

Automatic Filtration Systems
MAGNEXFLO



Purification Control Technology



VISION

To be among the world suppliers of technologically advanced filtration systems.



MISSION

Designing high-tech filter elements and filtration systems capable of meeting the growing needs of the production world, through the continuous improvement of processes and performance.





Since 1961 **BEA Technologies** has been developing and distributing filtration systems, which are manufactured in the company's Italian production plant, in compliance with the reference standards and regulations of the following main industrial sectors: **Pharmaceutical Industry, Life Science, Food & Beverage, Industry, Air & Gas Treatment and Energy, Oil & Gas.**

The constant research in the field of technologies and materials has allowed the company to supply cutting-edge, advanced, and competitive products.

The design, manufacturing, distribution, and after-sales services meet the requirements of ISO-9001. The polymeric containers of the filter capsules have been designed to withstand operating pressure using the most advanced software.

BEA Technologies has developed a network of distributors and agents throughout Europe, North and South America, Asia, and the Middle East, in order to ensure local commercial assistance during the pre and post-sales phases.



Laboratory, R&D and validation services

The highly qualified team specialized in the fields of filtration, microfiltration, and industrial processes are engaged in constant consultancy, analysis, and research of new technologies and applications.

BEA Technologies consulting services include:

- Feasibility studies
- Support to the qualification service
- Refresher courses
- Particle analysis
- Microbiological analysis and challenge (ASTM)
- Verification of chemical and material compatibility





INTRODUCTION

Filtration techniques in the production of chemicals, pharmaceutical products, food, beverages, and viscous solutions are constantly evolving thanks to the development of innovative automatic systems capable of improving performance and simplifying management.



Many manufacturers currently adopt filter sheets and traditional filter aids such as diatomaceous earth, perlite and cellulose to achieve clarification of products or filter sheets.

Today these techniques are outdated and their operating limits have been identified:

- Hazardous powder inhalation by operators.
- High costs for the disposal of exhausted filters aids.
- Loss of output product due to the absorption properties of the filter sheets themselves and of the filter aids.
- Potential release of particles and heavy metals inside the product.
- Potential oxidation of the product with consequent damage to its intrinsic properties.
- Potential oxidation of product with subsequent damage of specific properties.

TECHNIQUES Focus

Simplifies filtration
management



OUR SOLUTION

The system designed by **BEA Technologies**, **MAGNEXFLO**, comes from a deep experience in this field and represents the solution for many different and difficult to filter products, combining filtration performance with automation.

Our engineers, in cooperation with manufacturers, have designed an updated, simple and safe system to purify raw gelatin and viscous products that have numerous advantages over pre-existing manual filtration equipment.



MAGNEX

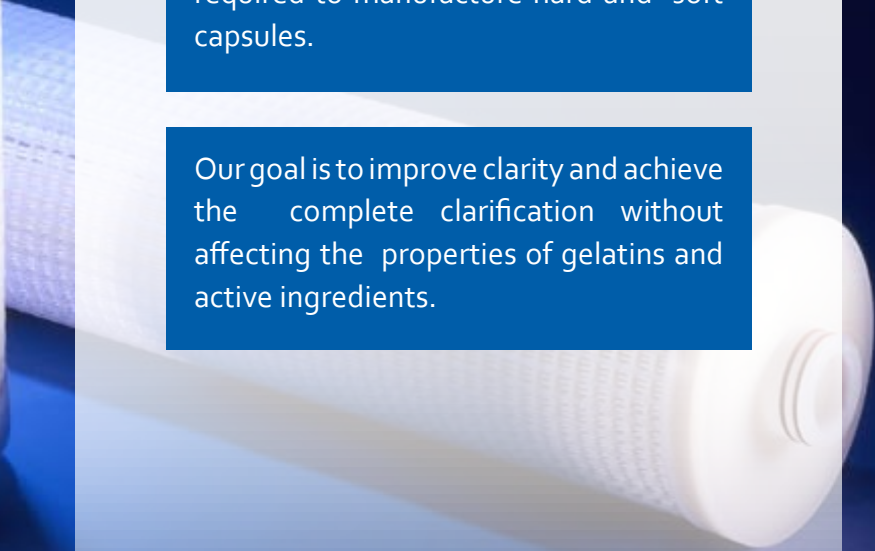
the heart of the system

The heart of the system is the **LARGE SIZE** of the **MAGNEX** filter element, characterized by the ability to retain large quantities of contaminants and colloids. Its durability is considerably higher than the classic filter elements currently used, and it is also easily regenerable.

BEA Technologies' MAGNEX is exceptionally effective due to its pleated multi-layer polypropylene filter media construction.

