

 ALFA
GROUP
WATER SOLUTIONS

THE SOLUTION FOR EVERY FILTRATION DEGREE.

 **alfawater**

 serenambiente



WATER SOLUTIONS

INNOVATION WINS. ALWAYS.



MARINE
930 FILTRATION
SYSTEMS IN OPERATION

Filters:
AVC - ABV - ABF - APEF
644.600 m³/h



DESALINATION
332 FILTRATION
SYSTEMS IN OPERATION

Filters:
ABV - AVC - ABG - APEF
120.460 m³/h



COOLING
163 FILTRATION
SYSTEMS IN OPERATION

Filters:
AVC - APEF
83.100 m³/h



HVAC AND PLUMBING
1.160 FILTRATION
SYSTEMS IN OPERATION

Filters:
ASF- AVC - AMB - AVX - APEF
75.400 m³/h



ELECTRONICS
32 FILTRATION
SYSTEMS IN OPERATION

FILTERS:
AVC - ADF - APM
160 m³/h



MUNICIPAL
422 FILTRATION
SYSTEMS IN OPERATION

Filters:
AMA - AVC - ABV - APEF - MBR
232.350 m³/h



IRRIGATION
WITH TREATED
SEWAGE EFFLUENT
1120 FILTRATION
SYSTEMS IN OPERATION

Filters:
ABV - AVC - APEF
392.100 m³/h



STEEL INDUSTRY
135 FILTRATION
SYSTEMS IN OPERATION

Filters:
AMA - AVC - ABV - APEF - MBR
232.350 m³/h



FOOD AND BEVERAGE
INDUSTRY
66 FILTRATION
SYSTEMS IN OPERATION

Filters:
AVC - AMA - APEF - ABV - ABF
15.180 m³/h



PETROCHEMICAL
72 FILTRATION
SYSTEMS IN OPERATION

Filters:
AVC - ABV - APN - APEF
15.180 m³/h

ALFA GROUP WATER SOLUTIONS

Alfa Group Water Solutions is the result of the synergy between Alfa Water S.r.l. and Serenambiente S.r.l., two Italian companies of excellence specialized in the design and production of state-of-the-art water treatment and air purification solutions.

The combination of their respective engineering and technological expertise enables Alfa Group to offer high-efficiency and sustainable systems, capable of meeting even the most demanding filtration requirements across various industrial and civil sectors.



