



# MICRO FILTRATION



...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 9001:2000  
and is subjected to regularly audits by  
accreditate internationally inspection body.  
Our skilled technicians and our lab team provide  
our customer with high qualified technical assistance.



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 LAB

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.



Products are sampled and tested for microorganism retention challenge according to ASTM standard test method F838-83.

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 increase 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



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

STERYFLUS - TSP MULTILAYER filter element is used for the sterilizing filtration of liquids in food & beverages and pharmaceuticals applications. Steryflus TSP Multi-layer cartridges are manufactured with hydrophilic PES membrane with absolute filtration rating from 0,2 to 1,2  $\mu\text{m}$  pleated with a pre filter in borosilicate micro fiber. The materials used are in accordance with FDA, USP and EC directives for food contact and their manufacturing is performed in a controlled environment.



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

Steryflus TSP 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  $\mu\text{m}$ , pleated with support layer of polyester. The materials used are in accordance with FDA, USP and EC directives for food contact and their 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 retention
  - materials used are in accordance with FDA, USP and EC directives for food contact
- Manufacturing is done 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 and their manufacturing is performed in a controlled environment.



## **BEERKLEAR** *filter elements for beer filtration*

BEERKLEAR filter element is designed and manufactured to satisfy brewers desire to achieve cold microbiological stabilization of beer through filtration. Beerklear is manufactured in a controlled environment and all the materials have been selected in order to guarantee a microbiological stabilization and resistance to sanitization cycles. Beerklear cartridges are manufactured with Bea`s SE-TECH technology to increase effective surface area.

# Membrane filter element for Air & Gas



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

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  $\mu\text{m}$  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 filtration at high temperature*

STERYTEMP filter element have all the characteristic of STERYFLON cartridges but can be used at higher temperature (80° C) in pharma and aerobic fermentation plants. STERYTEMP are manufactured with hydrophobic expanded PTFE membrane, with absolute filtration rating of 0,2  $\mu\text{m}$ , pleated with polypropylene support media suitable for high temperature. The materials used are in accordance with FDA and USP guidelines and their manufacturing is performed in a controlled environment.



## **PROTEMP** *filter element for sterilizing air filtration with NOMEX support*

PROTEMP membrane cartridges are specifically designed for biotech applications where the air to be sterilized has a temperature in the range of 95 — 105 °C. PROTEMP are manufactured with hydrophobic expanded PTFE membrane, with absolute filtration rating of 0,2  $\mu\text{m}$ , pleated with NOMEX support media. The materials used are in accordance with FDA and USP guidelines and their 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  $\mu\text{m}$ , 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.



## **VENT FILTER** *sterilizing filter*

Vent filters prevent contamination of products contained in storage tanks from intake atmospheric air; the filters are designed to operate even with reverse flow to allow the exit of air when the level of process liquid grows inside the tank.

# 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.

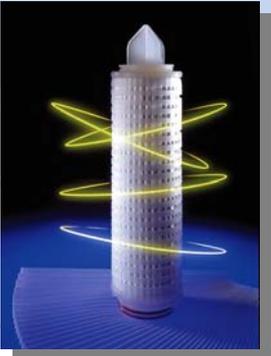
The filter element is all made up with different porosity polypropylene layers. This gives the filter element an absolute filtration rating, high dirt holding capacity and high flow throughput .

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.

Posittrak filter cartridges are manufactured from positively charged nonwoven polypropylene and borosilicate microfibre media.

The materials used meet FDA and EC requirements.

## Integrity Tester



### **BEAMATIC**

BEAMATIC test equipment is designed to enable the verification of the integrity of membrane filter cartridges.

Beamatic Main Unit can be located in the Control Room while the measurement units can work in a remote mode.

Beamatic can perform a variety of integrity tests including diffusion flow, bubble point, decay pressure test and intrusion test.

The software supplied with Beamatic is validated.



### **BEATEST**

BEATEST is a portable integrity tester that performs the decay pressure test.

This portable and flexible friendly device is able to store up to 19 different tests by filter/ housings and up to 100 results.

Beatest allows to load and print the test results when connected to any computer.

# Depth & Pleated filter element

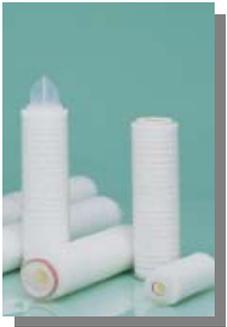


## **BRAVOCHEM** *Polyester pre filter*

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.



