



## Filtration Solutions for Bottle Washing Machines



**BOLLFILTER Automatic & BOLL Fine Filtration for your washing process.  
Maximum plant protection. Minimum operating costs.**



## Filtration specialist for the beverage industry

As a specialist in the field of industrial filtration, we offer simply unrivalled process reliability with our high quality automatic filters. Leverage our many years of experience to increase the efficiency of your washing process. Benefit from the longer availability of the caustic soda solution, the improved quality of the washing machine and better protection for the spray nozzles.

### Filter solutions for reliable processes

Top priority when it comes to maintaining constantly high washing quality is the continuous and fail-safe removal of contaminants. BOLL & KIRCH, as an experienced technology specialist, has tailored its solution to your application and developed a stainless steel filter element that is perfectly suited to removing large volumes of contaminants and fibrous matter. Continuous operation and protection of the actual application are the primary concerns here. This pays off for you, because the use of BOLLFILTER Automatic filters significantly improves the efficiency of your plant. This is confirmed by the fact that major manufacturers of bottle washing machines and beverage producers have been using our filters as standard for several years.

## Our filters in your washing process



6.64 caustic soda solution filter

The BOLLFILTER Automatic Type 6.64 offers top results for the filtration of caustic soda solutions and requires only limited maintenance. It is not necessary to pause the process, thanks to the multi chamber principle. The filtration and backflushing processes can run in parallel. Efficient washing intervals with minimum backflushing volumes keep on-going operating costs low.



aquaBoll® spray nozzle protection

With the BOLLFILTER Automatic aquaBoll®, blocked washing nozzles are a thing of the past because dirt particles are efficiently trapped on the inside surface of the filter element. The continuity of the filter process guarantees a fully automatic differential pressure or time-controlled backflushing unit.



FFU 12.1 BWM  
Fine filtration

The BOLLFILTER FFU BWM membrane filtration system ensures reliable clarification of your cleaning liquor even with a wide range of different contaminants or the finest fouling particles. This ensures the highest process reliability through consistent caustic quality and the avoidance of production downtimes for maintenance work or lengthy sedimentation times of the cleaning caustic. The modern cross-flow principle using long-life ceramic membranes guarantees a continuous filtration process with the lowest operating costs.



6.03 AOT disinfection/filtration

The BOLLFILTER Automatic Type 6.03 AOT provides the solution to two different challenges in a unique manner. Its primary function is to efficiently remove contamination from your application. In addition, the filter candle disinfects the process water using UV radiation. Here, reactive free radicals ensure the chemical-free, oxidative degradation of biological components such as bacteria. The UV system replaces treatment using biocides and is more cost-efficient at the same time.

A man in a grey shirt and orange safety vest is inspecting a clear glass bottle in a factory setting. In the background, another worker is visible, and the foreground is filled with rows of similar glass bottles. The scene is brightly lit, suggesting an industrial environment.

A clean solution –  
plant efficiency on the next level

## Application expertise for washing machines of any size

With BOLL & KIRCH you have an expert partner for multifaceted applications in the beverage industry – we understand your specific bottle washing process and protect the components using automatic filtration solutions.

### ABInBev

Through the use of BOLLFILTERs at ABInBev in China, it has been possible to increase line production by 3.32%. This equates to an additional output of 9,000 bottles per hour.

