



## MICROFILTRATION



...Our goal is to  
**work together**  
**with our customers**  
**to reach**  
**the best results.**

The Quality System of Bea Technologies has been found to conform to the Quality System standard UNI EN ISO 9001 and is subjected to regularly audits by accredited international inspection body.



The effort in the research and the continuous testing in the field enable us to develop and to manufacture high tech filter element.



## OUR MISSION

*Bea Technologies is focused  
to provide our Customers  
the highest quality and  
the most effective products  
and services.*



We manufacture our products  
in a controlled environment  
to obtain high quality,  
contaminant free filter element,  
and meet the requirements  
of international guidelines.



## MANUFACTURING FACILITY

Our membrane filter elements  
are checked with non-destructive integrity test  
such as bubble point test, diffusion and  
decay pressure test.



Bea Technologies provides our Customers with the filtration process validations and supply maintenance services.

Microbiological department is able to perform particles retention and microbiological test.

## BEA LAB



Products are sampled and tested for microorganism retention challenge according to ASTM standard test method F838-05.

The correlations between the results of the integrity test and the bacteria retention are reported in the Validation Guides.

## VALIDATION



## R & D



## SE-TECH

SE-TECH extended surface area technology increases the effective surface filtering area of the filter element; it is obtained through a new design of the pleat by applying Fluid Dynamic Analysis to the flow patterns through different filter media. The increased surface enhances also the performances and the service life of the filter element.

# Membrane filter element for Liquid



## **MICRONYL, STERINYL, POSINYL** *Nylon membrane filter elements for sterilizing filtration*

MICRONYL, STERINYL and POSINYL filter elements are manufactured with Nylon 66 membrane and are suitable in critical applications.

They extend the range of sterilizing cartridges both in bio-burden reduction and in final filtration applications. The filter elements are steamable and testable in situ; materials meet the FDA, USP, EC requirements; the manufacturing is performed in a controlled environment.



## **STERYKLEAR SE-TECH technology filter elements**

STERYKLEAR filter elements are manufactured using SETECH technology which combine high effective filtration surface area with increased service life.

The materials used are in accordance with FDA, USP and EC directives for food contact; the manufacturing is performed in a controlled environment.



## **STERYFLUS** *membrane filter element for sterilizing liquid filtration*

STERYFLUS filter elements are specifically designed for sterilizing filtration of liquids in pharmaceutical, biotechnology and food & beverage applications.

STERYFLUS filter elements are manufactured with hydrophilic PES membrane with absolute filtration rating from 0,1 to 0,65 µm, pleated with support layer of polyester.

The materials used are in accordance with FDA, USP and EC directives for food contact; the manufacturing is performed in a controlled environment.



## **STERYFLUS MULTILAYER** *membrane filter element for sterilizing liquid filtration*

STERYFLUS MULTILAYER filter element is used for the sterilizing filtration of liquids in food & beverages and pharmaceuticals applications.

STERYFLUS MULTILAYER cartridges are manufactured with hydrophilic PES membrane with absolute filtration rating from 0,2 to 1,2 µm pleated with a pre filter in borosilicate micro fiber.

The materials used are in accordance with FDA, USP and EC directives for food contact; the manufacturing is performed in a controlled environment.



## **STERYAQUA** *extended area filter element for sterilizing filtration*

STERYAQUA filter elements, available with Single Layer and Double Layer, are manufactured with hydrophilic PES (Polyethersulphone) membrane and specifically designed for water filtration. Main characteristics are:

- asymmetric membrane with high particle and microbiological retention
- materials used are in accordance with FDA, USP and EC directives for food contact.

Manufacturing is performed in a controlled environment.

# Membrane filter element for Air & Gas



## STERYFLON *filter element for sterilizing air & gas*

STERYFLON cartridges are specifically designed for sterilizing filtration of compressed air and gas in pharmaceutical, biotechnology and food & beverage applications.

STERYFLON cartridges are manufactured with hydrophobic expanded PTFE membrane, with absolute filtration rating from 0,1 to 0,2 µm pleated with polypropylene support media. The materials used are in accordance with FDA and USP guidelines and their manufacturing is performed in a controlled environment.



## STERYTEMP *filter element for sterilizing air at high temperature*

STERYTEMP is suitable for air and gas sterilization in biological bulk applications where the operating temperature could reach 105°C.

The filter media is made with hydrophobic expanded PTFE membrane with absolute 0.2 and 0,1 micron filtration rating, validated in liquid conditions, pleated with NOMEX support that provides a stronger support to the membrane. The materials used are in accordance with FDA and USP guidelines and the manufacturing of cartridges is performed in a controlled environment.



## PROTEMP *filter elements for sterilizing air at middle temperature*

PROTEMP filter cartridge is specifically designed for biotech applications where operating temperature does not exceed 80°C.