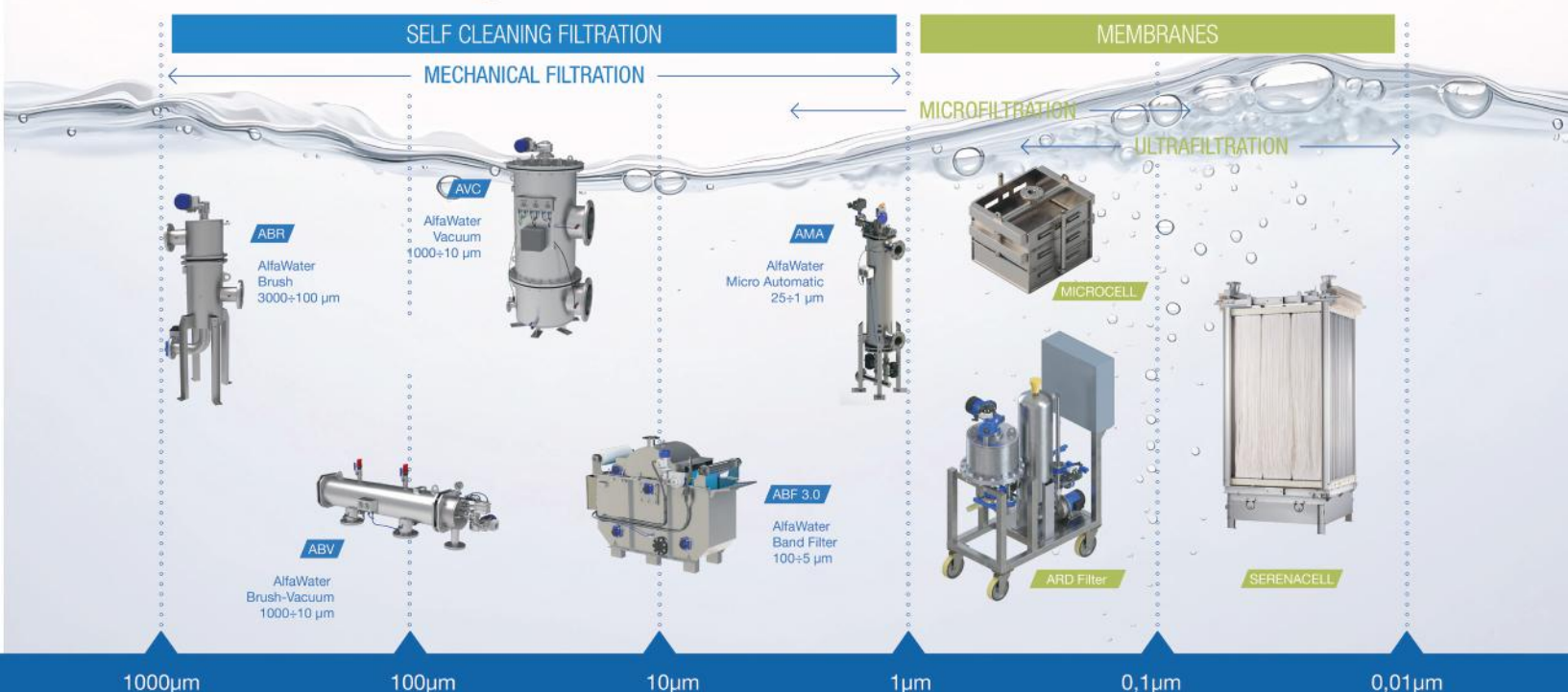
ALFA WATER

Alfa Water is the Italian company specialized in water treatment and filtration solutions. Thanks to its research and innovation-oriented approach, Alfawater researches, designs and manufactures high-performance filtration systems for industrial, civil and marine applications. Alfawater has developed the Awions division dedicated to air treatment and purification systems, fulfilling its mission to protect natural resources as water and air.



SERENAMBIENTE

Serenambiente is the Italian company specialized in the development of engineering solutions for the treatment and reuse of water and gas, guaranteeing operational efficiency and environmental sustainability. For over twenty years, it has been designing microfiltration and ultrafiltration systems for the filtration, treatment, and purification of water, working with international partners such as Mitsubishi Chemical Corporation, Fuji Filter and Alfawater.



PRODUCTION SITE



The production facility is located in Sedico, in the province of Belluno - Italy, the heart of the company's operations. Modern production lines and the technical skills of the staff guarantee the construction of tailor-made solutions that meet the company's high standards of quality, reliability and performance.

The facility is also a focal point for company research: engineers and technicians are committed to studying and developing innovative and sustainable water treatment solutions. Sustainability and continuous improvement guide every stage of the design and production process, which is entirely Made in Italy.

The Sedico facility is recognized in the sector as a center of Italian engineering and manufacturing excellence, capable of responding quickly to global market demands and the growing need for custom solutions.



Two Production Units - One Integrated Vision

Stainless Steel Processing Unit

Dedicated to precision stainless steel processing, this facility ensures the highest quality standards through advanced technologies and skilled craftsmanship.

Production area: 5.400 m².

- 7 - BENDING MACHINES.
- 2 - PUNCHING MACHINES.
- 8 - WELDING STATIONS.
- 3 - LASER CUTTING MACHINES.