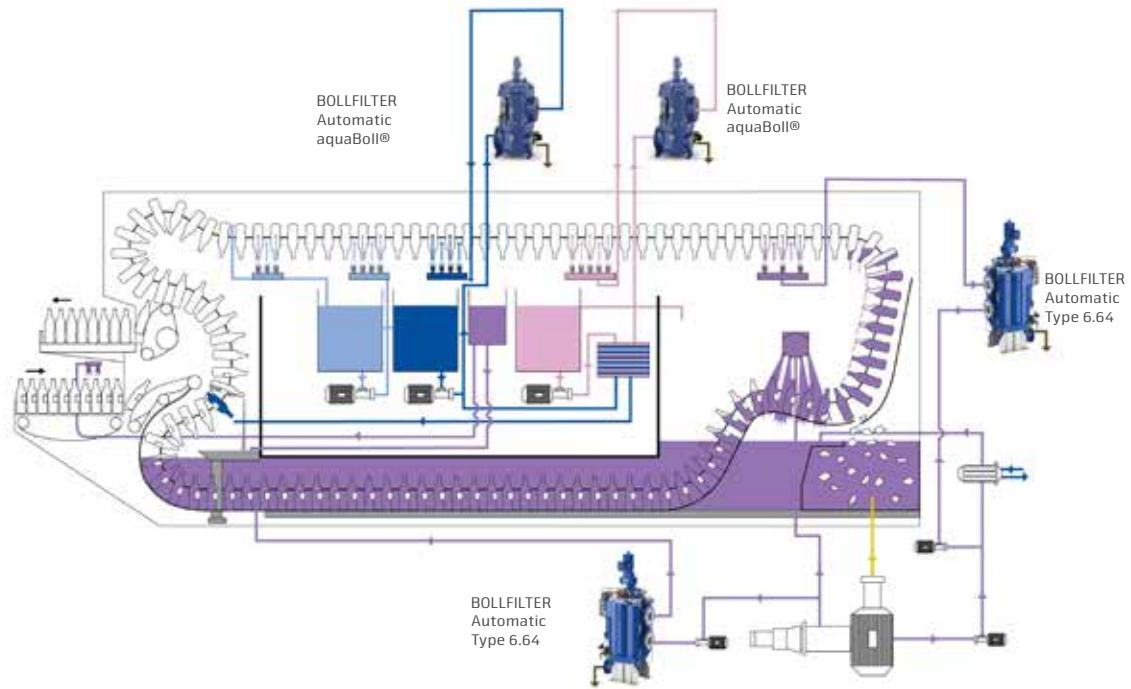
### Darguner Brauerei

By using the BOLLFILTER Automatic Type 6.64 at the Darguner Brauerei (Dargun Brewery) it has been possible to reduce the level of contaminants in the main caustic bath by 47% and in the post-caustic bath by 65%. This has quadrupled the lifetime of the caustic solution and increased productivity.

### Adelholzener Mineralquellen

The BOLLFILTER FFU BWM bottle washer continuously reduces the dirt load in the bottle washer by more than 80% up to the final curing zones, thus ensuring reliable cleaning results over the entire production period and maximum process reliability.





## BOLLFILTER for maximizing the life of the main caustic bath

### Dirt reduction and nozzle protection in all zones of the bottle washing machine

Cost-efficiently maintaining the continuity of complex cleaning processes: Automatic filters from BOLL & KIRCH satisfy the exacting requirements placed on bottle washing machines and efficiently protect the overall plant.

BOLLFILTERs can sustainably improve the hygiene and cleaning result of your system through guaranteed filtration quality, the automatic back-flushing function and low-maintenance design. This achieves lasting spray nozzle protection and a reduction in the overall degree of contamination in your plant. The increased life of the main caustic bath is the result of the improved conditions.

