

PureFlow[®]

a simple ingenious way of filtering



Product origin



Concept

BIONIC DESIGN – Learning from nature

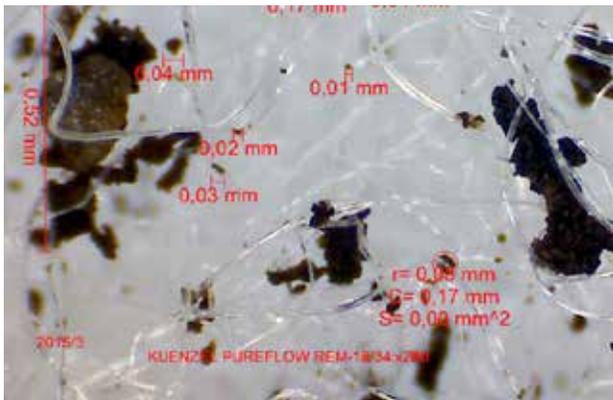
For approximately 600 million years mussels have filtered suspended particles in the water, thus helping to clean the water. A blue mussel filters about 5 liters of water per hour, an oyster up to 25 liters. Nature itself has provided us with a concept for a brilliant and highly effective filter material: **PureFlow**.

Objective

The two elements water and air are vital for all of us, and their availability is limited. Every day they are polluted, contaminated and consumed all over the world. We are aiming to treat polluted elements in an environmentally friendly and effective way in order to restore and return them to nature.

Result

Our innovative filter **PureFlow** cleanses water and air quickly and effectively from pollution. Any retrofitting can be made quickly, easily and whenever desired. **PureFlow** saves energy, reduces the expenditures significantly, is highly durable, can be disposed of easily and recycled in an environmentally friendly manner, and moreover, it is very cost effective. Please help to protect the vital elements of nature by applying **PureFlow**.



We are different



The genius

PureFlow is the lightweight alternative to other filter materials and ensures crystal-clear water - without silver ions without chemical additives and no coloring. You save a lot of time and money. We can provide information about the use of **PureFlow**, also on specific and individual areas of application.

The outstanding

PureFlow consists of three specially fibers which are thermally bonded in layers. These can vary in accounts, type and thickness and they are highly fixed in each element. Several filter elements with different sizes and forms provide an excellent filtration. To achieve the maximum separation efficiency within the elements, the fiber density was calculated separately for each application. **PureFlow** is extremely dimensionally stable and has a quick regeneration itself after compression.

The individual

PureFlow consists of multistage stacked layers and thus ensures a high throughput rate of fluids. For system suppliers, we also offer individual forms and the clothing of the elements. **PureFlow** is extendable with surface filters made of plastic or stainless steel and can be combined with activated carbon layers/discs.



Functionality

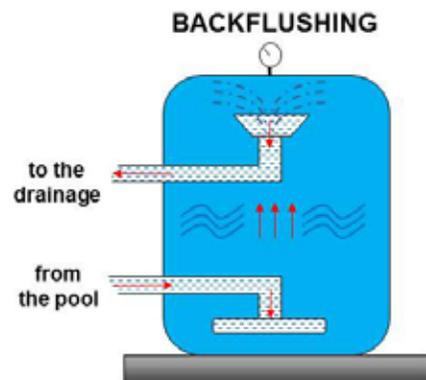
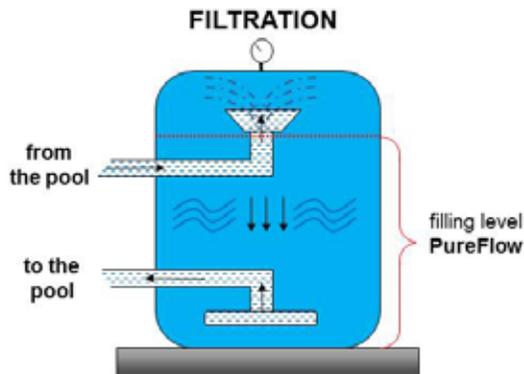


Installation

The installation of **PureFlow** is ingeniously simple: All you need to do is to switch off the system and separate it from the mains. Then open the filter box, remove the present filter material and clean the box. Insert **PureFlow** in your filter box and close it. The operation should be started with backflushing, then switch to normal operation.

Filtration

The individual segments of **PureFlow** in the filter box combine with the water that has been introduced to a completely closed depth filter, where dirt particles and even the finest suspended particles will get caught. The water flows through the filter almost without any resistance; it will be purified crystal-clear and led back to the pool.



