



Fully automatic filter system for water treatment

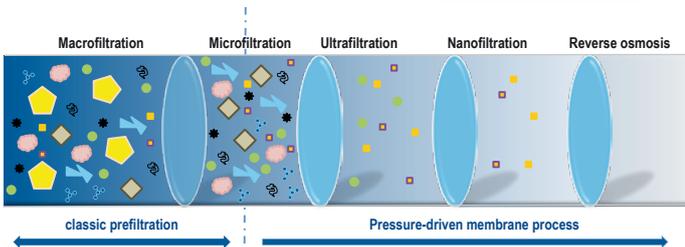
Water is not only essential to life, but is also an important operating medium in many industries. Particles and suspended matter are introduced into this raw material through its constant transport, motion, and use. These contaminants are removed for the most part by means of conventional sand filter systems which do not, however, have the required selectivity. Moreover, alternative purification processes often come with high costs.

Absolute filtration was developed to overcome these challenges. Using specially manufactured filters whose pore size is precisely defined in the production process, micro-particles down to a grain size of 5 µm can be safely removed from the water.

The highly resistant glass bead structure of the filter also enables safe filtration of other liquid media. This filter system can therefore be implemented risk-free in various industries and sectors

Fully automatic filtration can be implemented in the following industries:

- ▶ Potable water treatment and General water treatment
- ▶ Textile industry
- ▶ Chemical industry
- ▶ Plastics industry
- ▶ Paper industry
- ▶ Beverage industry
- ▶ Energy generation/power plants
- ▶ Automotive industry
- ▶ Car washes
- ▶ Agriculture, horticulture



Clean water is essential for humans and animals and is an important part of our lives. This is why the United Nations has included the right to clean water in the Universal Declaration of Human Rights. Home and building technology is a particularly important area of application, where there is a daily need for the availability of perfect-quality water.

Functional principle

The untreated water is conducted into the system by means of a pump. Coarse material and flotsam are removed by an integrated dirt trap. Next, the water is conducted through special filters manufactured by Bloom Filtertechnologie GmbH. During the filtration process, the water is forced through the defined pore size of the filter, and particles that are too large are separated out. This results in the formation of a filter cake, which is then split off in a cleaning process using compressed air. Any filter residues are forced out of the system via a separate conduit system and stored temporarily in a retention tank. This cleaning method also saves water.

The fully automatic filter system is monitored and controlled by a PLC (programmable logic controller). If there is an increase in the differential pressure in the filter system, the filter is automatically cleaned. In the case of a fault, water can also be disconnected by means of an integrated bypass system. The system has a redundant design, meaning the two integrated filters can be operated alternately.

The system is continuously monitored by appropriate safety devices. Pressure monitors that check the positive pressure and current monitors that check the volume flow enable controlled operation of the system. Remote monitoring can also be integrated as an option.



► Technical information

Dimensions	Width: 100 cm, Depth: 80 cm, Height: 200 cm
Removal of	particles as small as 5 µm
Filter volume	3 m³/h each filter
System components	Filter cabinet including PLC/filter unit with conduit system and compressed air Components Optional: Remote access/turbidity and also measurement and control technology
Operating media	Electricity, water, compressed air (10 bar)
Metering	None
Energy supply	230 V, also 380 V as an option
Connections	Water inlet 1" internal thread Water outlet 1" internal thread
Backwashing	Via compressed air
Certification	Filter use permit issued by Germanischer Lloyd

References

Bloom Filtertechnologie GmbH filters have already been successfully used by German water providers, including the Höhr-Grenzhausen association of communities and the Ertverband water management association.

Kunststofftechnik Weißbach GmbH

The medium-sized company has been producing custom plastic solutions for 20 years.

Production has steadily expanded with the assistance of superbly trained skilled workers and the use of continually updated machinery. At first, the company specialized in plant and swimming pool construction, but increasingly its focus shifted to the processing of semi-finished plastic products for technical parts, containers, and machinery for the manufacturing industry.

Today, 45 employees in Gornau produce a wide range of components and containers, right through to large-scale, complex systems for mechanical and plant engineering applications, medical and environmental technology, and the semiconductor industry.

An in-house development department works on innovations and increasing efficiency. This expertise, the company's own engineering office, and its technically and technologically cutting-edge production processes ensure all-round, high-quality support for clients. An ever-increasing number of international customers are also coming to trust the "Made by KTW" label, from the initial concept to the final product.



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