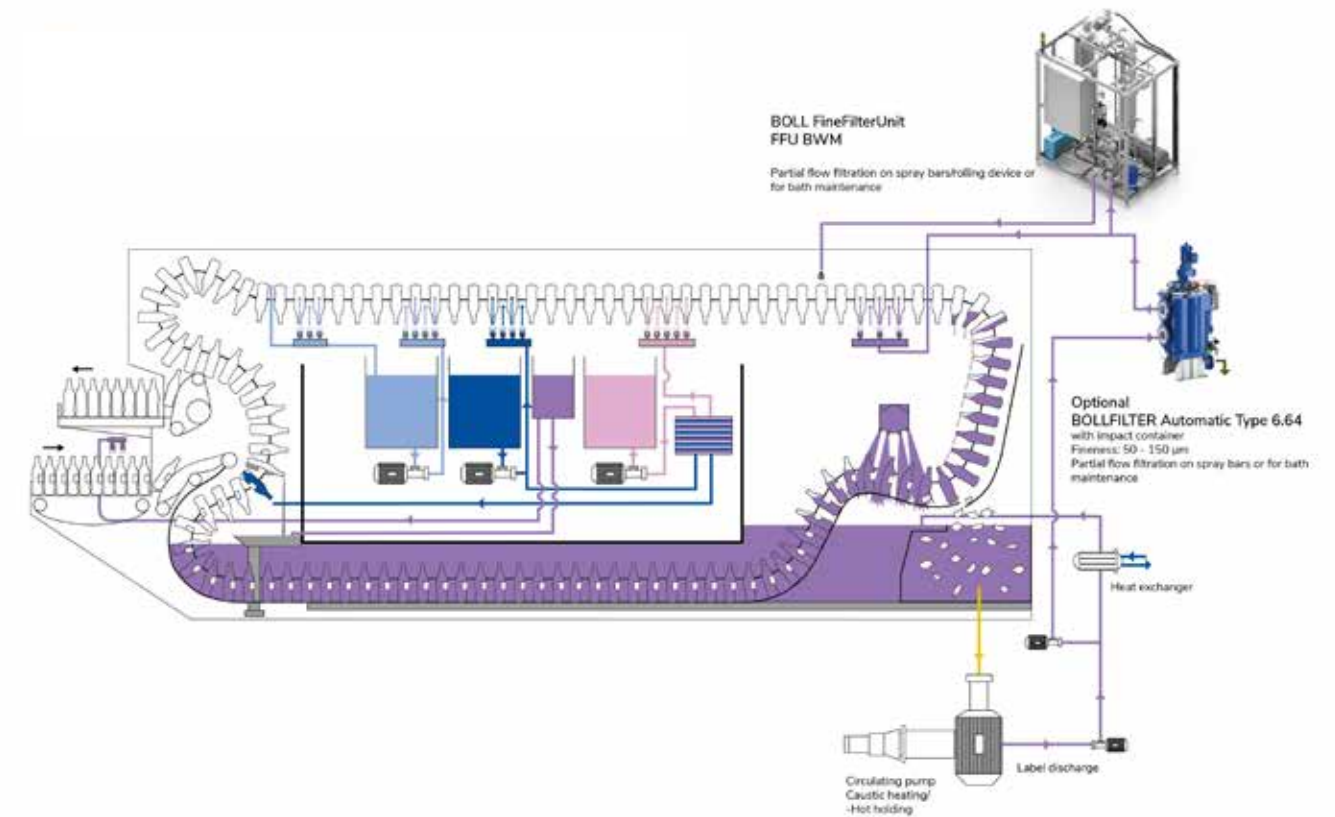
BOLLFILTER Automatic filters can be integrated into bottle washing machines of practically any type. Either as an upgrade to your existing machine or as part of a new one – our flexible filtration solutions will meet your requirements while minimizing your on-going costs.

#### Primary benefits:

- Defined filtration quality
- Increase in the life of the main caustic bath
- Minimisation of operating costs
- Improved plant availability
- Reduction of maintenance costs with a simultaneous increase in productivity
- Reduction in particle carryover

#### Filter sizes according to machine size

Caustic bath volume (m <sup>3</sup> )	Bottles per hour (btl/h)	Filter size
above 36 m <sup>3</sup>	above 40,000	6.64 BWM DN125
18 – 36 m <sup>3</sup>	15,000 – 40,000	6.64 BWM DN100
up to 18 m <sup>3</sup>	up to 15,000	6.64 BWM/6.60 BWM DN50