Backflushing

During the backflushing process water is conducted in reverse flow direction back to the filter box. Thanks to the reverse water flow the individual segments of **PureFlow** are segregated and release the dirt particles, which are then being rinsed out.

Aqua areas of application for PureFlow



Sauna / Spa



Whirlpool



Pool



Aqua parks



Aquariums



Grand aquariums



Fountains



Water tanks



Maritime sector



Geo areas of application for PureFlow



Fish farming



Plantations



Sewage treatment plants



Garden centers



Landscaping



Horticulture



Mining



Snow making systems



Sewage systems



Industrial areas of application for PureFlow



Mechanical engineering



Car wash



Color industry



Food industry



Beverages industry



Ventilation and air conditioning technology



Garden technology



Freezing technology



Safety engineering



Advantages



Less costs – less effort

- Energy can be saved thanks to a high flow rate, less backflushing cycles and the possibility of using pumps of lower capacity.
- Due to the high cleaning efficiency flocculants may be dispensed with.
- High dirt holding capacity and a long period of usage
- Less repair- and maintenance costs of pipelines, filter star, filter candle, sluice valves, gaskets, etc.; no transport- and disposal costs
- The reduced number of backflushings results in less loss of water and less energy input for reheating the fresh water that is being introduced.



Less effort – less time

- Delivery and warehousing: no heavy loads and a minimal space requirement
- Simple and quick exchange of the filter material
- Low weight, no carrying of heavy sandbags
- Thanks to its low resistance **PureFlow** filters more quickly and more frequently than other filter materials during the same time period.
- Fast disposal – no waste management and final disposal of heavy filter material, no troublesome removal of compacted filter sand
- Fast pool-floor cleaning resp. cleaning of the pool by suction



More efficiency – more safety

- Very high cleaning efficiency; backflushing is possible any time; automatic adjustment with every backflushing
- Adapts to mostly any filter vessel; guarantees high filter compaction
- Certified raw materials and application-oriented fiber mix; due to the very dense fiber arrangement per filter segment the liquid undergoes more than 1000 changes of direction; fast flow rate despite the high fiber density
- Separation of segments, no compacting - **PureFlow** keeps its shape
- Individual adaption to various fluids and areas of application
- In filter tests suspended matters smaller than 1 micron (0,001 mm) are filtered.

Advantages



Sustainability

- Long period of usage of the filter material
- High degree of energy saving
- Made of environmentally friendly materials
- **PureFlow** helps to safeguard valuable resources.
- Space-saving warehousing, since **PureFlow** keeps its shape
- Permanent laboratory controls guarantee excellent, constant quality.
- Mostly no fiber separation when using **PureFlow**



Innovation

- Developed in consideration of the BIODESIGN surveys
- Innovative mix of thermally fixed technical fibers with lotus effect
- Individually adaptable filter for mostly areas of application
- Regenerative stable fiber shape, even after pressure has been applied
- Self-compacting thanks to a special CNC-Cut surface



Quality

We are a German manufacturer and guarantee premium quality. Our quality monitoring ranges from raw material procurement to the delivery of goods.

PureFlow is permanently tested in our internal laboratory; additionally it is subject to the strict quality controls of a German laboratory and testing institute. We also collaborate with universities, external engineering firms and certified technical experts in the areas of micro-biology, chemistry and the technical development of fibers.

Service



Laboratory services

Our internal laboratory also provides our customers with the possibility to have hydrotechnical tests and analyses performed. Thanks to state-of-the-art technology we are able to identify important parameters and values of NTU-solids, TSS-turbidity-values, ph- and CO₂-values as well as water hardness, oxygen content, nitrate resp. nitrate concentration and much more. Just send us the samples you want to be tested. We will then compile a comprehensive documentation of the test results for you.



Service

We are offering customized advice, even outside regular business hours. Our technical support is available daily from 7.30 a.m. to 10 p.m. Additionally we offer customized filter optimizations that match your application and many more optional products such as backflushing grids, water treatment agents, pool chemicals, water disinfectants and cleaning accessories.



Ordering and contact

The minimum order for **PureFlow** is 500 gram. Our local service team and recognized contractual partners worldwide will be pleased to help you.

