

# Polymer Filters & White Filter Cleaning

Clean. Nothing Else.



**Long-lasting filtration technology for best melt quality**



## Polymer filters

Do you know the exact composition of your polymers? Polymers can carry a lot of micro-contamination and pollution, that affect your production process, your production hardware and the characteristics of your end product. Furthermore, filtration is essential for the recycling of polymer waste. Polymer filters by BBE guarantee a clean, pure melt and therefore the ideal base for any further processing.

### Reasons to use filters

- Better quality of your end product
- Higher efficiency in subsequent processes
- Possibility to produce even critical or complex end products, e.g. microfibers, ultra-thin films
- Protection and extended lifetime of components

### Possible contamination:

- Refractory crystallites
- Cross-linked material (hard and soft gels)
- Catalyst remnants (Sb2O3)
- Accumulated filler material (TiO2, CaCO3, SiO2)
- Metal particles (powder, welding beads, bolts, ...)
- Environmental contaminants (sand, pollen, insects, soot, dust, ...)

## Polymer filter types

### Long-Life Filter (LLF)

- Above-average long run-time
- Single-chamber housing

### Non-Stop Filter (NSF)

- Continuous operation without production stop
- Two-chamber housing: one chamber in production and one in stand-by, manual or automated switchover during production via 3/2 way valve

### Continuous Vertical Filter (CVF)

- Melt inlet and outlet at same height, fitting perfectly in line, especially for spinning systems
- Two-chamber housing: one chamber in production and one in stand-by, manual or automated switchover during production via 3/2 way valve

### Horizontal Candle Filter (HCF)

- Compact inline design
- Melt inlet and outlet at same height, fitting perfectly in line, especially for film extrusion
- Quick & simple filter cartridge change because of quick-action fastener

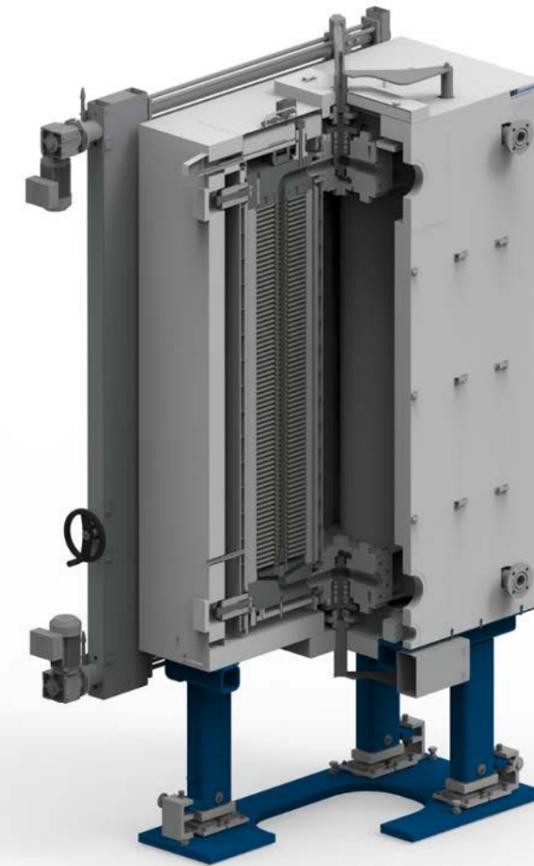
Large and small design  
Long-Life Filter examples



