

SAATlaqua

precision fabrics
for water filtration



—SAATI

We cross-innovate



We cross-innovate

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SAATI and its Filtration Applications

SAATI is a multinational company with corporate headquarters situated in northern Italy since 1935. Today we are a leader in the development, manufacturing and commercialization of advanced technical textiles and chemicals.

SAATI specializes in the production of precise woven fabrics and chemical technologies used in the fields of Filtration, Screen Printing and Ballistic Protection. The development of enhanced performance coatings lies at SAATI's core.

SAATI's filtration activities focus on the production of technical precision fabrics (with monofilament and multifilament yarn) and fabricated components in polyamide, polyester and polypropylene, with the possibility of special finishing treatments.

These products are put to use in a wide range of different filtration fields such as home appliance, consumer electronics, healthcare, automotive, food & milling, and water treatment, along with many other industrial applications.



Focuses on Customer and Innovation

Thanks to our direct presence in many countries, it is easy for the customers to reach us, wherever they are located, and our responsiveness is always prompt. Our staff has a high level of technical expertise and dedication, always aiming to finding the best solution for the customer's requirements.

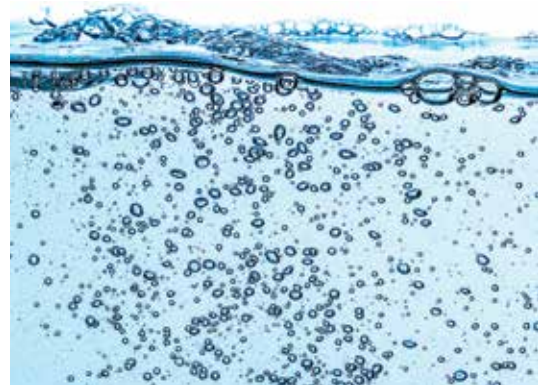
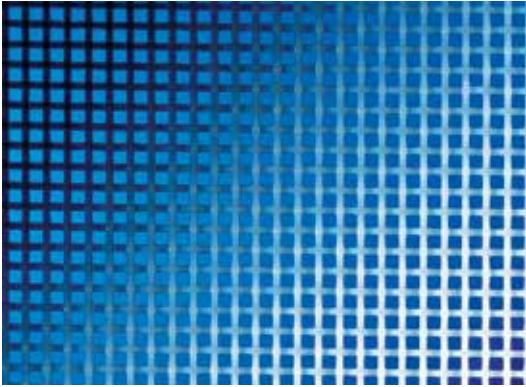
SAATI sales representatives and engineers understand customers' applications, and work closely with the staff in the production and R&D departments to offer a customized solution in a form that best meets their customer's needs.

At SAATI, we have a real attitude for innovation and are committed to a continuous research of processes and materials that make tangible improvements in production and service. SAATI acts in the market with this attitude, offering sieving and filter fabrics and components that answer to the most demanding needs in filtration application.

Every phase of production is carefully monitored, employing frequent in-house testing and rigorous inspection to ensure consistent quality. All SAATI products are manufactured in accordance with UNI ISO 9001 standards.

SAATlaqua

The Industry Standard for Water Treatment Applications



Perfecting the Art of Precision Woven Fabric

SAATI has a long history of manufacturing and distributing precision woven fabrics. Over the past eight decades, SAATI has perfected the technology of manufacturing fabrics to a high degree of precision.

Every phase of production is carefully monitored, employing frequent in-house testing and rigorous inspection to ensure consistent quality.

Unsurpassed Customer Support

With business offices and warehouses throughout the world, SAATI provides strong local support, expert response to customer inquiries, and quick delivery to all locations.

SAATI Sales Representatives and Engineers are committed to a tradition of continuous innovation. They understand their customers' applications and offer the most appropriate product in a form that best meets their customers' needs.

The continuing success of SAATI is founded on the company's ability to design and manufacture innovative, precision woven fabrics and parts that meet the needs of its customers' most demanding applications.

Manufactured To The Most Exacting Standards

SAATlaqua fabrics are woven with monofilament polyester or polyamide fibers with smooth and uniform surfaces that are particularly suitable for water applications. The monofilament fibers are woven to exceptionally tight tolerances, creating uniform pore sizes, excellent strength, and good dimensional stability.

