

Depth Filtration
BECODISC® BA Range

Stacked Disc Cartridges for the Filtration of Cognac, Whisky, Brandy, and Other High Quality Spirits

BECODISC BA stacked disc are ideal for the demanding filtration of high quality spirits such as cognac, armagnac, barrel-matured brandy, and whisky. The product range is graded from coarse particle separation to fine filtration and enables accurate adaptation to the requirements of spirit filtration.

The specific advantages of BECODISC BA stacked disc cartridges:

- Low content of calcium, magnesium and iron ions to avoid secondary hazes
- Color-preserving filtration through minimum color adsorption in the depth filter sheet
- Selective separation of long-chain fatty acid esters
- Reliable product retention through ideal pore structure
- High clarification through the use of high-quality raw materials
- Economic service life through high dirt holding capacity
- Comprehensive quality assurance for all raw and auxiliary materials and intense in-process controls ensure consistent quality of the finished products



Fine Filtration of Very Fine Haze Substances

BECODISC BA 20

BECODISC stacked disc cartridges for achieving a high clarifying level. This stacked disc cartridge type reliably retains very fine particles, higher fatty acids and fusel oils. This makes them particularly suitable for haze-free storage and filling.

Clarification Filtration

BECODISC BA 40

BECODISC stacked disc cartridges for clarification filtration and for the separation of medium-strong haze. This stacked disc cartridge type has a high dirt holding capacity and is particularly suitable for the filtration of spirits with a high fusel oil content.

Water throughput BECODISC BA range



Conditions: Δ p = 14.5 psi (100 kPa, 1 bar), Medium: Water at 68 °F (20 °C)

Components

The depth filter sheets of the BECODISC BA stacked disc cartridges are made from extremely pure materials. They contain varying quantities of finely fibrillated cellulose fibers of hardwood and softwood, cationic resin and high quality diatomaceous earth.

Physical Data

This information is intended as a guideline for the selection of BECODISC stacked disc cartridges.

Type	Utilized BECO depth filter sheet	Nominal retention rate μm	Thickness in (mm)	Ash content %	Bursting strength wet psi (kPa)	Water throughput at	
						$\Delta p = 14.5 \text{ psi}$ gpm/ft ²	$(\Delta p = 100 \text{ kPa}^*)$ l/m ² /min)
BA 20	SELECT A 20	0.8	0.17 (4.4)	43	> 5.8 (40)	3.9	(160)
BA 40	SELECT A 40	2.5	0.17 (4.4)	43	> 5.8 (40)	7.4	(300)

The water throughput is a laboratory value characterizing the different BECO[®] depth filter sheets. It is not the recommended flow rate.

* 100 kPa = 1 bar

Recommendations for Avoiding Damage

BECODISC stacked disc cartridges can be used only in the specified flow direction. This applies to product filtering as well as sanitizing with hot water, and sterilizing with the stacked disc cartridges with saturated steam. In order to avoid damage to the filter cells, the system should be protected with a suitable non-return valve.

Refer to the insert included with each BECODISC stacked disc cartridge carton for detailed application information.

Intermediate Plates

If more than two BECODISC stacked disc cartridges (12" or 16") with double O-ring adapters are stacked in the housing, install a central spindle for safety reasons. In the event, more than one 16" BECODISC stacked disc cartridge (flat adapter/double O-ring adapter) is used in the housing, Eaton recommends the installation of stainless steel intermediate plates between the BECODISC stacked disc cartridges.

Sanitizing and Sterilizing (Optional)

Sterilizing with Hot Water

The hot water temperature should be 185 °F (85 °C) to 203 °F (95 °C). A differential pressure of 21.8 psi (150 kPa, 1.5 bar) must not be exceeded when sterilizing with hot water.

Sterilization time: At least 30 minutes once a minimum temperature of 176 °F (80 °C) is reached at all filter openings. In the interest of energy conservation, the water may be circulated provided the specified temperatures are maintained.

Sterilizing with Steam

The wetted BECODISC stacked disc cartridges can be sterilized with saturated steam up to a maximum temperature of **250 °F (121 °C)** as follows:

Steam quality: The steam must be free of foreign particles and impurities.

Temperature: Max. 250 °F (121 °C) (saturated steam)

Duration: Approx. 20 minutes after steam exits from all filter valves.

Rinsing: After sterilizing with 1.23 gal/ft² (50 l/m²) at 1.25 times the flow rate.

Filter Preparation and Filtration

Unless already completed after sterilization, Eaton recommends pre-rinsing the closed filter with 1.23 gal/ft² (50 l/m²) of water at 1.25 times the flow rate prior to the first filtration. Depending on the application, this usually equals a rinsing time of 10 – 20 minutes. Test the entire filter for leakage at maximum operating pressure.

High-proof alcohol solutions and products that do not allow pre-rinsing with water should be circulated for 10 to 20 minutes. Dispose of the rinsing solution after rinsing.

Safety

When used and handled correctly, there are no known unfavorable effects associated with this product.

Further safety information can be found in the relevant Material Safety Data Sheet, which can be downloaded from our website.

Waste Disposal

Due to their composition, BECODISC stacked disc cartridges can be disposed of as harmless waste. Comply with relevant current regulations, depending on the filtered product.

Storage

BECODISC stacked disc cartridges must be stored in a dry, odor-free, and well ventilated place.

Do not expose the BECODISC stacked disc cartridges to direct sunlight.

BECODISC stacked disc cartridges are intended for immediate use and should be used within 36 months after production date.

Available Formats

BECODISC stacked disc cartridges are available with 12-inch and 16-inch diameters. Further information about filter areas and gasket types can be found in our current BECODISC stacked disc cartridge folder.

Quality Assurance According to DIN EN ISO 9001

Eaton's Begerow Product Line comprehensive Quality Management System has been certified according to DIN EN ISO 9001.

This certification verifies that a fully functioning comprehensive Quality Assurance System covering product development, contract controls, choice of suppliers, receiving inspections, production, final inspection, inventory management, and shipment has been implemented. Extensive quality assurance measures incorporate adherence to technical function criteria and chemical purity and quality recognized as safe under the German legislation governing the production of foods and beverages.

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