

## Depth filtration in a closed housing



### Description

The QUALI-DISC filtration modules are particularly suited for demanding liquid filtration applications. The product range continuously covers nominal retention ratings from 20 µm to 0.1 µm, allowing precise adaptation to specific separation requirements across the entire range.

### Advantages

- Reliable particle retention thanks to an optimized pore structure
- Use of high-quality raw materials ensuring excellent clarification performance
- Cost-effective service life thanks to high regeneration capacity
- Strict quality control of raw and auxiliary materials
- Continuous monitoring of manufacturing processes
- The raw materials used comply with oenological codex requirements / European agri-food standards

### Components

- Purified and ultra-pure celluloses, perlite + filter aids
- Wet-strength agent

### Application

QUALI-DISC modules provide a high level of microorganism retention.

This high level of microbiological retention is achieved through the fine-pore structure of the depth filter sheets, combined with an electrokinetic potential with adsorptive effect.

Due to their high capacity for retaining colloidal components, these modules are ideally suited for coarse prefiltration, clarifying or fine filtration, final filtration, or prefiltration for downstream membrane protection.

### Regulatory compliance and extractables

The filter sheets comply with the main regulations applicable to materials intended to come into contact with foodstuffs. They comply in particular with:

- Regulation (EC) No 1935/2004
- LFGB (Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch – Germany)
- BfR Recommendation XXXVI/1
- FDA – 21 CFR § 177.2260

Polypropylene (PP): compliant with EU Directive 2002/72, Regulation (EU) No 10/2011, as well as FDA regulation 21 CFR § 177.1520

Polyamide (PA): compliant with FDA 21 CFR § 177.1500

Silicone: compliant with FDA 21 CFR § 177.2600

EPDM, Nitrile, Viton®: available as alternatives, also compliant with applicable FDA regulations

PP modules also meet USP Class VI classification (biological reactivity).

### Quality assurance

The filter plates are manufactured in management systems certified according to international standards:

- ISO 9001 / DIN EN ISO 9001 – Quality Management
- ISO 14001 – Environmental Management
- ISO 22000 – Food Safety
- FDA Drug Master File: DMF #16418
- FDA 21 CFR Compliance
- Certificat Kasher

Detailed inspections ensure compliance with technical specifications as well as the expected chemical purity and safety of the materials used in food applications.

The information provided corresponds to the knowledge available at the time of writing. It is not intended to be exhaustive and does not engage the manufacturer's liability. Technological improvements may be implemented at any time.

### Chemical resistance

Substance	% concentration	Filter media T = 50°C	Polypropylene T = 50°C	Polyamide T = 20°C
NaOH	1	+++	+++	+++
Ethanol	80	+++	+++	+++
Acetic acid		+++	+	-
Citric acid	10	+++	+++	+++
Peracetic acid	0.1	+++	+++	-

+++ Excellent | ++ Good | + Acceptable | - Incompatible

Please contact us for data on other chemical substances

### Pyrogen content

Endotoxin release

MDCP and DCP in wet strength agents: compliant with legal regulations.

GMO : absent.

Allergenic substances: absent.

## Dimensions

	12"	16"
Diameter	295	402
Maximum filtration area per module (m <sup>2</sup> ) <sup>1</sup>	1.9	3.7
Maximum height with DOR adapter (mm)	330	330
Maximum height with DEO adapter (mm)	276	276

<sup>1</sup> For 12" and 16", maximum surface for 16-cell modules

## Operating conditions

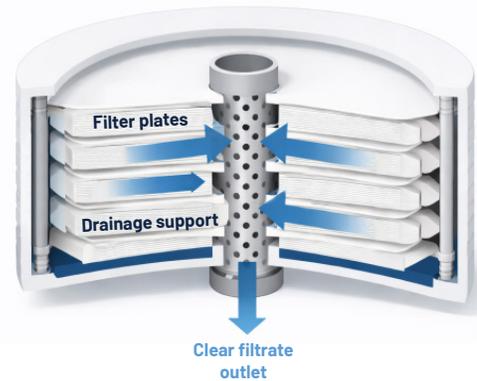
	Continuous load	Short-term load
Maximum operating temperature, standard version	80°C	85°C
Maximum differential pressure (module)	3 bar	
Recommended cleaning volume	50 l/m <sup>2</sup>	
Recommended sterilization	Hot water or steam	

## Construction

The modules are based on a main frame made of polypropylene or polyamide. The filter elements, called lenses, consist of 2 filter media placed on either side of a drainage support.

These lenses are mounted in series around a central collector ensuring the filtrate discharge. When the number of lenses is less than 14 (5 to 9 units), the addition of reinforcing bars is possible to improve mechanical stability.

During filtration, the unclarified fluid enters the housing and, under the action of the pressure difference, passes through the filter media where particles are retained.



## QUALI-DISC range

Code	Nominal retention rating (µm)	Permeability (l/m <sup>2</sup> /min)	Basis weight (g/m <sup>2</sup> )	Thickness (mm)	Filtration type
40 QF	20 - 8.0	1400 - 1900	1100 - 1300	3.8 - 3.9	Coarse
30 QF	15 - 6.0	1390 - 1565	1000 - 1200	3.7 - 3.9	Clarifying
25 QF	12 - 5.0	380 - 425	1300 - 1500	3.7 - 3.9	Clarifying
20 QF	9.0 - 4.0	260 - 300	1200 - 1400	3.7 - 3.9	Clarifying
15 QF	3.0 - 6.0	200 - 230	1200 - 1400	3.7 - 3.9	Clarifying
10 QF	3.0 - 1.5	170 - 210	1200 - 1400	3.7 - 3.9	Fine
08 QF	1.5 - 0.6	110 - 155	1300 - 1400	3.7 - 3.9	Microbial reduction
04 QF	0.8 - 0.5	68 - 70	1300 - 1500	3.7 - 3.9	Sterilizing
03 QF	0.6 - 0.4	55 - 62	1350 - 1550	3.7 - 3.9	Sterilizing
02 QF	0.4 - 0.2	36 - 46	1400 - 1600	3.8 - 3.9	Sterilizing
01 QF	0.2 - 0.04	20 - 30	1500 - 1700	3.9 - 4.0	Sterilizing

## Log reduction values (LRV)

Code	Pathogen	Load	LRV
08 QF	Reduction of pathogen quantity in the filtrate		
04 QF	Serratia marcescens	1.0 x 10 <sup>7</sup> / cm <sup>2</sup>	>5
03 QF	Serratia marcescens	1.0 x 10 <sup>8</sup> / cm <sup>2</sup>	>7
02 QF	Serratia marcescens	1.0 x 10 <sup>9</sup> / cm <sup>2</sup>	>8
01 QF	Brevundimonas diminuta	1.0 x 10 <sup>9</sup> / cm <sup>2</sup>	>8

## NOMENCLATURE

Example :



### A / Plate grade

Code	Grade
40	40 QF
30	30 QF
25	25 QF
20	20 QF
15	15 QF
10	10 QF
08	08 QF
04	04 QF
03	03 QF
02	02 QF
01	01 QF

### D / Seals

Code	Material
S	MVQ / Silicone
E	EPDM
T	FEP / Teflon® *
V	FKM / Viton
N	NBR

\*With DOR adapter only

### E / Material

Code	Material
PP	Polypropylene (PP)
PA	Polyamide (PA)

### B / Diameter

Code	Diameter (inches)
2	12"
6	16"

### C / Adapter

Code	Designation
E	DOE = Flat gasket adapter
R	DOR = Double O-ring bayonet adapter