

# 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.





# INTRODUCTION

Filtration techniques in the production of chemicals, pharmaceuticals, food, beverages, and viscous solutions are continuously evolving thanks to the development of innovative automated systems that improve performance and simplify management.

Since 1961, **BEA Technologies** has been developing, producing, and distributing filtration systems for oenology, in compliance with the relevant regulations for major industrial sectors: Life Science, Food & Beverage, Industry, Air & Gas Treatment and Energy, Oil & Gas.

Constant research in the field of technologies and materials has enabled the company to offer increasingly innovative and competitive products to the market.

The design, manufacturing, distribution, and aftersales services meet the requirements of the ISO-9001 standard. The filter element housings are designed to withstand operating pressure and stress 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.



# **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 collaboration with manufacturers, have designed a state-of-the-art, simple, and safe system for the clarification and filtration of wines, liquors, and spirits, offering numerous advantages over pre-existing manual filtration equipment.



Today these techniques are outdated and their operating limits have been identified: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

Simplifying filtration management in oenology



### MAGNEX The heart of the system

At the heart of the system lies the LARGE DIMENSION of MAGNEX filter element, which is characterized by the capacity to retain a huge quantity of contaminants and colloidal particles. The service is notably higher compared to the classic filter elements currently used, as well as being easily regenerable.

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

The performance is astonishing: wine known to be difficult to filter or with high turbidity is rapidly cleared and polished with one single pass through MAGNEXFLO, and is then ready for microbiological stabilization.

This result is obtained without affecting the organoleptic properties of wine and without heating up, debilitating or impoverishing its essential flavors.

# Laboratory Services, Research and Development, and Product Analysis

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 during installation and commissioning
- Refresher courses
- Particle analysis
- Microbiological analysis and challenge (ASTM)
- Verification of chemical and material compatibility



#### 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.

### **AVALAIBLE 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.

# **TECHNICAL FEATURES**

Lower installation cost of a tangential filter, with equivalent production capacity.

Greater versatility ensured by a modular construction combined with a wide selection of filter elements available for optimal adaptation to the type of wine.

Significant reduction in operating costs.

Direct filtration without recirculation.

No heating of the wine.

Completely constructed in stainless steel 316L.

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Complete with safety certifications and PED for safe use and full compliance with all national and European regulations.

Polished finish with o.8 RA roughness.



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### **BEA Technologies Spa**

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