Stainless Steel Processing Unit



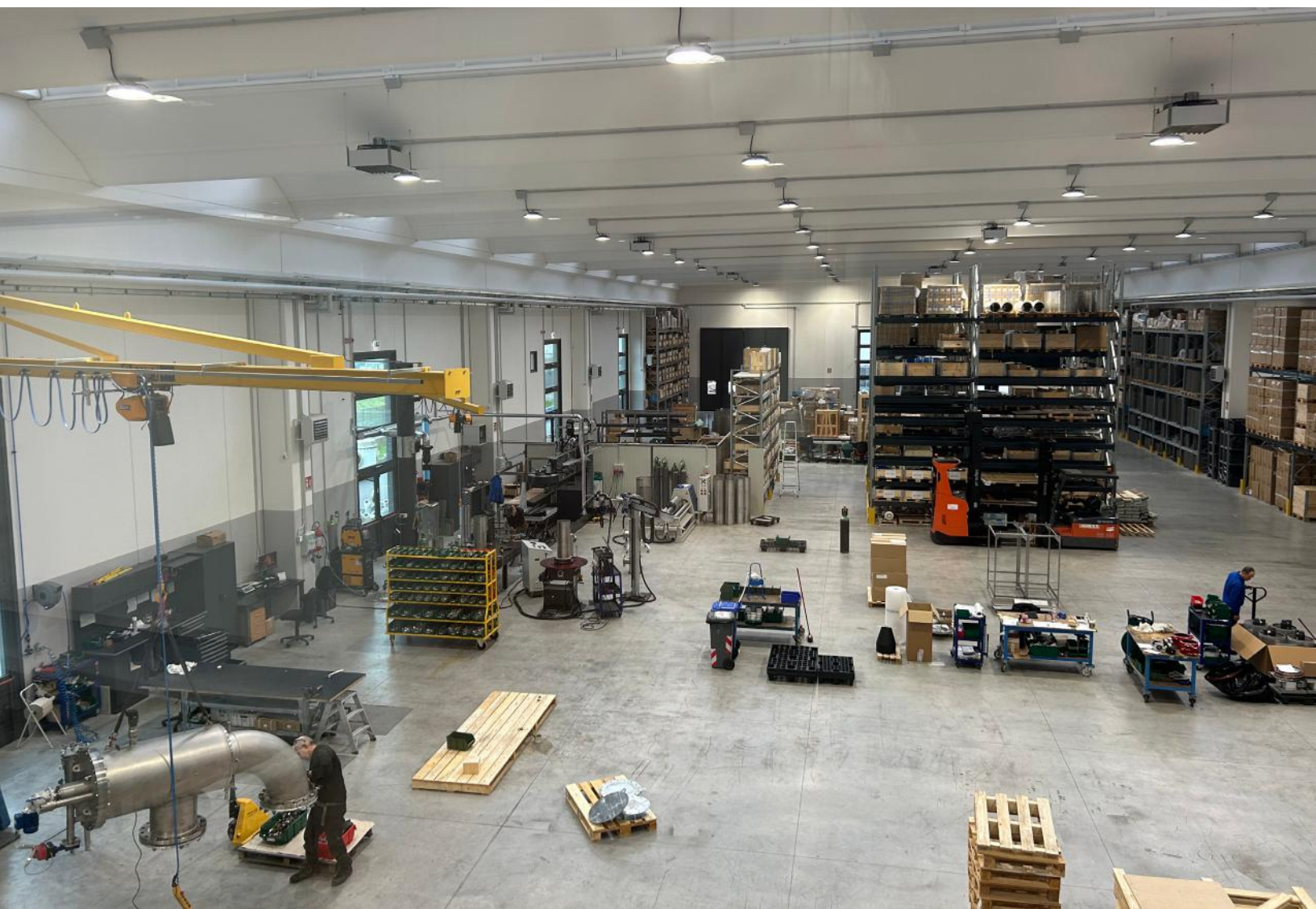
Rolling, Welding & Sheet Metal Assembly Unit

Focused on structural fabrication, assembly, and product testing. This unit combines efficiency and innovation for complete manufacturing solutions.

Production area: 3.000 m².

- 1 - AUTOMATIC WELDING MACHINE.
- 3 - WELDING STATIONS.
- 1 - ASSEMBLY ROOM.
- 1 - TEST ROOM.
- 1 - R&D ROOM.

Rolling, Welding & Sheet Metal
Assembly Unit



DESIGN, RESEARCH & DEVELOPMENT (R&D)

Thanks to the expertise and specialization of Alfa Water S.r.l. and Serenambiente S.r.l., Alfa Group stands out in the design and production of manual and automatic, self-cleaning and advanced technology filters, made with high quality materials such as stainless steel, super alloys and innovative materials. With over twenty years of experience in the water filtration sector, the Group successfully tackles even the most complex challenges of major industrial processes, offering personalized, high-performance solutions.

Our mission is to develop customized filtration systems by combining engineering expertise and advanced technology. The use of modern techniques of solid and 3D modelling enables the design of robust, efficient and low-maintenance solutions.

Research and development (R&D) activities, conducted by a specialized team of engineers and technicians, is the basis for continuous product improvement. Among the most relevant innovations are the NanoTex™ technology, designed for the cleaning of filter surfaces, and several patented cleaning systems.

