

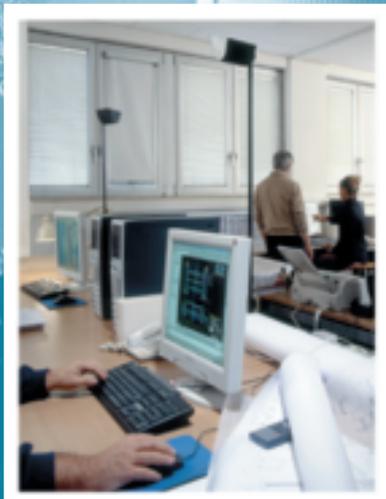


PROCESS FILTRATION



...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
and is subjected to regularly audits
by accredited international
inspection body.



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



OUR MISSION

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

*AUTOMATIC BACKWASHING WATER SYSTEMS
AUTOMATIC BACKWASHING FEED FILTERS
HIGH PRESSURE GAS COALESCERS
ACTIVATED CARBON FILTERS
PRECOAT PROCESS FILTERS*

CARTRIDGE AND BAG PRESSURE VESSELS

SKID MOUNTED AND DUPLEX UNITS

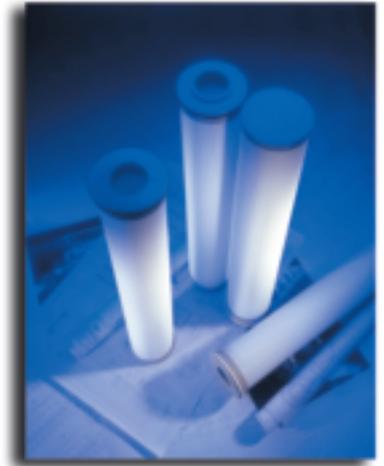
FILTER EQUIPMENT & SYSTEMS



SKID MOUNTED UNITS offers the guarantee of the controlled quality of workmanship and therefore a high degree of reliability, with a considerable economic advantage.



OIL & GAS PRODUCTION



Bea Technologies is extensively involved in development and design of specialized filtration filter elements and filter systems for the application in Oil and Gas production, as well as offshore disposal and Gas Processing operation.

Application also exist for ammine, glycol system and batch process system.