Customized to Meet Specific Customer Needs

Typical surface modifications requested include plasma treatment, adding hydrophilic or hydrophobic characteristics, and dyeing in virtually any color.

SAATI Engineers can also evaluate developing a fully customized solution using your specific chemistry applied to the mesh surface to functionalize the surface beyond simple filtration.



SAATI is environmentally conscientious, especially regarding water, one of the most precious resources on Earth. Manufactured with FDA Approved Polymers, the SAATIaqua range of products is designed to suit every water filtration need. SAATIaqua is focused on the specific applications of water treatment:



Waste Water Treatment



Irrigation



Domestic Water Filtration



Beverage



Aquaculture

Thanks to our deep understanding of technical fabrics and filtration, we have the capability to supply products and solutions which can contribute to making water more suitable for the desired end use. In particular, our components play a primary role in the purification of water, in solid/liquid separation, and in all processes where it is necessary to remove contaminants which are present in water and aquaculture.

SAATlaqua

For Water Applications

Waste Water Treatment

Water is one of our planet's most precious resources and safeguarding it also means optimising its use and making sure it returns into circulation clean and reusable for the most diverse purposes, once eliminated from the various industrial processes.

SAATI helps industrial water treatment equipment manufacturers to find the right woven mesh according to their specific needs.

SAATlaqua precise monofilament fabrics are the perfect choice for drum filters, disc filters and other waste water treatment equipment.

For these applications, SAATI has developed a wide range of woven polyester meshes characterized by following properties:

- Excellent tensile strength
- Moisture resistance
- Corrosion resistance
- Good dimensional stability
- Precise, uniform mesh openings and wide open area that provide exceptionally accurate filtration and low pressure drop
- Long service time



Irrigation

SAATlaqua fabrics are manufactured to withstand aggressive physical or chemical agents and from all the every elements normally used in the sewage irrigation field.

Choosing the optimal filter media depends on the volume of water, pressure and capacity required by the irrigation system and its pressure and capacity. Other key factors to choose the right filter media are water quality and impurity level present in water.

SAATI is able to offer a wide range of finishing processes and mesh openings according to the fertilizer's type and application.

Some features of SAATlaqua's fabrics are:

- Designed to suspend both organic and inorganic (sands, rubble, seaweed, mucilage or minerals such as iron and manganese) particles in the water
- Low pressure drop
- Easy to wash
- Excellent tensile strength
- Precise selective filtration accurate filtration and low pressure drop





Domestic Water Filtration

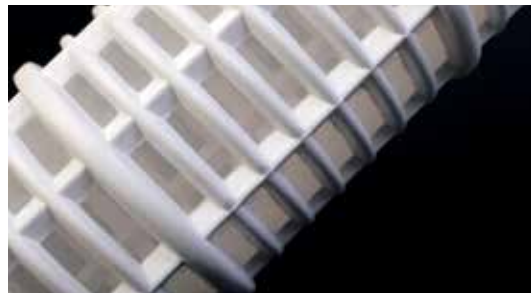
Water used in the home comes from water channels and containing suspended solids such as sands, rust and other small particles. These particles can damage equipment, taps and home appliances.

In order to avoid contaminants entering into domestic equipment, it is necessary to implement a surface filtration through washable net cartridges.

The main purposes of net cartridges is to minimize the possibility of clogging, improve the water's quality and extend the equipment's life.

SAATlaqua fabrics are inserted into the cartridge core, enabling consistent filtration capacity and minimizing pressure drop, due to the uniform openings of its monofilament fiber.

SAATI offers a complete range of precision woven fabrics and filter tubes to suit customers' production needs.



Beverage

SAATlaqua monofilament woven fabrics are a great alternative to non-woven materials and they are subjected to the strictest tests daily in order to maintain the highest quality and safety standards.

Our fabrics are ideal in the manufacturing of filter cartridges for pitchers especially for "Pre-Filtration", in order to keep particles from tap water, and "Final Filtration", with the purpose to retain the particles mixture.

On request, SAATlaqua fabrics are manufactured in compliance with GMP and are subjected to migration tests according to current regulations.

Thanks to these features that stand out from the common filter media, our products meet the modern requirements of water pitcher systems.