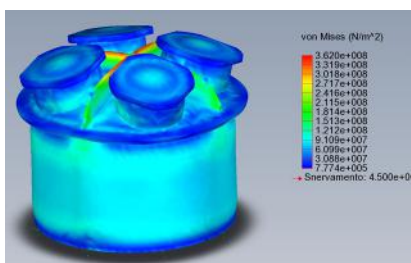
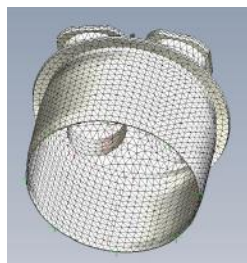
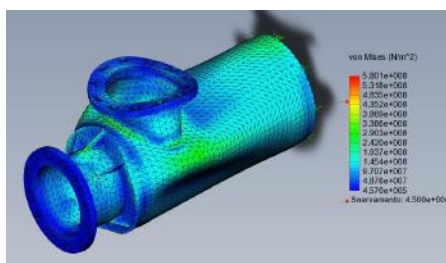
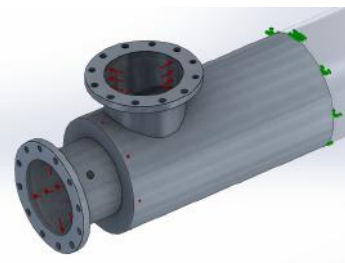
All filters are designed, manufactured and tested in-house, with strict quality controls at every stage of the process. Our product offering serves a wide range of industrial and civil sectors, with versatile, reliable solutions that can be adapted to meet any specific requirement.

The product portfolio is complemented by a range of advanced control systems, ideal for managing individual filters or complex skids, in compliance with various international standards.

Quality, innovation and flexibility make Alfa Group a benchmark in the water filtration sector.



AWC 07





alfawater

INNOVATION WINS. ALWAYS.



ALFA WATER S.r.l.

Alfa Water S.r.l. is an Italian company based in Sedico, in the province of Belluno - ITALY, specialized in the design and production of advanced water treatment and filtration solutions. Founded in the heart of the Dolomites, a UNESCO World Heritage, the company stands out for its focus on environmental sustainability and the adoption of innovative technologies.

Skills and Areas of Application

Alfa Water offers a complete range of manual, semi-automatic and automatic filters made of stainless steel (AISI 304, AISI 316) and special alloys such as SAF 2205, SAF 2507 and 254 SMO. These products comply with international standards such as ASME, PED, ATEX and SHELLDEP, guaranteeing high levels of quality and safety.

Alfa Water's solutions find application in several areas, including:



Drinking water and
waste water treatment



HVAC systems and
cooling towers



Shipbuilding and
desalination plants



Industrial processes
and water recycling



Irrigation and
agriculture

Innovation and Sustainability

The company is constantly committed to the research and development of cutting-edge solutions, with the goal of improving filtration process efficiency and reducing environmental impact.

By combining engineering expertise, craftsmanship, and attention to detail, Alfa Water delivers reliable and long-lasting products that contribute to the preservation of water resources.

AWIONS

The Air Purification Division

Within Alfa Water, Awions has been established as a division dedicated to air purification and environmental sanitization.

Using advanced technologies such as Cold Plasma and Bipolar Ionization, Awions develops effective systems for neutralizing VOCs, odors, allergens, viruses, bacteria, mold, and fungi.



Healthcare and
hospital sector



Food and
beauty industry



Offices and
workplaces



Marine and
transport sector

These solutions can be applied in a wide range of settings, including:

Awions devices are designed to ensure clean, healthy air, contributing to both people's well-being and environmental protection.

With solid expertise in water treatment and a strong commitment to innovation, Alfa Water is recognized as a reliable partner for sustainable and technologically advanced filtration solutions.

Through the creation of Awions, Alfa Water has expanded its expertise and is now able to offer integrated solutions for the management of both water and air—essential elements for life and well-being.

PRODUCT RANGE

MANUAL FILTERS AND SEPARATORS



AMB
AlfaWater Mini-basket
5000÷100 µm



The inline basket filter designed to be placed to protect pumps, valves or hydraulic equipment.

- Stainless steel body and basket.
- Reusable basket.
- Easy installation, maintenance and cleaning of the basket.
- Suitable for suction piping in pumping systems.



