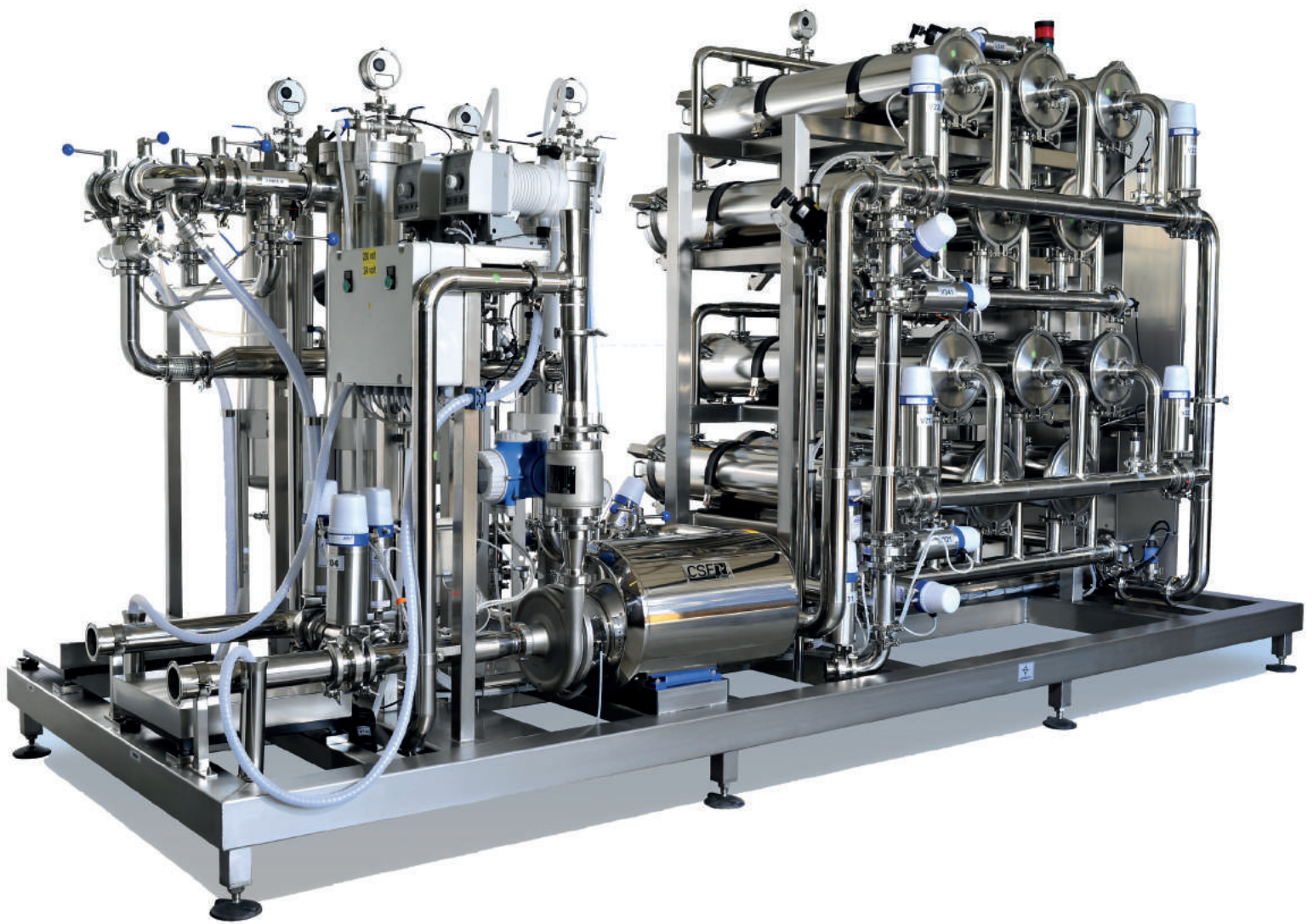


AUTOMATIC FILTRATION SYSTEM

MAGNEXFLO





INTRODUCTION

Techniques for filtration in the production of foods, beverages, chemicals, gelatins and viscous solutions are continuously evolving with the development of innovative automatic equipment to deliver improved performance and simplify management.