PROTEMP is manufactured with hydrophobic expanded membrane with absolute 0.2 micron filtration grade, validate in liquid conditions, pleated with Polyaramid support which provides high resistance to thermic cycles in operating and sterilization cycles. The materials used are in accordance with FDA and USP guidelines; the manufacturing is performed in a controlled environment.



## PROVENT *sterilizing vent filter elements*

PROVENT membrane filter element 0.2 micron absolute prevent the contamination of products contained in storage tanks from intake atmospheric air; the cartridge is designed to operate even with reverse flow to allow the air exit when the process liquid level grows inside the tank.

PROVENT is repeatedly steamable in situ; the materials meet the requirements of FDA and USP. The manufacturing is performed in a controlled environment.



## MINICARTRIDGES *for sterilizing air & gas filtration*

MINICARTRIDGES are specifically designed for sterilizing filtration in pharmaceutical, biotechnology, food & beverage and microelectronics applications.

Mini Cartridges are manufactured with hydrophobic expanded PTFE membrane, with absolute filtration rating from 0,1 to 0,2 µm, pleated with polypropylene support media. The materials used are in accordance with FDA and USP guidelines and their manufacturing is performed in a controlled environment.

# Pleated filter element with absolute filtration rating



## **POLYSAN all Polypropylene filter element**

POLYSAN are pre filter cartridges pleated with all polypropylene materials, suitable for food & beverages and cosmetic applications.

The filter element is all made up with different porosity polypropylene layers. This gives the filter element an absolute filtration rating, high dirt holding capacity and high flow throughput.

The material used are in accordance with FDA, USP and EC directives for food contact and their manufacturing is performed in a controlled environment



## **CLEARTRAK pre fluxed GF filter element**

CLEARTRAK are very high efficiency filter cartridges to remove extremely fine particles; the high level of performance is obtained by pleating multiple layers of polypropylene and borosilicate microfibre media. The borosilicate microfibre is an extensively reticulated matrix that develops an electrostatic potential when immersed in aqueous solution, thus providing a double filtration effect of both depth retention and surface adsorption. All media and components are biologically safe and meet FDA and EC requirements for food contact.



## **POSITRAK positively charged pre filter**

POSITRAK filter elements are very high efficiency filter cartridges to remove extremely fine particles and colloids from fluids and water in food & beverages and cosmetic applications. POSITRAK filter cartridges are manufactured from positively charged nonwoven polypropylene and borosilicate microfibre media.

The materials used meet FDA and EC requirements.



## **POLIVERSE backwashable pleated filter elements**

POLIVERSE is a particellar filter designed to be effectively recovered by washing with reverse flow.

They are specifically recommended to filter liquids containing sugary substances. The innovative media is obtained by pleating several filtering layers with a progressive retention capacity: larger particles are trapped outside and are easily removed. The materials meet the requirements of FDA, USP and EC for food contact.



## **BEAMATIC - BEATEST integrity tester**

The equipment to enable the check the integrity of the membrane filter cartridges are available in two versions.

BEAMATIC: main unit can be located in the control room while the measurement unit works in a remote mode; the system performs integrity check by diffusion flow, bubble point, decay pressure or intrusion test.

BEATEST: portable and flexible friendly device which allows to verify the integrity by diffusion flow or decay pressure test. Data are stored and can be recalled at any time just connecting the unit to a personal computer.

# Depth & Pleated filter element



## **POLIXTER polyester pleated filter elements**

POLIXTER are integrally made with polyester which withstand at higher temperature in comparison to other polymers; in addition the chemical compatibility of polyester allows reproducible performances in filtration of a wide range of fluids like solvents, acid and bases.

The materials meet the requirements of FDA, USP and EC for food contact.



## **POLYVER Borosilicate microfiber filter element**

POLYVER are very high efficiency filter cartridges to retain colloidal particles and to reduce Bio Burden.

The high performance is obtained by pleating multiple layers of polypropylene and borosilicate microfiber media in order to take advantage both from the prefiltration effect of the polypropylene and the final retention effect of the glass microfiber. All media and components are biologically safe and meet FDA and EC requirements for food contact usage.



## **BRAVOCHEM Polyester pre filter**

BRAVOCHEM pre filters are all made by pleating Polyester media and glass fiber media. Typical applications are in chemicals and solvents filtration. BRAVOCHEM are cost effective pleated filter cartridges with high dirt holding capacity.

## **BRAVOPLEAT Polypropylene pre filter**

BRAVOPLEAT pre filters are all made with Polypropylene material, suitable for industrial, food & beverage cosmetic and chemical application.

The manufacturing materials are compliant for food contact.



## **TOPLIFE depth filter element**

TOPLIFE cartridges are typically used in food & beverage and cosmetic applications.

TOPLIFE cartridges are manufactured by winding layers of meltblown polypropylene media around a polypropylene internal core.

All the materials of construction meet FDA and EC requirements for food contact usage.