ABK
AlfaWater Basket
5000÷100 µm



The ABK is a filter with a perforated basket for catching coarse matter in feed water.

- Stainless steel body and basket.
- Reusable baskets.
- No mechanical moving parts.
- Easy to install, easy to maintain and clean the basket.



ASF
AlfaWater Simple Filter
1000÷10 µm



The ASF is manually cleaned filter element with a stainless steel body that is durable, economical and easy to maintain:

- Stainless steel body and filter cartridge.
- Interchangeable tissues with a wide range of filtration grades.
- No mechanical moving parts.
- Very economical and very durable.
- Easy installation, maintenance and cartridge cleaning/replacement.
- Minimal pressure losses.



AHC
AlfaWater Hydro-cyclone
5000÷50 µm



The AHC is a hydrocyclone liquid-solid separator filter with high efficiency and limited pressure drop.

- High efficiency for removing sand and heavy suspended solids.
- Continuity of flow.
- No filter tissue or internal moving parts.
- Zero maintenance.
- Reduced volume water discharged during cleaning.



ABG
AlfaWater Bag Filter
200÷1 µm



SHAPES

The ABG is the bag filter with a stainless steel body and heavy-duty inner bag:

- Stainless steel body.
- Interchangeable bags with multiple degrees of filtration.
- No mechanical moving parts.
- Easy installation, easy maintenance and filter bag replacement.
- Minimum filtration degree down to 1 µm.



AVM
AlfaWater Vacuum-Manual
1000÷10 µm



SHAPES

The manually operated AVM filter with suction skids for the pre-filtration of water containing suspended solids.

- Stainless steel body and filter cartridge.
- Interchangeable tissues with wide filtration range.
- Economical and robust choice for filtration.



ABM
AlfaWater Brush-Manual
3000÷100 µm



SHAPES



The ABM is the manually operated filter with brushes for the pre-filtration of process and surface water containing solids larger than 1 mm.

- Stainless steel body and filter cartridge.
- Interchangeable tissues with wide filtering range.
- Economical and robust choice for filtration.
- Low inlet pressure required.

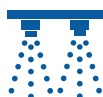
SELF-CLEANING FILTERS



APN
AlfaWater
Pressurized Nozzles
3000÷10 µm



SHAPES



The APN is a self-cleaning automatic filter suitable for filtering water with organic or colloidal material.

The internal filter cartridge consists of a stainless steel basket onto which a polyester filter fabric (PS), a 3D fabric, or a stainless steel filter tissue (SS2L) can be inserted. The degrees of filtration are between 10 and 3000µm, and the cartridge is cleaned internally by special pressurized nozzles (fed with an external clean water supply) that are fed to the central shaft driven by an electric motor.



ABR
AlfaWater Brush
3000÷100 µm

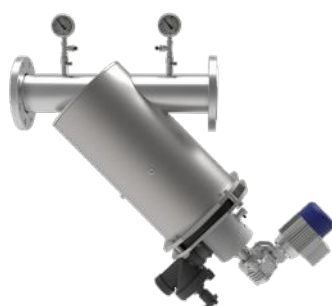


SHAPES



The ABR is the automatic self-cleaning filter with brushes for the pre-filtration of process and surface water containing solids larger than 1 mm.

- Stainless steel body and filter cartridge.
- Interchangeable filter tissue with wide filtering range.
- Economical and robust choice for automatic filtration.
- Low inlet pressure required.



AVC
AlfaWater Vacuum
1000÷10 µm



SHAPES



The AVC is the high-efficiency automatic self-cleaning filter that ensures continuity of flow and reduced water consumption during cleaning cycles.

- Multilayer cartridges with wide filtration range.
- Continuity of flow during the cleaning cycle.
- Minimum consumption of cleaning water.
- Efficient and very reliable cleaning mechanism with “suction scanner”.



AVB
AlfaWater Vacuum-Brush
1000÷10 µm

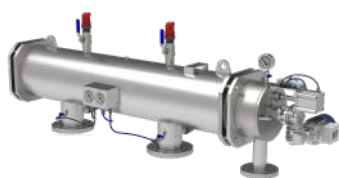


SHAPES



The AVB is the high-efficiency automatic self-cleaning filter that ensures continuity of flow and reduced water consumption during cleaning cycles.