TECHNIQUES

Focus

SIMPLIFY FILTRATION MANAGEMENT

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

Today these techniques are outdated and their operating limits have been identified:

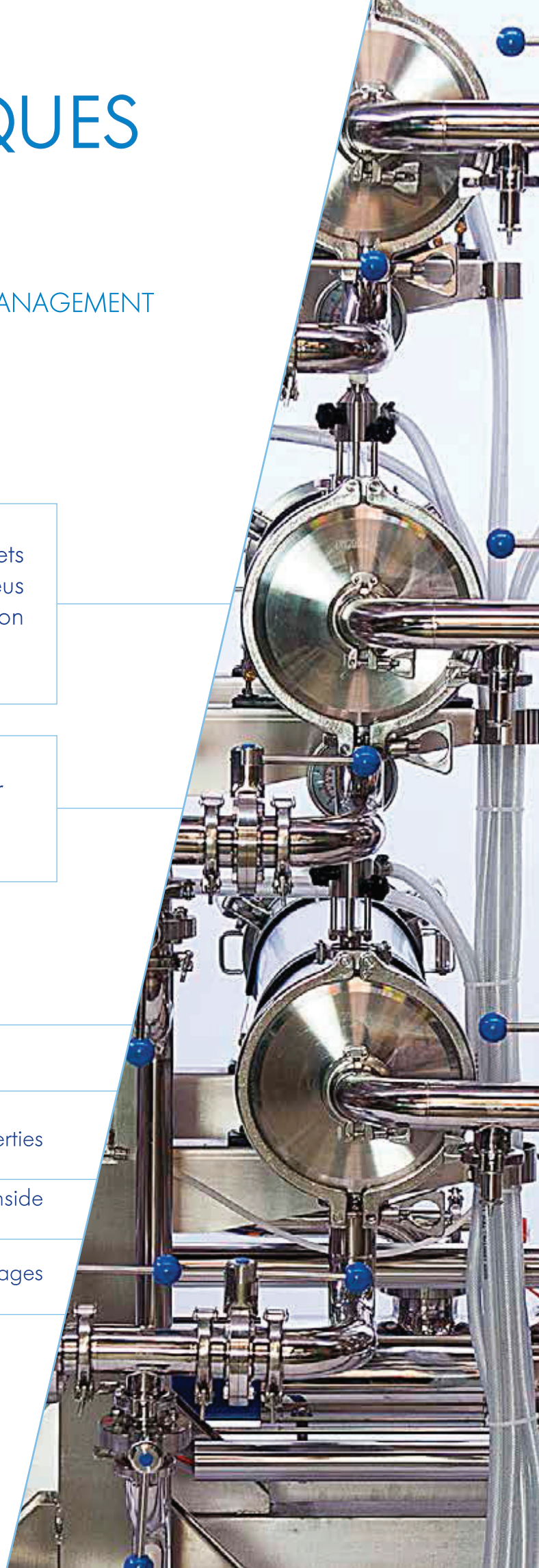
Hazardous powder inhalation by operators.

High costs for exhausted filter aids disposal.

Loss of output product due to the adsorption properties of the same filter sheets and filter aids.

Potential release of particles and heavy metals inside the product.

Potential oxidation of product with subsequent damages of specific properties.





MOBILE PILOT FILTRATION PLANT

OUR SOLUTION

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

Our engineers, in cooperation with manufacturers, have designed an up-to-date, simple and safe system to purify raw gelatins and viscous products with many benefits compared to existing manual filtration equipment.

MAGNEX

THE HEART OF
THE SYSTEM



The heart of the system is 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 life 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 OUTSTANDING:

The MAGNEXFLO automatic filtration system allows to clarify gelatins and excipients of different origin and viscosity reaching the level required to prepare the final products.

Our goal is leverage the production activity impact to achieve the complete clarification without affecting the properties of gelatins and active ingredients.



FEATURES

Tech Data

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

Highly flexible “modular” construction with a wide choice of filtration elements to achieve customization to the level of polishing required.

Reduced operational costs.

Direct filtration without the need to recirculate.

The filtration is carried out without heating the product.

Entirely manufactured in Stainless Steel 316 L.

Delivered with safety certification and PED certificate to be utilized in compliance with all European and national regulations of pressure vessels and “filtration systems”.

Mechanically polished surface finished to 0,8 RA.