GAS PROCESSING & REFINING



SEARCH & DEVELOPMENT PLANNING

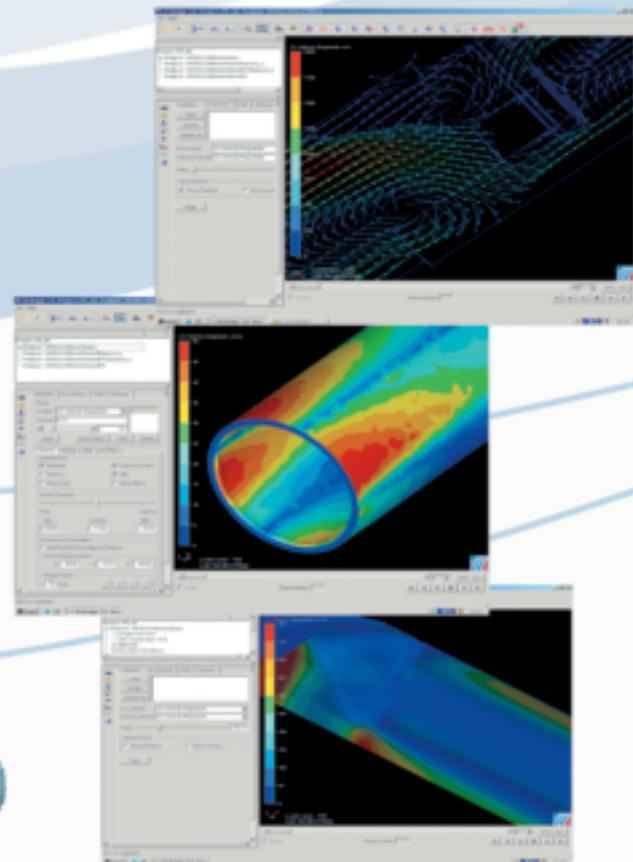
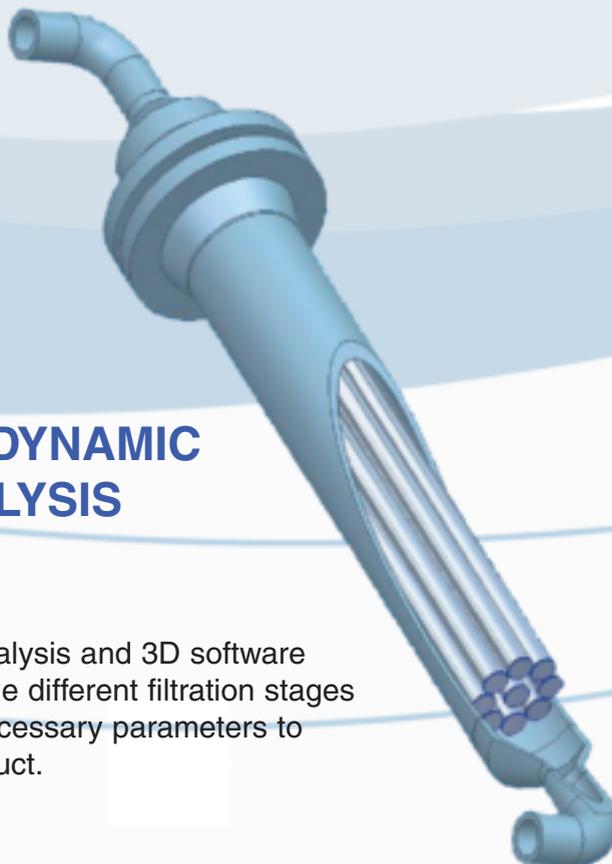
Bea Technologies experienced team studies the application to find the best solution for Process filtration, adopting the latest technologies.

Technical Department designs the filters according to VSRM-M-S, ASME, ADMK, CODAP, EN13445, and PED-ATEX directives.



FLUIDODYNAMIC ANALYSIS

Fluid dynamic Analysis and 3D software enable to study the different filtration stages and get all the necessary parameters to optimize the product.



Automatic backwashing filter and package filter



FILTROMATIC *automatic backwashing water filters for high flow*

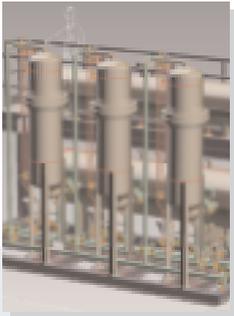
FILTROMATIC automatic backwashing filters are designed to remove dirt and debris from water, thereby protecting critical equipment and systems for cooling, air conditioning, descaling, boiler feed supply, spray nozzles, etc. The backwashing process requires only minimal quantities of water without stopping filtration.

The Filtromatic automatic backwashing filter consists of:

VESSEL BODY: fabricated in carbon steel, stainless steel, nickel alloys, cupronickel, etc.

FILTER ELEMENTS: constructed from heavy gauge wedge-wire with V-shaped slots to resist the elements plugging and to facilitate effective backwashing.

AUTOMATIC CONTROLS: automatic backwashing process is driven by electronic panel, screw geared motor, differential pressure gauge and pneumatic activated ball valve.



PROMATIC *automatic backwashing gas assisted filters*

PROMATIC is a turn-key backflush filtration system designed for treatment of biodiesel, slurry oil, heavy hydrocarbons. The solid contaminants are retained on the surface of stainless steel elements; to reduce the waste of valuable product, the backwashing is operated through a flush of gas.



