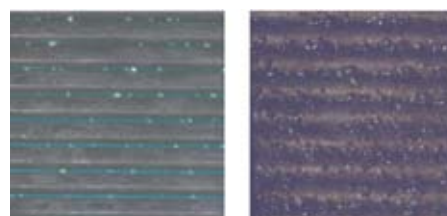
BOLLFILTER Automatic Type 6.18 System at WAG Water Treatment Plant



BOTTOM left: WAG contaminated filter systems before treatment with FouleX

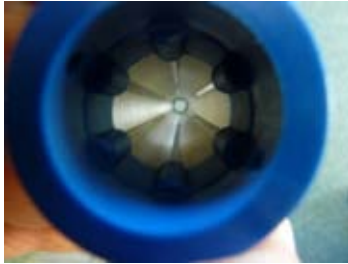
BOTTOM right: Comparison of filter elements treated with FouleX

BOTTOM centre: Filter element free from biofilm





# Filter element types used in backflushing filters



## Standard wedge wire filter element

**Left hand photograph:** A view down the inside of the standard element, clearly showing the 6 longitudinal support wires running top to bottom. **Right hand photograph:** The standard wedge wire filter element, seen from the clean side.

## The longitudinal round profile (LRP) filter element

Liquids that contain high levels of fibrous material, or when weed or algae are present, require a different solution. For these applications we use a longitudinal wire with either round or triangular cross section. The support wire for this profile type is spiral wound on the outside of the tube, leaving a very smooth filter surface that runs in the direction of the filter backflushing flow resulting in better cleaning and backflushing of difficult solids.

The main reason LRP elements are not used as standard is that they have a higher cost and are not required for all applications. The LRP element pictured is with stainless steel end caps and a filtration degree of 200 to 500 microns, typically used in Final Effluent Washwater Filtration systems.



**Above Photograph:** The longitudinal round profile (LRP) filter element, showing the support structure on the outside of the tube. **Right Photograph:** The view down the tube clearly showing the smooth unimpeded internal filter surface the LRP element provides.

## The polyester mesh type filter element

For relatively clean liquids where a polishing cleaning effect is required we offer mesh type filter elements. Filter mesh is like a fabric and made by weaving strands of stainless steel or plastic to form a cloth that we weld to form a tube, then fit over a stainless steel support structure. Being made from thin strands of stainless steel or plastic, mesh type elements are not as strong and durable as wedge wire, so tend to only have limited applications.



**Left Photograph:** The view down the tube shows the 6 longitudinal support wires and the additional coarse spiral wound support wires, providing a support surface for the mesh type filter media. **Right Photograph:** The polyester mesh type filter element showing the fine cloth type mesh; in this example finer than 30 micron.

# Automatic filter skid mounted package system



- 1 Skid base
- 2 110v Junction box
- 3 415v Junction box
- 4 Gate valves
- 5 Automatic filters
- 6 Actuated butterfly valves

- ✔ Complete package for easy installation and maintenance
- ✔ Efficient cleaning
- ✔ Can handle large solids and high solids loading
- ✔ On-stream cleaning in seconds
- ✔ Low backflush using pressurised fluid
- ✔ Duty/Standby system available with automatic changeover facility



## Technical Specifications

BOLLFILTER Skid-mounted Automatic Filter	
<b>Filter sizes</b>	50mm up to 1000mm N/B.
<b>Flow rates</b>	5 m <sup>3</sup> /hr up to 9000 m <sup>3</sup> /hr.
<b>Filtration levels</b>	Down to 10 micron.
<b>Materials of construction</b>	Ductile Iron, Carbon Steel.
<b>Internals/Lining</b>	Stainless Steel / FIP Epoxy Lining / DWI Lining.
<b>Working pressure</b>	Up to 16 Bar.
<b>Design temperature</b>	0 to 60°C (other temperatures available on request).
<b>Filter elements</b>	Wedge Wire Tubes, Mesh Tubes, Round Profile Wire Tubes.
<b>Typical applications</b>	All applications as per the aquaBoll® filters.
<b>Options include</b>	Butterfly Valves/Gate Valves/Actuated. Auto/Auto or Auto/Manual Bypass Options.