SAATlaqua

For Water Applications

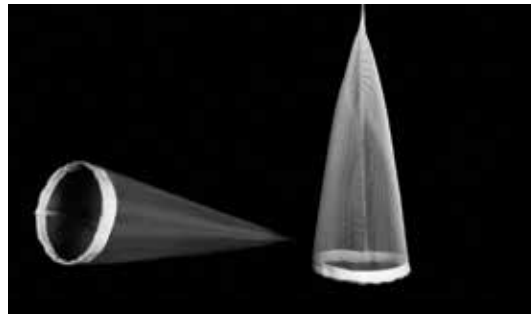
Aquaculture

Aquaculture is a growing, vibrant and important production sector for high protein and healthy food.

SAATI supplies a wide range of high-tech fabrics, surface treatments and custom-oriented precise fabricated parts for the plankton and larvae screens, laboratory analysis and fish culture equipment.

SAATlaqua Polyester Screen Benefits:

- Excellent resistance to sodium hypochlorite
- Long service life
- Ideal for the construction of sieves, screens and zooplankton nets for the aquaculture industry
- Made from polyester screens that do not lose their elasticity after the sterilization cycle in an autoclave

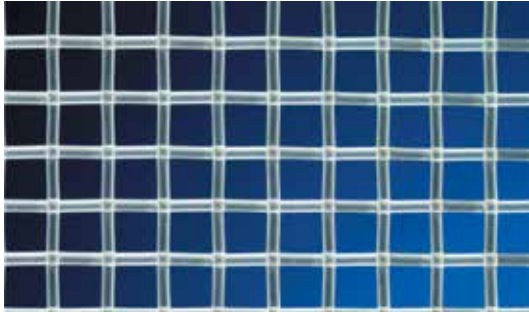


SAATI has been able to develop a huge number of high quality products and solutions for a host of water applications. However, our research never comes to a standstill. Day after day, it is the catalyst of new solutions, new ideas, new technologies, new increasingly efficient and high-performing applications. Our Marketing and R&D departments work alongside each customer to find the most suitable solutions for each specific need, together, in a process of continual improvement and ongoing mutual innovation.



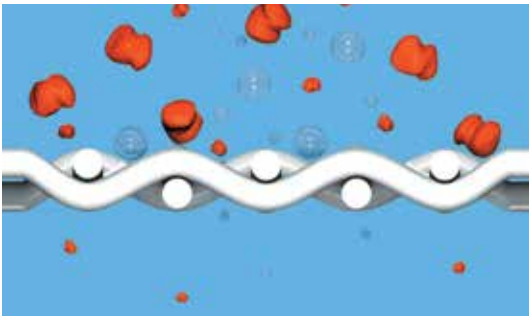
SAATlaqua

Fabric

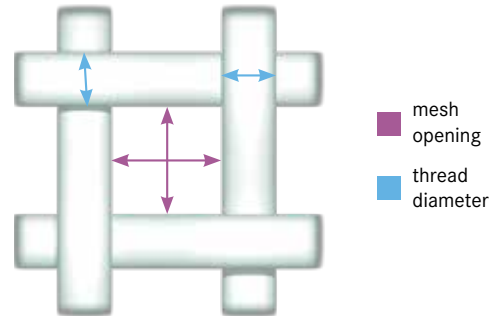


SAATlaqua includes a wide and complete range of cutting-edge technical fabrics woven with monofilament yarns in different polymers such as polyester (PET) and polyamide (PA6.6).

SAATlaqua precision fabrics provide a narrow and consistent aperture size distribution, leading to accurate and predictable filtration. The weave pattern ensures a low pressure drop and consequently an interrupted flow. All SAATlaqua fabrics grant exceptional mechanical performance, and are developed to operate effectively at very high tension levels.



High flow rates with low pressure loss

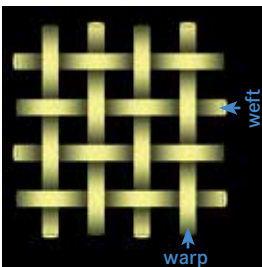


Precise pore size

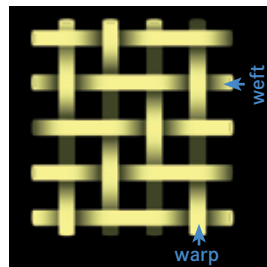
Made from non-shedding monofilament fibers to reduce the risk of particulate contamination.