DUOMATIC *automatic backwashing feed filters*

The DUOMATIC self-cleaning backwash filter is designed to continuously remove solid contaminant particles from liquid feedstocks in refineries and petrochemical plants. By preventing solid particles from entering and building up in the catalyst bed, the Duomatic filter enables optimum reaction efficiency, extends catalyst life and substantially reduces catalyst bed changeouts. The Duomatic filter generates higher production rates and real savings in operating costs.



UNYVER *precoat process filters*

UNYVER high pressure leaf filters are extremely versatile and utilized in many industrial applications. The filter housing can be designed according to various manufacturing codes, and can be constructed from carbon steel, stainless steel 316L or special alloys. The filter leaf elements are manufactured from layers of stainless steel media or other materials.

VERTICAL leaf filters are recommended for the filtration of liquids with medium or low content of solids, with automatic removal of solids from the filter leaf elements.

HORIZONTAL leaf filters are recommended for the filtration of liquids with relatively high solids content. The filter leaf elements are mounted on an internal carriage, which allows easy removal for cleaning and maintenance.



FLOW-GAS, FLO-SEP, MICRO-SEP

Solid particles, liquid condensates and lubricating oil present in any natural or process gas pipeline provide several maintenance problems to compressors and instrumentation. Bea, to solve the problem, has developed a full line of gas filters, FLO-GAS, filter separators, FLO-SEP, and absolute separators, MICRO-SEP, for complete removal of solids and liquids from natural or processed gas streams. The Gas Filters and Filter Separators have excellent applications in gas distribution, gas compression stations, protection of mainline transmission systems and protection of dehydration towers and desiccant beds.

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 need 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 element*

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.



OXOPOR *oxygen filter element*

OXOPOR porous sintered bronze filter elements are specifically designed for high pressure oxygen gas filtration. Oxopor elements, manufactured from non-sparking materials, are designed to be easily cleanable and to achieve extremely long service life.

Main features of this filter elements are:

- Usage of oxygen compliant material
- Degreasing of all components before and after assembly
- Collapse pressure above 100 bar
- Integrity test on 100% of the filter elements

Specially designed housings are available to be used in conjunction with Oxopor elements.

Pleated & depth filter element



BRAVOCHEM *polyester filter element*

BRAVOCHEM provide a cost effective filtration in applications where retention efficiency, service operating life and dirt holding capacity must be linked with high chemical compatibility. The media is pleated borosilicate microfibers with upstream and downstream layers of polyester and thermo-welded end fittings.

The media retains the contaminants both through mechanical and adsorption mechanism: the result is high dirt holding capacity and precise filtration rating. Except the media in borosilicate, all the components are in polyester. External net-mesh prevents back pressure phenomena. The cartridges 20", 30" and 40" are manufactured in one single piece.



BRAVOPLEAT *polypropylene filter element*

BRAVOPLEAT BLP provides a cost effective filtration in applications where retention efficiency, service operating life and dirt holding capacity are the key factors.

The media is obtained pleating several layers of Melt-blown and Spun-bonded polypropylene; the end fittings, available in several configurations, are assembled by Hot-melt process. External extruded cage prevents back pressure phenomena and allows sanitization and sterilization cycles. The cartridges 20", 30" and 40" are manufactured in one single piece and represent a valid alternative to retrofit string wound cartridges, when better performances are required.



POLYSAN *all polypropylene filter element*

POLYSAN prefilter are entirely made in polypropylene suitable to be used in food and cosmetic applications.

POLYSAN is obtained by pleating up to 5 polypropylene layers of decreasing porosity to achieve high effective filtration area, high dirt holding capacity and precise and controlled filter ratings.

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

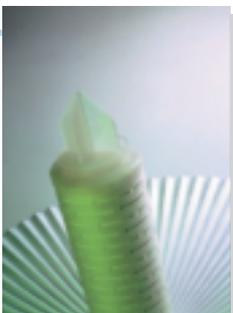


POLYVER *borosilicate microfibers filter element*

POLYVER is designed for cosmetic and food&beverage applications for the filtration of liquid with high bio-burden and colloidal particles. PH grade is prefluxed with non-pyrogenic water and is suitable for pharmaceutical process applications.