## BOLLFILTER FineFiltrationUnit for microfiltration of the main caustic

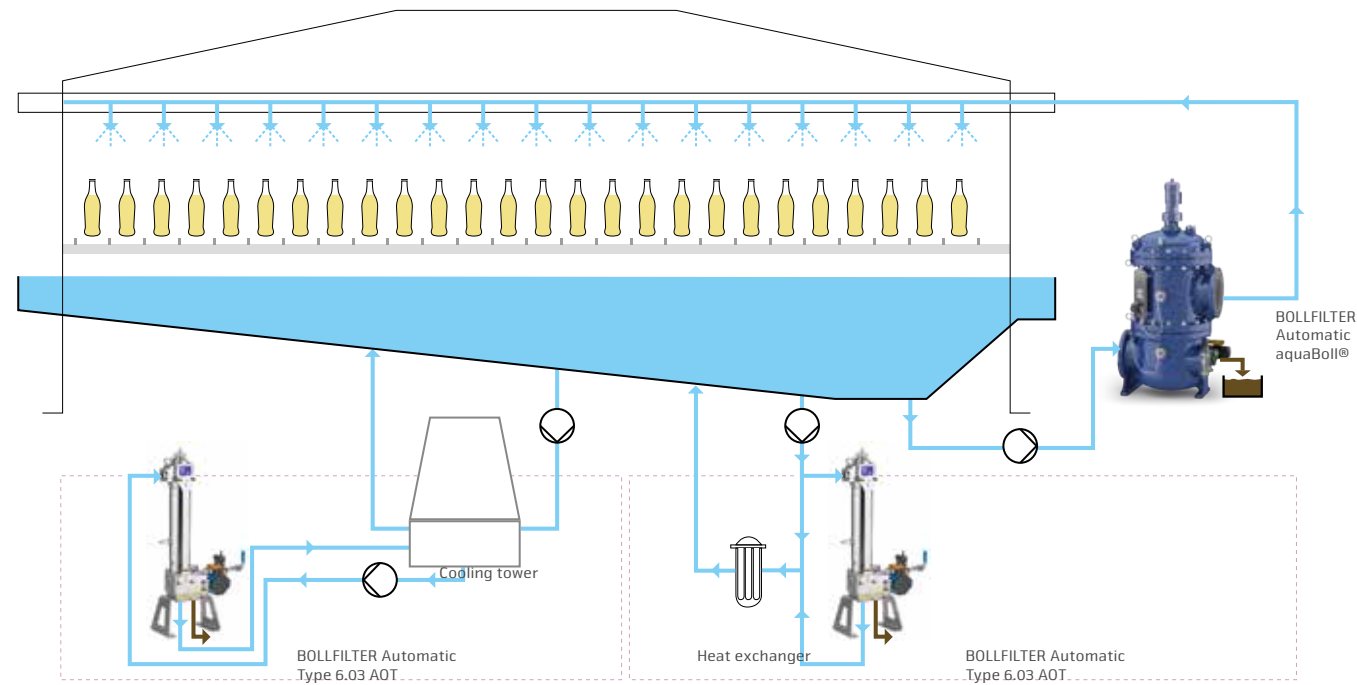
### Example of single-end bottle washer

BOLL fine filtration for full-scale clarification of the main caustic. Due to unpredictable fouling bottle washer operators face major challenges in terms of process reliability and consistent product quality. Fine filtration systems from BOLL & KIRCH meet this challenge with highly efficient long-life ceramic membranes, which guarantee reliable and continuous separation of caustic fouling regardless of particle type and size. This sustainably improves the condition of the entire bottle washer and ensures a consistently high cleaning result and maximum system availability. Whether it is a new machine or a subsequent upgrade, integration with additional cleaning bars is always possible and reduces the carryover of contamination to a minimum. Thus, there is potential for further savings.

#### Primary benefits:

- Continuously high caustic quality
- No more lengthy sedimentation processes required
- Maximization of plant availability
- Minimization of particle carryover up to the last post-treatment zone
- Low operating costs due to resource savings
- Hygienically better condition of the bottle washing machine