The fibers are woven to exceptionally tight tolerances, ensuring uniform pore sizes, excellent strength, and good dimensional stability.

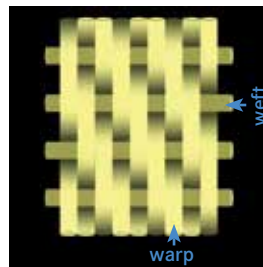
Fabric design (main examples)



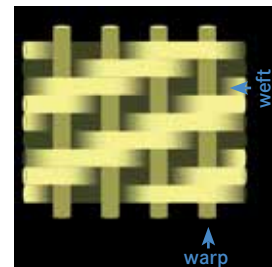
Plain



Twill 2/1

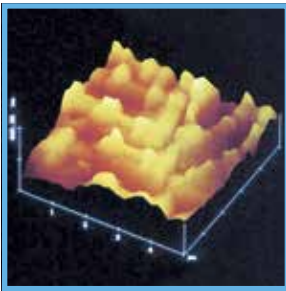


Tressen TW 2/1



Dutch TW 2/2

In addition to the deep weaving expertise, SAATI has unsurpassed experience in surface treatments, and knows how to finish the fabrics in order to enhance their mechanical performances, or to infuse additional functional properties. Almost any surface treatment can be applied including customers' own proprietary coating.



- **Plasma Treatments:** SAATI has pioneered the use of cold plasma to modify screen fabrics' surface properties. The plasma treatment greatly increases the fabrics' hydrophilia making it far more wettable. This also enhances the bonds of subsequent coatings and plastics while leaving the undersurface properties completely unaffected. The intensity of the treatment can also be modified to meet customers unique requirements.



- **Hydrophilic Treatments:** These optimize the speed and effectiveness of wetting the fabric's surface.
- **Hydrophobic Treatments:** These allow separation of water from oil-based products such as fuels.



- **Food Finishing:** Food compliance is SAATI's priority for all the applications of drinking water, this is why SAATlaqua meshes are intended to come in contact with food and are in compliance with the latest legal regulations:
 - Compliance Of Composition:** FDA code of Federal Regulation Title 21 part 177, paragraph 177.1500 and 177.1420.
 - Compliance Of Performance:** 1935/2004/CE and EU 10/2011 regulations, full traceability, migration test and GMP compliance as per plastic material food contact regulation.
- **Antistatic Finishing:** An antistatic treatment can be applied to reduce the build-up of static charges often associated with synthetic fabrics.

In addition to the aforementioned, we can collaborate with customers to develop special treatments according to specific applications, needs and required performance.

SAATlaqua

Fabricated Components

High-Quality, Cost-Effective Custom Fabrication

SAATlaqua fabrics can be provided in a wide variety of finished or partly finished products. Specially designed processing equipment can create quality custom-fabricated parts in the most cost-effective way. SAATlaqua fabrics can be cut into ribbons, pleated, or formed into tubes, or made into any required shape.

When SAATI engineers design a part for custom fabrication, their primary consideration is to produce a high-quality precision product that will remain consistent from order to order, year after year.



SAATIaqua

Fabricated Components



Ribbons

SAATI fabrics can be heat slit economically, or ultrasonic slit for the closest tolerances and highest quality as needed.

Production Technology involved: Heat, Ultrasonics.



Continuous Tube / Multi-Layer Products

Two layers of filter media (identical or different) are simultaneously slit with heated blades to form a continuous double-seamed tube. Ultrasonic-welded tubular ribbons, although similar in construction to heat slit items, can be produced in a wide range of sizes, including very small ones. Two or more narrow layers can be attached using ultrasonic slitting. A fine filtration media can be supported or protected with a coarser one.