# Automatic filter compact low-cost backflushing type 6.04



- ✓ Simple installation, reliable operation
- ✓ "Plug & Play" fully functional unit
- ✓ High quality materials
- ✓ Low capital outlay
- ✓ High filtration area
- ✓ Small footprint
- ✓ Efficient, automatic operation
- ✓ On-line flushing

All brochures are on our website for download; <https://www.bollfilter.com/downloads>

**Automatic Filter**

## Technical Specifications

	<b>BOLLFILTER 6.04 Automatic Filter</b>
<b>Filter sizes</b>	40mm N/B.
<b>Flow rates</b>	Up to 18 m <sup>3</sup> /hr (5 l/s).
<b>Filtration levels</b>	25µm to 500µm mesh or 50µm to 500µm wedge-wire.
<b>Materials of construction</b>	Aluminium housing hard coated.
<b>Internals/Lining</b>	Stainless steel element, high performance plastic.
<b>Design pressure</b>	2 to 10 bar (16 bar available).
<b>Design temperature</b>	0 to 60 °C.
<b>Filter elements</b>	Wedge wire elements as standard / Foulex™ coated as an option.
<b>Typical applications</b>	Irrigation, Domestic, HVAC, Machine Tools, Cooling, Spray Wash, Sealing Water and Final Effluent Washwater.
<b>"Plug &amp; Play"</b>	Supplied ready to use. Filter with hard coated aluminium housing, mating flanges drilled G1 0.5 inch, stainless steel wedge wire candle filter elements. All other internal parts are plastic. Electric drive motor, differential switch / indicator type 4.46.2, backflush valve & integrated 24V DC control.



# Automatic oil and coolant filter type 6.64 + 6.72 + 6.21/6.22



The 6.64/6.72 plus 6.21/6.22 series are compact automatic self-cleaning filters offering large filtration areas with highly effective filter stored compressed air assisted backflushing.

- ✓ Low maintenance automatic operation
- ✓ Low backflush quantities & pressure loss
- ✓ Compact with large filter area
- ✓ Low operating costs

All brochures are on our website for download; <https://www.bollfilter.com/downloads>

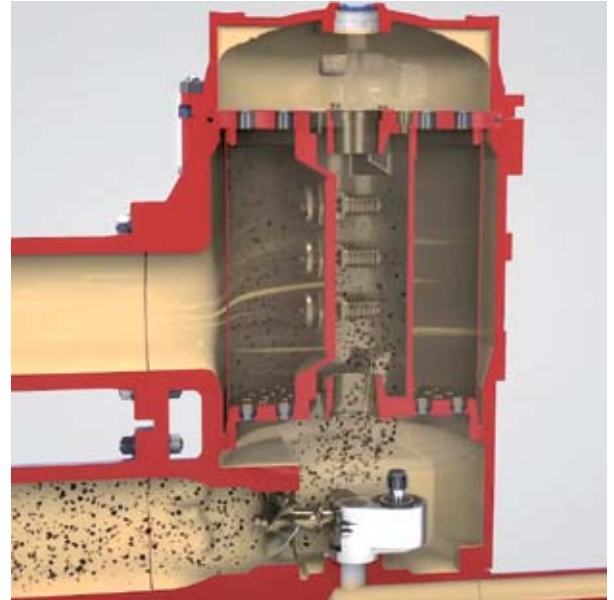
**Automatic Filter**

## Technical Specifications

BOLLFILTER 6.64 & 6.72 plus 6.21/6.22 Automatic Filters	
Filter sizes	40mm up to 400mm N/B.
Flow rates	Dependent on liquid type and viscosity.
Filtration levels	5 µm up to 2 mm.
Materials of construction	Ductile iron.
Internals/Lining	Ductile iron/nickel-plated lining (for aqueous applications).
Working pressure	0.5 bar up to 16 bar (as standard).
Design temperature	-10 to 160 °C (other temperatures available on request).
Filter elements	Cylindrical screw-in candle type with special weave mesh.
Typical applications	Lubricating Oils, Machining Coolants, Industrial Washing Liquids, HFO, Fuel Oils, Diesel Oils.
Options include	Backflushed liquid recycling unit. Manual standby filter complete with manual changeover valve. Control panel type 2300 universal controller.



# Automatic filter Lube Oil type 6.46 + 6.48



The 6.46/6.48 series are compact automatic self-cleaning filters offering large filtration areas with highly effective filter stored compressed air assisted backflushing.