**Long-Life Filter**



**Non-Stop Filter**



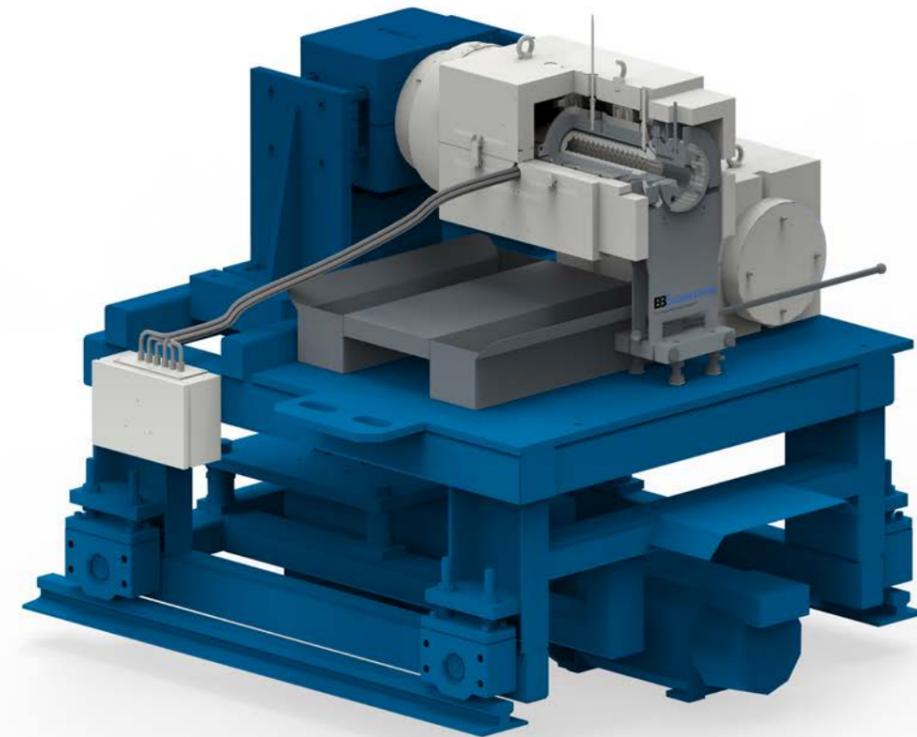
Configuration	
Process	BO-PP, BO-PA, BO-PET, PA 6, extruders & polymerization plants (others on request)
Filtration area	0.1 – 40 m <sup>2</sup>
Filter media	Disc or candles (cylindrical pleated or non-pleated)
Heating principle	Electrical, heat transfer medium (vapour or liquid)
Continuity	Non-continuous operation

Configuration	
Process	BO-PP, BO-PA, BO-PET, PA 6, extruders & polymerization plants (others on request)
Filtration area	2x 1.8 – 40 m <sup>2</sup>
Filter media	Disc or candles (cylindrical pleated or non-pleated)
Heating principle	Electrical, heat transfer medium (vapour or liquid)
Continuity	Continuous operation (valve operated)

**Continuous Vertical Filter**



**Horizontal Candle Filter**



Configuration	
Process	Mostly for PET (others on request)
Filtration area	2 x 0.4 – 2 x 8 m <sup>2</sup>
Filter media	Candles (pleated)
Heating principle	Heat transfer medium (vapour or liquid)
Continuity	Continuous operation (valve operated)

Configuration	
Process	Mostly for film extrusion (BO-PP, BO-PA, BO-PET, others on request)
Filtration area	0.1 – 1.5 m <sup>2</sup>
Filter media	Candles (cylindrical pleated or non-pleated)
Heating principle	Electrical
Continuity	Discontinuous operation
Often combined with booster pump	

## White Filter Cleaning

### The cleaner cleaning method

White Filter Cleaning is an innovative and environmental-friendly system for pre-cleaning polymer filters of BB Engineering in cooperation with B&M Longworth Ltd, UK. It uses superheated, dry steam to effectively remove a range of polymer contaminants.

### Your benefits

- No use of toxic and flammable chemicals like TEG or DEG
- No carbonizing of polymer due to non-oxidative conditions
- Gentle treatment of filter elements
- Better filtration performance and media lifetime hence enhanced productivity and reduced cost compared to traditional cleaning methods
- Reduced energy consumption as the process is quicker and more effective
- No emergence of poisonous waste products
- No cost-intensive use and disposal of chemicals
- Sustainable — ecologically and economically
- Patented know-how of B&M Longworth Ltd, UK, an expert in cleaning technology solutions
- Easy use and operation

### Combine with our filters

Save time and costs by combining WFC with our continuous filters to start the cleaning process immediately and parallel to production.