## **STARLIFE depth filters**

STARLIFE are depth filters integrally manufactured using pure polypropylene, and are used for filtration in food & beverage, industrial inks and paints applications. The filter media is manufactured by thermally bonding microfibers with a precise diameter to obtain a decreasing porosity from external to internal. This assures high dirt holding capacity and low filtration costs. The strongly bonded microfibers assure high resistance to pressure drop increase, preserve constant flow rate and extend the service life of the filter.

# Metallic filter elements



## RETINOX *regenerable pleated filter element*

RETINOX filter cartridges are manufactured from pleated stainless steel wire mesh media and a stainless steel core sealed to ends by resin. Retinox filter cartridges can be regenerated by backwashing and cleaning; version with drainage media is available.

Main Applications are:

- Filtration of potable and process water
  - Filtration of paints, resins and adhesives, soap, wax and all the high viscosity fluids
- RETINOX filter element has no particle migration and therefore is recommended for final filtration where there is fiber release.



## SOLINOX *regenerable filter element*

SOLINOX cartridges are constructed entirely in stainless steel, with a fine stainless steel mesh wrapped around a stainless steel inner core and welded metal end-caps; no glues or resins are used in the construction. SOLINOX cartridges are cleanable and regenerable; they have a very high mechanical resistance up to differential pressure of 20 bar and can withstand extreme temperatures from -30°C to +300° C. Typical applications include:

- corrosive fluids, high temperatures viscous liquids, liquefied gas and steam
- Viscous liquids with high differential pressure drop
- Elements that needs no fiber presence
- Filtration support for precoat filtration



## PORAL INOX *Stainless Steel Seamless filter element*

PORAL INOX regenerable elements are manufactured from a sintered stainless steel seamless tube with controlled porosity. Ends welded by TIG process are available with a wide array of fittings including flatgasket, threaded and bayonet connections.

PORAL INOX elements are versatile and extremely robust. Typical applications include filtration of liquids, gases, steam and corrosive chemicals.

On request, PORAL MONEL and PORAL INCONEL are available for extremely highly corrosive gases or liquids.



## STEELPORE *Stainless Steel filter elements*

STEELPORE pleated cartridges are 100% stainless steel.

The filter media is a sintered stainless steel microfiber, supported by a wire mesh with welded end caps.

All the cartridge components are precision TIG welded.

STEELPORE cartridges are able to resist high temperatures and differential pressures and are backwashable and steam cleanable.

# Bags and Cartidges with high dirt holding capacity



## MAGNEX - GRANPLEAT *large size pleated filter elements*

These cartridges adopt a new technology with high pleated surface. Large size filter elements have longer running time and are easy change-outs.

The incorporated SE-TECH technology provides optimal flow distribution between the media and the internal core, avoiding restriction and exploiting the full filtration surface area to generate higher throughput and service life.



## BAGS *felt, mesh and high efficiency bags*

BEAFELT bags are manufactured from polypropylene or polyester felt media. By the appropriate combination of fiber diameter, the bags offer different dirt retention, grade and particle removals performance. BEAMESH bags are available with polyester media, or in Nylon which is stronger and washable.

BEAFINE Polypropylene multi layers bags are used in wine, beer and chemical applications.

## Backwashing filters



## FILTROMATIC SM *automatic backwashing system*

FILTROMATIC SM series represents the ideal solution for filtration of fresh water, industrial process water, sea water, brackish water and aqueous liquids. Manufactured in AISI 316 and PTFE, FILTROMATIC guarantees high corrosion resistance. Backwashing doesn't require the FILTROMATIC to stop filtering and can be automatically and manually controlled. Water or liquid loss during backwashing is very moderate and adjustable.

## Housings



## INDUSTRIAL SERIES *single and multiple filter housings*

Bea Technologies has developed several series of housings for industrial applications in order to provide our customer with technical and cost effective solution.

Stainless steel 304 and 316L materials provides the maximum corrosion resistance. All the housing are directive 97/23/EC compliant.



## FOOD AND SANITARY SERIES *single and multiple filter housings*

These housings are designed for food & beverages and pharma applications; they are made in stainless steel 316L and the polished surface both outside and inside allows to reach a roughness down to 0,3RA.

The housings are available in different configuration from 1 to 45 cartridges with different types of closures. The connections available are DIN 11851 or TRICLOVER type. All the housings are directive 97/23/EC compliant.

bea Technologies is dedicated to provide Customers with the highest quality and most effective products and services.

## Customer Service

A highly experienced team of engineers and filtration experts is available to advise our Customers regarding the selection of the best performing and most cost effective filter for their particular application. Please contact us to arrange for an initial evaluation and on-site trial.

## Laboratory Service

Bea Technologies has a fully equipped laboratory with a broad range of test rigs and instrumentation to conduct laboratory trials to help Customers to optimise their production processes.

## Quality System

**COMPANY WITH QUALITY MANAGEMENT  
SYSTEM CERTIFIED BY DNV  
=ISO 9001:2008=**