The media is made by borosilicate microfibers pleated with upstream and downstream layers of polypropylene; the electrical charges of the porous media interact with the contaminant electrical charges and generate an attraction whose effect is to retain particles finer than the physical pore size.

Manufacturing is performed in a controlled environment.



POLYVERSE *regenerable filter element*

POLYVERSE is designed for clarification in Food&Beverage industries.

The media is obtained by innovative materials with controlled and decreasing porosity, particularly pleated in order to allow the chemical regeneration or to perform an easier backwashing process.

Materials of construction meet international guidelines for food contact and manufacturing is performed in a controlled environment.



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.



POLYSAN-PKN *pleated filter element*

POLYSAN-PKN is integrally manufactured with polypropylene. The filter media is obtained by pleating several polypropylene layers, with different porosity and permeability from external to internal; the outer section retains larger particles while the inner section provides filtration rating with high efficiency.

The high chemical compatibility of the polypropylene allows the use both in industrial, process, chemical, oil & gas applications.

All the materials of construction are chemically and biologically inert in accordance with FDA and EC requirements.



STARLIFE *meltblown depth filter element*

STARLIFE are meltblown polypropylene depth filters ideal for filtration in food & beverage, industrial, inks and paints applications.

The filter element is made with microfibers, thermally bonded to get pattern with decreasing porosity from external to internal.

The strongly media structure does not require any internal or external support providing cost effective solutions.



DUALSEP *filter elements for gas and natural gas*

DUALSEP filter elements are designed to remove solid particles from compressed air and gas, nitrogen, hydrogen and natural gas.

They are manufactured using a pleated structure incorporating two different layers: one for particle retention, the second to agglomerate and separate oil and water mist.



REVERSE FINCELL *coalescer filter elements*

High efficiency REVERSE FINCELL elements remove oil and water mists, condensates and hydrocarbon vapours down to 0,01 ppm in compressed gas systems. REVERSE FINCELL works as a coalescer filter with the direction of flow from internal to external layers, whose function is to separate the water and oil droplets from the gas stream.

Housings



Industrial housings

Industrial housings series offers interesting options in order to guarantee cost effective investment, easy change outs and maintenance.

Industrial housings are available in 304 e 316L Stainless Steel and are designed with various closure systems, including V-Clamp, swing bolts and quick opening device. A wide range of connections and accessories are available.



Single filter element housings

Single filter element housings are available in Carbon Steel and 316 Stainless Steel constructions.

MAB - GHS - PAT - GFF series are used for both gas and liquid filtration.

Single filter element housings are available both with double open end or code 7 configuration, in different construction material and filtration grade.



Sanitary / Food & Beverages housings

Sanitary housings are used for applications in food and pharma industries.

The housings are available in Stainless Steel constructions with internal and external surface polished down to $< 0,3 \text{ Ra}$.

They are available to fit from 1 up to 45 cartridges. Inlet and outlet connections are both DIN 11851 or TRICLOVER type.



Bags housing

Bags are used when high quantity of contaminants are present in the fluid.

Single and multi-bag housings are available with various closure systems, including clamp, eye-bolts and swing-bolts.

BEAFELT bags are manufactured with polypropylene or polyester needlefelt.

BEAMESH bags are available with polyester mesh and nylon monofilament screen which can be, in some applications, re-used.

BEAFINE bags are multi-layer polypropylene bags typically used for filtration of wine, beer and chemicals.



Special Housings

Pressure vessels for process filtration are designed on customer requirements and according to international manufacturing codes and european directives.

The design takes advantages of fluidodynamic analysis to consider multiple factors such as turbulence and pressure drops.



Customer Service

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



Pre and Post-Sales Assistance

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 =

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