- ✓ Low maintenance automatic operation
- ✓ Low backflush quantities & pressure loss
- ✓ Compact with large filter area
- ✓ Low operating costs

All brochures are on our website for download; <https://www.bollfilter.com/downloads>

**Automatic Filter**

## Technical Specifications

BOLLFILTER 6.46 & 6.48 Automatic Lube Oil Filters	
Filter sizes	40mm up to 300mm N/B.
Flow rates	16 m <sup>3</sup> /hr Up to 780 m <sup>3</sup> /hr.
Filtration levels	10 µm up to 48 µm.
Materials of construction	Ductile iron.
Internals/Lining	Ductile iron/nickel-plated lining.
Working pressure	2 bar up to 10 bar
Design temperature	-10 to 160 °C (other temperatures available on request).
Filter elements	Cylindrical screw-in candle type with special weave mesh.
Typical applications	Lubricating Oils.
Options include	Backflushed liquid recycling unit. Manual standby filter complete with manual changeover valve. Control panel type 2300 universal controller.

# Multiple applications for a range of sectors and segments



BOLLFILTER UK cover all of the market sectors that are represented by the Global BOLL & KIRCH product range. The segments of these sectors are diverse and can be seen in the **Application Lists** below.

Some products cross over between these sectors and segments. One thing that's important to our customers is the fact that we carry out all types of filtration.

## Engines

- Marine - Lube Oil Filtration for 2-Stroke Engines
- Marine - Lube Oil Filtration for 4-Stroke Engines
- Marine - Fuel Oil Filtration in Booster System
- Marine - Fuel Oil Filtration in Supply System
- Power Plant - Lube Oil Filtration for 4-Stroke Engines
- Power Plant- Fuel Oil Filtration in Booster System
- Power Plant- Fuel Oil Filtration in Supply System
- Railway - Lube Oil Filtration

## Industrial Filtration & Machining

- Burners
- Cleaning
- Food & Beverage - Bottle Washing Machine
- Food & Beverage - Crate Washer
- Food & Beverage - Tunnel Pasteurisers
- Heat Treatment
- Machining
- Power Plants - Feed Water Filtration

## Compressors & Turbines

- Chemical and Petrochemical Industries
- Compressor Manufacturers
- Construction Equipment for Oil and Gas industry
- Energy Generators and Providers
- Generators
- Offshore Industry
- Steam and Gas Turbines

## Water Filtration

- Water Treatment - Potable Water
- Sewage Treatment
- Desalination
- HVAC
- Irrigation
- Power Plant - Hydro Power Plant
- Power Plant - Offshore Windparks
- Power Plant - Steam Turbine
- Maritime Filtration - Ballast Water
- Maritime Filtration - Exhaust Scrubber
- Maritime Filtration - FSRU
- Maritime Filtration - Injection Water
- Maritime Filtration - Reverse Osmosis
- Maritime Filtration - Wellboats
- Pulp & Paper
- Snow Production
- Steel Making - Continuous Casting
- Steel Making - Rolling Mill

## Offshore Expertise

Many offshore filtration applications are there to remove coarse suspended solids that could deposit on process equipment creating scale and corrosion sites.



Above: North Sea oilfields hold more reserves than originally anticipated and are expected to produce 600 mbd of oil and 660 mmscfd of gas compression

## Drinking Water

### Keldgate WTW Water Treatment for Yorkshire Water



**Application:** Filtration of raw borehole water. Removal of particulates to protect Ultra Filtration Membrane Plant from risk of blockage and damage to sensitive membrane filters.

**Comments from site:** Low Pressure Auto Strainers prevent particles from reaching the sensitive membrane filters, with risk of blockage and damage. This staff free site requires proven reliable low maintenance filters.

**System:** 11x BOLLFILTERs Low Pressure Automatic Filters, 100 micron.

**Application:** The plant treats up to 18 million litres a day, using ferric chloride to bring organic matter out of solution. To remove the resulting flocs, water highly saturated with air is injected into the treated water, bringing the flocs to the surface.

**Comments from site:** The filters' self-cleaning method is ideal for this application. Thanks to the automatic backflushing, the filters operate continually without need for regular cleaning or maintenance.

**System:** 2x Automatic BOLLFILTERs at Filtration level of 500 micron to protect the saturators.

## Drinking Water

### Lound WTW - DAF Plant Water Treatment



**Application:** Nitrate removal systems to Anglian Water for un-manned borehole water treatment plants. The skid mounted systems incorporate BOLLFILTERs to provide particulate removal (down to 50 microns).

**Comments from site:** Thanks to the automatic backflushing, the filters operate continually without need for regular cleaning or maintenance.