- Multilayer cartridges with wide filtration range.
- Continuity of flow during the cleaning cycle.
- Minimum consumption of cleaning water.
- Efficient and very reliable cleaning mechanism with “suction scanner”.



ABV
AlfaWater
Brush-Vacuum
1000÷10 µm



The ABV is the self-cleaning automatic filter with pneumatic or electric piston and double cleaning system. High efficiency due to the combined action of brushes and suction pads, particularly suitable for water with large solids, for water rich in larger solids, such as river water or sea water intakes:

- Multilayer tissues with wide filtering range.
- Continuity of flow during the cleaning cycle.
- Economical and robust choice for automatic cleaning systems.
- Very simple and reliable cleaning mechanism with special pads and brushes.

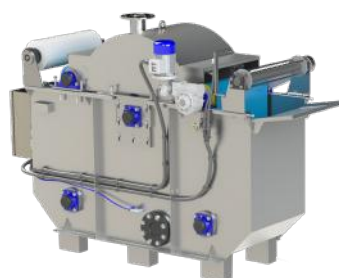


AGT
AlfaWater Giant
1000÷10 µm



The AGT is the filter designed to filter large flow rates and guarantees flow continuity during the cleaning cycle:

- Multi-cartridge solution.
- Multilayer tissue with wide filtering range.
- Continuity of flow during the cleaning cycle.
- Minimum consumption of cleaning water.
- Efficient and very reliable cleaning mechanism with 'suction scanner'.
- Easy replacement of cartridges or filtration grade.



ABF 3.0
AlfaWater Band Filter
100÷5 µm



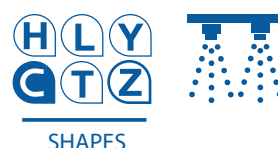
The ABF is a compact gravity filter with a disposable non-woven fabric medium. It includes two tanks: the inner for filtering raw water, the outer for containing leaks or overflow.

Contaminated liquid enters the upper inner tank, passes through the fabric, where solids are retained, and collects in the clean compartment below. The solids layer (called the "cake") enhances filtration.

The clean compartment is kept under vacuum by a suction pump, generating 0.2 to 0.6 bar of negative pressure in the filtration chamber.



AMA
AlfaWater Micro Automatic
25÷1 µm



Microfiltration down to 1 micron with automatic cleaning.

Pleated cartridges with multilayer AMC technology and large filter area. Cleaning by pressurized jets. Multi-cartridge and parallel setups for high flow rates.

Alfa Water AMA filters are self-cleaning, with AMC cartridges cleaned by pressurized nozzles. Filtration is from inside out. A central shaft cleans the cartridges when clogging is detected or at set intervals, managed by a controller.

Pressurized clean water feeds the nozzles; wash water is discharged by gravity.



 serenambiente

INNOVATION WINS. ALWAYS.



SERENAMBIENTE S.r.l.

Serenambiente S.r.l. is the Italian company specialized in the development of advanced solutions for the treatment, filtration and reuse of water resources and gases, with a strong orientation towards environmental sustainability and technological innovation.

Founded in 2000, Serenambiente was established with the goal of protecting and enhancing the environment we live in, by offering systems designed to reduce waste, preserve natural resources, and contribute meaningfully to the improvement of water and air quality. Our guiding vision is clear: *The earth is not a legacy received from our fathers but a loan to be returned to our children.*

With over 20 years of experience in the industry and consolidated technical and scientific know-how, Serenambiente has two main divisions:

- **FILTRATION:** microfiltration and ultrafiltration of fluids and gas purification, in cooperation with Mitsubishi Chemical Corporation, Fuji Filter, Alfa Water.
- **TREATMENT:** systems for oil removal and sludge dewatering.



Alfa Water Srl

Thanks to the synergy with Alfa Water, a manufacturer of manual and automatic filters as well as Nanotex-OilRepellent™ fabrics, we are able to design custom-engineered solutions and deliver turnkey systems for solving filtration and microfiltration issues.



Mitsubishi Chemical Corp

Thanks to our partnership with Mitsubishi Chemical Corp, we are able to provide solutions for ultrafiltration and the removal of emulsified oils using Dia Flow technology, as well as for gas separation and purification.



FUJI FILTER

Thanks to our partnership with Fuji Filter, we are able to apply special filtration cartridges.