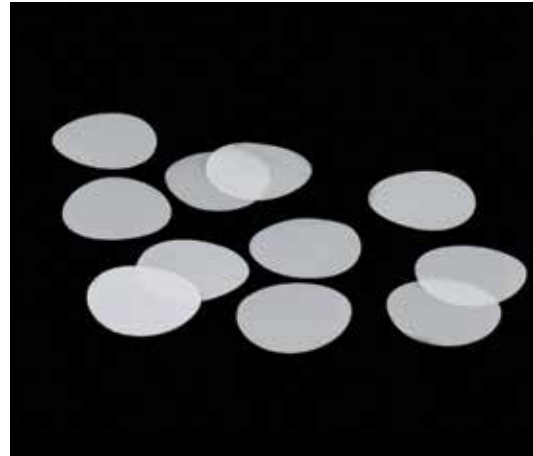
Production Technology involved: Heat, Ultrasonics.



Pleated Components

Mono or multi-layer pleated components such as pack, ribbon, and cartridges can be manufactured for all applications requiring high filtration capacity in a narrow space.

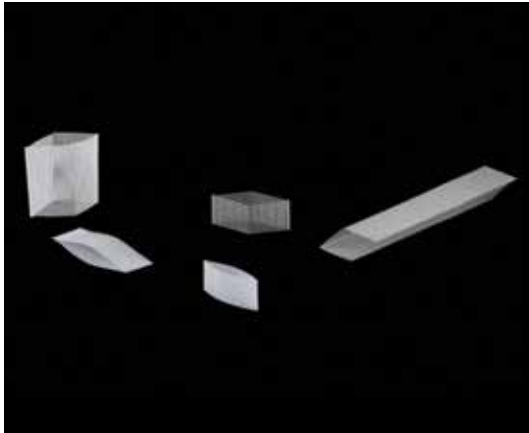
Production technology involved: Heat, Ultrasonics.



Shapes

Die-cut or laser cut parts can be produced in almost any shape or size. One or more layers of fabrics can be ultrasonic cut or sealed into virtually any shape using a PC controlled plotter, assuring a faithful reproduction of design.

Production Technology involved: Die-Cut, Ultrasonics, Laser.



Tubes - Rectangles

For all applications requiring molded cylindrical filters, SAATI offers fabric tubes and rectangles with two open ends, die-cut or laser cut to length.

Many applications can accept the quality of a cold cut tube in view of its economic advantages. If a component must have one end sealed and one end open, SAATI is able to combine technologies in the same process and supply tubes with one end die-cut or laser cut and the other end ultrasonic sealed.

Ultrasonic technology is also applied for the fabrication of rectangular filters.

Production Technology Involved: Die-Cut, Heat and Ultrasonic.



Sewing

SAATI supplies a wide range of sewn products (bags, sleeves and belts) and many solutions for edging, joining and reinforcement.



Notes



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Notes



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**SAATI S.p.a**

Via Milano, 14
22070 Appiano Gentile (Co), Italy
Tel : +39 0319711
Fax: +39 031 933392
E-mail: info.it@saati.com

SAATI Americas Corp.

201 Fairview St. Extension
Fountain Inn, SC 29644
Toll-Free: +1 800 431 2200
Fax: +1 864 862 0089
E-mail: info.us@saati.com

SAATI Technical Fabrics (Tianjin) Co., Ltd.

Cross Of Saida 2nd Branch Road and Saida Century Avenue,
Xiqing Economic Development Area,
Tianjin, China 300385
Tel: +86 22 23960843
Fax: +86 22 23962116
E-mail: info.cn@saati.com

SAATI Deutschland GmbH

Ostring 22 46348 Raesfeld, Germany
Phone: +49 2865 95800
Fax: +49 2865 958010
E-mail: info.de@saati.com

SAATI Korea Ltd.

SK Ventium 101-601
166, Gosan-ro, Gunpo-si, Gyeonggi-do,
Republic of Korea
Phone: +82 31 429 9337
Fax: +82 31 429 9338
E-mail: info.kr@saati.com

SAATI France

74 Route de Bapaume 80360 Sailly Saillisel, France
Phone: +33 3 22 85 77 00
Fax: +33 3 22 85 77 00
E-mail: info.fr@saati.com

SAATI Serigrafía Ibérica, S.a.

Pol. Ind. El Mijares, C/ Industria, nº 13 12550
Almazora, Castellón, Spain
Phone: +34 964550688
Fax: +34 964551049
E-mail: info.es@saati.com

SAATI Russia

23 Shvetsova str. 198095 Saint-Petersburg, Russia
Phone: +79 062788343

Website

www.SAATI.com

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