The performance is astonishing: the **MAGNEXFLO** automatic filtration system allows to treat gelatins and excipients of different origin and viscosity to clarify them to the level required to manufacture hard and soft capsules.

Our goal is to improve clarity and achieve the complete clarification without affecting the properties of gelatins and active ingredients.



FEATURES Tech Data

Lower cost compared to a typical cross- flow plant with the same throughput capacity.

Highly flexible “modular” construction with wide choice of filtration elements to achieve customization to the type of product to be polished.

Reduced operational costs.

Direct filtration without the need to recirculate.

Product is not heated up throughout the filtration stage.

Entirely manufactured in Stainless Steel 316 L.

Delivered with full safety certification and PED certificate for utilization in compliance with all European and national regulations of pressure vessels.

Mechanically polished surface finished to 0,8 RA.

LIST OF MAGNEXFLO STANDARD MODEL

MODEL	STAGES OF FILTRATION IN LINE	N° OF FILTER ELEMENTS FOR EACH STAGE	INDICATIVE WATER FLOW RATE LT / H
MF 300	3	1	3000
MF 900	3	3	9000
MF 1200	3	4	12000
MF 1500	3	5	15000
MF 1800	3	6	18000

SUGGESTED LAYOUT

The automatic version constantly monitors all phases of the process. The software continually measures and display hourly flow, pressures and temperatures.

The wash, CIP and regeneration phases are preconfigured to optimize operational safety and the use of water, chemical solutions and energy.

The automation of **MAGNEXFLO** minimizes human errors and requires very little supervision, thus allowing resources to devote themselves to different types of operations.

Our staff composed of experts and technicians can carry out all the necessary trials to optimize the configuration of the filtration systems in order to meet the objectives and requirements of each single production process.

Ad hoc training is provided to educate staff on the daily use of the system.

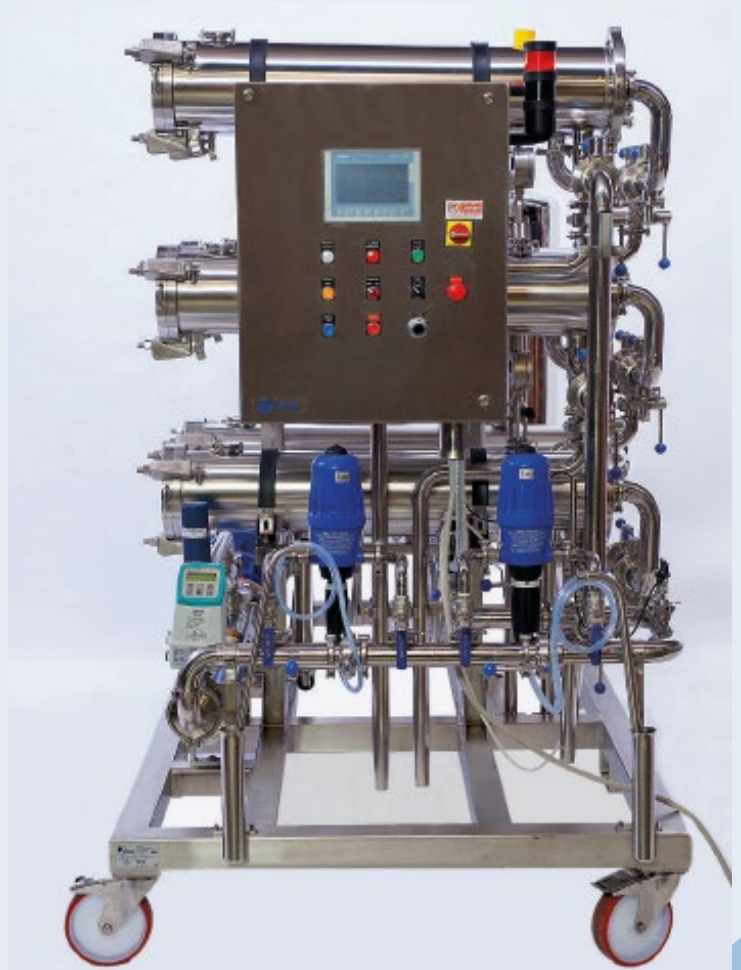
OPTIONAL FEATURES

Automatic backflushing with multiple possible setups.

Additional filtration stage for microbiologic stabilization of product.

Automatic dosing pumps for addition of stabilization additives.

Isobaric version for operation at 6.0 bar for products to be maintained under pressure.



AVAILABLE VERSIONS

Fully automatic (PLC controlled) with user friendly dedicated software.

Semiautomatic for lower cost implementation.

Totally manual for smaller and less expensive plants.



Additional microbiological stabilization stage construction details of the plate for cartridge mounting Safe system for filter closure.



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