### Polymers

PET, PA 6, others on request

### Filter media

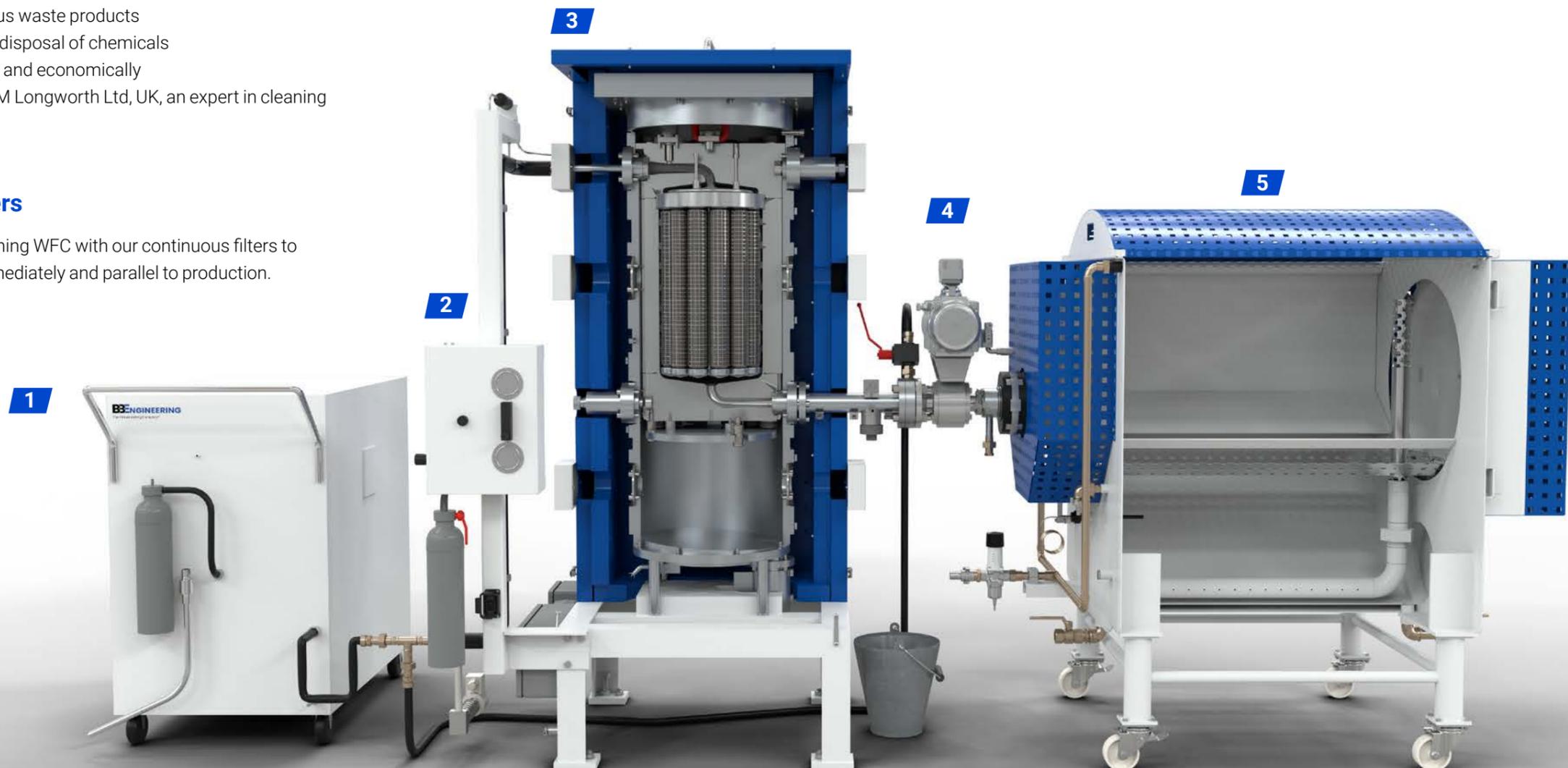
Discs, candles and others

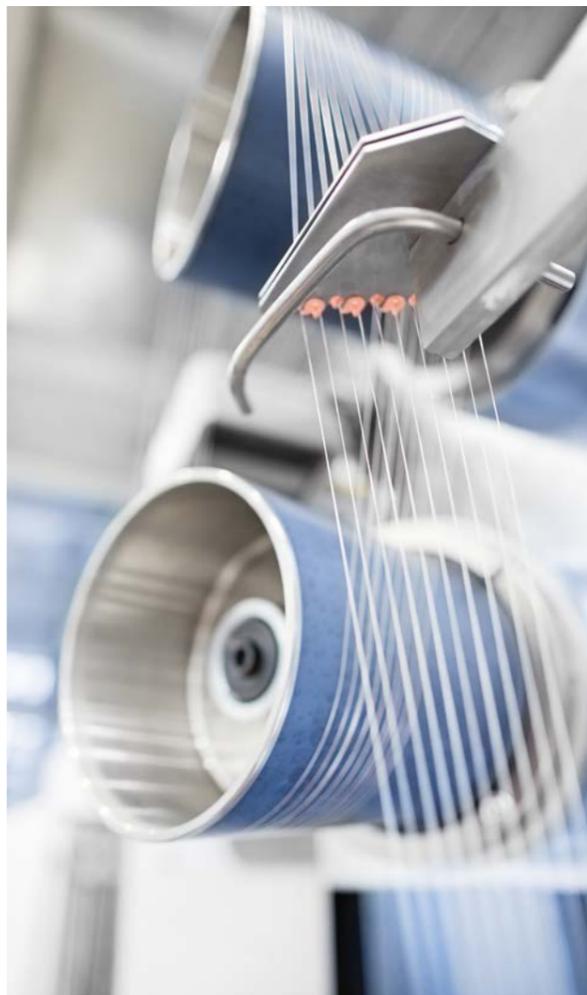
### Standard configuration contains

- 1 Steam supply unit with controls
- 2 Nitrogen control
- 3 Heating and draining station
- 4 Steam pressure relief valve
- 5 Waste collector with recondensation

### Pre-cleaning process with White Filter Cleaning

- Mounting polluted filters from production directly into pre-heating station
- Draining of melt with help of nitrogen
- Cleaning with super-heated steam ( $\leq 300^{\circ}\text{C}$ ,  $\leq 5$  bar)
- Cooling down
- Removing pre-cleaned filter inserts for subsequent cleaning step





## BBE Valueneering

**Innovative services in the field of machines and plant design for more than 25 years.**

Our business is development, engineering, design and manufacturing of extrusion and filtration technologies as well as complete spinning (VarioFil®) and recycling (VacuFil®) machines for the plastics and textile industry. The services offered range from the design and planning phases all the way through to the implementation of projects. Innovation, quality and trust are our greatest strengths from which you will benefit. Founded in 1997 as a joint venture between Barmag, nowadays a subsidiary of Rieter, and Brückner Group GmbH, the company nowadays employs more than 160 members of staff at its Remscheid-Lennep location.

## Worldwide operation

All over the world companies trust in our products and services. Closely partnered with Barmag Customer Services, we provide a global service network comprising about 20 service stations, over 60 agencies and hotline support for finding solutions to the challenges you face.



● Countries with BBE customers



### Let's get in touch

Our experts look forward to hearing from you and are ready to answer any questions you may have.

@ sales@bbeng.de

+49 21 91 95 10 300

www.bbeng.de

BB Engineering GmbH  
Leverkuser Str. 65  
42897 Remscheid  
Germany  
Fon +49 2191 9510 - 100  
sales@bbeng.de  
www.bbeng.de

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