

**Depth Filtration**  
**BECO® SELECT™ A Range**

**Depth Filter Sheets for Spirits and Fragrance Filtration**

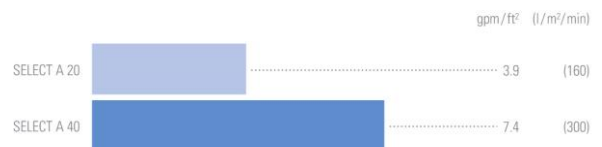
BECO SELECT A depth filter are used for the demanding filtration of high quality spirits, such as cognac, armagnac, barrel-matured brandy, and whisky. Also in the filtration of spirits based on pomaceous fruit, pitted fruit, soft fruit, yeast, and grapes, juniper berries (Gin, Genever), grain (Aquavit) excellent filtration results are achieved. The product range is graded from coarse particle separation to fine filtration and enables accurate adaptation to the requirements of spirits and fragrance filtration.

The specific advantages of BECO SELECT A depth filter sheets:

- 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 retention of the components to be separated through ideal pore structure
- High clarification effect 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



**Water throughput BECO SELECT A range**



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

**Fine Filtration of Very Fine Haze Substances**

**BECO SELECT A 20**

BECO depth filter sheets for achieving a high clarifying level. This depth filter sheet type reliably retains very fine particles and higher fatty acids. This makes them particularly suitable for haze-free storage and filling.

**Clarification Filtration**

**BECO SELECT A 40**

BECO depth filter sheets for clarification filtration and for the separation of medium-strong haze. This depth filter sheet type has a high dirt holding capacity and is particularly suitable for the filtration of spirits with a high fusel oil content.

## Physical Data

This information is intended as a guideline for the selection of BECO depth filter sheets.

Type	Article no.	Nominal retention rate $\mu\text{m}$	Thickness in (mm)	Ash content %	Bursting strength wet		Water throughput at	
					psi	(kPa)	$\Delta p = 14.5 \text{ psi}$ gpm/ft <sup>2</sup>	$(\Delta p = 100 \text{ kPa}^*)$ l/m <sup>2</sup> /min)
SELECT A 20	27620	0.8	0.17 (4.4)	43.0	> 5.8	(40)	3.9	(160)
SELECT A 40	27640	2.5	0.17 (4.4)	43.0	> 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

The figures indicated are based on the current standard of knowledge. Subject to modification in the interest of further development of BECO depth filter sheets to improve quality. A manufacturer's certificate according to DIN EN 10204 can be issued on request.

## Components

BECO depth filter sheets are made from particularly pure natural materials and cationic charge carriers. Different quantities of finely fibrillated cellulose fibers obtained from deciduous and coniferous trees, diatomaceous earth, and perlite are used.

## Instructions for Correct Use

BECO depth filter sheets require careful handling when inserting them into the plate and frame filter. Avoid banging, bending, and rubbing the sheets. Do not use damaged depth filter sheets.

### Inserting

Each BECO depth filter sheet has a rough side and a smooth side. The rough side of the depth filter sheet is the unfiltrate side; the smooth side is the filtrate side. Always ensure that the filtrate side is in contact with the clear filtrate plate when inserting the sheets.

## Sanitizing and Sterilizing (Optional)

The wetted BECO SELECT A depth filter sheets may be sterilized with hot water or saturated steam up to a maximum temperature of **250 °F (121 °C)**. The pressed filter package should be loosened slightly. Make sure to sterilize the entire filter system thoroughly. Do not apply final pressure until after the filter package has cooled down.

### Sterilizing with Hot Water

The flow velocity should at least equal the filtration capacity. The water should be softened and free of impurities.

Temperature:	185 °F (85 °C)
Duration:	30 minutes after the temperature has reached 185 °F (85 °C) at all valves.
Pressure:	At least 7.2 psi (50 kPa, 0.5 bar) at the filter outlet.

### Sterilizing with Steam

Steam quality:	The steam must be free of foreign particles and impurities.
Temperature:	Max. <b>250 °F (121 °C)</b> <b>(saturated steam)</b>
Duration:	Approx. 20 minutes after steam escapes from all filter valves.
Rinsing:	After sterilizing with 1.23 gal/ft <sup>2</sup> (50 l/m <sup>2</sup> ) 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/ft<sup>2</sup> (50 l/m<sup>2</sup>) 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 to 20 minutes. Test the entire filter for leakage at maximum operating pressure.

High-proof alcohol solutions and chemical 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 BECO depth filter sheets are biodegradable. Relevant current regulations must be followed, depending on the filtered product.

### **Storage**

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BECO depth filter sheets consist of strongly adsorbing materials. The product must be handled carefully during shipping and storage. Store the depth filter sheets in a dry, odor-free, and well ventilated place.

Do not expose the depth filter sheets to direct sunlight.

BECO depth filter sheets are intended for immediate use and should be used within 36 months after production date.

### **Available Formats**

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All common square or round filter sizes are available for delivery. Special formats are available on request.

### **Quality Assurance According to DIN EN ISO 9001**

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The Quality Management System of Eaton Technologies GmbH 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.

All information is given to the best of our knowledge. However, the validity of the information cannot be guaranteed for every application, working practice and operating condition. Misuse of the product will result in all warranties being voided.

Subject to change in the interest of technical progress.

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