## **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.



## **TOPLIFE** *depth filter element*

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

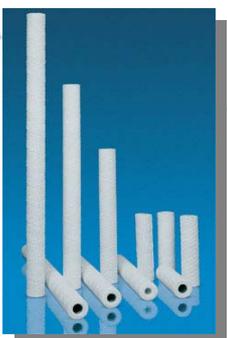
Toplife cartridges are manufactured by winding layers of meltblown polypropylene media around a polypropylene internal core.

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.



## **MIKROCELL** *string wound filter element*

MIKROCELL are high quality string wound cartridges offering high capacity for contaminant retention at low operating costs. These cartridges are available in various string wound materials including polypropylene, cotton and glass fiber, with support cores in polypropylene, galvanized steel and stainless steel. Typical applications are pre-reverse-osmosis water treatment, chemicals, metal plating and food & beverage. The wounding process produces the formation of thousands of channels with a controlled porosity decreasing from the outside section to the inner layer. Progressive removal of particles provides true depth filtration and high dirt holding capacity.

# Metal filter element



## **RETINOX** *reusable pleated filter element*

RETINOX filter element gives extended area and can be restored and reused over and over. Typical applications are filtration of potable and process water, beverages, syrups and spirits, varnish, resins and adhesives, cosmetics, soap, waxes and high viscosity liquids. The Retinox filter element is characterized by the absence of media migration and for this reason it is recommended for application downstream of other fiber filters in order to insure an ultra clean system. Retinox cartridge is available in two construction styles: STANDARD: filter media is a pleated st. steel AISI 316 wire mesh with a controlled porosity, supported by st. steel frame. DELUXE: provides supplementary drainage media to avoid the collapse of pleats under differential pressure drop; this device assures higher throughput.



## **SOLINOX** *reusable pleated filter element*

SOLINOX filter element is designed and recommended for critical filtrations and can be cleaned and reused over and over. Typical applications are filtration of corrosive fluids that attack other type of filter media, liquid and gases at high temperatures, high viscosity liquids requiring high differential pressures, ultra-clean fluids requiring non-fibrous media, liquefied gas; other applications are filtration of steam, beverages, food and pharmaceutical products. The Solinox filter is produced in stainless steel, with absence of other materials as bonding for sealing. It is made in cylindrical shape construction with woven wire mesh and slotted type tube as internal support welded to end caps and equipped with replaceable gaskets. The Solinox filter element withstands, without deformation, up to 20 bar differential pressure.



## **PORAL INOX** *sintered stainless steel filter element*

PORAL INOX regenerable elements are manufactured from a sintered stainless steel seamless tube with controlled porosity, end welded by TIG process with a wide array of fittings including threaded and bayonet connections. PORAL INOX elements are versatile and extremely rugged. 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** *sintered stainless steel filter element*

Manufactured in all stainless steel, STEELPORE filter elements incorporate depth media manufactured from sintered stainless steel fibers. These fibers create a porous media matrix optimized for particle retention down to 0,5  $\mu\text{m}$ . The depth media is pleated with upstream and downstream stainless steel wire meshes which provide extra mechanical strength and facilitates liquid flow to achieve excellent filtration performance. Steelpore seams and fittings are precision welded to perform in high pressure and high temperature applications. Steelpore filter elements regenerable by backflushing, steaming or chemical sanitization.

# Bags and Cartridges with high dirt holding capacity



## **MAGNEX - GRANPLEAT** *pleated filter element*

MAGNEX & GRANPLEAT incorporate the new SE-TECH filter technology with enhanced pleated surface area that reaches 11 sqm. These filter elements are used on fluids with high content of contaminants and protect membrane filter elements.

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



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

Felt bags are manufactured from polypropylene or polyester felt media. By the appropriate combination of fiber diameter, weight and thickness, the bags offer different dirt retention, grade and particle removals performance.

The mesh bags are available with polyester media, cheap or in Nylon which is stronger and washable.

The 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 low flow rate 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.

Filtromatic SM series is available with connections up to DN 100.

## 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



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

The Quality Management System implemented by Bea Technologies SpA has been certified according to:

UNI EN ISO 9001:2000  
CERT-00190-94-AQ-MIL-SINCERT