LIST OF MAGNEXFLO STANDARD MODEL

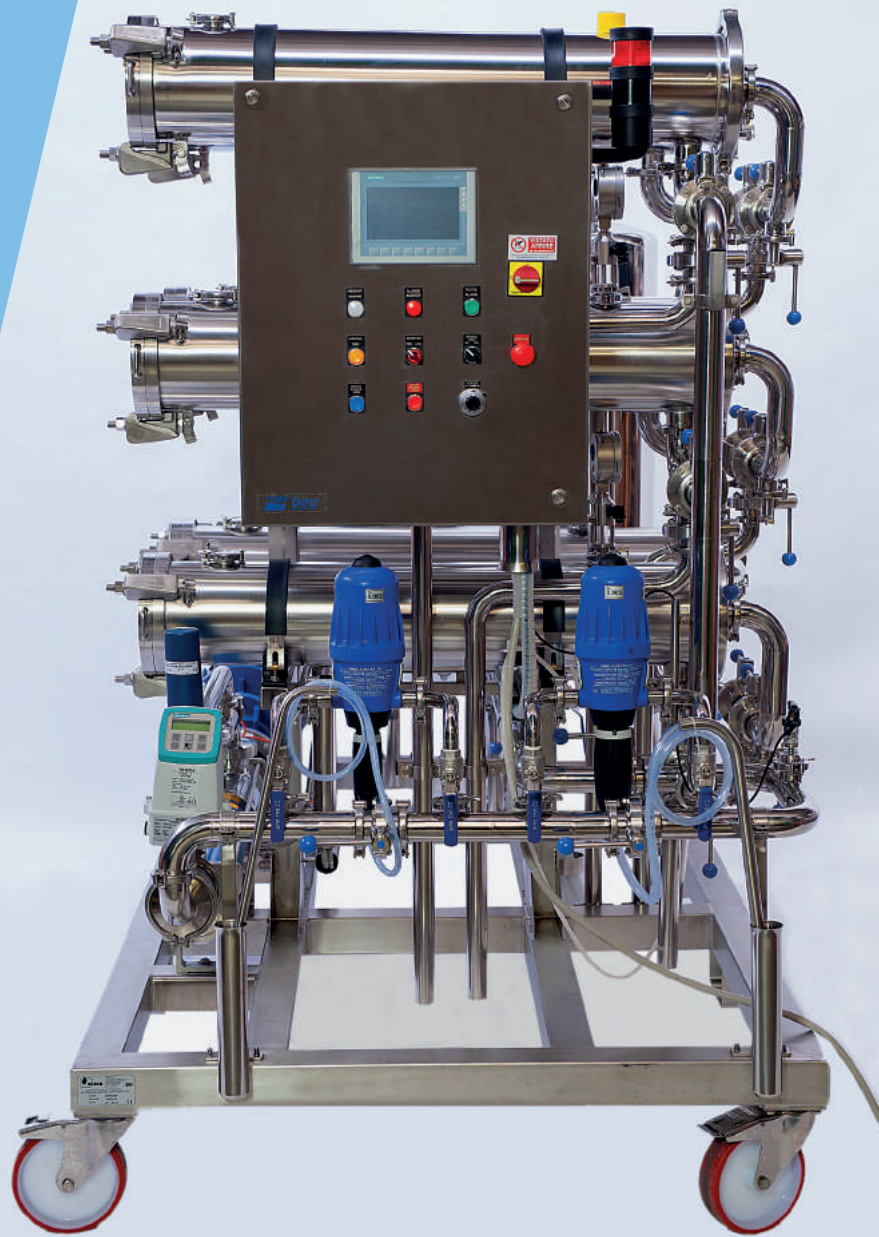
MODEL	STAGES OF FILTRATION IN LINE	N° OF FILTER ELEMENTS FOR EACH STAGE	INDICATIVE WATER FLOW RATE LT / H
MF 300	3	1	3000
MF 900	3	3	9000
MF 1200	3	4	12000
MF 1500	3	5	15000
MF 1800	3	6	18000

SUGGESTED LAYOUT

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

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

The automation minimises human errors and requires very little human attention, freeing up resources that can be used elsewhere.



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 scope and requirements of each single production process.

Training is held to instruct the personnel in 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 interface.

Semiautomatic for lower cost implementation.

Totally manual for smaller and less expensive installations.



ADDITIONAL MICROBIOLOGICAL STABILIZATION STAGE
CONSTRUCTION DETAILS OF THE PLATE FOR MOUNTING
OF FINAL FILTER ELEMENTS
SAFE SYSTEM DESIGN FOR FILTER CLOSURE



BEFORE CLARIFICATION

AFTER CLARIFICATION

RESEARCH & DEVELOPMENT

Pilot plant for Field trials

We have carried out a variety of tests on different types of product coming from different manufacturers in order to optimize the MAGNEXFLO system. During the tests we have registered the most important process parameters. The results obtained with the pilot system are implemented to develop the best configuration and components to be used for filtration systems delivered to customers.

MAGNEXFLO has met in full all of the requirements of the customers present during the filtration tests at site. The quality/price ratio compared to the filtration time required by actual equipment makes MAGNEXFLO the ideal filtration system for clarification of different and viscous products prior to further processing steps.





Filtration & system solutions

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