**System:** Automatic BOLLFILTER - 86m<sup>3</sup>/hr, DN150, 50 micron, 1 bar.

## Drinking Water

### Moulton WTW Water Treatment





## Effluent Treatment

### Beckton STW Thames Water



**Application:** Following primary and secondary treatment, washwater is fed into the screens via a series of nozzles to wash the sludge off and clean the screens and brushes. In order to prevent the washwater nozzles from blocking and disrupting the screenings separation process, a BOLLFILTER automatic filtration system is installed.

**Comments from site:** Protecting Beckton's pumps from possible particulate damage. Efficient cleaning without the need for separate backflush pumps, creating a low energy, space efficient filter/pump solution.

**System:** 2x Automatic BOLLFILTERs DN200, Flow Rate: 216 m<sup>3</sup>/hr, Filtration Level: 1mm.

## Effluent Treatment

### Chalton STW Anglian Water Sewage Plant

**Application:** A Sand Filter System. The first stage of filtration of this wastewater flow is a BOLLFILTER with backflush assist pump. This is a fully automated unit that backflushes the accumulated debris and solids to waste.

**Comments from site:** The water quality has improved substantially, which has reduced the contamination in the system to a minimum and ensures smooth operation. The protection of local wildlife has been upheld.

**System:** BOLLFILTER Automatic Type 6.18 GR500 DN700 Filtration Grade: 1000 micron. BOLLFILTER Simplex Type 1.89.2.1100 Filtration Grade: 5mm. Flow Rate: 1830 m<sup>3</sup>/hr. Operating Pressure: 1 bar.



## Effluent Treatment

### Cranleigh STW Thames Water Sewage Plant



**Application:** The NSAF plant handles all the waste water for Cranleigh. Following secondary treatment, the waste water is passed through the NSAF system, which uses a biological oxidation process to remove microscopic particles.

**Comments from site:** Automatic backflushing cycle, removes the need for manual cleaning and prevents plant downtime.

**System:** Automatic BOLLFILTERs DN250 with BOLLFILTER Simplex Type 1.03 Manual Bypass. Flow Rate: 120 l/s. Filtration Level: 6mm with 2D Wedge Wire. Operating Pressure: 0.5 bar.

## Steel Industry

Tata Steel, Port Talbot, Wales



**Application:** Filtration of raw water supply, plant cooling and re-cooling water. Removal of particulates from internal works reservoir feeding general water system, slab caster cooling water to prevent spray nozzles blocking, and cooling tower water serving re-cooling system.

**Comments from site:** Unique backflush process that enables the filters to operate without regular cleaning or maintenance, making them ideal for continuous manufacturing processes.

**System:** Reservoir: 2x DN400 Automatic BOLLFILTERS, 200 microns. Slab Caster: 2x Boll 6.18 DN250 Filters, 300 microns, Simplex Strainer Back-up. Re-Cooling: Boll 6.18 DN500, 300 microns.

## Power Station

Hinkley Point Power Station

**Application:** British Energy Advanced Gas-cooled Reactor (AGR) nuclear power station. As part of the process, the nuclear reactors require large quantities of cooling water. At Hinkley Point B, seawater from the Bristol Channel is used to provide the reactor cooling water.

**Comments from site:** To protect the system from risk of blockage by particulates, it is necessary to continuously filter the raw water. BOLLFILTER's automatic filters are particularly suitable for such a challenging application thanks to their reliability and minimal maintenance requirements.

**System:** 4x Boll Automatic Seawater Filters with Super Duplex Stainless Steel Internals. Filtration Level: 2000 microns Flow Rate: 1631 m<sup>3</sup>/hr. Operating Pressure: 8 bar.



## Power Plant

Marchwood Power,  
Port of Southampton



**Application:** Marchwood Power Station is a modern CCGT (combined cycle gas turbine) Power Station using cooling water. Raw water is also used on-site as general wash water, including for the removal of debris, such as seaweed, mussel lava and other organic matter entering the system.

**Comments from site:** A reduction in nozzle blockages significantly cutting downtime and maintenance on-site.

**System:** 3x BOLLFILTERS DN200, Filtration: 500 microns. Flow: 206 m<sup>3</sup>/hr @3.5 bar. Internals: 316 stainless steel. Rubber lined filter body. Special profile hydrodynamic filter elements.



