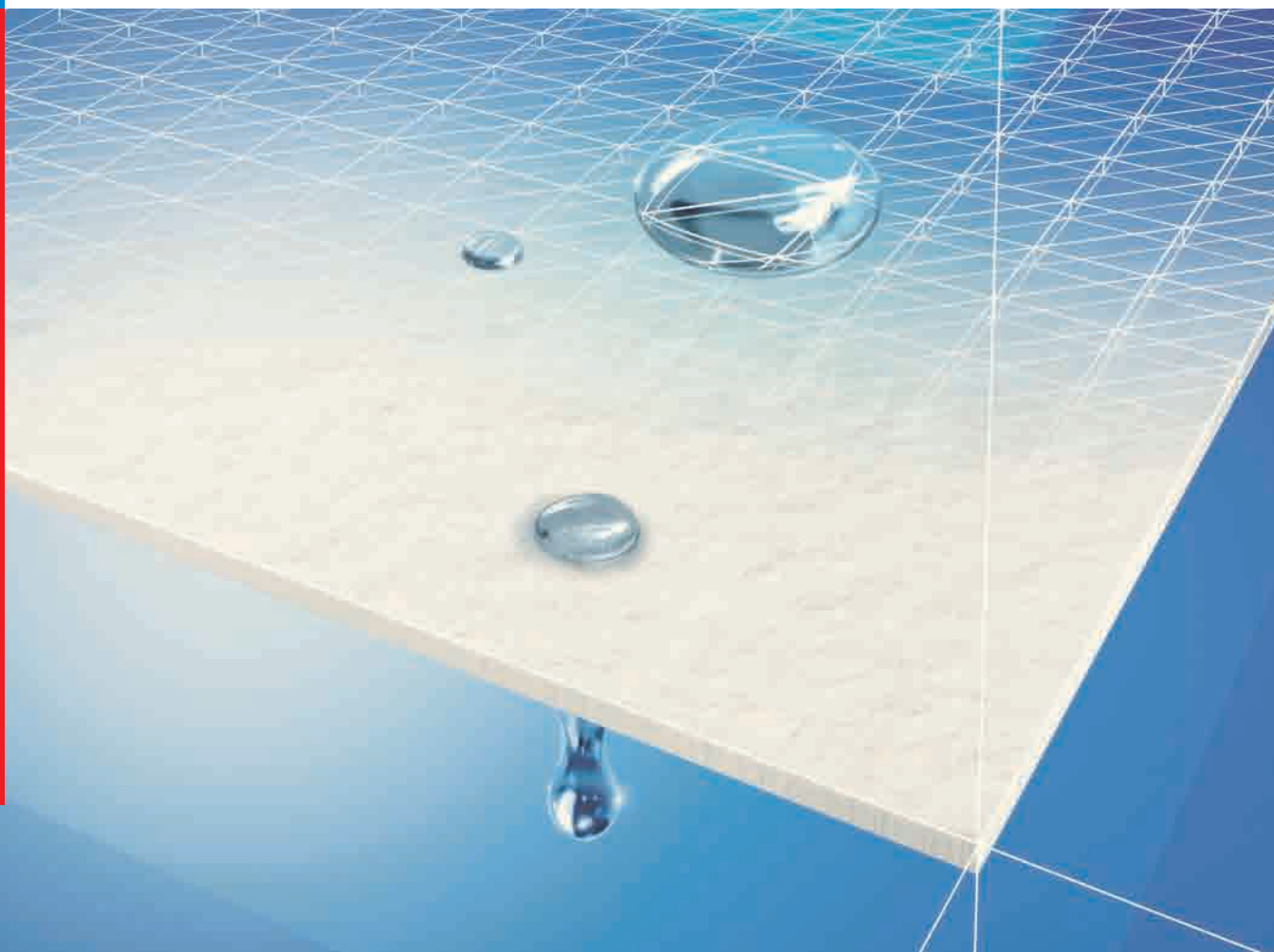


Product Overview



The Company

BEGEROW was established in 1933 as a family enterprise. Today, more than 80 years later, BEGEROW is one of the main manufacturers of depth filter media and depth filtration systems in the world.