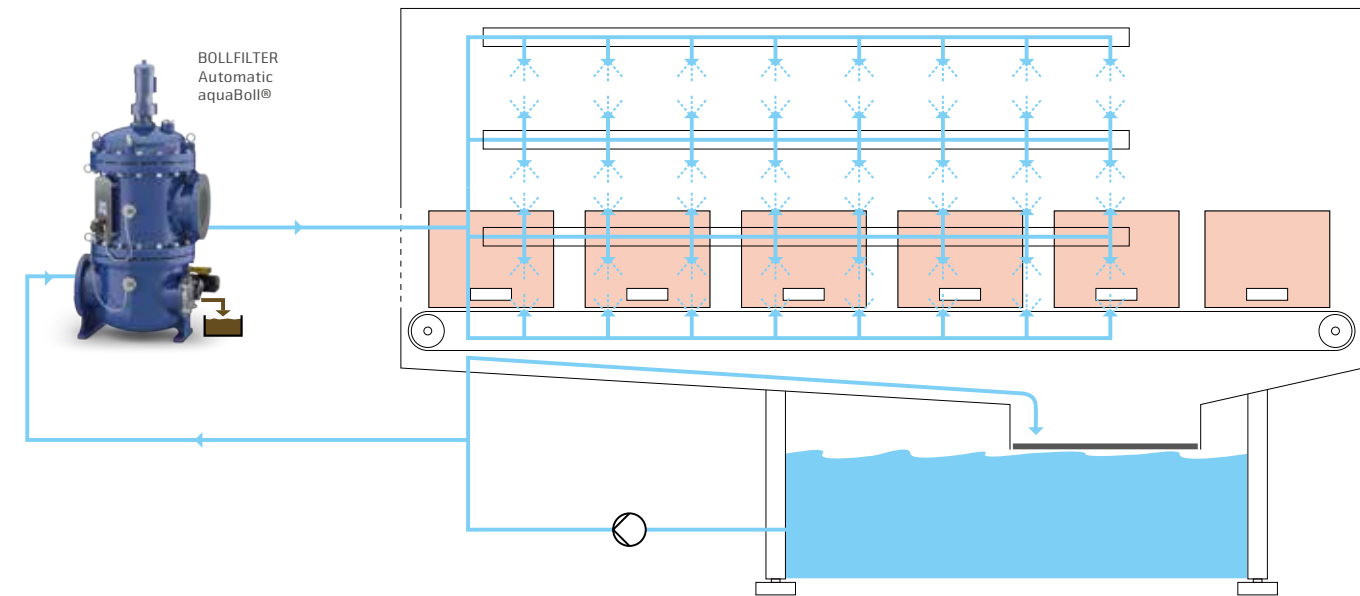
## Tunnel pasteurisers



1: disinfection of cooling tower water

2: disinfection of pasteurising water

## Crate washer



## Filtration and disinfection in perfect interplay

One application, two benefits: The BOLLFILTER Automatic Type 6.03 AOT facilitates disinfection of the process water from your tunnel pasteuriser or cooling tower in addition to ensuring efficient permanent filtration. Using the AOT method, micro-organisms are swiftly and effectively killed without the use of chemical additives.

The system can be integrated into your specific process via an interface in the cooling circuit of your tunnel pasteuriser or cooling tower. If disinfection is not necessary, the BOLLFILTER Automatic Type aquaBoll® can be used to protect the spray nozzles.

### Primary benefits:

- Compact, multi-functional design
- Reduced use of chemicals
- Minimisation of operating costs
- Prevention of algal bloom

## Reliable spray nozzle protection at low cost

Cleaning drink crates cost-efficiently and reliably: Operating and maintenance costs are reduced to the minimum thanks to a self-cleaning filtration system. Protecting your cleaning nozzles is always in the foreground here.



BOLL & KIRCH sets the standards for the filtration of process fluids in the beverage industry with its leading-edge products. Our comprehensive and ongoing approach to engineering guarantees self-cleaning filtration solutions that raise the overall plant efficiency for your specific application through

- improved cleaning results,
- effective plant protection and
- significantly minimising costs

Our customers trust in the flexibility of our processes when implementing application-optimised solutions, and value personal consultation as well as reliable service.

**Contact:**

BOLL & KIRCH Filterbau GmbH

Siemensstraße 10 – 14

50170 Kerpen

Telephone: +49 2273 562 0

Fax: +49 2273 562 223

E-mail: [info@bollfilter.com](mailto:info@bollfilter.com)

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