You can contact us at:
E-Mail: pureflow@kuenzel-awt.com
Hotline: +49 (0)170 322 41 41

Glossary



Here you will find important information about the products.

cleaning efficiency	The cleaning efficiency defines the ratio between introduced and eliminated solid particles. The cleaning efficiency of PureFlow is much higher than that of other comparable filter media; this is why the water provided is crystal-clear.
activated carbon	During the filtering and absorption process the substances that need to be eliminated are taken in by the activated carbon and accumulated in the carbon body. Undissolved mechanical particles are filtered out during the filtering process. PureFlow supports this process extensively. PureFlow can be applied together with activated carbon.
algae	PureFlow is best suited for the filtration of garden ponds and in landscaping.
contact	(see brochure)
aquaristics	(see aquarium)
aquarium	PureFlow is best suited for aquariums; it provides crystal-clear water without destroying the special flora resp. biological habitat of fish.
replacement	In order to preserve the high cleaning efficiency PureFlow should be replaced when a certain saturation level has been reached.
bakteria	PureFlow has an antibacterial effect due to the use of silver/activated carbon.
chemicals	PureFlow is resistant and can be used with virtually all common pool chemicals.
density	The PureFlow density is between 550 and 1.650 g/m ³ .

Glossary



Here you will find important information about the products.

suitability	PureFlow is suited for almost all kinds of filters.
saving effects	Thanks to the use of PureFlow you will save energy-, maintenance- and repair costs as well as a lot of time because installation and replacement are easy to handle.
waste management	PureFlow can be disposed of easily via domestic waste collection.
fiber	PureFlow is not coiled or detaching, rolled and short fibers, but it is a mix of thermally fixed fiber components without bonding additives. This prevent a detachment of fibers.
fish farming	PureFlow can be used even in fish farming without any concerns.
flocculants	Flocculants are used for example for wastewater treatment in sewer treatment plants, for drinking water treatment, for swimming-pools, in paper mills and in industrial procedures in order to convert micro-flakes into easily filterable macro-flakes. PureFlow basically does filter micro-flakes. Due to the very high cleaning efficiency of PureFlow flocculants can be dispensed to the greatest possible extend.
shape	PureFlow is dynamically elastic and adapts to any filter shape.
frost	PureFlow is 100% frost-resistant.
functionality	(see PureFlow brochure)
groundwater	PureFlow may be used as filter for groundwater.

Glossary



Here you will find important information about the products.

skin compatibility	Coming into contact with PureFlow is quite safe.
cartridges	PureFlow can be used instead of cartridge filters.
germs	For a short time PureFlow may be heated up to 100°C. The majority of germs, Legionella bacteria for example, are killed at a temperature of 75°C.
costs	Due to its high cost-saving potential PureFlow is much more cost-effective than traditional filters.
life	(see period of usage)
delivery date	PureFlow is immediately available. Bulk quantities on request.
minimum order	1 kilogram of PureFlow
period of usage	PureFlow can be used for a long time. The period of use depends on the pollution degree.
oil	PureFlow supports the oil separation of water.
polymer fiber	Polymer fiber is a short fiber, extruded mainly from recycled plastic waste. Contrary to other filters PureFlow does not consist of recycled plastic but of tested and certified raw materials as it is been used in the food industry.
price	(see price list PureFlow)

Glossary



Here you will find important information about the products.

references	(see list of references PureFlow , on request)
cleaning	(see backflushing resp. washing)
cleaning efficiency	(see cleaning efficiency)
backflushing meshes	(see PureFlow brochure, graphics: backflushing) Backflushing meshes are available at our offices.
backflushing	Backflushings are possible any time. Please prevent that PureFlow is washed out by applying a backflushing mesh.
bag filter	PureFlow can be used together with or instead of bag filters.
sand filter	System/filter box is filled with gravel resp. sand (see silting)
special conditions	(on request)
language	Our team is offering information and advice about PureFlow in almost any language.
test materials	(on request)
selectivity	(see cleaning efficiency)

Glossary



Here you will find important information about the products.

drinking water	The quality of drinking water in Germany asks for the fulfillment of highest requirements and a great number of official authorizations. Currently, these are not yet released for PureFlow . Therefore its application in the area of drinking water is not yet permitted.
changeover	Changing over to PureFlow is possible any time.
environment	In providing crystal-clear water PureFlow is protecting the environment due to the enormous reduction of energy cost and fresh water which is the most important resource on earth.
packaging	(see PureFlow brochure)
silting	When filter sand is flushed into the pool by the current, it is polluting the pool. PureFlow prevents any silting.
representatives	Our PureFlow sales partners all over the world are looking forward to hearing from you.
advantages	(see PureFlow brochure)
washing	PureFlow is washable. Please use a textile net when you wash it in a washing machine.
water filter	A water filter is a device for improving the water quality aiming to remove particles, such as turbidities resp. micro organisms or dissolved substances in the water, or to reduce their concentration. PureFlow generates crystal-clear water.
whirlpool	Almost all filter cartridges may be replaced by PureFlow .
certificates	(on request)

Partners and contact



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