We develop, produce and sell depth filter media of highest quality for a variety of applications in the chemical, pharmaceutical and biotechnology industries. Further areas of application are the cosmetics industry and the beverage and food industries.

Our product range comprises BECO depth filter sheets, BECODISC stacked disc cartridges and associated equipment and system solutions.

Our head office and production facilities are located in Germany. Successful subsidiaries were established and forward-looking partnerships formed in Poland, Italy, France, Austria, Denmark and USA in order to increase BEGEROW's global presence.

Depth Filtration

Depth filtration is used for coarse, clarifying, fine filtration and for microbe reduction and removal. It is particularly suitable for effective and safe separation of colloidal haze, very fine particles and micro-organisms.

Depth filters can also be used effectively as prefilters for efficient membrane protection. Another area of application for depth filter sheets or support sheets is the recovery of valuable substances or as support material for precoat filtration.

Mechanisms

The depth filtration mechanisms are both of a mechanical and adsorptive nature. Particles are mechanically retained in the asymmetric hollow space structure of the depth filter medium (gradually decreasing pore structure towards the outlet side).

Particles that are significantly smaller than the pores of the depth filter medium are retained through adsorption. This is due to the positive zeta potential (electrokinetic potential), which retains negatively charged particles through adsorption.

Components

Very pure, finely fibrillated cellulose fibers form the matrix of the BECO depth filter sheets. The characteristic selective properties of the depth filter sheets are achieved in combination with filtration-active mineral components (e.g. kieselguhr).

BEGEROW developed this innovative product in its in-house research facility. In the BECOPAD range high-purity celluloses form a unique structure which even for superfine filtration does not require inorganic ingredients.



Depth Filter Media

Due to their individual components and the special manufacturing processes, **BECO depth filter sheets** ensure high dirt holding capacity, safe retention and good haze reduction. This results in consistently high performance and safe and reproducible filtration results.

The BECO depth filter sheets are used in enclosed and classic plate and frame filters.

BECO depth filter sheets are also used to produce depth filter cells for insertion in **BECODISC stacked disc cartridges**. The special design of the stacked disc cartridge units provides excellent mechanical stability for the BECODISC stacked disc cartridge

and enables simple insertion and removal in BECO INTEGRA DISC stacked disc cartridge housings.

With more than 40 depth filter types from different product ranges, we meet the requirements of a wide variety of applications.

Application Examples:

- Paints, varnishes
- Resins
- Silicone oils
- Active ingredients
- Plasma proteins
- Plasma substitutes
- Buffer, salt and conditioning solutions
- Enzymes, vitamins, antibiotics
- Fragrances, flavours, plant extracts

Scale-up Concept

In addition to BECO MiniCap depth filter capsules, depth filter sheets and stacked disc cartridges, corresponding laboratory filters from the equipment range are available for laboratory and pilot plant trials for selection and configuration of process filters and for smaller production batches.

BECO Filter Aids

Depending on the application it may be necessary to use filter aids.

The product range comprises:

BECOGUR kieselguhrs

BECOLITE filter perlites

BECOCCEL cellulose

BECOFLOC filter flakes

For qualification information please refer to the respective Technical Information data sheet.

	BECO depth filter sheets	BECODISC stacked disc cartridges	
In compliance with pharmaceutical processes	Mineral-free, high purity depth filter medium for pharmaceutical applications	BECOPAD P range	BECODISC P
	Depth filter with low endotoxin content for pharmaceutical applications	BECO PR range	BECODISC BP
	Support sheets for precoat filtration in the pharmaceutical industry	BECO PR ENDURA BECO PR ENDURA S	BECODISC B00P
	Filters containing activated carbon	BECO ACF 07	BECODISC B30C
	Mineral-free, high purity depth filter medium for industrial applications	BECOPAD range	BECODISC
	Depth filter for standard applications	BECO Standard range	BECODISC BS
	Depth filter for filtration of viscous liquids	BECO CP1	
	Depth filter for filtration of highly viscous liquids	BECO CPS range	BECODISC BT
	Support sheets for precoat filtration	BECO ENDURA	BECODISC B00E