## Chemical/Petrochemical

### Coryton Aviation Fuel Refinery Pumping Station



**Application:** A BOLLFILTER Automatic Filtration System has been installed within the main refinery pumping station to ensure that the whole aviation fuel pipeline is kept clean and free from particulates. Regular backflushing ensures that the filter elements remain clear without the need for maintenance or plant downtime.

**Comments from site:** BOLLFILTER backflushing technology is efficient and reliable and ensures that many miles of pipeline are protected against contamination. The main benefit of the system is reduced maintenance.

**System:** Automatic BOLLFILTERs ANSI 150lbs.  
Flow Rate: 550 m<sup>3</sup>/hr. Filtration Level: 250 micron. Liquid: Aviation Fuel, Diesel Oil & Petrol. Operating Pressure: 19 bar.

**Application:** Filtration units for skid-mounted steam turbine systems. Removal of particulates from closed loop system supplying control oil and lube oil to protect moving parts and prevent damage to high value capital equipment.

**Comments from site:** Simplex filters typically operate for 6 months without the need for cleaning and Duplex filters can be easily cleaned without stopping production. An efficient solution.

**System:** 1x Boll Lube Oil Filter Type BFD Duplex with Glassfibre Elements @10 micron, 1x Control Oil Filter.

## Power Plant

### Peter Brotherhood Steam Turbine Protection



## Engines

### Major Cruise Line Operator



**Application:** Fuel filtration. With marine fuel oil prices continuously rising, the need for increased fuel efficiency is more important than ever. This was a well-documented problem on board a major cruise liner, whose fuel oil system had become outdated and so was producing high levels of sludge. New filters were fitted.

**Comments from site:** The biggest saving is less filter cleaning, saving a lot of staff hours. The filters also produce far less sludge due to the reduction in number of backflushes per day.

**System:** Main Engine Fuel Oil Filtration: 2 x BOLLFILTER Type 6.72.1 DN65, Filtration: 34 microns Standby Filtration: 37 microns. Complete with Type 2200 control panel.



# Accessories

elements | valves | panels | dp indicators | switches



Filter Elements

A range of accessories are available including: standard and custom control panels; pneumatic or electric backflush valves; standard DPI/DPS or adjustable switches; and DP transmitters.



Standard DPI



Auto Air Vent Valve



Typical GRP Panel



Typical stainless steel panel with glazed outer door



# Genuine parts and service

spares | service | warranty | training



## Spare Parts & Service Departments

BOLLFILTER UK combines the strength of a leading European manufacturer with local sales and service support providing in-depth technical support, including field engineering providing maintenance, contract servicing and fast, efficient spares supply.

## Training

BOLLFILTER UK offer special training courses for all customers.



Alex Wood, Service Engineer

## Extended Guarantee

A three year extended warranty is available for the BOLLFILTER automatic filters. This covers a yearly site visit, full strip down service, reassembly and test and, if repeated on annually, can further extend the guarantee on a year by year basis.

## Spares

Our dedicated UK spares service, with direct access to the Boll & Kirch automated storage and distribution system, ensures minimum response times. Special next day delivery can also be arranged in certain circumstances.

All parts are clearly marked to ensure that only genuine spares are used.



Candles Filter Element



Multi Mantle Element





# Meet the directors and employees of the BOLLFILTER UK team

## The BOLLFILTER UK Team

BOLLFILTER UK is a team of highly motivated, positive and professional people with extensive knowledge and experience of the filtration industry. The company is in the business of providing complete filtration solutions and expertise through the supply of quality equipment, servicing, spares and support.

BOLLFILTER UK is dedicated to meeting and exceeding customer expectations from first point of contact to selection and supply of equipment, after-sales support, spares, advice, commissioning and service, and has recently completed a major staff development programme.

## Filters & Capital Equipment

Our dedicated UK Filters team, with direct access to the Boll & Kirch Filterbau GmbH Global Information System, ensures minimum response times for filter enquiries.

## Spares Department

Our dedicated UK Spares team, with direct access to the Boll & Kirch Filterbau GmbH Global Information System, ensures minimum response times for spares enquiries and orders.

## Service Department

Our dedicated UK based Service team ensures minimum response times for service enquiries and service engineer bookings.

## BOLLFILTER UK Limited

Leading European manufacturer of Capital Equipment **Boll & Kirch Filterbau GmbH** have a wholly owned UK office, able to provide in-depth technical support, including project timings, financial arrangements, taxation queries and fast, efficient coordination with the factory for your product supplies.



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# BOLLFILTER UK team members at work and their hobbies



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