Serenambiente continuously invests in **Research & Development**, collaborating with academic institutions of excellence such as the University of Trento, to implement patented technologies and cutting-edge solutions in the fields of microfiltration and ultrafiltration.

ISO 9001 certified, the company adopts a quality management system focused on maximum customer satisfaction, ensuring reliability, operational precision, and high performance in every project delivered.

MICROCELL

Silicon Carbide (SiC) Microfiltration Membrane Modules

The Microcell system is a membrane filtration technology made of Silicon Carbide (SiC), designed for microfiltration (MF) and ultrafiltration (UF). It is particularly suitable for the treatment of drinking water, process water, wastewater, and water from natural sources (wells, surface water, water networks). Microcell is a reliable, efficient and sustainable solution for the removal of both physical and microbiological contaminants.

Why Silicon Carbide (SiC)?

SiC is distinguished by a number of unique advantages:

- **High chemical and mechanical resistance:** wide pH range (1-14), resistance to abrasive and aggressive chemicals.
- **Negatively charged surface:** helps reduce the accumulation of organic and oily substances.
- **High permeate flow** even with high concentrations of total suspended solids (SST) up to 40,000 ppm.
- **Easy cleaning** and offers long operational life.
- **High removal efficiency:** >99% of bacteria, viruses, microorganisms and suspended solids.



Main applications:



Treatment of drinking water
from unsafe sources



Well and surface waters



Industrial processes and
waste water



Swimming pools and
potable water

Con l'uso di tecnologie di assorbimento, è possibile trattare anche:



PFAS



Dissolved organic
substances



Radionuclides

Technical characteristics of Microcell modules

- **Membrane material:** Silicon Carbide (SiC)
- **Pore size:** 0,1 μm
- **Operating pH range:** 1 – 14
- **Operating temperature:** 5 – 80 °C
- **Maximum permeate flow rate:** up to 6,0 m³/h
- **Active surface area:** up to 6.20 m² per module
- **Pressione massima di filtrazione:** -0,7 bar
- **Maximum backwash pressure:** 3,0 bar
- **Certifications:** NSF61 for drinking water



MATERIALS AND CONFIGURATION

- **Module body:** SS304L stainless steel
- **O-ring materials available:** Viton, EPDM, NBR
- **Caps:** Polypropylene / AISI 304
- **Internal configuration:** 42 interchangeable individual ceramic plates with an average spacing of 6.90 mm.

Available cleaning systems



Backwashing



Chemical cleaning



High-pressure jet



Ozone

DISTINCTIVE ADVANTAGES OF THE MICROCELL SYSTEM

- Filtered water outlet on both sides
- Quick connection with double O-ring
- Integrated self-degassing system
- Compact design that optimizes space and energy

SERENACELL

MBR STERAPORE™ MEMBRANE MODULES

The **SERENACELL** module is a skid built by Serenambiente in the production site of Alfa Group - Italy.

The modules are made of stainless steel and consist of several elements containing STERAPORE™ hollow fiber membranes.

STERAPORE™ Series 5600-5700 Ultrafiltration Membranes are manufactured by MITSUBISHI CHEMICAL CORPORATION.

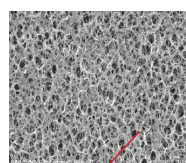
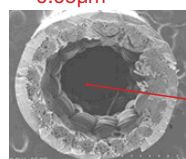
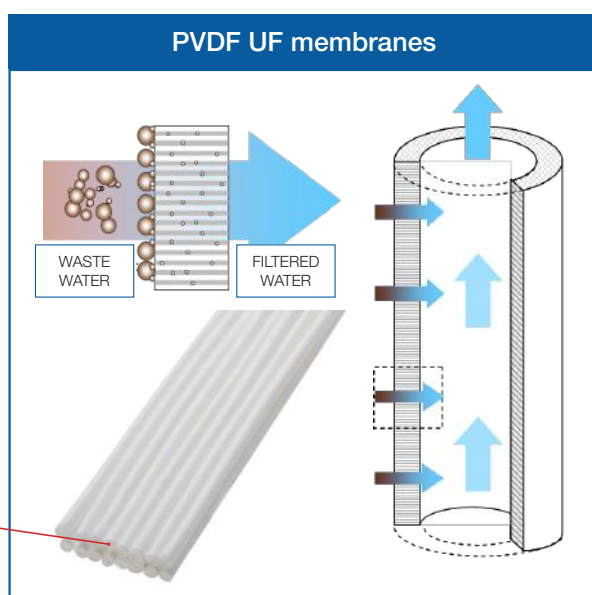