BEGEROW Filtration Systems

Enclosed filtration systems

BECO INTEGRA PLATE

Enclosed plate and frame filters for inserting BECO depth filter sheets. Filter elements are available in sizes of 400 x 400 mm (15.75 x 15.75 in), 600 x 600 mm (23.62 x 23.62 in) and 800 x 800 mm (31.5 x 31.5 in) and in different frame sizes with filter areas ranging from 0.24 m² (2.58 ft²) to maximum 66 m² (710.42 ft²). Only plastic versions of the 800 x 800 mm (31.50 x 31.50 in) filter elements are available (PP and PVDF).

BECO INTEGRA DISC

12" or 16" stacked disc cartridge housings for 1 – 4 BECODISC stacked disc cartridges with filter areas from 0.59 m² (6.35 ft²) up to a maximum of 14.8 m² (159.31 ft²).

Design versions:

- sanitary design
- industrial design

Available with quick closure device and clamp screw. Multi-column stacked disc cartridge housings up to a maximum filter area of 88,8 m² (955.84 ft²) are available.

BECO INTEGRA LAB

Enclosed laboratory filters, type 60 P, 140 P, 220 P and 200.

BECO INTEGRA SOLO

Enclosed single-sheet filter with a filling space designed as a pressure vessel, suitable for inserting a filter medium. Filters with diameters between 300 mm (11.81 in) and



1200 mm (47.24 in) and corresponding filter areas from 0.06 m² (0.65 ft²) up to a maximum of 1.12 m² (12.06 ft²) are available.

Classic filtration systems

BECO COMPACT PLATE

Plate and frame filters, type 200, 400 and 600 SF/ASF; filter elements available in 200 x 200 mm (7.87 x 7.87 in), 400 x 400 mm (15.75 x 15.75 in) and 600 x 600 mm (23.62 x 23.62 in), and in different frame sizes with filter areas from 0.07 m² (7.54 ft²) up to a maximum of 67.32 m² (724.6 ft²) or 28.38 m² (305.5 ft²) with a cake volume of 496 l (131.03 gal).

Filtration systems

StepFlow

The implementation of client-specific filtration tasks is realized through the assembly of filtration systems into a fully automatic or manually operated filtration system.

BEGEROW process technology offers a wide range of components and devices, including complex filtration systems.

Our process specialists offer competent and practical support covering preparation of the requirements profile and its implementation in practice, delivery documentation and customer staff training.



High Quality

▶ The end products of our customers are subject to very rigorous and precisely defined quality requirements and different regulations. As part of the overall manufacturing process, depth filtration has to produce safely reproducible and economic results.

The BEGEROW quality policy therefore aims to produce and offer products and services with uniform and outstanding quality.

The processes required to achieve this are described, regularly checked for their performance and further developed. Staff at all levels of our company contribute to ensuring and continuously improving the quality of our products and services.

The procedures for development, production and testing of our products are based on more than 80 years of experience in depth filtration and are compatible with internationally recognized standard methods (e.g. LFGB¹⁾, FDA²⁾).

Our Guaranty

Innovative concepts for product development and quality assurance ensure maximum safety for your filtration tasks.



¹⁾ German Food, Commodity and Feed Act
²⁾ Food and Drug Administration

All information is given to the best of our knowledge.

They reflect current know-how and do not claim to be complete.

No warranty is expressed or implied.

The application of our products outside the test criteria specified in the Technical Information requires separate verification by the customer. In such cases, no liability for any damage whatsoever can be accepted. Misuse of the product will result in all warranties being voided, including any third-party commercial property rights.

Subject to change in the interest of technical progress. Please ensure that you have the latest edition of our Technical Information, available as pdf download from our website at www.begerow.com



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