TECHNOLOGY AND PERFORMANCE

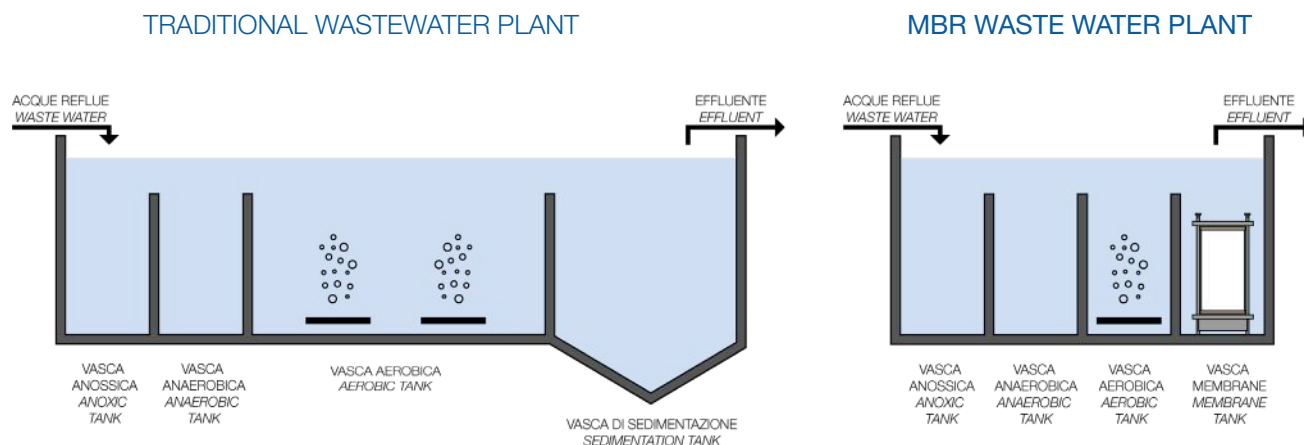
- **PVDF UF membranes**, porosity 0.05 μm , fiber diameter 1.65 mm.
- **STERAPORE™ 5600 and 5700 Series**
- **Operating conditions:** temperature 5-40°C, pH 5-9 (operation), pH 2-11 (cleaning), TSS up to 15 g/l, oils and greases up to 150 mg/l.
- **Filtration cycle:** 5-7 min with 1-2 min pause.

MAIN ADVANTAGES

- **High quality effluent**, suitable for reuse
- **Reduced footprint** compared to conventional systems
- **Reduced sludge production** (up to 25%)
- **No backwash required**
- **Long-life membranes** (up to 36 months dry)
- **Can be installed directly in the oxidation tank**, with no need for recirculation pumps


0.05 μm


SMALLER FOOTPRINT COMPARED TO TRADITIONAL PLANTS



MODEL RANGE (FILTER AREA: 50-1920 M²)

Modules are available in various configurations, featuring a modular design and optimized sizing to meet different system requirements.

MODEL	SURFACE	HEIGHT (MM)	WEIGHT (KG)
SC 50 – SC 200	50 – 200 m ²	1635	70 – 165
SC 400 – SC 1000	400 – 1000 m ²	3038	399 – 770
SC 1200 – SC 1920	1200 – 1920 m ²	3038	859 – 1427
Variable hydraulic connections, possibility of using activated carbon in the tank.			

CLEANING AND MAINTENANCE

- **Ordinary** (weekly): NaOCl 300-500 mg/l, 15-30 min.
- **Extraordinary** (quarterly): NaOCl 3000 mg/l, 30+90 min.
- **Acid** ((annual): oxalic or citric acid 1-2%, 30+90 min

MATERIALS AND CONSTRUCTION

- **Frame:** AISI 304 / AISI 316 / SAF2205 stainless steel.
- **Elements:** ABS and stainless steel.
- **Pipes:** PVC or stainless steel.
- **Diffuser:** energy-saving “large bubble” system

APPLICATIONS



Civil and industrial waste water treatment



Water reuse and recovery



Tertiary treatment and advanced





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